Synthetic Linked 2016 NHCS-NDI Data Codebook

Date Created: 24AUG2026
Number of Variables: 47

Variable Name	Variable Label	Variable Source	Range of Values	Value Description	Notes
SEQNUM	Sequence number	N/A	ID		Sequential numbering of records in synthetic data file.
COPD_IND	Chronic Obstructive Pulmonary Disease Diagnosis	NHCS Patient Encounter	0	Not present	Patient-level variable constructed to identify whether any ICD-10-CM diagnosis codes on any of the patient's encounters indicated a diagnosis of COPD.
			1	Condition present	
DEATH_WITHIN_30DAYS	Patient death within 30 days of last encounter	Linked NHCS-NDI	0	No	Patient-level recode variable created to indicate if patient death occurred within 0-30 days of hospital encounter date of discharge (including deaths that occurred during an IP or ED hospital encounter). Source variable is TIME_TO_DEATH_CD. Note that this variable was created post-synthesis.
			1	Yes	
DEATH_WITHIN_60DAYS	Patient death within 60 days of last encounter	Linked NHCS-NDI	0	No	Patient-level recode variable created to indicate if patient death occurred within 0-60 days of hospital encounter date of discharge (including deaths that occurred during an IP or ED hospital encounter). Source variable is TIME_TO_DEATH_CD. Note that this variable was created post-synthesis.
			1	Yes	
DEATH_WITHIN_90DAYS	Patient death within 90 days of last encounter	Linked NHCS-NDI	0	No	Patient-level recode variable created to indicate if patient death occurred within 0-90 days of hospital encounter date of discharge (including deaths that occurred during an IP or ED hospital encounter). Source variable is TIME_TO_DEATH_CD. Note that this variable was created post-synthesis.
			1	Yes	
DIABETES_IND	Diabetes (diagnosis)	NHCS Patient Encounter	0	Not Present	Patient-level variable constructed to identify whether any ICD-10-CM diagnosis codes on any of the patient's encounters indicated a diagnosis of diabetes.
			1	Condition Present	
DRUG_OVRDSE_DEATH	Drug overdose deaths	Linked NHCS-NDI	0	Death not caused by drug overdose	Patient-level variable constructed to identify linked NDI records where the underlying cause of death indicated a drug overdose death.

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			1	Death caused by drug overdose	
			2	Assumed alive	
DRUG_OVRDSE_DEATH_ANYOPIOID	Drug overdose deaths involving any opioid	Linked NHCS-NDI	0	Death not caused by overdose	Patient-level variable constructed to identify linked NDI records where the underlying cause of death indicated a drug overdose death and the multiple causes of death codes indicated any opioid involvement.
			1	Death caused by opioid overdose	
			2	Assumed alive	
DRUG_OVRDSE_DEATH_ANYOPIOID_R	Recoded drug overdose deaths involving any opioid	Linked NHCS-NDI	0	No	Patient-level recode variable created to indicate if patient's underlying cause of death indicated a drug overdose death and the multiple causes of death codes indicated any opioid involvement. Source variable is DRUG_OVRDSE_DEATH_ANYOPIOID. Note that this variable was created post-synthesis.
			1	Yes	
DRUG_OVRDSE_DEATH_R	Recoded drug overdose deaths	Linked NHCS-NDI	0	No	Patient-level recode variable created to indicate if patient's underlying cause of death indicated a drug overdose death. Source variable is DRUG_OVRDSE_DEATH. Note that this variable was created post-synthesis.
			1	Yes	
DSCHRG_STUS_CD	Hospital discharge status	NHCS Patient Encounter	1	Home	Patient-level variable constructed to provide information on the patient's discharge status from their encounter records reported in the 2016 NHCS.
			2	Admitted as inpatient	
			3	Another facility	
			4	Deceased	
			5	Hospice care	
			6	Other discharge	

