FROM NUMBERS TO KNOWLEDGE

DATA DIRECTORY

HEALTH CARE DECISION SUPPORT DATA

PRODUCED BY VIRGINIA HEALTH INFORMATION

WELCOME TO VIRGINIA HEALTH INFORMATION! 3

DESCRIPTION OF PATIENT LEVEL DATA (PLD) 4

General Types of Data Found on the Distribution Files 4

Classification Systems 4

Support Files 5
- DRG Support Tables 5
- Geog Support Table 6
- Provider Table 6
- Payer Table 7

Data Quality 7

Ordering VHI Patient Level Data 8

DESCRIPTION OF READMISSION AND TRANSFER FILES (RATS) 9

General Types of Data Found on the Supplemental Files 9

How a Readmission or Transfer is Identified 9

Timeframe 9

Record Layout and Naming Convention 9

Linking RATs to Patient Level Data (PLD) 10

PLD RECORD LAYOUTS AND DATA DICTIONARY 11

PLD Record Layout 11

PLD Dictionary of Data Elements 15

SUPPLEMENTAL RATS RECORD LAYOUT AND DATA DICTIONARY 22

Record Layout for Readmision and Transfer (RATs) Data (updated 05-12-2015) 22

RATs Dictionary of Data Elements 23

PLD AND RATS ORDERING INFORMATION 24

License Agreement 24

WELCOME TO VIRGINIA HEALTH INFORMATION!

VHI is the go-to for health information in Virginia and the only source for Virginia's complete publicly available inpatient discharge database.

Since 1993 **VHI** has collected, analyzed and distributed the public use files (PUFs) as valuable health care information tools. Those who have used these flexible, easy-to-manipulate files under license by **VHI** have been satisfied with the results and many continue to obtain quarterly or yearly updates.

In response to the growing demand from **VHI's** PLD licensees for more information on hospital health care quality, we also offer the Readmissions and Transfers Supplemental Data Set (RATs)—a significant enhancement to the hospital discharge data files.

When linked to the PLD files, RATs offers the unique ability to track episodes of care through readmission cycles and transfer patterns. RATs enables development of more sophisticated performance measurements and comparative analyses when studying trends and assessing options. RATs is a powerful evaluation tool that facilitates sound, fact-based research and decision-making.

This product directory was designed to provide a brief background on the PLDB comprised of over 840,000 discharges annually. Included are:

- ***Record layouts*** of the PLD and RATs
- Detailed ***data dictionaries*** describing aspects of available fields
- A description and record layout of the ***support files*** *and*
- Licensing Agreement

Because many of **VHI's** customers have multiple staff, department and location needs, **VHI** offers multi-site licenses. Some users generate revenue from reports derived from **VHI's** PLD, so if you have potential multi-site or distribution opportunities, please see the appropriate section of the license agreement. **VHI** is proud to present the PLDB and RATs described herein and believes you will find this information important to you now and in the future.

DESCRIPTION OF PATIENT LEVEL DATA (PLD)

Licensed files contain all submitted, processed and verified inpatient hospital discharges in the Commonwealth of Virginia. Collected quarterly, the basis for these data are hospital-submitted billing claims forms adhering to the current National Uniform Billing Manual.

GENERAL TYPES OF DATA FOUND ON THE DISTRIBUTION FILES

ADMINISTRATIVE data includes from where the patient originated, the urgency of the admission, when the patient was treated and the hospital in which care was provided.

CLINICAL data available provides up to 18 diagnoses and 6 diagnostic or surgical procedures effective with discharges on and after January 1, 2011. **Virginia Health Information** calculates the patient's length of stay as well as the number of days a patient is hospitalized before and after the reported principal procedure. Using the diagnosis codes, values are created which note if the patient has any reported co-morbid conditions. These conditions are not the primary reason for the hospital stay but have been found to influence the length of time the patient is hospitalized, total charges and other factors. A complication indicator is also calculated. The field patient status reports whether the patient was discharged to return home, transferred to another hospital, expired or was discharged to another facility's care.

DEMOGRAPHIC data describe the patient's age; in days for newborns, years for patients one year or older. Information on the patient's gender and race (when available) are also collected. A five-digit patient zip code as well as the Virginia health planning region and district code, county code and state of the patient's residence is also provided.

FINANCIAL data includes total charges for the stay as well as a series of 14 calculated groupings by type of care. These groupings are as general as room and board and as specific as charges for anesthesiology.

PHYSICIAN data includes the National Provider Identifier (NPI) of the attending and operating (where principal procedure is reported) physicians who are primarily responsible for the care received by any individual patient. This data is available for discharges on and after April 1, 2008.

Prior to April 1, 2008 discharges, VHI provides the Unique Physician Identification Number (UPIN). VHI accepted both the UPIN and the NPI effective with discharges on and after January 1, 2007, through March 31, 2008.

CLASSIFICATION SYSTEMS

To facilitate meaningful analysis of this data, **Virginia Health Information** provides two types of classification systems. The first of these systems, Diagnosis Related Groups (DRGs), was developed under contract for the federal government for use in classifying Medicare patients

by resource use for reimbursement purposes. DRGs are useful for the analysis of care provided to elderly patients. A DRG is assigned to each discharge.

The All Patient Refined DRG (APR-DRG) classification system developed by 3M Company differs from the DRG system in two key ways. First, the APR-DRGs were designed to classify patients of all age groups and contain more categories for children and infants. Second, 3M's APR-DRGs provide indicators of the patient's severity of illness and risk of mortality. These indicators further classify patients using reported co-morbid conditions, complications, age and other available data.

Both classification systems are provided to allow the user more flexibility in analysis of data. Major Diagnostic Categories (MDC) are also assigned and available. MDCs categorize patients into larger groups than either DRGs or APR-DRGs.

SUPPORT FILES

Support files are included with each order to facilitate the use of Virginia's patient level data. Prior to April 2015 (discharges prior to 2014q3), VHI provided all support information in separate SDF files for each quarter and version. Moving forward, VHI provides support files in consolidated tables within a single Microsoft Access database named SUPPORT_YYYYqQ.

DRG SUPPORT TABLES

Moving forward, multiple DRG key support files will be consolidated and provided as a single table within the Access database. Field widths for each element are contained within parentheses.

The APR_CMS_DRG_KEY_YYYYqQ table contains the following elements:
DRG_TYPE (6): -- which will contain either APRDRG or CMSDRG
VERSION (3): – contains V29, V30, V31, etc.
VHIKEY (10): -- the corresponding VHIKEY located in the patient data file
DX1 (7): -- This Primary Diagnosis field is use as a validator with the VHIKEY for the other values
DRG (3): – APRDRG or CMSDRG
APR_SEVERITY (1): -- APRDRG only
APR_RISK (1): -- APRDRG only
MDC (2): -- APRDRG or CMSDRG

The APRDRG_Desc_YYYYqQ contains:
VERSION (3): – contains V29, V30, V31, etc.
APRDRG_VALUE (3): – 001 through 956
APRDRG_DESC (89): text field containing the English description of the respective APRDRG value
APR_MDC_VALUE (2): – 01 through 25 – of the respective MDC value and 99 representing unknown and/or ungroupable

The CMSDRG_Desc_YYYYqQ contains:

VERSION (3): – contains V29, V30, V31, etc.
CMS_DRG_VALUE (3): – 001 through 999
CMS_DESC (68): text field containing the English description of the respective CMSDRG value
CMS_MDC_VALUE (2): – 01 through 25 – of the respective MDC value and 98 representing pre-MDC MS-DRGs which include organ transplants, bone marrow transplants and tracheostomy cases and 99 representing unknown and/or ungroupable
CMS_DRG_WEIGHT (7): -- value of the CMS DRG weight

The MDC_Desc_YYYYqQ contains:
DRG_TYPE (6): -- contains either APRDRG or CMSDRG
VERSION (3): -- contains V29, V30, V31, etc.
MDC_VALUE (2): – 01 through 25
MDC_DESC (88): -- text field containing the English description of the respective MDC value

