



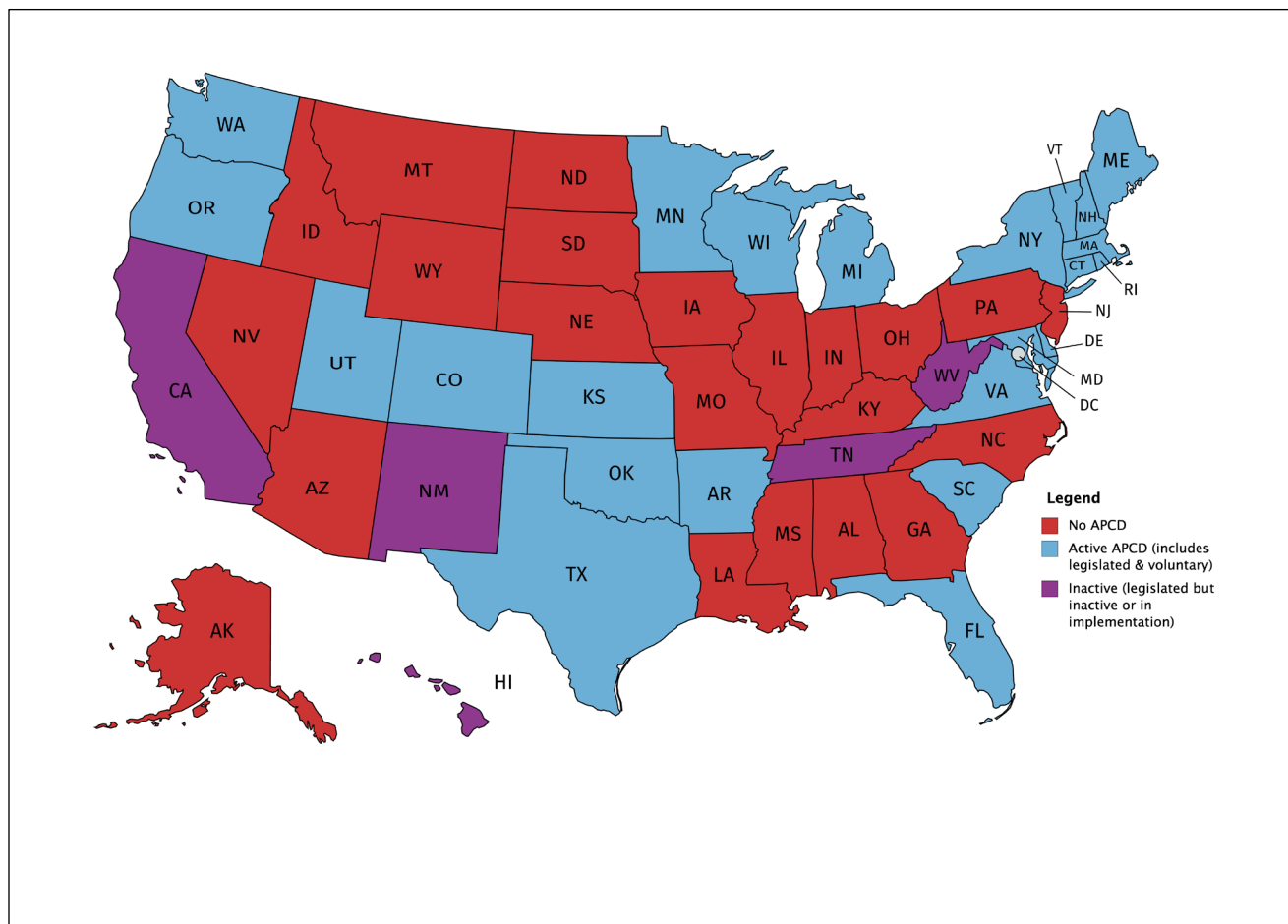
EMPLOYERS' FORUM OF INDIANA

Addressing the challenges of the local healthcare marketplace

White Paper: Overview of All-Payer Claims Databases in the United States

A Report for Employers and Other Health Care Purchasers

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Executive Summary

The number and transparency of All Payer Claims Databases, APCDs, has been increasing in recent years, signaling that states hope that purchasers of health care will use such a tool to allow them to shop for healthcare services in a more rational manner. Ideally, an APCD would provide insight on quality, price, and efficiency of services at the provider level. For the purposes of this paper, purchasers are defined as any person or organization who pays for health care services, including the general public, self-funded employers, Medicaid, Medicare, and private insurance companies for their fully-insured clients. By providers, we mean practitioners, hospitals, emergency departments, urgent care facilities, skilled nursing facilities, laboratories, imaging centers, surgical centers, and all other organizations at which health care services are purchased. The promise of an APCD to purchasers is that it is a tool which allows for transparent, evidenced-based, easily accessible, unbiased, health information to permit them to “shop” for services BEFORE care is provided.

One assumption of a public-facing APCD, which includes the actual negotiated prices paid to providers (commonly known as the allowed amount), is that price transparency will result in increased provider competition and thus lower provider prices overtime. In addition to price information, including quality and efficiency information in an APCD provides purchasers what they need to shop for the best value. This provides an opportunity to not only select care from high quality and best price providers, but also from those who do not conduct unnecessary procedures and services. However, at the time this paper is written, most APCDs do not publicly present information at the level of granularity that is actionable to purchasers. Interestingly, some states permit access to their raw APCD claims data for research purposes and policy support, while others have stringent regulatory limitations prohibiting analyses to be conducted or publicly presented, at the level of individual provider. Additionally, technical issues in determining practitioner and hospital attribution to health-systems has been challenging as data elements are designated by the billing provider NPI (national provider identifier), and not necessarily by the where services were provided. Thus, while the promise is to produce a more informed shopper of health care, in most cases, that promise is not able to be realized. Assuring price, quality, and efficiency transparency at the provider level is critical if purchasers are to use this tool in an actionable manner to make decisions on where to buy health care.

Our review, completed in the Fall of 2019, revealed that APCDs are primarily used to inform public policy and provide public health trends. As such, it is challenging to determine return-on-investment (ROI) of an APCD. In July 2019, the US Congressional Budget Office conducted a cost estimate assessment for a national APCD and found that there is no expected direct ROI.¹ It is important to note that the scale of a national APCD is different than that for individual state APCDs, thus decreasing the generalizability of those calculations for individual states.

The Colorado and New Hampshire APCDs are two excellent examples we have selected to review in greater detail. They both provide price and quality transparency to purchasers, with the New Hampshire APCD also providing public price and quality transparency at the hospital and health plan level. The New Hampshire government manages and funds their APCD, while Colorado’s APCD is privately managed under a state mandate and is independently financially sustainable.

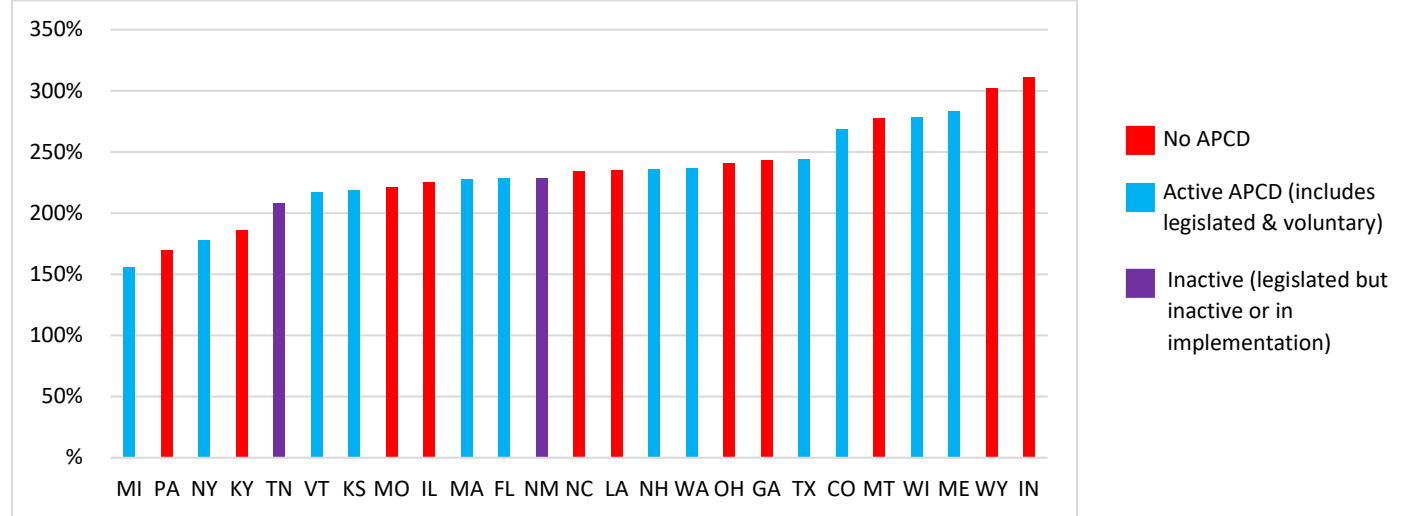
In Figure 1, we note the results of a Rand Corp study looking at relative hospital prices paid by private health plans as a percent of what Medicare pays for hospitals in 25 states and layered on top of this the

APCD status of these 25 states.² It becomes clear that while New Hampshire has had a robust APCD established for 15 years, that their hospital prices are above the national average. In fact, 14 of the 25 states have lower hospital prices than New Hampshire, many of which do not have an APCD. The same can be said for Colorado which was found to have the 6th highest hospital prices, resulting in 19 states with lower hospital prices. In analyzing all 25 states in the RAND study and looking at whether they have an APCD or not, or whether they have a robust APCD, it becomes clear from our analysis having an APCD does not result in lower hospital prices.

