**Supplemental Table 1. List of Features Extracted from Electronic Health Record**

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| --- | --- |
|  | |
| Encrypted patient identifier |  |
| Care episode date | |
| No. of Previous calendar year ambulatory visits | |
| No. of Previous calendar year emergency visits | |
| No. of Previous calendar year hospital visits | |
| No. of Previous year hospital care episodes | |
| No. of Previous year non-hospital care episodes | |
| No. of Previous year total care episodes | |
| Hospitalization associated with transfer to psychiatry (y/n) | |
| Primary hospitalization diagnosis is psychiatric (y/n) | |
| Primary hospitalization diagnosis is medical (y/n) | |
| Primary diagnosis ICD code(s) | |
| Primary diagnosis descriptions | |
| Ever previous chief complaint medical (y/n) | |
| Ever previous chief complaint psychiatric (y/n) | |
| Ever previous chief complaint suicidal (y/n) | |
| Ever previous chief complaint substance use (y/n) | |
| Episode chief complaint medical (y/n) | |
| Episode chief complaint psychiatric (y/n) | |
| Episode chief complaint suicidal (y/n) | |
| Episode chief complaint substance use (y/n) | |
| Age at admission | |
| Gender |  |
| Race (UCLA-xDR only) |  |
| Ethnicity |  |
| Zip code |  |
| Charges (UCLA-xDR only) |  |
| Median pain score for episode of care (UCLA-xDR only) |  |
| Congestive heart failure | |
| Cardiac arrhythmia | |
| Valvular disease | |
| Pulmonary circulation disorder | |
| Peripheral vascular disorder | |
| Hypertension uncomplicated | |
| Hypertension complicated | |
| Paralysis |  |
| Other neurological disorder | |
| Chronic pulmonary disease | |
| Diabetes uncomplicated | |
| Diabetes complicated | |
| Hypothyroidism | |
| Renal failure |  |
| Liver disease | |
| Peptic ulcer disease excluding bleeding | |
| HIV/AIDS |  |
| Lymphoma |  |
| Metastatic cancer | |
| Solid tumor without metastasis | |
| Rheumatoid arthritis | |
| Coagulopathy | |
| Obesity |  |
| Weight loss |  |
| Fluid and electrolyte disorders | |
| Blood loss anemia | |
| Deficiency anemia | |
| Depression |  |
| Bipolar |  |
| Bipolar 1 |  |
| Bipolar 2 |  |
| Psychosis |  |
| Schizoaffective | |
| Anxiety disorder |  |
| Alcohol use |  |
| Opioids use |  |
| Cannabis use |  |
| Sedative/hypnotic/anxiolytic use | |
| Cocaine use |  |
| Stimulant use |  |
| Hallucinogen use | |
| Nicotine use |  |
| Substance use |  |
| Paranoid personality | |
| Schizoid personality | |
| Antisocial personality | |
| Borderline personality | |
| Histrionic personality | |
| Obsessive personality | |
| Dependent personality | |
| Avoidant personality | |
| Narcissistic personality | |
| Other personality disorder | |
| Anxiety disorder | |
| Reaction to severe stress | |
| Post-traumatic stress disorder | |
| Adjustment disorder | |
| Adult abuse or neglect | |
| Child abuse or neglect (history of) | |
| Pregnancy-related mental illness | |
| Post-partum depression (ICD-10 only) | |
| Puerperal psychosis (ICD-10 only) | |
| Homelessness | |
| Criminal justice involvement | |
| Poverty | |
| History of suicide attempt | |
| History of suicidal ideation | |
| History of injury of unknown intent | |
| History of injury |  |
| History of suicide attempt or self-injury | |
| History of episode for suicidal ideation + injury of unknown intent | |
| Aminoglycosides | |
| Analgesics-Narcotic | |
| Analgesics-Nonnarcotic | |
| Androgen-Anabolic | |
| Anorectal |  |
| Antacids |  |
| Anthelmintic |  |
| Anti-Rheumatic | |
| Antianginal Agents | |
| Antianxiety Agents | |
| Antiarrhythmic | |
| Antiasthmatic | |
| Anticoagulants | |
| Anticonvulsant | |
| Antidepressants | |
| Antidiabetic |  |
| Antidiarrheals | |
| Antidotes |  |
| Antiemetics |  |
| Antifungals |  |
| Antihistamines | |
| Antihyperlipidemic | |
| Antihypertensive | |