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Variable Name	Variable Label	Variable Source	Range of Values	Value Description	Notes
			7	Discharge status unknown	
DSCHRG_STUS_CD_R	Recoded hospital discharge status	NHCS Patient Encounter	1	Home	Recode variable created to further combine patient discharge status categories. Source variable is DSCHRG_STUS_CD. Note that this variable was created post-synthesis.
			2	Other facility	
			3	Deceased or Hospice	
			4	Other	
ED_ENCOUNTER_POSTIP_IND	ED encounter within 7 days of IP discharge	NHCS Patient Encounter	0	None within 7 days	Patient-level variable constructed to indicate whether the 2016 NHCS patient had any ED encounter admission dates that occurred within 7 days after an IP discharge date.
			1	At least one readmission	
HEART_DISEASE_IND	Heart disease (diagnosis)	NHCS Patient Encounter	0	Not present	Patient-level variable constructed to identify whether any ICD-10-CM diagnosis codes on any of the patient's encounters indicated a diagnosis of heart disease.
			1	Present	
LAST_ENC_SETTING	Setting of the last patient encounter record	NHCS Patient Encounter	1	Emergency Department	Patient-level variable constructed to provide information regarding the type of hospital setting in which each patient's last 2016 NHCS hospital encounter reported took place.
			2	Inpatient	
MENTAL_HEALTH_IND	Mental health (diagnosis)	NHCS Patient Encounter	0	Not present	Patient-level variable constructed to identify whether any ICD-10-CM diagnosis codes on any of the patient's encounters indicated a mental health related diagnosis.
			1	Present	
MONTH_LAST_ENC	Month of last encounter (IP or ED)	NHCS Patient Encounter	1	January	Patient-level variable constructed to identify the month that the last reported IP or ED hospital encounter occurred.

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			2	February	
			3	March	
			4	April	
			5	May	
			6	June	
			7	July	
			8	August	
			9	September	
			10	October	
			11	November	
			12	December	
MORTSTAT	Patient final mortality status	Linked NHCS-NDI	0	Assumed alive	Patient-level variable for final assigned mortality status based on the NHCS-NDI linkage results for deaths occurring from January 1, 2016 through December 31, 2017.
			1	Assumed deceased	
P_AGE_CD	Patient age	NHCS Patient Encounter	1	18-44 years	Patient-level variable constructed to compute patient age based on date of birth and date of discharge on the patient's last reported hospital encounter. If a patient had more than one unique date of birth collected by the NHCS, the earliest date of birth was used to compute the patient's age.
			2	45-64 years	
			3	65-84 years	
			4	85+ years	
P_AGE_CD_R	Recoded age	NHCS Patient Encounter	1	18-44 years	Patient-level recode variable created to provide an ages 65 and over age category. Source variable is P_AGE_CD. Note that this variable was created post-synthesis.

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Variable Name	Variable Label	Variable Source	Range of Values	Value Description	Notes
			2	45-64 years	
			3	65+ years	
P_RACE_ETHNCTY_CD	Imputed patient race/ethnicity	NHCS Patient Encounter	1	White, Non-Hispanic	Patient-level variable imputed to assign patient race and ethnicity using a statistical model based on first and last names and race/ethnicity distributions at the Census-tract level from the 2010 Decennial Census.
			2	Black, Non-Hispanic	
			3	Hispanic	
			4	Other races, Non-Hispanic	
P_SEX_CD	Patient sex	NHCS Patient Encounter	1	Male	Patient-level variable constructed to code patient sex based on the reported sex from the patient's last hospital encounter record.
			2	Female	
P_URBRURAL_CD	Patient residence urban/rural status	NHCS Patient Encounter	1	Urban Metro	Patient-level variable constructed to assign a rural/urban status code based on hospital reported patient address of residence from the patient's last hospital encounter record.
			2	Rural Micro	
			3	Rural Non-Core	
P_URBRURAL_CD_R	Recoded urban/rural status	NHCS Patient Encounter	1	Urban	Patient-level recode variable created to further combine rural/urban status categories. Source variable is P_URBRURAL_CD. Note that this variable was created post-synthesis.
			2	Rural	
SEPSIS_IND	Sepsis (diagnosis)	NHCS Patient Encounter	0	Not Present	Patient-level variable constructed to identify whether any ICD-10-CM diagnosis codes on any of the patient's encounters indicated a diagnosis of sepsis.
			1	Present	

