Data Elements for Health Data Shootout
February 2019

Center for Health Systems Innovation
Transforming Rural and Native American Health

Category	Column Name	Detailed description	Potential values	Dataset Fill Rate (%)
Patient Information	ENCOUNTER_ID	The unique identifier for each encounter, or patient visit, in this dataset. No two visits have the same encounter_id.	20-digit number	100
	PATIENT_SK	The unique identifier for each patient.		100
	GENDER	The patient's gender.	Female, Male	99.95
	MARITAL_STATUS	The marital status of the patient.	Divorced, Legally Separated, Married, Single, Unknown, Widowed, Null	99.98
	RACE	The race of the patient.	Asian, African American, Caucasian, Biracial, Pacific Islander, NULL, Native American, Unknown, etc.	99.98
	AGE_IN_YEARS	The age of the patient at admission (calculated from admission date minus date of birth). For HIPAA compliance purposes, ages greater than or equal to 90 are shown as 90. If using age in any analysis, use the latest age information present in the data.	0-90	99.99
Hospital Information	HOSPITAL_ID	The ID of the hospital or facility at which the encounter took place.	1-3306. Examples: 46, 76, 78, 101, 102	100
	BED_SIZE_RANGE	Indicates size of the hospital based on number of beds or the number of patients that the hospital can accommodate. To simplify analysis, bed sizes have been grouped into one of several categorical ranges.	<6, 6-99, 100-199, 200-299, 300-499, 500+	100
	URBAN_RURAL_STATUS	Indicates whether a hospital is located in an urban or rural area.	U (Urban), R (Rural)	100
	CENSUS_REGION	Indicates which of the four census regions where the facility is located: Northeast (New England, Middle Atlantic), Midwest (East North Central, West North Central), or South (East South Central, South).	Northeast, Midwest, South, West	100
	TEACHING_FACILITY_IND	Indicates if the healthcare organization is a teaching or non-teaching facility.	1 (Teaching), 0 (Non-Teaching), 1(NULL)	97.17
Visit Information	PATIENT_TYPE_DESC	Indicates whether the encounter (visit) was classified as an inpatient, emergency room, or outpatient visit. Although there are many other visit types, these three types constitute the majority of visits.	Inpatient, Emergency, Outpatient, Pre-Admit, Observation, Recurring, Short Stay, Outpatient Surgery, Clinic, Billing, Dental, Hospice, Non-patient	99.99
	DISCHG_DISP_CODE_DESC	Indicates the patient's status or discharge location as of the discharge date.	Examples: Discharged to home, Expired, Discharged/transferred to a SNF	99.77
	PAYER_CODE_DESC	Describes the patient's primary payer, or the insurance provider, during the visit.	Examples: Blue Cross/Blue Shield, CHAMPUS (Military dependents), HMO/Managed Care (undesignated), Medicare, Self-Pay	99.98
	ADMITTED_DT_TM	The date when the patient was admitted to the hospital/clinic. Note that, to protect the privacy of the patient, dates are randomly shifted in increments of 7 (to preserve day of the week) up to 35 days.	mm/dd/yyyy	100
	DISCHARGED_DT_TM	The date when the patient was discharged from the hospital/clinic. Note that, to protect the privacy of the patient, dates are randomly shifted in increments of 7 (in order to preserve day of the week) for up to±35 days.	mm/dd/yyyy	100
Opioid related information	opioid_overdose	Flag indicating whether the patient received a diagnosis for opiod overdose in the current encounter. For the list of diagnosis codes used, please refer to: https://onlinelibrary.wiley.com/doi/full/10.1002/pds.4157	1 or NULL	7.23
	adverse_opioid_effect	Flag indicating whether the patient received a diagnosis for an adverse opiod effect in the current encounter. For the diagnosis codes used, please refer to: https://onlinelibrary.wiley.com/doi/full/10.1002/pds.4157	1 or NULL	24.36