GEOG SUPPORT TABLE

The Geog support table connects zip codes to their corresponding health planning regions and districts and city/county codes and is used in geographic analyses. This file is useful in studying patient origin or geographic differences in patterns of care. The GEOG_YYYYqQ contains:
ZIP_CODE (5): -- USPS valid Virginia zip code for respective quarter of patient discharges
DISTRICT_CODE (2): -- 01 through 23 – containing the Virginia Health Planning District code
REGION_CODE (1): – 1 through 5 – containing the Virginia Health Planning Region code
COUNTY_CODE (3): – 001 through 840 – containing Virginia's county code. (Virginia's state code is 51.)
HPD_DESC (20): -- English text description of Virginia's Health Planning District
REGION_DESC (22): -- English text description of Virginia's Health Planning Region
COUNTY_DESC (25): -- English text description of Virginia's city and/or county

*please note that some Virginia zip codes may cross county and or health planning districts or regions

PROVIDER TABLE

The Provider table supplies basic hospital demographic information. PROVIDER_YYYYqQ contains:
MPN (50): -- current Medicare Provider Number
All_MPNs (255): -- all known Medicare Provider Numbers previously assigned to hospitals
Facility Name (100): -- current text name of each hospital
Address1 (100), City (100), State (100): -- street address, city and state for each hospital
Zip (100): -- USPS valid zip code for each hospital
Entity (255): -- valid values include acute, children's, critical access, LTACH, psych and rehab
Tax Status (255): -- valid values are "Proprietary" or "Not-for-profit"
Teaching Status (100): -- valid values are "None, Council of Teaching Hospitals and Accreditation Council of Graduate Medical Education"
Licensed_Beds (255): -- The number of beds licensed for use
Staffed_Beds (255): -- The number of licensed beds that the hospital staffs for patient care
Provider POA (255): -- Y or N indicates whether the hospital is exempt from reporting present

on admission
Submitted (11): -- the number of records a hospital submitted
InFile (22): -- the number of records without fatal errors that are contained in the distribution file

PAYER TABLE

Lists the **VHI** payer code with its associated English description for the field. PAYER_YYYYqQ contains:
PAYER_VALUE (2): -- VHI unique values – 1 through 99 – of the responsible payer
DESCRIPTION (25): -- English text description of Virginia Health Information's PAYER_VALUE

Current Payer Codes are:

Code	Payer	Code	Payer
1	Medicare	20	Jail/Detention
2	Medicaid	21	Black Lung
3	Trigon/BC/BS	24	Allstate
4	Tricare/Champus	25	Research/Donor
5	Self Pay	26	Foreign
6	Aetna/US Healthcare	27	Hospice-Unspecified
7	United Healthcare (was MetraHealth)	28	John Hancock
		29	HMO/PPO-Unspecified
8	Cigna	31	Medicaid Out-of-State
9	Other Commercial	32	BC/BS Out-of-State
10	Indigent/Charity	33	GWU Health Plan
11	Worker's Comp	34	Kaiser Permanente
13	Prudential	35	MAMSI
14	State Farm	36	Nylcare
16	Local Government	37	QualChoice
17	State Government	38	Sentara
18	Other Government	39	Southern Health
19	Govt Assistance	99	Unknown

DATA QUALITY

VHI edits all data at the record level for integrity. Certain records are automatically excluded from distribution files. These are records which contain a "fatal" error in:

- admission date
- discharge date
- patient status at discharge
- date of birth
- principal diagnosis or
- principal procedure.

Duplicate records are also excluded. For other fields in error, **VHI** has collapsed invalid entries into “unknown” or designated error values. We believe this allows for maximum use of the data while affording exclusions of records with serious errors.

ORDERING VHI PATIENT LEVEL DATA

To order the inpatient data Public Use File (PUF) or the supplemental Readmissions and Transfers (RATs) file, complete the license agreement found in Appendix C. Download and complete the Order Form for PLD and RATs Quarterly Hospital Data in Adobe Acrobat Format available at www.vhi.org/pld. Enclose payment in full and mail to **Virginia Health Information**. *Note: Sales tax should be added to orders for individual or multi-site licenses only. Taxes apply only to in-state sales.*

DESCRIPTION OF READMISSION AND TRANSFER FILES (RATS)

GENERAL TYPES OF DATA FOUND ON THE SUPPLEMENTAL FILES

VHI defines a readmission as a hospital stay that follows an earlier hospitalization by at least one day but within 90 days. Transfers are defined as a hospital stay in which the discharge date of the first admission is the same as the admission date of the second admission. A transfer may take place within a hospital (generally between specialty units) or across hospitals. **VHI** provides detailed information on each hospital stay to allow the user to define a related readmission according to their own criteria of time between hospital stays, diagnoses, procedures, All Patient Refined-Diagnostic Related Groups (APR-DRGs) or other criteria.

HOW A READMISSION OR TRANSFER IS IDENTIFIED

The Readmission and Transfer (RATs) file is an optional supplement to the PLD file that facilitates longitudinal analysis of multiple episodes of inpatient hospital care through readmission cycles and transfer patterns. When a patient has been admitted into a facility more than once within the reporting timeframe, they will be part of the RATs database. If a patient is admitted to a facility on the same day they are discharged, it is considered a transfer. If there are one or more days between discharge from one facility to admission to another or same facility, it is considered a readmission. **VHI** uses social security number, age, and gender to identify an individual patient across multiple admissions.

TIMEFRAME

VHI patient level data is based on the discharge date within a quarterly period. In order for a patient record to be included in the RATs file, the patient must have had an admission in that time period and a readmission or transfer in that quarterly period or in the previous or following quarter.

Each quarter **VHI** takes the most recent file and looks forward and backward 90 days, within that quarter and up to 90 days in the previous and following quarters. So, for any discharge between October and December 2012, we would look within that quarter, in the previous quarter’s discharges between July and September 2012 and in the following quarter’s discharges between January and March 2013. Although this spans nine months, we only look 90 days forward and backward for each discharge. Patients must match on Social Security Number (SSN), date of birth and patient sex. Because **VHI** does not require SSN for patients three years old or younger, RATs information is not complete even though some hospitals do provide this information when available. Since VHI looks in the following quarter, RATs data is always released one quarter later than the quarterly patient level data.

RECORD LAYOUT AND NAMING CONVENTION

The RATs table contains information pertaining to current quarter’s discharges as well as previous and subsequent discharges. The first column, “*VHIKEY*” is the only field in the database that refers to the current discharge. The VHIKEY in the RATs table will match exactly

one record in VHI's Patient Level Database (PLD). All of the other fields relate to a discharge that took place before (*fieldname_b*), or after (*fieldname_after*) the discharge from the VHIKEY. Therefore, the field "*VHIKEY_after*" will link to a record in the PLD that had a discharge *after* the date of the discharge of the record associated with VHIKEY. "After" records will show up in the current and next quarter of PLD, and "Before" records will show up in the current and previous quarter of PLD.

The field "*RT1*" will contain either the value "T1" or "R1" that indicates that the record (VHIKEY) is the first admission of a readmission (R1) or transfer (T1). This means that all the fields related to an "After" record will be filled in. ie: the patient who was discharged in the record related to VHIKEY, was subsequently readmitted to the record related to "*VHIKEY_after*."

The field "*RT2*" will contain either the value "T2" or "R2" that indicates that the record (VHIKEY) is the second admission of a patient. This means that all the fields related to a "Before" record will be filled in.

There will be times when a current record (*VHIKEY*) will have a previous and subsequent discharge record and all before and after fields will be filled in.

The fields *Days_before* and *Days_after will* be the number of days before or after that a transfer (0 days) or readmission (1 or more days) occurred. This will be the number of days from the discharge date of the first record to the admission date of the next record. For example, if "*RT1*" has a value of "R1," then "*Days_after*" will contain the number of days from when the patient was discharged (*VHIKEY*) to when they were admitted (*VHIKEY_after*).

LINKING RATS TO PATIENT LEVEL DATA (PLD)

To utilize the RATs files, you must first obtain **VHI** quarterly patient level data (PLD) files. The PLD files provide the denominator for calculating percentages of patients readmitted or transferred. You then obtain a RAT file for the same quarter. By linking this information, you can develop profiles at the state, region, county, hospital, physician or zip code level. These profiles may be by disease or any other variable you choose that is in the data file.

In order to properly link RATs to PLD, you must first link the *VHIKEY* field from the PLD table to the *VHIKEY* in the RATs table. Once linked, you can use the RATs principal diagnosis codes (*DX1_after and DX1_b*), principal procedure codes (*PX1_after and PX1_b*), APRDRG codes, and Medicare provider number (*MPN_after and MPN_b*) to analyze the data.