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TIME_TO_DEATH_CD	Time to death	Linked NHCS-NDI	0	0-30 days	Number of days between the patient's NDI date of death and the last hospital encounter date of discharge.
			1	31-60 days	
			2	61-90 days	
			3	91-365 days	
			4	366 or more days	
			5	Assumed alive	
TOT_ED_ENC	Total number of ED encounter records	NHCS Patient Encounter	0	No encounters	Patient-level variable constructed to provide information on the total number of ED encounter records reported per patient.
			1	One encounter	
			2	Two encounters	
			3	Three or more encounters	
TOT_ED_ENC_R1	Total number of ED encounter records, Recode 1	NHCS Patient Encounter	0	No encounters	Patient-level recode (1) variable created to combine categories for the number of ED encounters. Source variable is TOT_ED_ENC. Note that this variable was created post-synthesis.
			1	One or more encounters	
TOT_ED_ENC_R2	Total number of ED encounter records, Recode 2	NHCS Patient Encounter	0	Zero or one encounter	Patient-level recode (2) variable created to combine categories for the number of ED encounters. Source variable is TOT_ED_ENC. Note that this variable was created post-synthesis.
			1	Two or more encounters	
TOT_ICU_DAYS	Total number of days of intensive care unit care	NHCS Patient Encounter	0	No days	Patient-level variable constructed to count the total number of days a patient was receiving care in a hospital Intensive Care Unit (ICU).
			1	One day	
			2	Two days	
			3	Three or more days	

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TOT_ICU_DAYS_R1	Total number of patient ICU days, recode 1	NHCS Patient Encounter	0	No days	Patient-level recode (1) variable created to combine categories for the number of ICU days of care. Source variable is TOT_ICU_DAYS. Note that this variable was created post-synthesis.
			1	One ore more days	
TOT_ICU_DAYS_R2	Total number of patient ICU days, recode 2	NHCS Patient Encounter	0	Zero or one day	Patient-level recode (2) variable created to combine categories for the number of ICU days of care. Source variable is TOT_ICU_DAYS. Note that this variable was created post-synthesis.
			1	Two ore more days	
TOT_IP_ENC	Total number of IP encounter records	NHCS Patient Encounter	0	No encounters	Patient-level variable constructed to provide information on the total number of IP encounter records reported in the 2016 NHCS.
			1	One ecounter	
			2	Two ore more encounters	
TOT_IP_ENC_R1	Total number of IP encounter records, Recode 1	NHCS Patient Encounter	0	No encounters	Patient-level recode (1) variable created to combine categories for the number of IP encounters. Source variable is TOT_IP_ENC. Note that this variable was created post-synthesis.
			1	One ore more encounters	
TOT_IP_ENC_R2	Total number of IP encounter records, Recode 2	NHCS Patient Encounter	0	Zero or one encounter	Patient-level recode (2) variable created to combine categories for the number of IP encounters. Source variable is TOT_IP_ENC. Note that this variable was created post-synthesis.
			1	Two ore more encounters	
TOT_OPIOID_ENC	Total number of opioid-involved hospital encounters	NHCS Enhanced Opioid Identification	0	No encounters	Patient-level variable constructed to count the number of opioid-involved hospital IP and ED encounter records reported in the 2016 NHCS. Opioid-involved hospital encounters were identified by the Enhanced Opioid Identification Algorithm created by the NCHS Division of Health Care Statistics.
			1	One encounter	

