Utilization

Encounters between patients and medical personnel.

This set of four tables incorporates data for all medical encounters. The data are organized to facilitate research. The four files are:

ENCOUNTER: Characterizes outpatient encounters, hospital stays, institutional stays, medical telephone calls, medical e-mails and other encounters.

DIAG: List of diagnosis codes associated with each of the encounters in the ENCOUNTER table. Each diagnosis code recorded during an encounter will have a separate record in the DIAG table.

PROC: List of procedure codes associated with each of the encounters in the ENCOUNTER table. Each procedure code recorded during an encounter will have a unique record in the PROC table.

PROVIDER: Lookup table for provider characteristics.

Encounter file specifications:

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 such as same day surgeries
- Ambulatory visits
- Non-hospital residential stays, such as
    - Skilled nursing facility
    - Rehab
    - Nursing home
    - Overnight hospice facility
    - Overnight dialysis facility
- Home health encounters

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..)

Rules for Populating Encounter:

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).

Please use the following logic to identify unique encounters:

- For Clarity/EPIC Data: Patient Contact Serial Number
- Other Data: Unique combination of the following variables: 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.

SAS Macros for use with the Utilization tables

GetDxForPeople (People, StartDt , EndDt , Outset)
GetPxForPeople (People, StartDt , EndDt , Outset)
GetPxForPX (PxLst , StartDt , EndDt , Outset)
Charleson_Deyo (Inset, Outset, IndexDt)

Standard Name: Encounter

Variable name	Variable Type and Length	Values	Definition and Comments
MRN	Character. Unique to each health plan	Unique to each health plan	Identifier unique to an individual. Used to link across files
ADATE	Numeric (4)	SAS date	Encounter date or admit date for an inpatient or institutional stay. If the encounter date or admit date is unknown from a claim, then use the first date of a claim.

DDATE	Numeric (4)	SAS date.	Discharge date. Use for hospital and overnight encounters. If the encounter date or admit date is unknown from a claim, then use the last date of a claim.
PROVIDER	Character. Length Unique to each health plan	Unique to each health plan	Provider code for the provider who is most responsible for this encounter. Usually physician, nurse practitioner, physician assistant, optometrist, etc. For encounters with multiple providers, choose a single provider so the encounter can be linked to the diagnosis and procedure files. If there is no provider code for an encounter, then specify the value for provider as "UNK".
ENC_ID	Character. Length Unique to each health plan	Encounter ID. Identifies unique encounters. Can not contain PHI.	Use to link across files. The encounter id must be unique for each encounter and should be permanently assigned (otherwise old and new versions of the files couldn't be joined). The encounter id can not contain PHI (such as MRN and dates). For EPIC/Clarity source data, recommend using the contact serial number. For other source data, sites should create a unique id that can be permanently assigned each unique combination of the following variables: MRN, Adate, EncType, Provider, Encounter_Subtype, Facility_Code and appointment time (if available). Suggest creating a separate crosswalk file between these variables and the encounter_id value. This crosswalk file would be updated with new encounters each time the utilization data is updated.
DRG_VERSION*	Char (1)	Diagnostic Related Group	Identifies the version of the Diagnostic Related Group. Expected for hospital encounters and some institutional stays but include for all encounters if in the source data. **A**=DRG values using the old coding system **B**=DRG values using the current coding system The DRG coding system officially changed 10/1/2007, but the variable should indicate the code version used, regardless of the actual date of conversion at the individual site which may be different from 10/1/2007.Must use with DRG_Value.
DRG_VALUE*	Char (3)	Diagnostic Related Group	Identifies the value of the Diagnostic Related Group. Used for hospital encounters. Use leading zero's for codes less than 100. Must use with DRG_Version to ensure appropriate classification of values.
ENC_Count	Numeric (4)	Encounter Count	Number of visits for this encounter. Usually 1. The reason for this variable is to track the

			number of visits from a claim when the visit dates for each encounter can't be identified. For example, the dialysis visit dates are not identified in the claims data at some sites but the number of dialysis visits is recorded.
EncType	Char (2)	See comments	Encounter Type. Valid Encounter Subtype values are in brackets "[]" **IP** = Acute Inpatient Hospital Stay: Inpatient stays, same-day hospital discharges, hospital transfers where the patient was admitted into the hospital. Includes acute inpatient psych and detox hospital stays. [Encounter_subtype=AI] **ED**=Emergency Department Encounter: Excludes urgent care visits. [Encounter_subtype=HA,OC] **AV**= Ambulatory Visit: Outpatient clinics, same day surgeries, observation beds, urgent care visits, and other same-day ambulatory hospital encounters. Excludes emergency department encounters). [Encounter_subtype= OC, OB, SD,HA,UC, RH, DI, OT] **TE** = Telephone Encounters: [Encounter_subtype=OT, HH] **EM** = E-mail Encounters: [Encounter_subtype=OT, HH] **IS**=Non-Acute Institutional Stays: Hospice, SNF, rehab, nursing home, residential, overnight non-hospital dialysis and other non-hospital stays. [Encounter_subtype=HS, SN, NH, RH,DI, OT] **OE**=Other Encounters (not overnight): Hospice visits, home health visits, SNF visits, other non-hospital visits. [Encounter_subtype=HS, HH, SN, RH, DI, OT] **LO**=Lab Only Encounter: Optional. Lab encounters that cannot be matched to another encounter. Include to link variables from utilization file to procedure file. [Encounter_subtype=OC,OT] **RO**=Radiology Only Encounter: Optional. Radiology encounter that cannot be matched to another encounter. Include to link variables from utilization file to procedure file. [Encounter_subtype=OC,OT]

