

Tracking Health Reform

The Future of State All-Payer Claims Databases

Lynn A. Blewett
Natalie Schwehr Mac Arthur
James Campbell
University of Minnesota

Abstract State policy makers are under increasing pressure to address the prohibitive cost of health care given the lack of action at the federal level. In 2020, the United States spent more on health care than any other country in the world—\$4.1 trillion, representing 19.7% of the nation's gross domestic product. States are trying to better understand their role in health care spending and to think creatively about strategies for addressing health care cost growth. One way they are doing this is through the development and use of state-based all-payer claims databases (APCDs). APCDs are health data organizations that hold transactional information from public (Medicare and Medicaid) and private health insurers (commercial plans and some self-insured employers). APCDs transform this data into useful information on health care costs and trends. This article describes states' use of APCDs and recent efforts that have provided benefits and challenges for states interested in this unique opportunity to inform health policy. Although challenges exist, there is new funding for state APCD improvements in the No Surprises Act, and potential new federal interest will help states enhance their APCD capacity so they can better understand their markets, educate consumers, and create actionable market information.

Keywords APCDs, Medicare, Medicaid, health care costs

In 2020, the United States spent more on health care than any other country in the world—\$4.1 trillion, representing 19.7% of the nation's gross domestic product (CMS 2021). The persistent rise in health care spending and the lack of federal action have significant impact for state policy makers. First, increases in health care spending put pressure on states, which must balance their budgets each year. State spending on the Medicaid

program alone accounted for almost one fifth (17.8%) of state budgets in the 2021 fiscal year (NASBO 2021). States also finance health care for state employees, state prison health care services, and a myriad of safety net programs. Second, patient concerns about excessive costs, including increases in health insurance premiums and in out-of-pocket costs for medical care, create political pressure from constituents seeking government action to limit their bills (Lowry et al. 2022). Health insurance premiums for private employer-sponsored health care have increased by more than 47% in the last decade—more than the growth in wages (31%) and more than double the rate of inflation (19%) during the same time period (KFF 2021a).

Given these factors, states are trying to better understand their role in health care spending and to think creatively about strategies for addressing health care cost growth. One way they are doing this is through the development and use of state-based all-payer claims databases (APCDs). APCDs are health data organizations that hold transactional information from public (Medicare and Medicaid) and private health insurers (commercial plans and some self-insured employers). This includes details on services rendered as well as the amounts paid to health care providers, which is often referred to as “paid health care claims” or simply “claims data.” APCDs transform the disparate data from each source into one standardized (harmonized) data format for ease of reporting and analysis. An APCD is a data aggregation tool that provides state-specific information on health care spending by disease type, by payer or provider, and across patient characteristics, including age, gender, and whether the patient lives in an urban or rural area.

APCDs can provide essential information to support state health reform strategies and monitor trends in health care spending. Understanding the strengths and limitations of APCDs will provide policy analysts and decision makers with important insights into their potential roles in fostering a more cost-effective health care system. This article provides an overview of state APCDs and how states use data to inform policy using specific state examples. We include an update on recent federal activity, including the impact of the US Supreme Court’s 2016 decision in *Gobeille v. Liberty Mutual Insurance Co.* on the collection of data from self-insured employers, along with information on the APCD provisions included in the No Surprises Act of 2020, which includes new federal funding for APCDs and an expanded role for the US Department of Labor.

Estimating State Health Care Spending

Given the multipayer nature of the US health care system, it is difficult to capture a comprehensive view of total health care spending across all payers and providers at either the state or national level. While states have access to Medicaid claims (and often Medicare claims), about half of the population (49.6%) is covered by a private health insurance plan (KFF 2019).

Several organizations—MarketScan, Health Care Cost Institute, Optum Labs, and others—aggregate health care claims collected from large private health plans and third-party administrators by translating disparate data into one comprehensive, standardized data set. Data submission is voluntary, and parameters for data release are dictated by data-sharing agreements, often with limits on what can be released, including identifying characteristics of payers and providers. Data can be purchased from these private data aggregators but frequently at a significant cost. Moreover, although these proprietary data sets are quite large, they are mostly national in scope, with limited or no data from public programs such as Medicare and Medicaid (Blewett et al. 2018).

