Virginia Health Information (VHI) Healthcare Pricing Methodology Outline

Updated May 2020

I.   <u>Background on the VHI Healthcare Pricing Report</u>

VHI's Healthcare Pricing report was originally created under Virginia law 32.1-276.5:1 to increase healthcare transparency within Virginia. Previously, participating health insurance carriers submitted average allowed amounts for commonly performed procedures that were aggregated by VHI and ultimately displayed on VHI's website. With the creation of the Virginia All Payer Claims Database (APCD), this report is now produced by VHI using APCD claims data.

II.   <u>Purpose</u>

This document serves as an outline for the methodology proposed by VHI to generate the next set of reports. Only data on commercial coverage will be used and no information will be displayed that could be used to easily identify individual providers or health plans. The original list of services was recommended to VHI in 2008 and 2009 by a workgroup of healthcare stakeholders and have been refined over time.

III.   <u>Services with Corresponding Codes</u>

A. Preventive Health and Wellness

- Colonoscopy: CPT Code 45378
- Chiropractic Service: CPT Code 98941, 98942
- Mammogram: CPT Code G0202 (Digital)
- Office Visits:
  - Well-Child Visit: CPT Code 99391, 99392, 99393
  - Adult Office Visit: CPT Code 99213
- Physical Therapy: CPT Code 97110

B. Emergency Care

- Ambulance Ride: CPT Code A0425 (Mileage), A0427, A0429
- Emergency Helicopter Ride: CPT Code A0431, A0436 (Mileage)
- Emergency Room Visit (Medium): CPT Code 99283
- Emergency Room Visit (Very Minor): CPT Code 99281

C. Radiology/Other

- Ankle X-Ray: CPT Code 73610
- Bone Density Scan: CPT Code 77080
- Chest X-Ray: CPT Code 71046
- Cystoscopy: CPT Code 52000
- Endoscopy CPT Code 43235
- Foot X-Ray: CPT Code 73630

- Non-Maternity Ultrasound CPT Code 76700 (Abdomen), 76856 (Non-obstetrical female/male pelvic)

D. CT
- CT (Abdomen): CPT Code 74160
- CT (Head/Brain): CPT Code 70450

E. MRI

- MRI (Back): CPT Code 72148
- MRI (Knee): CPT Code 73721

F. Surgical Procedures

- Arthrocentesis: CPT Code 20610 (Major joints-shoulder, hip, knee)
- Arthroscopic Knee Surgery: CPT Code 29881
- Breast Biopsy: CPT Code 19103, 19081, 19083, 19085
- Carpal Tunnel Surgery: CPT Code 64721
- Destruction of Lesion: CPT Code 17000
- Gall Bladder Surgery: CPT Code 47562
- Hernia Repair: CPT Code 49505
- Kidney Stone Removal: CPT Code 50590
- Shoulder Arthroscopy: CPT Code 29826
- Tonsillectomy with Adenoidectomy: CPT Code 42820
- Knee Replacement ICD 10 Codes 0SRC07Z, 0SRC0JZ, 0SRC0KZ, 0SRD07Z, 0SRD0JZ, 0SRD0KZ, 0SRT07Z, 0SRT0JZ, 0SRT0KZ, 0SRU07Z, 0SRU0JZ, 0SRU0KZ, 0SRV07Z, 0SRV0JZ, 0SRV0KZ, 0SRW07Z, 0SRW0JZ, 0SRW0KZ, 0SRC0J9, 0SRD0J9
- Hip Replacement ICD 10 Codes 0SR90J9, 0SR90JA, 0SR90JZ, 0SRB0J9, 0SRB0JA, 0SRB0JZ
- Angioplasty ICD 10 Codes 02703ZZ, 02704ZZ, 02713ZZ, 02714ZZ, 02723ZZ, 02724ZZ, 02733ZZ, 02734ZZ, 027034Z, 027134Z, 02703DZ
- Rotator Cuff Surgery CPT Code 23410, 23412, 23420, 23670, 24341, 29827

G. Maternity

- Ultrasound (Pregnancy): CPT Code 76805
- Vaginal Birth: MS-DRG (v33) 775
- Cesarean Delivery: MS-DRG (v33) 766

IV. Potential Cost Allocations
1. Facility
2. Surgeon
3. Radiologist
4. Anesthesiologist
5. Physician
6. Pharmacy
7. Other Charges
8. Mileage (Ambulance/Emergency Helicopter Ride only)

9. Base Cost (Ambulance/Emergency Helicopter Ride only)

V. <u>Potential Locations</u>

1. Physician Office
2. Licensed Ambulatory Surgical Center
3. Hospital Outpatient
4. Hospital Inpatient

VI. <u>Logic for Extracting Data</u>

Everything on the same day for outpatient services will be extracted from the Virginia APCD. Only claims that include the qualifying code for each service will be used in each pricing calculation with the exception of outpatient surgeries, colonoscopy and endoscopy. All outpatient services occurring in the ER (except for the ER price calculation) will be excluded. For inpatient services, only claims occurring between the admit date and discharge date of key codes will be included in further analysis. For both inpatient and outpatient services, only commercial claims listed as being primary will be included.