If you need additional information pertaining to a patient's discharge, you would need to link PLD to *VHIKEY_after* and/or *VHIKEY_before*. For instance, if you are interested in only readmission and transfers that occurred after the discharge in the PLD, link the *VHIKEY_after* to both the "current" quarter and the next quarter of the PLD in order to get all extra discharge data needed.

PLD RECORD LAYOUTS AND DATA DICTIONARY

PLD RECORD LAYOUT

Updated 10/09/2013	Virginia Health Information Public Use File-PUF1 PLD Record Layout for Discharges 1q11 to Present						
Field	Name	Label	Length	Format	From	To	Description
1	MPN	Hospital ID Number	6	A	1	6	Medicare Provider Number
2	ProvNPI	Provider's NPI	10	N	7	16	National Provider Identifier for the hospital
3	Ageday	Age in Days	3	N	17	19	Age in Days up to 365 Days
4	Age	Age in Years	3	N	20	22	Age in Years for Individuals >= 1 Year Old
5	Sex	Sex	1	A	23	23	Values: M (Male), F (Female), U (Unknown)
6	Race	Race	1	A	24	24	Values: 0 (White), 1 (Black), 2 (Other), 3 (Asian), 4 (Am. Indian), 5 (Hispanic), 6 (Blk. Hispanic), 9 (Unknown)
7	QYA	Quarter/Year of Admission	3	A	25	27	Example: 306 = Third Quarter 2006
8	QYD	Quarter/Year of Discharge	3	A	28	30	Example: 107 = First Quarter 2007
9	Asrce	Admit Source	1	A	31	31	Values for non newborns: 1 (Non Health Care Facility), 2 (Clinic or Physician's office), 4 (Transfer from Hospital), 5 (Transfer from SNF, ICF or ALF), 6 (Transfer from other Health Care Facility), 8 (Court/Law Enforcement), 9 (Information not available) **Please obtain a UB manual for a current and complete listing of codes
10	Atype	Admit Type	1	A	32	32	Values: 1 (Emergency), 2 (Urgent), 3 (Elective), 4 (Newborn), 5 (Trauma), 9 (Unknown) **Please obtain a UB manual for a current and complete listing of codes
11	Zip	Patient Zip Code of Residence	9	A	33	41	U.S. Postal Service Zip Codes
12	LOS	Length of Stay	3	N	42	44	Note:If Adate = Ddate, LOS = 0; Subtract Units from Rcode 180-189
13	Pstat	Patient Status	2	A	45	46	Values: 1 = Discharged to home or self care, 2 = Discharged/ Transferred to another short term general hospital, 3 = Discharged/Transferred to a skilled nursing facility, 4 = Discharged/Transferred to a facility providing custodial or supportive care, 5 = Discharged/Transferred to a designated cancer center or children's hospital, 6 = Discharged/Transferred to home under the care of an organized home health service organization, 7 = Left against medical advice or discontinued care, 20 = Expired, 43 = Discharged/transferred to Federal Facility, 50 = Hospice-Home, 51 Hospice-Medical Facility. **Please obtain a UB manual for a current and complete listing of codes
14	DX1	Principal Diagnosis Code	7	A	47	53	ICD-9-CM code
15	DX1_POA	Present on Admission for DX1	1	A	54	54	Indicates diagnosis was Present on Admission; required from non-exempt acute hospitals; values include Y (yes), N (no), U (unknown), W (clinically undetermined), 1 (unreported, not used)
16	DX2	1st Secondary Diagnosis Code	7	A	55	61	ICD-9-CM code

Updated 10/09/2013	Virginia Health Information Public Use File-PUF1 PLD Record Layout for Discharges 1q11 to Present						
Field	Name	Label	Length	Format	From	To	Description
17	DX2_POA	Present on Admission for DX2	1	A	62	62	Indicates diagnosis was Present on Admission; required from non-exempt acute hospitals; values include Y (yes), N (no), U (unknown), W (clinically undetermined), 1 (unreported, not used)
18	DX3	2nd Secondary Diagnosis Code	7	A	63	69	ICD-9-CM code
19	DX3_POA	Present on Admission for DX3	1	A	70	70	Indicates diagnosis was Present on Admission; required from non-exempt acute hospitals; values include Y (yes), N (no), U (unknown), W (clinically undetermined), 1 (unreported, not used)
20	DX4	3rd Secondary Diagnosis Code	7	A	71	77	ICD-9-CM code
21	DX4_POA	Present on Admission for DX4	1	A	78	78	Indicates diagnosis was Present on Admission; required from non-exempt acute hospitals; values include Y (yes), N (no), U (unknown), W (clinically undetermined), 1 (unreported, not used)
22	DX5	4th Secondary Diagnosis Code	7	A	79	85	ICD-9-CM code
23	DX5_POA	Present on Admission for DX5	1	A	86	86	Indicates diagnosis was Present on Admission; required from non-exempt acute hospitals; values include Y (yes), N (no), U (unknown), W (clinically undetermined), 1 (unreported, not used)
24	DX6	5th Secondary Diagnosis Code	7	A	87	93	ICD-9-CM code
25	DX6_POA	Present on Admission for DX6	1	A	94	94	Indicates diagnosis was Present on Admission; required from non-exempt acute hospitals; values include Y (yes), N (no), U (unknown), W (clinically undetermined), 1 (unreported, not used)
26	DX7	6th Secondary Diagnosis Code	7	A	95	101	ICD-9-CM code
27	DX7_POA	Present on Admission for DX7	1	A	102	102	Indicates diagnosis was Present on Admission; required from non-exempt acute hospitals; values include Y (yes), N (no), U (unknown), W (clinically undetermined), 1 (unreported, not used)
28	DX8	7th Secondary Diagnosis Code	7	A	103	109	ICD-9-CM code
29	DX8_POA	Present on Admission for DX8	1	A	110	110	Indicates diagnosis was Present on Admission; required from non-exempt acute hospitals; values include Y (yes), N (no), U (unknown), W (clinically undetermined), 1 (unreported, not used)
30	DX9	8th Secondary Diagnosis Code	7	A	111	117	ICD-9-CM code
31	DX9_POA	Present on Admission for DX9	1	A	118	118	Indicates diagnosis was Present on Admission; required from non-exempt acute hospitals; values include Y (yes), N (no), U (unknown), W (clinically undetermined), 1 (unreported, not used)
32	DX10	9th Secondary Diagnosis Code	7	A	119	125	ICD-9-CM code
33	DX10_POA	Present on Admission for DX10	1	A	126	126	Indicates diagnosis was Present on Admission; required from non-exempt acute hospitals; values include Y (yes), N (no), U (unknown), W (clinically undetermined), 1 (unreported, not used)
34	DX11	10th Secondary Diagnosis Code	7	A	127	133	ICD-9-CM code