Ideally, an APCD would include claims data from all payers, including self-funded employers, health plans with fully insured members, Medicare, Medicaid, and others. However, currently many self-funded employer claims data cannot be required to be in state APCD. This important limitation is a result of a US Supreme Court ruling in the case of *Gobeille vs. Liberty Mutual* (2016).³ This ruling disallows states from forcing self-insured employers who fall under the Employee Retirement Income Security Act of 1974 (ERISA) to submit their healthcare data to an APCD. This does not preclude ERISA employers from voluntarily submitting information to an APCD, nor does it protect non-ERISA employers (including public self-funded insurance plans) from submitting information to an APCD. ERISA employer participation is more commonly observed in states that passed their APCD laws prior to the US Supreme Court ruling in 2016. However, a bipartisan federal bill was introduced in 2019 and should it pass in 2020, it would provide a solution for the ERISA preemption allowing states to compel all self-insured employers to submit data to state APCDs, regardless of ERISA status.⁴

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4. Meyer, H. Surprise billing package aims to end secrecy of provider-insurers contacts. (2019, December 13). Retrieved from <https://www.modernhealthcare.com/payment/surprise-billing-package-aims-end-secrecy-provider-insurer-contracts>.

Figure 1. Total Hospital Commercial Prices & All-Payer Claims Database



Source: Adapted from APCD Council Retrieved from <https://www.apcdouncil.org/>

Source: White, C., & Whaley, C. (2019). Prices Paid to Hospitals by Private Health Plans Are High Relative to Medicare and Vary Widely. Santa Monica, CA: Rand Corporation. Retrieved from https://www.rand.org/pubs/research_reports/RR3033.html.

Created by the Employers' Forum of Indiana, December 2019

Introduction

The United States leads the world in per capita health care spending, however the quality of care lags behind.¹ As health care costs continue to rise yearly above the rate of inflation, the demand for a more effective and efficient health care system is at a fever pitch.² Indiana is a microcosm of health care gone awry with infant mortality and life expectancy below that of the national average.^{3,4} Additionally, Indiana is ranked among the 10 worst states in health quality (41 out of 50).⁵ The Employers' Forum of Indiana commissioned the Rand Corporation to conduct the first national hospital price transparency study in the country to publicly report hospital negotiated prices paid as a percent of what Medicare pays for the same services. This study, published in May 2019, found that Indiana private health plans paid the highest prices to hospitals among the 25 states studied.⁶ Clearly, Indiana has a mismatch between what is paid for health services and the resulting health outcomes. To better understand opportunities to improve public health, 28 states have at some point implemented or attempted to implement an All Payer Claims Database, commonly referred to as APCD.

An APCD is an aggregation of health care data, reported to and maintained by a state authority or other private entity. The type of data collected is wide-ranging, reported by a variety of health care payers and data sources, and specific to an individual APCD. States require varying types of data to be submitted and generally include the amount of money paid for specific services, utilization data, and enrollment data. The level of granularity of the aggregated data also differs, with some states having granularity at the provider/institutional/hospital level, and others only at the county or geographical region level. The aim of these databases is to increase transparency in health care with the goal of creating a resource that can be used to reduce health care costs for purchasers, improve the quality provided to patients, improve overall efficiencies, and provide a foundation for market-driven strategies to move forward.

In our correspondence with APCD experts, we found that more recent initial contractual costs to start an APCD is approximately \$400,000-\$600,000. In our review, we found that the reported annual maintenance costs are \$0.7-\$4 million. Of note, we were not able to obtain cost information for all states.

While APCDs are widely diverse, we categorize them in this paper by, (1) whether they are part of a legislated effort by the state or if they are a part of a non-legislated effort led by stakeholders, and (2) whether the APCD is currently operational or not.

Of the 28 APCDs reviewed in this paper:

- 18 APCDs are state legislated and operational
- 5 APCDs are state legislated and are not operational, meaning they are either inactive or in implementation
- 5 APCDs are not state legislated but formed per a voluntary effort and all are operational

These 28 APCDs are summarized in table format in this paper. Colorado, Delaware, Michigan, Oklahoma, South Carolina, Texas, and Wisconsin APCDs are privately administered, though may be publicly funded, through a third, non-governmental party, with the remaining 21 being administered through a publicly funded governmental arm/agency. Washington is in the process of transitioning from a government managed APCD to a private organization. Data fields per state noted in this paper include the current

activity of the APCD, the payers required to submit data, the frequency of submission, the cost of maintaining the APCD, clinical outcome measures available, and economic outcome measures available.

1. Ridic, G., Gleason, S., & Ridic, O. (2012). Comparisons of health care systems in the United States, Germany and Canada. *Materia Socio Medica*, 24, 112-120.
2. Morgan, L. (2015). US Healthcare Annual Spending Estimated to Rise by 5.8% on Average Through 2024. *American Health & Drug Benefits*, 8, 272.
3. Measure of America. (2013). The Measure of America 2013-2014. Retrieved from <http://www.measureofamerica.org/wp-content/uploads/2013/06/MOA-III.pdf>.
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Methodology

The APCD Council webpage provided information on existing APCDs in the U.S. Each state's APCD website, if available, was reviewed along with a search of the published literature.

To achieve a more comprehensive overview of APCDs throughout the country, the authors of this paper plan to contact each APCD and update this paper.

Observations

While we noted several robust APCDs across the country, we describe two that excel in providing price and quality transparency.

New Hampshire

The New Hampshire APCD, the Comprehensive Healthcare Information System (CHIS), began collecting healthcare data in 2005, and is a model APCD. Patients, employers, and anyone can access their user-friendly, freely available, public website which notes information on quality and average prices paid for specific medical and dental services. This information can be found at <https://nhhealthcost.nh.gov/>. Through this website, consumers can search for the quality and price of specific services per health insurance plan. Each health service price represents the average price patients paid at respective institutions. For example, as of November 2019, a skin biopsy for a patient insured with Anthem costs \$199 at Dermatology Associates of South New Hampshire, and this price reflects an associated precision of “medium” and an average patient complexity of “medium.” Thus, an individual patient’s actual price paid should be in the ballpark of \$199, but it may vary somewhat depending on the complexity of procedure and the patient. This level of public price transparency allows all purchasers of healthcare services to shop for care and theoretically allows for marketplace competition as it empowers consumers with the information they need to actively participate in a free market.

Colorado

While the Colorado APCD was established in 2010, it began operations in 2012. The Colorado APCD is managed by the Center for Improving Value in Health Care (CIVHC). CIVHC has been offering new services near yearly and has a consumer facing website available at <https://www.civhc.org/>. It also provides various analyses upon request to advance legislative policy in both a published and interactive format. The published format includes quality measures, regional price differences, and hospital price differences. The interactive data includes modalities to view cost trends in the states, and information about the estimated costs per procedure per patient. There is no option to stratify the costs of procedures by type of insurance coverage. Notably, the Colorado APCD releases a substantial number of publications on healthcare systems. Annually, an extensive APCD report is published that includes summaries on data trends, changes to the APCD, data requests, costs of operations, and revenue generated from data requests. The Colorado APCD is an example of an APCD that generates revenue directly through data licensing fees from a variety of research entities. This takes advantage of the inherent value of an APCD that could be capitalized upon.

Public price and quality transparency could be useful to assist purchasers in shopping for health care. Shopping for health care however is different than shopping for other services for several reasons, including: (1) health care terminology is complex and the average lay person may not understand it, i.e. if a person has neck pain, he may not know if he should shop for an X-Ray, CT Scan, MRI with contrast or MRI without contrast; (2) health care, unlike candy or corn chips, is the type of product/service that one cannot opt out of if maintaining good health is the goal, and (3) often when people access health care, it is because an urgent issue presents itself and they do not have time to shop. Numerous studies have found that patients/employees simply do not use existing price transparency tools offered to them. However, it may be plausible that employers, including the state government and Medicaid, would find the information of value to inform design of their employee health benefits.

States with a Legislated APCD that is Operational

Arkansas

Arkansas All-Payer Claims Database	
Year Established	Legislation was passed in 2015 but was retroactive back to 2013. ¹
Activity Status	Yes ²
System Lead Public	Arkansas Center for Health Improvement (ACHI) ² with oversight from Arkansas Insurance Department (AID) and the Health Insurance Rate Review Division (HIRRD) ³
Involved Payers	Medicaid, Medicare, and fully insured private plans operating plans with at least 2000 enrollees ²
Frequency of Data Collected	Yearly ¹
Primary Users	State agency and health policy support ²
Initial Investment	An estimated \$1 million ⁴ from the Arkansas Healthcare Transparency Fund ⁵
Annual Maintenance Fee	In March of 2014, \$1.7 million was awarded for establishing APCD, and in June 2015, an additional \$1.05 million was awarded for additional development. ⁴ It was estimated that the projected maintenance costs would peak at \$4 million in 2018. ⁴
Clinical Outcomes	Medicare claims data from the APCD in 2013 was used to analyze diabetes in patients 65 and older. ³
Economics Outcomes	Not Available
Notes	<p>Since adoption, Arkansas has added hospital discharge and emergency department data for the uninsured, cancer registry data, birth and death records, and a flag for medical marijuana qualifying patients.⁶ More information about the APCD will be available in the next Biennial report which should be released in 2020 covering 2018 and 2019. While there isn't data to show that the APCD has saved Arkansas money, they have done a couple of studies to show how the APCD could potentially drive policy change to save money.³ The following examples are not all-inclusive.^{7,8}</p> <ul style="list-style-type: none"> • EpiPen Cost Trends • Healthcare Cost Trends: Developments Disability and Serious and Persistent Mental Illness • Smoking Attributable Costs <p>It has been noted that the Arkansas Biosciences Institute will continue to utilize the APCD data for research, but short-term funding is necessary to keep the program afloat.³</p>

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2. APCD Council. (n.d). Arkansas. Retrieved September 25, 2019 from <https://www.apcdouncil.org/state/arkansas>.
3. Arkansas Healthcare Transparency Initiative Standards. (n.d). Arkansas All Payer Claims Database 2016-2017 Biennial Report [PDF file]. Retrieved from <https://www.arkansasapcd.net/Docs/209/>.