Drug information	drug_opioid	Flag indicating whether patient was prescribed an opiod medication in the current encounter. For a list of opiod drugs, please refer to: https://americanaddictioncenters.org/the-big-list-of-narcotic-drugs/	1 or NULL	22.24
	drug_benzodiazepine	Flag indicating whether patient was prescribed benzodiazepine in the current encounter. For a list of benzodiazepine drugs, please refer to: https://www.rehabcenter.net/list-of-benzodiazepines-united-states/	1 or NULL	25.27
	drug_naloxone	Flag indicating whether patient was prescribed Naloxone in the current encounter.	1 or NULL	6.35
	drug_assist_therapy	Flag indicating whether patient was given drug-assisted therapy in the current encounter. For a list of drugs used in drug-assisted therapy, please refer to: https://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm600092.htm	1 or NULL	7.69
	drug_corticosteroid	Flag indicating whether patient was prescribed a corticosteroid in the current encounter. For a list of corticosteroid drugs, please refer to: https://www.medicinenet.com/corticosteroids-oral/article.htm	1 or NULL	6.84
	drug_anticonvulsant	Flag indicating whether patient was prescribed an anticonvulsant in the current encounter. For a list of anticonvulsant drugs, please refer to: http://epilepsyontario.org/about-epilepsy/treatments/medications/anticonvulsantanti-seizure-medication-from-a-to-z/	1 or NULL	22.29
	drug_antidepressant	Flag indicating whether patient was prescribed an antidepressant in the current encounter. For a list of antidepressant drugs, please refer to: https://www.rxlist.com/the_comprehensive_list_of_antidepressants/drugs-condition.htm	1 or NULL	14.42
Vital Sign Measurements	bp_diastolic	Latest recorded value of systolic blood pressure, in mmHg, for the given encounter. If multiple values share the same latest timestamp, then the values are averaged. The normal range should be less than 120 mm Hg for an adult age 20 or over.	>0 or NULL	45.55
	bp_systolic	Average value of diastolic blood pressure, in mmHg, for the given encounter. The normal range should be less than 80 mm Hg for an adult age 20 or over.	>0 or NULL	45.55
	heart_rate	Average value of heart rate, in beats per minute (bpm), for the given encounter. A normal resting heart rate for adults ranges from 60 to 100 beats a minute. Generally, a lower heart rate at rest implies more efficient heart function and better cardiovascular fitness.	>0 or NULL	31.09
	resp_rate	Average value of respiration, in breaths per minute, for the given encounter. The normal respiration rate for an adult at rest is 12 to 20 breaths per minute. A respiration rate under 12 or over 25 breaths per minute while resting is considered abnormal.	>0 or NULL	45.68
	glasgow	Average value of Glasgow Coma Score for the given encounter. A fully awake and aware patient will have a maximum score of 15 and a patient in deep coma or brain dead will have a score of 3. For more information, please refer to: https://nurse.org/articles/glasgow-coma-scale/	0-15, or NULL	26.58

Lab Test Results	benzo_urine_test	Average value of urine test for benzodiazepines for the given encounter. A positive test result means that the test found the medicine's metabolite in the urine at the time the urine sample was taken. For more information, please refer to: https://www.urmc.rochester.edu/encyclopedia/content.aspx?contenttypeid=167&contentid=benzodiazepine_urine	Numeric or NULL	5.81
	cocaine_urine_test	Average value of urine test for Cocaine for the given encounter. A positive test result means cocaine or its metabolites were found, or negative, meaning no evidence of cocaine was found in your body. For more information, please refer to: https://www.urmc.rochester.edu/encyclopedia/content.aspx?contenttypeid=167&contentid=cocaine_screen	Numeric or NULL	2.6
	WBC_test	Average value of white blood cell count, in 10^3/uL or thousands per microliter, for the given encounter. A WBC count is a blood test to measure the number of white blood cells (WBCs) in the blood. The most common reasons are when you have an infection or allergic reaction. You can also have more WBCs when you are under stress or have inflammation. An increased number of WBCs can be due to a blood cancer, such as leukemia or lymphoma. The normal number of WBCs in the blood is 4.5 to 11 x 10^3 white blood cells per microliter. For more information, please refer to: https://medlineplus.gov/ency/article/003643.htm	>0 or NULL	30.06
	MCH_test	Average value of mean corpuscular hemoglobin (MCH) in picograms (pg)/cell, for the given encounter. This value refers to the average quantity of hemoglobin present in a single red blood cell. The normal ranges for MCH are 27.5 to 33.2 picograms for adults. For more details about the ranges and a deeper explanation of the test, please refer to: https://www.healthline.com/health/mch	>0 or NULL	36.24
	HCT_test	Average value of hematocrit, in %, for the given encounter. This value reflects the ratio of the volume of red blood cells to the total volume of blood. The hematocrit test is often used to check for anemia. The normal ranges for hematocrit % are 42% to 54% for adult males and 38% to 46% for adult females. For more information about the ranges and a deeper explanation of the test, please refer to: http://www.medicinenet.com/hematocrit/page2.htm	>0 or NULL	36.24
Visit counts	total_past_visits	Total past visits for the patient in the one year period prior to current encounter.	>0 or NULL	79.24
	total_ER_visits	Total past ER visits for the patient in the one year period prior to current encounter.	>0 or NULL	43.87
	total_outpatient_visits	Total past outpatient visits for the patient in the one year period prior to current encounter.	>0 or NULL	48.13
	total_inpatient_visits	Total past inpatient visits for the patient in the one year period prior to current encounter.	>0 or NULL	25.34

