Supplemental Appendix

This appendix has been provided by authors to give readers additional information about their work.

Supplement to: Sharma A, Alvarez PJ, Woods SD, et al. A Model to Predict Risk of Hyperkalemia in Patients With Chronic Kidney Disease Patients Using a Large Administrative Claims Database.

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Appendix A . Table S1. Identifying and stage-assigning individuals with chronic kidney disease (CKD)

Individuals in the study group were considered to have CKD if they had at least 1 claim with an International Classification of Diseases (ICD), 9th or 10th Revision, Clinical Modification (CM; ICD-9-CM or ICD-10-CM); or a lab report containing a value for estimated glomerular filtration rate (eGFR) by the Modification of Diet in Renal Disease Study equation.[1] CKD stage was assigned by ICD-9-CM or ICD-10-CM code or by the eGFR according to the following scheme. An individual was assigned their highest CKD stage found in the baseline year (BY).

Stage	ICD-9-CM	ICD-10-CM	eGFR, mL/min/1.73 m^2
CKD stage 1	N18.1	585.1	≥90
CKD stage 2	N18.2	585.2	60–89
CKD stage 3	N18.3	585.3	30–59
CKD stage 4	N18.4	585.4	15–29
CKD stage 5	N18.5	585.5	<15
End-stage renal disease	N18.6	585.6	

Notes: eGFR data from Stevens et al.[1]

Reference 1.

Stevens LA, Manzi J, Levey AS, et al. Impact of creatinine calibration on performance of GFR estimating equations in a pooled individual patient database. Am J Kidney Dis. 2007;50(1):21–35. Copyright © 2007 National Kidney Foundation, Inc. Published by Elsevier Inc. All rights reserved.

Appendix B. Table S2. Renin- aldosterone system inhibitors (RAASi's) and maximum angiotensin-labeled doses

Angiotensin converting enzyme inhibitors (ACEi's)	
Benazepril 80 mg	Moexipril 30 mg
Captopril 450 mg	Perindopril 8 mg
Enalapril 40 mg	Quinapril 80 mg
Fosinopril 40 mg	Ramipril 10 mg
Lisinopril 40 mg	Trandolapril 8 mg
Angiotensin II receptor blockers (ARBs)	
Azilsartan 80 mg	Losartan 100 mg
Candesartan 32 mg	Olmesartan 40 mg
Eprosartan 800 mg	Telmisartan 80 mg
Irbesartan 300 mg	Valsartan 320 mg
Mineralocorticoid receptor antagonists (MRAs)	
Eplerenone 100 mg	Spironolactone 200 mg
Direct renin inhibitors (DRIs)	
Aliskiren 300 mg	Aliskiren-hydrochlorothiazide
Aliskiren-valsartan (considered submaximum if taken as 150/160 mg)	Aliskiren-amlodipine-hydrochlorothiazide
Aliskiren-amlodipine	

Appendix C. Table S3. Non-RAASi medications associated with hyperkalemia (HK)

Nonsteroidal anti-inflammatory drugs (NSAIDs)
Beta-blockers
Calcineurin inhibitors
Cyclosporine
Tacrolimus
Potassium-sparing diuretics
Amiloride
Triamterene

Appendix D. Table S4. Variables with significant univariate association to first identification of HK in the prediction year

ACEi use	Diabetes mellitus	MRA use
Age	Gender	Nonspecific gastritis/dyspepsia
Allergy	Glaucoma	Number of comorbid conditions
Anxiety	Hepatitis	Obesity
ARB	Human immunodeficiency virus disease	Osteoarthritis
Asthma	Hyperlipidemia	Osteoporosis
Atrial fibrillation	Hypertension	Proportion of days covered ≥80%
Beta-blocker use	Inflammatory bowel disease	Peripheral artery disease
Business line (commercial vs Medicare Advantage)	Inpatient admission	Potassium-sparing diuretics use
Calcineurin inhibitor use	Iron deficiency anemia	Primary care visit
Cerebrovascular disease	Ischemic heart disease	RAASi at optimal dose
Congestive heart failure	Kidney stone history	Geographic region
CKD stage	Hemoglobin (lab)	Rheumatoid arthritis
Chronic thyroid disorders	Serum/plasma potassium (lab)	Sacubitril-valsartan use
Congenital heart disease	Liver disease	Visit to a medical specialist
Chronic obstructive pulmonary disease	Malignant neoplasms	Urban vs rural
Dementia	Metabolic syndrome	
Depression	Migraine	