4. Arkansas Healthcare Transparency Initiative. (2016, July 12). Board Meeting [PowerPoint slides]. Retrieved from <https://www.arkansasapcd.net/Docs/114/>.
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7. Arkansas Center for Health Improvement. (2019). Smoking Attributable Costs. [Fact Sheet]. Retrieved from https://achi.net/wp-content/uploads/2017/05/Smoking_Costs_MCD_COM_FINAL.pdf.
8. Arkansas Center for Health Improvement. (n.d). Reports and Maps. Retrieved September 25, 2019, from <https://www.arkansasapcd.net/ReportsAndMaps/>.

Colorado

Colorado All Payer Claims Database	
Year Established	APCD Legislation was passed in 2010, but yearly reporting began in 2012. ¹
Activity Status	Yes ²
System Lead Private	Center for Improving Value in Health Care (CIVHC) ²
Involved Payers	Medicare, Medicaid, Medicare Advantage, and the 21 largest commercial health plans. ²
Frequency of Data Collected	Monthly ³
Primary Users	Consumers, state agencies, researchers and academic institutions, hospitals, providers, government officials and legislators, employers and health plan brokers, non-profits, digital healthcare companies ²
Initial Investment	\$1.63 million ⁴
Annual Maintenance Fee	Increasing yearly: \$2.2 million in 2014 to \$4.2 million in 2018. ⁴ The cost of data storage alone costs \$220k annually. ⁴
Clinical Outcomes³	<ul style="list-style-type: none"> • Unplanned Hospitalizations • ER Visits • 30-day Readmissions • Pharmacy Scripts • Quality Measures • Trends related to Quality Measures • Geographic Variation • Chronic Condition Snapshots • Cancer Prevalence
Economics Outcomes	Not Available
Notes	<p>Funding is partially earned and partially granted.⁴ Consumers have access to a lot of price information at comedprice.org, which is something sort of unique to Colorado.³ Colorado's CIVHC plans to add quality of care to their current cost of care reporting, to allow for comparison across providers.⁴</p> <p>There is no ROI data, but Colorado is using their data for several studies⁴, as follows, that could potentially drive policy change to decrease healthcare costs.</p> <ul style="list-style-type: none"> • Urban vs Rural Healthcare Costs • Healthcare Expense Trends • Service Cost Trends • County Profiles • Overall Trends • Cost of Imaging Procedures • Total Cost of Care Multi-State Analysis • Opportunities for Savings • Firearm Injury Trends and Costs • Intraoperative Neuromonitoring Cost Comparisons

1. Colo. Rev. Stat. § 25.5-1 (2010). Retrieved from http://www.leg.state.co.us/CLICS/CLICS2010A/csl.nsf/fsbillcont3/7772EFE1E998E627872576B700617FA4?Open&file=1330_enr.pdf.
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3. Center for Improving Value in Healthcare. (2016). CO APCD Annual Report. <http://www.civhc.org/wp-content/uploads/2017/07/FINAL-2016-CO-APCD-Annual-Report-with-Bookmarks.pdf>
4. Center for Improving Value in Healthcare. (2019). Colorado All Payer Claims Database Annual Report. Retrieved from <https://www.civhc.org/wp-content/uploads/2019/01/2018-CO-APCD-Annual-Report-incl.-Appendices.pdf>.

Connecticut

Connecticut All Payer Claims Database	
Year Established	Legislation was passed in 2012 and implemented in 2013. ¹ Data Collection began in 2015. ²
Activity Status	Yes ³
System Lead Public	Connecticut Health Insurance Exchange d/b/a Access Health CT ⁴
Involved Payers	Insurers (not including Medicare or Medicaid), healthcare centers, hospitals, third party administrators, provider networks, and dental plan organizations. ⁵
Frequency of Data Collected	Not Available
Primary Users	Researchers, policy makers, state agencies, insurers, other professionals ⁶
Initial Investment	\$6.5 million ⁷
Annual Maintenance Fee	Not Available
Clinical Outcomes⁶	<ul style="list-style-type: none"> • Disease Diagnosis Trends • Acute Care Hospital and Outpatient Surgical Facility Data
Economics Outcomes	Not Available
Notes	The APCD was funded with grant money from CMS. ⁷ Over time, Access Health CT plans to release data reports online incrementally. As of now, the above reports are the only available. ⁶

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Delaware

Delaware Health Care Claims Database	
Year Established	Effective date of Jan 1, 2017, following Senate Bill 238 passing on June 30, 2016 to amend Title 16 of Delaware Code. ¹
Activity Status	In implementation ¹
System Lead Private	Delaware Health Information Network (DHIN) Board of Directors ¹
Involved Payers	Medicaid Program, the State Group Health Insurance Program, and “any qualified health plan in the Delaware Health Insurance Marketplace for plan year 2017 and any subsequent plan year”, but anyone can voluntarily report. ¹ The seven largest commercial insurers in the state also report. ²
Frequency of Data Collected	Not Available
Primary Users	Not Available
Initial Investment	Not Available
Annual Maintenance Fee	Not Available
Clinical Outcomes	Not Available
Economics Outcomes	Not Available
Notes	Revenue neutral, funded with grant money and other independent funds. ¹ APCD has been financially self-sustaining since 2012 using revenues from products and services to pay for cost of operation; prior to this, the APCD was a public-private partnership and received part of its funding from the public. ³

1. APCD Council. (n.d). Delaware. Retrieved October 19, 2019, from <https://www.apcdouncil.org/state/delaware>.
2. Delaware Health Information Network. (n.d). Delaware Health Care Claims Database. Retrieved October 19, 2019, from <https://dhin.org/healthcare-claims-database/>.
3. Delaware Health Information Network. (n.d). DHIN Funding. Retrieved from <https://dhin.org/about/dhin-funding/>.

Florida

Florida All Payer Claims Database	
Year Established	HB1175 passed in 2016. ¹
Activity Status	Yes ¹
System Lead Public	Florida Agency for Health Care Administration (AHCA) ¹
Involved Payers	Medicare and voluntary third-party payers ²
Frequency of Data Collected	To be determined
Primary Users	Policy holders, patients, government agency ²
Initial Investment	\$5 million ³
Annual Maintenance Fee	Not Available
Clinical Outcomes	Topics will be chosen each year for research, one of which is preventable hospitalizations. ²
Economics Outcomes	The goal is to make healthcare quality measures available to consumers for comparison of outcomes and performance measures of different services. ²
Notes	<p>Health Care Cost Institute (HCCI) was selected as the vendor for implementing the APCD, and they are working on implementation as of December 2019.¹ HB1175 also mentions healthcare transparency regarding facilities; participant facilities are required to submit data types specified in the act and make them available to patients per request. Health insurers are also asked to provide estimates for policyholders regarding cost-sharing, copayments, and out-of-network versus in-network service costs.²</p> <p>The contact person for Florida APCD is Beth Eastman, she can be reached at Beth.Eastman@ahca.myflorida.com.¹ The AHCA has developed a consumer-friendly website called floridahealthfinder.gov with resources and cost comparisons among facilities, yet limitations include coding discrepancies among hospitals, varying physician volume methodology, data strictly related to facility, and lack of actual cost estimates for consumers.⁴</p>

1. APCD Council. (n.d). Florida. Retrieved December 10, 2019, from <https://www.apcdouncil.org/state/florida>.
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3. Florida Agency for Healthcare Administration. (2015). Gov. Scott's Florida First Budget Will Make Florida First in Improving Transparency and Fighting Price Gouging at Hospitals. Retrieved from https://ahca.myflorida.com/Executive/Communications/Press_Releases/archive/docs/2015_2016/nov/Gov_Scott_Florida_First_Budget_Proposed.pdf.
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from <https://ahca.myflorida.com/schs/CommitteesCouncils/SCHIP/docs/2014-12-05/TabE-APCD-ValueProposition.pptx>.

