FINAL REPORT – ***Revised***

Qualitative Assessment of Databases for Out-of-Network Physician Reimbursement

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Disclosure:

NORC is a social science research organization, affiliated with the University of Chicago, which conducts work for a variety of federal agencies, foundations, associations, and other organizations. The contents of this report are objective, unbiased, and impartial. In the interest of maintaining the highest level of transparency in the research, NORC hereby discloses that it performs work for some of entities referenced in this report, including: the Health Care Cost Institute; the Maine Health Data Organization (MHDO), which operates the all-payer claims database in the state of Maine; and the Center for Improving Value in Health Care (CIVHC), which operates the all-payer claims database in the state of Colorado.

Executive Summary

This study is an environmental scan of different data sources and vendors that could potentially be used to create a minimum benefit standard for out-of-network services.[1] Physicians for Fair Coverage (PFC), an alliance of multi-specialty physician groups dedicated to improving patient protections and promoting transparency in health costs, contracted with NORC at the University of Chicago to conduct the study. Using qualitative methods, NORC reviewed information on the following potential data sources and vendors:

- Blue Health Intelligence (BHI)
- FAIR Health
- Health Care Cost Institute (HCCI)
- Truven MarketScan
- State All-Payer Claims Databases (APCDs)

NORC collected information on the characteristics of these data sources as they relate to the policy use case described above. Key considerations included:

- the organizational structure of each vendor or organization;
- the breadth and depth of the organization's data (e.g., geography, types of commercial payers, inclusion of "allowable charges" or paid amounts);
- access and availability of cost information for stakeholders; and
- the feasibility of using the vendor's data to develop a minimum benefit standard for out-of-network services.

We found that data from multiple sources had characteristics that aligned favorably relative to these considerations. We summarize qualitative findings in our report. In the information we gathered for this research, we note where significant information was missing or where the information we obtained seems inconsistent.

We gathered information from interviews and public websites on the number of covered lives and total claims included in each vendor's database. We present this information in Exhibit A. According to the information we were able to gather:

- BHI data includes information on approximately 60 million privately insured covered lives per year,[2]

[1] "The Issue." Physicians for Fair Coverage. Accessed March 30, 2017. http://thepfc.org/the-issue/.

[2] From interview

- FAIR Health has claims data on 150 million privately insured covered lives per year,[3]
- HCCI's data includes information on 50 million covered lives per year (including privately insured and Medicare Advantage),[4] and
- Truven data includes 28 million privately insured covered lives per year.[5]

These figures suggest that the databases are of sufficient size to have adequate coverage in many areas to set benchmarks. However, the best data source will depend on the particular geographic area. Careful analysis should be done of the available microdata to determine whether the data are "fit for use" (in terms of population coverage and representativeness) in each geography of interest. In preparing this report, we did not have access to information on the completeness of claims for each covered life or how well the individuals included in the data represent the underlying population. For a given geographic area, a vendor with complete claims on a smaller (but more representative) number of covered lives could be more appropriate than a data set that has incomplete claims records on a larger set of covered lives that systematically excludes segments of the underlying population.

The NORC team also sought pricing information for licensing each organization's data. Much of the pricing information we were able to obtain was relevant to licensing data for individual research projects as opposed to operational purposes such as identifying the minimum benefit standard. We conclude that pricing for "non-research" purposes depends on factors such as the geographic area and use case for which the data are needed and likely will vary depending on detailed requirements. This makes it difficult to draw direct pricing comparisons between organizations. However, it is relevant to note that FAIR Health does not charge licensing fees to states where their data are used to support setting a standard for out-of-network services.

Overall, this review showed that FAIR Health, HCCI, and state APCDs are important potential sources of data for the minimum benefit standard policy use case.[6] It should also be said that Truven and BHI also may have data relevant to this use case, depending on the state and geographic area. However, both of those organizations noted that they do not license their data for public benchmarking, and we did not find examples of arrangements either organization has with government entities for benchmarking.

Based on our research, Fair Health is the only vendor whose data are being used for the specific purpose of establishing reimbursement standards for out-of-network services in more than one state and who

[3] "Data Contribution." FAIR Health. Accessed March 30, 2017. http://www.fairhealth.org/ContributeData. A phone conversation with FAIR Health confirmed 150 million covered lives was an annual figure.

[4] "What Makes HCCI Data Unique?" Health Care Cost Institute. Accessed March 30, 2017. http://www.healthcostinstitute.org/wp-content/uploads/2016/11/How-Data-Unique-June-2016_0.pdf

[5] From interview

[6] The viability of using APCDs for benchmarking will vary by state. Some states are much further along in developing an APCD than others. Furthermore, in states where a substantial share of the population is covered through self-insured health plans, APCDs have limited coverage. The Supreme Court in *Gobeille v. Liberty Mutual Insurance Company* ruled that states cannot mandate these plans submit claims to the APCD. The effect of this ruling should be considered on a state-by-state basis, as our experience shows that, in some states, some self-insured plans continue to submit data to the APCD even absent the mandate.

currently make their data available for this purpose broadly across the United States. As a pragmatic matter, this may be the most important consideration.

There are also barriers to using an APCD to establish a national approach to minimum benefit standards; depending on its status, however, an APCD in any given state may offer the best coverage of the total insured population within the state as well as all the necessary data elements to support this standard for smaller geographic locations within that state. However, the Supreme Court's decision in *Gobeille v. Liberty Mutual Insurance Company* (2016), may limit state governments' abilities to secure participation in APCDs by self-insured health plans. While the *Gobeille* decision does not allow states to mandate claims submission by self-insured plans, our experience in selected states shows that some self-insured plans may yet continue submitting claims to their APCD.[7]

For these reasons, the optimal source of data for determining a minimum benefit standard may vary depending on geographic location and the priorities of any given policymaker. Because circumstances and requirements will vary by geographic area, we encourage stakeholders to contact relevant organizations directly to assess the compatibility of a given data asset to their needs. Many of the considerations raised in this report might facilitate these discussions.

NORC employed qualitative research methodologies only, and our characterizations are based on a summary review of publicly available information and discussions with stakeholders. The scope of the report did not allow independent validation of these claims through firsthand inspection of the data or analysis using the data to understand the strengths and limitations for use in specific policy-relevant purposes (such as establishing a minimum benefit standard for out-of-network services). We also note that data access and availability policies associated with each vendor and data organization are evolving as the policy landscape is changing.

While we were able to obtain useful information about the data sources through qualitative research, we also believe that future reports of this type could benefit from the analysis of the microdata from the data sources. We also encourage all the vendors and data organizations to produce publicly available data quality reports, which could help potential users better understand the data sources. These data quality reports should include information such as the specific number of unique covered lives by payer type in any given year (e.g., group, individual, and Medicare Advantage); how the data link individuals from different data sources to ensure individual people are not counted more than once in the final dataset; what percentage of total claims are available for a unique individual person; what types of claims may be missing systematically from the database; what specific manipulations were made to the data to comply with national and state laws (e.g., HIPAA or anti-trust); and any other relevant data editing, cleaning, or harmonization that is done in aggregating the data. Producing detailed data quality reports would enable potential users to better understand how these data are able to meet the specific policy needs of users.

[7] This is NORC's understanding based on our work with APCDs in two states. However, the approach taken by ERISA plans will vary by state.

Introduction

According to a March 2016 Kaiser Family Foundation issue brief, surprise medical bills refer to "charges arising when an insured individual inadvertently receives care from an out-of-network provider."[8] Consumers may not necessarily understand the plans that they have purchased, what services are covered, or the financial burden they assumed through the plan's cost sharing. The potential for surprise medical bills may grow as some health plans look to narrow their networks as a way to reduce costs for consumers. Examples of instances where consumers may be subject to a surprise medical bill include:

- In emergencies when the patient is unable to select the provider, i.e., emergency room, treating physicians, or ambulance providers; and
- When a patient receives nonemergency care in a health care facility in the patient's insurance provider network but from individual providers who are out of network.

Instances such as these are sometimes referred to as the "surprise insurance gap." To address the affordability concerns caused by this gap, Physicians for Fair Coverage (PFC), an alliance of multispecialty physician groups dedicated to improving patient protections and promoting transparency in health costs,[9] advocates for the creation of a minimum benefit standard for out-of-network services, which would establish a charge-based reimbursement schedule connected to an independently recognized and verified database.[10] PFC contracted NORC at the University of Chicago to conduct an environmental scan of different data sources and vendors that could potentially be used for this purpose.

[8] Pollitz, Karen. "Surprise Medical Bills." Kaiser Family Foundation Issue Brief. Accessed April 23, 2017. http://files.kff.org/attachment/issue-brief-surprise-medical-bills

[9] "About PFC." Physicians for Fair Coverage. Accessed March 30, 2017. http://thepfc.org/about-pfc/.

[10] "The Issue." Physicians for Fair Coverage. Accessed March 30, 2017. http://thepfc.org/the-issue/.

Methodology

NORC conducted web-based research and held discussions with PFC to identify a panel of vendors that aggregate insurance claims. Vendors identified included Blue Health Intelligence, Health Care Cost Institute, FAIR Health, Optum360, and Truven MarketScan. NORC conducted a grey literature review to gain insight into the various vendors and databases and contacted vendors via email to schedule phone interviews with executives from each organization. The interview protocol reviewed:

- the mission and structure of each organization;
- data elements, including the availability of allowed and billed charges;
- data contributors and quality-control processes;
- accessibility of the database; and
- limitations of the data.

Of the five vendors contacted, four agreed to interviews: Health Care Cost Institute, Blue Health Intelligence, FAIR Health, and Truven Health Analytics MarketScan. Optum360 declined, as they felt their database would not be appropriate for the project's purposes. Although publicly available information on Optum360 may exist, we limit our review to vendors who agreed to participate in interviews. Once the interviews were concluded, NORC experts reviewed responses and assessed each of the vendors on the following considerations:

- the organizational structure and governance of each data owner;
- the breadth of the organization's data, i.e., geographic and across commercial payers;
- the depth of the organization's data, i.e., highly local data and the ability to establish a minimum benefit standard (e.g., usual and customary charges, "allowable charges" or paid amounts);
- the ease of access and availability of cost information for stakeholders, i.e., consumers, providers, payers, and policymakers; and
- the feasibility of using the vendor's data to establish a minimum benefit standard for out-of-network services.

