VIRTUAL DATA WAREHOUSE
DATA SPECIFICATIONS

Version 4.0

Updated February 2020

The HCSRN's Virtual Data Warehouse (VDW) is a pioneering common data model designed to support multi-site health system research. The VDW consists of clinical and claims data mapped to a common format to create tremendous efficiencies for data extraction, collection, and management.
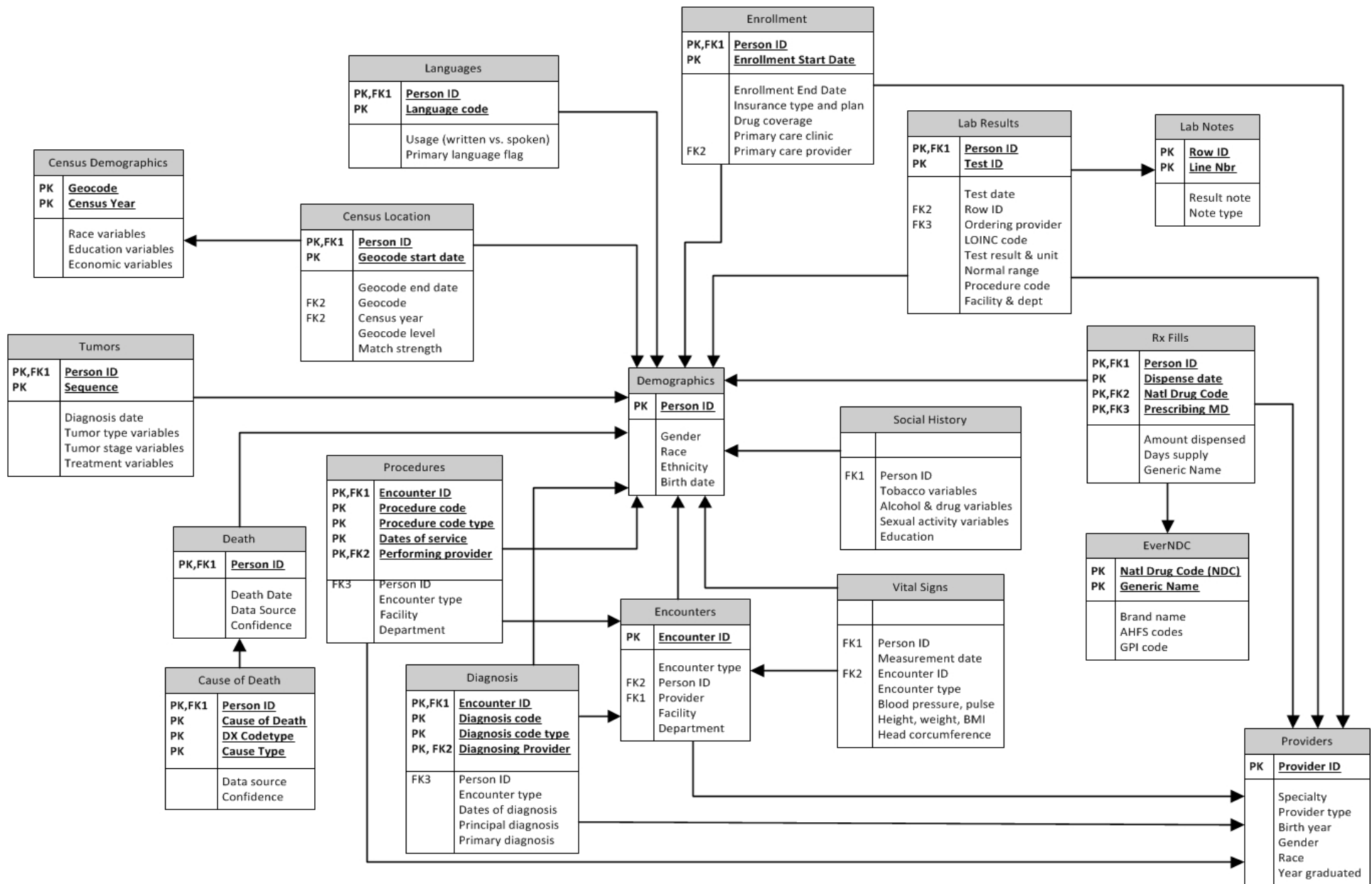
This document, the Virtual Data Warehouse Data Model Specifications, provides detailed data specifications for the VDW data model. These data areas are managed by site data managers and designated workgroups within the HCSRN sites. Some of the information contained in these spec sheeets is only available to registered members of the HCSRN.

To submit a request for additional information regarding any of the data specs described in this document, please reach out to the VOC, admin@hcsrn.org.

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HCSRN VIRTUAL DATA WAREHOUSE ENTITY-RELATIONSHIP MODEL

Enrollment

PK,FK1	**Person ID**
PK	**Enrollment Start Date**
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	Insurance type and plan
	Drug coverage
	Primary care clinic
FK2	Primary care provider

Languages

PK,FK1	**Person ID**
PK	**Language code**
	Usage (written vs. spoken)
	Primary language flag

Lab Results

PK,FK1	**Person ID**
PK	**Test ID**
	Test date
FK2	Row ID
FK3	Ordering provider
	LOINC code
	Test result & unit
	Normal range
	Procedure code
	Facility & dept

Lab Notes

PK	**Row ID**
PK	**Line Nbr**
	Result note
	Note type

Census Demographics

PK	**Geocode**
PK	**Census Year**
	Race variables
	Education variables
	Economic variables

Census Location

PK,FK1	**Person ID**
PK	**Geocode start date**
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FK2	Geocode
FK2	Census year
	Geocode level
	Match strength

Tumors

PK,FK1	**Person ID**
PK	**Sequence**
	Diagnosis date
	Tumor type variables
	Tumor stage variables
	Treatment variables

Demographics

PK	**Person ID**
	Gender
	Race
	Ethnicity
	Birth date

Social History

FK1	Person ID
	Tobacco variables
	Alcohol & drug variables
	Sexual activity variables
	Education

Rx Fills

PK,FK1	**Person ID**
PK	**Dispense date**
PK,FK2	**Natl Drug Code**
PK,FK3	**Prescribing MD**
	Amount dispensed
	Days supply
	Generic Name

EverNDC

PK	**Natl Drug Code (NDC)**
PK	**Generic Name**
	Brand name
	AHFS codes
	GPI code

Procedures

PK,FK1	**Encounter ID**
PK	**Procedure code**
PK	**Procedure code type**
PK	**Dates of service**
PK,FK2	**Performing provider**
FK3	Person ID
	Encounter type
	Facility
	Department

Death

PK,FK1	**Person ID**
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	Data Source
	Confidence

Cause of Death

PK,FK1	**Person ID**
PK	**Cause of Death**
PK	**DX Codetype**
PK	**Cause Type**
	Data source
	Confidence

Diagnosis

PK,FK1	**Encounter ID**
PK	**Diagnosis code**
PK	**Diagnosis code type**
PK, FK2	**Diagnosing Provider**
FK3	Person ID
	Encounter type
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Encounters

PK	**Encounter ID**
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	Provider
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Vital Signs

FK1	Person ID
	Measurement date
FK2	Encounter ID
	Encounter type
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	Height, weight, BMI
	Head corcumference

Providers

PK	**Provider ID**
	Specialty
	Provider type
	Birth year
	Gender
	Race
	Year graduated

Version = 4.0 StdVar = &_vdw_demographic

Subject Area Description

The DEMOGRAPHICS table contains patient/enrollee level descriptives for the people found in VDW tables. It serves as a lookup dataset for MRNs. Every MRN appearing in any other VDW file should appear in the Demographics table, even if demographics information on the person is unknown.

Variable Name	Definition	Type(Len)	Values
MRN	Medical record number is the unique patient identifier within a site and should never leave the site	char(*)	Unique to each patient at each site
BIRTH_DATE	The person's date of birth	num(4)	SAS Date
GENDER	The person's gender and/or sex; if both gender and sex are known, this variable should hold gender	char(1)	M = Male F = Female O = Other including transgendered U = Unknown
RACE1 - RACE5	The person's race. Preference is for self-reported; please see comment 1 for recording multiple race values	char(2)	HP = Native Hawaiian / Pacific Islander IN = American Indian / Alaskan Native AS = Asian BA = Black or African American WH = White MU = Multiple races with particular unknown OT = Other, values that do not fit well in any other value UN = Unknown or Not Reported
HISPANIC	Whether the person is of Hispanic origin/ethnicity	char(1)	Y = Yes N = No U = Unknown

NEEDS_INTERPRETER	Whether the person needs an interpreter to communicate with an English-only speaker	char(1)	Y = Yes N = No U = Unknown

Primary Key:

MRN

Foreign Key Relationship:

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?	
[None Defined]				

Usage Notes

1 - If source data indicates the person's race as "Hispanic" and there is no other known race recorded for the person, code the person's race as unknown. Please see appendix A for guidelines on mapping local race values to the permissible value set in the VDW. When more than one race is known for a given person, assign values to the race variables in the order listed above RACE values and fill in any unused race variables with the value UN for unknown / not reported. Examples of coding RACE1 through RACE5 are illustrated here:

Example Race Coding	Race1	Race2	Race3	Race4	Race5
White only	WH	UN	UN	UN	UN
White and Pacific-Islander	HP	WH	UN	UN	UN
No Race Known	UN	UN	UN	UN	UN
African-American and Native-American	IN	BA	UN	UN	UN
Multi-racial, particular races not reported.	MU	UN	UN	UN	UN

Comments

Updated 12/30/2015 - Primary_language variable removed

LANGUAGE

Version = 4.0 StdVar = &_vdw_language

Subject Area Description

The LANGUAGE table contains information on the languages that patients speak and write. There is one record per person per known language. People on whom you have no language information should not be included in the table.

Variable Name	Definition	Type(Len)	Values
MRN	Medical record number is the unique patient identifier within a site and should never leave the site	char(*)	Unique to each patient at each site
LANG_ISO	A code signifying the language.	char(3)	As defined by ISO-639-2 or 'unk' for unknown Note that value set is lowercase
LANG_USAGE	How the person uses this language.	char(1)	S = Spoken/signed W = Written B = Both spoken and written U = Unknown
LANG_PRIMARY	For spoken languages, whether this is the person's primary spoken language.	char(1)	Y = Yes N = No U = Unknown

Primary Key:

MRN + LANG_ISO

Foreign Key Relationship:

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?
MRN	DEMOGRAPHICS	MRN	No

Usage Notes

Code to pull ISO specification from the web
Note: This may or may not work depending on SAS set up and website changes.
* Create file ref pointing to the URL;
*filename langiso url "http://www.loc.gov/standards/iso639-2/ISO-639-2_utf-8.txt";
* In case anyone would need UTF-8;
filename langiso url "http://www.loc.gov/standards/iso639-2/ISO-639-2_8859-1.txt";

```
* Import data from web site ;
PROC IMPORT DATAFILE = "langiso"
        OUT = lang_iso1
        DBMS = dlm
        REPLACE;
        delimiter='|';
        GETNAMES = no;
RUN;

* Create file to match to local names ;
data lang_iso (keep = iso639_2 name iso_name);
  set lang_iso1 (rename = (var1 = iso639_2 var4 = name));
  iso_name = name;
run;
```

Comments

Version = 4.0 StdVar = &_vdw_enroll

Subject Area Description

The ENROLLMENT table contains periods of time during which we believe to have at least the partial capture of medical care information either because of enrollment in a health plan or as a patient of a care delivery system that we own or interact with. Insurance coverage is not the only basis of data capture (see ENROLLMENT_BASIS) nor do all records necessarily indicate completeness of data capture (see OUTSIDE_UTILIZATION). Each record represents a period of time during which the information on the included variables was true. As many records as are necessary should be added to represent changes over time. There may be many contiguous records for a single period of enrollment, in order to account for these changes. However, periods may NOT overlap one another; there should be only one record covering any given day + medical record number. The following figure illustrates this concept:
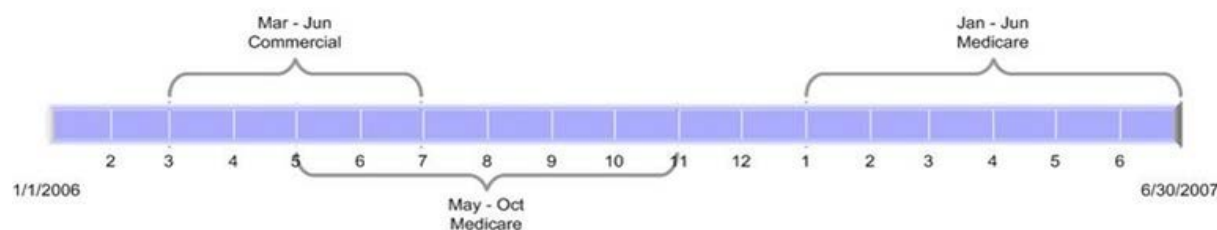
Should result in 4 records:

```
MRN   enr_start     enr_end       ins_commercial ins_medicare
111   03/01/2006    04/30/2006    Y
111   05/01/2006    06/30/2006    Y              Y
111   07/01/2006    10/31/2006                   Y
111   01/01/2007    06/30/2007                   Y
```

Variable Name	Definition	Type(Len)	Values
MRN	Medical record number is the unique patient identifier within a site and should never leave the site	char(*)	Unique to each patient at each site
ENR_START	Beginning of the period at risk for medical care capture	num(4)	SAS Date

ENR_END	End of the period at risk for medical care capture	num(4)	SAS Date
INS_MEDICAID	Whether the person had any Medicaid insurance coverage during the period	char(1)	Y = Yes E = Yes, but from an External organization N = No U = Unknown
INS_COMMERCIAL	Whether the person had any commercial insurance coverage during the period	char(1)	Y = Yes E = Yes, but from an External organization N = No U = Unknown
INS_PRIVATEPAY	Whether the person had any insurance coverage in a private pay plan during the period	char(1)	Y = Yes E = Yes, but from an External organization N = No U = Unknown
INS_STATESUBSIDIZED	Whether the person had any state subsidized insurance coverage during the period	char(1)	Y = Yes E = Yes, but from an External organization N = No U = Unknown
INS_SELFFUNDED	Whether the person had any insurance coverage through an employer group that insures itself during the period	char(1)	Y = Yes E = Yes, but from an External organization N = No U = Unknown

INS_HIGHDEDUCTIBLE	Whether the person had any insurance coverage in a high deductible plan during the period as defined by the U.S. IRS (Pub 969) qualifying for a Health Savings Account	char(1)	Y = Yes E = Yes, but from an External organization N = No U = Unknown
INS_MEDICARE	Whether the person had any Medicare insurance coverage, including Medicare working aged, during the period	char(1)	Y = Yes E = Yes, but from an External organization N = No U = Unknown
INS_MEDICARE_A	Whether the person had Medicare Part A insurance coverage during the period	char(1)	Y = Yes E = Yes, but from an External organization N = No U = Unknown
INS_MEDICARE_B	Whether the person had Medicare Part B insurance coverage during the period	char(1)	Y = Yes E = Yes, but from an External organization N = No U = Unknown
INS_MEDICARE_C	Whether the person had Medicare Part C insurance coverage during the period	char(1)	Y = Yes E = Yes, but from an External organization N = No U = Unknown
INS_MEDICARE_D	Whether the person had Medicare Part D insurance coverage during the period	char(1)	Y = Yes E = Yes, but from an External organization N = No U = Unknown

INS_OTHER	Whether the person had insurance coverage during the period that is not otherwise included in the INS_* variables during the period	char(1)	Y = Yes E = Yes, but from an External organization N = No U = Unknown
PLAN_HMO	Whether the person had insurance coverage under an HMO plan during the period	char(1)	Y = Yes E = Yes, but from an External organization N = No U = Unknown
PLAN_POS	Whether the person had insurance coverage in a point-of-service plan during the period	char(1)	Y = Yes E = Yes, but from an External organization N = No U = Unknown
PLAN_PPO	Whether the person had insurance coverage in a preferred provider organization plan during the period	char(1)	Y = Yes E = Yes, but from an External organization N = No U = Unknown
PLAN_INDEMNITY	Whether the person had insurance coverage in a traditional indemnity plan during the period	char(1)	Y = Yes E = Yes, but from an External organization N = No U = Unknown
DRUGCOV	Whether the person had any insurance coverage that included at least some coverage for prescription drugs	char(1)	Y = Yes E = Yes, but from an External organization N = No U = Unknown

INCOMPLETE_OUTPT_RX	Is outpatient pharmacy fill data suspected to be incomplete for this person/period?	char(1)	K = There are known reasons to suspect incomplete caputure N = No, there is no known reason to suspect incomplete capture X = This variable not implemented at this site
INCOMPLETE_OUTPT_ENC	Is outpatient encounter data suspected to be incomplete for this person/period?	char(1)	K = There are known reasons to suspect incomplete caputure N = No, there is no known reason to suspect incomplete capture X = This variable not implemented at this site
INCOMPLETE_INPT_ENC	Is inpatient encounter data suspected to be incomplete for this person/period?	char(1)	K = There are known reasons to suspect incomplete caputure N = No, there is no known reason to suspect incomplete capture X = This variable not implemented at this site

INCOMPLETE_EMR	Is electronic medical record data (e.g. social history, vital signs) suspected to be incomplete for this person/period?	char(1)	K = There are known reasons to suspect incomplete caputure N = No, there is no known reason to suspect incomplete capture X = This variable not implemented at this site
INCOMPLETE_TUMOR	Is tumor data suspected to be incomplete for this person/period?	char(1)	K = There are known reasons to suspect incomplete caputure N = No, there is no known reason to suspect incomplete capture X = This variable not implemented at this site
INCOMPLETE_LAB	Is lab results data suspected to be incomplete for this person/period?	char(1)	K = There are known reasons to suspect incomplete caputure N = No, there is no known reason to suspect incomplete capture X = This variable not implemented at this site
ENROLLMENT_BASIS	The basis for the claim that we have at least partial capture of the medical care information during the period. Historically 'I'nsurance was the only permissible basis	char(1)	G = Geography I = Insurance B = Both geography & insurance P = Non-enrolled patient

| PCC | The primary care clinic to which the patient is paneled in administrative record. | char(*) | Same value set as UTILIZATION.FACILITY_CODE |
| PCP | The clinician to which the patient is paneled in administrative record | char(*) | Values link as a foreign key to UTILIZATION.PROVIDER |

Primary Key:

MRN + ENR_START (no overlapping time periods are permitted)

Foreign Key Relationship:

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?	
MRN	DEMOGRAPHICS	MRN	No	
PCP	PROVIDER	PROVIDER	No	

Usage Notes

For the INCOMPLETE_XXX variables, users are advised to treat N and X values as essentially identical in information content. For applications that require, for example, complete Tumor data over time, we recommend using a condition like: WHERE incomplete_tumor ne "Y". Users may also want to avail themselves of the enrollment_basis variable for applications that require complete pharmacy or encounter data. When in doubt please check with your sites.

Many sites have added site-specific variables that are not a part of the specifications. At these sites, users may well find multiple records for contiguous time periods, over which none of the official specification variables change. Users will likely be interested in the %CollapsePeriods or enrollment-related macros for collapsing records in to continuous periods.

Comments

Updated 12/30/2015

Version = 4.0 StdVar = &_vdw_utilization

Subject Area Description

The ENCOUNTER table contains one record for each significant medical-related interaction between a patient and a medical provider regardless of care setting or type of encounter. All known encounters should be included whether known through claims, through clinical systems, or a third source type. Inclusion, exclusions, classification, and uniqueness of an encounter is dependent on the type of service and care setting. For a precise description, please refer to the Utilization Implementation Guidelines on the private HCSRN website.