Kansas

Kansas All Payer Claims Database	
Year Established	Legislation was first passed in 2004. ¹ Data collection began in 2010 ²
Activity Status	Yes ³
System Lead Public	Kansas Department of Health and Environment (KDHE) and the Division of Health Care Finance (DHCF) ³
Involved Payers	Commercial insurers and Medicaid ¹
Frequency of Data Collected	Data is maintained on a rolling five-year cycle. ³ Frequency of collection was not available.
Primary Users	Not Available
Initial Investment	\$3.1 million ⁴
Annual Maintenance Fee	Not Available
Clinical Outcomes⁶	<ul style="list-style-type: none"> • Access to Care • Health and Wellness Trends • Quality and Efficiency of Care
Economics Outcomes	Not Available
Notes	<p>Kansas has published several reports relating to healthcare cost and coverage that could potentially help drive policy change:⁵</p> <ul style="list-style-type: none"> • Market Price Index Comparisons • Insurance Mandates • Insurance Premiums and Market Characteristics • Provider Payments • Beneficiary Expenditures • Membership and Demographics • Affordability and Sustainability⁶ <p>Kansas has several programs that are all tied together and related to their APCD. The DHCF collects health data from Medicaid, CHIP, and SEHP but they are trying to implement another module for individual and small group insurance plans through a partnership with the Kansas Health Insurance Information System. This data is then reviewed by the Kansas Health Data Consortium. The website has not been updated since 2010, so it is not known how much data has been collected since or what the data is being used for.⁵</p>

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2. Richards, J., & Blewett, L. (2014). Making Use of All-Payer Claims Databases for Health Care Reform Evaluation. Retrieved from State Health Access Data Assistance Center, https://www.shadac.org/sites/default/files/publications/ACADDataAnalytics_Paper_%231_Making_Use_of_APCDs_for_web_0.pdf.
3. APCD Council. (n.d). Kansas. Retrieved September 25, 2019, from <https://www.apcdcouncil.org/state/kansas>.

4. Centers for Medicare and Medicaid Services, The Center for Consumer Information & Insurance Oversight. (n.d). Kansas Rate Review Grants Award List. Retrieved November 1, 2019, from <https://www.cms.gov/ccio/Resources/Rate-Review-Grants/ks.html>.
5. Kansas Department of Health and Environment. (n.d). Health Market Reports. Retrieved November 1, 2019, from http://www.kdheks.gov/hcf/medicaid_reports/Health_Care_Market_Reports.html.
6. Kansas Department of Health and Environment. (2010, June 23). Kansas Health Indicators. Retrieved November 1, 2019, from http://www.kdheks.gov/hcf/data_consortium/data_consortium_health_indicators/default.htm.

Maine

Maine All Payer Claims Database	
Year Established	Data collection began in 2003 ^{1,2}
Activity Status	Yes ²
System Lead Public	Maine Health Data Organization (MHDO) ²
Involved Payers	Commercial Insurances, Medicare, Medicaid, and third-party administrators ²
Frequency of Data Collected	Not Available
Primary Users	Consumers, state agencies, researchers and academic institutions, hospitals, providers, government officials and legislators, employers and health plan brokers ³
Initial Investment	\$4-5 million since 2002 ²
Annual Maintenance Fee	The MDHO has legislative authority to equally assess fees on providers and payers which provides revenue based on relative market share. The MDHO also receives a small amount of revenue from the sale of data. Unexpended funds are carried over to the following fiscal year. ⁴
Clinical Outcomes⁵	<ul style="list-style-type: none"> • Costliest Drugs • Drugs with highest year-over-year cost increase
Economics Outcomes	Not Available
Notes	<p>The \$4-5 million has been used for hardware and staff.² It is noted that the states that use a common format of other states can reduce start-up costs.²</p> <p>The MDHO website includes hospital and outpatient clinic data ("Hospital encounter data") which is not officially part of the APCD legislation, some of which dates back to the 1980s.⁶</p> <p>There is a consumer website available at www.comparemaine.org, as well as a FAQ page that provides a lot of information about the APCD and its data.^{2,7}</p>

1. Main Health Data Organization, Me. Stat. tit. 22, § 1683 (1995).
<http://www.mainelegislature.org/legis/statutes/22/title22sec8703.html>
2. APCD Council. (n.d). Maine. Retrieved September 25, 2019, from <https://www.apcdouncil.org/state/Maine>.
3. Maine Health Data Organization. (n.d). Current Data Requests. Retrieved October 27, 2019, from <https://mhdo.maine.gov/datarequest.aspx>.
4. Miller, P., Love, D., Sullivan, E., Porter, J., & Costello. A. (2010, May). All-Payer Claims Databases [PDF file.] Retrieved from http://www.statecoverage.org/files/SCI_All_Payer_Claims_ReportREV.pdf.
5. Maine Health Data Organization. (n.d). MHDO Prescription Drug Reports. Retrieved October 27, 2019, from <https://mhdo.maine.gov/tableau/prescriptionReports.cshtml>.
6. Maine Health Data Organization. (n.d). Pricing Information. Retrieved March 15, 2018, from https://mhdo.maine.gov/pricing_information.html.
7. Maine Health Data Organization. (n.d). Frequently Asked Questions. Retrieved October 27, 2019, from https://mhdo.maine.gov/faqs_data.html.

Maryland

Maryland All Payer Claims Database	
Year Established	Legislation passed in 1998 ¹ but wasn't fully expanded until 2011. ²
Activity Status	Yes ²
System Lead Public	Maryland Health Care Commission ¹
Involved Payers	Commercial insurers covering at least 1000 lives, Medicare, Medicaid, third party administrators, and self-insured employers. ²
Frequency of Data Collected	Not Available
Primary Users	Maryland Insurance Administration, Health Services Cost Review Commission, researchers, policymakers, purchasers, providers, public. ^{3,4}
Initial Investment	Not Available
Annual Maintenance Fee	Approximately \$1 million ²
Clinical Outcomes	Not Available
Economics Outcomes	Not Available
Notes	Maryland's APCD was not designed to promote transparency or quality control, but instead for policy use. Mostly used for system wide comparisons. ² They have a consumer website that compares healthcare costs for a few different common procedures (hysterectomy for example) and shows whether the discrepancy between locations is due to expected or unexpected costs. ^{3,4}

1. Maryland Medical Care Data Base and Data Collection, Md. Code, Com. Law § 19-101 (1998). Retrieved from <http://www.dsd.state.md.us/comar/SubtitleSearch.aspx?search=10.25.06>
2. APCD Council. (n.d). Maryland. Retrieved September 25, 2019, from <https://www.apcdouncil.org/state/maryland>.
3. Maryland Healthcare Commission. (2019, April 15). MCDB Reports and Use Cases. Retrieved October 28, 2019, from https://mhcc.maryland.gov/mhcc/pages/apcd/apcd_mcdb/apcd_mcdb_reports.aspx.
4. Maryland Healthcare Commission. (2014, June). State Health Care Expenditures [PDF file]. Retrieved from https://mhcc.maryland.gov/mhcc/pages/plr/plr_healthmd/documents/SHEA_State_Health_Care_Expenditures_20140601_rpt.pdf.
5. Maryland Health Commission. (n.d). Wear the Cost. Retrieved October 28, 2019, from <https://www.wearthecost.org/index.html>.
6. Maryland Healthcare Commission. (n.d). Costs We Know: Hysterectomy. Retrieved October 28, 2019, from <https://www.wearthecost.org/hysterectomy.html>.

Massachusetts

Massachusetts All Payer Claims Database	
Year Established	Legislation passed in 2009 and was retroactive to 2006. ^{1,2}
Activity Status	Yes ²
System Lead Public	Center for Health Information and Analysis (CHIA) ²
Involved Payers	Private and public insurers ²
Frequency of Data Collected	Monthly for Medical, Dental, and Pharmacy Claims, Member Eligibility, Provider, and Benefit Plan Control Total File; Product is collected quarterly. ³
Primary Users	Government Agencies, payers, providers, researchers ³
Initial Investment	\$7 million ²
Annual Maintenance Fee	Not Available
Clinical Outcomes⁴	<p>The APCD data has been used to:</p> <ul style="list-style-type: none"> • Look at causes of effective responses to public health concerns • Provide better understanding of the burden of chronic conditions • Understanding the dynamics of aging populations • Evaluate quality and costs of care: lung, colorectal, breast, and prostate cancer • Prevent mergers that could lead to increased costs and decreased quality of care • Identify wasteful spending that does not benefit patients
Economics Outcomes	Not Available
Notes	<p>CHIA has been actively trying to recruit businesses to participate in their APCD, which is important especially since many self-insured businesses are not obligated to report per ERISA.⁴</p> <p>CHIA is hoping to partner with providers and payers to improve coordination and delivery of patient care.³</p>

1. Center for Healthcare Information and Analysis, Mass. Gen. Laws ch.12C (2006). Retrieved from <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleII/Chapter12C>.
2. APCD Council. (n.d). Massachusetts. Retrieved September 25, 2019, from <https://www.apcdouncil.org/state/massachusetts>.
3. Center for Health Information and Analysis. (2014, March). Overview of the Massachusetts All-Payer Claims Database [PDF file]. Retrieved from <https://www.apcdouncil.org/sites/apcdouncil.org/files/media/state/ma-apcd-overview-2014.pdf>.
4. Center for Health Information and Analysis. (n.d). Your Business Can Help Control the Cost of Health Care in Massachusetts: Participate in the Massachusetts All-Payer Claims Database [PDF file]. Retrieved from <http://www.chiamass.gov/assets/docs/p/apcd/ma-apcd-employer-outreach.pdf>.