After reviewing available information and results from interviews, we explicitly chose not to treat these considerations as criteria that could be either "met" or "not met". Instead, we summarize qualitative findings related to these considerations. In many cases, important questions remained after our information-gathering phase.

In the following sections we present information we were able to gather from respondents from each participating organization. We then review the strengths, limitations, and accessibility of the databases in terms of their potential to be used to establish a minimum benefit standard for out-of-network services. Unless otherwise cited, descriptive information noted in the sections that follow is taken from interviews with key stakeholders.

Blue Health Intelligence

Blue Health Intelligence (BHI) has access to one of the largest databases of medical and pharmacy claims.[11] BHI aims to provide data to help assess health care trends and best practices through data analytics.[12] In 2004, BCBS plans within the Blue Cross and Blue Shield Association (BCBSA) noted they had large amounts of claims data at their disposal but lacked the expertise needed to effectively analyze these data. The plans pooled their data for internal use and launched an effort to make better use of these data in 2006.[13]

By 2011, this effort was commercialized and spun off as a separate company.[14] Based on responses from our interview, BHI licenses data to researchers, hospitals, state governments, medical device manufacturers, pharmaceutical companies, analysts, and other vendors. It is a for-profit company that provides analytics, data consulting, and software services. BHI maintains a close relationship with the BCBSA and is owned by a group of individual BCBS plans. BHI also has perpetual contracts in place with 30 Blue Cross plans, which submit data monthly. The Board of Managers is made up of representatives from these plans' owners.[15] While BHI does not have a publicly available website allowing consumers to use their data to compare procedure costs, it does offer a transparency platform to BCBS members.

Data

BHI collect all claims for BCBS's commercial population. BHI's database includes 165 million members from 2005 to present and allows for consistent and continuous data for analysis.[16] According to information received in the interview, they receive data on approximately 60 million members in a given year. BHI's data includes physician specialty, geographic location, place of service, and date of service. Further, BHI's dataset includes health information that allows researchers to compare patients by diagnoses, procedures, prescriptions, SIC, age bands, geographic regions, and product types.[17] To ensure data reliability, BHI's data certification process includes four levels of review from both within BHI and with an independent third-party actuarial review.[18]

[11] "About Us." Blue Health Intelligence. Accessed February 15, 2017. https://bluehealthintelligence.com/about-us/index.html

[12] "Data Transformation." Blue Health Intelligence. Accessed February 15, 2017. https://bluehealthintelligence.com/data-transformation/index.html

[13] Conn, Joseph. "Blue Health Intelligence acquires Fla. analytics firm." Modern Healthcare. Accessed March 30, 2017. http://www.modernhealthcare.com/article/20130116/news/301169954.

[14] Conn, Joseph. "Blue Health Intelligence acquires Fla. analytics firm." Modern Healthcare. Accessed March 30, 2017. http://www.modernhealthcare.com/article/20130116/news/301169954.

[15] "Board of Managers." Blue Health Intelligence. Accessed April 25, 2017. https://bluehealthintelligence.com/about-us/board-of-managers/index.html

[16] "Markets." Blue Health Intelligence. Accessed February 15, 2017. https://bluehealthintelligence.com/markets/index.html

[17] "Markets." Blue Health Intelligence. Accessed February 15, 2017. https://bluehealthintelligence.com/markets/index.html

[18] "About Us." Blue Health Intelligence. Accessed February 15, 2017. https://bluehealthintelligence.com/about-us/index.html

Availability of Data

According to the interview, when an organization reaches out to BHI with a specific purpose, BHI will license a subset or rollup of the data, depending on the client's needs. Data are typically provided through a secure FTP site. However, in some instances BHI will host the data internally. Allowed uses of data and required approvals are described in a licensing agreement between BHI and data users. If the project involves a white paper, for example, there is an approval process for the publication.

BHI's data has both the billed and allowed charges for every claim. The information we collected suggests that BHI's data are not primarily used for benchmarking and that the data are not used to compare actual to allowable charges. Typically, BHI does not get involved in projects that look to measure if one BCBS plan can pay more than another for the same service. BHI does offer a transparency platform for BCBS members to compare cost by CPT code and look at the average cost for procedures. However, this type of tool is not available to third parties. BHI's data are proprietary and not available for establishing a minimum benefit standard for out-of-network services.

Strengths and Limitations

Strengths

- BHI holds ongoing contracts with plans that require data submission.
- Plan data submissions are submitted uniformly.
- All required data elements are included, such as physician specialty, geographic location, place and date of service, and allowed charges.
- Database includes 165 million unique members from 2005 to present, with approximately 60 million unique members submissions in a given year.

Limitations

- Not licensed for benchmarking use cases such as establishing a minimum benefit standard for out-of-network services.
- BHI created a consumer cost-comparison tool, but it is only available for BCBS consumers. It is not made available to third parties.
- Only BCBS plan data included.

FAIR Health

As noted in their public representations, FAIR Health is a nonpartisan and independent nonprofit organization whose mission is to increase transparency for health care costs and health insurance information through comprehensive data products and consumer resources.[19] [20] FAIR Health was established in 2009 in response to an investigation in New York into reimbursement practices that were based on data compiled and controlled by a major insurer.[21] The court mandated that an independent database of information in health care claims contributed by payers nationwide be developed with the support of independent experts.[22]

FAIR Health's Board of Directors includes professionals from the consumer, government, academic, health plan, and provider communities.[23] The latest publicly available information NORC could obtain shows that FAIR Health board members are not paid. Based on responses provided during our interview, the organization is self-sustaining from the sales of services and data. In addition, FAIR Health is also a CMS Qualified Entity with access to CMS data for Medicare and Medicaid. The latest publicly available information shows that the large majority of FAIR Health's revenue comes from data licensing to a variety of customers.[24] Finally, FAIR Health makes some views of their data available to consumers through an online portal.[25]

Data

Sixty organizations, including national and regional health plans and employers, contribute medical claims data to build the FAIR Health commercial database. Most of these organizations contribute data monthly. According to information provided by FAIR Health, the commercial database includes 150 million covered lives per year, and 23 billion claims from 2002–2017.[26] All 50 states and some territories are represented in the database.

According to information conveyed in our interview, data are available in all 50 states, but limited in some states. In areas where data are thin, FAIR Health uses imputation algorithms to account for shortcomings in the combination of procedure codes. The imputation algorithms are a means to predict the cost and utilization of services in areas where there are gaps in the data based on similar observations. Algorithms are vetted internally and sent to the FAIR Health board for approval before use.

[19] "About Us." FAIR Health. Accessed February 15, 2017. http://www.fairhealth.org/About-FH
[20] FAIR Health, Inc. Form 990. http://990s.foundationcenter.org/990_pdf_archive/900/900524293/900524293_201506_990.pdf
[21] "About Us." FAIR Health. Accessed February 15, 2017. http://www.fairhealth.org/About-FH
[22] "About Us." FAIR Health. Accessed February 15, 2017. http://www.fairhealth.org/About-FH
[23] "About Us." FAIR Health. Accessed February 15, 2017. http://www.fairhealth.org/About-FH
[24] FAIR Health, Inc. Form 990. http://990s.foundationcenter.org/990_pdf_archive/900/900524293/900524293_201506_990.pdf
[25] "Consumer Engagement Tools." FAIR Health. Accessed February 15, 2017. http://www.fairhealth.org/Toolsforconsumers
[26] "Data Contribution." FAIR Health. Accessed February 15, 2017. http://www.fairhealth.org/ContributeData. Also from telephone communications with FAIR Health.

All data include information on the billed charges, but only 50 percent of claims have data on allowed charges. Medical claims include data on specialty, place of service, date of service, and geographic location of the service. FAIR Health conducts quality-control review to ensure the validity of the data. They check unit thresholds, codes, and month-to-month contribution levels and eliminate extreme outliers from the database.

Availability of Data

FAIR Health licenses de-identified claims databases, largely to governments and academic researchers. Twenty states and the General Accountability Office (GAO) use FAIR Health data. Using a pricing model for each request, FAIR Health also reviews each application before signing a data use agreement. Most requests can be fulfilled within two to six weeks.

Furthermore, we found evidence that FAIR Health data are currently used in a context similar to the minimum benefit standard use case for out-of-network services. FAIR Health has been designated as an official benchmark for determining out-of-network reimbursement in both New York and Connecticut. In New York, the State Department of Financial Services, which provides oversight to insurance companies, issued guidance implementing Part H of Chapter 60 of the Laws of 2014 that identifies FAIR Health as an authorized, "independent source" for health plans to determine the "usual and customary cost" for out-of-network services. If health plans choose to use a source other than FAIR Health for determining the usual and customary cost, they must seek approval from the State Department of Financial Services.

In Connecticut, state law (Public Act 15-146) sets the payment for out-of-network emergency services as the greater of: "1) the allowed amount for in-network services, 2) the usual and customary reasonable rate for such services (defined by statute as the 80th percentile of all charges for the covered service by health providers in the same or similar specialty, from the same geographic region, as reported via a benchmarking database run by a non-profit); or 3) the amount Medicare would pay for the service." On June 29, 2016, the State of Connecticut Insurance Department issued guidance to insurance companies defining the "usual, customary and reasonable rate" as "the eightieth percentile of all charges for the particular health care service performed by a health care provider in the same or similar specialty and provided in the same geographical area, as reported by FAIR Health, Inc." Finally, while the cost of the time required to make data available for benchmarking may vary depending on specific needs, our information suggests that FAIR Health does not charge data licensing costs to states for the out-of-network minimum benefit standard use case.