Variable Name	Definition	Type (Len)	Values
MRN	Medical record number is the unique patient identifier within a site and should never leave the site	char(*)	Unique to each patient at each site. Nulls are not allowed
ADATE	Encounter or admit date for inpatient or institutional stay. If encounter/admit date is unknown, then use the first date of a claim.	num(4)	SAS date. Nulls are not allowed
ATIME	Start time of an encounter. - Use admission time for inpatient, emergency or institutional encounters. - For other encounters (such as ambulatory visits), use check-in time if this field is populated, otherwise use appointment time. If unknown, specify as null	num(4)	SAS time. # of seconds since midnight (0-86,400), If input data are default time values (placeholders and not actual time measurements) and there isn't another source for time, set these default time values to missing. Sites can restrict this rule to specific encounter type/subtype values and/or data sources. null values are allowed

DDATE	Discharge date for inpatient and overnight encounters. End date for other encounters if documented in the source data. If discharge date is unknown, then use the last date of a claim.	num(4)	SAS date null values are allowed although this field is expected to be populated for inpatient and instistutional stays
DTIME	End time of an encounter. - Use discharge time for inpatient, emergency or institutional encounters. - For other encounters (such as ambulatory visits), use check-out time if populated. If unknown, specify as null	num(4)	SAS time. # of seconds since midnight (0-86,400), If input data are default time values (placeholders and not actual time measurements) and there isn't another source for time, set these default time values to missing. Sites can restrict this rule to specific encounter type/subtype values and/or data sources. null values are allowed
PROVIDER	Identifies the provider most responsible for the encounter.	char(*)	Unique to each provider at each site. If unknown, then use value "UNK"
ENC_ID	Uniquely identifies the encounter. The value should not change at update. An encounter should be unique across MRN, ADATE, ENCTYPE, PROVIDER, ENCOUNTER_SUBTYPE, FACILITY_CODE and appointment time.	char(*)	Unique to each encounter at each site.

ENCTYPE	The type of encounter. Valid associated ENCOUNTER_SUBTYPE values are in brackets	char(2)	IP = Acute inpatient hospital stay including inpatient stays, same-day hospital discharges, hospital transfers when patient was admitted into hospital, acute inpatient pysch, and detox stays. [SUB = AI] ED = Emergency department excluding urgent care [SUB = HA, OC] AV = Ambulatory visit including outpatient clinics, same-day surgeries, observation beds, urgent care visits, and same-day ambulatory hospital encounters. Excludes emergency department. [SUB = OC, OB, SD, HA, UC, RH, DI, OT] TE = Telephone encounter [SUB = OT, HH] EM = E-mail including secure messaging [SUB = OT, HH] IS = Non-acute institutional stays including hospice, SNF, rehab, nursing home, residential, overnight non-hospital dialysis and other non-hospital stays [SUB = HS, SN, NH, RH, DI, OT] OE=Other Encounters: Non-overnight hospice visits, home health visits, SNF visits, or other visits that do not occur in a typical ambulatory clinic or hospital setting. This encounter type can include individual professional services or provider rounding visits for inpatient or institutional stays where no facility claim could be identified in which to merge these visits. [Encounter_subtype=HS, HH, SN, RH, DI, OT, AI, NH]

			LO = A lab only encounter that cannot be matched to another encounter [SUB = OC, OT] RO = A radiology only encounter that cannot be matched to another encounter [SUB = OC, OT]
ENCOUNTER_ SUBTYPE	Further specification of the type of encounter. Valid associated ENCTYPE values are in brackets	char(2)	AI = Acute inpatient stay excluding observation bed [TYPE=IP, OE] OB = Observation bed [TYPE = AV] OC = Outpatient clinic visit [TYPE = AV, LO, RO, ED] SD = Same-day surgery [TYPE = AV] UC = Urgent care [TYPE = AV] HA = Hospital ambulatory; outpatient care at hospital excluding same-day surgery and observation beds [TYPE = AV, ED] HS = Hospice [TYPE = IS, OE] HH = Home health [TYPE = OE, TE, EM] SN = Skilled nursing facility [TYPE = IS, OE] NH = Nursing home including intermediate care facilities [TYPE = IS, OE] RH = Rehab [TYPE = IS, AV, OE] DI = Dialysis [TYPE = IS, AV, OE] OT = Other non-hospital [TYPE = IS, OE, TE, EM AV, LO, RO]
DRG_VERSION	Identifies the version of the Diagnostic Related Group value (DRG_VALUE). Expected for hospital and some institutional stays but populate for all encounters where known.	char(1)	A = CMS-DRG (used prior to 10/1/07) B = MS-DRG (used post 10/1/07) Null values are allowed

DRG_VALUE	The Diagnostic Related Group value. Used for hospital encounters. Using leading zeros for codes less than 100.	char(3)	Values maintained by Centers for Medicare & Medicaid Services . Null values are allowed.
ENC_COUNT	The number of visits associated with this encounter. Value may be greater than one when a claim indicates a number of visits, but dates of visits are not specified as may occur in a bundled claim e.g. of dialysis services.	num(4)	Positive integer value
ADMITTING_ SOURCE	The location from which the patient was admitted for events with admit.	char(2)	AV=Ambulatory Visit ED=Emergency Department AF=Adult Foster Home AL =Assisted Living Facility HH=Home Health HS=Hospice HO=Home / Self Care IP=Other Acute Inpatient Hospital NH=Nursing Home (Includes ICF) OT=Other RS=Residential Facility RH=Rehabilitation Facility SN=Skilled Nursing Facility UN=Unknown

DISCHARGE_STATUS	The status of the patient at discharge for events with discharge.	char(2)	AF=Adult Foster Home AL =Assisted Living Facility AM=Against Medical Advice AW=Absent without leave EX=Expired HH=Home Health HS=Hospice HO=Home / Self Care IP=Other Acute Inpatient Hospital NH=Nursing Home (Includes ICF) OT=Other RS=Residential Facility RH=Rehabilitation Facility SH=Still In Hospital SN=Skilled Nursing Facility UN=Unknown
DISCHARGE_DISPOSITION	The disposition of the patient at discharge for events with discharge.	char(1)	A = Alive E = Expired U = Unknown
FACILITY_CODE	A code indiciating the facility, hospital, or clinic in which the encounter occurred.	char(*)	Unique to each facility at each site. If unknown, then use value "UNK"
DEPT	The department where the encounter took place as documented in the source data. This is not necessarily the specialty of the clinician providing services.	char(6)	If department information is unavailable in the source data (as may happen in claims data), specify as "UNKNWN". See New 6 Character DEPARTMENT values, Appendix A2
DEPARTMENT	The department or specialty where the encounter took place.	char(4)	See Appendix A1 - DEPARTMENT for values. As of version 4.0, DEPT will replace DEPARTMENT.

| SOURCE_DATA | Classification of the database that was used to create this record. | char(1) | E = Your site's EHR (Electronic Health Record) operated by your health care organization. Excludes claims and billing data. This category includes the following:
• Direct extract from your site's EHR (or associated reporting database).
• A secondary database that houses your site's EHR data (no code changes for billing)
• Data for services captured in other local systems (such as a separate lab or radiology system) and interfaced into your site's EHR.
B = Billing data--for services performed by your organization and captured in your org's EHR, but formatted for billing an outside insurer. These are sometimes referred to as 'internal' or 'outgoing' claims, or transaction data.
C = Claims data--for services performed outside of your health care organization, presented to your organization for payment as the patient's insurer.
L = Local data source but unrelated to your site's EHR. Often Includes pre-EHR systems prior to EHR implementation such as appointment management systems.

M = Multiple sources--the encounter is an amalgam of data from different sources (e.g., inpatient encounters with data from claims and EHR rounding)
O = Other. Not from the sources listed above.
U = Unknown
Can not be null |

ELECTRONIC_CHART_REVIEW	Can this encounter be chart reviewed electronically?	char(1)	Y=Yes N=No P=Partially (part of the record can be reviewed electronically). A couple of examples: - If only a discharge summary is available for inpatient stays - if only rounding data is available for inpatient stays U=Unknown Can not be null

Primary Key:

ENC_ID

Foreign Key Relationship:

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?	
MRN	DEMOGRAPHICS	MRN	No	
PROVIDER	PROVIDER	PROVIDER	No	

Usage Notes

In general, the intention of the encounter file is to describe all significant interactions between patients and medical providers. It should include such things as inpatient stays, emergency department visits, other outpatient hospital services (e.g. same day surgeries), ambulatory visits, home health encounters, and non-hospital residential stays including skilled nursing facility, rehab, nursing home, overnight hospice facility, and overnight dialysis facility.

See the definition of the variables EncType and Encounter_Subtype for the full list of the types of encounters that should be included. Questions about whether a particular type of encounter should be included and how it should be characterized should be directed to the VDW Utilization Workgroup.

All available encounters should be included, even those taking place at external providers (in other words, claims data should be included if that is the only source you have for a given encounter). Sites with known "data blind spots" (e.g., hospice care is subcontracted out on a capitated basis, and no claims are submitted) should document them on their Utilization implementation page on the CRN Portal.

Similarly, data on all services provided by the health plan, whether or not they were provided to a member (enrollee) of the plan should be included. (This means that this file will frequently need to be checked against Enrollment in order to identify study populations-users should not assume that people found in the Utilization tables are members of the health plan, or that anything in particular is known about them.)

Uniquely Identifying an Encounter:
A single inpatient stay, non-acute institutional stay (such as SNF, Rehab, Nursing Home, overnight Hospice or Dialysis stay) or emergency visit has 1 record in the encounter file. For ambulatory visit, telephone, e-mail, lab only, radiology only and "other" encounters, a unique encounter record is defined as each patient and provider medical contact documented in the source data (exclude scheduling appointments and other administrative tasks).

A unique combination of the following variables is an encounter: MRN, adate, enctype, encounter_subtype, provider, facility_code, and appointment time (if available).

Classification/Inclusion/Exclusion rules:
The encounter file only contains data where a medical provider interacts with a patient. Medical providers include: physicians, nurse practitioners, registered nurses, lab technicians, social workers, etc.—generally, people licensed to provide medical care and closely related services.

Ambulatory Visits (a subset of the encounter file) are limited to outpatient encounters where the provider is licensed to prescribe medical services. However, if the source data contain separate records with a lab or radiology tech, then code these encounters as "Lab Only" or "Radiology Only" encounter types respectively.

Recurring visits to the same clinicians on the same day should be maintained as separate encounters if possible.

Include denied claims if the actual utilization occurred. Exclude claims where the utilization didn't take place or for claims that have been identified as false.

Classify "Vaccine Only" encounters as "Other Encounter".

Telephone calls should be included only if the call was between the patient and a provider who is licensed to prescribe medical services. Hence a call to schedule or cancel an appointment should be excluded.

Visits to the pharmacy to pick-up medications are not encounters and therefore are excluded.

Classify same day inpatient discharges as inpatient if the patient is admitted to the hospital for an inpatient stay.

Rules about transfers within hospitals: Treat as 1 stay in the encounter file if a patient is transferred from one acute inpatient station to another acute inpatient station within the same hospital. Treat as separate encounters if a patient is transferred from an acute inpatient station to a long term care station (such as SNF, Rehab or other non-acute inpatient care).

The PROVIDER variable is most useful for outpatient encounters. Inpatient stays should have a single PROVIDER for the entire stay, even if multiple providers performed procedures during the stay. If possible, use the admitting physician as the provider for all care during the stay. (Note that the Procedure and Diagnosis files have fields to signify the provider that actually performed a given procedure/made a given diagnosis where that is known.)

For claims-sourced encounters where there is a first and last service date, but the particular dates of the individual services included are not known (e.g., claims for dialysis) use first service date for ADate and last service date for DDate.

Roll-up the professional and inpatient rounding services (outpatient providers who visit their patients in the hospital) into inpatient stays. Store the details of these services in the procedure and diagnosis files.

Classify admissions to residential alcohol and chemical dependency programs as "Rehab".

The index variable ENC_ID uniquely identifies each encounter and is used to link the ENCOUNTER file to the both the DIAGNOSIS and PROCEDURE files. Multiple encounters to the same provider on the same day are allowed if that is the truth in the source data and have unique ENC_ID values.

All variables are required to simplify programming. Set to missing or unknown if the variable is unavailable at your site.   Consider using the SAS compress option to reduce the size of the file and improve I/O processing.

Use local HEDIS definitions as guidelines to classify encounters into encounter type and subtype values at your site.

In addition, the utilization work group is developing universal guidelines for classification rules from claims and Clarity/EPIC data sources.

Special rules for counting emergency encounters: The definition of an inpatient stay established for measuring hospital activities across the country sets the requirement for starting an admission with time of arrival at the emergency department. It is the standard for assuring consistent counts of emergency encounters and hospital stays in national health statistics. Since some emergency encounters result in an inpatient stay while others don't, identify emergency encounters at all sites by selecting enctype='ED' or (enctype='IP' and admitting_source='ED'). Some sites will have both the ED and Inpatient record. Remove duplicates (MRN, adate, facility_code) to avoid double-counting.

Users of this data are scientists/researchers across many disciplines, who have very divergent concepts, theories, variables, methods, and analytic paradigms. Hence, the VDW utilization files should be rich and complex, just as medical care is rich and complex. We are asking sites to match the source outpatient data systems when the source data matches the spec. Each project should decide how to handle the differential ascertainment of encounters across the sites participating in the specific study, not the VDW programmers.

Comments

Version = 4.0 StdVar = &_vdw_dx

Subject Area Description

The DIAGNOSIS table contains all recorded diagnoses associated with the encounters indicated in the ENCOUNTERS table with the exception of admitting diagnoses for inpatient stays.

Variable Name	Definition	Type(Len)	Values
MRN	Medical record number is the unique patient identifier within a site and should never leave the site	char(*)	Unique to each patient at each site
ADATE	Refer to the ADATE variable on the ENCOUNTER table for definition, type, length, and value set. This variable's redundancy is to improve querying performance.		
ENCTYPE	Refer to the ENCTYPE variable on the ENCOUNTER table for definition, type, length, and value set. This variable's redunancy is to improve querying performance.		
ENC_ID	Foreign key to the ENCOUNTER table uniquely identifying the encounter.	char(*)	Unique to each encounter at each site.
PROVIDER	Refer to the PROVIDER variable on the ENCOUNTER table for definition, type, length, and value set. This variable's redundancy is to improve querying performance.		
DIAGPROVIDER	Identifies the provider that made the diagnosis. If unknown, set the value equal to the PROVIDER variable.	char(*)	

DX	The diagnosis made. For ICD diagnosis coding, include decimal points in the value.	char(*)	ICD-9-CM Format ###.##, V##.##, E###.# ICD-10-CM Format A#@.@@@@ (3-8 characters - includes a decimal point (except for 3 digit codes)) First digit is alpha (A); Digit 2 is numeric (#); Digits 3-7 are alpha or numeric (@) Centers for Medicare & Medicaid Services http://www.cms.gov/Medicare/Coding/ICD 9ProviderDiagnosticCodes/index.html
DX_CODETYPE	The coding set used in the DX variable for this record.	char(2)	07='ICD-7-CM' (including 'ICD-7') 08='ICD-8-CM' (including 'ICD-8') 09='ICD-9-CM' (including 'ICD-9') 10='ICD-10-CM' (including 'ICD-10') 11='ICD-11-CM' (including 'ICD-11') OT='Other'
ORIGDX	The diagnosis code as reported in source data without standardization or cleaning.	char(*)	
PRINCIPAL_DX	For hospital admissions, whether this diagnosis is the principal discharge diagnosis of the encounter. The principal diagnosis indicates the main reason why the patient was admitted to the hospital for care and the value on which a DRG is assigned.	char(1)	P = Principal diagnosis N = Not principal diagnosis X = Unknown or not classifiable
PRIMARY_DX	Whether this diagnosis is the primary diagnosis of the encounter. The primary diagnosis is the most serious or resource intensive diagnosis and is the primary reason for the procedures being rendered.	char(1)	P = Primary diagnosis S = Secondary diagnosis X = Unknown or not classifiable

| SOURCE_DATA_DX | Classification of the database that was used to create this record. | char(1) | E = Your site's EHR (Electronic Health Record) operated by your health care organization. Excludes claims and billing data. This category includes the following:
• Direct extract from your site's EHR (or associated reporting database).
• A secondary database that houses your site's EHR data (no code changes for billing)
• Data for services captured in other local systems (such as a separate lab or radiology system) and interfaced into your site's EHR.
B = Billing data--for services performed by your organization and captured in your org's EHR, but formatted for billing an outside insurer. These are sometimes referred to as 'internal' or 'outgoing' claims, or transaction data.
C = Claims data--for services performed outside of your health care organization, presented to your organization for

payment as the patient's insurer.
L = Local data source but unrelated to your site's EHR . Often Includes pre-EHR systems prior to EHR implementation such as appointment management systems.
O = Other. Not from the sources listed above.
U = Unknown |

Primary Key:

ENC_ID + DX + ORIGDX + DIAGPROVIDER + DX_CODETYPE

Foreign Key Relationship:

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?	
MRN	DEMOGRAPHICS	MRN	No	
ENC_ID	ENCOUNTER	ENC_ID	No	
PROVIDER	PROVIDER	PROVIDER	No	
DIAG_PROVIDER	PROVIDER	PROVIDER	No	

Usage Notes

Do NOT include diagnoses in a problem list.

Do NOT include admitting diagnoses for inpatient stays

Do include diagnoses from professional and inpatient rounding services

Consider using SAS compress option to reduce the size of the file and improve I/O processing

Comments

Version = 4.0 StdVar = &_vdw_px

Subject Area Description

The PROCEDURE table contains all recorded procedures that were actually performed associated with the encounters indicated in the ENCOUNTERS table.

Variable Name	Definition	Type(Len)	Values
MRN	Medical record number is the unique patient identifier within a site and should never leave the site.	char(*)	Unique to each patient at each site
ENCTYPE	Refer to the ENCTYPE variable on the ENCOUNTER table for definition, type, length, and value set. This variable's redunancy is to improve querying performance.		
ADATE	Refer to the ADATE variable on the ENCOUNTER table for definition, type, length, and value set. This variable's redundancy is to improve querying performance.		
PROCDATE	The actual date when the procedure was performed. Unknown values should be coded as missing/null.	num(4)	SAS Date
ENC_ID	Foreign key to the ENCOUNTER table uniquely identifying the encounter.	char(*)	Unique to each encounter at each site.
PROVIDER	Refer to the PROVIDER variable on the ENCOUNTER table for definition, type, length, and value set. This variable's redundancy is to improve querying performance.		

PERFORMINGPROVIDER	Identifies the provider that performed the procedure. If unknown, set the value equal to the PROVIDER varaible.	char(*)	
PX	Code identifying the procedure that was performed.	char(*)	##.## or ##.# ICD-9, $$$$$$$ ICD-10, #####, ####A, ####T CPT-4, A#### for HCPCS, ### or #### for Revenue Codes (match source data) # = Numeric Digit, A=Alphabet Letter $=Alpha or Numeric Convert local codes to standard codes if possible. Value set is dependent on the PX_CODETYPE value and is set by external organizations. Revenue codes may appear as both a 3-digit value and an equivalent 4-digit value with a leading zero, for example, both '123' and '0123' may appear in the data. Users should include both variants in filter/query conditions.
ORIGPX	The procedure code as reported in source data without standardization or cleaning.	char(*)	

PX_CODETYPE	Identifies the coding scheme used in the PX variable to identify the procedure performed.	char(2)	09 = ICD-9-CM 10 = ICD-10-CM 11 = ICD-11-CM C4 = CPT-4 H4 = HCPCS-4 RV = Revenue code LO = Local homegrown OT = Other
PXCNT	Number of times that the procedure was performed.	num(4)	Positive integer value
CPTMOD1	First modifier to a CPT or HCPCS procedure code used to communicate special circumstances related to the performance of a procedure.	char(2)	Value set is set by the American Medical Association and proprietary
CPTMOD2	Second modifier to a CPT or HCPCS procedure code used to communicate special circumstances related to the performance of a procedure.	char(2)	Value set is set by the American Medical Association and proprietary
CPTMOD3	Third modifier to a CPT or HCPCS procedure code used to communicate special circumstances related to the performance of a procedure.	char(2)	Value set is set by the American Medical Association and proprietary
SOURCE_CATEGORY_PX	Source of the procedure information. Order and billing pertain to internal healthcare processes and data sources. Claim pertains to data from the bill fulfillment, generally data sources held by insurers and other health plans.	char(2)	OD=Order (such as from your EHR's order table) BI=Billing (billing data such as transaction tables and internal claims created from services inside the health care organization)

		CL=Claim (external claims for services outside the health care organization) NI=No information UN=Unknown OT=Other (including but not limited to your EHR's encounter table)
SOURCE_DATA_PX	Classification of the source database that was used to create this record. char(1)	E = Your site's EHR (Electronic Health Record) operated by your health care organization. Excludes claims and billing data. This category includes the following: • Direct extract from your site's EHR (or associated reporting database). • A secondary database that houses your site's EHR data (no code changes for billing) • Data for services captured in other local systems (such as a separate lab or radiology system) and interfaced into your site's EHR. B = Billing data--for services performed by your organization and captured in your org's EHR, but formatted for billing an outside insurer. These are sometimes referred to as 'internal' or 'outgoing' claims, or transaction data.