Encounter_SubType	Char (2)	See comments	Encounter Subtype. Valid Encounter type values are in brackets "[]" **AI**=Acute Inpatient Stay. Excludes observation bed. [Enctype=IP] **OB**=Observation Bed. [Enctype=AV] **OC**=Outpatient Clinic Visit. [Enctype=AV, LO, RO, ED] **SD**=Same Day Surgery. [Enctype=AV] **UC**=Urgent Care. [Enctype=AV] **HA**=Hospital Ambulatory. Outpatient care at a hospital excluding same day surgery and observation beds. [Enctype=AV, ED] **HS**=Hospice. [Enctype=IS, OE] **HH**=Home Health. [Enctype=OE, TE, EM] **SN**=SNF. [Enctype=IS, OE] **NH**=Nursing Home (Includes ICF). [Enctype=IS] **RH**=Rehab. [Enctype=IS, AV, OE] **DI**=Dialysis. [Enctype=IS, AV, OE] **OT**=Other non-hospital. [Enctype=IS, OE, TE, EM, AV, LO, RO]
Facility_Code	Character. Length Unique to each health plan	Unique to each health plan	Facility code that identifies hospital or clinic. Specify the facility_code as "UNK" is the facility code is missing but first verify that the encounter is valid.
Discharge_Disposition*	Char (1)	A = Alive E = Expired U = Unknown	Discharge status.
Discharge_Status*	Char (2)	See comments	Discharge Status. 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
Admitting_Source*	Char (2)	See comments	Admitting Source. 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 Use for hospital and overnight encounters
Department	Char (4)		

		See department codes table.	Department Code (specialty providing service). Code when available. See table below. If this variable is unavailable, specify as “UNK”.

*Expected for hospital encounters and some institstutional stays but include for all encounters if in the source data.

The previous version of this spec

Can be found here

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Department Code	Department Description
ACUP	Acupuncture
ALGY	Allergy
AMBU	Ambulance Services
ANES	Anesthesiology
AUD	Audiology
CARD	Cardiology
CASR	Cast Room
CHEM	Chemical and Alcohol Dependency
CHIR	Chiropractic
CMHL	Community Health
CRIT	Critical Care Medicine
CRMG	Care Management
DENT	Dental
DERM	Dermatology
DIAL	Dialysis
DME	Durable Medical Equipment
EDUC	Education
ENDO	Endocrinology
ENT	Otolaryngology
ER	Emergency Room
FP	Family Practice
GEN	Genetics
GER	Gerontology/Geriatrics
GI	Gastro-Intestinal Medicine
HAP	Health Appraisals
HEP	Hepatology
HH	Home Health
HOSP	Hospital Care
HSPC	Hospice
ICF	Intermediate Care Facility
IM	Internal Medicine
IMUN	Immunology

IND	Industrial Medicine
INF	Infectious Disease
INFU	Infusion Center
IR	Injection Room
LAB	Laboratory
MH	Mental Health
NATU	Naturopathy
NEPH	Nephrology
NEUR	Neurology
NEWB	Newborn
NRSG	Neurosurgery
NUCL	Nuclear Medicine
NUT	Nutrition
OBGN	Obstetrics/Gynecology
OCTH	Occupational Therapy
ONC	Oncology
OPTH	Opthalmology
OPTO	Optometry
ORTH	Orthopedics
OST	Osteopathy
PAL	Palliative Care
PATH	Pathology
PC	Primary Care
PEDS	Pediatrics
PERI	Perinatology
PHYS	Physiatry
POD	Podiatry
PSRG	Plastic Surgery
PT	Physical Therapy
PULM	Pulmonary Medicine
RAD	Radiology
RADT	Radiation Therapy
RECT	Recreational Therapy
REHB	Rehabilitation
RESP	Respiratory Therapy
RHEU	Rheumatology
RN	Registered Nurse
SNF	Skilled Nursing Facility
SPOR	Sports Medicine
SPTH	Speech Therapy
SURG	General Surgery
TRAN	Transplant
URG	Urgent Care
URO	Urology
OTH	Other

UNK	Unknown

Please contact the VDW Utilization working group for questions or suggestions.

Related content
- Utilization (v2)
- Utilization QA Workplan

Comments (0)