History of diagnoses	hist_cancer	Flag indicating whether the patient received a cancer diagnosis on any encounter in the one year period prior to the current encounter. For a list of diagnosis codes used, please refer to: https://seer.cancer.gov/tools/casefinding/case2014.html	1 or NULL	4.31
	hist_diabetes	Flag indicating whether the patient received a diabetes diagnosis on any encounter in the one year period prior to the current encounter. For a list of diagnosis codes used, please refer to: https://www.ncbi.nlm.nih.gov/books/NBK368403/table/sb203.t5/	1 or NULL	12.8
	hist_asthma_copd	Flag indicating whether the patient received an asthma or COPD-related diagnosis on any encounter in the one year period prior to the current encounter. The codes include ICD 9-CM 491.2* and 493*.	1 or NULL	15.03
	hist_hypertension	Flag indicating whether the patient received a hypertension diagnosis on any encounter in the one year period prior to the current encounter. The codes include ICD 9-CM 401.*.	1 or NULL	28.86
	hist_heart_disease	Flag indicating whether the patient received a heart disease diagnosis on any encounter in the one year period prior to the current encounter. For a list of diagnosis codes used, please refer to: http://mchp-appserv.cpe.umanitoba.ca/viewConcept.php?printer=Y&conceptID=1083	1 or NULL	8.74
	hist_mental_health	Flag indicating whether the patient received a mental health diagnosis on any encounter in the one year period prior to the current encounter. For a list of diagnosis codes used, please refer to: https://en.wikipedia.org/wiki/List_of_ICD-9_codes_290%E2%80%93319:_mental_disorders	1 or NULL	96.19
	hist_alcohol	Flag indicating whether the patient received an alcohol abuse diagnosis on any encounters in the one year period prior to the current encounter. For a list of diagnosis codes used, please refer to: https://www.ncbi.nlm.nih.gov/books/NBK367628/table/sb202.t4/?report=objectonly	1 or NULL	2
	hist_smoking	Flag indicating whether the patient received a tobacco- or smoking-related diagnosis on any encounter in the one year period prior to the current encounter. For a list of diagnosis codes used, please refer to: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3721171/	1 or NULL	7.66
	hist_chronic_pain	Flag indicating whether the patient received a chronic pain-related diagnosis on any encounter in the one year period prior to the current encounter. For a list of diagnosis codes used, please refer to: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5424616/	1 or NULL	47.02
	hist_abdominal_pain	Flag indicating whether the patient received an abdominal pain diagnosis code of ICD 9-CM 789.* on any encounter in the one year period prior to the current encounter.	1 or NULL	20.71
	hist_headache_migraine	Flag indicating whether the patient received migrane headache or a headache diagnosis code of ICD 9-CM 784.* or 346.* on any encounter in the one year period prior to the current encounter.	1 or NULL	8.11
	hist_unspecified_pain	Flag indicating whether the patient received an unspecified pain diagnosis code of ICD 9-CM 338.* or 780.96 on any encounter in the one year period prior to the current encounter.	1 or NULL	2.06
	hist_hepatitis_c	Flag indicating whether the patient received a hepatitis C diagnosis on any encounter in the three-month period prior to the current encounter. For a list of diagnosis codes used, please refer to: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5424616/	1 or NULL	10.51
	hist_opioid_doses	Flag indicating the total number of opiod doses that were prescribed in the one year period prior to the current visit. For the list of opioid drugs used, please refer to: https://americanaddictioncenters.org/the-big-list-of-narcotic-drugs/	1 or NULL	25.98
	hist_opioid_duration	Flag indicating the number of days the opiod doses were administered in a year prior to the current visit. Please refer the link for a list of opiod durgs https://americanaddictioncenters.org/the-big-list-of-narcotic-drugs/	1 or NULL	25.96

Count of Inpatient and Outpatient Admissions	future_visits	Total number of admissions for the one year period after the current encounter Note that a visit can be either classified as either inpatient or outpatient, but not both.	>0 or NULL	79.02
	future_ER_visits	Total number of emergency room (ER) admissions for the one year period after the current encounter.	>0 or NULL	40
	future_inpatient_visits	Total number of inpatient admissions for the one year period after the current encounter.	>0 or NULL	23.51
	future_outpatient_visits	Total number of outpatient admissions for the one year period after the current encounter.	>0 or NULL	48.05
	future_opioid_dependence	Flag indicating whether the patient received an opioid dependence diagnosis on any encounters within the one year period after the current encounter. For a list of diagnosis codes used, please refer to: https://onlinelibrary.wiley.com/doi/full/10.1002/pds.4157	1 or NULL	43.85
	future_opioid_overdose	Flag indicating whether the patient received an opiod overdose diagnosis on any encounter within the one year period after the current encounter. https://onlinelibrary.wiley.com/doi/full/10.1002/pds.4157	1 or NULL	1.95
	future_adverse_opioid_effect	Flag indicating whether the patient received an adverse opiod effect diagnosis on any encounter within the one year period after the current encounter. https://onlinelibrary.wiley.com/doi/full/10.1002/pds.4157	1 or NULL	19.62
	future_naloxone	Flag indicating whether the patient was prescribed Naloxone on any encounter within the one year period after the current encounter.	1 or NULL	6.14
	future_drug_assist_therapy	Flag indicating whether the patient received drug-assisted therapy on any encounter within the one year period after the current encounter. https://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm600092.htm	1 or NULL	7.18
	future_expired	Flag indicating whether the patient expired on any encounter within the one year period after the current encounter.	1 or NULL	1.15
	future_30day_inpatient	Flag indicating whether the patient was readmitted within 30 days as an inpatient after the current encounter.	1 or NULL	7.17
	future_30day_ER	Flag indicating whether the patient was readmitted to the emergency room within 30 days after the current encounter.	1 or NULL	12.95