C = Claims data--for services performed outside of your health care organization, presented to your organization for payment as the patient's insurer.
L = Local data source but unrelated to your site's EHR . Often Includes pre-EHR systems prior to EHR implementation such as appointment management systems.
O = Other. Not from the sources listed above.
U = Unknown

Primary Key:

ENC_ID + PROCDATE + PERFORMINGPROVIDER + ORIGPX + PX + PX_CODETYPE + CPTMOD1-3

Foreign Key Relationship:

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?	
MRN	DEMOGRAPHICS	MRN	No	
ENC_ID	ENCOUNTER	ENC_ID	No	
PROVIDER	PROVIDER	PROVIDER	No	
PERFORMINGPROVIDER	PROVIDER	PROVIDER	No	

Usage Notes

This table lists all procedures performed. A record is a procedure code/original procedure code/performing provider/procedure date combination unique to an index variable ENC_ID combination. Include denied claims if you consider the utilization to be valid.

Includes all performed procedures from all settings including lab, radiology and immunization procedure codes. Lab, radiology, immunization and other procedure codes may exist without a linked record in the encounter file. Require that the procedure file contain each type of procedure code when available: CPT, HCPCS, ICD9, Revenue Code. Exclude procedures that were ordered by not performed.

Include procedures from professional and inpatient rounding services (outpatient providers who visit their patients in the hospital) in inpatient encounters. Identify the professional/inpatient rounding provider in the "performingprovider" variable and the procedure date in the "procdate" variable.

Ensure that the codetype variable is correct for each procedure value (px). Consider using the SAS compress option to reduce the size of the file and improve I/O processing.

Comments

Version = 4.0 StdVar = &_vdw_provider_specialty

Subject Area Description

The PROVIDER table contains proivder level descriptives for the providers found in VDW tables. Every provider appearing in any other VDW file should appear in the PROVIDER table, even if demographics information is unknown.

Variable Name	Definition	Type(Len)	Values
PROVIDER	The unique provider identifier.	char(*)	Unique to each provider at each site
SPECIALTY	The provider's specialty.	char(3)	See Appendix C - SPECIALTY for value list
SPECIALTY2 - SPECIALTYN	Optional variables (as many as desired) to indicate when a provider has multiple specialties.	char(3)	See Appendix C - SPECIALTY for value list
PROVIDER_TYPE	The position, job, title, or role of the provider.	char(3)	See Appendix C - PROVIDER_TYPE for value list
PROVIDER_BIRTH_YEAR	The year that the provider was born.	num(4)	Leave missing if unknown
PROVIDER_GENDER	The provider's gender and/or sex; if both gender and sex are known, this variable holds gender.	char(1)	M = Male F = Female O = Other including transgendered U = Unknown
PROVIDER_RACE	Refer to the RACE1 variable on the DEMOGRAPHICS table for definition, type, length, and value set.		
PROVIDER_HISPANIC	Refer to the HISPANIC variable on the DEMOGRAPHICS table for definition, type, length, and value set.		
YEAR_GRADUATED	The year that the provider graduated from medical/nursing/technical school.	num(4)	Leave missing if unknown

Primary Key:

PROVIDER

Foreign Key Relationship:

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?	
[None Defined]				

Usage Notes

Comments

Version = 4.0 StdVar = &_vdw_facility

Subject Area Description

Contains the most recent information about each health care facility found in the encounter table.
Should have a value for each facility_code value in the encounter table. Create the encounter table first and use that as input to create this table.   Please populate the address and latitude and longitude variables whenever possible, however, it is expected that sites can populate these fields for facilities they own or operate.
Update frequency: Updated after every update of the encounter table.
Include in the VDW. This is a HMORN VDW table to be used in multi-site distributed programs.

Variable Name	Definition	Type(Len)	Values
FACILITY_CODE	VDW Facility Code as defined by each site. Use same coding system as the VDW Encounter table.	char(*)	VDW facility_code values Cannot be null
RELATIONSHIP	Relationship between the facility and your health care organization. Specify the most recent information about this facility.	char(1)	O=Owned and/or operated by your health care organization. E=External facility. A facility NOT owned nor operated by your health care organization. Includes contract facilities. U=Unknown Cannot be null
RELATIONSHIP_HISTORY	Describes the relationhship history between the facility and your health care organization	char(1)	O=Always owned and/or operated by your health care organization E=Always an external facility (includes contract facilities) 1=Was an owned facility, most recently an external facility 2=Was an external facility, most recently an owned facility U=Unknown

FULL_ADDRESS	Full address of the facility. This is the full address for the clinical location if possible. If not, then use the billing facility address. This field should be populated when there is at least some address information for this facility. If the source data has the full address in separate fields, this field should be populated in the following order separated by commas: Street address, city, state, zip This field is expected to be populated for facilities owned and or operated by your health care organization as defined in the relationship variable. Leave missing if unknown.	CHAR(*)	Street address, city, state, zip combined in to one variable. Null values are allowed.
STREET_ADDRESS	Street address of the facility. Use the street address for the clinical location if possible. If not, then use the billing facility address. Leave missing if unknown.	CHAR(*)	This field is populated if the information is easily available in the source system. Null values are allowed.
CITY	City where the facility is located. Use the city for the clinical location if possible. If not, then use the billing facility city. Leave missing if unknown.	CHAR(*)	This field is populated if the information is easily available in the source system. Null values are allowed.
STATE	State where the facility is located. Use the state for the clinical location if possible. If not, then use the billing facility state. Leave missing if unknown.	CHAR(2)	This field is populated if the information is easily available in the source system. Null values are allowed.

ZIP	Zip code of the facility (5 or 9 digits). The first 3 digits are required by both Sentinel and PCORnet. Use the zip code for the clinical location if possible. If not, then use the billing facility zip code. Leave missing if unknown.	CHAR(9)	5 or 9 digit zip code, with leading zeroes, and no dashes. For example: 01234 12345 123456789 Null values are allowed.
ADDRESS_ FACILITY_TYPE	Specify whether the address information is for a clinical or billing facility	CHAR(1)	C=Clinical Facility B=Billing Facility. Typically, this is the zip code for a claims vendor. U=Unknown (specify if zip is not missing) Leave as missing when ZIP is missing.
LATITUDE	The latitude of the location. Leave as missing if unknown.	num(8)	Value between -90 and +90 measured in degrees Null values are allowed.
LONGITUDE	The longitude of the location. Leave as missing if unknown.	num(8)	Value between -180 and +180 measured in degrees Null values are allowed.

Primary Key:

FACILITY_CODE. This field should be unique and never missing.

Foreign Key Relationship:

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?	
[None Defined]				

Usage Notes

For ZIPs: Retain leading zeroes, but do not pad out 5 digit source values with additional leading or trailing zeroes. For example:
source value of '01234' remains '01234'
source value of '12345' remains '12345' not '123450000' or '000012345'

For Facility: Health plans typically have more control on the type, volume, quality, and cost of care at the facilities that they own and/or operate. There is a stronger incentive to provide efficient care and providers at these facilities probably have access to more complete patient information. Health plans typically have less control over external facilities. These external facilities often have different incentives and thus, care patterns may be different.   For instance, the mom delivery C-section rate may be different at owned hospitals as compared to external hospitals. Despite the disadvantages, it's also possible that patients may receive better care at an external facility (the specialty group with the best reputation in the service area may be at an external facility).

Address: Facility address can be used to determine an estimate of time and distance from home to specific health care facilities. This is an access to care measure. Some sites may not have this data or may choose to include a less specific facility address for some facilities.

Comments

Version = 4.1 StdVar = &_vdw_rx

Subject Area Description

The PHARMACY file contains data on medications dispensed in the outpatient setting. Dispensings in the inpatient setting are not included. Incomplete or unfilled medication orders are also excluded. Rows are unique on the combination of patient, NDC, dispense date, and prescribing provider. When multiple dispensings occur for the same patient for the same drug on the same day from the same provider, the amount dispensed and days supplied of the drug should be summed. Compound drugs may be represented differently across sites. If a drug of interest is a compound drug, users may want to check with individual sites on their handling of these dispensings.

Variable Name	Definition	Type (Len)	Values
MRN	Medical record number is the unique patient identifier within a site and should never leave the site	char(*)	Unique to each patient at each site
RXDATE	Date that medication was dispensed	num(*)	SAS Date
NDC	The identifier of a drug (or pharmacy product). If available, this should be the National Drug Code in the HIPAA/CMS/NCPDP standard 5-4-2 configuration without dashes. If a true NDC is not available, a locally defined unique identifier with up to 11 characters can be used.	char(11)	FDA National Drug Code Directory
RXSUP	Number of days of medication supplied	num(8)	Either RXSUP or RXAMT must be a positive value.
RXAMT	Number of units (e.g. pills, tablets) dispensed	num(8)	Either RXSUP or RXAMT must be a positive value.
RXMD	The provider that prescribed this medication	char(*)	

Primary Key:

MRN + RXDATE + NDC + RXMD

Foreign Key Relationship:

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?	
MRN	DEMOGRAPHICS	MRN	No	
NDC	EVERNDC	NDC	No	
RXMD	PROVIDER	PROVIDER	No	

Usage Notes

1. For any single record both RXSUP and RXAMT may not be negative or null values. If either RXSUP or RXAMT are greater than or equal to 1, then it's a valid record.
Examples:
Valid: RXSUP = 0 and RXAMT = 1
Valid: RXSUP = -1 and RXAMT = 1
Valid: RXSUP = 1 and RXAMT = -1
Not Valid: RXSUP = 0 and RXAMT = 0
Not Valid: RXSUP = -1 and RXAMT = 0

2. A link between Pharmacy and Medication Orders is available at over half of the sites. Contact individual sites for availability if interested.

Comments

Version = 4.1 StdVar = &_vdw_everndc

Subject Area Description

The EVERNDC table is a lookup table containing all National Drug Codes (NDC) found in the PHARMACY table at each site. That is, pharmacy dispensings occurring at site A will have at least one corresponding record in site A's EVERNDC table but not necessarily any records in site B's EVERNDC table.

Variable Name	Definition	Type(Len)	Values
NDC	The identifier of a drug (or pharmacy product). If available, this should be the National Drug Code in the HIPAA/CMS/NCPDP standard 5-4-2 configuration without dashes. If a true NDC is not available, a locally defined unique identifier with up to 11 characters can be used.	char(11)	FDA National Drug Code Directory
NDC_FDA	The original FDA National Drug Code in 4-4-2, 5-3-2, or 5-4-1 format including dashes.	char(12)	
GENERIC	The generic name of the drug in all upper case with form, strength, and other labels expunged.	char(105)	
BRAND	The brand name of the drug in all upper case with form, strength, and other labels expunged.	char(105)	
AHFS1 - AHFS7	The American Society of Health-System Pharmacists drug classification code. If code is in the 6 digit format, pad with two zeros at the end of the code. Store up to seven different AHFS codes across these variables.	char(8)	Value set is set by AHFS and considered proprietary.
GPI	The Generic Product Identifier drug classification code	char(14)	Value set is set by Medi-Span and is considered proprietary.

UNIT_OF_MEASURE	The unit of measure as reported in source data without standardization or cleaning except for storing values in all upper case.	char(*)	Example values are 2000, U/4ML, GM/15ML, %/5GM, -400 UNIT
STRENGTH	The drug strength as reported in source data without standardization or cleaning except for storing values in all upper case.	char(*)	Example values are 99.99%, 9G, 9MCG/0.3ML, 9000 UNIT
DOSAGE_FORM	The dosage form as reported in source data without standardization or cleaning except for storing values in all upper case.	char(*)	Example values are VIAL, VIAL PORT, WAFER, WAF, SOLUTION, SOLN SEQ, SPIRIT
OBSOLETE_DT	The date the NDC was made obsolete, only if the drug is reinstated with a different NDC/Generic combination at a later time.	num(*)	SAS Date
REINSTATED_DT	The date the NDC was resinstated, only if the drug was reinstated with a different NDC/Generic combination.	num(*)	SAS Date
NDC_SITE_SPECIFIC_FLAG	Indicates whether an NDC is a site-specific, non-standard item. This includes but is not limited to compound drugs, stock items, repackaged drugs and study medications. Some site specific NDCs are identifiable via a starting set of characters, such as 11111 or 99999, or a term.	char(1)	Y = Yes N = No U = Unknown

Primary Key:

NDC + GENERIC	*Duplicate NDCs occur when an NDC is retired and reused for a new drug.

Foreign Key Relationship:

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?	
[None Defined]				

Usage Notes

For multi-site projects, a locally created list of NDCs rarely captures all NDCs used at all participating HCSRN sites. A two-step approach that uses the EverNDC table will help compil a complete list of all NDCs for the studied drug. The lead analyst of a project can first write a distributed program to query the EverNDC tables across sites. They may use generic names, brand names, AHFS codes (if available), or GPI codes (if available) to identify the NDCs in use at other sites. They can then collate the NDCs identified from all participating sites to compile a final list of NDCs for the study. Compound drugs are represented differently in the data across sites. If the drug you are looking for may be a compound drug, please check with individual sites to understand how they are handling these data.

Number of dispensings and of members who used each drug during a specific period can be obtained by querying the VDW Pharmacy file using the NDCs identified from the two-step approach.

1. Some sites may not have AHFS or GPI codes, or both.

2. Codes

A. FDA National Drug Code (NDC)
The Drug Listing Act of 1972 requires registered drug establishments to provide the Food and Drug Administration (FDA) with a current list of all drugs manufactured, prepared, propagated, compounded, or processed by it for commercial distribution. (See Section 510 of the Federal Food, Drug, and Cosmetic Act (Act) (21 U.S.C. § 360)). Drug products are identified and reported using a unique, three-segment number, called the National Drug Code (NDC), which serves as a universal product identifier for human drugs. FDA publishes the listed NDC numbers and the information submitted as part of the listing information in the NDC Directory which is currently updated semimonthly.

The National Drug Code is a unique 10-digit, 3-segment numeric identifier assigned to each medication listed under Section 510 of the US Federal Food, Drug, and Cosmetic Act. The segments identifies the labeler or vendor, product (within the scope of the labeler), and trade package (of this product).
- NDC codes exist in one of the following groupings of digits into segments: 4-4-2, 5-3-2, or 5-4-1, but all NDC codes have 10 digits.
- Example, 1234-5678-90, 12345-678-90, and 12345-6789-0 could all be entirely different products with the same barcode 1234567890. To prevent any actual ambiguity from impacting the marketplace, ambiguity checks are part of the new electronic listing process.

- The first segment, the labeler code, is 4 or 5 digits long and assigned by the Food and Drug Administration (FDA) upon submission of a Labeler Code Request. A labeler is any firm that manufactures, repacks or distributes a drug product.
- The second segment, the product code, is 3 or 4 digits long and identifies a specific strength, dosage form, and formulation for a particular firm.
- The third segment, the package code, is 1 or 2 digits long and identifies package forms and sizes. In very exceptional cases, product and package segments may have contained characters other than digits.

However, HIPAA wanted to avoid any confusion and in response, National Council for Prescription Drug Programs (NCPDP) and Centers for Medicare and Medicaid Services (CMS) created an 11-digit NDC derivative, which pads the labeler, product, or package code segments of the NDC with leading zeroes wherever they are needed to result in a fixed length 5-4-2 configuration (but always written without dashes). The 11-digit NDC format cannot be transformed back into the 10-digit standard format without the help of the product listing database.

FDA NDC 10-Digit Format	FDA NDC 11-Digit Format	Actual 10-Digit NDC Example	11-Digit Conversion of Example
4-4-2 9999-9999-99	5-4-2 09999-9999-99	0002 7597 01 Zyprexa® 10mg vial	00002-7597-01
5-3-2 99999-999-99	5-4-2 99999-0999-99	50242 040 62 Xolair® 150mg vial	50242-0040-62
5-4-1 99999-9999-9	5-4-2 99999-9999-09	60575 4112 1 Synagis® 50mg vial	60575-4112-01

B. American Hospital Formulary Service (AHFS) Pharmacologic-Therapeutic Classification System©

The AHFS Pharmacologic-Therapeutic Classification was developed and is maintained by the American Society of Health-System Pharmacists (ASHP). ASHP is the national professional association that represents pharmacists who practice in inpatient, outpatient, home-care, and long-term-care settings. ASHP has a long history of fostering evidence-based medication use as well as patient medication safety.

Originally published by ASHP in the inaugural edition of the American Hospital Formulary Service (AHFS; now AHFS Drug Information), the Classification has been the foundation for organizing drug formularies in institutional, governmental, and other settings since 1959. The AHFS Pharmacologic-Therapeutic classification originated as an adaptation of the drug classification used to organize the University of Michigan's Hospital Formulary of Selected Drugs. The principal change reflected in the 1959 adaptation was the incorporation of a hierarchical numeric structure to the alpha description of the drug classes and subclasses. The AHFS classification allows the grouping of drugs with similar pharmacologic, therapeutic, and/or chemical characteristics in a 4-tier hierarchy There are 31 classifications in the first tier, 185 in the second tier, 256 in the third tier, and 94 in the fourth tier.

Sample Expansion to the Fourth Tier
Some classes, like 16:00 and 60:00, only have a first tier, but others continue down the hierarchy with more granularity the further they go. Compare the class for celecoxib (28:08.04.08) with aspirin (28:08.04.24)

AHFS Class Number AHFS Class Description
28:00.00.00 Central Nervous System Agents
28:08.00.00 Analgesics and Antipyretics
28:08.04.00 Nonsteroidal Anti-inflammatory Agents
28:08.04.08 Cyclooxygenase-2 (COX-2) Inhibitors
28:08.08.24 Salicylates

C. Medi-Span™ Generic Product Identifier (GPI)

A series of 14 characters defined by Medi-Span™ that consists of a hierarchy of seven subsets, each providing increasingly more specific information about drug products; encompassing drug group, class, sub-class, name, name extension and dosage. In addition, GPIs provide categories of brand name and generic drugs in like-therapeutic classes. (See below example.) Products assigned the same code should be pharmaceutically equivalent regarding active ingredients, dose form, route of administration, and strength. The same drug may be classified in multiple therapeutic classes. While Medi-Span™ incorporates the American Hospital Formulary Service (AHFS) (1994), a classification system based on the pharmacological uses of drugs, Medi-Span™ also groups drugs with comparable compounds in the same therapeutic class and allows the same drug to be classified into multiple therapeutic classes.

Medi-span™ Classification System - Example of an Antidepressant GPI Coding Example

58	Drug Group	Antidepressants
58-20	Drug Class	Tricyclic Agents
58-20-00	Drug Sub-Class	--
58-20-00-60	Drug Name	Nortiptyline
58-20-00-60-10	Drug Name Extentsion	Hydochloride
58-20-00-60-10-01	Dosage Form	10mg

D. Master Drug Data Base v2.5 (MDDB®)

Updated daily, MDDB® provides the very latest pricing and descriptive information on name brand, generic, prescription and OTC medications, including herbals. The industry's leading comprehensive drug file, MDDB®, provides timely and accurate information that supports multiple application needs.

E. First Databank (FDB)

First DataBank, Inc. (FDB), provides context-relevant, integrated drug database products. The firm creates and maintains widely used drug database products, software for drug database integration, and drug reference products.

Comments

Version = 4.0 StdVar = &_vdw_lab

Subject Area Description

The LAB RESULTS table contains the results of laboratory tests performed on patients. If a test is not resulted for whatever reason (e.g. specimen not sufficient, patient did not show), then that test should not appear in the table.