Updated 10/09/2013	Virginia Health Information Public Use File-PUF1 PLD Record Layout for Discharges 1q11 to Present						
Field	Name	Label	Length	Format	From	To	Description
35	DX11_POA	Present on Admission for DX11	1	A	134	134	Indicates diagnosis was Present on Admission; required from non-exempt acute hospitals; values include Y (yes), N (no), U (unknown), W (clinically undetermined), 1 (unreported, not used)
36	DX12	11th Secondary Diagnosis Code	7	A	135	141	ICD-9-CM code
37	DX12_POA	Present on Admission for DX12	1	A	142	142	Indicates diagnosis was Present on Admission; required from non-exempt acute hospitals; values include Y (yes), N (no), U (unknown), W (clinically undetermined), 1 (unreported, not used)
38	DX13	12th Secondary Diagnosis Code	7	A	143	149	ICD-9-CM code
39	DX13_POA	Present on Admission for DX13	1	A	150	150	Indicates diagnosis was Present on Admission; required from non-exempt acute hospitals; values include Y (yes), N (no), U (unknown), W (clinically undetermined), 1 (unreported, not used)
40	DX14	13th Secondary Diagnosis Code	7	A	151	157	ICD-9-CM code
41	DX14_POA	Present on Admission for DX14	1	A	158	158	Indicates diagnosis was Present on Admission; required from non-exempt acute hospitals; values include Y (yes), N (no), U (unknown), W (clinically undetermined), 1 (unreported, not used)
42	DX15	14th Secondary Diagnosis Code	7	A	159	165	ICD-9-CM code
43	DX15_POA	Present on Admission for DX15	1	A	166	166	Indicates diagnosis was Present on Admission; required from non-exempt acute hospitals; values include Y (yes), N (no), U (unknown), W (clinically undetermined), 1 (unreported, not used)
44	DX16	15th Secondary Diagnosis Code	7	A	167	173	ICD-9-CM code
45	DX16_POA	Present on Admission for DX16	1	A	174	174	Indicates diagnosis was Present on Admission; required from non-exempt acute hospitals; values include Y (yes), N (no), U (unknown), W (clinically undetermined), 1 (unreported, not used)
46	DX17	16th Secondary Diagnosis Code	7	A	175	181	ICD-9-CM code
47	DX17_POA	Present on Admission for DX17	1	A	182	182	Indicates diagnosis was Present on Admission; required from non-exempt acute hospitals; values include Y (yes), N (no), U (unknown), W (clinically undetermined), 1 (unreported, not used)
48	DX18	17th Secondary Diagnosis Code	7	A	183	189	ICD-9-CM code
49	DX18_POA	Present on Admission for DX18	1	A	190	190	Indicates diagnosis was Present on Admission; required from non-exempt acute hospitals; values include Y (yes), N (no), U (unknown), W (clinically undetermined), 1 (unreported, not used)
50	PX1	Principal Procedure Code	7	A	191	197	ICD-9-CM code
51	PX2	1st Secondary Procedure Code	7	A	198	204	ICD-9-CM code
52	PX3	2nd Secondary Procedure Code	7	A	205	211	ICD-9-CM code
53	PX4	3rd Secondary Procedure Code	7	A	212	218	ICD-9-CM code

Updated 10/09/2013 Virginia Health Information Public Use File-PUF1 PLD Record Layout for Discharges 1q11 to Present

Field	Name	Label	Length	Format	From	To	Description
54	PX5	4th Secondary Procedure Code	7	A	219	225	ICD-9-CM code
55	PX6	5th Secondary Procedure Code	7	A	226	232	ICD-9-CM code
56	PRLOS	Pre-Op LOS	3	N	233	235	PX1date - Adate
57	PSLOS	Post-Op LOS	3	N	236	238	Ddate - PX1date
58	DRG	DRG Code	3	A	239	241	DRG as per CMS
59	MDC	MDC Code	2	A	242	243	MDC as per CMS
60	APRDRG	APRDRG Code	5	A	244	248	3M All Patient Refined DRG Code
61	Tchg	Total Charges	7	N	249	255	NOTE: For all charges, if value is > 7 digits, default to 9999999
62	RBchg	Room and Board Charges	7	N	256	262	100-171
63	RCchg	Routine Care Charges	7	N	263	269	176-199,220-232,235-239,500-529,550-569,650-659, 910-919, 990-999
64	SCchg	Special Care (Intensive Care)	7	N	270	276	172-175, 200-219, 233-234
65	Aneschg	Anesthesiology Charges	7	N	277	283	370-379
66	Phrchg	Pharmacy Charges	7	N	284	290	250-269
67	Radchg	Radiology Charges	7	N	291	297	320-339, 400-409
68	MRICT	MRI/CT Charges	7	N	298	304	350-359, 610-619
69	NMchg	Nuclear Medicine Charges	7	N	305	311	340-349
70	CLchg	Clinical Lab Charges	7	N	312	318	300-319
71	LDchg	Labor/Delivery Room Charges	7	N	319	325	720-729
72	ORchg	Operating Room Charges	7	N	326	332	360-369, 490-499, 710-719
73	Oncchg	Oncology Charges	7	N	333	339	280-289
74	MSSchg	Med/Surg Supplies Charges	7	N	340	346	270-279
75	Othchg	Other Charges	7	N	347	353	All Other Revenue Codes
76	Payer	Payer Type 1	2	A	354	355	VHI Payer Codes
77	Cnty	County Code	3	A	356	358	U.S. Postal Service County Code
78	HPR	Health Planning Region	1	A	359	359	Va. Health Planning Region Codes
79	HPD	Health Planning District	2	A	360	361	Va. Health Planning District Codes
80	Comp	Complication Code	1	A	362	362	1 = Complication Present
81	CCA	Cancer CoMorbid	1	A	363	363	1 = Comorbidity Present
82	CCV	Chronic Cardiovascular Disease	1	A	364	364	1 = Comorbidity Present
83	CLV	Chronic Liver Disease	1	A	365	365	1 = Comorbidity Present
84	CRN	Chronic Renal Disease	1	A	366	366	1 = Comorbidity Present
85	CDI	Chronic Diabetes	1	A	367	367	1 = Comorbidity Present
86	COP	Chronic Pulmonary Disease	1	A	368	368	1 = Comorbidity Present
87	CCE	Cerebrovascular Degeneration	1	A	369	369	1 = Comorbidity Present
88	Filler1	Filler1	9	A	370	378	
89	State	Patient State	2	A	379	380	Not available for discharges prior to July 1, 1994

Updated 10/09/2013	Virginia Health Information Public Use File-PUF1 PLD Record Layout for Discharges 1q11 to Present						
Field	Name	Label	Length	Format	From	To	Description
90	Ecode1	1st External Injury Code	7	A	381	387	ICD-9-CM Diagnosis Code not available for discharges prior to July 1, 1994
91	Ecode1_POA	Present on Admission for Ecode1	1	A	388	388	Indicates Ecode was Present on Admission; required from non-exempt acute hospitals; values include Y (yes), N (no), U (unknown), W (clinically undetermined), 1 (unreported, not used)
92	Ecode2	2nd External Injury Code	7	A	389	395	ICD-9-CM Diagnosis Code not available for discharges prior to January 1, 2007
93	Ecode2_POA	Present on Admission for Ecode2	1	A	396	396	Indicates Ecode was Present on Admission; required from non-exempt acute hospitals; values include Y (yes), N (no), U (unknown), W (clinically undetermined), 1 (unreported, not used)
94	Ecode3	3rd External Injury Code	7	A	397	403	ICD-9-CM Diagnosis Code not available for discharges prior to January 1, 2007
95	Ecode3_POA	Present on Admission for Ecode3	1	A	404	404	Indicates Ecode was Present on Admission; required from non-exempt acute hospitals; values include Y (yes), N (no), U (unknown), W (clinically undetermined), 1 (unreported, not used)
96	InfBWT	Infant Birth Weight	4	N	405	408	Weight in Grams not available for discharges prior to July 1, 1994
97	VHIKey	Key Number	10	A	409	418	Unique Record Identifier not available for discharges prior to July 1, 1994
98	APHY	Attending Physician ID	10	A	419	428	Attending Physician UPIN or NPI not available for discharges prior to April 1, 1996
99	OPHY	Operating Physician ID	10	A	429	438	Operating Physician UPIN or NPI not available for discharges prior to April 1, 1996
100	OthPHY1	Other Physician 1	10	A	439	448	Other Physician 1 UPIN or NPI not available for discharges prior to April 1, 1996
101	OthPHY2	Other Physician 2	10	A	449	458	Other Physician 2 UPIN or NPI not available for discharges prior to April 1, 1996
102	Filler2	Filler 2	8	A	459	466	
103	Filler3	Filler 3	8	A	467	474	
104	APHYWRN	Attending Phys ID Warning	1	A	475	475	Values: 0=UPIN/NPI is valid format and in CMS UPIN/NPI table, 1= UPIN/NPI is valid format only
105	OPHYWRN	Operating Phys ID Warning	1	A	476	476	Values: 0=UPIN/NPI is valid format and in CMS UPIN/NPI table, 1=UPIN/NPI is valid format only
106	OthPHY1WRN	Other Phys 1 ID Warning	1	A	477	477	Values: 0=UPIN/NPI is valid format and in CMS UPIN/NPI table, 1=UPIN/NPI is valid format only
107	OthPHY2WRN	Other Phys 2 ID Warning	1	A	478	478	Values: 0=UPIN/NPI is valid format and in CMS UPIN/NPI table, 1=UPIN/NPI is valid format only
108	RAT	Readmission and Transfer	1	A	479	479	1=Record is eligible for inclusion in the Readmission and Transfer File
109	CRLF		2	N	480	481	End of Record