Strengths and Limitations

Strengths

- Based on information gathered in our review, FAIR Health holds claims on 150 million unique privately insured individuals per year.
- Data contributed by 60 organizations with claims from all 50 states.
- There are examples in state law (Connecticut and New York) that demonstrate the feasibility of using FAIR Health data to help inform an out-of-network reimbursement standard.
- FAIR Health data has been used by multiple state governments and GAO.
- Data are made publicly available via https://www.fairhealthconsumer.org/.

Limitations

- Only 50 percent of claims have data on allowed charges.
- Where data are limited, imputation algorithms are used to impute data.

Health Care Cost Institute

As noted in their public representations, the Health Care Cost Institute (HCCI) is a nonpartisan, independent, and nonprofit organization founded in 2011 by professionals from academic, actuarial, and medical institutions.[27] The latest publicly available information we could obtain shows that HCCI's board members are not paid. [28]

HCCI's mission is to promote independent research and analyses on the causes of rising U.S. health care spending; to provide policymakers, consumers, and researchers with high-quality and transparent information regarding the forces that are driving health care costs; and to help ensure that the nation gets a greater value from its health spending.[29] In addition, HCCI is a CMS Qualified Entity with access to CMS data for Medicare and Medicaid. HCCI has received the majority of its revenue from four major insurers that submit data: Aetna, Humana, Kaiser Permanente, and UnitedHealthcare. Finally, HCCI maintains a public website that consumers can use to obtain cost estimates for health care services.[30]

Data

According to information provided by HCCI, its database includes claims going back to 2007 and includes approximately 6 billion private pay claims,[31] and 50 million covered lives per year—the latter including both commercial and Medicare Advantage.[32] Data elements include geographic location, place of service, date of service, and physician specialty. HCCI's data have come from four health plans: Aetna, Humana, Kaiser Permanente, and UnitedHealthcare. Health plans submit uniform data on an annual basis. HCCI's data include both the allowed and billed charges as well as payments.

Although their database includes claims from all 50 states, HCCI's data are limited in some areas and in states that are overwhelmingly covered by Blue Cross and Blue Shield Plans. HCCI's quality control involves actuary review, and since the data are fully adjudicated paid claims, the issuers that submitted them met all internal controls to pay the claim.

Availability of Data

HCCI data are used in different ways. For example, HCCI licenses to federal agencies, state governments, and researchers for the purpose of hypothesis testing. Once a proposal is submitted, it goes to an internal review committee made up of academic experts. Beyond licensing for hypothesis-driven research use, HCCI allows for use of their data via individual agreements or awards. For example, HCCI collaborated

[27] "Governing Board." Health Care Cost Institute. Accessed February 15, 2017. http://www.healthcostinstitute.org/about-hcci/governing-board/
[28] Health Care Cost Institute, Form 990. http://990s.foundationcenter.org/990_pdf_archive/383/383917409/383917409_201512_990.pdf
[29] "Mission and Vision." Health Care Cost Institute. Accessed February 15, 2017. http://www.healthcostinstitute.org/about-hcci/mission-vision/
[30] www.guroo.com
[31] "Fact Sheets." Health Care Cost Institute. Accessed February 15, 2017. http://www.healthcostinstitute.org/about-hcci/fact-sheets/
[32] "What Makes HCCI Data Unique?" Health Care Cost Institute. Accessed February 15, 2017. http://www.healthcostinstitute.org/wp-content/uploads/2016/11/How-Data-Unique-June-2016_0.pdf

with the Green Mountain Care Board in Vermont to issue a report comparing cost and utilization for health care services in Vermont to the nation in 2014.[33] Furthermore, HCCI recently received an award from the State of Florida to support price transparency.[34] This study did not reveal the full scope or pricing associated with these uses of HCCI data.

Users of HCCI data include many private and public sector organizations. A partial list of these organizations include the American Academy of Actuaries, the Congressional Budget Office (CBO), Dartmouth College, the Medicare Payment Advisory Commission (MedPAC), the National Bureau of Economic Research (NBER), Northwestern University's Kellogg School of Management, and the Society of Actuaries.

Strengths and Limitations

Strengths

- Data contribution by four major issuers with claims from all 50 states.
- Data are uniformly submitted and reviewed by actuaries.
- Based on information gathered in our review, HCCI's data includes 50 million covered lives per year, including both commercial and Medicare Advantage.
- Database includes all necessary elements such as physician, geographic location, and place and date of service as well as allowed charges and paid amount.
- Numerous government agencies organizations use HCCI data, including CBO, MedPAC, and others.
- Data are made publicly available at https://www.guroo.com/

Limitations

- We did not find evidence that the data have been used for establishing a minimum benefit standard for out-of-network services.
- Database has some areas with limited data for some areas [35] and generally in states that are heavily Blue Cross.

[33] 2007–2011 Vermont Health Care Cost and Utilization Report. Health Care Cost Institute. Accessed February 15, 2017. http://www.healthcostinstitute.org/report/2007-2011-vermont-health-care-cost-utilization-report/

[34] "Secretary senior announces contract awarded to HCCI for health care transparency initiative." Capital Soup: Florida News Straight from the Source. Accessed February 15, 2017. http://capitalsoup.com/2017/01/24/secretary-senior-announces-contract-awarded-hcci-health-care-transparency-initiative/

[35] HCCI National Chartbook of Health Care Prices – 2015. Accessed May 16, 2017. http://www.healthcostinstitute.org/wp-content/uploads/2015/04/HCCI-National-Chartbook-of-Health-Care-Prices-2015.pdf

Truven Health MarketScan

Truven MarketScan is a series of claims databases offered by Truven Health Analytics to provide researchers with patient centric data from over 230 million patients since 1995.[36] Truven's MarketScan databases were created to address the need for better health care data on privately insured Americans.[37] The five core MarketScan data sets include commercial, Medicare supplemental, multi-state Medicaid, hospital drug, and primary care EMR claims, with additional linked datasets available as well.[38] Data in Truven's MarketScan databases are reported to Truven by large employers, managed care organizations, hospitals, and EMR providers. MarketScan also includes some Medicare data and data from some Medicaid plans.[39] Truven is a health analytics firm owned by IBM. According to information received in the interview, fees from users of Truven data and analytical services are the source of revenue for the firm. As noted in material published by Truven, the MarketScan databases were created to address the need for better health care data on privately insured Americans to help reduce the cost and improve the quality of health care delivered in the United States.[40] As far as we could find, Truven does not make MarketScan available to the public at large through a consumer portal.

Data

According to the interview, Truven does not identify the organizations contributing commercial medical claims. The size of the data set fluctuates as plans begin or cease submitting data. In 2015, the annual enrollment had 28 million commercial covered lives. In 2014, there were 47 million. Large employers are now the predominant contributors of data. Large employers are likely to have their employees clustered around specific geographic areas. For instance, there is less coverage in the South and Northwest. Because employer and health plan submissions depend on whether the entity wants to use Truven's decision support network, the data represent a convenience sample. There are no imputed values in the database.

Although Truven is able to weight the data to a national representative sample for those with employer-sponsored insurance, the weights are at a regional, not local, level. There are about 600 million medical claims per year, and all include data on allowed and billed charges. Claims also include data on provider specialty, provider geographic location, date, and place of service. All licensed data are de-identified.

[36] "MarketScan Databases." Truven MarketScan Databases. Accessed February 15, 2017. http://truvenhealth.com/markets/life-sciences/products/data-tools/marketscan-databases

[37] Hansen, Leigh. "The MarketScan Databases for Life Sciences Researchers." Truven Health Analytics. May 2016. Accessed February 15, 2017. http://content.truvenhealth.com/rs/699-YLV-293/images/%7B87d8921a-c27c-4382-bd88-d8ec9011de70%7D_2016_Truven_Health_MarketScan_white_paper_for_Life_Sciences.pdf?aliId=1274509.

[38] "Life Sciences." Truven MarketScan Databases.

[39] Hansen, Leigh. "The MarketScan Databases for Life Sciences Researchers." Truven Health Analytics. May 2016. Accessed February 15, 2017. http://content.truvenhealth.com/rs/699-YLV-293/images/%7B87d8921a-c27c-4382-bd88-d8ec9011de70%7D_2016_Truven_Health_MarketScan_white_paper_for_Life_Sciences.pdf?aliId=1274509.

[40] Hansen, Leigh. "The MarketScan Databases for Life Sciences Researchers." Truven Health Analytics. May 2016. Accessed February 15, 2017. http://content.truvenhealth.com/rs/699-YLV-293/images/%7B87d8921a-c27c-4382-bd88-d8ec9011de70%7D_2016_Truven_Health_MarketScan_white_paper_for_Life_Sciences.pdf?aliId=1274509.

Organizations that contribute data do so in a standard format and in a timely manner but at different frequencies. The majority of contributors contribute data monthly. Truven releases data annually. Truven data sets are widely used and have been the data source for many peer-reviewed articles. U.S. government agencies, including the Centers for Disease Control and Prevention, use Truven data.[41]

Availability of Data

Truven commonly leases data to interested parties. The cost of leasing is negotiated and dependent on the specific requirements of the user. Users pay for the data on a per-study basis. Truven is able to deliver data within a few weeks from the initial request for data. Truven data are not oriented for establishing a minimum benefit standard for out-of-network services. Users cannot publish data at a metropolitan area without the permission of Truven.

Strengths and Limitations

Strengths

- Truven offers a large, diverse database with data elements of interest.
- All claims include allowed charges and billed charges.
- Database features 600 million medical claims per year with allowed and billed charges.
- Data are updated annually with consistent data submitted across all plans.

Limitations

- We did not find any indication that Truven is using data for establishing a minimum benefit standard for out-of-network services.
- Truven is not in the business of using data for benchmarking.
- Truven data represent a convenience sample that is from mostly large employers.
- Employer data tend to be clustered, resulting in limited data in some geographies.
- Data not available to consumers.

[41] "DHIS Data Hub." Centers for Disease Control and Prevention (CDC). Accessed April 25, 2017. https://www.cdc.gov/ophss/csels/dhis/

State All-Payer Claims Databases

NORC examined the size, accessibility, and cost of establishing and maintaining state-run All-Payer Claims Databases (APCDs). These databases collect much of the same health claims information at a state level. States have established APCDs to help fill information gaps needed to make effective health policy decisions, to support health care and payment reform initiatives, and to address the need for transparency in health care.[42] APCDs offer a unique advantage over non-state-run databases, as they generally allow for consistent and uniform data submissions, and use the force of state law.[43] Many states mandate the submission of health care claims data to the state APCD.