Variable Name	Definition	Type(Len)	Values
MRN	Medical record number is the unique patient identifier within a site and should never leave the site.	char(*)	Unique to each patient at each site
TEST_TYPE	VDW-specific classification of laboratory results.	char(20)	• The Test_Type, LongName, LOINC, Priority excel spreadsheet maintained by the VDW Lab Workgroup lists all test_types currently defined along with LOINCs associated with each test_type. • The same Test_Type-LOINC association can be found in the EverLOINC SAS table also maintained by the VDW Lab Workgroup.
STAT	Indicates the immediacy of the test. The intent of this value is to determine whether the test was obtained as part of routine care or as an emergent/urgent diagnostic test.	char(1)	E=Expedite S=Stat R=Routine U=Unknown or missing

LOINC	Logical Observation Identifiers Names and Codes (LOINC) is a universal coding system for laboratory tests and measurements developed by Regenstrief Institute. Follow http://loinc.org/ to download a list of all LOINC codes defined by Regenstrief. Not all LOINCs have been mapped to VDW test_types.	char(10)	• The Test_Type, LongName, LOINC, Priority excel spreadsheet maintained by the VDW Lab Workgroup lists all test_types currently defined along with LOINCs associated with each test_type. • The same Test_Type-LOINC association can be found in the EverLOINC SAS table also maintained by the VDW Lab Workgroup. • LOINC codes are in the form nnnnnnnn-n with one to 8 digits preceding the hyphen. Do not fill LOINC codes with leading zeros. Format is left-justified. The last digit of the LOINC code is a check digit and is always preceded by a hyphen. The hyphen, as well as all the numbers, is part of the LOINC and must be included.
PT_LOC	Location of the patient when the lab specimen was obtained.	char(1)	I=Inpatient O=Outpatient E=Emergency Department H=Home U=Unknown or missing
RESULT_LOC	Location where the result was completed. Particularly whether the lab was completed in a certified laboratory.	char(1)	L = Lab P = Point of care (e.g. home, provider office) Code nulls and unknowns as "L". There are no missing values.
SPECIMEN_ID	Used to uniquely identify a collected specimen which may ultimately be used to obtain multiple lab results. Specimen ID will be used to connect multiple records from the same blood sample.	char(*)	

SPECIMEN_SOURCE	The source or method for collecting the specimen.	char(6)	BLOOD SERUM PLASMA SR_PLS = serum and/or plasma PPP = Platelet Poor Plasma CSF = cerebral spinal fluid URINE STOOL NSWAB = nasal swab (including nose) NWASH = nasal wash NPH = nasopharyngeal swab NPWASH = nasopharyngeal wash THRT = throat, oropharyngeal swab SPUTUM BAL = bronchoalveolar lavage (BAL) BALBX = BAL biopsy OTHER NS = not specified [Null] = missing value
LOCAL_CD	The lab test type code as reported in source data without standardization or cleaning. This code indicates in the data source system which test was performed.	char(*)	Unique to each site
BATTERY_CD	The battery code as reported in source data without standarization or cleaning. A battery consists of a grouping or series of tests performed and is sometimes referred to as a panel of tests.	char(*)	Unique to each site

PX	Refer to the PX variable on the Procedure file for type and length.	Refer to the PX variable on the Procedure file for value set EXCEPT missing is also an acceptable value on the lab result table.	
PX_CODETYPE	Refer to the PX_CodeType variable on the Procedure file for type and length.	Refer to the PX_CodeType variable on the Procedure file for value set EXCEPT missing is also an acceptable value on the lab result table.	
ORDER_ID	Uniquely identifies the order for this lab test. In the future, may link to a table of orders.	char(*)	Unique to each site
ORDER_DT	Date that the lab test was ordered. It is possible for the order date to be any date from months before the sample was taken (in the case of a recurring test to monitor a chronic condition or drug interaction) to the same day the sample was taken.	num(4)	SAS date
LAB_DT	Date that the specimen was collected.	num(4)	SAS date
LAB_TM	Time that the specimen was collected.	num(4)	SAS time
RESULT_DT	Date that the test was resulted. This date could be the same day the specimen was collected or any date up to weeks later.	num(4)	SAS date
RESULT_TM	Time that the specimen was resulted.	num(4)	SAS time
RESULT_C	The result of the test stored in a character field. This variable works in conjunction with the Modifier variable.	char(20)	• VDW Qualitative Laboratory Test Standards spreadsheet lists expected results for qualitative test types. • SEE LAB NOTES TABLE

MODIFIER	Modifies the value stored in the Result_C field.	char(2)	TX = Text EQ = Equal LT = Less than LE = Less than or equal to GT = Greater than GE = Greater than or equal to RA = Range
RESULT_UNIT	The units in which the result is reported after basic standardizations have been applied. At the least, the value should be uppercase and left justified.	char(11)	Examples of possible values: %, U/L, MG/DL, K/UL, 10^6/UL
RESULT_UNIT_RAW	The units in which the result is reported before basic standardizations are applied.	char(11)	Examples of possible values: PER, Percent, units/L, mg/dL, 10*3/uL, 10^9/L, x10e6/uL
NORMAL_LOW_C	The lowest value still considered normal for this test. This variable works in conjunction with the Modifier_Low variable.	char(8)	
MODIFIER_LOW	Modifies the value stored in the Normal_Low_C field.	char(2)	EQ = Equal GT = Greater than GE = Greater than or equal to Null if Normal_Low_C is null The following will probably not be needed for this variable TX = Text LT = Less than LE = Less than or equal to
NORMAL_HIGH_C	The highest value still considered normal for this test. This variable works in conjunction with the Modifer_High variable.	char(8)	

MODIFIER_HIGH	Modifies the value stored in the Normal_High_C field.	char(2)	EQ = Equal LT = Less than LE = Less than or equal to Null if Normal_High_C is null The following will probably not be needed for this variable TX = Text GT = Greater than GE = Greater than or equal to
ABN_IND	Indicates whether the test result is abnormal.	char(2)	AB = Abnormal C = Critical AH = Abnormal high CH = Critical high AL = Abnormal low CL = Critical low IN = Inconclusive NL = Normal UK = Unknown or missing
ORDER_PROV	Identifies the provider that ordered the lab test.	char(*)	Unique to each site. Value set is same as rxmd in pharmacy or provider in utilization.
ORD_DEPT	The department or specialty in which the order took place.	char(6)	See Appendix A2 - DEPT. These values are the same as for the variable DEPT in encounters.
ORDER_DEPT	The department or specialty in which the order took place.	char(4)	See Appendix A1 - DEPARTMENT. These values are the same as for the variable DEPARTMENT in encounters. Please remove after 3/31/18 when no longer needed at your site.
FACILITY_CODE	A code indiciating the facility, hospital, or clinic in which the lab order originated.	char(*)	Unique to each site. Value set is same as Facility_Code in utilization.

ROW_ID	A site specific identifer that enables linkage between the LAB NOTES and LAB RESULT tables.	type and length are site specific	Unique to each site

Primary Key:

No primary key defined

Foreign Key Relationship:

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?	
MRN	DEMOGRAPHICS	MRN	No	
ORDER_PROV	PROVIDER	PROVIDER	No	

Usage Notes

The missingness of ORDER_DT, LAB_DT, and RESULT_DT varies greatly. Users are advised to coalesce values across these date variables in the order first of LAB_DT, second RESULT_DT, and last possibly ORDER_DT.

Comments

Updated 04/24/2019
Implementation Guidelines updated 6/14/2019

Implementation guidelines for Result_C updated 6/27/2019

Version = 4.0 StdVar = &_vdw_lab_notes

Subject Area Description

The LAB NOTES table includes text notes that may accompany lab test results. If a note is long, it may span over several records in the table. The LAB NOTES table links to the LAB RESULT table by the variable Row_ID. Not all records in the LAB RESULTS table will have corresponding records in the LAB NOTES table.

Variable Name	Definition	Type(Len)	Values
ROW_ID	A site specific identifer that enables linkage between the LAB NOTES and LAB RESULT tables.	type and length are site specific	
RESULT_NOTE	Contains result note (or, theoretically, this field might be used to hold results or lower boundary or upper boundary of normal range values that require more than 8 bytes of storage).	char(80)	
NOTE_TYPE	Identifies the type of note in the Result_Note field.	char(1)	R = Result L = Low normal value H = High normal value N = Note
LINE	A line counter starting at one and incrementing by one as needed to accommodate each Row_ID / Note_Type combination.	num(4)	Positive integer

Primary Key:

ROW_ID + NOTE_TYPE + LINE

Foreign Key Relationship

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?	
[None Defined]				

Usage Notes

Comments

Version = 4.0 StdVar = &_vdw_vitalsigns

Subject Area Description

The VITAL SIGNS table includes physiological measures taken by health professionals during encounters. Additional measures on anthropometry and tobacco use are also included.

Variable Name	Definition	Type(Len)	Values
MRN	Medical record number is the unique patient identifier within a site and should never leave the site.	char(*)	Unique to each patient at each site
ENC_ID	Foreign key to the ENCOUNTER table uniquely identifying the encounter; unlinkable records should contain null/missing values.	char(*)	Unique to each encounter at each site
MEASURE_DATE	The date on which these vital signs were measured.	num(4)	SAS Date
MEASURE_TIME	The time at which these vital signs were measured.	num(4)	SAS Time
ENCTYPE	Refer to the ENCTYPE variable on the ENCOUNTER table for definition, type, length, and value set.		
HT	The height measured in inches of the patient at this time.	num(8)	Positive real number HT missing if: age = 0 and (ht < 3 or ht > 41) age between 1 and 5 and (ht < 12 or ht > 60) age between 6 and 12 and (ht < 20 or ht > 84) age between 13 and 17 and (ht < 30 or ht > 108) age > = 18 and (ht < 36 or ht > 108)

WT	The weight measured in pounds of the patient at this time.	num(8)	Positive real number WT missing if: age = 0 and (wt < 0 or wt > 80) age between 1 and 5 and (wt < 9 or wt > 200) age between 6 and 12 and (wt < 20 or wt > 350) age between 13 and 17 and (wt < 25 or wt > 650) age > = 18 and (wt < 50 or wt > 1000)
SYSTOLIC	The systolic blood pressure measured in mmHg of the patient at this time.	num(4)	Integer SYSTOLIC missing if < 50 or > 300
DIASTOLIC	The diastolic blood pressure measured in mmHg of the patient at this time.	num(4)	Integer DIASTOLIC missing if < 20 or > 160
BP_TYPE	The type of blood pressure taken.	char(1)	R = Rooming O = Orthostatic M = Multiple E = Extended
POSITION	The patient's position for orthostatic blood pressure measurements.	char(1)	1 = Sitting 2 = Standing 3 = Supine Null = Unknown
HT_RAW	The height measurement as reported in source data without standardization or cleaning.	char(*)	Examples may include specific values, ranges, or categories
WT_RAW	The weight measurement as reported in source data without standardization or cleaning.	char(*)	Examples may include specific values, ranges, or categories
BMI_RAW	The patient's body mass index measurement as reported in source data without standardization, calculation, or cleaning.	char(*)	

HEAD_CIR_RAW	The patient's head circumference measurement as reported in source data without standardization or cleaning.	char(*)	
SYSTOLIC_RAW	The systolic blood pressure measurement as reported in source data without standardization or cleaning.	char(*)	Examples may include specific values, ranges, or categories
DIASTOLIC_RAW	The diastolic blood pressure measurement as reported in source data without standardization or cleaning.	char(*)	Examples may include specific values, ranges, or categories
RESPIR_RAW	The respirations in breaths per minute measurement as reported in source data without standardization or cleaning.	char(*)	
TEMP_RAW	The patient's body temperature measurement as reported in source data without standardization or cleaning.	char(*)	
PULSE_RAW	The heartbeats per minute measurement as reported in source data without standardization or cleaning.	char(*)	

Primary Key:

No primary key defined

Foreign Key Relationship:

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?	
MRN	DEMOGRAPHICS	MRN	No	
ENC_ID	ENCOUNTER	ENC_ID	No	

Usage Notes

Body Mass Index (BMI) is not a cleaned variable on the VITAL SIGNS table. Users are recommended to calculate BMI at the time of actual need making use of the VDW Standard Macros. The RAW variables' primary purpose is for capturing categories or ranges that may be recorded in the system (e.g. for BMI_RAW values like "overweight", or "25.0-25.9" or for DIASTOLIC_RAW values like "HYPERTENSION" or "100-109").

Comments

Updated 6/14/2019

Version = 4.0 StdVar = &_vdw_social_hx

Subject Area Description

The SOCIAL HISTORY table contains behavioral measures taken by health professionals during clinic visits, over the telephone, or via questionnaires. These measures include the use of tobacco, alcohol, and illegal drugs as well as sexual behavior and contraceptive use. Because of the range of tobacco products available and the variability in the level of detail recorded, precision and capture of tobacco related variables may vary both across and within sites. Consistency of response is also not guaranteed over time.

Social history measures may carry special privacy concerns. Beyond the nature of these variables, the use of free text fields in any content area warrants additional care as they may contain personal health information. Users are encouraged to consult with privacy experts and/or experienced users before extracting data if they are unfamiliar with these additional data sensitivities.

Variable Name	Definition	Type(Len)	Values
MRN	Medical record number is the unique patient identifier within a site and should never leave the site	char(*)	Unique to each patient at each site
CONTACT_DATE	Date of encounter or date of social history data collection	num(4)	SAS date, missing is not allowed
ENC_ID	Foreign key to the ENCOUNTER table uniquely identifying the encounter; unlinkable records should contain null/missing values	char(*)	SAS date, missing values allowed
EDUCATION_YEARS	Number of years of education completed recorded as free text	char(*)	Free text, missing values allowed

SEX_ACTIVE	Whether the person is sexually active	char(1)	Y = Yes N = No W = Not currently (Was) X = Not asked U = Unknown or missing
SEX_FEMALE_PARTNER	Whether the person has female sex partners	char(1)	Y = Yes N = No X = Not asked U = Unknown or missing
SEX_MALE_PARTNER	Whether the person has male sex partners	char(1)	Y = Yes N = No X = Not asked U = Unknown or missing
SEX_COMMENT	Comment about the person's sexual activity	char(*)	Free text, missing values allowed
BC_ABSTINENCE	Whether the person uses abstinence as birth control	char(1)	Y = Yes N = No X = Not asked U = Unknown or missing
BC_CONDOM	Whether the person uses condoms as birth control	char(1)	Y = Yes N = No X = Not asked U = Unknown or missing
BC_DIAPHRAGM	Whether the person uses a diaphragm as birth control	char(1)	Y = Yes N = No X = Not asked U = Unknown or missing
BC_IMPLANT	Whether the person uses an implant as birth control	char(1)	Y = Yes N = No X = Not asked U = Unknown or missing

BC_INJECTION	Whether the person uses injections as birth control	char(1)	Y = Yes N = No X = Not asked U = Unknown or missing
BC_INSERTS	Whether the person uses inserts as birth control	char(1)	Y = Yes N = No X = Not asked U = Unknown or missing
BC_IUD	Whether the person uses an intrauterine device (IUD) as birth control	char(1)	Y = Yes N = No X = Not asked U = Unknown or missing
BC_PILL	Whether the person uses birth control pills	char(1)	Y = Yes N = No X = Not asked U = Unknown or missing
BC_RHYTHM	Whether the person uses the rhythm method as birth control	char(1)	Y = Yes N = No X = Not asked U = Unknown or missing
BC_SPERMICIDE	Whether the preson uses spermicide as birth control	char(1)	Y = Yes N = No X = Not asked U = Unknown or missing
BC_SPONGE	Whether the person uses a sponge as birth control	char(1)	Y = Yes N = No X = Not asked U = Unknown or missing

BC_SURGICAL	Whether a surgery (e.g. vasectomy, hysterectomy) significantly reduces the chance of contraception	char(1)	Y = Yes N = No X = Not asked U = Unknown or missing
BC_OTHER	Whether a surgery (e.g. vasectomy, hysterectomy) significantly reduces the chance of contraception	char(1)	Y = Yes N = No X = Not asked U = Unknown or missing
BC_COMMENT	Comment about the person's sexual activity	char(*)	Free text, missing values allowed
ALCOHOL_USE	Whether the person is an alcohol drinker	char(1)	Y = Yes N = No Q = Quit/Former X = Not asked U = Unknown or missing
ALCOHOL_BEER_NWK	The number of drinks per week, beer	char(*)	Drinks/wk, beer; could be a range; 0 is valid
ALCOHOL_WINE_NWK	The number of drinks per week, wine	char(*)	Drinks/wk, wine; could be a range; 0 is valid
ALCOHOL_LIQ_NWK	The number of drinks per week, hard liquor	char(*)	Drinks/wk, liquor; could be a range; 0 is valid
ALCOHOL_UNSPEC_NWK	The number of drinks per week, unspecified type	char(*)	Drinks/wk, unspecified; could be a range; 0 is valid
ALCOHOL_COMMENT	Comment about the person's alcohol use	char(*)	Free text, missing values allowed
ILLICIT_DRUG_USE	Whether the person uses illicit drugs	char(1)	Y = Yes N = No Q = Quit/Former X = Not asked U = Unknown or missing

ILLICIT_DRUG_USE_FREQ	Frequency of illicit drug use as free text	char(*)	Free text, missing values allowed
ILLICIT_DRUG_USE_COMMENT	Comment about the person's illicit drug use	char(*)	Free text, missing values allowed
IV_DRUG_USE	Whether the person uses IV drugs	char(1)	Y = Yes N = No Q = Quit/Former X = Not asked U = Unknown or missing
TOBACCO_USE	Whether the person is a user of tobacco	char(1)	Y = Yes / Current I = Infrequent N = Never Q = Quit / Former P = Passive/Environmental/ Second hand X = Not Asked U = Unknown or missing
TOBACCO_USE_YEARS	The number of years the person used tobacco	char(*)	Free text, missing values allowed
TOBACCO_PACKS_DAY	Number of packs smoked per day as free text	char(*)	Free text, missing values allowed
TOBACCO_SMOKELESS_USE	Whether the person uses smokeless tobacco	char(1)	Y = Yes / Current I = Infrequent N = No / Never used Q = Quit / Former X = Not asked U = Unknown or missing
TOBACCO_SMOKELESS_START_DATE	Date the person started using smokeless tobacco	num(4)	SAS Date, missing allowed

TOBACCO_SMOKELESS_QUIT_DATE	Date the person quit using smokeless tobacco	num(4)	SAS Date, missing allowed
TOBACCO_SMOKING_USE	Whether the person uses smoking tobacco	char(1)	E = Current every day S = Current some days H = Heavy smoker L = Light smoker N = Never P = Passive Q = Former U = Unknown X = Never assessed Y = Smoker - current status unknown
TOBACCO_SMOKING_START_DATE	Date the person started using smoked tobacco	num(4)	SAS Date, missing allowed
TOBACCO_SMOKING_QUIT_DATE	Date the person quit using smoked tobacco	num(4)	SAS Date, missing allowed
TOBACCO_CHEW	Whether the person uses chew tobacco	char(1)	Y = Yes N = No X = Not asked U = Unknown or missing
TOBACCO_CIGARETTES	Whether the person uses tobacco cigarettes	char(1)	Y = Yes N = No X = Not asked U = Unknown or missing
TOBACCO_CIGARS	Whether the person uses tobacco cigars	char(1)	Y = Yes N = No X = Not asked U = Unknown or missing

TOBACCO_PIPES	Whether the person uses tobacco pipes	char(1)	Y = Yes N = No X = Not asked U = Unknown or missing
TOBACCO_SNUFF	Whether the person uses snuff tobacco	char(1)	Y = Yes N = No X = Not asked U = Unknown or missing
TOBACCO_UNSPECIFIED	Whether the person uses an unspecified form of tobacco	char(1)	Y = Yes N = No X = Not asked U = Unknown or missing
TOBACCO_COMMENT	Comment about the person's tobacco use	char(*)	Free text, missing values allowed

Primary Key:

No primary key defined

Foreign Key Relationship:

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?	
MRN	DEMOGRAPHICS	MRN	No	
ENC_ID	ENCOUNTER	ENC_ID	No	

Usage Notes

Data on marijuana use is currently contained as free text in the illicit_drug_comment variable, although the tobacco_comment field may also containt pertinent information. However, relevant information may also be contained in a medical center's chart notes or "problem lists," which would not then be transferred into the VDW Social History table.

With the increasing decriminalization of marijuana, many may no longer consider it to be "illicit," and thus be uncertain where to record this information, particular in states where it has been legalized. Investigation of and familiarity with individual site's recording/data-population processes may be important to your needs.

Default settings for some variables may vary across sites, and may result in some values being more heavily weighted than others. Check with the site for default values if there are questions on value distribution. For example, one source system has a default value of No for Tobacco_Chew, rather than Unknown or Not Asked.

Comment data at some sites may have restricted access. Site data managers should be consulted for rules governing access.

Date values may be outside of expected parameters. Query results involving dates should be carefully reviewed for extreme outliers.

Comments

A proposal to expand birth control categories is under consideration.

