

# OVERVIEW OF THE VIRGINIA ALL PAYER CLAIMS DATABASE

More information about all the topics addressed here can be found on the Virginia APCD website: [www.vhi.org/apcd](http://www.vhi.org/apcd)

Virginia Health Information (VHI) is a nonprofit organization that creates health information for businesses, consumers, government entities, health insurance companies and health care providers. VHI collects, analyzes and distributes health care data under contract to the Virginia Department of Health (VDH) to support Virginia health care data reporting requirements. Information collected includes hospital discharge data, financial and operational data from hospitals, nursing facilities and surgical centers, certificate of need data, health care prices from health insurance companies, HMO cost and quality information and outpatient survey data. VHI publishes reports and consumer guides on health insurance, hospitals, HMO's, nursing facilities, physicians and other topics at [www.vhi.org](http://www.vhi.org). VHI also provides quality improvement support to private organizations.

## VIRGINIA ALL PAYER CLAIMS DATABASE

### BACKGROUND

All Payer Claim Databases (APCDs) are being established across the US to effectively measure the performance of health care systems. APCDs include paid claims from institutional encounters (hospital, surgery centers, etc.), medical professional services (such as doctor visits and imaging), pharmacy and other services. APCDs provide the ability to understand how, where and how much health care is delivered and how much is spent.

In April 2012, the Virginia General Assembly enacted legislation to create a statewide APCD. Virginia's APCD is a voluntary program with specific requirements of participating data submitters and certain restrictions on how the de-identified data may be used. Virginia's APCD was created under the authority of the Virginia Department of Health. The program is operated by VHI as a collaborative effort with health care stakeholders who provide input through the Virginia APCD Advisory Committee. The Virginia APCD was established to facilitate data-driven, evidence-based improvements in the access, quality and cost of health care and to promote and improve public health through the understanding of health care expenditure patterns and the operation and performance of the health care system. Thirty months of initial funding was provided by participating members of the Virginia Association of Health Plans, the Virginia Hospital and Healthcare Association (VHHA) and VHI. During this initial period, all aspects of agreements among the VDH, VHI, VHHA and participating health insurance companies were formed and four years of data were submitted, edited and made available for initial use. Effective July 1, 2015, a second phase of three year agreements with health insurance companies began. VHI is responsible for the long-term sustainability of the APCD in collaboration with the Department of Health and other health care stakeholders.

The Virginia APCD currently includes paid claims data for approximately 3.5 million lives. VHI estimates that approximately 60-65% of the Commonwealth's commercially-insured residents are represented in the Virginia APCD. Analysis shows that anywhere from 20 to 70% of commercially-covered lives in any particular county in Virginia are included.



### Legal Authority

The Virginia APCD was created on April 9, 2012 by the passage of House Bill 343. The Code of Virginia 32.1-276.4 allows for the Commissioner of the Virginia Department of Health to enter into a contract with Virginia Health Information, a nonprofit organization, to implement and operate the All Payer Claims Database. VHI collects paid claims data for covered benefits from private and public health insurance carriers, including third-party administrators, pursuant to section 32.1.276.7:1.

Full details about the regulations and requirements can be found on the APCD website at [www.vhi.org/apcd](http://www.vhi.org/apcd).

## DATA SOURCES, SCOPE AND COVERED POPULATIONS AND SERVICES

The Virginia APCD consists of medical and pharmacy claims submitted by commercial and public insurance carriers. Health insurance carriers submit paid claims data for services provided to privately-insured individuals and individuals covered under self-funded group health plans in the Commonwealth.

These records include paid claims from institutional encounters (hospital, surgery centers, etc.), medical professional services (such as doctor visits and imaging), pharmacy and other services. Data submitted to the Virginia APCD by medical insurance carriers includes claims from administrators of “carved-out” services such as pharmacy and mental health/chemical dependency. The database also contains records about individual plan members (e.g., demographics and enrollment), providers and insurance products (e.g., product type and coverage type).

The Virginia APCD includes data on coverage and services for the majority of commercially-insured Virginia residents as well as those with public or private Medicaid insurance. It also includes data from both health insurance carriers and third-party administrators. The following kinds of coverage are excluded at this time:

- Workers’ Compensation
- Medicare Fee For Service
- TRICARE and the Veterans Health Administration and
- Federal Employees Health Benefit Plan.

### *Data Submitters*

Currently, the Department of Medical Assistance Services and the following nine commercial insurance carriers submit data to the Virginia APCD: Aetna, Anthem Blue Cross and Blue Shield, Carefirst, CIGNA, INTotal Health, Kaiser Permanente, Optima Health, United Health Care and Virginia Premier.