The following fields will be utilized from the Virginia APCD to generate the Healthcare Pricing report:

1. **MI PERSON KEY-** This is the key that identifies a unique person within the database across all payers.

2. **INCURRED DATE-** The date of service.

3. **CLAIM ID KEY-** Unique identifier for the claim within the data warehouse.

4. **HCG LINE-** Heath Cost Guideline Line Code is the 2nd level of the Milliman HCG service grouping system. The Line rolls all services into one of 61 groups (e.g., I11 = Medical, O11 = Emergency Room, or P21 = Maternity).

5. **HCG SETTING-** Heath Cost Guideline Setting is the highest level of the Milliman HCG service grouping system. The setting groups all services into one of five categories. They are: 1-Inpatient, 2- Outpatient, 3-Professional, 4-Prescription Drug and 5-Ancillary.

6. **ORIGINAL AMT ALLOWED-** The total expected reimbursement amount to a provider by both the health insurance company and the patient. Note the Healthcare Pricing report will display overall median data for a service but not identify payments between individual payers and providers.

7. **PROC CODE-** Procedure Code is the American Medical Association's Current Procedural Terminology (CPT) code, the Healthcare Common Procedure Coding System (HCPCS) code or the Common Dental Terminology (CDT) code for the service (e.g., 90471 = IMMUNIZATION ADMIN, 80061 = LIPID PANEL, or 74170 = CT ABDOMEN W/O & W/DYE).

8. **ICD PRIMARY PROCEDURE CODE-** ICD Primary Procedure is the main or principal surgery ICD code associated with the service. ICD is the International Statistical Classification of Diseases and Related Health Problems that classifies diseases and a wide variety of signs, symptoms, abnormal findings, complaints, social circumstances and external causes of injury or disease (e.g., 0331 = SPINAL TAP, 9921 = INJECT ANTIBIOTIC or 9396 = OXYGEN ENRICHMENT NEC).

9. **REV CODE-** Revenue Code is the revenue code from facility bills. It is a rollup of hospital services (e.g., 0201 = INTENSIVE CARE-SURGICAL, 0280 = ONCOLOGY-GENERAL CLASSIFICATION or 0512 = CLINIC-DENTAL CENTER).

10. **INCURRED YEAR-** The year of a service. It is in YYYY format.

11. **HEALTH PLANNING REGION-** The five Virginia Health Planning Regions are mapped from Virginia zip codes based on the patient's address.

12. **ENCRYPTED PARENT PAYERCODE-** A Milliman generated identifier assigned to each data supplier organization. Once data is extracted from MedInsight, VHI encrypts this field and the original payer identifier is removed.

13. **POS-** Place of Service is an industry standard place of service code (e.g., 20 = Urgent Care Facility, 21 = Inpatient Hospital, 34 = Hospice, etc.).

14. **UB BILL TYPE-** Uniform Bill (UB) Bill Type is the code for the type of bill on the UB form. The Bill type ID encodes facility type (e.g. Hospital, Home Health, etc.), bill classification (e.g. Inpatient, Outpatient, etc.) and description.

15. **ADMIT DATE-** Admit Date is the date of the facility admission. If this date is NULL, the row does not represent a facility admission or the row represents an Incurred But Not Reported (IBNR) complete trends row and not an actual claim line item.

16. **DISCHARGE DATE-** Discharge Date is the date that the patient left the facility. This date may be NULL for patients that have not been discharged yet.

17. **MS-DRG-** MedInsight Medicare Severity Diagnostic Related Group Code is the CMS MS DRG code. The MS-DRG is a Medicare grouping system that classifies inpatient hospital services into one of approximately 750 groups. The codes in this column are for MS-DRG version 25 and above (e.g., 864 = FEVER, 885 = PSYCHOSES or 795 = NORMAL NEWBORN).

VII.   Steps for Analysis

1. **Ensure Market Share Plurality by Insurer and Provider-** At least 3 payers and providers must be included within each calculation for a cost figure to be reported.
2. **Assign Events or Individuals to a Location of Care for Reporting-** Events are all services for an individual for one calendar day (or admission for inpatient) that include a

qualifying code for inclusion. There will be multiple claim lines per individuals for a given service. The logic for location assignment is below.

For any claim line that includes the classification code for each service:

Hospital Inpatient IF UB Bill Type = *Hospital Inpatient*

Ambulatory Surgery Center IF UB Bill Type = *Ambulatory Surgery Center*

Hospital Outpatient IF UB Bill Type = *Hospital Outpatient*

Physician Office IF Place of Service Code = *Office*

If none of these criteria are met, then all claims for an individual will be excluded from reporting. This should result in each individual being assigned once to a mutually exclusive location of care that can be used for trimming each data set.