Updated 5/16/2016

Version = 4.0 StdVar = &_vdw_death

Subject Area Description

The DEATH table contains one record per person in the DEMOGRAPHICS table for whom there is some belief that the person may be dead. When sources of death provide conflicting information, site data managers should make local determinations as to which source to use, collating information when possible, and reflecting their confidence in the observation overall using the CONFIDENCE variable.

Variable Name	Definition	Type(Len)	Values
MRN	Medical record number is the unique patient identifier within a site and should never leave the site	char(*)	Unique to each patient at each site
DEATHDT	The date that the person most likely died.	num(4)	SAS date, missing values allowed
DTIMPUTE	Indicates whether the death date is imputed and if so, how it was imputed.	char(1)	M = Month of date imputed D = Day of date imputed B = Both month & day imputed N = Date not imputed
SOURCE_LIST	A list of all sources of data that report this death regardless of any discrepencies in other variables (e.g. DEATHDT).	char(8)	A concatenated string of letters in descending order of reliability indicating all sources that report this person's death B = Social Security Admin N = National Death Index S = State Death records T = Tumor registry E = Encounter data P = Patient data M = Membership data O = Other

CONFIDENCE	Based on all information available, the level of confidence that this person is in fact dead.	char(1)	E = Excellent F = Fair P = Poor

Primary Key:

MRN

Foreign Key Relationship:

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?	
MRN	DEMOGRAPHICS	MRN	No	

Usage Notes

Comments

Updated 12/2015

Version = 4.0 StdVar = &_vdw_cause_of_death

Subject Area Description

The CAUSE OF DEATH table contains one record per person per known cause of death.

Variable Name	Definition	Type(Len)	Values
MRN	Medical record number is the unique patient identifier within a site and should never leave the site.	char(*)	Unique to each patient at each site
COD	The cause of death diagnosis mortality code. For ICD diagnosis coding, include decimal points in the value.	char(6)	
DX_CODETYPE	Refer to the DX_CODETYPE variable on the ENCOUNTER table for definition, type, length, and value set.		
CAUSETYPE	The type of cause of death.	char(1)	I = Immediate/Primary U = Underlying C = Contributory O = Other
SOURCE_LIST	Refer to the SOURCE_LIST variable on the DEATH table for definition, type, length, and value set.		
CONFIDENCE	Refer to the CONFIDENCE variable on the DEATH table for definition, type, length, and value set.		

Primary Key:

MRN + COD + DX_CODETYPE + CAUSETYPE

Foreign Key Relationship:

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?	
MRN	DEMOGRAPHICS	MRN	No	

Usage Notes

Comments

Updated 12/2015

Version = 4.0 StdVar = &_vdw_tumor

Subject Area Description

The TUMOR table contains records of documented neoplasms (typically malignant) diagnosed in patients as indicated in a tumor registry. There is one record per separately diagnosed neoplasm per reporting registry. Diagnoses of neoplasms in sources other than registries should not be included. Information in this table should be based entirely on information reported by registries (e.g., do not populate demographic variables with information from other sources).

Variable Name	Definition	Type(Len)	Values	NAACCR Item #
MRN	Medical record number is the unique patient identifier within a site and should never leave the site	char(*)	Unique to each patient at each site	
SEQUENCE	Sequence number of all malignant and non-malignant neoplasms over the lifetime of the patient	char(2)	As defined by NAACCR items #560 (Sequence Number—Hospital) or #380 (Sequence Number—Central).	*380, 560*
DXDATE	Date of diagnosis	num(4)	SAS date version of NAACCR item #390	*390*
DXDATE_IMPUTE	Indicates whether the DXDATE has been imputed, and if so, how it was imputed	char(1)	M = Month of date imputed D = Day of date imputed B = Both month & day imputed N = Date not imputed	
DXYEAR	Year of diagnosis	num(4)	Four-digit year (which should correspond to year extracted from DXDATE, if populated). Null values are preferred for unknown values (even if stored as "9999" in original NAACCR character-based format).	

ICDOSITE	Primary site	char(4)	As defined by NAACCR item #400. Valid codes are those listed by the WHO (excluding the decimal point) at http://codes.iarc.fr/topography.	*400*
SS1977	General/summary stage (1977 version)	char(1)	As defined by NAACCR item #760 (original) or #3010 (Collaborative Staging–derived): 0 = In situ 1 = Localized 2 = Regional, direct extension only 3 = Regional, regional lymph nodes only 4 = Regional, direct extension and regional lymph nodes 5 = Regional, NOS 7 = Distant 8 = Not applicable 9 = Unstaged	*760, 3010*
SS2000	General/summary stage (2000 version)	char(1)	As defined by NAACCR item #759 (original) or #3020 (Collaborative Staging–derived). Values same as SS1977 above.	*759, 3020*
STAGEGEN	Best available general/summary stage	char(1)	As defined for variables SS1977 and SS2000 above. If necessary, this variable can be constructed as the coalesce of SS2000 (preferred) and SS1977.	
STAGEAJ	Pathological (preferred) or clinical AJCC stage group at diagnosis	char(4)	0, 0A, 0IS, 1, 1A, 1A1, 1A2, 1B, 1B1, 1B2, 1C, 1S, 2, 2A, 2A1, 2A2, 2B, 2C, 3, 3A, 3B, 3C, 3C1, 3C2, 4, 4A, 4A1, 4A2, 4B, 4C, OC, 88, 99, XX	*910, 970, 3430, 3000*

| AJCC_ED | AJCC Staging Scheme Edition | char(2) | 00 = Not Staged (cases that have AJCC staging scheme and staging was not done)
01 = First Edition
02 = Second Edition (published 1983)
03 = Third Edition (published 1988)
04 = Fourth Edition (published 1992), recommended for use for cases diagnosed 1993-1997
05 = Fifth Edition (published 1997), recommended for use for cases diagnosed 1998-2002

06 = Sixth Edition (published 2002), recommended for use for cases diagnosed 2003-2009
07 = Seventh Edition (published 2009), recommended for use with cases diagnosed 2010–2017
U7 = UICC Seventh Edition (published 2009; SEER only)
08 = Eighth Edition (published 2016), recommended for use with cases diagnosed 2018+
88 = Not Applicable (cases that do not have an AJCC staging scheme)
99 = Edition Unknown | *1060 (where available) otherwise derive* |
| MORPH | Histologic type | char(4) | As defined by NAACCR item #522. Valid values are the first four characters of the codes in this list available from the WHO: http://codes.iarc.fr/codegroup/2. | *522* |

BEHAV	Behavior	char(1)	As defined by NAACCR item #523 (Behavior Code ICD-O-3; preferred) or #430 (BEHAVIOR [92-00] ICD-O-2). Valid values are: 0 = Benign (Reportable for intracranial and CNS sites only) 1 = Uncertain whether benign or malignant, borderline malignancy, low malignant potential, and uncertain malignant potential (Reportable for intracranial and CNS sites only) 2 = Carcinoma in situ; intraepithelial; noninfiltrating; non-invasive (carcinoma) 3 = Malignant, primary site (invasive) 6 = Metastatic site 9 = Unknown	*523, 430*
GRADE	Grade/differentiation	char(1)	As defined by NAACCR item #440: 1 = Grade I 2 = Grade II 3 = Grade III 4 = Grade IV 5 = T-cell 6 = B-cell 7 = Null cell 8 = NK (natural killer) cell 9 = Grade/differentiation unknown, not stated, or not applicable	*440*

DXAGE	Patient's age at diagnosis	num(3)	Numeric version of NAACCR item #230. Null values are preferred for unknown ages (even if stored as "999" in original NAACCR character-based format).	*230*
BDATE	Patient's date of birth	num(4)	SAS date version of NAACCR item #240	*240*
GENDER	Sex of patient	char(1)	As defined by NAACCR item #220: 1 = Male 2 = Female 3 = Other (intersex, disorders of sexual development/DSD) 4 = Transsexual, NOS 5 = Transsexual, natal male 6 = Transsexual, natal female 9 = Not stated/Unknown	*220*
RACE1 - RACE5	Race of patient	char(2)	As defined by NAACCR item #160, valid values are 01–08, 10–17, 20–22, 25–28, 30–32, and 96–99. In addition, code 88 is valid for RACE2–RACE5.	*160–164*
HISPANIC	Spanish/Hispanic origin of patient	char(1)	As defined by NAACCR item #190: 0 = Non-Spanish; non-Hispanic 1 = Mexican (includes Chicano) 2 = Puerto Rican 3 = Cuban 4 = South or Central American (except Brazil)	*190*

			5 = Other specified Spanish/Hispanic origin (includes European; excludes Dominican Republic) 6 = Spanish, NOS Hispanic, NOS Latino, NOS 7 = Spanish surname only 8 = Dominican Republic 9 = Unknown whether Spanish or not	
CLASS	Class of case	char(2)	As defined by NAACCR item #610, valid values are 00, 10–14, 20–22, 30–38, 40–43, 49, and 99. To limit an analysis to so-called "analytic" cases, restrict CLASS variable to values 00 through 22.	610
VITAL	Vital status of patient as of last contact	char(1)	Recoded version of NAACCR item #1760: 1 = Alive 2 = Deceased	1760
DCAUSE	Cause of death	char(6)	As defined by NAACCR item #1910	1910
DOD	The person's date of death as reported or derived from the tumor registry.	num(4)	SAS date version of NAACCR item #1750, populated only when VITAL = "2" (see above)	1750
DT_FU	Date of last contact or death	num(4)	SAS date version of NAACCR item #1750	739

LATERALITY	Laterality (side of a paired organ or side of body)	char(1)	As defined by NAACCR item #410: 0 = Not a paired site 1 = Right: origin of primary 2 = Left: origin of primary 3 = Only one side involved, right or left origin unspecified 4 = Bilateral involvement at time of diagnosis, lateral origin unknown for a single primary; or both ovaries involved simultaneously, single histology; bilateral retinoblastomas; bilateral Wilms' tumors 5 = Paired site: midline tumor 9 = Paired site, but no information concerning laterality	*410*
IDPLAN	A unique VDW implementing site identifier.	char(2)	As defined by the Site ID documented on the VDW Implementations Overview on the HCSRN Portal: 01 = KPWA 02 = KPNW 03 = KPNC 04 = KPSC 05 = KPHI 06 = KPCO 07 = HPI 08 = HPHC 09 = MPCI 10 = HFHS 11 = KPGA	

			13 = MCRF 14 = GHS 15 = SWH 17 = KPMA 18 = EIRH 19 = PAMF 21 = CHI	
DATA_SOURCE	Indicates the source of data for this record.	char(4)	For the first two positions use: LO = Local registry SE = Regional SEER registry ST = State operated registry The final two positions are locally defined to further differentiate source. Use values 'XX' for these positions if they are not needed at your site.	
DCNFRM	As defined by NAACCR item #490	char(1)	As defined by NAACCR item #490	*490*
TMR_SIZE	Tumor size	char(3)	Character representations of numbers between 000 and 999, inclusive. Exact interpretation depends on year of diagnosis and sometimes tumor site. See implementation guidelines (linked at right) and underlying NAACCR documentation for items 756, 2800, and 780.	*756, 2800, 780*
DAJC1T_P	As defined by NAACCR item #880	char(5)	As defined by NAACCR item #880	*880*
DAJC1N_P	As defined by NAACCR item #890	char(5)	As defined by NAACCR item #890	*890*
DAJC1M_P	As defined by NAACCR item #900	char(5)	As defined by NAACCR item #900	*900*
DAJC1T_C	As defined by NAACCR item #940	char(5)	As defined by NAACCR item #940	*940*
DAJC1N_C	As defined by NAACCR item #950	char(5)	As defined by NAACCR item #950	*950*
DAJC1M_C	As defined by NAACCR item #960	char(5)	As defined by NAACCR item #960	*960*

DSRG_FAC	As defined by NAACCR item #670	char(2)	As defined by NAACCR item #670	670
DRAD_FAC	As defined by NAACCR item #690	char(2)	As defined by NAACCR item #690	690
DCHM_FAC	As defined by NAACCR item #700	char(2)	As defined by NAACCR item #700	700
DHRM_FAC	As defined by NAACCR item #710	char(2)	As defined by NAACCR item #710	710
DBRM_FAC	As defined by NAACCR item #720	char(2)	As defined by NAACCR item #720	720
DOTH_FAC	As defined by NAACCR item #730	char(2)	As defined by NAACCR item #730	730
HTE_FAC	As defined per NAACCR item #3250 except that the source of information is from the reporting facility only.	char(2)	As defined per NAACCR item #3250	
R_MOD_FAC	As defined per NAACCR item #1570 except that the source of information is from the reporting facility only.	char(2)	As defined per NAACCR item #1570	
R_VOL_FAC	As defined per NAACCR item #1540 except that the source of information is from the reporting facility only.	char(2)	As defined per NAACCR item #1540	
B_MOD_FAC	As defined per NAACCR item #3200 except that the source of information is from the reporting facility only.	char(2)	As defined per NAACCR item #3200	
B_VOL_FAC	As defined per NAACCR item #1540 except that source of information is from the reporting facility only and for boost radiation rather than regional radiation.	char(2)	As defined per NAACCR item #1540	
DNDI	As defined by NAACCR item #820	char(2)	As defined by NAACCR item #820	820
DNDX	As defined by NAACCR item #830	char(2)	As defined by NAACCR item #830	830
DTMRK1	As defined by NAACCR item #1150	char(1)	As defined by NAACCR item #1150	1150
DTMRK2	As defined by NAACCR item #1160	char(1)	As defined by NAACCR item #1160	1160

DTMRK3	As defined by NAACCR item #1170	char(1)	As defined by NAACCR item #1170	*1170*
EOD	Extent of disease	char(12)		
DT_SURG	As defined by NAACCR item #1200	num(4)	As defined by NAACCR item #1200	*1200*
DT_CHEMO	As defined by NAACCR item #1220	num(4)	As defined by NAACCR item #1220	*1220*
DT_HORM	As defined by NAACCR item #1230	num(4)	As defined by NAACCR item #1230	*1230*
DT_RAD	As defined by NAACCR item #1210	num(4)	As defined by NAACCR item #1210	*1210*
DT_RAD_END	As defined by NAACCR item #3220	num(4)	As defined by NAACCR item #3220	*3220*
DT_BRM	As defined by NAACCR item #1240	num(4)	As defined by NAACCR item #1240	*1240*
DT_SYS	Date any systemic treatment began.	num(4)	SAS date	
DT_HTE	Date of hematologic transplant and endocrine procedures	num(4)	SAS date	
DT_OTH	As defined by NAACCR item #1250	num(4)	As defined by NAACCR item #1250	*1250*
R_N_SURG	As defined by NAACCR item #1340	char(1)	As defined by NAACCR item #1340	*1340*
R_N_CHEMO	As defined by NAACCR item #1440	char(2)	As defined by NAACCR item #1440	*1440*
R_N_HORM	As defined by NAACCR item #1450	char(1)	As defined by NAACCR item #1450	*1450*
R_N_RAD	As defined by NAACCR item #1430	char(1)	As defined by NAACCR item #1430	*1430*
R_N_BRM	A placeholder for indicating why the patient did not receive immunotherapy as a part of first course of therapy.	char(1)	No value set defined	

R_N_HTE	Reason no hematologic transplant or endocrine ablation was given.	char(1)	0 = HTE administered 1 = HTE not recommended 2 = HTE contraindicated; autopsy only cases 5 = HTE not administered, pt died 6 = Reason unknown for no HTE 7 = Patient/pt`s guardian refused HTE 8 = HTE recommended, unk if administered 9 = Unk if HTE recommended/admin; death cert only	
R_N_OTH	A placeholder for indicating why the patient did not receive some other form of treatment as a part of the first course of therapy.	chart(1)	No value set defined	
DSRG_SUM	As defined by NAACCR item #1290, #1646, and #1640. If multiple items are known, preference is given first to #1290, then #1646, and lastly #1640.	char(2)	As defined by NAACCR item #1290	
DRAD_SUM	As defined by NAACCR item #1360	char(2)	As defined by NAACCR item #1360	*1360*
DCHM_SUM	As defined by NAACCR item #1390	char(2)	As defined by NAACCR item #1390	*1390*
DHRM_SUM	As defined by NAACCR item #1400	char(2)	As defined by NAACCR item #1400	*1400*
DBRM_SUM	As defined by NAACCR item #1440	char(2)	As defined by NAACCR item #1440	*1440*
DOTH_SUM	As defined by NAACCR item #1420	char(2)	As defined by NAACCR item #1420	*1420*
HTE_SUM	As defined by NAACCR item #3250	char(2)	As defined by NAACCR item #3250	*3250*
R_MOD_SUM	As defined by NAACCR item #1570	char(2)	As defined by NAACCR item #1570	*1570*
R_VOL_SUM	As defined by NAACCR item #1540	char(2)	As defined by NAACCR item #1540	*1540*
R_DOSE	As defined by NAACCR item #1510	char(5)	As defined by NAACCR item #1510	*1510*
B_MOD_SUM	As defined by NAACCR item #3200	char(2)	As defined by NAACCR item #3200	*3200*

B_VOL_SUM	As defined per NAACCR item #1540 except for boost radiation rather than regional radiation.	char(2)	As defined per NAACCR item #1540	
B_DOSE	As defined by NAACCR item #3210	char(5)	As defined by NAACCR item #3210	*3210*
CS_EXT	As defined by NAACCR item #2810	char(3)	As defined by NAACCR item #2810	*2810*
CS_NODES	As defined by NAACCR item #2830	char(3)	As defined by NAACCR item #2830	*2830*
CS_NODES_EVAL	As defined by NAACCR item #2840	char(1)	As defined by NAACCR item #2840	*2840*
CS_METS	As defined by NAACCR item #2850	char(2)	As defined by NAACCR item #2850	*2850*
CS_METS_EVAL	As defined by NAACCR item #2860	char(1)	As defined by NAACCR item #2860	*2860*
SSF1 - SSF25	Up to 25 different site specific factors. Definition and values are dependent on ICDOSITE and are documented in the NAACCR standards starting with item #2880 for SSF1.	char(3)	As defined by NAACCR standards. Refer to the NAACCR data dictionary for value set.	*Series*
DER_T6	As defined by NAACCR item #2940	char(3)	As defined by NAACCR item #2940	*2940*
DER_T6_D	As defined by NAACCR item #2950	char(1)	As defined by NAACCR item #2950	*2950*
DER_N6	As defined by NAACCR item #2960	char(3)	As defined by NAACCR item #2960	*2960*
DER_N6_D	As defined by NAACCR item #2970	char(1)	As defined by NAACCR item #2970	*2970*
DER_M6	As defined by NAACCR item #2980	char(3)	As defined by NAACCR item #2980	*2980*
DER_M6_D	As defined by NAACCR item #2990	char(1)	As defined by NAACCR item #2990	*2990*
DER_T7	As defined by NAACCR item #3400	char(3)	As defined by NAACCR item #3400	*3400*
DER_T7_D	As defined by NAACCR item #3402	char(1)	As defined by NAACCR item #3402	*3402*
DER_N7	As defined by NAACCR item #3410	char(3)	As defined by NAACCR item #3410	*3410*
DER_N7_D	As defined by NAACCR item #3411	char(1)	As defined by NAACCR item #3411	*3411*
DER_M7	As defined by NAACCR item #3420	char(3)	As defined by NAACCR item #3420	*3420*
DER_M7_D	As defined by NAACCR item #3422	char(1)	As defined by NAACCR item #3422	*3422*
PAL_FAC	As defined by NAACCR item #3280	char(1)	As defined by NAACCR item #3280	*3280*
PAL_SUM	As defined by NAACCR item #370	char(1)	As defined by NAACCR item #370	*370*

RECUR_DT	As defined by NAACCR item #1860	num(4)	As defined by NAACCR item #1860	*1860*
RECUR_TYPE	As defined by NAACCR item #1880	char(2)	As defined by NAACCR item #1880	*1880*
RECUR_FL	As defined by NAACCR item #1861	char(2)	As defined by NAACCR item #1861	*1861*

Primary Key:

MRN + SEQUENCE

Foreign Key Relationship:

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?	
MRN	DEMOGRAPHICS	MRN	No	

Usage Notes

NAACCR definitions and values sets change over time. Each record reflects the definitions and values as they were set at the time of diagnosis (DXDATE).