Minnesota

Minnesota All Payer Claims Database	
Year Established	Legislation passed in 2008 ¹ ; first collected data in 2009 ²
Activity Status	Active ²
System Lead Public	Minnesota Department of Health ²
Involved Payers	Medicare, Medicaid, TPA, commercial payers ²
Frequency of Data Collected	Pricing data: Annually; Encounter data: Every 6 months ¹
Primary Users	The Minnesota Department of Health researchers ³
Initial Investment	Not Available
Annual Maintenance Fee	Not Available
Clinical Outcomes	Several studies have been published using data from the APCD, including: <ul style="list-style-type: none"> • Low-Value Health Services • Pharmaceutical Spending and Use • State-based Risk Adjustment and Feasibility • Chronic Conditions • Potentially Preventable Health Care Events • Chronic Pain Procedures Other studies are underway regarding heart failure, hepatitis C, lung cancer screening. ⁴
Economics Outcomes	Not Available
Notes	Funding comes from general appropriations. ⁵

1. Payment Reform; Healthcare Costs; Quality Outcomes, MINN. STAT. 62U04 (2008). Retrieved from <https://www.revisor.mn.gov/statutes/cite/62U.04>.
2. APCD Council. (n.d). Minnesota. Retrieved September 25, 2019, from <https://www.apcdouncil.org/state/minnesota>.
3. Minnesota Department of Health. (2016, March). Minnesota All Payer Claims Database [PDF file]. Retrieved from <https://www.health.state.mn.us/data/apcd/docs/mnapcdoverview.pdf>.
4. Minnesota Department of Health, Health Economics Program. (2017, October). Current Uses of the Minnesota All Payer Claims Database. Retrieved from https://www.health.state.mn.us/data/apcd/docs/use_of_apcd_fact_sheet.pdf.
5. North Carolina Institute of Medicine. (2017, August). All Payer Claims Databases: A State-by-State Overview [Presentation]. Retrieved from <http://nciom.org/wp-content/uploads/2017/08/APCD-9-22-Presentation1.pdf>.

New Hampshire

New Hampshire All Payer Claims Database	
Year Established	Legislation passed in 2003; First year collected data 2005 ¹
Activity Status	Active ¹
System Lead Public	The NH Insurance Department (NHID); NH Department of Health and Human Services partner ¹
Involved Payers	Medicare, Medicaid, Commercial, TPA with Opt-In ^{1,2}
Frequency of Data Collected	Payers covering more than 100,000 lives: monthly; Payers with fewer than 100,000 lives: quarterly ³
Primary Users	NHID ¹
Initial Investment	Not Available
Annual Maintenance Fee	Approximately \$3M since 2005 ¹
Clinical Outcomes	<ul style="list-style-type: none"> • Population Health Utility • Medicaid Utility • NH Insurance Department Utility <ul style="list-style-type: none"> ○ Ambulance transport costs in NH ○ Impact of aging on commercial and self-insured insurance marketplace ○ Reimbursement contracts ○ Patient cost sharing on health care services • NH HealthCost Evaluation⁴
Economics Outcomes	ROI 2:1 - local analysis done in a public health department in Tamworth, NH ⁴
Notes	<p>Funding comes from Medicaid matching.⁵ Available to the public are yearly reports, which can be found online. The reports give information pertaining to utility, quality and costs. The public information is less comprehensive than that of other states. However, NH does allow for commercial interests to request and purchase data to fulfill purposes pursuant to the aims clarified in its rules.⁶</p> <p>Consumer website can be accessed at https://nhhealthcost.nh.gov/</p>

1. APCD Council. (n.d). New Hampshire. Retrieved September 25, 2019, from <https://www.apcdouncil.org/state/new-hampshire>.
2. The State of New Hampshire Insurance Department. (2016, November 22). Health Claims Data Submission/Self-Funded Private Employer Opt-In. [Bulletin]. Retrieved from <https://www.nh.gov/insurance/media/bulletins/2016/documents/INS16-034-ab.pdf>.
3. N.H. Rev. Stat. § 420-G:11 (2014). Retrieved from http://www.gencourt.state.nh.us/rules/state_agencies/ins4000.html.
4. de Beaumont Foundation. (n.d). All-Payer Claims Database [PDF file]. Retrieved from <https://www.astho.org/Health-Systems-Transformation/Medicaid-and-Public-Health-Partnerships/Case-Studies/New-Hampshire-All-Payer-Claims-Database/>.
5. North Carolina Institute of Medicine. (2017, August). All Payer Claims Databases: A State-by-State Overview [Presentation]. Retrieved from <http://nciom.org/wp-content/uploads/2017/08/APCD-9-22-Presentation1.pdf>.
6. N.H. Admin. Rules, Lab He-W 910.

New York

New York All Payer Claims Database	
Year Established	Legislation enacted in 2011; first year data collected in 2014 ^{1,2}
Activity Status	Active ²
System Lead Public	New York State Department of Health ²
Involved Payers	Medicare, Medicaid, state sponsored private healthcare plans
Frequency of Data Collected	Monthly ³
Primary Users	State Policy Makers/ Public Health Officials, Health Plans, Employers, Providers, Researchers, Consumers ²
Initial Investment	Not Available
Annual Maintenance Fee	Not Available
Clinical Outcomes	<ul style="list-style-type: none"> • Delivery System Reform Incentive Payment program, or DSRIP; • State Health Innovation Plan, or SHIP; • Population Health Improvement Program, or PHIP⁴
Economics Outcomes	Not available; mainly depending on data analytics ⁵
Notes	<p>Funding comes from grants and partnerships with other initiatives (HIE).⁶ The consumer website can be accessed at https://nyshc.health.ny.gov/web/nyapd/home. Authorized users need to submit application and pay fees to have access to the database.¹</p> <p>New York has modified the existing authority to collect hospital discharge data.⁵</p>

1. NYS Health Connector. (n.d). Background. Retrieved October 20, 2019, from <https://nyshc.health.ny.gov/web/nyapd/background>.
2. APCD Council. (n.d). New York. Retrieved October 20, 2019, from <https://www.apcdouncil.org/state/new-york>.
3. APD Data Submission, N.Y. Comp. Codes R. & Regs. tit. 10, § 350.2 (2018). Retrieved from <https://regs.health.ny.gov/volume-c-title-10/373299820/section-3502-apd-data-submission>.
4. Miller, P., Peters, A., Porter, J., & Sullivan, E. (2015, September). A New Lens for Consumer Transparency. Durham, NH: APCD Council. Retrieved from <https://www.apcdouncil.org/publication/new-york's-all-payer-database-new-lens-consumer-transparency>.
5. APCD Council. (2015, March). All-Payer Claims Database Development Manual [PDF file]. Retrieved from https://www.westhealth.org/wp-content/uploads/2015/04/All-Payer-Claims-Database-Development-Manual_03042015.pdf.
6. North Carolina Institute of Medicine. (2017, August). All Payer Claims Databases: A State-by-State Overview [Presentation]. Retrieved from <http://nciom.org/wp-content/uploads/2017/08/APCD-9-22-Presentation1.pdf>.

Oregon

Oregon All Payer Claims Database	
Year Established	House bill 2009 passed in 2009; first year data collected in 2010 ^{1,2}
Activity Status	Active ¹
System Lead Public	Office of Health Analytics, Health Policy and Analytics Division, Oregon Health Authority (OHA) ¹
Involved Payers	Medicare, Medicaid, CCOs, PBMs, SNPs, Commercial with at least 5,000 lives, voluntary ERISA plans ²
Frequency of Data Collected	Quarterly or annually depending on data type ²
Primary Users	OHA and external non-state users ¹
Initial Investment	\$700,000 ¹
Annual Maintenance Fee	Not Available
Clinical Outcomes	The database has been used to generate analyses under a variety of health care categories. Below are several projects that have been introduced: <ul style="list-style-type: none"> • Patient Centered Primary Care Home Evaluation • Monitoring Outpatient Antibiotic Prescribing • Public Health Surveillance of Chronic Diseases³
Economics Outcomes	Not Available
Notes	Funding comes from general appropriations. ⁴ Cost per data request is listed based on data type on the data request applications. ² Diaz-Perez et al. (2019) published a study on how to standardize healthcare quality and cost measures cross-state to increase the use of APCDs. The AHRQ funded this study. Four members of the Network of Regional Health Improvement Collaborative, naming Colorado, Massachusetts, Oregon, and Utah, partnered with National Bureau of Economic Research (NBER) and Harvard University for this study. ⁵

1. APCD Council. (n.d). Oregon. Retrieved October 20, 2019, from <https://www.apcdcouncil.org/state/oregon>.
2. Oregon Health Authority, Office of Health Analytics. (2018, March). Oregon All Payer All Claims Database (APAC) Frequently Asked Questions [PDF file]. Retrieved from <https://www.oregon.gov/oha/HPA/ANALYTICS/APAC%20Page%20Docs/APAC-FAQ.pdf>.
3. Oregon Health Authority. Oregon All Payer All Claims Database (APAC) Use Case Document. Retrieved from <https://www.oregon.gov/oha/HPA/ANALYTICS/APAC%20Page%20Docs/APAC-Use-Cases.pdf>.
4. North Carolina Institute of Medicine. (2017, August). All Payer Claims Databases: A State-by-State Overview [Presentation]. Retrieved from <http://nciom.org/wp-content/uploads/2017/08/APCD-9-22-Presentation1.pdf>.
5. Diaz-Perez, M., Hanover, R., Sites, E., Rupp, D., Courtemanche, J., & Levi, E. Producing Comparable Cost and Quality Results from All-Payer Claims Databases. *American Journal of Managed Care*, 25, e138-e144. Retrieved from <https://www.ajmc.com/journals/issue/2019/2019-vol25-n5/producing-comparable-cost-and-quality-results-from-allpayer-claims-databases>.