APCDs' authority to mandate reporting was recently limited after the 2016 Supreme Court decision *Gobeille v. Liberty Mutual Insurance Company*.[44] The court ruled that reporting of claims by self-insured plans are pre-empted by Employee Retirement Income Security Act (ERISA).[45] Liberty Mutual Insurance Company, a multi-state employer operating a self-insured health plan for its Vermont employees, argued that the state APCD statute imposed a "reporting" requirement on its self-insured employer health plan and that ERISA makes reporting the exclusive domain of the federal government.[46]

The 2nd Circuit court ruled in favor of Liberty Mutual, and the Supreme Court let the decision stand.[47] Many large employers use self-funded plans for coverage. According to the Kaiser Family Foundation, 63 percent of workers covered by employer-based health insurance are covered by self-funded plans.[48] Given that a large proportion of workers are covered in self-funded plans, APCDs may see limits in the information they are able to collect. Further, large employers are more likely to obtain large discounts from providers. Exclusion of self-insured plans may impact estimates of "allowed charges."

[42] "The Value of All-Payer Claims Databases for Employers." APCD Council. April 27, 2016. Accessed March 29, 2017. https://www.apcdcouncil.org/publication/value-all-payer-claims-databases-employers

[43] Feldman, Joan W., and William J. Roberts. "APCDs: one solution to obtaining meaningful performance data." Shipman & Goodwin. January 21, 2016. Accessed March 29, 2017. http://www.shipmangoodwin.com/apcds-one-solution-to-obtaining-meaningful-performance-data.

[44] *Gobeille v. Liberty Mutual Insurance Company*, 577 U. S. ____ (2016)

[45] Curfman, Gregory. "All-Payer claims databases after Gobeille." Health Affairs Blog. March 3, 2017. Accessed March 22, 2017. http://healthaffairs.org/blog/2017/03/03/all-payer-claims-databases-after-gobeille/.

[46] Feldman, Joan W., and William J. Roberts. "APCDs: one solution to obtaining meaningful performance data." Shipman & Goodwin. January 21, 2016. Accessed March 29, 2017. http://www.shipmangoodwin.com/apcds-one-solution-to-obtaining-meaningful-performance-data.

[47] Feldman, Joan W., and William J. Roberts. "APCDs: one solution to obtaining meaningful performance data." Shipman & Goodwin. January 21, 2016. Accessed March 29, 2017. http://www.shipmangoodwin.com/apcds-one-solution-to-obtaining-meaningful-performance-data.

[48] Claxton, Gary, Matthew Rae, Michelle Long, Nirmita Panchal, Anthony Damico, Kevin Kenward, and Heidi Whitmore. "2015 Employer Health Benefits Survey." The Henry J. Kaiser Family Foundation. September 14, 2016. Accessed April 04, 2017. http://kff.org/health-costs/report/2015-employer-health-benefits-survey/

Cost of Developing an APCD

APCDs are developed in several phases, including planning, implementation, and information production.[49] Each phase includes a one-time start-up cost and ongoing costs for appropriation.[50] States can receive funding for APCDs from general appropriations, fee assessments on public and private payers, through Medicaid match, and data sales.[51] Many state APCDs also receive federal funds through grants from the Center for Medicare and Medicaid Services (CMS). Costs for APCD planning, implementation, and maintenance vary by state and are subject to the state health care market structure, population and coverage patterns, number of licensed payers, agency that hosts the APCD, and planned users and uses for the APCD and costs of data release.[52] Given that these factors can vary state to state, the cost of implementing an APCD is difficult to approximate.

In Florida, a state that is in the process of implementing an APCD, the legislation creating the APCD authorized $3.1 million dollars from the Health Care Trust fund to the Agency for Health Care Administration to implement the APCD.[53] The legislation also authorized an additional $952,919 in recurring funds for the APCD.[54] States often contract with outside organizations to operate the APCD. For example, Tennessee signed a contract with a vendor to operate the state's APCD for approximately $3 million over four years.[55] In Colorado, the cost of operating the APCD was $3.8 million in FY2016. [56] The state also earned $2.4 million in earned revenue and $1.4 million in grant revenue, summing to a total of $3.8 million in revenue.[57]

In the state of Washington, no funding is allocated by the state for the APCD.[58] Washington receives $1.9 million from the two-year, U.S. Department of Health and Human Services CMS Rate Review Cycle III grant to the state Office of Financial Management to fund the APCD.[59] The Washington state Health Care

[49] Love, Denise, and Emily Sullivan. "Cost and Funding Considerations for a Statewide All-Payer Claims Database (APCD)." APCD Council. July 06, 2015. Accessed March 29, 2017. https://www.apcdcouncil.org/publication/cost-and-funding-considerations-statewide-all-payer-claims-database-apcd.

[50] Love, Denise, and Emily Sullivan. "Cost and funding considerations for a statewide All-Payer Claims Database (APCD)." APCD Council. July 6, 2015. Accessed March 29, 2017. https://www.apcdcouncil.org/publication/cost-and-funding-considerations-statewide-all-payer-claims-database-apcd.

[51] Love, Denise, and Emily Sullivan. "Cost and funding considerations for a statewide All-Payer Claims Database (APCD)." APCD Council. July 6, 2015. Accessed March 29, 2017. https://www.apcdcouncil.org/publication/cost-and-funding-considerations-statewide-all-payer-claims-database-apcd.

[52] Love, Denise, and Emily Sullivan. "Cost and funding considerations for a statewide All-Payer Claims Database (APCD)." APCD Council. July 6, 2015. Accessed March 29, 2017. https://www.apcdcouncil.org/publication/cost-and-funding-considerations-statewide-all-payer-claims-database-apcd.

[53] "CS/CS/HB 1175: Transparency in Health Care." Florida Senate. 2016 Legislature. https://www.flsenate.gov/Session/Bill/2016/1175

[54] "CS/CS/HB 1175: Transparency in Health Care." Florida Senate. 2016 Legislature. https://www.flsenate.gov/Session/Bill/2016/1175

[55] "Contract." Tennessee Health Information Committee. March 29, 2017. https://www.tn.gov/hcfa/article/tennessee-health-information-committee

[56] "CO APCD Annual Report 2016." Center for Improving Value in Health Care. http://civhc.org/getmedia/80881590-f979-41b2-89dd-cb2bdaeb5424/FINAL-2016-CO-APCD-Annual-Report-with-Bookmarks.pdf.aspx/.

[57] "CO APCD Annual Report 2016." Center for Improving Value in Health Care. http://civhc.org/getmedia/80881590-f979-41b2-89dd-cb2bdaeb5424/FINAL-2016-CO-APCD-Annual-Report-with-Bookmarks.pdf.aspx/.

[58] "Statewide All-Payer Health Care Claims Database, Report to the Legislature." Washington Office of Financial Management. December 2016. http://www.ofm.wa.gov/reports/AllPayerHCClaimsDatabaseReportToLegDec2016.pdf

[59] "Statewide All-Payer Health Care Claims Database, Report to the Legislature." Washington Office of Financial Management. December 2016. http://www.ofm.wa.gov/reports/AllPayerHCClaimsDatabaseReportToLegDec2016.pdf

Authority included an additional $6 million from the CMS State Innovation Model grant to support the APCD.[60] Overall, standardizing and comparing the costs of implementing an APCD between states is difficult to do. Factors such as how long the APCD has been operated, whether the APCD is funded by the state alone or through federal grants, and whether the database is administered internally or through an outside vendor make it difficult to establish an adequate baseline cost of implementing an APCD.

State Summaries

Interest in implementing APCDs is high, and many states already have APCDs in place in some form. Currently, 15 states have APCDs in place and active. Eight have APCDs that are in the process of being implemented. Twenty states are in the early stages of planning or have expressed interest in developing an APCD. Only seven states have no interest or no activity in developing an APCD. Below, we summarize state's efforts to provide claims data through APCDs:

Arkansas. In 2013, Arkansas was awarded $3.1 million from a Cycle III grant from CMS to build an APCD.[61] Arkansas's APCD is overseen by the AR Insurance Department, with consultation from a 13-member advisory board comprised of four statutorily named members and nine governor-appointed members, and the Arkansas Center for Health Improvement administers the APCD.[62] Arkansas does not have a data codebook available to determine if the necessary elements are included in the data. Arkansas does not operate a publically available cost-comparison website based on the data in the APCD.

Colorado. Colorado officially launched its APCD in 2012 to provide transparent price, quality, cost of care, and utilization information across Colorado. The APCD is administered by the Center for Improving Value in Health Care (CIVHC), a nonprofit, nonpartisan organization established in 2008 by executive order by the governor. As noted earlier, NORC at the University of Chicago is part of a team that works with CIVHC to implement its APCD. CIVHC receives no direct, ongoing operational state funding. The administrator of the Colorado APCD must raise all funds. Colorado's APCD is funded through $1.4 million in grants and $2.4 million in earned revenue.

Data include approximately 65 percent of the insured Coloradoans with claims from the largest 33 commercial health payers and Medicaid.[63] In addition to licensing data, Colorado's APCD also provides an online resource for consumers to look up medical prices. Data are available from 2011–2014 for commercial claims and Medicaid and include all of the necessary data elements. The licensing cost can vary depending on data needs. A user must fill out a data release application and data element dictionary for the state to review. Colorado operates a publically available medical cost comparison website—CO

[60] "Statewide All-Payer Health Care Claims Database, Report to the Legislature." Washington Office of Financial Management. December 2016. http://www.ofm.wa.gov/reports/AllPayerHCClaimsDatabaseReportToLegDec2016.pdf

[61] "Arkansas Rate Review Grants Award List." Centers for Medicare & Medicaid Services (CMS). Accessed April 05, 2017. https://www.cms.gov/cciio/Resources/Rate-Review-Grants/ar.html

[62] "Governance." Arkansas APCD. Accessed March 29, 2017. https://www.arkansasapcd.net/Governance/

[63] "CO Medical Price Compare." CO Medical Price Compare. Accessed March 29, 2017. https://www.comedprice.org.