| Antimalarial |  |
| Antimyasthenic Agents | |
| Antimycobacterial Agents | |
| Antineoplastics | |
| Antiparkinsonian | |
| Antipsychotics | |
| Antiseptics and Disinfectants | |
| Antisera |  |
| Antiviral |  |
| Assorted Classes | |
| Beta Blockers | |
| Calcium Blockers | |
| Cardiotonics |  |
| Cardiovascular | |
| Cephalosporins | |
| Chemicals |  |
| Contraceptives | |
| Corticosteroids | |
| Cough/Cold |  |
| Decongestants | |
| Dermatological | |
| Diagnostic Products | |
| Dietary Products | |
| Digestive Aids | |
| Diuretics |  |
| Estrogens |  |
| Fluoroquinolones | |
| General Anesthetics | |
| Gout |  |
| Hematopoietic Agents | |
| Hemostatics |  |
| Hypnotics |  |
| Laxatives |  |
| Local Anesthetics-Parenteral | |
| Macrolide Antibiotics | |
| Unknown medication | |
| Medical Devices | |
| Migraine Products | |
| Minerals and Electrolytes | |
| Misc. Antiinfectives | |
| Misc. Endocrine | |
| Misc. Genitourinary Products | |
| Misc. Gi |  |
| Misc. Hematological | |
| Misc. Psychotherapeutic | |
| Misc. Respiratory | |
| Mouth and Throat (Local) | |
| Multivitamins |  |
| Neuromuscular Blockers | |
| Nutrients |  |
| Ophthalmic |  |
| Otic |  |
| Oxytocics |  |
| Penicillins |  |
| Pharmaceutical Adjuvants | |
| Pressors |  |
| Progestins |  |
| Skeletal Muscle Relaxants | |
| Stimulants |  |
| Sulfonamides | |
| Tetracyclines |  |
| Thyroid |  |
| Toxoids |  |
| Ulcer Drugs |  |
| Urinary Antiinfectives | |
| Urinary Antispasmodics | |
| Vaccines |  |
| Vaginal Products | |
| Vitamins |  |
| Any mood stabilizer | |
| Any antipsychotic | |
| Any anxiolytic | |
| Any antidepressant | |
| Lithium |  |
| Valpro |  |
| Lamotrigine |  |
| Carbamazepine | |
| Aripiprazole |  |
| Risperidone |  |
| Olanzapine |  |
| Quetiapine |  |
| Asenapine |  |
| Paliperidone |  |
| Ziprasidone |  |
| Lurasidone |  |
| Haloperidol |  |
| Chlorpromazine | |
| Amisulpride |  |
| Alprazolam |  |
| Bromazepam | |
| Chlordiazepoxide | |
| Clonazepam |  |
| Clorazepate |  |
| Diazepam |  |
| Flurazepam |  |
| Lorazepam |  |
| Oxazepam |  |
| Temazepam |  |
| Triazolam |  |
| Citalopram |  |
| Escitalopram |  |
| Paroxetine |  |
| Fluoxetine |  |
| Fluvoxamine |  |
| Sertraline |  |
| Desvenlafaxine | |
| Duloxetine |  |
| Levomilnacipran | |
| Milnacipran |  |
| Venlafaxine |  |
| Vilazodone |  |
| Vortioxetine |  |
| Nefazodone |  |
| Trazodone |  |
| Reboxetine |  |
| Teniloxazine |  |
| Viloxazine |  |
| Bupropion |  |
| Amitriptyline |  |
| Amitriptylinoxide | |
| Clomipramine | |
| Desipramine |  |
| Dibenzepin |  |
| Dimetacrine |  |
| Dosulepin |  |
| Doxepin |  |
| Imipramine |  |
| Lofepramine |  |
| Melitracen |  |
| Nitroxazepine | |
| Nortriptyline |  |
| Noxiptiline |  |
| Opipramol |  |
| Pipofezine |  |
| Protriptyline |  |
| Trimipramine |  |
| Amoxapine |  |
| Maprotiline |  |
| Mianserin |  |
| Mirtazapine |  |
| Setiptiline |  |
| Isocarboxazid | |
| Phenelzine |  |
| Tranylcypromine | |
| Selegiline |  |
| Discharge home |  |
| Discharge with home health |  |
| Discharge to inpatient psychiatry |  |
| Discharge to acute care facility |  |
| Discharge operating room | |
| Discharge to hospice |  |
| Discharge skilled nursing facility | |
| Discharge with planned readmission | |
| AWOL |  |
| Died |  |
| Discharged to rehabilitation |  |
| Discharge to long term care | |
| Day of admission |  |
| Day of discharge | |
| Length of stay | |
| Days until psychiatric rehospitalization | |
| Hospitalization associated with psychiatric rehospitalization within 30 days | |
| Days until rehospitalization | |
| Hospitalization associated with medical rehospitalization within 30 days | |
| Medical rehospitalization for suicidal ideation | |
| Medical rehospitalization for suicide attempt or self-harm | |
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