Rhode Island

Rhode Island All Payer Claims Database	
Year Established	Legislation (Chapter 23-17.17-9) passed in 2008; first year data collected in 2010 ^{1,2}
Activity Status	Active ²
System Lead Public	The Rhode Island Department of Health, the Office of the Health Insurance Commissioner, the Health Benefits Exchanges, and the Executive Office of Health and Human Services ²
Involved Payers	2011-present: Medicaid, private insurers 2011-2017: Medicare ³
Frequency of Data Collected	Monthly or quarterly depending on the preference of payers ¹
Primary Users	Medicaid, Dept. of Health, Health Insurance Commissioner and the Health Insurance Exchange ²
Initial Investment	Not Available
Annual Maintenance Fee	Not Available
Clinical Outcomes	Data can be used to: <ul style="list-style-type: none"> • Evaluate interventions and policy changes; • Identify cost drivers and spending trends; • Compare healthcare quality across providers; • Evaluate effects of new treatment; • Compare payers' or employers' population health to statewide averages.³
Economics Outcomes	Not Available
Notes	<p>Funding came from federal grants, Medicaid, the Health Insurance Exchange, the Office of the Health Insurance Commissioner, and the Dept. of Health.²</p> <p>The database does not collect identifiable information. Individual patients have the option to opt-out of the system.¹</p> <p>Users can apply for data product request. The application fee is \$100.³</p> <p>Rhode Island detected approximately \$90 million in unnecessary costs relating emergency room visits using data from the APCD.⁴</p>

1. Rhode Island Department of Health. (n.d). HealthFacts RI Frequently Asked Questions [PDF file]. Retrieved from <http://health.ri.gov/publications/frequentlyaskedquestions/HealthFactsRIFAQ.pdf>.
2. APCD Council. (n.d). Rhode Island. Retrieved October 20, 2019, from <https://www.apcdouncil.org/state/rhode-island>.
3. Rhode Island Department of Health. (n.d). Healthfacts RI Database. Retrieved October 20, 2019, from <http://health.ri.gov/data/healthfactsri/>.
4. Porter, J., Love D. (2018, November 8). The ABCs of APCDs. Retrieved from chcf.org/publication/the-abcs-of-apcds/.

Utah

Utah All Payer Claims Database	
Year Established	2009 ¹
Activity Status	Active ¹
System Lead Public	Utah Department of Health, Office of Health Care Statistics ¹
Involved Payers	Health insurance carriers, Medicaid, and third-party administrators ²
Frequency of Data Collected	Monthly ³
Primary Users	Healthcare providers, healthcare carriers, policy makers, and public health researchers, consumers ^{4,5}
Initial Investment	Not Available
Annual Maintenance Fee	General funding: \$615,000; Medicaid match: \$185,000 ¹
Clinical Outcomes	Research that has been published based on the APCD data series: <ul style="list-style-type: none"> • Compare the prevalence of a disease across population • Identify maternity cost in the state • Compare clinic quality • Identify provider payment methodology^{5,6}
Economics Outcomes	Not Available
Notes	The APCD includes information on diagnosis, procedures, costs, payment, patient demographics, eligibility, and medical/pharmacy/dental claims. The state does not have complete data for Medicare but plans to collect Medicare data in the future. Utah collects both identified and de-identified data sets. ^{1,4} Descriptions of each data type (limited use data, sample file, and research data) is available on the Utah Office of Health Care Statistics (OHCS) website. Data request accounts for \$50 request application cost plus the data fee. Pricing information is also published by the OHCS. ⁷

1. APCD Council. (n.d). Utah. Retrieved December 21, 2019, from <https://www.apcdouncil.org/state/utah>.
2. Utah Department of Health. (n.d). About All Payer Claims Data. Retrieved December 21, 2019, from <http://stats.health.utah.gov/about-the-data/apcd/>.
3. Health Insurance Claims Reporting, Utah Admin Code r. 428-15. Retrieved from <https://rules.utah.gov/publicat/code/r428/r428-015.htm>.
4. Utah Department of Health, Office of Healthcare Statistics. (n.d). Frequently Asked Questions. Retrieved December 21, 2019, from <http://stats.health.utah.gov/about/frequently-asked-questions/>.
5. Miller, P., Love, D., Sullivan, E., Porter, J., & Costello. A. (2010, May). All-Payer Claims Databases [PDF file.] Retrieved from http://www.statecoverage.org/files/SCI_All_Payer_Claims_ReportREV.pdf.
6. Utah Department of Health, Office of Healthcare Statistics. (n.d). Publications. Retrieved December 21, 2019, from <http://stats.health.utah.gov/publications/>
7. Utah Department of Health, Office of Healthcare Statistics. (n.d). Access to Data Series). Retrieved December 21, 2019, from <http://stats.health.utah.gov/about-the-data/data-series/>.

Vermont

Vermont All Payer Claims Database	
Year Established	Enactment of 18 V.S.A. 9410 in 2009 ¹
Activity Status	Active ²
System Lead Public	Vermont Green Mountain Care Board ²
Involved Payers	Medicare, Medicaid, commercial insurers, certain TPAs ¹
Frequency of Data Collected	Monthly: carriers with ≥2,000 members Quarterly: carriers with 500-1,999 members Annually: carriers with 200-499 members ³
Primary Users	Qualified users ¹
Initial Investment	Not Available
Annual Maintenance Fee	\$750,000 ²
Clinical Outcomes	Consumers are more likely to utilize health transparency websites for non-urgent health services such as outpatient office visits, second MRI or CT scan. ⁴
Economics Outcomes	Little attempt to capture ROI due to three main refrains: <ul style="list-style-type: none"> • Difficulty in obtaining accurate information about price/quality of care for analysis • ROI was not a main focus • Anecdotal evidence about APCD impact⁴
Notes	Funding comes from general appropriations, grants, and health systems. ⁵

1. Vermont Green Mountain Care Board. (n.d). VHCURES Overview [PDF file]. Retrieved from <https://gmcboard.vermont.gov/sites/gmcb/files/documents/VHCURES%20Overview%20Jan2019%20FINAL.pdf>.
2. APCD Council. (n.d). Vermont. Retrieved October 20, 2019, from <https://www.apcdcouncil.org/state/vermont>.
3. OnPoint Health Data. (2018, April). Data Submission Guide. Retrieved from <https://gmcboard.vermont.gov/sites/gmcb/files/documents/Onpoint%20-%20Data%20Submission%20Guide%20for%20VHCURES%20%28Version%202.2%29%20%282018-04%29.pdf>.
4. Green Mountain Care Board. (2015, October 1). Consumer Information and Price Transparency Report [PDF file]. Retrieved from <https://legislature.vermont.gov/assets/Legislative-Reports/GMCB-CIPTR-10012015.pdf>.
5. North Carolina Institute of Medicine. (2017, August). All Payer Claims Databases: A State-by-State Overview [Presentation]. Retrieved from <http://nciom.org/wp-content/uploads/2017/08/APCD-9-22-Presentation1.pdf>.

Virginia

Virginia All Payer Claims Database	
Year Established	2011 ^{1,2}
Activity Status	Active ²
System Lead Public	Virginia Health Information (VHI) under the authority of the Virginia Department of Health ¹
Involved Payers	Medicaid, Commercial insurers ¹
Frequency of Data Collected	Annually
Primary Users	VHI and custom users ²
Initial Investment	Initial 30-month funding in a total of \$3,281,500 ¹
Annual Maintenance Fee	Expenses of the VHI on APCD in 2016: \$270,548 ³
Clinical Outcomes	<ul style="list-style-type: none"> Population Health: prevalence and cost burden of individual diseases, immunization rates, and patient medication adherence Provider and Health Plan Comparisons: referral patterns and leakage, industry standard and custom quality metrics, and market share information for all inpatient and outpatient services Trends in the Cost and Utilization of Healthcare Services: rates of emergency room utilization, opioid prescription trends, and the average cost of healthcare services such as those displayed within the VHI Healthcare Pricing Report⁴
Economics Outcomes	Not Available
Notes	<p>Virginia passed a legislation for APCD but operates as a voluntary effort APCD.²</p> <p>Data access can be requested. The cost of dataset and report depends on the amount of data requested and the VHI staff time.²</p> <p>Funding comes from mixed resources: 40% from participating health insurance companies, 40% from the Virginia Hospital and Healthcare Association, and 20% from Virginia Health Information.¹</p> <p>Researchers found an estimated \$586 million in unnecessary spending by using data from the APCD⁵</p>

1. All-Payer Claims Database created; purpose; reporting requirements, Va. Code Ann. §32.1-276.7 (2012). Retrieved from <https://law.lis.virginia.gov/vacode/title32.1/chapter7.2/section32.1-276.7:1/>.
2. APCD Council. (n.d). Virginia. Retrieved October 22, 2019, from <https://www.apcdouncil.org/state/virginia>.
3. Virginia Health Information. (2017). 2017 Annual Report and Strategic Plan Update [PDF file]. Retrieved from <https://rga.lis.virginia.gov/Published/2017/RD314/PDF>.
4. Virginia Health Information. (n.d). All Payer Claims Database (APCD). Retrieved October 29, 2019, from <https://www.vhi.org/apcd/>.
5. Porter, J., Love D. (2018, November 8). The ABCs of APCDs. Retrieved from chcf.org/publication/the-abcs-of-apcds/.