PLD DICTIONARY OF DATA ELEMENTS

The following information describes each data element contained in the patient level data public use files. These descriptions can be used with the above record layout for information pertaining to VHI data elements. For complete and updated information, VHI recommends subscribing to the National Uniform Billing Committee to obtain updates to the UB Data Specifications Manual. More information may be found at www.nubc.org

MPN--MEDICARE PROVIDER NUMBER Pseudo numbers have been assigned where a hospital is not a Medicare provider. Records are excluded if there is a known error in this field. A Provider support table containing the MPN, hospital's name, address, number of licensed and staffed beds, teaching status, hospital type and tax status is provided.
PROVNPI--PROVIDER NPI NUMBER National provider identifier for the hospital as assigned by the federal government.
AGEDAY--AGE IN DAYS Calculated in days for children up to one year old. The calculation is based on date of birth and date of admission. Age in days is equal to zero if the admission date and date of birth are the same. This field is blank for patients one year of age or older. Records are excluded if there is a known error in any of the fields used for this calculation.
AGE--AGE IN YEARS Calculated for individuals one year of age or older. The calculation is based on date of birth and date of admission. Records are excluded if there is a known error in any of the fields used for this calculation; however, some questionable ages may still result.
SEX--PATIENT SEX Values are: M = Male, F = Female, U = Unknown. Records with a missing or known invalid entry are assigned a default value of U.
RACE--PATIENT RACE Values are: 0 = White, 1 = Black, 2 = Other, 3 = Asian, 4 = American Indian, 5 = Hispanic, 6 = Black Hispanic, 9 = Unknown. Records with a missing or known invalid entry are assigned a default value of 9.
QYA--QUARTER/YEAR OF ADMISSION Admission date is converted to the calendar quarter and year the patient was admitted. Records are excluded if there is a known error in the admission date.
QYD--QUARTER/YEAR OF DISCHARGE Discharge date is converted to the calendar quarter and year the patient was discharged. Records are excluded if there is a known error in the discharge date.
ASRCE--ADMISSION SOURCE (POINT OF ORIGIN FOR ADMISSION OR VISIT) Values for patients other than newborns are: 1 (Non Health Care Facility), 2 (Clinic or Physician's office), 4 (Transfer from Hospital), 5 (Transfer from SNF, ICF or ALF), 6 (Transfer from other Health Care Facility), 8 (Court/Law Enforcement), 9 (Information not available) However, if the admission is a newborn, the values are: 5 (Born inside this Hospital) and 6 (Born Outside of this Hospital). Any record with a missing or known invalid entry is assigned a default value of 9. **Please obtain a UB manual for a current and complete listing of codes.
ATYPE--ADMISSION TYPE Priority of the admission. Values are: 1 = Emergency, 2 = Urgent, 3 = Elective, 4 = Newborn, 5 = Trauma, 9 = Unknown. Records with a missing or known invalid entry are assigned a default value of 9. **Please obtain a UB manual for a current and complete listing of codes.
ZIP--UNITED STATES POSTAL SERVICE ZIP CODE OF PATIENT RESIDENCE A 5-digit zip code of patient residence is provided. A value of XXXXX indicates an unknown zip code and a value of YYYYY indicates a foreign zip code. Records with a missing or known invalid value are assigned a default value of blanks.
LOS--LENGTH OF STAY Calculated by subtracting the admission date from the discharge date. If the admission date is the same as the discharge date, the length of stay is defined to be 0. You may wish to exclude cases with a length of stay equal to 0 from average length of stay calculations or other analyses. Furthermore, if a patient took a leave of absence, indicated by a

revenue center code of 180-189, those days are subtracted from the length of stay. Records with a known error in either the admission date or discharge date are excluded from the data base.

PSTAT--PATIENT DISCHARGE STATUS Beginning October 1, 2001, allowable values include but are not limited to the following:

Values: 1 = Discharged to home or self care, 2 = Discharged/ Transferred to another short term general hospital, 3 = Discharged/Transferred to a skilled nursing facility, 4 = Discharged/Transferred to a facility providing custodial or supportive care, 5 = Discharged/Transferred to a designated cancer center or children's hospital, 6 = Discharged/Transferred to home under the care of an organized home health service organization, 7 = Left against medical advice or discontinued care, 20 = Expired, 43 = Discharged/transferred to Federal Facility, 50 = Hospice-Home, 51 Hospice-Medical Facility. Records with a missing or known invalid entry are excluded from the data base. **Please obtain a UB manual for a current and complete listing of codes.

DX1--PRINCIPAL DIAGNOSIS Based on the ICD-9-CM coding system. Records with a missing or known invalid entry are excluded from the data base.

DX2-DX18--SECONDARY DIAGNOSIS FIELDS Based on the ICD-9-CM coding system. Records with a known invalid entry are assigned a default value of "00000".

DX1_POA TO DX18_POA—PRESENT ON ADMISSION POA indicates that the diagosis was present at the time the order for inpatient admission occurred. POA Values from non-exempt acute hospitals include Y = Yes (present at the time of inpatient admission), N = No (not present at the time of inpatient admission), U = Unknown (documentation is insufficient to determine if condition was present at the time of admission), W = clinically undetermined (provider is unable to clinically determine whether a condition was present on admission), 1 = Unreported, not used. The diagnosis is exempt from POA reporting. POA values for exempt providers are blank. Exempt providers include critical access, long-term care, children's, psychiatric and rehabilitation hospitals. The CMS website has more information on POA reporting.
http://www.cms.gov/HospitalAcqCond/01_Overview.asp#TopOfPage

PX1--PRINCIPAL PROCEDURE Based on the ICD-9-CM coding system. Records with a known invalid value are excluded from the data base.

PX2-PX6--SECONDARY PROCEDURE FIELDS Based on the ICD-9-CM coding system. Records with a known invalid value are assigned a default value of "0000".

PRLOS--PREOPERATIVE LENGTH OF STAY Measured in days and calculated by subtracting the admission date from the date of the principal procedure. Records with a known invalid value in the principal procedure date field are assigned a default value of blanks. Note: Some software will convert blanks to zeros. If this occurs, various calculations and statistics you perform could be distorted. You should determine your software default and exercise caution.

PSLOS--POSTOPERATIVE LENGTH OF STAY Measured in days and calculated by subtracting the principal procedure date from the date of discharge. Records with a known invalid entry in the principal procedure date field are assigned a default value of blanks. PSLOS will be blank filled even though it is defined as a numeric field. Note: Some software will convert blanks to zeros. If this occurs, various calculations and statistics you perform could be distorted. You should determine your software default and exercise caution.

DRG--DIAGNOSIS RELATED GROUP Based on the CMS (Centers for Medicare & Medicaid Services) DRG grouping software. This software utilizes the principal diagnosis, secondary diagnoses, surgical procedures, age, sex and discharge status. A file containing the English descriptions is provided and labeled DRG.SDF.

MDC--MAJOR DIAGNOSTIC CATEGORY Assigned based on the CMS definition. A separate file containing the English descriptions is provided and labeled MDC.sdf.

APRDRG--ALL PATIENT REFINED-DRG Based on the 3M definition as follows:
1Q04 - 3q06 is version 20.0
4q06 - 3q07 is version 24.0
4q07 -3q08 is version 25.0
4q08 -3q09 is version 26.0
Note: Version numbers are updated annually with discharges beginning each October 1.

TCHG--TOTAL CHARGE Determined by the revenue center code 0001. If this code is present, the corresponding revenue center charge is the total charge. There are 23 possible revenue center code and charge fields. Values are in whole dollar amounts. For ALL charges, if the amount is greater than 7 digits, the default value is 9999999. Records not reporting a revenue center code value of 001 or containing a missing or known invalid value in the required RCode1 field will have total charges reported as blanks. Note: Some software will convert blanks to zeros. If this occurs, various calculations and statistics you perform could be distorted. You should determine your software default and exercise caution. You may wish to exclude cases from charge analyses if total charges are equal to 0.

RBCHG--ROOM AND BOARD CHARGES Calculated by summing revenue center charge fields that have associated revenue center code fields containing values: 100 - 171, inclusive.

RCCHG--ROUTINE CARE CHARGES Calculated by summing revenue center charge fields that have associated revenue center code fields containing values: 176 -199, 220 - 232, 235 - 239, 500 - 529, 550 - 569, 650 - 659, 910 - 919 or 970 - 999.