Deprecated values: DER_SS2000F, AJCC_GRP, AJCC_FULL_DER, DSTZ, CS_SZ, CLN_STG

Comments

Added TMR_SIZE (10/2019)

CENSUS LOCATION

Version = 4.0 StdVar = &_vdw_census_loc

Subject Area Description
The CENSUS LOCATION table contains geographic location markers for patient residencies over time.

Variable Name	Definition	Type(Len)	Values
MRN	Medical record number is the unique patient identifier within a site and should never leave the site	char(*)	Unique to each patient at each site
LOC_START	The date on which the person's tenure at this location began.	num(4)	SAS date
LOC_END	The date on which the person's tenure at this location ended.	num(4)	SAS date
GEOCODE	The concatenation of FIPS codes for State, County, Tract, Block Group, and Block	char(15)	FIPS values are set by the National Institute of Standards & Technology and are public information
GEOCODE_BOUNDARY_YEAR	The census year for which the GEOCODE applies.	num(8)	Year values (e.g. 2000, 2004)
GEOLEVEL	The most granular geographic level of the GEOCODE indicating the specificity of the match made. Also called 'map flag'.	char(1)	B = Block G = Block group T = Tract C = County Z = Zip code U = Unable to be appended P = Address is post office

Census Location *Virtual Data Warehouse Data Specifications* 85

MATCH_STRENGTH	A code indicating the type of match achieved by the geocoding software.	char(1)	0 = No coordinates 1 = Zip +0 centroid 2 = Zip +2 centroid 3 = Zip +4 centroid 4 = Shape path centroid 5 = Street address position 6 = Point zip centroid X = Street intersection
LATITUDE	The latitude of the location	num(8)	Value between -90 and +90 measured in degrees
LONGITUDE	The longitude of the location	num(8)	Value between -180 and +180 measured in degrees
ZIP	Zip Code--a five-character numeric code assigned by the US Postal Service to various regions where it delivers mail.	char(5)	Any valid zip code, as assigned by the US Postal Service
GEOCODE_APP	The name of the application used to geocode this location	char(*)	Free text field

Primary Key:

MRN + LOC_START (no overlapping time periods are permitted)

Foreign Key

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?	
MRN	DEMOGRAPHICS	MRN	No	
GEOCODE + CENSUS_YEAR	CENSUS DEMOG	GEOCODE + CENSUS_YEAR	No	

Usage Notes

Comments

Updated 12/2015

Version = 4.0   StdVar = &_vdw_census_demog

Subject Area Description

The CENSUS DEMOGRAPHICS table contains US Census information in a given year, Census data source, and geocode.

Variable Name	Definition	Type(Len)	Values	*ACS Field Numbers*
CENSUS_YEAR	Year the census data was collected	Num(8)	Year values (e.g. 2000, 2010)	
CENSUS_DATA_SRC	Source of the data in the record	Char(16)	Census, ACS5, ESRI, etc.	
GEOCODE	Concatenation of the FIPS codes for State, County, Tract, Block Group and Block	Char(15)	The first two characters signify the state, the next three signify the county, the next six signify the tract, the next 1 signifies the block group, and the final 3 signify the block.	
STATE	State Code--a two-character numeric code assigned to US states, districts, territories and protectorates.	char(2)	Any valid state code, as used by the USCB.	
COUNTY	County Code--a 3-character numeric code assigned to census counties.	char(3)	Any valid county code, as used by the USCB.	
TRACT	Tract Code--a six-character numeric code assigned to census tracts.	char(6)	Any valid tract code, as used by the USCP.	
BLOCKGP	Block Group Code--a 1-character numeric code assigned to census block groups.	char(1)	Any valid block group code, as used by the USCB.	
BLOCK	Block code--a 3-character numeric code assigned to census blocks.	char(3)	Any valid block code, as used by the USCB.	

EDUCATION1	Less than 9th grade	num(8)	Any proportion between 0 and 1.	*B15002003* *B15002004* *B15002005* *B15002006* *B15002020* *B15002021* *B15002022* *B15002023*
EDUCATION2	9th - 12th grade	num(8)	Any proportion between 0 and 1.	*B15002007* *B15002008* *B15002009* *B15002010* *B15002024* *B15002025* *B15002026* *B15002027*
EDUCATION3	high school graduate	num(8)	Any proportion between 0 and 1.	*B15002011* *B15002028*
EDUCATION4	some college, no degree	num(8)	Any proportion between 0 and 1.	*B15002012* *B15002013* *B15002029* *B15002030*
EDUCATION5	associate degree	num(8)	Any proportion between 0 and 1.	*B15002014* *B15002031*
EDUCATION6	bachelor degree	num(8)	Any proportion between 0 and 1.	*B15002015* *B15002032*
EDUCATION7	graduate or professional degree	num(8)	Any proportion between 0 and 1.	*B15002016* *B15002017* *B15002033* *B15002034*
EDUCATION8	Doctorate degree	num(8)	Any proportion between 0 and 1.	*B15002018* *B15002035*
MEDFAMINCOME	Median Family Income	num(8)	Any integer.	*B19113001*
FAMINCOME1	less than $10,000	num(8)	Any proportion between 0 and 1.	*B19101002*
FAMINCOME2	$10,000 - $14,999	num(8)	Any proportion between 0 and 1.	*B19101003*
FAMINCOME3	$15,000-$19,999	num(8)	Any proportion between 0 and 1.	*B19101004*
FAMINCOME4	$20,000-$24,999	num(8)	Any proportion between 0 and 1.	*B19101005*
FAMINCOME5	$25,000-$29,999	num(8)	Any proportion between 0 and 1.	*B19101006*

FAMINCOME6	$30,000-$34,999	num(8)	Any proportion between 0 and 1.	*B19101007*
FAMINCOME7	$35,000-$39,999	num(8)	Any proportion between 0 and 1.	*B19101008*
FAMINCOME8	$40,000-$44,999	num(8)	Any proportion between 0 and 1.	*B19101009*
FAMINCOME9	$45,000-$49,999	num(8)	Any proportion between 0 and 1.	*B19101010*
FAMINCOME10	$50,000-$59,999	num(8)	Any proportion between 0 and 1.	*B19101011*
FAMINCOME11	$60,000-$74,999	num(8)	Any proportion between 0 and 1.	*B19101012*
FAMINCOME12	$75,000-$99,999	num(8)	Any proportion between 0 and 1.	*B19101013*
FAMINCOME13	$100,000-$124,999	num(8)	Any proportion between 0 and 1.	*B19101014*
FAMINCOME14	$125,000-$149,999	num(8)	Any proportion between 0 and 1.	*B19101015*
FAMINCOME15	$150,000-$199,999	num(8)	Any proportion between 0 and 1.	*B19101016*
FAMINCOME16	$200,000+	num(8)	Any proportion between 0 and 1.	*B19101017*
FAMPOVERTY	Proportion of family households in the geography with below-poverty level income.	num(8)	Any proportion between 0 and 1.	*B17001002*
MEDHOUSINCOME	median household income	num(8)	Any integer.	*B19013001*
HOUSINCOME1	< $10,000	num(8)	Any proportion between 0 and 1.	*B19001002*
HOUSINCOME2	$10,000-$14,999	num(8)	Any proportion between 0 and 1.	*B19001003*
HOUSINCOME3	$15,000-$19,999	num(8)	Any proportion between 0 and 1.	*B19001004*
HOUSINCOME4	$20,000-$24,999	num(8)	Any proportion between 0 and 1.	*B19001005*
HOUSINCOME5	$25,000-$29,999	num(8)	Any proportion between 0 and 1.	*B19001006*
HOUSINCOME6	$30,000-$34,999	num(8)	Any proportion between 0 and 1.	*B19001007*
HOUSINCOME7	$35,000-$39,999	num(8)	Any proportion between 0 and 1.	*B19001008*
HOUSINCOME8	$40,000-$44,999	num(8)	Any proportion between 0 and 1.	*B19001009*
HOUSINCOME9	$45,000-$49,999	num(8)	Any proportion between 0 and 1.	*B19001010*
HOUSINCOME10	$50,000-$59,999	num(8)	Any proportion between 0 and 1.	*B19001011*
HOUSINCOME11	$60,000-$74,999	num(8)	Any proportion between 0 and 1.	*B19001012*
HOUSINCOME12	$75,000-$99,999	num(8)	Any proportion between 0 and 1.	*B19001013*
HOUSINCOME13	$100,000-$124,999	num(8)	Any proportion between 0 and 1.	*B19001014*
HOUSINCOME14	$125,000-$149,999	num(8)	Any proportion between 0 and 1.	*B19001015*
HOUSINCOME15	$150,000-$199,999	num(8)	Any proportion between 0 and 1.	*B19001016*

HOUSINCOME16	$200,000+	num(8)	Any proportion between 0 and 1.	*B19001017*
HOUSPOVERTY	%Households with below-poverty level income	num(8)	Any proportion between 0 and 1.	*B17026002* *B17026003* *B17026004*
POV_LT_50	<50% of poverty level	num(8)	Any proportion between 0 and 1.	*B17026002*
POV_50_74	Between 50 and 74.99% of poverty level	num(8)	Any proportion between 0 and 1.	*B17026003*
POV_75_99	Between 75 and 99.99% of poverty level	num(8)	Any proportion between 0 and 1.	*B17026004*
POV_100_124	Between 100 and 124.99% of poverty level	num(8)	Any proportion between 0 and 1.	*B17026005*
POV_125_149	Between 125 and 149.99% of poverty level	num(8)	Any proportion between 0 and 1.	*B17026006*
POV_150_174	Between 150 and 174.99% of poverty level	num(8)	Any proportion between 0 and 1.	*B17026007*
POV_175_184	Between 175 and 184.99% of poverty level	num(8)	Any proportion between 0 and 1.	*B17026008*
POV_185_199	Between 185 and 199.99% of poverty level	num(8)	Any proportion between 0 and 1.	*B17026009*
POV_GT_200	> 200% of poverty level	num(8)	Any proportion between 0 and 1.	*B17026010* *B17026011* *B17026012* *B17026013*
RA_NHS_WH	%white, non-hispanic	num(8)	Any proportion between 0 and 1.	
RA_NHS_BL	%black or african american, non-hispanic	num(8)	Any proportion between 0 and 1.	
RA_NHS_AM	%american indian or alaska native, non-	num(8)	Any proportion between 0 and 1.	
RA_NHS_AS	%asian, non-hispanic	num(8)	Any proportion between 0 and 1.	
RA_NHS_HA	%native hawaiian or other pacific islander, non-hispanic	num(8)	Any proportion between 0 and 1.	
RA_NHS_OT	%other, non-hispanic	num(8)	Any proportion between 0 and 1.	
RA_NHS_ML	%two or more races, non-hispanic	num(8)	Any proportion between 0 and 1.	
RA_HIS_WH	%white, hispanic	num(8)	Any proportion between 0 and 1.	
RA_HIS_BL	%black or african american, hispanic	num(8)	Any proportion between 0 and 1.	
RA_HIS_AM	%amercian indian or alaska native, hispanic	num(8)	Any proportion between 0 and 1.	
RA_HIS_AS	%asian, hispanic	num(8)	Any proportion between 0 and 1.	
RA_HIS_HA	%native hawaiian or other pacific islander, hispanic	num(8)	Any proportion between 0 and 1.	
RA_HIS_OT	%other, hispanic	num(8)	Any proportion between 0 and 1.	
RA_HIS_ML	%two or more races, hispanic	num(8)	Any proportion between 0 and 1.	

HOUSES_N	Number of housing units in geography	num(8)	Any integer.	
HOUSES_ OCCUPIED	Proportion of houses_n that are occupied.	num(8)	Any proportion between 0 and 1.	
HOUSES_OWN	Proportion of occupied housing units that are occupied by owners.	num(8)	Any proportion between 0 and 1.	
HOUSES_RENT	Proportion of occupied housing units that are occupied by renters.	num(8)	Any proportion between 0 and 1.	
HOUSES_UNOCC_ FORRENT	Proportion of unoccupied housing units that are for rent.	num(8)	Any proportion between 0 and 1.	
HOUSES_UNOCC_ FORSALE	Proportion of unoccupied housing units that are for sale	num(8)	Any proportion between 0 and 1.	
HOUSES_UNOCC_RE NTSOLD	Proportion of unoccupied housing units that are rented or sold, but still unoccupied.	num(8)	Any proportion between 0 and 1.	
HOUSES_UNOCC_ SEASONAL	Proportion of unoccupied housing units that are used seasonally or other occasional use.	num(8)	Any proportion between 0 and 1.	
HOUSES_UNOCC_MI GRANT	Proportion of unoccupied housing units that are used for migrant workers.	num(8)	Any proportion between 0 and 1.	
HOUSES_UNOCC_OT HER	Proportion of unoccupied housing units that are vacant for other reasons.	num(8)	Any proportion between 0 and 1.	
ENGLISH_SPEAKER	Proportion of people over age 5 that speak only English or speak english "very well"	Num(8)	Any proportion between 0 and 1.	*B16007003 B16007009 B16007015*
SPANISH_SPEAKER	Proportion of people over age 5 who speak only spanish or speak spanish "very well"	Num(8)	Any proportion between 0 and 1.	*B16007004 B16007010 B16007016*
BORNINUS	Proportion of people over age 5 that were born in the US	Num(8)	Any proportion between 0 and 1.	*B05001002*

MOVEDINLAST12MON	Proportion of households that moved in the last 12 months	Num(8)	Any proportion between 0 and 1.	*1-(B07001017/B07001001*
MARRIED	Proportion of people over age 15 who are married	Num(8)	Any proportion between 0 and 1.	*B12001004 B12001013*
DIVORCED	Proportion of people over age 15 who are divorced	Num(8)	Any proportion between 0 and 1.	*B12001010 B12001019*
DISABILITY	Proportion of people over age 18 living with any disability	Num(8)	Any proportion between 0 and 1.	*C18101007 C18101010 C18101017 C18101020*
UNEMPLOYMENT	Proportion of civilian noninstitutionalized population between 18 and 64 who are unemployed	Num(8)	Any proportion between 0 and 1.	*B23001008 B23001015 B23001022 B23001029 B23001036 B23001043 B23001050 B23001057 B23001064 B23001071 B23001076 B23001081 B23001086 B23001094 B23001101 B23001108 B23001115 B23001122 B23001129 B23001136 B23001143 B23001150 B23001157 B23001162 B23001167*

UNEMPLOYMENT_MALE	Proportion of civilian noninstitutionalized males between 18 and 64 who are unemployed	Num(8)	Any proportion between 0 and 1.	*B23001008* *B23001015* *B23001022* *B23001029* *B23001036* *B23001043* *B23001050* *B23001057* *B23001064* *B23001071* *B23001076* *B23001081* *B23001086*
INS_MEDICARE	Proportion of people covered by Medicare	Num(8)	Any proportion between 0 and 1.	*C27006004* *C27006007* *C27006010* *C27006014* *C27006017* *C27006020*
INS_MEDICAID	Proportion of people covered by Medicaid	Num(8)	Any proportion between 0 and 1.	*C27007004* *C27007007* *C27007010* *C27007014* *C27007017* *C27007020*
HH_NOCAR	Proportion of households with no car (owner and renter occupied)	Num(8)	Any proportion between 0 and 1.	*B08201002*
HH_PUBLIC_ ASSISTANCE	Proportion of households on public assistance	Char(1)	Any proportion between 0 and 1.	*B19057002*
HMOWNER_COSTS_ MORT	Proportion of households with monthly owner costs > 50% HH income, in homes	Num(8)	Any proportion between 0 and 1.	*B25091011*
HMOWNER_COSTS_ NO_MORT	Proportion of households with monthly owner costs > 50% HH income, in homes without mortgages	Num(8)	Any proportion between 0 and 1.	*B25091022*
HOMES_MEDVALUE	Median value of homes	Num(8)	Any integer.	*B25077001*

PCT_CROWDING	Proportion of households with >= 1 person per room	Num(8)	Any proportion between 0 and 1.	*B25014005* *B25014006* *B25014007* *B25014011* *B25014012* *B25014013*
FEMALE_HEAD_ OF_HH	Proportion of households headed by females (no male present)	Num(8)	Any proportion between 0 and 1.	*B25115011* *B25115024*
MGR_FEMALE	Proportion of female management occupations		Any proportion between 0 and 1.	*C24040046* *C24040045*
MGR_MALE	Proportion of male management occupations	Num(8)	Any proportion between 0 and 1.	*C24040019* *C24040018*
RESIDENTS_65	Proportion of population over 65	Num(8)	Any proportion between 0 and 1.	*B01001020* *B01001021* *B01001022* *B01001023* *B01001024* *B01001025* *B01001044* *B01001045* *B01001046* *B01001047* *B01001048* *B01001049*
SAME_RESIDENCE	Proportion of persons in same residence since year 2005	Num(8)	What years does ACS provide for this?	*B25026004* *B25026005* *B25026006* *B25026007* *B25026008* *B25026011* *B25026012* *B25026013* *B25026014* *B25026015*

Primary Key:

GEOCODE + CENSUS_YEAR

Foreign Key Relationship:

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?	
[None Defined]				

Usage Notes

Comments

Updated 12/2015

DEPT replaced DEPARTMENT starting in Version 4.0

Subject Area Description

A list of permissible values for the DEPT variable on the ENCOUNTERS table

6 Character Department Code for "DEPT" variable	Department Description	Care Management	Cardiology	Chemical and/or Alcohol Dependency	Complementary & Alternative Medicine	Critical Care	Dental	Diagnostic testing	Disease Management	Emergency Services	Geriatric Medicine	Long Term Care	Mental & Behavioral Health	Neurology	Nursing services	Obstetrics and Gynecology	Oncology	Ophthalmology	Pediatrics	Pulmonology	Radiology	Rehab	Rx (Pharmacy Services)	Surgery	Transplant
ADMINS	*Administration*																								
ADULHC	*Adult Day Health*											Y													
ADVCNT	*Advice Center*																								
ALLRGY	*Allergy*																								
AMBULN	*Ambulance Services*																								
ANCILL	*Ancillary Services*																								
ANESTH	*Anesthesiology*																								
AUDIOL	*Audiology*																								
AVIATN	*Aviation Medicine/ Aerospace Medicine*																								
BARIAT	*Bariatric Medicine*																								
BLDBNK	*Blood Bank*																								

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BREAST	*Breast Care*																								
BURNCL	*Burn Care*																								
CADALC	*Chemical and/or Alcohol Dependency, Alcoholism Treatment*			Y																					
CADNOS	*Chemical and/or Alcohol Dependency, Not Otherwise Specified*			Y																					
CADRHB	*Chemical and/or Alcohol Dependency, Rehabilitation*			Y																		Y			
CADSUB	*Chemical and/or Alcohol Dependency, Substance Abuse*			Y																					
CARCAT	*Cardiology, Cardiac Catherization*		Y																						
CARCVL	*Cardiology, Cerebrovascular Lab*		Y																						
CARINT	*Cardiology, Cardiac Intensive Care*		Y																						
CARLAB	*Cardiology, Cardiac Lab (Non-Invasive)*		Y																						
CARMED	*Cardiology, Cardiovascular Medicine*		Y																						
CARNOS	*Cardiology, Not Otherwise Specified*		Y																						
CARPRH	*Cardiopulmonary Rehabilitation*		Y																	Y		Y			
CARPUL	*Cardiology, Cardiopulmonary*		Y																	Y					

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CARRHB	Cardiology, Cardiac Rehabilitation		Y																						
CARRHB	Cardiac Rehabilitation		Y																			Y			
CARTRD	Cardiology, Cardiac Stress Lab (Cardiac Treadmill)		Y																						
CLNPHR	Clinical Pharmacy/ Clinical Pharmacology																						Y		
CMGEMR	Care Management/ Coordination, Emergency Medicine	Y																							
CMGGER	Care Management/ Coordination, Geriatric	Y									Y														
CMGMEN	Care Management/ Coordination, Mental Health	Y																							
CMGNOS	Care Management, Not Otherwise Specified	Y																							
CMGPOP	Care Management/Population Based	Y																							
CMPACP	Complementary Medicine, Acupuncture				Y																				
CMPCHI	Complementary Medicine, Chiropractic				Y																				
CMPHOL	Complementary Medicine, Holistic Health				Y																				
CMPINT	Complementary Medicine, Integrative Medicine				Y																				
CMPMED	Complementary Medicine (incl. Alternative Medicine) Not Otherwise Specified				Y																				