Washington

Washington All Payer Claims Database	
Year Established	WA-APCD: Chapter 43.371 of the Revised Code of Washington ¹ Washington All Payer Claims Database: 2007 ²
Activity Status	Is switching from a voluntary database to a mandatory database ³
System Lead Public and Private	WA-APCD: Washington State Health Care Authority (HCA) Washington All Payer Claims Database: Washington Health Alliance ²
Involved Payers	WA-APCD: Medicaid, Commercial insurers ¹ Washington All Payer Claims Database: Medicaid, Commercial insurers, voluntary TPAs ²
Frequency of Data Collected	Not Available
Primary Users	WA-APCD: purchasers, providers, health plans, consumers, and other industry stakeholders ²
Initial Investment	WA-APCD: CMS Cycle III and Cycle IV ¹ Washington All Payer Claims Database: \$1.5 million ²
Annual Maintenance Fee	Washington All Payer Claims Database: \$20 million to date ²
Clinical Outcomes	The WA-APCD aims to reduce underuse of effective care (chronic disease management, prevention screening) and reduce overuse (hospital readmissions, intensity of care, ER services). ⁴ The WA-APCD established several tools for consumers: Choosing Wisely, Community Checkup, Your Voice Matters, First Do No Harm Report, Generic Drug Prescribing Report. ⁵
Economics Outcomes	Not Available
Notes	In May 2019, the Washington Health Alliance issued a blog to report a successful pass through both houses of Washington legislature regarding a single statewide APCD (SB 5741). The contract with the lead organization of WA-APCD terminated on June 30, 2019. The Alliance is hoping to be considered for the role of the state's lead organization. The procurement process will ensure a single APCD in Washington. ³ As of December 2019, Washington State Health Care Authority (HCA) remains in negotiations with the private Washington Health Alliance, thus remains government managed for now. ⁶

1. APCD Council. (n.d). Washington Legislatively Mandated Effort. Retrieved October 29, 2019, from https://www.apcdcouncil.org/state/washington-existing_
2. APCD Council. (n.d). Washington Voluntary Effort. Retrieved October 28, 2019, from <https://www.apcdcouncil.org/state/washington-mandated>.
3. Giunto, N. (2019, May 2). Washington Moves Closer to A Single All-Payer Claims Database [Blog post]. Retrieved from <https://wahealthalliance.org/washington-moves-closer-to-a-single-all-payer-claims-database/>.
4. Washington Health Alliance (n.d). Reducing Price. Retrieved from <https://wahealthalliance.org/what-we-do/reducing-price/>.
5. Washington Health Alliance (n.d). Alliance Reports. Retrieved October 28, 2019, from <https://wahealthalliance.org/alliance-reports-websites/alliance-reports/>
6. Washington Health Care Authority. Retrieve February 9, 2020, from <https://www.hca.wa.gov/about-hca/washington-state-all-payer-claims-database-wa-apcd>

States with a Legislated APCD that is not Operational

California

California All Payer Claims Database	
Year Established	2018 Budget Act included funding for APCD development and implementation. Will be presented July 2020 and should be completed in July 2023. ¹
Activity Status	In implementation ²
System Lead Public	Office of Statewide Health Planning and Development (OSHPD) ²
Involved Payers	Federal Trust Fund to Medical Providers Interim Payment Fund to California APCD ²
Frequency of Data Collected	Not Available
Primary Users	Not Available
Initial Investment	\$60 million ²
Annual Maintenance Fee	Not Available
Clinical Outcomes	Not Available
Economics Outcomes	Not Available
Notes	Many things are still being worked on in California. The bill lays out the fact that each of these things will be addressed, but the proposal is still in workshop. ³

1. Chang, S. (2018, November 27). AB 1810: California's Rough Road to an APCD Becomes Smoother [Blog post]. Retrieved from <https://sourceonhealthcare.org/ab-1810-californias-rough-road-to-an-apcd-becomes-smoother/>.
2. Office of Statewide Health Planning and Development. (2019, February). Cost Transparency Database Program – Phase 1 Implementation Plan [PDF file]. Retrieved from <https://oshpd.ca.gov/ml/v1/resources/document?rs:path=/Data-And-Reports/Documents/Topics/Cost-Transparency/Healthcare-Payments/OSHPD-Healthcare-Cost-Transparency-Database-Phase-1-Implementation-Plan-February-2019.pdf>.
3. Cal. Com. Code §16531.1. Retrieved from https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB1810.

Hawaii

Hawaii All Payer Claims Database (Health Data Center)	
Year Established	2016 Act 139 established authority to collect claims data ¹
Activity Status	In implementation ¹
System Lead Public	State Health Planning & Development Agency (SHPDA)
Involved Payers	None currently, but planned for Medicare, Medicaid, and Commercial payers ¹
Frequency of Data Collected	Not Applicable
Primary Users	Not Applicable
Initial Investment	\$3 million ²
Annual Maintenance Fee	\$1.2 million ²
Clinical Outcomes	Hawaii's 2019 Plan includes points that they are going to focus on reporting in the future: ³ <ul style="list-style-type: none"> • Assess population health • Measure utilization of services • Improve coordination of care • Monitor and analyze healthcare costs • Inform customers of cost and quality of healthcare
Economics Outcomes	Not Available
Notes	The SHPDA released in their FY 2019 Annual Plan the timeline of data collection and objectives for their data collection. They are hoping to begin with Medicare and grow their collection from there beginning this year with historic data. ³

1. APCD Council. (n.d). Hawaii. Retrieved October 24, 2019, from <https://www.apcdouncil.org/state/hawaii>.
2. Centers for Medicare and Medicaid Services, The Center for Consumer Information & Insurance Oversight. (n.d). Hawaii Rate Review Grant Awards. Retrieved October 29, 2019, from <https://www.cms.gov/ccio/Resources/Rate-Review-Grants/hi.html>.
3. State Health Planning & Development Agency. (2018, June 28). FY 2019 Annual Plan [PDF file]. Retrieved from <https://phidc.ssri.hawaii.edu/wp-content/uploads/2018/06/FY-2019-SHPDA-HHDC-APCD-Annual-Plan.pdf>.

New Mexico

Delaware Health Care Claims Database	
Year Established	Planning began in 2016, first year included in the budget was for fiscal year 2020 ¹
Activity Status	In implementation ¹
System Lead Public	New Mexico Department of Health ¹
Involved Payers	Not yet determined
Frequency of Data Collected	Not Available
Primary Users	Not Available
Initial Investment	\$3800 ^{1*}
Annual Maintenance Fee	Not Available
Clinical Outcomes	Not Available
Economics Outcomes	Not Available
Notes	<p>In 2016, a collaboration between the National Association of Health Data Organizations and the University of New Hampshire's Institute for Health Policy and Practice fruited a publication envisioning a plan to bring an APCD to New Mexico. This plan argued that New Mexico has the privilege to start an APCD without a new legislation because prior legislation already gave the state authority.²</p> <p>In the 2020 fiscal year budget, a total of \$3800 was allotted for the APCD: \$2000 for the Department of Health to "provide transparency to medical procedures across the state for all New Mexicans," and \$1800 for the information technology sustenance of the APCD.¹</p>

*It is unclear whether the \$3800 total amount is the only amount allotted towards the APCD, or whether the APCD will also be funded through funds allocated to the Department of Health generally

1. State of New Mexico. (2019, January). Executive Budget Recommendation. Retrieved from <https://www.governor.state.nm.us/wp-content/uploads/2019/01/Executive-Budget-Recommendation-FY2020.pdf>.
2. The All-Payer Claims Database Council. (2016, March). A Plan for New Mexico's All-Payer Claims Database (APCD). Retrieved from <https://nmhealth.org/publication/view/plan/2273/>.

Tennessee

Tennessee All Payer Claims Database	
Year Established	2009 ¹
Activity Status	Inactive as of 2017 ¹
System Lead Public	Health Care Finance and Administration, TennCare ¹
Involved Payers	Medicaid and commercial ¹
Frequency of Data Collected	Monthly ²
Primary Users	Not Available
Initial Investment	Not Available
Annual Maintenance Fee	Annual budget of \$500,000 ¹
Clinical Outcomes	Not Available
Economics Outcomes	Not Available
Notes	The state used to collect identified data. ² Their APCD websites are not in operations as of time the paper is written.

1. APCD Council. (n.d). Tennessee. Retrieved October 19, 2019, from <https://www.apcdouncil.org/state/tennessee>.
2. Tenn. Comp. R. & Regs. 0780-01-79 (2010). Retrieved from <https://publications.tnsosfiles.com/rules/0780/0780-01/0780-01-79.20100908.pdf>.

West Virginia

West Virginia All Payer Claims Database	
Year Established	Not applicable
Activity Status	On hold ¹
System Lead Public	West Virginia Healthcare Authority ¹
Involved Payers	Medicaid, Medicare, and commercial (covered more than 500 lives in the previous calendar year) ²
Frequency of Data Collected	Not Available
Primary Users	Not Available
Initial Investment	\$200,000 ¹
Annual Maintenance Fee	Not Available
Clinical Outcomes	Not Available
Economics Outcomes	Not Available
Notes	The claims database is developed for policy decisions, discovery of geographic variation in health status and incidence of chronic diseases, and development of managed care. ¹

1. APCD Council. (n.d). West Virginia. Retrieved October 22, 2019, from <https://www.apcdouncil.org/state/west-virginia>.
2. W. Va. Code § 33-16G (2011). Retrieved from http://www.wvlegislature.gov/bill_status/bills_text.cfm?billdoc=SB350%20SUB1.htm&yr=2011&sesstype=RS&i=350.