SCCHG--SPECIAL CARE (INTENSIVE CARE) Calculated by summing revenue center charge fields that have associated revenue center code fields containing values: 172 - 175, 200 - 219 and 233 - 234.

ANESCHG--ANESTHESIOLOGY CHARGES Calculated by summing revenue center charge fields that have associated revenue center code fields containing values: 370 - 379, inclusive.

PHRCHG--PHARMACY CHARGES Calculated by summing revenue center charge fields that have associated revenue center code fields containing any of the values: 250 - 269, inclusive.

RADCHG--RADIOLOGY CHARGES Calculated by summing revenue center charge fields that have associated revenue center code fields containing values: 320 - 339 or 400 - 409.

MRICT--MRI/CT CHARGES Calculated by summing revenue center charge fields that have associated revenue center code fields containing values: 350 - 359 or 610 - 619.

NMCHG--NUCLEAR MEDICINE CHARGES Calculated by summing the revenue center charge fields that have corresponding revenue center code fields containing values: 340 - 349, inclusive.

CLCHG--CLINICAL LAB CHARGES Calculated by summing revenue center charge fields that have associated revenue center code fields containing values: 300 - 319, inclusive.

LDCHG--LABOR/DELIVERY ROOM CHARGES Calculated by summing revenue center charge fields that have associated revenue center code fields containing values 720 - 729.

ORCHG--OPERATING ROOM CHARGES Calculated by summing revenue center charge fields that have corresponding revenue center code fields containing values: 360 - 369, 490 - 499, 710 - 719.

ONCHG--ONCOLOGY CHARGES Calculated by summing revenue center charge fields that have associated revenue center code fields containing values 280 - 289, inclusive.

MSSCHG--MEDICAL/SURGICAL SUPPLIES CHARGES Calculated by summing revenue center charge fields that have associated revenue center code fields containing values 270 - 279, inclusive.

OTHCHG--OTHER CHARGES Calculated by summing remaining revenue center charge fields that have corresponding revenue center code fields containing any value not listed above.

PAYER--PAYER TYPE A **VHI** assigned numeric value indicating the primary health plan responsible for reimbursing the hospital for the services provided. Values were calculated by converting text names of payers provided by hospitals to codes. A support table named Payer containing the English description is provided.

CNTY--COUNTY CODE The United States Postal Service county code derived from the patient's zip code of residence. A support table containing Virginia's county codes, zip codes, health planning regions and health planning districts is provided and named GEOG.

HPR--HEALTH PLANNING REGION Based on Virginia's Department of Health planning regions. A support table containing Virginia's county codes, zip codes, health planning regions and health planning districts is provided and named GEOG. Zip codes were mapped to the HPR by the Central Virginia Health Planning Agency (CVHPA). A value of 9 indicates that the patient resides outside Virginia or the zip code was invalid or unknown.

HPD--HEALTH PLANNING DISTRICT Based on Virginia's Department of Health planning districts. A support table containing Virginia's county codes, zip codes, health planning regions and health planning districts is provided and named GEOG. Zip codes were mapped to the HPD by the CVHPA. A value of 99 indicates that the patient resides outside Virginia or the zip code was invalid or unknown.

COMP--COMPLICATION CODE If any diagnosis field contains a value of 9950, 99520-99529, 9954 or in the range of 996 to 999 a value of 1 is assigned indicating the presence of a complication. Otherwise, the default value is blank.

CCA--CANCER COMORBID If any diagnosis field contains a value falling within these ranges: 141 - 1609, 162 - 1729 or 174 - 20891, a value of 1 is assigned indicating the presence of the comorbidity. Otherwise, the default value is blank.

CCV--CHRONIC CARDIOVASCULAR DISEASE If any diagnosis field contains a value falling within these ranges: 412.0 - 414.9, 426.0 - 429.1, a value of 1 is assigned indicating the presence of the comorbidity. Otherwise, the default value is blank.

CLV--CHRONIC LIVER DISEASE If any diagnosis field contains a value falling within the range 571.0 - 572.8, a value of 1 is assigned indicating the presence of the comorbidity. Otherwise, the default value is blank.

CRN--CHRONIC RENAL DISEASE If any diagnosis field contains a value falling within the ranges: 582.0 - 583.9, 585.0 - 587.0 or is equal to 403.01, 403.11, 403.91, 404.02, 404.03, 404.12, 404.13, 404.92 or 404.93, a value of 1 is assigned indicating the presence of the comorbidity. Otherwise, the default value is blank.

CDI--CHRONIC DIABETES If any diagnosis field contains the value 25001 or falls within the range 2501 - 25093, a value of 1 is assigned indicating the presence of the comorbidity. Otherwise, the default value is blank.

COP--CHRONIC PULMONARY DISEASE If any diagnosis field contains the value 496.0 or falls within the range 491 - 49392, a value of 1 is assigned indicating the presence of the comorbidity. Otherwise, the default value is blank.

CCE--CEREBROVASCULAR DEGENERATION If any diagnosis field contains a value falling within the ranges: 290.0 - 290.9, 294.0 - 299.9, a value of 1 is assigned indicating the presence of the comorbidity. Otherwise, the default value is blank.

STATE--PATIENT STATE United States Postal Service assigned state code. Zip codes received are edited for validity. Valid zip codes are then assigned the appropriate state and county code. Records with a missing or known invalid zip code are assigned a default state value of XX. State codes are provided for discharges on and after July 1, 1994.

ECODE1-ECODE3--EXTERNAL CAUSE OF INJURY CODES Base on ICD-9-CM coding system. Ecode 1 provided for discharges on and after July 1, 1994; Ecodes 2-3 provided for discharges on and after January 1, 2007.

ECODE1_POA TO ECODE3_POA—Present on Admission POA indicates that the Ecode was present at the time the order for inpatient admission occurred. POA Values from non-exempt acute hospitals include Y = Yes (present at the time of inpatient admission), N = No (not present at the time of inpatient admission), U = Unknown (documentation is insufficient to determine if condition was present at the time of admission), W = clinically undetermined (provider is unable to clinically determine whether a condition was present on admission), 1 = Unreported, not used. The diagnosis is exempt from POA reporting. POA values for exempt providers are blank. Exempt providers include critical access, long-term care, children's, psychiatric and rehabilitation hospitals. The CMS website has more information on POA reporting.
http://www.cms.gov/HospitalAcqCond/01_Overview.asp#TopOfPage

INFBWT--INFANT BIRTH WEIGHT Recorded for newborns. The range included is 160-7999 grams; improbable weights have been changed to blanks. The user may wish to further restrict this range. Provided for discharges on and after July 1, 1994.

VHIKEY--VHI UNIQUE RECORD IDENTIFIER This field allows linking of records to other records if developed with adjunct information. Provided for discharges on and after July 1, 1994.

APHY--ATTENDING PHYSICIAN UPIN or NPI Federally assigned unique physician identification number. The attending physician is defined in the Virginia UB manual as the physician who has primary responsibility for the patient's medical care and treatment. Individual hospitals and their medical staffs determine how to make this determination. Provided for all hospitals on and after July 1, 1996.

OPHY--OPERATING PHYSICIAN UPIN OR NPI Federally assigned unique physician identification number. Provided for all hospitals on and after July 1, 1996.

OTHPHY1—OTHER PHYSICIAN 1 UPIN or NPI Federally assigned unique physician identification number.

OTHPHY2—OTHER PHYSICIAN 2 UPIN or NPI Federally assigned unique physician identification number.

APHYWRN--ATTENDING UPIN OR NPI WARNING The addition of this field allows the data user to determine whether the UPIN OR NPI will be included in an analysis. A value equal to "0"

indicates that the submitted Attending Physician UPIN or NPI for a hospital discharge was on the CMS National UPIN or NPI table. A value of "1" indicates that the value was not on the CMS National table but was in the proper UPIN or NPI format (Alpha character followed by five numbers). A value of "1" may indicate a physician recently assigned a UPIN or NPI, a physician who seldom submits claims for Medicare patients or a possible error. A blank (" ") reflects that no value was submitted or it was in an incorrect format. Available for discharges beginning with 4q98.