The Office of the Actuary of the Centers for Medicare and Medicaid Services (CMS) produces estimates of state health care spending as part of its National Health Expenditure Accounts, the official government estimates of health spending in the United States (Lassman et al. 2017). CMS produces state reports about every five years, with the most recent report published for 2020 (CMS n.d.-a). The state estimates are derived from the national accounting system, and the complex methodology and lack of access to data inputs makes these estimates less usable at the state level.

The uniqueness of state APCDs is that they combine claims data from both public payers (Medicaid, CHIP, and Medicare) and private payers (commercially insured plans and some self-funded employer plans), with sufficient detail and timeliness to understand state health care spending and key drivers of that spending. Understanding state health spending by payer and site of care has broad economic value. For example, cost comparisons can be made across hospitals or by region of care. Cost comparisons can help consumers shop for low-cost providers as well as helping health insurers develop efficient health care networks. Additional information on the sociodemographic characteristics of enrollees increases the capacity of analysts and policy makers to develop targeted policies that address the needs of specific populations. Longitudinal data linkages at the patient level across sites of care and years of service use support research on key

drivers of health care spending and health care emergencies (such as the COVID-19 pandemic), and helps to identify targets for state intervention. The richness of APCD data also informs policy-relevant questions. For example, analyzing spending by type of payer (public or private) and by age of patient is important for understanding the roles states can play in administering public programs. Data from APCDs can also be used to examine differences between public and private payment rates for hospital inpatient care. Such comparisons can inform policy makers on decisions regarding public program expansion that might impact the private provider market.

State APCDs provide foundational information that allows policy makers to better understand their health care markets and the roles that both the public and private sectors play in health care spending over time. The data are also being used to understand and improve care delivery (CHCF 2018). The purpose of state APCDs is aptly described in Maine's authorizing legislation that directed the Maine Health Data Organization to "create and maintain a useful, objective, reliable, and comprehensive health information database that is used to improve the health of Maine citizens, and to issue reports promoting public transparency of health care quality, outcomes, and costs" (Commonwealth Fund 2020).

There are, of course, limitations to the reach of state APCDs. For example, there are several fairly large public health programs that do not participate, including the Federal Employee Health Benefits Program, the Veterans Health Administration, and the Indian Health Service (Carman et al. 2021). There is also limited information on race and ethnicity—key factors in the ability to assess disparities and promote equity. The National Association of Health Data Organizations (NAHDO) examined the completeness of race and ethnicity data for five APCDs in 2017 and found that only 28% of records for race and only 12% for ethnicity were usable (Carman et al. 2021). And finally, the Supreme Court decision in *Gobeille v. Liberty Mutual Insurance Co.* (discussed below) has curtailed states' ability to mandate data submission from self-insured health plans, which make up as much as one third of residents (McAvey forthcoming).

Additional categories of missing information in APCDs are the utilization and cost of health care for the uninsured and underinsured. This is a notable omission because data on the uninsured population is important for understanding population health, health equity, and health care access. State-level hospital discharge data can be used to capture hospital spending for the uninsured and self-pay patients including those with large out-of-pocket hospital payments. Combining estimates of spending from the

Hospital Discharge Data System with claims data from APCDs can be used to better estimate total state health care spending.

Despite these challenges, we argue here that APCDs have a key role to play in elevating state policy debate and signaling direction for policy action by providing better data on health care spending and cost drivers. We leave it to others to make the case for a national APCD and for cross-state comparisons to inform national policy (Fiedler and Young 2020; McAvey forthcoming). From a state perspective, we find that state APCDs are well suited to provide data needed to inform parallel policy and regulatory functions of the states.

APCD State Use Cases

States are using APCD data in a number of ways, including efforts to promote market competition through price transparency, voluntary adherence to state-established growth benchmarks for health care spending, identifying low-value health care spending as targets for cost containment, enhancing regulatory functions including antitrust measures, and assessing implementation of new mandated health care benefits. Each will be discussed in turn.