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			2	Two ore more encounters	
TOT_OPIOID_ENC_R	Recoded total number of opioid-involved hospital encounters	NHCS Enhanced Opioid Identification	1	Zero or one encounter	Patient-level recode variable created to combine categories for the number of opioid-involved hospital encounters (IP and ED). Source variable is TOT_OPIOID_ENC. Note that this variable was created post-synthesis.
			2	Two ore more encounters	
UCOD_ALZHEIMERS_ DISEASE	Cause of death: Alzheimer's disease	Linked NHCS-NDI	0	No	Patient-level recode variable created to identify patient deaths where underlying cause of death was Alzheimer's disease. Source variable is UCOD_LEADING. Note that this variable was created post-synthesis.
			1	Yes	
UCOD_CANCER	Cause of death: malignant neoplasms	Linked NHCS-NDI	0	No	Patient-level recode variable created to identify patient deaths where underlying cause of death was malignant neoplasms (cancer). Source variable is UCOD_LEADING. Note that this variable was created post-synthesis.
			1	Yes	
UCOD_CHRONIC_LOWER_ RESP_DISEASE	Cause of death: chronic lower respiratory diseases	Linked NHCS-NDI	0	No	Patient-level recode variable created to identify patient deaths where underlying cause of death was chronic lower respiratory disease. Source variable is UCOD_LEADING. Note that this variable was created post-synthesis.
			1	Yes	
UCOD_DIABETES	Cause of death: diabetes mellitus	Linked NHCS-NDI	0	No	Patient-level recode variable created to identify patient deaths where underlying cause of death was diabetes mellitus. Source variable is UCOD_LEADING. Note that this variable was created post-synthesis.
			1	Yes	
UCOD_HEART_DISEASE	Cause of death: Diseases of the heart	Linked NHCS-NDI	0	No	Patient-level recode variable created to identify patient deaths where underlying cause of death was heart disease. Source variable is UCOD_LEADING. Note that this variable was created post-synthesis.

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			1	Yes	
UCOD_INFLUENZA_AND_PNEUMONIA	Cause of death: influenza and pneumonia	Linked NHCS-NDI	0	No	Patient-level recode variable created to identify patient deaths where underlying cause of death was influenza or pneumonia. Source variable is UCOD_LEADING. Note that this variable was created post-synthesis.
			1	Yes	
UCOD_KIDNEY_DISEASE	Cause of death: nephritis, nephrotic syndrome and nephrosis	Linked NHCS-NDI	0	No	Patient-level recode variable created to identify patient deaths where underlying cause of death was Nephritis, Nephrotic Syndrome, or Nephrosis (kidney disease). Source variable is UCOD_LEADING. Note that this variable was created post-synthesis.
			1	Yes	
UCOD_LEADING	Underlying cause of death (9 leading categories)	Linked NHCS-NDI	0	Assumed alive	Patient-level variable constructed to categorize ICD-10 underlying cause of death codes (ICD_10REV) into nine categories representing the top nine leading causes of death among the U.S. population in 2016.
			1	Heart disease	
			2	Malignant neoplasms	
			3	Chronic lower respiratory diseases	
			4	Accidents	
			5	Cerebrovascular diseases	
			6	Alzheimer's disease	
			7	Diabetes mellitus	
			8	Influenza and pneumonia	
			9	Kidney disease	
			10	All other causes	

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UCOD_STROKE	Cause of death: cerebrovascular diseases	Linked NHCS-NDI	0	No	Patient-level recode variable created to identify patient deaths where underlying cause of death was cerebrovascular diseases (stroke). Source variable is UCOD_LEADING. Note that this variable was created post-synthesis.
			1	Yes	
UCOD_UNINTENTIONAL_INJURIES	Cause of death: unintentional injuries	Linked NHCS-NDI	0	No	Patient-level recode variable created to identify patient deaths where underlying cause of death was unintentional injuries (accidents). Source variable is UCOD_LEADING. Note that this variable was created post-synthesis.
			1	Yes	