OPHYWARN--OPERATING PHYSICIAN WARNING The addition of this field allows the data user to determine whether the UPIN or NPI will be included in an analysis. A value equal to "0" indicates that the submitted Operating Physician UPIN or NPI for a hospital discharge was on the CMS National UPIN or NPI table. A value of "1" indicates that the value was not on the CMS National table but was in the proper UPIN (Alpha character followed by five numbers)or NPI format. A value of "1" may indicate a physician recently assigned a UPIN or NPI, a physician who seldom submits claims for Medicare patients or a possible error. A blank (" ") reflects that no value was submitted or it was in an incorrect format. Available for discharges beginning with 4q98.

RAT--READMISSION AND TRANSFER Indicates whether the discharge is eligible to be used for Readmission and transfer calculations when valid SSN, Bdate, Adate, Ddate, MPN and sex are provided to VHI. When available, Readmission and Transfer (RAT) files can be used to accurately calculate readmission or transfer rates by determining which records in the patient level data file were considered a possible readmission/transfer record (e.g. met the listed criteria). A label of "1" indicates that the record met those criteria. Readmission and transfer information can be linked to the public use data files and correctly identify the denominator by including only those cases with a "1" in the RAT field. Populated beginning with discharges on and after January 1, 1999.

SUPPLEMENTAL RATS RECORD LAYOUT AND DATA DICTIONARY

RECORD LAYOUT FOR READMISION AND TRANSFER (RATS) DATA (UPDATED 05-12-2015)

Field Name	Length	Format	From	To	Description
VHIKEY	10	A	1	10	10-digit Unique Record Identifier available for discharges after July 1, 1994; VHI assigns a unique identifier for every inpatient discharge in Virginia. The first digit indicates the VHI dataset source: 0=Inpatient Discharge, 1-State Mental Health Institution Discharge, 2-Outpatient Discharges (not currently being used). The second digit indicates the quarter of discharge, and the third and fourth digits are the two-digit year of discharge. The remaining 6 digits identify the unique record.
VHIKEY_BEFORE	10	A	11	20	If a record is the second of a RAT pair, then VHIKey_before identifies the first record in the RAT pair.
VHIKEY_AFTER	10	A	21	30	If a record is the first of a RAT pair, then VHIKey_after identifies the second record in the RAT pair.
RT1_FLAG	2	A	31	32	RT1 identifies a record as the first in a readmission or transfer pair. The possible values are R1=a readmit pair and T1=a transfer pair.
RT2_FLAG	2	A	33	34	RT2 identifies a record as the second in a readmission or transfer pair. The possible values are R2=a readmit pair and T2=a transfer pair.
DAYS_BEFORE	3	A	35	37	If a record is the second of a RAT pair, then Days_before contains the number of days between this record and the first record of the RAT pair.
DAYS_AFTER	3	A	38	40	If a record is the first of a RAT pair, then Days_after contains the number of days between this record and the second record of the RAT pair.
DX1_BEFORE	5	A	41	45	If a record is the second of a RAT pair, then DX1_before contains the principal diagnosis code of the first record in the RAT pair.
DX1_AFTER	5	A	46	50	If a record is the first of a RAT pair, then DX1_after contains the principal diagnosis code of the second record in the RAT pair.
PX1_BEFORE	4	A	51	54	If a record is the second of a RAT pair, then PX1_before contains the principal procedure code of the first record in the RAT pair.
PX1_AFTER	4	A	55	58	If a record is the first of a RAT pair, then PX1_after contains the principal procedure code of the second record in the RAT pair.
MPN_BEFORE	6	A	59	64	If a record is the second of a RAT pair, then MPN_before contains the Medicare Provider Number of the first record in the RAT pair.
MPN_AFTER	6	A	65	70	If a record is the first of a RAT pair, then MPN_after contains the Medicare Provider Number of the second record in the RAT pair.
APRDRG_BEFORE	5	A	71	75	If a record is the second of a RAT pair, then the first three digits of APRDRG_before contain the All Patient Refined Diagnostic Related Group (APRDRG) code, the fourth digit indicates the severity of illness and the last digit indicates the mortality subclass of the first record in the RAT pair.
APRDRG_AFTER	5	A	76	80	If a record is the first of a RAT pair, then the first three digits of APRDRG_after contain the All Patient Refined Diagnostic Related Group (APRDRG) code, the fourth digit indicates the severity of illness and the last digit indicates the mortality subclass of the second record in the RAT pair.
QTR_IND	4	A	81	84	QTR_ind contains the calendar quarter of this source record.

RATS DICTIONARY OF DATA ELEMENTS

Key Number 10-digit Unique Record Identifier available for discharges after July 1, 1994; VHI assigns a unique identifier for every inpatient discharge in Virginia. The first digit indicates the VHI dataset source: 0=Inpatient Discharge, 1-State Mental Health Institution Discharge, 2-Outpatient Discharges (not currently being used). The second digit indicates the quarter of discharge, and the third and fourth digits are the two-digit year of discharge. The remaining 6 digits identify the unique record.

VHIKey_before If a record is the second of a RAT pair, then VHIKey_before identifies the first record in the RAT pair.

VHIKey_after If a record is the first of a RAT pair, then VHIKey_after identifies the second record in the RAT pair.

RT1--RT1 Flag RT1 identifies a record as the first in a readmission or transfer pair. The possible values are R1 for a readmit pair and T1 for a transfer pair.

RT2--RT2 Flag RT2 identifies a record as the second in a readmission or transfer pair. The possible values are R2 for a readmit pair and T2 for a transfer pair.

Days_before If a record is the second of a RAT pair, then Days_before contains the number of days between this record and the first record of the RAT pair.

Days_after If a record is the first of a RAT pair, then Days_after contains the number of days between this record and the second record of the RAT pair.

DX1_before--If a record is the second of a RAT pair, then DX1_before contains the principal diagnosis code of the first record in the RAT pair.

DX1_after--If a record is the first of a RAT pair, then DX1_after contains the principal diagnosis code of the second record in the RAT pair.

PX1_before If a record is the second of a RAT pair, then PX1_before contains the principal procedure code of the first record in the RAT pair.

PX1_after If a record is the first of a RAT pair, then PX1_after contains the principal procedure code of the second record in the RAT pair.

MPN_before If a record is the second of a RAT pair, then MPN_before contains the Medicare Provider Number of the first record in the RAT pair.

MPN_after If a record is the first of a RAT pair, then MPN_after contains the Medicare Provider Number of the second record in the RAT pair.

APRDRG_before If a record is the second of a RAT pair, then the first three bytes of APR-DRG_before contain the All Patient Refined Diagnostic Related Group (APR-DRG) code, the fourth byte indicates the severity subclass and the last byte indicates the mortality subclass of the first record in the RAT pair.

APRDRG_after If a record is the first of a RAT pair, then the first three bytes of APR-DRG_after contain the All Patient Refined Diagnostic Related Group (APR-DRG) code, the fourth byte indicates the severity subclass and the last byte indicates the mortality subclass of the second record in the RAT pair.

Qtr_ind QTR_ind contains the calendar quarter of this source record.

PLD AND RATS ORDERING INFORMATION

LICENSE AGREEMENT

Virginia Health Information
Application for and Agreement to License Patient Level Data
(Public Use File - PUF1)
Revised as of November 22, 2011

I. Name: ____
Company: ____ (the "Contractor")
Address: ____
Telephone: ___________________________
email: _______________________________
Check as Applicable: Business nonprofit (per IRS): ______ Business other: _______
University: _____ Government: _____ Other: _____

II. State the reason the data is requested. ____________________________________
____
____
____

III. Will reports be created for sale to third parties using this data? If yes, please note target volume of expected reports using this data or extracts from this data and the file format of any such report.

____

IV. Will computer readable files be created for sale to third parties? If yes, please note the target volume and format of the files to be created.

____

V. Applicant desires the following license: (Please check only one)

A. Individual License: _____ Allows Contractor to use data on a single computer belonging to the Contractor or the Contractor's designated subcontractor.

B. Site License: _____ Allows Contractor to make multiple copies of the data for use by individuals within the same organization of the Contractor or a single copy accessible by Contractor's computer network by more than one individual within the same organization.

C. Commercial License: _____ Allows Contractor to make multiple copies of the data for incorporation into computer software for subsequent resale and/or distribution of such computer software to third parties, subject to the condition that with respect to the data the third party is able only to access the data by queries that produce aggregated data reports. This license also allows Contractor to sell reports created from the database. Notwithstanding the forgoing, any subsequent resale and/or distribution

by such third parties is expressly prohibited, and any distribution of data to third parties that enables third party access to data other than by aggregated reports is expressly prohibited.