Medical Price Compare, available at www.comedprice.org—based on the claims data in the state's APCD.

Kansas. Kansas received $3.1 million in funding from Cycle III grants from CMS in 2013 to enhance the state's APCD.[64] Kansas' APCD is combined from two databases: Kansas' Division of Health Care Finance, which collects and maintains data from Medicaid, CHIP, and the State Employee Health Plan, and the Kansas Health Insurance Information System, which includes health care data from individual and small-group private plans.[65] These data are posted online at http://www.kdheks.gov/hcf/medicaid_reports/Health_Care_Market_Reports.html. Kansas combined these datasets in 2010 into an APCD referred to as the Data Analytic Interface (DAI), which can be used to compare prices paid for health care services across insurance plans across time.[66]

The APCD is used by the Kansas Health Data Consortium, a collaborative, multi-stakeholder advisory committee on data-driven policy with membership spanning across key sectors of the health care industry.[67] The Health Data Consortium uses the DAI to develop and review reports on health cost, utilization, service patterns, and other trends in the health care market. However, Kansas does not license its data to researchers outside of the consortium, and no data dictionary is available online to verify that it includes the required data elements. Kansas's data includes data from commercial payers and Medicaid and include medical, eligibility, dental, and pharmacy claims.[68]

Maine. Maine's APCD was established in 2002 and is administered by the Maine Health Data Organization (MHDO). MHDO was created by the Maine legislature in 1996 as an independent executive agency to collect clinical and financial health care information. (As noted earlier, NORC at the University of Chicago is part of a team that works with MHDO to implement the APCD.) MHDO's board of directors is made up of a group of multidisciplinary representatives, including providers, employers, consumers, and third-party payers.

The APCD collects claims from commercial insurance carriers, third-party administrators and self-funded plans, pharmacy benefit managers, dental benefit administrators, MaineCare (Maine Medicaid), and CMS (Medicare). MHDO data includes all necessary data elements except the allowed charge. Any data files, reports, or tables can be generated for a rate of $80 per hour. The price for licensing the data set varies depending on the dataset. In 2013, MHDO received $2.6 million in funding from a Cycle III grant from the Center for Consumer Information and Insurance Oversight; this funding was used to develop a public-

[64] "Kansas Rate Review Grants Award List." Centers for Medicare & Medicaid Services (CMS). Accessed April 05, 2017. https://www.cms.gov/cciio/Resources/Rate-Review-Grants/ks.html

[65] "Health Care Market Reports." Kansas Department of Health and Environment. Accessed March 29, 2017. http://www.kdheks.gov/hcf/medicaid_reports/Health_Care_Market_Reports.html.

[66] "Health Care Market Reports." Kansas Department of Health and Environment. Accessed March 29, 2017. http://www.kdheks.gov/hcf/medicaid_reports/Health_Care_Market_Reports.html.

[67] "Health Care Market Reports." Kansas Department of Health and Environment. Accessed March 29, 2017. http://www.kdheks.gov/hcf/medicaid_reports/Health_Care_Market_Reports.html.

[68] "Kansas." APCD Council. Accessed March 29, 2017. https://www.apcdcouncil.org/state/kansas.

facing website—Compare Maine, available at http://www.comparemaine.org/—to assist Maine resident with comparing health costs in the state.

Maryland. Maryland's Medical Care Database (MCDB) is the state's APCD, which includes enrollment, provider, and claims data for residents enrolled in private insurance, Medicare, or Medicaid Managed Care Organizations.[69] Maryland was awarded $2.8 million in 2013 by CMS from a Cycle III grant to enhance its APCD.[70] Datasets in the MCDB include member eligibility, professional services, institutional services, pharmacy, and dental claims.[71] At this time, data are available from 2010 to 2014. Maryland's professional services data include all required elements with the exception of physician specialty.[72]

To license Maryland's data, the application process includes a review by a Data Review Committee, Institutional Review Board (if required), and a review by the Maryland Health Commission. From there, a data use agreement is issued, and the data are released.[73] The state requires ongoing reporting and monitoring on all active projects to ensure that data are used properly. [74] Similar to other states, the cost for licensing Maryland's data depends on the type of organization.

Massachusetts. Massachusetts's APCD is operated by the Center for Health Information and Analysis (CHIA), an independent agency established in 2012 to serve as Massachusetts's hub for health care data and analytics to support policy development.[75] Information on funding for Massachusetts's APCD was not found. Massachusetts's APCD collects data from commercial payers, third-party administrators, and public programs (Medicare and MassHealth, Massachusetts's Medicaid program).[76] Massachusetts does license a limited dataset to non-government organizations; the data includes all of the necessary elements. Whereas Massachusetts's APCD makes data available for cost analysis, it does not provide a public transparency site of health costs. To license Massachusetts's APCD data, organizations must submit a data request, data management plan, and fee remittance request to the state.[77] The state will review the application and work with applicants to refine the application as needed to ensure that they meet

[69] "Health Data and Quality: Medical Care Data Base." Maryland Health Care Commission. Accessed March 29, 2017. http://mhcc.maryland.gov/mhcc/pages/apcd/apcd_mcdb/apcd_mcdb.aspx.

[70] "Maryland Rate Review Grants Award." Centers for Medicare & Medicaid Services (CMS). September 19, 2014. Accessed April 05, 2017. https://www.cms.gov/cciio/Resources/Rate-Review-Grants/md.html.

[71] "MCDB Data Release." Maryland Health Care Commission. Accessed March 29, 2017. http://mhcc.maryland.gov/mhcc/pages/apcd/apcd_data_release/apcd_data_release_mcdb.aspx.

[72] NORC analysis of MD APCD codebook, available via "MCDB Data Release." Maryland Health Care Commission. Accessed March 30, 2017. http://mhcc.maryland.gov/mhcc/pages/apcd/apcd_data_release/apcd_data_release_mcdb.aspx

[73] "MCDB Data Release." Maryland Health Care Commission. Accessed March 29, 2017. http://mhcc.maryland.gov/mhcc/pages/apcd/apcd_data_release/apcd_data_release_mcdb.aspx.

[74] "MCDB Data Release." Maryland Health Care Commission. Accessed March 29, 2017. http://mhcc.maryland.gov/mhcc/pages/apcd/apcd_data_release/apcd_data_release_mcdb.aspx.

[75] "Mission & History." Center for Health Information and Analysis. Accessed March 29, 2017. http://www.chiamass.gov/mission-and-history/.

[76] "Massachusetts All Payer Claims Database." Center for Health Information and Analysis. Accessed March 29, 2017. http://www.chiamass.gov/ma-apcd/.

[77] "Non-Government Agency APCD Requests." Center for Health Information and Analysis. Accessed March 29, 2017. http://www.chiamass.gov/non-government-agency-apcd-requests.

regulatory requirements.[78] From there, the request is reviewed by the state's Data Privacy Committee, and a data use agreement is issued.[79]

Minnesota. Minnesota passed legislation in 2008 to create a system to provide greater transparency of provider cost and quality.[80] As part of the system, Minnesota developed an APCD to collect health claims from billing records. The state was awarded $3.1 million from a Cycle III grant by CMS in 2013 to conduct a study of how an APCD could enhance rate-review activities.[81] A legislative mandate was redirected to a research and analytic agenda, to better inform health care planning and policy decisions.[82] Minnesota's APCD is run by the Minnesota Department of Health, which requires all health plans and third-party administrators to submit encounter data every six months.[83] Minnesota's APCD also incorporates data from Medicaid and Medicare plans.[84] Minnesota's APCD includes data for services from 2009 through 2015.[85] Minnesota provides public use files for little or no cost; however, the files do not include the allowed charge or the physician specialty.[86]

New Hampshire. New Hampshire's APCD began accepting claims in 2005 to better provide transparency in the commercial insurance system.[87] In 2013, New Hampshire was granted $3 million from CMS to enhance the state's APCD.[88] New Hampshire's APCD includes claims from commercial payers, third-party/self-funded, Medicaid, and Medicare.[89] New Hampshire's APCD data are available in both public use and limited form with all necessary data elements included. Data sets may be requested through an application and approval process in which the requestor specifies and justifies the data elements to be included in the data set. No pricing information is available. New Hampshire does operate a transparency tool for consumers to look up health costs, which was developed by the New Hampshire Insurance Department based on data from the APCD, available at https://nhhealthcost.nh.gov/.[90]

[78] "Non-Government Agency APCD Requests." Center for Health Information and Analysis. Accessed March 29, 2017. http://www.chiamass.gov/non-government-agency-apcd-requests.

[79] "Non-Government Agency APCD Requests." Center for Health Information and Analysis. Accessed March 29, 2017. http://www.chiamass.gov/non-government-agency-apcd-requests.

[80] "Non-Government Agency APCD Requests." Center for Health Information and Analysis. Accessed March 29, 2017. http://www.chiamass.gov/non-government-agency-apcd-requests.

[81] "Minnesota Rate Review Grants Award List." Centers for Medicare & Medicaid Services (CMS). Accessed April 05, 2017. https://www.cms.gov/cciio/Resources/Rate-Review-Grants/mn.html.

[82] "Minnesota All Payer Claims Database." MN APCD. http://www.health.state.mn.us/healthreform/allpayer/mnapcdoverview.pdf

[83] "All Payer Claims Database Data Collection." Minnesota Dept. of Health. Accessed March 29, 2017. http://www.health.state.mn.us/healthreform/encounterdata/index.html.

[84] "All Payer Claims Database Data Collection." Minnesota Dept. of Health. Accessed March 29, 2017. http://www.health.state.mn.us/healthreform/encounterdata/index.html.

[85] "All Payer Claims Database Data Collection." Minnesota Dept. of Health. Accessed March 29, 2017. http://www.health.state.mn.us/healthreform/encounterdata/index.html.