## DATA SUBMISSION

Files of eligible members, paid medical and pharmacy claims and providers are aggregated across insurance carriers and longitudinally. Carriers submit four files to VHI: Medical Claims (MC), Pharmacy Claims (PC), Member Eligibility (ME) and Medical Provider (MP). Carriers submit files monthly or quarterly adhering to detailed data submission specifications.

To ensure data quality, a series of validations at different stages of processing are conducted to process and verify APCD data at levels of accuracy consistent with existing VHI standards. Validation checks confirm that the file can be read and meets the formatting standards detailed in the Virginia APCD Data Submission Manual. If the file does not pass these checks, it must be corrected and resubmitted. Data elements in every file are checked for field length, data type, code values and completeness. An audit of the field level checks is provided to the data submitter, and, if quality problems are identified, insurance carriers are asked to resolve the problem and submit a corrected file or request an exemption.

Over 160 logic-based quality edits are run on the overall file (for example, the average number of claims per member or the percent of male eligibles) and compared to predefined thresholds. Data submitters may request a temporary or permanent threshold exemption depending on the failure reason. VHI staff grants variances on a case-by-case basis. Some variances are time limited with the expectation that data quality can be improved over a defined period of time. Milliman, VHI and VDH review exemption requests and the process is overseen by an APCD Advisory Committee workgroup should the request go beyond those granted for data not collected or maintained by the data submitter in the normal course of business activities.

Generally, data submitters are in compliance with present Virginia APCD data submission guidelines. This compliance is the result of close collaboration between VHI and the insurance carriers. VHI enjoys and appreciates a high level of support from the insurance carriers, which have committed significant staff and technology resources to the Virginia APCD.

### *Data Standardization*

Presently, Virginia APCD data is standardized as follows:

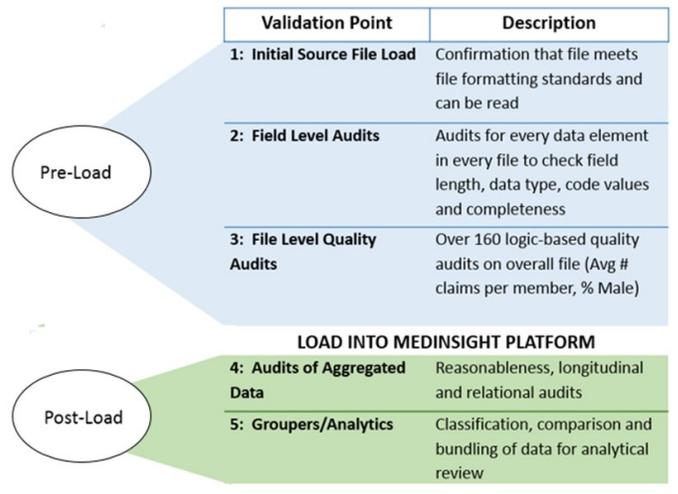
- All submissions to the Virginia APCD have been designed to comply with National Post Adjudicated Claims Data Reporting (PACDR) standards as much as possible.
- Changes to agreements, data collection elements and funding are made only with approval from participating stakeholders.
- A member crosswalk is created at Milliman to uniquely identify individuals longitudinally and across plans.

## DATA PROFILING AND VALIDATION

VHI works collaboratively with insurance carriers on an ongoing basis to improve the quality of submissions. A number of overall checks are performed once data from multiple submitters is aggregated to help achieve the highest quality data standard possible. Once files have passed field level and file level quality audits, longitudinal and relational audits are run on the consolidated data to identify issues that would not be evident at the individual file or field level. VHI staff also extensively profile data and reach out to carriers as anomalies are identified.

In addition to analyzing whether results comply with industry standards or agreed upon thresholds, Milliman also conducts peer reviews of the aggregated audit results. VHI reviews the longitudinal audits for each insurance carrier prior to releasing data.

Carriers have been closely involved in each data validation project and the result has been a continued improvement in the quality and completeness of data submissions.



{ Additional data enhancements will be included in future releases. }

## DATA ANALYTIC METHODS

### STANDARDIZED PROXY REIMBURSEMENT AMOUNT

Virginia Code prohibits disclosing or reporting provider-specific, facility-specific or carrier-specific reimbursement information. Information capable of being reverse-engineered, combined or otherwise used to calculate or derive such reimbursement information from the APCD is also prohibited. To comply with the legal prohibition of disclosing reimbursement information, a standardized proxy reimbursement amount is utilized for the Virginia APCD. All dollar amounts referenced in the APCD are proxy dollars based on Milliman's Global RVU methodology.