States with a Voluntary APCD that is Operational

Michigan

Michigan All Payer Claims Database	
Year Established	Legislation supporting the development of an APCD was introduced and died in 2015, but the Michigan Data Collaborative (MDC) began collecting health data in 2010 and stands in its place. ^{1,2}
Activity Status	Active ¹
System Lead Private	University of Michigan - The Michigan Data Collaborative ^{1,2}
Involved Payers	Medicare, Medicaid, BCBS Michigan, Blue Care Network, and Priority Health. ¹
Frequency of Data Collected	Not Available
Primary Users	Physician organizations, practices, providers, evaluation contractors of the MAPCP program participants ¹
Initial Investment	Not Available
Annual Maintenance Fee	Not Available
Clinical Outcomes	Not Available
Economics Outcomes	Not Available
Notes	Michigan has a State Innovation Model (SIM) that was funded by CMS (\$70 million over 4 years) with the intention of improving the delivery and payment for healthcare within the state. ³ The SIM initiative is run by the MI Department of Health and Human Services (MIHHS) and it is broken into Population Health, Care Delivery, and Technology. ³ The MDC collaborates with the MIHHS in the Care Delivery sector as well as a few other organizations within the state. ⁴

1. APCD Council. (n.d). Michigan. Retrieved September 27, 2019, from <https://www.apcdcouncil.org/state/michigan>.
2. Michigan Data Collaborative. (n.d). Retrieved September 27, 2019, from <https://www.michigandatacollaborative.org>.
3. Michigan Department of Human and Health Services. (n.d). State Innovation Model. Retrieved from https://www.michigan.gov/mdhhs/0,5885,7-339-71551_64491---,00.html.
4. Michigan Data Collaborative. About Us. Retrieved November 1, 2019, from <https://www.michigandatacollaborative.org/about.html>.

Oklahoma

Oklahoma All Payer Claims Database	
Year Established	2009 ¹
Activity Status	Active ²
System Lead Private	MyHealth Access Network ¹ which is operated by Greater Tulsa Health Access Network, Inc ¹
Involved Payers	Medicaid, Medicare, Blue Cross, and Community Care of Oklahoma ²
Frequency of Data Collected	Not Available
Primary Users	Healthcare Providers
Initial Investment	Not Available
Annual Maintenance Fee	Not Available, but MyHealth Is a non-profit organization ³
Clinical Outcomes⁴	<p>MyHealth claims their Network can:</p> <ul style="list-style-type: none"> • Improve care coordination • Improve patients' experience • Improve quality of care <p>They also address social issues such as:</p> <ul style="list-style-type: none"> • Food insecurity • Housing insecurity • Utility needs • Transportation • Interpersonal violence
Economics Outcomes	Not Available
Notes	<p>The Health Care Cost Reduction and Transparency Act of 2016 required the State Department of Health to collect price and commercial payment information and make it available to the public.⁵ The OKSDH provides quality and cost information for hospitals, nursing homes, and physicians within the state. It does not appear that this is related to the OK APCD that is run by MyHealth Access.⁶ It seems as though the OKSDH runs more of an APCD whereas MyHealth Access is more like a Health Information Exchange, so it is not clear why the OKSDH does not claim the title of Oklahoma's APCD.</p>

1. My Health Access Network. (n.d). FAQ. Retrieved November 2, 2019, from <https://myhealthaccess.net/who-we-are/faq/>.
2. APCD Council. (n.d). Oklahoma. Retrieved October 9, 2019, from <https://www.apcdouncil.org/state/oklahoma>.
3. My Health Access Network. (n.d). Governance Privacy, & Security. Retrieved from <https://myhealthaccess.net/who-we-are/governance-privacy-security/>.
4. My Health Access Network. (n.d). What We Do. Retrieved November 2, 2019, from <https://myhealthaccess.net/what-we-do/>.
5. About Health Transparency. (n.d). Oklahoma. Retrieved November 2, 2019, from <https://abouthealthtransparency.org/report-card-directory/state-report-cards/oklahoma/>.

6. Oklahoma State Department of Health. (n.d). Consumer. Retrieved November 2, 2019, from https://www.phin.state.ok.us/ahrq/MONAHQR6_2014_2011/index.html#/consumer/.

South Carolina

South Carolina All Payer Claims Database *	
Year Established	Not Available
Activity Status	Active ¹
System Lead Private	Division of Medicaid Policy Research (MPR) at the University of South Carolina Institute for Families in Society ¹
Involved Payers	Medicaid ²
Frequency of Data Collected	Not Available
Primary Users	Researchers, policy makers, practitioners ³
Initial Investment	Not Available
Annual Maintenance Fee	Not Available
Clinical Outcomes²	MPR publishes fact sheets on several chronic illnesses and provides cost burden and prevalence information on them: <ul style="list-style-type: none"> • Asthma • ADHD • Breast Cancer • Cervical Cancer • COPD • Cardiovascular disease • Depression • Diabetes • End Stage Renal Disease • Hypertension • Obesity • Sickle Cell
Economics Outcomes	Not Available
Notes	MPR works collaboratively with: ³ <ul style="list-style-type: none"> • State Agencies • Systems of care and provider organizations • Policy makers • Federal agencies • Children and families at risk of poor health outcomes • Underserved or vulnerable populations • Major stakeholder organizations serving individuals with chronic conditions; individuals with disabilities; low-income populations <p>It serves the purpose of researching and analyzing healthcare in South Carolina with the intention of driving policy change.³</p>

1. APCD Council. (n.d). South Carolina. Retrieved November 3, 2019, from <https://www.apcdouncil.org/state/south-carolina>.

2. Institute for Families in Society. (2010). SFY 2010 SC Medicaid Chronic Disease Fact Sheets. Retrieved from <http://ifs.sc.edu/MPR/Factsheets/2011.asp>.

3. Institute for Families in Society. (n.d). The Division of Medicaid Policy Research. Retrieved from <http://ifs.sc.edu/MPR/default.asp>.

Texas

Texas All Payer Claims Database	
Year Established	Not Available
Activity Status	Active ¹
System Lead Private	University of Texas Center for Healthcare Data ¹
Involved Payers	Commercial, Medicaid and Medicare ²
Frequency of Data Collected	Not Available
Primary Users	Researchers; users authorized via application process ²
Initial Investment	Not Available
Annual Maintenance Fee	Not Available
Clinical Outcomes	Not Available
Economics Outcomes	Not Available
Notes	In 2011, Texas has attempted mandating a state APCD as one mission of the newly created Texas Institute of Health Care Quality and Efficiency at the Health and Human Services Commission (HHSC). However, the Institute was dissolved in 2015 and as of 2017, there was no new effort of mandating an APCD in Texas. ¹

1. APCD Council. (n.d). Texas. Retrieved October 22, 2019, from <https://www.apcdouncil.org/state/texas>.
2. The University of Texas Health Science Center at Houston, Center for Healthcare Data. (n.d). About. Retrieved October 22, 2019, from <https://sph.uth.edu/divisions/management-policy-comm-health/center-for-health-care-data/>.

Wisconsin

Wisconsin All Payer Claims Database	
Year Established	First year collected data: 2006 ¹
Activity Status	Active ¹
System Lead Private	Wisconsin Health Information Organization (WHIO) ¹
Involved Payers	Medicare, Medicaid, voluntarily participating commercial ²
Frequency of Data Collected	Every 6 months ³
Primary Users	Members: public players, health plans Subscribers: hospitals, medical networks, and physician practice groups ⁴
Initial Investment	\$4 million (includes staff/contracts/legal) ¹
Annual Maintenance Fee	Not Available; Depends on membership dues ⁵
Clinical Outcomes	Ratings for healthcare groups ⁴
Economics Outcomes	No ROI available; data used to analyze the cost of common procedures ⁴
Notes	WHIO is a non-profit 501(c)(3) organization. ² At the time the paper is written, WHIO Health Datamart is in transition to WHIO 2.0, operated by a Wisconsin based data management company called SymphonyCare. ⁶ Members and subscribers can request queries to generate reports of interest. ³ MyHealthWI.org is a website for patients to help patients choose their best fitted primary care clinic. ⁷

1. APCD Council. (n.d). Wisconsin. Retrieved October 22, 2019, from <https://www.apcdcouncil.org/state/wisconsin>.
2. Wisconsin Health Information Organization. (2018). A County Level Comparison of Quality and Effective Use of Resources for Primary Care Practices in Wisconsin [PDF]. Retrieved from <http://wisconsinhealthinfo.org/images/publications/WHIO-County-Level-Comparison-of-Primary-Care-6-14-18.pdf>.
3. Wisconsin Health Information Organization (n.d). Subscribers. Retrieved October 23, 2019, from <http://wisconsinhealthinfo.org/members-subscribers>.
4. Wisconsin Health Information Organization. (n.d). About. Retrieved October 23, 2019, from <http://wisconsinhealthinfo.org/about>.
5. APCD Council. (n.d). Wisconsin. Retrieved November 1, 2019, from <https://www.apcdcouncil.org/frequently-asked-questions>.
6. Wisconsin Health Information Organization. (n.d). News Events. Retrieved October 23, 2019, from <http://wisconsinhealthinfo.org/news-events>.
7. Wisconsin Health Information Organization. (n.d). Patients and Families. Retrieved from <http://wisconsinhealthinfo.org/patients-families>.