[86] NORC analysis of MN APCD codebook, available via "Currently Available Public Use Files." Minnesota Department of Health. Accessed March 30, 2017. http://www.health.state.mn.us/healthreform/allpayer/publicusefiles/about.html

[87] "New Hampshire." APCD Council. July 14, 2016. Accessed March 29, 2017. https://www.apcdcouncil.org/state/new-hampshire.

[88] "New Hampshire Rate Review Grant Award List." Centers for Medicare & Medicaid Services (CMS). Accessed April 05, 2017. https://www.cms.gov/cciio/Resources/Rate-Review-Grants/nh.html.

[89] "New Hampshire." APCD Council. July 14, 2016. Accessed March 29, 2017. https://www.apcdcouncil.org/state/new-hampshire

[90] "Compare Health Costs & Quality of Care in New Hampshire." NH Health Cost. Accessed March 29, 2017. http://nhhealthcost.nh.gov/.

Oregon. Oregon established its APCD in 2009 as a way to measure health cost, quality, and utilization.[91] Oregon received approximately $3.6 million from CMS to invest in an APCD.[92] Oregon's Health Authority is responsible for hosting and maintaining the dataset.[93] Oregon's APCD includes medical and pharmacy claims, enrollment data, premium information, and provider information for commercial insurers, Medicaid, and Medicare.[94] Data submissions include "commercial health plans and third-party administrators (TPAs) with 5,000+ covered lives in Oregon, all pharmacy benefit managers (PBMs) in Oregon, any payer with a dual eligible special needs plans (SNPs) in Oregon, and any payers that participate in Oregon's health insurance exchange."[95] Additionally, the state provides data from Medicaid fee-for-service plans and coordinated care organizations while CMS provides claims for Medicare Parts A and B.[96] In Oregon's limited data set, all data elements are included, with the exception of the allowed amount.[97]

Rhode Island. Rhode Island's APCD was established in 2008 to identify health care needs, inform health care policy, and compare costs.[98] Funding information for Rhode Island's APCD was not found. Rhode Island's database includes data from 2011 to present for private health insurers and Medicaid.[99] Medicare FFS claims are available from 2011 to 2013.[100] Data are licensed to consumers, researchers, providers, health insurers and others to examine data on health care use, quality, and spending, and identify opportunities for improvement.[101] Rhode Island's APCD provides a series of datasets on eligibility, medical claims, members, pharmacy claims, procedure codes, product codes, providers, and more.[102] Data include all required elements, but elements vary across datasets.

Tennessee. Tennessee's APCD has undergone numerous transitions since its beginning in 2009. Legislation for Tennessee's APCD was passed in 2009, with collection beginning the summer of 2010.[103]

[91] "Office of Health Analytics All Payer All Claims Reporting Program." Office of Health Analytics. Accessed March 29, 2017. https://www.oregon.gov/oha/analytics/Pages/All-Payer-All-Claims.aspx.

[92] "Oregon Rate Review Grants Award List." Centers for Medicare & Medicaid Services (CMS). September 19, 2014. Accessed April 05, 2017. https://www.cms.gov/cciio/Resources/Rate-Review-Grants/or.html.

[93] "Oregon Rate Review Grants Award List." Centers for Medicare & Medicaid Services (CMS). September 19, 2014. Accessed April 05, 2017. https://www.cms.gov/cciio/Resources/Rate-Review-Grants/or.html.

[94] "Oregon All Payer All Claims Database (APAC): An Overview." Oregon.gov. http://www.oregon.gov/oha/analytics/APACPageDocs/APAC-Overview.pdf

[95] "Oregon All Payer All Claims Database (APAC): An Overview." Oregon.gov. http://www.oregon.gov/oha/analytics/APACPageDocs/APAC-Overview.pdf

[96] "Oregon All Payer All Claims Database (APAC): An Overview." Oregon.gov. http://www.oregon.gov/oha/analytics/APACPageDocs/APAC-Overview.pdf

[97] NORC analysis of OR APCD data dictionary, available via "All Payer All Claims Data Requests." Oregon Office of Health Analytics. Accessed March 30, 2017. https://www.oregon.gov/oha/analytics/Pages/APAC-Data-Requests.aspx

[98] "TITLE 23 Health and Safety. CHAPTER 23-17.17 Health Care Quality Program SECTION 23-17.17-9." Rhode Island State Code. Accessed March 29, 2017. http://webserver.rilin.state.ri.us/Statutes/TITLE23/23-17.17/23-17.17-9.HTM

[99] **"**HealthFacts RI Database." State of Rhode Island: Department of Health. Accessed March 29, 2017. http://health.ri.gov/data/healthfactsri/.

[100] **"**HealthFacts RI Database." State of Rhode Island: Department of Health. Accessed March 29, 2017. http://health.ri.gov/data/healthfactsri/.

[101] **"**HealthFacts RI Database." State of Rhode Island: Department of Health. Accessed March 29, 2017. http://health.ri.gov/data/healthfactsri/.

[102] NORC analysis of RI APCD data dictionary, available via "Data Dictionary for the Rhode Island All-Payer Claims Database (RI APCD)." Rhode Island Executive Office of Health & Human Services. November 2016. Accessed March 30, 2017. http://www.health.ri.gov/publications/metadata/HealthFactsLevel3ExtractsDataElementDictionary.pdf

[103] "Tennessee." APCD Council. March 15, 2017. Accessed March 29, 2017. https://www.apcdcouncil.org/state/tennessee.

After implementing the contract, data from all payers were collected through 2011.[104] After the contract expired, the state experienced a lapse in collection.[105] The state received a $3.9 million grant from CMS in 2011 to continue to support the state's APCD.[106] The state began a new contract in 2013, which would collect data in a modified format.[107] The Tennessee Health Information Committee oversees and approves the data management, reporting, and research activities of the APCD. [108] Currently, Tennessee's APCD is being implemented, and data are not publically available.

Utah. The Utah All Payer Claims Database became the fifth operating APCD in the nation in September 2009.[109] Funding for the Utah APCD was not found. The APCD contains data from health insurer, Medicaid, and third-party administrators in Utah. Claims in the APCD include medical, pharmacy, dental, enrollment, and provider data.[110] The state's claim centric dataset has data available from 2013–2014 to be licensed. The limited dataset includes all elements except the allowed charge, physician specialty, and geography. Utah also offers a research dataset that includes sensitive and detailed patient data linked over time.[111] These datasets require review and approval by both an IRB and the Health Data Committee. [112] Licensing cost varies depending on data needs.

Vermont. Vermont's APCD, VHCURES, allows for population-based analysis of health care system performance. [113] Vermont's Green Mountain Care Board assumed responsibility for VHCURES in 2013 and has worked to improve the quality of the information and to ensure appropriate access to the data. [114] Funding for the Vermont APCD was not found. The APCD includes data from health insurers, third-party administrators, pharmacy benefit managers, self-insured plans, Medicare supplement, and Medicare parts C and D.[115] VHCURES is overseen by Data Governance Council, which oversees data quality, data

[104] "Brief History of Tennessee's All Payer Claims Database." Tennessee State Government. July 17, 2015. Accessed March 29, 2017. https://www.apcdcouncil.org/state/tennessee

[105] "Brief History of Tennessee's All Payer Claims Database." Tennessee State Government. July 17, 2015. Accessed March 29, 2017. https://www.apcdcouncil.org/state/tennessee

[106] "Tennessee Rate Review Grants Award List." Centers for Medicare & Medicaid Services (CMS). Accessed April 05, 2017. https://www.cms.gov/cciio/Resources/Rate-Review-Grants/tn.html.

[107] "Tennessee Rate Review Grants Award List." Centers for Medicare & Medicaid Services (CMS). Accessed April 05, 2017. https://www.cms.gov/cciio/Resources/Rate-Review-Grants/tn.html.

[108] "Tennessee Rate Review Grants Award List." Centers for Medicare & Medicaid Services (CMS). Accessed April 05, 2017. https://www.cms.gov/cciio/Resources/Rate-Review-Grants/tn.html.

[109] "Utah." APCD Council. January 25, 2017. Accessed March 29, 2017. https://www.apcdcouncil.org/state/utah.

[110] "About the All Payer Claims Data." Office of Health Care Statistics. Accessed March 29, 2017. http://stats.health.utah.gov/about-the-data/apcd/.

[111] "Access to Data Series." Office of Health Care Statistics. Accessed March 29, 2017. http://stats.health.utah.gov/about-the-data/data-series/.

[112] "Access to Data Series." Office of Health Care Statistics. Accessed March 29, 2017. http://stats.health.utah.gov/about-the-data/data-series/.

[113] "Vermont Health Care Uniform Reporting and Evaluation System – VHCURES." Green Mountain Care Board. Accessed March 29, 2017. http://gmcboard.vermont.gov/hit/vhcures.

[114] "Vermont Health Care Uniform Reporting and Evaluation System – VHCURES." Green Mountain Care Board. Accessed March 29, 2017. http://gmcboard.vermont.gov/hit/vhcures.

[115] "VHCURES History." Green Mountain Care Board. Accessed March 29, 2017. http://gmcboard.vermont.gov/hit/vhcures/history.

privacy and security, financial stability of the VHCURES program, and data release.[116] VHCURES includes all of the necessary data elements, excluding the allowed charge.[117]

Virginia. Virginia's APCD was created in 2012 and is a voluntary program by Virginia's major health insurance companies.[118] Virginia's APCD is operated by Virginia Health Information (VHI), a nonprofit organization that creates health information for businesses, consumers, governments, health insurance companies, and providers.[119] Funding for the Virginia's APCD was not found. VHI estimates that Virginia's APCD contains information for approximately 60 percent to 65 percent of Virginia's commercially insured residents. Records include paid claims from institutional encounters (hospital, surgery centers, etc.), medical professional services (such as doctor visits and imaging), pharmacy, and other services. [120] Claims files include medical claims, pharmacy claims, member eligibility, and medical provider. Costs for using the states data vary depending on data needs. Virginia's data can be accessed through the state's MedInsight platform.[121]

Washington. Washington's APCD is currently still in implementation. The state legislature passed a bill in 2015 initiating a statewide APCD administered by the state's Office of Financial Management through its Center for Health Systems Effectiveness.[122] As previously mentioned, Washington receives $1.9 million from the two-year, U.S. Department of Health and Human Services CMS Rate Review Cycle III grant to the state Office of Financial Management to fund the APCD.[123] Washington's APCD is governed by two committees. One committee focuses on data policy issues, while the other focuses on data release processes and requests.[124] Committee members include multidisciplinary stakeholders such as provider, hospital, public health, health-maintenance organization, purchaser, and consumer stakeholder groups, and representatives from the two largest insurance carriers submitting data to the APCD.[125] The state is still implementing its system and data are projected to begin being reported in March 2017.[126]

[116] "VHCURES History." Green Mountain Care Board. Accessed March 29, 2017. http://gmcboard.vermont.gov/hit/vhcures/history.