The standardized proxy reimbursement amount is based on Milliman's Global RVU software. This software assigns Relative Value Units (RVUs) to all health care services, including those on physician, facility and pharmacy claims. Medicare's Resource Based Relative Value System (RBRVS) methodology assigns RVUs to most professional services. Milliman's Global RVUs extend this concept to assign RVUs to facility and pharmacy claims as well as other professional fee schedules (e.g. anesthesia, DME, Lab) so RVUs can be calculated for all services and applied to all lines of business (commercial, Medicaid, etc). Regardless of the type of service (e.g. inpatient admissions, outpatient surgery, MRI), procedures or services requiring similar levels of resources will have approximately the same number of RVUs.

Milliman receives actual billed, paid and member cost share dollars on the source claims from all participating insurance carriers. Allowed dollars are derived from the submitted financial data in the source claims by adding the paid amounts and member cost share. For each year of claims, Milliman sums the allowed and paid dollars from all insurance carriers by line of business (such as commercial and Medicaid), Metropolitan Statistical Area (MSA)\* and Health Cost Guideline (HCG) benefit category. They then calculate a conversion factor, or average, per RVU. The proxy allowed and paid dollars for each service is calculated by multiplying the number of RVUs for each service by the corresponding conversion factor.

Using this methodology, the conversion factor is reflective of allowed and paid charges within the Commonwealth of Virginia, but does not represent the actual allowed dollars of any specific insurance carrier or provider. The conversion factor is essentially a blend of all the allowed dollars by all the contributing insurance carriers. This approach prevents users from determining actual allowed amounts through reverse engineering. This methodology is applied to all claims regardless of payer type.

\*Data from smaller MSAs are combined.

## DATA ANALYTIC METHODS

### FACILITY AND PROVIDER IDENTIFIERS

The purpose of including facility identifiers within the database is to allow facility-level aggregation of claims across insurance carriers. The process of identifying common facilities within an All Payer Claims Database is complex for various reasons, including the following:

- A single facility often has multiple providers practicing on a single campus
- A single facility could house multiple practice groups, all providing various specialties
- A single facility could include multiple buildings that are considered separate facilities in some systems, but not in others and
- There are no standard unique facility IDs that are uniform across the universe of facilities. The same facility can have different IDs across the various carriers.

Consolidating facility identifiers is one of the biggest challenges to APCDs across the country. VHI and Milliman work with stakeholders to increase the specificity of facility identifiers through local knowledge of facilities and providers.

The high-level steps for this process are as follows:

1. Determine the list of facilities that will be cross walked in the database.
2. Identify the provider IDs within the database that meet the facility criteria.
3. Run the facility ID algorithm on the providers identified in step 2.
4. Assess the results and make manual adjustments to reflect local knowledge.

Several iterations of this process have occurred to date and will continue.

## DATA RELEASE

The Virginia APCD was created with the intent of providing data to all health care stakeholders. Virginia APCD data is used for public health reporting by the Virginia Department of Health as well as VHI's Health Care Pricing Report. All private access to Virginia APCD data is governed and approved by a multi-stakeholder advisory committee. VHI initially evaluates requests for APCD data and develops a price quote based on the nature of the request. VHI then presents each request to the APCD Advisory Committee for approval. If approved, data is provided to the requester in the desired format.

*Release of APCD data is governed by a multi-stakeholder APCD advisory committee*

#### Documentation and Support

VHI's website at [www.vhi.org/APCD](http://www.vhi.org/APCD) hosts a wealth of documentation about APCD releases including:

- Application documents
- A full data dictionary of all data elements available
- Quarterly newsletters on the status of the Virginia APCD
- Publications related to using the MedInsight Analytics tool.

Additionally, you can visit the APCD council website, [www.apcdcouncil.org](http://www.apcdcouncil.org), to get information on other APCDs across the country.

There are multiple ways to access APCD Data. Subscription to the MedInsight platform provides the widest range of capabilities including use of the analytic tools that can be used to create custom reports as well as de-identified data extracts. Data extracts and custom reports can also be licensed separately. Each type of access has a unique application process with varying levels of security requirements. A brief summary of each type of access is provided below:

#### MedInsight Analytics

- Online advanced analytics for novice to expert
- Broad tool chest of dashboards, pre-formatted reports and custom design for employer, payer, provider, policymaker needs

#### De-identified Data Extracts

- Ability to create own database for offline access
- Greatest flexibility for power users

#### Custom Reports

- Custom query and analysis done at VHI
- Cost effective option for individual use cases



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