

Supplemental Table S1. Algorithm for Identifying Medicare Beneficiaries with cUTIs Based on International Classification of Diseases, Tenth Revision (ICD-10) Diagnostic Codes and Procedure Codes and Current Procedural Terminology (CPT) Codes

| Group A | | Group B | | Group C | |
|---|------------------|---|------------------|------------------|------------------|
| Any code from this group qualifies as UTI | | Any code from Group B qualifies as UTI | | | |
| Presence on inpatient claim qualifies as cUTI | | Group B code and Group C code on same day qualifies as cUTI | | | |
| ICD-10 diagnosis | ICD-10 diagnosis | ICD-10 diagnosis | ICD-10 diagnosis | CPT code | ICD-10 diagnosis |
| • N10 | • N35111 | • N139 | • N3501 | • 51702 | • N329 |
| • N110 | • N35112 | • N300 | 4 | • 51703 | • N3644 |
| • N118 | • N35113 | 0 | • N3502 | ICD-10 procedure | • N400 |
| | • N35114 | • N301 | 8 | • OT9B70 | • N401 |
| • N12 | • N35119 | 0 | • N351 | Z | • N402 |
| • N151 | • T83510 | • N302 | • N358 | • OT9B80 | • N403 |
| • N159 | A | 0 | • N359 | Z | • N4283 |
| • N16 | • T83511 | • N303 | • N360 | • OT2BX0 | • N9951 |
| • N288 | A | 0 | • N361 | Z | 0 |
| 4 | • T83512 | • N304 | • N362 | • 3C1ZX8 | • N9951 |
| • N288 | A | 0 | • N365 | Z | 1 |
| 5 | • T83518 | • N308 | • N368 | ICD-10 diagnosis | • N9951 |
| • N288 | A | 0 | • N9911 | | 2 |
| 6 | | • N309 | 0 | • B0870 | • N9951 |
| | | 0 | • N37 | • B0871 | 8 |
| | | • N300 | • N390 | • B0872 | • Q6210 |
| | | 1 | | • N1330 | • Q6211 |
| | | • N301 | | • N1339 | • Q6212 |
| | | 1 | | • N139 | • Q6231 |
| | | • N302 | | • N200 | • Q6239 |
| | | 1 | | • N201 | • R338 |
| | | • N303 | | • N202 | • R339 |
| | | 1 | | • N209 | • R3914 |
| | | • N304 | | • N312 | • Z436 |
| | | 1 | | • N319 | • Z466 |
| | | • N308 | | • N320 | |
| | | 1 | | • N3289 | |
| | | • N309 | | | |
| | | 1 | | | |
| | | • N340 | | | |
| | | • N341 | | | |
| | | • N342 | | | |
| | | • N343 | | | |

Supplemental Table S2. Distribution of Diagnoses in 30-Day Post Index-cUTI period

| Total individuals | <i>n</i> | (N=723,324) (%) |
|---|----------|--------------------|
| HIV/AIDS | 2,961 | (0.4%) |
| Septicemia, Sepsis, Systemic Inflammatory Response Syndrome/Shock | 132,711 | (18.3%) |
| Opportunistic Infections | 7,143 | (1.0%) |
| Metastatic Cancer and Acute Leukemia | 31,018 | (4.3%) |
| Lung and Other Severe Cancers | 17,074 | (2.4%) |
| Lymphoma and Other Cancers | 17,094 | (2.4%) |
| Colorectal, Bladder, and Other Cancers | 46,105 | (6.4%) |
| Breast, Prostate, and Other Cancers and Tumors | 66,750 | (9.2%) |
| Diabetes with Acute Complications | 9,421 | (1.3%) |
| Diabetes with Chronic Complications | 187,485 | (25.9%) |
| Diabetes without Complication | 92,486 | (12.8%) |
| Protein-Calorie Malnutrition | 53,653 | (7.4%) |
| Morbid Obesity | 56,769 | (7.8%) |
| Other Significant Endocrine and Metabolic Disorders | 65,044 | (9.0%) |
| End-Stage Liver Disease | 7,859 | (1.1%) |
| Cirrhosis of Liver | 8,093 | (1.1%) |
| Chronic Hepatitis | 6,016 | (0.8%) |
| Intestinal Obstruction/Perforation | 37,244 | (5.1%) |
| Chronic Pancreatitis | 4,459 | (0.6%) |
| Inflammatory Bowel Disease | 12,977 | (1.8%) |
| Bone/Joint/Muscle Infections/Necrosis | 18,053 | (2.5%) |
| Rheumatoid Arthritis and Inflammatory Connective Tissue Disease | 72,728 | (10.1%) |
| Severe Hematological Disorders | 9,708 | (1.3%) |
| Disorders of Immunity | 31,960 | (4.4%) |
| Coagulation Defects and Other Specified Hematological Disorders | 90,310 | (12.5%) |
| Dementia with Complications | 26,956 | (3.7%) |
| Dementia without Complications | 83,178 | (11.5%) |
| Drug/Alcohol Psychosis | 2,415 | (0.3%) |
| Drug/Alcohol Dependence | 30,242 | (4.2%) |
| Substance Use Disorder, Mild, Except Alcohol and Cannabis | 4,816 | (0.7%) |
| Schizophrenia | 10,062 | (1.4%) |
| Reactive & Unspecified Psychosis | 7,480 | (1.0%) |
| Major Depressive, Bipolar and Paranoid Disorders | 79,172 | (10.9%) |
| Personality Disorders | 3,484 | (0.5%) |
| Quadriplegia | 10,600 | (1.5%) |
| Paraplegia | 9,595 | (1.3%) |
| Spinal Cord Disorders/Injuries | 14,263 | (2.0%) |
| Amyotrophic Lateral Sclerosis and Other Motor Neuron Disease | 988 | (0.1%) |