VI. Virginia Health Information (VHI) hereby grants the Contractor indicated in Section I a non-exclusive, non-transferable, and perpetual license to use the Data Base described in Appendix A (or "data") under the terms and subject to the restrictions of this Agreement, and the Contractor hereby accepts, subject to the terms and conditions set forth in this Agreement, the nonexclusive and nontransferable right to use the Data Base pursuant to the terms of this Agreement. VHI reserves all rights, title, and interest in and to the Data Base (including ownership of all copyrights and other intellectual property rights pertaining thereto), subject only to the license expressly granted to Contractor herein.

In accepting the usage granted by VHI, the Contractor agrees that it shall:

A. Except as permitted under Section VI, Part F below, not license, rent, lease, distribute, or permanently transfer the Contractor's rights to use the Data Base.

B. Use the Data Base only for the expressed purpose stated by the Contractor in this application.

C. Make no attempt, by commission or omission, to identify, disclose, discuss, release, or provide access to information on specific individual patients.

D. Contractor agrees to include the following statement in any reports, publications, or secondary files created using the Data Base whether for internal use or for sale, presentation, or distribution to third parties:

"Virginia Health Information (VHI) has provided non-confidential patient level information used in this file, report, publication, or database which it has compiled in accordance with Virginia law but which it has no authority to independently verify. By using this file, report, publication, or database, the user agrees to assume all risks that may be associated with or arise from the use of inaccurate data. VHI cannot and does not represent that the use of VHI's data was appropriate for this file, report, publication, or database or endorse or support any conclusions of inferences that may be drawn from the use of VHI's data."

For any reports, publications, or secondary files created using the Data Base for sale, presentation, or distribution to third parties under Section V., Part C., Contractor also agrees to include the following statement:

"The patient level information used in this file, report, publication, or database is provided for your sole, internal use only, and is non-transferable, and shall not be distributed to any third parties whatsoever."

E. Not resell or externally distribute to third parties the Data Base unless Contractor obtains a commercial license from Virginia Health Information as defined in Section V., Part C above and incorporates the Data Base into a computer program that manipulates and analyzes or enables the user to manipulate and analyze the data as permitted under this License Agreement (the "Software".) Any such resale or external distribution shall be expressly limited to the internal use of such third party; Contractor shall not make any representation or attempt to authorize third parties to further resell or distribute the Data Base or patient level

information therein. Contractor agrees to take all reasonable steps to limit such third party use to the sole use of making queries and generating reports of aggregated data, and as a condition of this license such third parties shall be expressly prohibited from accessing or exporting data or individual patient records.

F. Notwithstanding the restrictions set forth above if a multi-site license or commercial license as described in Section V., Parts B, or C is issued, Contractor shall be permitted to distribute the Data Base to entities or individuals that are directly or indirectly owned or controlled by Contractor or that are directly or indirectly owned or controlled by the same entity or individual that owns or controls Contractor, with any such distribution remaining subject to the terms and conditions herein.

G. Pay such additional licensing fees to VHI as may reasonably be demanded by VHI in the event that Contractor's use of the Data Base exceeds the scope of this agreement.

Contractor further agrees that VHI shall be entitled to terminate all of Contractor's rights to use the Data Base and Contractor shall return all copies of the Data Base to VHI, in the event Contractor violates the terms of this Agreement and fails to cure such violation within seven (7) days of the receipt of such notice. Notwithstanding the preceding sentence, if Contractor violates the terms of Section C above regarding patient identity, this license shall immediately terminate and Contractor shall immediately return all copies of the Data Base to VHI. The rights and remedies of VHI set forth herein with respect to Contractor's failure to comply with the terms of this Agreement (including, without limitation, the right to terminate this Agreement) are not exclusive, the exercise thereof shall not constitute an election of remedies, and VHI shall be entitled to seek whatever additional remedies may be available in law or in equity.

Upon receipt of this application and Agreement, executed by the Contractor acceptance by VHI hereof, and receipt of the license fee, VHI shall execute the Agreement and furnish the Contractor the Data Base in computer-readable form, subject to the terms of this agreement.

All fees payable by Contractor under this Agreement are net of applicable taxes. Contractor is solely responsible for any taxes or assessed fees which are, or may become, due by reason of this Agreement.

Contractor does hereby indemnify and shall hold harmless VHI, and its directors, officers, and any employees and agents from and against all liability (including punitive damages) and costs (including reasonable attorneys' fees) arising out of a claim or claims of third parties arising from the use by Contractor, in any manner, of the Data Base, including (but not limited to) the violation of any third party's privacy rights.

CONTRACTOR AGREES THAT THE DATA BASE IS BEING PROVIDED AS IS AND ALL WARRANTIES, WHETHER BY COMMON LAW, STATUTE, OR EQUITY, ARE EXCLUDED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE (WHETHER OR NOT VHI KNOWS, HAS REASON TO KNOW, HAS BEEN ADVISED, OR IS OTHERWISE IN FACT AWARE OF ANY SUCH PURPOSE). CONTRACTOR ACKNOWLEDGES THAT VHI ONLY COMPILES THE INFORMATION CONTAINED IN THE DATA BASE, AND DOES NOT INDEPENDENTLY VERIFY OR

WARRANT THE ACCURACY OF SUCH INFORMATION.

CONTRACTOR AGREES THAT VHI SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES EVEN IF IT HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE ABOVE INDEMNIFICATION, DISCLAIMER OF WARRANTIES, AND LIMITATATION OF LIABILITY SHALL SURVIVE TERMINATION OF THIS AGREEMENT.

Contractor has read and agrees to abide by all terms and restrictions described regarding the use of Virginia Health Information (VHI) patient level data. Any change or waiver of any provision of this Agreement shall be only by signed writing of the parties to be effective.

VIRGINIA HEALTH INFORMATION

By: ______________________________
Name: ____________________________
Title: ____________________________
Date: _____________________________

CONTRACTOR

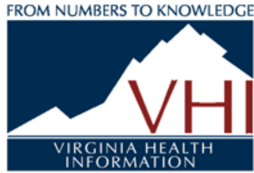
By: ______________________________
Name: ____________________________
Title: ____________________________
Date: _____________________________

VHI License No. __________________
November 2011

Description of the Data Base

Public Use File-PUF1

The Public Use File-PUF1 is a data file of all hospital discharges in the Commonwealth of Virginia for the identified quarter. Claims data elements are included for patient demographics, diagnoses and procedures, charges, and revenue groupings. Co-morbid conditions have also been added to aid in determining variations in patient outcomes.



PLD & RATs Quarterly Hospital Data

C D - R O M   O R D E R   F O R M

Virginia Health Information

Phone: 804-643-5573

Your Information

Name ______________________

Title ______________________

Organization/Firm Name ______________________

Street Address ______________________

City, State, Zip ______________________

Email ______________________

Phone (with Area Code) ______________________

Reorder License No. (for reorders with current VHI license) ______________________

DATA PRODUCTS

Patient Level Data (PLD)

Individual License	$1,050
Site License	$2,100
Commercial License	$2,690
Govt Redistribution License	$6,900

Readmission And Transfer (RAT)

Individual Copy	$ 265
Site License	$ 535
Commercial License	$ 800
Govt Redistribution License	$1,930

Data Products (PLD or RAT + License information)	**File Format** (SDF or DBF)	**Discharge**		**Price *** (Each)
		Quarter (1,2,3, or 4)	**Year**	
Note: Except where noted otherwise, all orders must be prepaid and accompanied by a completed application for and agreement to license Patient Level Data.		Subtotal		
		VA Business add Sales Tax 5.3%		
		Shipping & Handling		$25
		Total		

- PLD : Patient Level Data (with accompanying Support Files in a Microsoft Access database)
- RAT : Readmission and Transfer
- SDF : Standard Data Format which is a fixed width file
- DBF : Data Base Format which is easily imported into database programs such as Ms. Access.
- Quarter: enter discharge quarter
- Year : enter discharge data year
- Price : enter price per quarter.

Please return:

◊ Application for and Agreement to License Patient Level Data
◊ Completed Order Form
◊ Payment (Check/Money Order)

to:

Virginia Health Information
102 N 5th Street
Richmond, VA 2319
Email: joan@vhi.org
Ph: 804-643-5573