[117] NORC analysis of VT Data dictionary, available via "VHCURES Claims Submission Information." Green Mountain Care Board. Accessed March 30, 2017. http://gmcboard.vermont.gov/hit/vhcures/data-user-information

[118] "All Payer Claims Database (APCD)." Virginia Health Information. Accessed March 29, 2017. http://vhi.org/APCD/.

[119] "Overview of the Virginia All Payer Claims Database." Virginia Health Information. http://vhi.org/flyers/APCD%20Overview.pdf

[120] "Overview of the Virginia All Payer Claims Database." Virginia Health Information. http://vhi.org/flyers/APCD%20Overview.pdf

[121] "All Payer Claims Database (APCD)." Virginia Health Information. Accessed March 29, 2017. http://vhi.org/APCD/.

[122] "Washington All Payer Claims Database." Oregon Health & Science University. Accessed March 29, 2017. http://www.ohsu.edu/xd/research/centers-institutes/center-for-health-systems-effectiveness/wa-apcd-governance-information/index.cfm.

[123] "Washington All Payer Claims Database." Oregon Health & Science University. Accessed March 29, 2017. http://www.ohsu.edu/xd/research/centers-institutes/center-for-health-systems-effectiveness/wa-apcd-governance-information/index.cfm.

[124] "WA-APCD Rules and Governance." Oregon Health & Science University. Accessed March 29, 2017. http://www.ohsu.edu/xd/research/centers-institutes/center-for-health-systems-effectiveness/wa-apcd-governance-information/rules-governance.cfm.

[125] "WA-APCD Rules and Governance." Oregon Health & Science University. Accessed March 29, 2017. http://www.ohsu.edu/xd/research/centers-institutes/center-for-health-systems-effectiveness/wa-apcd-governance-information/rules-governance.cfm.

[126] "WA-APCD Rules and Governance." Oregon Health & Science University. Accessed March 29, 2017. http://www.ohsu.edu/xd/research/centers-institutes/center-for-health-systems-effectiveness/wa-apcd-governance-information/rules-governance.cfm.

Summary and Conclusions

We found that data from multiple data sources had characteristics that aligned favorably relative to these considerations. We summarize qualitative findings in our report. In the information we gathered for this research, we note where significant information was missing or where the information we obtained seems inconsistent.

For the purposes of this report, we gathered information from interviews and public websites on the number of covered lives and total claims included in each vendor's database. Exhibit A presents this information. According to what we were able to gather:

- BHI data includes information on approximately 60 million privately insured covered lives per year,[127]
- FAIR Health has claims data on 150 million privately insured covered lives per year,[128]
- HCCI's data includes information on 50 million covered lives per year (including privately insured and Medicare Advantage),[129] and
- Truven data includes 28 million privately insured covered lives per year.[130]

These figures suggest that the databases are of sufficient size to have adequate coverage in many areas to set benchmarks. The best data source, however, will likely depend on the particular geographic area. Careful analysis should be done of the available microdata to determine whether the data are "fit for use" (in terms of population coverage and representativeness) in any geography of interest. We were unable for this report to assess completeness of claims for each covered life or how well the individuals included in the data represent the underlying population. It's possible that in some geographic areas a vendor with complete claims on a smaller (but more representative) number of covered lives could be more appropriate than a data set with incomplete claims records on a larger set of covered lives that systematically excludes segments of the underlying population.

The NORC team sought pricing information for licensing each organization's data. Much of the pricing information we were able to obtain was relevant to licensing data for individual research projects as opposed to operational purposes such as identifying the minimum benefit standard. We conclude that pricing for "non-research" purposes depends on factors such as the geographic area and use case for which data are needed and likely will vary depending on detailed requirements. This makes it difficult to draw direct pricing comparisons between the organizations. However, it is relevant to note that FAIR

[127] From interview

[128] http://www.fairhealth.org/ContributeData, and from phone conversation with FAIR Health that confirmed 150 million covered lives was an annual figure.

[129] http://www.healthcostinstitute.org/wp-content/uploads/2016/11/How-Data-Unique-June-2016_0.pdf

[130] From interview

Health does not charge licensing fees to states where their data are used to support setting a standard for out of network services.

Overall, this review showed that FAIR Health, HCCI, and state APCDs are important potential sources of data for the minimum benefit standard policy use case.[131] Whereas Truven and BHI also may have data relevant—depending on the state and geographic area—to this use case, both organizations noted that they do not license their data for public benchmarking, and we did not find examples of arrangements either organization has with government entities for benchmarking.

Based on our research, Fair Health is the only vendor whose data are being used for the specific purpose of establishing reimbursement standards for out-of-network services in more than one state and who currently make their data available for this purpose broadly across the United States. As a pragmatic matter, this may be the most important consideration. While there are barriers to using an APCD to establish a national approach to minimum benefit standards, depending on its status, an APCD in any given state may offer the best coverage of the total insured population within the state and all the necessary data elements to support this standard for smaller geographic locations within that state. However, the Supreme Court's decision in *Gobeille v. Liberty Mutual Insurance Company*, may limit state governments' ability to secure participation in APCDs by self-insured health plans. But while the *Gobeille* decision does not allow states to mandate claims submission by self-insured plans, our experience in selected states shows that some self-insured plans may yet continue submitting claims to their APCD.[132]

For these reasons, the optimal source of data for determining a minimum benefit standard may vary depending on geographic location and the priorities of any given policymaker. Because circumstances and requirements will vary by geographic area, we encourage stakeholders to contact relevant organizations directly to assess the compatibility of a given data asset to their needs. Many of the considerations raised in this report might facilitate these discussions.

NORC employed qualitative research methodologies only, and our characterizations are based on a summary review of publicly available information and discussions with stakeholders. The scope of the report did not allow independent validation of these claims through firsthand inspection of the data or analysis using the data to understand the strengths and limitations for use in specific policy relevant purposes (such as establishing a minimum benefit standard for out-of-network services). We also note that data access and availability policies associated with each vendor and data organization are evolving as the policy landscape changes.

[131] The viability of using APCDs for benchmarking will vary by state. Some states are much further along in developing an APCD than others. Furthermore, in states where a substantial share of the population is covered through self-insured health plans, APCDs have limited coverage. The Supreme Court in *Gobeille v. Liberty Mutual Insurance Company* ruled that states cannot mandate that these plans submit claims to the APCD. The effect of this ruling should be considered on a state-by-state basis, as our experience shows that some self-insured plans in some states continue to submit data to the APCD even absent the mandate.

[132] This is NORC's understanding based on our work with APCDs in two states. However, the approach taken by ERISA plans will vary by state.

While we were able to obtain useful information about the data sources through qualitative research, we also believe that future reports of this type could benefit from analysis of the sources' microdata. It would also be useful for researchers if vendors and data organizations were to produce publicly available data quality reports that could help potential users better understand the sources. These data quality reports should include information such as the specific number of unique covered lives by payer type in any given year (e.g., group, individual, and Medicare Advantage); how the data link individuals from different data sources to ensure individual people are not counted more than once in the final dataset; what percentage of total claims are available for a unique individual person; what types of claims may be missing systematically from the database; what specific manipulations were made to the data to comply with national and state laws (e.g., HIPAA or anti-trust); and any other relevant data editing, cleaning, or harmonization that is done in aggregating the data. Producing detailed data quality reports would enable potential users to better understand how these data are able to meet the specific policy needs of users.

Exhibit A summarizes our findings for each of the vendors.

Exhibit A: Summary of Claims Database Vendors

Data Owner or APCD	Blue Health Intelligence	FAIR Health	Health Care Cost Institute	Truven MarketScan
Mission	Provide analytics, data consulting, and software services to BCBS plans and other customers such as hospitals, government, and medical device industry. Provide analytic consulting to the Blue Cross Association.[133]	To increase transparency in health care costs and health insurance information through comprehensive data products and consumer resources.[134]	Promote independent research and analyses on the causes of rising health spending, provide more transparent information on what is driving health care costs, and ensure that the nation gets a greater value from its health spending.[135]	To lower health costs, improve quality, produce better health outcomes.[136]
Board Composition	Board is comprised of representatives from BCBS plans.[137]	The FAIR Health board of directors is comprised of individuals in the fields of medicine, health care policy, law, consumer advocacy, technology, education, medical research, and business.[138] Board members serve without compensation.	HCCI board includes members from the academic, actuarial, and medical communities.[139] Board members serve without compensation.	Truven's management includes leaders from the health care industry and private business.[140]
Data Contributors	30 BCBS plans.[141]	60 national and regional insurers, TPAs, and employers.[142] CMS Qualified Entity with access to Medicare and Medicaid data.	Aetna, Humana, Kaiser Permanente, and UnitedHealthcare.[143] CMS Qualified Entity with access to Medicare and Medicaid data.	Primarily employer-provided data but does include some Medicare claims data.[144]

[133] From interview.
[134] http://www.fairhealth.org/About-FH
[135] http://www.healthcostinstitute.org/about-hcci/mission-vision/
[136] From interview.
[137] From interview.
[138] http://www.fairhealth.org/About-FH
[139] http://www.healthcostinstitute.org/about-hcci/governing-board/
[140] From interview.
[141] From interview.
[142] From interview.
[143] From interview.
[144] From interview.