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|---|---------|---------|
| Cerebral Palsy | 4,708 | (0.7%) |
| Myasthenia Gravis/Myoneural Disorders and Guillain-Barre Syndrome/Inflammatory and Toxic Neuropathy | 13,408 | (1.9%) |
| Muscular Dystrophy | 755 | (0.1%) |
| Multiple Sclerosis | 10,550 | (1.5%) |
| Parkinson's and Huntington's Diseases | 25,455 | (3.5%) |
| Seizure Disorders and Convulsions | 39,142 | (5.4%) |
| Coma, Brain Compression/Anoxic Damage | 13,764 | (1.9%) |
| Respirator Dependence/Tracheostomy Status | 10,422 | (1.4%) |
| Respiratory Arrest | 1,149 | (0.2%) |
| Cardio-Respiratory Failure and Shock | 77,956 | (10.8%) |
| Congestive Heart Failure | 179,585 | (24.8%) |
| Acute Myocardial Infarction | 39,662 | (5.5%) |
| Unstable Angina and Other Acute Ischemic Heart Disease | 22,686 | (3.1%) |
| Angina Pectoris | 35,272 | (4.9%) |
| Specified Heart Arrhythmias | 200,821 | (27.8%) |
| Cerebral Hemorrhage | 14,324 | (2.0%) |
| Ischemic or Unspecified Stroke | 54,014 | (7.5%) |
| Hemiplegia/Hemiparesis | 27,744 | (3.8%) |
| Monoplegia, Other Paralytic Syndromes | 2,309 | (0.3%) |
| Atherosclerosis of the Extremities with Ulceration or Gangrene | 11,749 | (1.6%) |
| Vascular Disease with Complications | 37,128 | (5.1%) |
| Vascular Disease | 198,689 | (27.5%) |
| Cystic Fibrosis | 202 | (0.0%) |
| Chronic Obstructive Pulmonary Disease | 161,161 | (22.3%) |
| Fibrosis of Lung and Other Chronic Lung Disorders | 16,150 | (2.2%) |
| Aspiration and Specified Bacterial Pneumonias | 29,447 | (4.1%) |
| Pneumococcal Pneumonia, Empyema, Lung Abscess | 23,252 | (3.2%) |
| Proliferative Diabetic Retinopathy and Vitreous Hemorrhage | 8,444 | (1.2%) |
| Exudative Macular Degeneration | 17,995 | (2.5%) |
| Dialysis Status | 16,283 | (2.3%) |
| Acute Renal Failure | 168,405 | (23.3%) |
| Chronic Kidney Disease (Stage 5) | 3,834 | (0.5%) |
| Chronic Kidney Disease, Severe (Stage 4) | 8,238 | (1.1%) |
| Chronic Kidney Disease, Severe (Stage 3) | 50,160 | (6.9%) |
| Pressure Ulcer of Skin with Necrosis Through to Muscle, Tendon, or Bone | 5,874 | (0.8%) |
| Pressure Ulcer of Skin with Full Thickness Skin Loss | 13,399 | (1.9%) |
| Pressure Ulcer of Skin with Partial Thickness Skin Loss | 11,864 | (1.6%) |
| Chronic Ulcer of Skin, Except Pressure | 12,253 | (1.7%) |
| Severe Skin Burn or Condition | 318 | (0.0%) |
| Severe Head Injury | 244 | (0.0%) |
| Major Head Injury | 12,766 | (1.8%) |
| Vertebral Fractures without Spinal Cord Injury | 20,420 | (2.8%) |

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|--|--------|--------|
| Hip Fracture/Dislocation | 23,298 | (3.2%) |
| Traumatic Amputations and Complications | 5,897 | (0.8%) |
| Complications of Specified Implanted Device or Graft | 58,500 | (8.1%) |
| Major Organ Transplant or Replacement Status | 4,453 | (0.6%) |
| Artificial Openings for Feeding or Elimination | 31,363 | (4.3%) |
| Amputation Status, Lower Limb/Amputation Complications | 1,552 | (0.2%) |