3. **Trim the Data Set for Each Service-** To manage the impact of outliers, the top and bottom 5% of individuals will be removed from the data set prior to the median calculations for each service. Individuals with 0 and negative net amounts will be removed prior to this calculation. A percentile will be assigned to each individual based on total allowed amount. This calculation will be conducted independently for each service setting.

4. **Determine Relevant Claims for Each Service's Median Cost-** For inpatient surgeries, all claims with service dates between the relevant admit and discharge date will be included. For outpatient surgeries, all claims on the same day as the relevant service will be included. All other outpatient services will include claims categorized into an HCG Line relevant to the service. For example, a Well-Child Visit will only include costs categorized as preventive office visits. For Emergency Room Visits, only facility and professional ER costs will be included. Imaging services will include professional and facility radiology fees.

5. **Calculate the Unweighted 25th, Median, and 75th Percentile Cost of Each Service Across All Health Plans-** The overall median allowed amount per service will then calculated for each health plan for each setting and Health Planning Region. To ensure that all costs reported cannot be reverse engineered to determine plan or provider specific reimbursement amounts, an unweighted range based on the 25th and 75th percentile averages is then calculated across plans. This range provides insight on the variability of the data and an additional step to identify outliers.

Assignment of allowed amounts within each overall service to individual service categories will be based on the closest resembling Milliman Health Cost Guidelines (HCG). A brief description of the Milliman HCG Grouper is provided at the end of this document. The mapping between HCGs and cost categories is below:

<u>**Facility**</u>

HCG Settings Facility Inpatient or Facility Outpatient

Surgeon

HCG Setting Professional, Lines P13 (Inpatient Surgery), P14 (Outpatient Surgery), P15 (Office Surgery), P21a (Normal Deliveries) and P21b (Cesarean Deliveries)

Radiologist

HCG Setting Professional, Lines P55 (Radiology Inpatient), P56 (Radiology Outpatient-General), P57 (Radiology Outpatient-CT/MRI/PET), P58 (Radiology Office-General) and P59 (Radiology Office- CT/MRI/PET)

Anesthesiologist

HCG Setting Professional, Lines P13 (Inpatient Anesthesia), P16 (Outpatient Anesthesia) and P21e (Maternity Anesthesia)

Physician

HCG Setting Professional, all remaining Lines not encompassed by Surgeon, Radiologist or Anesthesiologist categories except for P34 (Office Administered Drugs), P21c (Maternity- Non-Deliveries) and P21d (Maternity- Ancillary)

Prescription Drug

HCG Setting Prescription Drug

Other

HCG Setting Ancillary; HCG Setting Professional, Line P34 (Office Administered Drugs)

Base Cost

Ambulance Ride- CPT Code A0427, A0429; Emergency Helicopter Ride- CPT Code A0431

Mileage

Ambulance Ride- CPT Code A0425; Emergency Helicopter Ride- CPT Code A0436

6. **Report the Overall Median Cost and Unweighted Range for Each Service Overall and by Each Individual Service Category-** The cost categories for each service will be reported as the median allowed amount when a particular category occurred. Most individuals will not incur every potential type of cost associated with a service. Some individuals may also experience different types of costs than others. Because of this, the sum of all potential cost categories will always be greater than the average service cost. Only cost categories that occurred at least 25% of the time for a service will be displayed within the final report. Each median service cost displayed within the final report must consist of at least 10 individual services.

Example:

<u>Cesarean Delivery, Statewide</u>

Statewide Median Cost- $14,592
Statewide Range- $12,355-$18,653

Cost Category	Median	Percent of Events
Anesthesiologist*	$149	10%
Facility	$10,689	100%
Other*	$300	11%
Physician	$3,853	96%
Prescription Drug	$15	78%
Radiologist*	$90	8%
Surgeon*	$247	6%

Potential Total for All Categories: $15,343
* Category would not be displayed within the final report

This same median calculation will be conducted for each of the five Health Planning Regions and by year for each service.

VIII. <u>Milliman Health Cost Guidelines (HCGs)</u>

The Health Cost Guidelines grouper software categorizes medical and pharmacy claims data into healthcare benefit service categories that can be used to analyze and benchmark medical utilization and cost. Claims data is categorized using the Health Cost Guidelines definitions by hospital, surgical, medical and other service categories. The HCG Grouper software can be used to analyze cost and utilization for many different types of population data, such as product lines, lines of business, employer groups, primary care panels, disease populations and others. Each line of claim detail is assigned an HCG service category for use in commercial, Medicare or Medicaid analysis. Additionally, the Grouper applies a standard for counting utilization: e.g., number of admits, cases, days, procedures, scripts and visits. An example of how the HCG organizes health care services is below:

Example of HCG Service Category Hierarchy and Groupings