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CMPNAT	Complementary Medicine, Naturopathy				Y																				
CMPOST	Complementary Medicine, Osteopathy				Y																				
COAGUL	Anti-coagulation Services																								
COMMHL	Community Health, Public Health																								
COSMET	Cosmetic Services																								
CYTOPA	Cytopathology																								
DENEND	Dental, Endodontics						Y																		
DENNOS	Dental, Not Otherwise Specified						Y																		
DENORT	Dental, Orthodontics						Y																		
DENPAI	Dental, Orofacial Pain, TMD						Y																		
DENPED	Dental, Pediatric Dentistry						Y												Y						
DENPER	Dental, Periodontics						Y																		
DENSUR	Dental, Oral Surgery						Y																	Y	
DERMAT	Dermatology																								

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DIABET	Diabetes Services																								
DIALYS	Dialysis																								
DMEQMT	Durable Medical Equipment																								
DSMAST	Disease management, Asthma								Y											Y					
DSMCAR	Disease management, Cardiovascular		Y						Y																
DSMCCC	Disease management, Complex Chronic Conditions								Y																
DSMCHF	Disease management, Congestive Heart Failure		Y						Y																
DSMCOP	Disease management, COPD								Y											Y					
DSMDBT	Disease management, Diabetes								Y																
DSMHYP	Disease management, Hypertension								Y																
DSMNOS	Disease management, Not Otherwise Specified								Y																
DXTANG	Diagnostic testing, Angiography							Y													Y				
DXTBRE	Diagnostic testing, Breast Imaging							Y													Y				
DXTCAT	Diagnostic testing, CAT Scan							Y													Y				

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DXTDEN	Diagnostic testing, Densitometry							Y													Y				
DXTDNA	Diagnostic testing, DNA Diagnostic Lab							Y																	
DXTECH	Diagnostic testing, Echocardiogram		Y					Y																	
DXTEEG	Diagnostic testing, Electroencephalography							Y																	
DXTEKG	Diagnostic testing, Electrocardiogram		Y					Y													Y				
DXTELC	Diagnostic testing, Electrophysiology							Y																	
DXTEND	Diagnostic testing, Endoscopy							Y																	
DXTEPL	Diagnostic testing, Evoked Potential Lab							Y																	
DXTFLU	Diagnostic testing, Fluoroscopy							Y													Y				
DXTIVP	Diagnostic testing, IVP (Intravenous Pyelogram X-ray test)							Y													Y				
DXTMEG	Diagnostic testing, Magnetoencephalography (MEG) Laboratory							Y													Y				
DXTMRI	Diagnostic testing, MRI							Y													Y				
DXTNEU	Diagnostic testing, Neurology							Y						Y											
DXTNOS	Diagnostic testing, Not Otherwise Specified							Y																	

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DXTOPH	Diagnostic testing, Ophthalmology							Y										Y							
DXTPET	Diagnostic testing, PET Scan							Y													Y				
DXTTEL	Diagnostic testing, Telemetry		Y					Y																	
DXTTOM	Diagnostic testing, Tomography							Y													Y				
DXTTOX	Diagnostic testing, Toxicology							Y																	
DXTULT	Diagnostic testing, Ultrasound							Y													Y				
EDUCAT	Education																								
EMEHOS	Emergency Department, Hospital Based Urgent Care									Y															
EMENOS	Emergency Deparment, Not Otherwise Specified									Y															
EMETRA	Emergency Department, Trauma									Y															
EMEXOB	Emergency Department, Extended Observation									Y															
EMPHLT	Employee Health																								
ENDOCR	Endocrinology																								
ENTOTO	Otolaryngology (includes ENT - Ear, Nose and Throat)																								

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EPILEP	Epilepsy Services																								
FAMILY	Family Practice																								
FRACTU	Fracture Care																								
GASINT	Gastro-Intestinal Medicine																								
GENETI	Genetics																								
GERONT	Gerontology/Geriatrics										Y														
HEMATO	Hematology																								
HEMONC	Hematology Oncology																Y								
HEPATO	Hepatology																								
HLTAPP	Health Appraisals																								
HOMHLT	Home Health											Y													
HOSPIC	Hospice											Y													
HSPAMB	Hospital Ambulatory Medical Care/Treatment																								
HSPCRT	Hospital Critical Care Medicine, Not Otherwise Specified					Y																			

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HSPICU	Hospital Critical Care Medicine - Intensive Care Unit (ICU)					Y																			
HSPNIC	Hospital Critical Care Medicine - Neonatal Intensive Care Unit (NICU)					Y																			
HSPNOS	Hospital Care, Not Otherwise Specified																								
HSPPRO	Hospital, Progressive Care Unit																								
IMMUNO	Immunology																								
INDUST	Industrial Medicine																								
INFECT	Infectious Disease																								
INJECT	Injection Room																								
INTCAR	Intermediate Care Services (typically at an Intermediate Care Facility)											Y													
INTMED	Internal Medicine																								
LABORD	Labor and Delivery																								
LABTRY	Laboratory							Y																	
LACTAT	Lactation Services																								

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LIFEST	Lifestyle Medicine																								
LIPDCL	Lipid Care																								
LOWACC	Low Acuity Care																								
LTCNOS	Long Term Care (includes Continuing Care), Not Otherwise Specified											Y													
MENEAT	Mental Health, Eating Disorders												Y												
MENIMM	Mental Health, Psychiatry Immune Deficiency												Y												
MENNOS	Mental Health (includes behavioral health) Not Otherwise Specified												Y												
MENPSG	Mental Health, Psychiatry Geriatric										Y		Y												
MENPSO	Mental Health Psychology												Y												
MENPSY	Mental Health Psychiatry Not Otherwise Specified												Y												
MENRHB	Mental Health Rehabilitation												Y										Y			
MICROB	Microbiology																								
MIDWIF	Midwifery															Y									
NEPHRO	Nephrology																								

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NEUINT	Neurology, Neurology Intensive Care													Y											
NEUMUS	Neurology, Neuromuscular Center													Y											
NEUNOS	Neurology, Not Otherwise Specified													Y											
NEUPSY	Neurology, Neuropsychology													Y											
NEURHB	Neurology, Neurology Rehabilitation													Y											
NEWBOR	Newborn: Nursery																								
NUCLEA	Nuclear Medicine																								
NURGER	Nursing, Geriatric										Y				Y										
NURNOS	Nursing Services, Not Otherwise Specified														Y										
NUROBG	Nursing, Obstetrics and Gynecology														Y	Y									
NUROBS	Nursing Observation														Y										
NUTRIT	Nutrition																								
OBGFET	Obstetrics/ Gynecology, Maternal Fetal Medicine															Y									
OBGNOS	Obstetrics/Gynecology (includes Gynecology/ Urology), Not Otherwise Specified															Y									

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OCCMED	Occupational Medicine																								
OCCTHE	Occupational Therapy																								
ONCGYN	Oncology, Gynecologic Oncology															Y	Y								
ONCNOS	Oncology, Not Otherwise Specified																Y								
OPHCOR	Ophthalmology, Corneal																	Y							
OPHLAS	Ophthalmology, Laser Vision Correction																	Y							
OPHLOW	Ophthalmology, Low Vision																	Y							
OPHNOS	Ophthalmology, Not Otherwise Specified																	Y							
OPHRET	Ophthalmology, Retinal																	Y							
OPHRHB	Ophthalmology, Vision Rehabilitation																	Y							
OPTOME	Optometry																								
ORTHOP	Orthopedics																								
OTHNOS	Other, Not Otherwise Specified																								
PAINCL	Pain Care																								

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PALLIA	Palliative Care																								
PATHOL	Pathology																								
PEDADH	Pediatric Attention Deficit Disorder Services																		Y						
PEDADO	Pediatric Adolescent Medicine																		Y						
PEDANE	Pediatric Anesthesiology																		Y						
PEDAUT	Pediatric Autism Center																		Y						
PEDCRD	Pediatric Cardiology		Y																Y						
PEDCRT	Pediatric Critical Care																		Y						
PEDDER	Pediatric Dermatology																		Y						
PEDDVL	Pediatric Learning and Development																		Y						
PEDEND	Pediatric Endocrinology																		Y						
PEDGAS	Pediatric Gastroenterology																		Y						
PEDGEN	Pediatric Genetics																		Y						
PEDIMM	Pediatric Immunology																		Y						

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PEDINF	Pediatric Infectious Disease																		Y						
PEDMEN	Pediatric Mental Health												Y						Y						
PEDNEO	Pediatric Neonatology																		Y						
PEDNEP	Pediatric Nephrology																		Y						
PEDNEU	Pediatric Neurology													Y					Y						
PEDNOS	Pediatrics, Not Otherwise Specified																		Y						
PEDNUR	Pediatric Nursing Unit														Y				Y						
PEDOCT	Pediatric Occupational Therapy																		Y						
PEDONC	Pediatric Hematology/Oncology																Y		Y						
PEDORT	Pediatric Orthopaedics																		Y						
PEDPLM	Pediatric Pulmonology																		Y	Y					
PEDPSY	Pediatric Psychiatry												Y						Y						
PEDRHM	Pediatric Rhuematology																		Y						
PEDSPT	Pediatric Speech Therapy																		Y						

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PEDURG	Pediatric Urgent Care																		Y						
PERINA	Perinatology															Y									
PHYSIA	Physiatry (includes Physical Medicine)																								
PHYTHE	Physical Therapy																								
PODIAT	Podiatry																								
PREVEN	Preventive Medicine																								
PRIMAR	Primary Care																								
PULMON	Pulmonary Medicine																			Y					
PULRHB	Pulmonary Rehabilitation																			Y		Y			
PYSRHB	Physical Rehabilitation																					Y			
RADIOL	Radiology							Y													Y				
RADONC	Radiation Oncology																Y								
RADTHE	Radiation Therapy																Y								
RECTHE	Recreational Therapy																								

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REPROD	Reproductive Medicine, Infertility Services, Family Medicine																								
RESMED	Research Medicine																								
RESPTH	Respiratory Therapy																								
RHBNOS	Rehabilitation Not Otherwise Specified																					Y			
RHEUMA	Rheumatology																								
RISKMG	Risk Management																								
RXCOAG	Pharmacy Anticoagulation Care																						Y		
RXINFC	Pharmacy Infusion Center, IV therapy																						Y		
RXINFH	Pharmacy, Home Infusion																						Y		
RXINPT	Pharmacy, Inpatient																						Y		
RXLTCR	Pharmacy, Long Term Care											Y											Y		
RXNOSP	Pharmacy, Not Otherwise Specified																						Y		
RXONCO	Pharmacy, Oncology																Y						Y		
SKLNUR	Skilled Nursing Services (typically at a Skilled Nursing Facility)											Y			Y										

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SLEEPM	Sleep Medicine (including Sleep Apnea)																								
SMOKTX	Tobacco Treatment Services (including smoking cessation)																								
SOCIAL	Social Services																								
SPEECH	Speech Therapy																								
SPINAL	Spinal Disorders Services																								
SPORTS	Sports Medicine																								
SURAMB	Surgery, Ambulatory (includes Day Surgery, Procedure Room)																							Y	
SURBAR	Surgery, Bariatric																							Y	
SURCOL	Surgery, Colon & Rectal																							Y	
SURCRD	Surgery, Cardiac/Thoracic		Y																					Y	
SURCVA	Surgery, Cardiovascular		Y																					Y	
SURFOO	Surgery, Foot and Ankle																							Y	
SURHND	Surgery, Hand																							Y	
SURMOH	Surgery, MOHS																							Y	

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SURMXF	Surgery, Maxillofacial																							Y	
SURNEU	Surgery, Neurosurgery													Y										Y	
SURNOS	Surgery, Not Otherwise Specified																							Y	
SURONC	Surgery, Oncology																Y							Y	
SURORT	Surgery, Orthopaedic/Spinal																							Y	
SURPED	Surgery, Pediatric																		Y					Y	
SURPLA	Surgery, Plastic and Reconstructive																							Y	
SURPRE	Surgery, Preoperative Evaluation																							Y	
SURREF	Surgery, Refractive																							Y	
SURTBO	Surgery, Transplant Surgery, Bone Marrow																							Y	Y
SURTHR	Surgery, Transplant Surgery, Heart																							Y	Y
SURTLI	Surgery, Transplant Surgery, Liver																							Y	Y
SURTLU	Surgery, Transplant Surgery, Lung																							Y	Y
SURTNE	Surgery, Nephrology Transplant																							Y	Y

6 Character Department Code for "DEPT" variable	Department Description	Care Management	Cardiology	Chemical and/or Alcohol Dependency	Complementary & Alternative Medicine	Critical Care	Dental	Diagnostic testing	Disease Management	Emergency Services	Geriatric Medicine	Long Term Care	Mental & Behavioral Health	Neurology	Nursing services	Obstetrics and Gynecology	Oncology	Ophthalmology	Pediatrics	Pulmonology	Radiology	Rehab	Rx (Pharmacy Services)	Surgery	Transplant
SURTRA	*Surgery, Trauma*																							Y	
SURTRN	*Surgery, Transplant Surgery, NOS*																							Y	Y
SURVAS	*Surgery, Vascular*		Y																					Y	
TRANSG	*Transgender Services*																								
TRANSP	*Transplant Medicine (excluding surgery). See surgery section for transplant surgery depts.*																								Y
TRAVEL	*Travel Medicine*																								
UNKNWN	*Unknown*																								
URGENT	*Urgent Care*																								
UROLOG	*Urology*																								
VACCLN	*Vaccination Services (All potential vaccines)*																								
VACFLU	*Flu Shot Services (just flu shots)*																								
WEIGHT	*Weight Management*																								
WOMENS	*Women's Health Services*																								
WOUNDC	*Wound Care*																								

APPENDIX A2. DEPARTMENT (DEPRECATED)

Replaced by A1. DEPT in Version 4.0

A list of permissible values for the DEPARTMENT variable on the ENCOUNTERS table

DEPARTMENT Value	Description	DEPARTMENT Value	Description
ACUP	Acupuncture	NEPH	Nephrology
ALGY	Allergy	NEUR	Neurology
AMBU	Ambulance Services	NEWB	Newborn
ANES	Anesthesiology	NRSG	Neurosurgery
AUD	Audiology	NUCL	Nuclear Medicine
CARD	Cardiology	NUT	Nutrition
CASR	Cast Room	OBGN	Obstetrics/Gynecology
CHEM	Chemical and Alcohol	OCTH	Occupational Therapy
CHIR	Chiropractic	ONC	Oncology
CMHL	Community Health	OPTH	Opthalmology
CRIT	Critical Care Medicine	OPTO	Optometry
CRMG	Care Management	ORTH	Orthopedics
DENT	Dental	OST	Osteopathy
DERM	Dermatology	PAL	Palliative Care
DIAL	Dialysis	PATH	Pathology
DME	Durable Medical Equipment	PC	Primary Care
EDUC	Education	PEDS	Pediatrics
ENDO	Endocrinology	PERI	Perinatology
ENT	Otolaryngology	PHYS	Physiatry
ER	Emergency Room	POD	Podiatry
FP	Family Practice	PSRG	Plastic Surgery
GEN	Genetics	PT	Physical Therapy
GER	Gerontology/Geriatrics	PULM	Pulmonary Medicine

GI	Gastro-Intestinal Medicine		RAD	Radiology
HAP	Health Appraisals		RADT	Radiation Therapy
HEP	Hepatology		RECT	Recreational Therapy
HH	Home Health		REHB	Rehabilitation
HOSP	Hospital Care		RESP	Respiratory Therapy
HSPC	Hospice		RHEU	Rheumatology
ICF	Intermediate Care Facility		RN	Registered Nurse
IM	Internal Medicine		SNF	Skilled Nursing Facility
IMUN	Immunology		SPOR	Sports Medicine
IND	Industrial Medicine		SPTH	Speech Therapy
INF	Infectious Disease		SURG	General Surgery
INFU	Infusion Center		TRAN	Transplant
IR	Injection Room		URG	Urgent Care
LAB	Laboratory		URO	Urology
MH	Mental Health		OTH	Other
NATU	Naturopathy		UNK	Unknown

Plan Types

Plan_HMO – Health Maintenance Organization

A health care system that assumes both the financial risks associated with providing comprehensive medical services (insurance and service risk) and the responsibility for health care delivery in a particular geographic area to HMO members, usually in return for a fixed, prepaid fee. Financial risk may be shared with the providers participating in the HMO. An HMO is accountable for assessing access and ensuring quality and appropriate care. Practitioners affiliated with the health care system render health care services. In this type of organization, members must obtain all services from affiliated practitioners and must usually comply with a predefined authorization system to receive reimbursement.

Examples of HMO Models Include:

- Group Model HMO - An HMO that contracts with a single multi-specialty medical group to provide care to the HMO's membership. The group practice may work exclusively with the HMO, or it may provide services to non-HMO patients as well. The HMO pays the medical group a negotiated, per capita rate, which the group distributes among its physicians, usually on a salaried basis.
- Staff Model HMO - A type of closed-panel HMO (where patients can receive services only through a limited number of providers) in which physicians are employees of the HMO. The physicians see patients in the HMO's own facilities.
- Network Model HMO - An HMO model that contracts with multiple physician groups to provide services to HMO members; may involve large single and multispecialty groups. The physician groups may provide services to both HMO and non-HMO plan participants.
- Individual Practice Association (IPA) HMO- A type of health care provider organization composed of a group of independent practicing physicians who maintain their own offices and band together for the purpose of contracting their services to HMOs. An IPA may contract with and provide services to both HMO and non-HMO plan participants.

Plan_POS - Point of Service

A Point-of-Service (POS) plan is a type of managed care plan that gives a member the option of seeing providers within the plan's network and paying only a copay amount, or seeing providers outside of the network and getting reimbursed as one

would under an indemnity plan. A POS plan is often referred to as an 'HMO with an opt-out option', an 'open-ended HMO', "HMO swing-out organization" or an "HMO/PPO" hybrid. POS Plans typically resemble HMO plans for in-network services.   Services received outside of the network are usually reimbursed in a manner similar to conventional indemnity plans (e.g., provider reimbursement based on a fee schedule or usual, customary and reasonable charges).   Both a members' level of benefits and reimbursement are generally determined by whether the member uses in-network or out-of-network services.

Plan_PPO Preferred Provider Organization

A PPO, Preferred Provider Organization, is similar to an HMO as there is a network of managed practitioners, but unlike an HMO in that a member is not limited to network practitioners and can see any provider they choose. However, co-payments and deductibles will be less for in-network services. In addition, network physicians agree to reasonable charges. Therefore, if an out-of-network physician charges more for services, the insurance company will still pay only 80% of the in-network charges. The member will often pay higher fees for out-of-network services. Members who go outside the network might incur larger costs in the form of higher deductibles, higher coinsurance rates, or nondiscounted charges from the providers.

Plan_Indemnity - Indemnity Insurance Plan

Indemnity is a type of medical plan that reimburses the patient and/or provider as expenses are incurred. Conventional indemnity plans allow members the choice of any provider without effect on reimbursement. These plans reimburse the patient and/or provider as expenses are incurred.

An example of an Indemnity arrangement is that the member is responsible for paying a deductible before insurance pays benefits. Then, the insurance company will pay 80% of the medical bills and the member would be responsible for the remaining 20%. The member can choose to go to any doctor or hospital to receive services, pay the provider directly, and then be reimbursed 80% of the bill by the insurance company. The member can sign a release requesting the insurance company pay the health provider directly and would then be responsible for paying the doctor or hospital the remaining 20%. When people speak about "traditional health insurance," they are referring to Indemnity Health Insurance.