Data Owner or APCD	Blue Health Intelligence	FAIR Health	Health Care Cost Institute	Truven MarketScan
Years Available	2005 to present (12 years)[145]	2002 to present (16 years)[146]	2007 to present (11 years)[147]	1995 to present (23 years)[148]
Known Ways to Access Data[149]	■ Licensed to businesses, providers, other vendors ■ Because we did not find examples of the use of BHI data for the minimum benefit standard use case, we do not have relevant pricing information.	■ Licensed to government, insurers, businesses, providers, and academic researchers. ■ Public cost transparency tool (FAIR Health Consumer): http://fairhealthconsumer.org/ ■ Mobile app for FAIR Health Consumer ■ While other costs may apply, information we gathered suggests that FAIR Health does not charge state governments licensing fees for using their data for the minimum benefit standard use case.	■ Public reports ■ Licensed to academics, actuarial organizations, and government agencies to conduct research. ■ Public cost transparency tool (Guroo): https://www.guroo.com/ ■ RWJ grant *Health Data for Action* ■ State Health Policy Grant Program ■ Because we did not find examples of the use of HCCI data for the minimum benefit standard use case, we do not have relevant pricing information.	■ Licensed to government organizations, businesses, nonprofits, and academics. ■ Because we did not find examples of the use of Truven data for the minimum benefit standard use case, we do not have relevant pricing information

[145] https://bluehealthintelligence.com/markets/index.html

[146] From interview.

[147] From interview.

[148] From interview.

[149] We are unable to provide comparable information on cost of data access. Vendors use different models depending on the purpose, and costs vary based on the amount and type of data requested, methods for data access, and other factors. Based on the information we have, if they agree to make available for the purpose of defining a "minimum benefit standard" or similar policy tool, vendors may consider this a "custom use" that would be priced differently depending on the needs of any given agency.

Data Owner or APCD		Blue Health Intelligence	FAIR Health	Health Care Cost Institute	Truven MarketScan
Volume[150]	Unduplicated commercial lives and claims in the most recent year[151]	■ 60 million covered lives in a given year.[152] ■ Number of claims in most recent year not known	■ 150 million covered lives per year.[153] ■ Number of claims in most recent year not known.	■ 50 million covered lives per year including individual, group, and Medicare Advantage.[154] ■ Number of claims in most recent year not known.	■ 28 million covered lives in 2015.[155] ■ 600 million claims per year.[156]
	No. of commercial claims total all years	Not available	23 billion claims[157]	6 billion claims[158]	Not available
	No. of commercial lives total all years	165 million[159]	Not available	Not available	Not available
Percent claims with allowed charges		100%	50%	100%	100%

[150] We urge caution in interpreting volume numbers. As noted in the Executive Summary and Conclusions, a dataset with a larger number of claims or covered lives will not automatically be the "best" data source to use in any given geography. We did not have access to the microdata that would allow for careful assessment of completeness of claims and representativeness of the data on covered lives presented in this table.

[151] Even though this information is not available for many vendors based on information we have, it is more relevant than "total numbers" for the purpose of developing a standard for out-of-network reimbursement.

[152] From interview.

[153] http://www.fairhealth.org/ContributeData, and from phone conversation with FAIR Health that confirmed 150 million covered lives was an annual figure.

[154] http://www.healthcostinstitute.org/wp-content/uploads/2016/11/How-Data-Unique-June-2016_0.pdf

[155] From interview.

[156] From interview.

[157] http://www.fairhealth.org/ContributeData

[158] http://www.healthcostinstitute.org/about-hcci/fact-sheets/

[159] https://bluehealthintelligence.com/markets/index.html

Data Owner or APCD		Blue Health Intelligence	FAIR Health	Health Care Cost Institute	Truven MarketScan
Geographic coverage	Limited or no coverage areas	States where BCBS have a low market share; areas with BCBS plans that do not share data.	Has coverage in all states; limited in some states.	Has coverage in all states; weakest coverage is in states where the Blues have a dominant market share.	Less coverage in South and Northwest; data clustered in different metropolitan areas and large employers.
Limitations on data use	Other limitations	Data not licensed for benchmarking purposes.[160]	Data are licensed for benchmarking purposes.[161]	Data has been used for benchmarking in different contexts.[162]	Data not licensed for benchmarking purposes.[163]
Examples of related prior use		Not applicable	http://www.dfs.ny.gov/insurance/health/ON_guidance.htm http://www.ct.gov/cid/lib/cid/LH-NoticeRegardingBenchmarkDatabase.pdf	http://ahca.myflorida.com/Executive/Communications/Press_Releases/pdf/HCCIPressRelease.pdf http://www.healthcostinstitute.org/files/Final%20VT%20HCCI%20Release.pdf	Not applicable

[160] From interview.

[161] From interview.

[162] From interview. HCCI has made its data available to states for benchmarking-related purposes as shown in "examples of prior use."

[163] From interview.

Exhibit B: Summary of State APCDs

State	Type of Claims Data Available	Has a Public Transparency Tool?	Data Elements	Years Available	Number of Commercial Claims Total All Years	Number of Commercial Lives Total All Years
Arkansas	—	No	—	—	—	—
Colorado	—	Yes. Available at https://www.comedprice.org/	Allowed charge, billed charge, physician specialty, geographic location, place of service, date of service	Data year ranges depending on needs. State costs and utilization uses data from 2011 to 2014. Medical services prices reflect 2012 claims for commercial payers.[164]	—	—
Kansas	Medical, eligibility, dental, and pharmacy claims	No	—	Since July 2011, Kansas has acquired Medicaid claims databases, which are integrated into the data warehouse. The data warehouse also includes state employee health plan (2009 onward) and KHIIS commercial claims (2009 onward). All data are maintained on a rolling five-year cycle. 2009 to 2012 Medicaid data are fee for service; 2012 onward is managed care.[165]	—	—
Maine	Claims from commercial insurance carriers, third-party administrators and self-funded plans, pharmacy benefit managers, dental benefit administrators, MaineCare (Maine Medicaid), and Medicare	Yes. Available at www.comparemaine.org	Billed charge, physician specialty, geographic location, place of service, date of service	Maine has collected health insurance claims information in its APCD since 2003.[166]	—	—

[164] https://www.comedprice.org/#/home
[165] https://www.apcdcouncil.org/state/kansas
[166] https://mhdo.maine.gov/claims.htm

State	Type of Claims Data Available	Has a Public Transparency Tool?	Data Elements	Years Available	Number of Commercial Claims Total All Years	Number of Commercial Lives Total All Years
Maryland	Enrollment, provider, and claims data for Maryland residents enrolled in private insurance, Medicare, or Medicaid Managed Care Organizations	No	Allowed charge, billed charge, geographic location, place of service, date of service	Member eligibility, professional services, institutional, pharmacy claims available from 2010 forward. Dental claims available from 2014 forward.[167]	—	—
Massachusetts	Data from commercial payers, third-party administrators and public programs such as Medicare and MassHealth, and Massachusetts's Medicaid program	No	Allowed charge, billed charge, physician specialty, geographic location, place of service, date of service	January 1, 2011 to December 31, 2015, with minimum run out through March 30, 2016.[168]	—	—
Minnesota	Medicaid and Medicare plans	No	Billed charge, geographic location, place of service, date of service	2009 to 2015 [169]	1.1 billion[170]	4.3 million[171]
New Hampshire	Claims from commercial payers, third-party/self-funded, Medicaid, and Medicare	Yes. Available at nhhealthcost.nh.gov	Allowed charge, billed charge, physician specialty, geographic location, place of service, date of service	—	—	—
Oregon	Medical and pharmacy claims, enrollment data, premium information, and provider information for commercial insurers, Medicaid, and Medicare	No	Billed charge, physician specialty, geographic location, place of service, date of service	Commercial, Medicaid, Medicare available from 2010 to present.[172]	—	About 3.2 million[173]

[167] http://mhcc.maryland.gov/mhcc/pages/apcd/apcd_data_release/apcd_data_release_mcdb.aspx.
[168] http://www.chiamass.gov/assets/docs/p/apcd/release5/CHIADOCS-GOVT-APCD-R5.0-FINAL.pdf.
[169] http://www.health.state.mn.us/healthreform/allpayer/mnapcdoverview.pdf.
[170] http://www.health.state.mn.us/healthreform/allpayer/mnapcdoverview.pdf.
[171] http://www.health.state.mn.us/healthreform/allpayer/mnapcdoverview.pdf.
[172] https://www.oregon.gov/oha/analytics/APACPageDocs/APAC-Overview.pdf.
[173] https://www.oregon.gov/oha/analytics/APACPageDocs/APAC-Overview.pdf.

State	Type of Claims Data Available	Has a Public Transparency Tool?	Data Elements	Years Available	Number of Commercial Claims Total All Years	Number of Commercial Lives Total All Years
Rhode Island	Eligibility, medical claims, members, pharmacy claims, procedure codes, product codes, providers, and more	No	Allowed charge, billed charge, physician specialty, geographic location, place of service, date of service	2011 forward for private insurer and Medicaid. Medicare FFS are available from 2011 to 2013.[174]	—	824,537 lives as in 2014[175]
Tennessee (in implementation)	—	—	—	—	—	—
Utah	Medical, pharmacy, dental, enrollment, and provider claims	No	Billed charge, place of service, date of service	—	—	—
Vermont	Health insurers, third-party administrators, pharmacy benefit managers, self-insured plans, Medicare supplement, Medicare parts C and D	No	Billed charge, physician specialty, geographic location, place of service, date of service	—	—	—
Virginia	Medical claims, pharmacy claims, member eligibility and medical provider	No	—	—	—	About 3.5 million176
Washington (in implementation)	—	—	—	—	—	—

[174] http://www.health.ri.gov/data/healthfactsri.

[175] http://www.health.ri.gov/data/healthfactsri.

[176] http://vhi.org/flyers/APCD%20Overview.pdf.

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