Type	Distinguishing Characteristics	Comments
HMO Health Maintenance Organization (synonym: Managed Care Organization)	Under the Federal HMO Act, an entity must have four characteristics to call itself an HMO: 1. An organized system of providing health care in a geographic area, for which the HMO is responsible for providing or otherwise assuring delivery. 2. An agreed upon set of basic and supplemental health maintenance and treatment services. 3. A voluntary enrolled group of people 4. It must use a community rating method for setting premiums. Additionally, what we mean by 'HMO' for purposes of the plan_hmo variable entails: ▪ A single organization is both *liable for the costs* of medical care to its members, as well as responsible for *actually providing* the vast majority of that care. So the *insurer* and *provider* roles are unified in a single organization. ▪ This organization operates one or more clinics where it provides care to its members (though not necessarily *exclusively* to members). ▪ Member care is managed/coordinated. The org has a financial incentive to make sure care is appropriate, as well as an incentive (and the means) to prevent illness. ▪ Members choose or are assigned a primary care provider (PCP), who manages their care.	In broad terms, an HMO is a form of health insurance that is also responsible for the delivery of care to its beneficiaries. An HMO provides health care services for members who prepay a premium that generally covers a comprehensive range of both inpatient and ambulatory care with limited copayments. "Care" here is primary care, so referrals out for specialty are *not* inconsistent w/HMO plans. Traditionally, there have been four main types, or models, of HMOs, classified according to the financial and organizational arrangements between the HMO and its physicians, although most HMOs today represent a combination of two or more models. ▪ A STAFF MODEL HMO hires its physicians individually and pays them a salary to practice in the HMO facility or clinic. The physicians are subject to the policies of the HMO management. Staff model HMOs often also own hospitals, nursing homes, pharmacies, laboratories, imaging centers, etc., as part of the fully integrated care system. This is the oldest model of HMO, and usually the most cost-efficient. ▪ In a GROUP MODEL HMO, the HMO contracts with a medical group and pays them a set amount per patient to provide a specified range of services. The medical group determines the compensation of each individual physician in the practice, often sharing profits. The practice may be located in a hospital or clinic setting. Like staff model HMOs, the medical facility usually contains a pharmacy, but, in some cases, the HMO contracts for pharmacy services. Some group model HMO's also own hospitals. ▪ An INDEPENDENT PRACTICE ASSOCIATION (IPA) contracts with individual physicians who see HMO

members, as well as patients covered by other types of health insurance, in their own private offices. It is the ability of IPA physicians to see both HMO and private patients in their own offices that principally differentiates an IPA from a group or staff HMO. Physicians in an IPA are paid on either a capitation or modified fee-for-services basis. An IPA HMO may also contract with chain or independent pharmacies to dispense prescriptions to members.

- A NETWORK MODEL HMO is essentially a network of group practices rather than individual physicians. Each of the contracted group practices sees HMO patients as well as fee-for-service patients in its group offices.

A HYBRID MODEL HMO combines attributes of more than one of the four principal HMO models and, hence, is not classifiable in any one of the four categories. Because physicians in Staff and Group model HMOs traditionally have had a few, if any, fee-for-service patients of their own, both models are often referred to as *closed panel HMOs*. Any organization that matches one of these descriptions is an 'HMO' for purposes of the plan_hmo variable.

POS Point-Of-Service	There are at least 2 defined groups of providers that a patient can see for covered care: 1. a group that practices at clinics owned/operated by the insurer (HMO-style) 2. a set of providers that practice at other, independent clinics, but who have an explicit relationship w/the insurer (agreed-upon fees, maybe data transfers, etc.) As in an HMO, the care is "managed"—patients choose a PCP.	If there is additional coverage that can be used with **any** provider at all (not limited to any defined group) then that is indemnity coverage, which should be noted separately in plan_indemnity. This is a very common situation.

	A POS plan is a hybrid model that combines features of both prepaid and indemnity insurance. Enrollees decide whether to use network or non-network providers at the time care is needed but are usually charged sizable copayments for selecting the latter. Variants include "open-ended HMOs" and "triple-option plans".	
PPO Preferred Provider Organization	A PPO is - A group of otherwise independent providers that all agree to charge members according to a negotiated fee schedule, *plus* - An insurer who accepts premiums in exchange for coverage according to that fee schedule. - Enrollees are offered a financial incentive to use doctors on the preferred list. Typically, the enrollees must pay a deductible and copayment amount of money if they receive care from a provider who is not part of the PPO. The provider group and the insurer are not the same organization (if they were this would be an HMO). Care is usually managed.	Providers are almost always paid on a fee-for-service basis (as opposed to capitated). There is almost always additional indemnity coverage for care from providers outside the PPO—this should be noted in plan_indemnity.
Indemnity	- There is no defined group of providers that the insured must see in order to have coverage. - There is less emphasis on managing or coordinating the care. - Insurance benefits paid according to a predetermined fee schedule in the event of a covered loss.	

Insurance Types

Self-Funded Insurance

A plan offered by employers who directly assume the major cost of health insurance for their employees. Some self-insured plans bear the entire risk. Other self-insured employers insure against large claims by purchasing stop-loss coverage. Some self-insured employers contract with insurance carriers or third party administrators for claims processing and other administrative services; other self-insured plans are self administered. Minimum Premium Plans (MPP) are included in the self-insured health plan category. All types of plans (Indemnity, PPO, HMO, and POS) can be financed on a self-insured basis.

High-Deductible Health Plan Insurance

A High Deductible Health Plan is a health insurance plan in which the enrollee plays a deductible of at least $1,150 (Self Only coverage) or $2,300 (family coverage). The annual out-of-pocket amount (including deductibles and copayments) the enrollee pays cannot exceed $5,800 (Self Only coverage) or $11,600 (family coverage). HDHPs can have first dollar coverage (no deductible) for preventive care and higher out-of-pocket copayments and coinsurance for services received from non-network providers. HDHPs offered by the FEHB Program establish and partially fund Healthcare Spending Accounts (HSAs) for all eligible enrollees and provide a comparable Health Reimbursement Account (HRA) for enrollees who are eligible for an HSA. The HSA premium funding or HRA credit amounts vary by plan.

The dollar limits on these deductibles are tied to the cost of living index, and change from year to year. If your indigenous data does not flag plans eligible as HDHPs, please refer to the table on this Wikipedia page, (reproduced below as of this writing).

Year	Minimum deductible (single)	Minimum deductible (family)	Maximum out-of-pocket (single)	Maximum out-of-pocket (family)
2005	$1,000	$2,000	$5,100	$10,200
2006	$1,050	$2,100	$5,250	$10,500
2007	$1,100	$2,200	$5,500	$11,000
2008	$1,100	$2,200	$5,600	$11,200
2009	$1,150	$2,300	$5,800	$11,600

2010	$1,200	$2,400	$5,950	$11,900
2011	$1,200	$2,400	$5,950	$11,900
2012	$1,200	$2,400	$6,050	$12,100
2013	$1,250	$2,500	$6,250	$12,500

Medicare Insurance

Varieties

Medicare Risk (aka Medicare+Choice) coverage—individuals who are eligible for Medicare and have elected to join the participating HMO under a Medicare+Choice risk contract. To be Medicare eligible, an individual has to be age 65 or older and have paid in sufficient FICA quarters over their work history, or be permanently and totally disabled such that employment in any job is not possible. Note that persons diagnosed with End-stage Renal Disease (ESRD) become eligible for Medicare when their disease progresses to the point that they have been unable to work for at least two years. It would be potentially useful for some research projects to know whether cancer patients obtained their Medicare eligibility through age-in, disability, or ESRD.

Medicare Cost Coverage—individuals who are eligible for Medicare but do not elect to join a risk contract with one of our participating health plans. This is a declining enrollment group because all newly eligible Medicare beneficiaries who want to be members of an HMO to receive their Medicare benefits must do to under a risk contract. Because Medicare Cost enrollees are not restricted from using other Medicare participating providers of service, we cannot be certain that these persons are receiving all of their medical care from our participating health plans.

Medicare Working Aged—individuals who are age 65 and older, enrolled in Medicare, and also have HMO coverage through employment (of self or spouse). In this case, the HMO coverage is the primary coverage and Medicare is the secondary payer for Medicare benefits that are not covered by the employer group contract (usually relates to benefits for Durable Medical Equipment, Skilled Nursing Facility care, and post-transplant medications). Under Medicare Risk contracts, CMS pays a modest monthly Medicare Working Aged premium to HMOs for these individuals, which provides an incentive for HMOs to track this eligibility category.

Medicaid Risk Coverage—individuals who are eligible for Medicaid and have elected to join the participating HMO under a risk contract between the HMO and the State Medicaid program. Medicaid eligibility relates to low income and categorical welfare eligibility (Temporary Aid to Needy Families (TANF)).

Parts

Part A: Hospital Insurance

Part A covers hospital visits – including stays in a skilled nursing facility – if certain criteria are met:

1. The hospital stay must be at least three days, not counting the discharge date.
2. The nursing home stay must be for something diagnosed during the hospital stay.
3. If the patient is not receiving rehabilitation, but has some other ailment that requires skilled nursing supervision, the nursing home stay would be covered.
4. The care being rendered by the nursing home must be skilled. Part A does not pay for custodial, non-skilled, or long-term care.

The maximum length of stay that Part A will cover in a skilled nursing facility is 100 days per ailment. The first 20 days are paid in full by Medicare with the remaining 80 days requiring a co-payment (as of 2008, $128.00 per day). If a beneficiary uses a portion of their Part A benefit and then goes at least 60 days without receiving facility-based skilled services, the person qualifies for a new 100-day benefit period.

Part B: Medical Insurance

Part B helps pay for some services and products not covered by Part A, generally on an outpatient basis. Part B is optional and may be deferred if the beneficiary or their spouse is still working. There is a lifetime penalty (10% per year) imposed for not accepting Part B if not actively working.

Part B coverage includes:

- physician and nursing services: x-rays, laboratory tests, influenza and pneumonia vaccinations, blood transfusions, and other outpatient medical treatments administered in a doctor's office. Medication administration is covered under Part B only if it is administered by the physician during an office visit.
- limited ambulance transportation

- durable medical equipment including canes, walkers, wheelchairs, and mobility scooters
- prosthetic devices such as artificial limbs and breast prosthesis
- one pair of eyeglasses following cataract surgery
- oxygen for home use

Complex rules are used to manage the benefit, and advisories are periodically issued which describe coverage criteria. On the national level, these advisories are issued by the Centers for Medicare and Medicaid Services (CMS) and are known as National Coverage Determinations (NCD). Local Coverage Determinations (LCD) only apply within the multi-state area managed by a specific regional Medicare Part B contractor. Coverage information is also located in the CMS Internet-Only Manuals (IOM), the Code of Federal Regulations (CFR), the Social Security Act, and the Federal Register.

Part C: Medicare Advantage plans

With the passage of the Balanced Budget Act of 1997, Medicare beneficiaries were given the option to receive their Medicare benefits through private health insurance plans, instead of through the original Medicare plan (Parts A and B). These programs were known as "Medicare+Choice" or "Part C" plans. These plans became known as "Medicare Advantage" (MA) plans.

Medicare has a standard benefit package that covers medically necessary care that members can receive from nearly any hospital or doctor in the country. For people who choose to enroll in a Medicare private health plan, Medicare pays the private health plan a set amount every month for each member. Members may have to pay a monthly premium in addition to the Medicare Part B premium and generally pay a fixed amount (a copayment of $20 for example) every time they see a doctor. The copayment can be higher to see a specialist.

The private plans are required to offer a benefit "package" that is at least as good as Medicare's and cover everything Medicare covers, but they do not have to cover every benefit in the same way. Plans that pay less than Medicare for some benefits, like skilled nursing, can balance their benefits package by offering lower copayments for doctor visits. Private plans use some of the excess payments they receive from the government for each enrollee to offer supplemental benefits. Some plans put a limit on their members' annual out-of-pocket spending, providing some insurance against catastrophic costs over $5,000. But many plans use the excess subsidies to offer dental coverage and other services not covered by Medicare. Medicare Advantage Plans that also include Part D prescription drug benefits are known as a Medicare Advantage Prescription Drug plan (MAPD).

In 2006, enrollees in Medicare Advantage Private Fee-for-Service plans were offered a net extra benefit value (the value of the additional benefits minus any additional premium) of $55.92 a month more than the traditional Medicare benefit package.

Part D: Prescription Drug plans

Medicare Part D went into effect on January 1, 2006. Anyone with Part A or B is eligible for Part D. It was made possible by the passage of the Medicare Prescription Drug, Improvement, and Modernization Act. In order to receive this benefit, a person with Medicare must enroll in a stand-alone Prescription Drug Plan (PDP) or Medicare Advantage plan with prescription drug coverage (MAPD). These plans are approved and regulated by the Medicare program, but are actually designed and administered by private health insurance companies. Unlike Original Medicare, Part D coverage is not standardized. Plans choose which drugs they wish to cover and at what level they wish to cover it. The exception to this is drugs that Medicare specifically excludes from coverage, including but not limited to benzodiazepines, cough suppressant and barbiturates. Plans that cover excluded drugs are not allowed to pass those costs on to Medicare, and plans are required to repay CMS if they are found to have billed Medicare in these cases.

It should be noted again for beneficiaries who are dual-eligible (eligible for Medicare and Medicaid) Medicaid will pay for drugs not covered by part D of Medicare, such as benzodiazepines.

PROVIDER_TYPE	Description
001	ACUPUNCTURIST
002	ANESTHESIOLGY ASST
003	AUDIOLOGIST
004	AUDIOLOGY ASSISTANT
005	CARDIAC REHAB THERAPIST
006	CASE MANAGER
007	CERTIFIED NURSE SPECIALIST
008	CERTIFIED REG NURSE ANESTHETIST
009	CHAPLAIN
010	CHEM DEP COUNSELOR, ADULT
011	CHEM DEP COUNSELOR, CHILD/ADOL
012	CHIROPRACTOR
013	CIGNA
014	CLINICAL NURSE SPECIALIST
015	COUMADIN NURSE
016	CPAP SPECIALIST
017	DENTAL ASSISTANT
018	DENTIST
019	DIABETIC NURSE
020	DIETETIC TECH
021	DIETITIAN
022	EEG TECHNICIAN
023	ER TECH

SPECIALTY	Description
ADO	Adolescent Medicine
AER	Aerospace Medicine
ALC	Chemical Dependency
ALL	Allergy
ANC	Ancillary Services
ANE	Anesthesiology
ATH	Sports Medicine
AUD	Audiology
BON	Bone And Mineral
CAR	Cardiology
CAV	Cardiovascular Surgery
CHR	Chiropractor
CLC	Clin Cardiac Electrophysiology
COL	Colon & Rectal Surgery
COM	Complimentary & Alternative Medicine
CON	Continuing Care
CRI	Critical Care
DEN	Dentistry
DER	Dermatology
DOR	Dor
EDU	Medical Education
EME	Emergency Medicine
EMI	Emi

024	EXERCISE PHYSIOLOGIST		END	Endocrinology
025	FELLOW		ENT	Otolaryngology
026	HEALING TOUCH		FAM	Family Medicine
027	HEALTH EDUCATOR		FLX	Flexible
028	HOME HEALTH AIDE		GAS	Gastroenterology
029	HP PHYSICIAN		GEN	Genetics
030	HYGIENIST		GER	Gerontology
031	INDEPENDENT LAB/X-RAY		HAN	Hand Surgery
032	INF CNTRL PRACT		HOM	Home Health
033	INFUSION THERAPIST		HOS	Hospital
034	INTERPRETER		HYM	Hyperbaric Medicine
035	LAB ASSISTANT		HYP	Hypertension
036	LAB TECHNICIAN		IMG	General Internal Medicine
037	LACTATION CONSULTANT		INF	Infectious Disease
038	LIC FAM THERAPIST		LAB	Laboratory
039	LIC SOCIAL WORKER		MEN	Mental Health
040	MASSAGE THERAPIST		MGM	Care Management
041	MEDICAL ASSISTANT		MID	Midlevel
042	MIDLEVEL		MUL	Multispecialty
043	MIDWIFE		NEH	Nephrology
044	MUSIC THERAPIST		NEO	Neonatology
045	NOT APPLICABLE		NES	Neurosurgery
046	NURSE		NEU	Neurology
047	NURSE CLINICIAN		NOB	No Boards
048	NURSE PRACTITIONER		NUM	Nuclear Medicine
049	OCCUPATIONAL THERAPIST		NUR	Nurse
050	OPHTHALMIC ASSISTANT		NUT	Nutrition

051	OPHTHALMIC TECHNICIAN		OBO	Gynecologyic Oncology
052	OPTICIAN		OBS	Obstetrics - Gynecology
053	OPTOMETRIST		OCM	Occupational Health
054	ORTHO PHY ASST		ONC	Oncology
055	ORTHOPAEDIC		ONS	Surgical Oncology
056	OSTEOPATH		OPH	Ophthalmology
057	PERSONAL CARE ATTENDANT		OPL	Optical
058	PHARM TECH		OPT	Optometry
059	PHARMACIST		ORA	Oral Surgery
060	PHYSICAL THERAPIST		ORD	Orthodontia
061	PHYSICIAN		ORT	Orthopedics
062	PHYSICIAN ASSISTANT		OTO	Otolaryngology
063	PODIATRIST		PAI	Pain Management
064	PSYCH TECHNICIAN		PAT	Pathology
065	PSYCHOLOGIST		PED	Pediatrics
066	PSYCHOTHERAPIST		PES	Pediatric Subspecialty
067	PSYCHOTHERAPIST, ADULT		PEY	Perinatology
068	PSYCHOTHERAPIST, CHILD/ADOL		PHA	Pharmacy
069	PT ASSISTANT		PHT	Physical Therapy
070	RADIATION THERAPIST		PHY	Physiatry
071	RADIOLOGY TECHNICIAN		PLA	Plastic Surgery
072	RECREATIONAL THERAPIST		POD	Podiatry
073	REGISTERED NURSE		PRE	Preventive Medicine
074	REHAB ASSISTANT		PRO	Prosthodontia
075	REHAB THERAPIST		PSY	Psychiatry
076	REIKI		PUB	Public Health
077	RESIDENT		PUL	Pulmonary Medicine

078	RESOURCE		RAD	Radiology
079	RESPIRATORY THERAPIST		REH	Rehabilitation Medicine
080	SOCIAL WORKER		RES	Respiratory Therapy
081	SPEECH PATHOLOGIST CERTIFIED		RHE	Rheumatology
082	STUDENT		ROP	Radiation Oncology
083	SURG TECH		SLC	Sleep Center
084	SURGEON ASSISTANT		SOC	Social Services
085	THERAPEUTIC AQUATIC SPECIALIST		SPP	Speech Patholgy
086	ULTRASOUND TECHNICIAN		SUR	Surgery
888	OTHER		TEE	Teen Clinic
999	UNKNOWN		TOX	Medical Toxicology
			TRN	Transportation/Non-Emergency
			TRS	Transplant Surgery
			UNK	Unknown
			URG	Urgent Care
			URO	Urology
			VAS	Vascular Surgery

Version = 4.0 Foreign Key Tables (Copied as Linked Pictures)

Demographics

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?
[None Defined]			

Language

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?
MRN	DEMOGRAPHICS	MRN	No

Enrollment

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?
MRN	DEMOGRAPHICS	MRN	No
PCP	PROVIDER	PROVIDER	No

Encounter

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?
MRN	DEMOGRAPHICS	MRN	No
PROVIDER	PROVIDER	PROVIDER	No

Diagnosis

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?
MRN	DEMOGRAPHICS	MRN	No
ENC_ID	ENCOUNTER	ENC_ID	No
PROVIDER	PROVIDER	PROVIDER	No
DIAG_PROVIDER	PROVIDER	PROVIDER	No

Procedure

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?
MRN	DEMOGRAPHICS	MRN	No
ENC_ID	ENCOUNTER	ENC_ID	No
PROVIDER	PROVIDER	PROVIDER	No
PERFORMINGPROVIDER	PROVIDER	PROVIDER	No

Provider

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?
[None Defined]			

Virtual Data Warehouse Data Specifications

Facility

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?
[None Defined]			

Pharmacy

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?
MRN	DEMOGRAPHICS	MRN	No
NDC	EVERNDC	NDC	No
RXMD	PROVIDER	PROVIDER	No

EverNDC

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?
[None Defined]			

Lab Results

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?
MRN	DEMOGRAPHICS	MRN	No
ORDER_PROV	PROVIDER	PROVIDER	No

Lab Notes

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?
[None Defined]			

Vital Signs

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?
MRN	DEMOGRAPHICS	MRN	No
ENC_ID	ENCOUNTER	ENC_ID	No

Social History

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?
MRN	DEMOGRAPHICS	MRN	No
ENC_ID	ENCOUNTER	ENC_ID	No

Death

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?
MRN	DEMOGRAPHICS	MRN	No

Cause of Death

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?
MRN	DEMOGRAPHICS	MRN	No

Tumor

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?
MRN	DEMOGRAPHICS	MRN	No

Census Location

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?
MRN	DEMOGRAPHICS	MRN	No
GEOCODE + CENSUS_YEAR	CENSUS DEMOG	GEOCODE + CENSUS_YEAR	No

Census Demographics

Source Variable (Foreign Key)	Target Table	Target Variable (Primary Key)	Orphans allowed?
[None Defined]			