Price Transparency

To date, at least nine states (Colorado, Connecticut, Florida, Maine, Maryland, Massachusetts, New Hampshire, New York, and Washington) have developed price comparison tools using data from state APCDs (NCSL 2021). Releasing data on the price of health care services is designed to increase consumer awareness and steer them to lower-cost providers. Data on pricing may be increasingly valuable to consumers as more people are enrolled in high-deductible plans and are looking for low-cost providers to limit their out-of-pocket spending. Public reports produced by state APCDs list the costs of care by hospital (or other provider type) for select conditions (e.g., labor and delivery, knee replacement), rank providers based on price of service, and are designed to increase price comparisons and price shopping (CIVHC n.d.).

To date, there is limited evidence that price transparency tools can generate substantial savings in state health care spending. However, one recent study, using APCD data from commercial plans in New Hampshire, compared imaging services with prices found on the price transparency website to services with prices not found on the website. They

found that presenting information on the cost of outpatient medical imaging reduced costs by 5% for patients and 4% for insurers, resulting in an estimated savings of \$7.9 million and \$36 million, respectively, over a five-year period (Brown 2019). Other evaluations have suggested that presenting comparative prices has both limited use and effectiveness in encouraging patients to choose lower-cost providers. Key barriers to effective price shopping include patients' reluctance to switch providers, lack of effective and intuitive price transparency tools, and lack of awareness among consumers on the availability of information and how best to use the information provided (Mehrotra, Chernew, and Sinaiko 2018). Even the New Hampshire study cited above had a very low uptake, with 8% of imaging patients using the price transparency tool.

Benchmarks to Limit Health Care Spending Growth

States are working with public and private stakeholders to elevate the issue of rising health care costs and encourage voluntary cost-containment efforts by health insurers and health care provider systems to improve affordability. At least eight states (Connecticut, Delaware, Massachusetts, Nevada, New Jersey, Oregon, Rhode Island, and Washington) have developed annual targets, or benchmarks, to limit the growth in health care spending (Milbank Memorial Fund n.d.). The first state to set growth benchmarks was Massachusetts, with targets set at 3.6% for 2013–2017 and 3.1% for 2018–2022. Massachusetts did not specify how to meet the growth benchmarks but encouraged the use of global payment arrangements and risk-based contracts. The law permits the Massachusetts Health Policy Commission to require a performance improvement plan for health plans and providers exceeding the cost growth benchmark and can impose civil penalties of up to \$500,000 as a last resort. In January 2022, the Health Policy Commission issued its first notice for Mass General Brigham health system to submit a performance improvement plan based on an analysis that determined the health plan was exceeding the spending benchmark by as much as \$293 million (MHPC 2022).

State growth limits and compliance are based on aggregate spending reports submitted by insurers and health systems, including out-of-pocket spending and the net cost of private insurance. APCD data are then analyzed to better understand key cost drivers and to identify areas of potential cost-containment strategies (Block and Lane 2021). Given the limited reach of state authority over private self-insured health plans and private

providers, it is clear that simply setting a cost growth target will have limited ability to constrain health care spending. However, cost growth benchmarking represents a crucial step toward identifying spending outliers and encouraging voluntary compliance, or it can be used in conjunction with performance improvement plans and potential monetary fines, as Massachusetts has done.

The measurement and reporting of progress toward reaching the spending growth benchmarks uses an additional method of accountability through “naming and shaming” to achieve results (Anthony, Segel, and Toher 2018). For many in the private sector, this voluntary engagement approach may be seen as preferable to the regulation of health care prices (Waugh and McCarthy 2020). Massachusetts reports some success with this approach: despite going over the target in several years, spending growth has consistently remained below the national average (MHPC 2021).

Low-Value Spending

Another cost-containment effort of interest to states is to identify spending on low-value services and encourage voluntary limits on these services in health plan contracts with providers. Low-value spending represents patient care that offers little or no clinical benefit, includes unnecessary health care spending, and in some cases leads to patient harm. Examples of low-value care include preoperative cardiac tests for low-risk noncardiac surgery, antibiotics for upper respiratory tract infection, and imaging for low-back pain (Beaudin-Seiler, Quincy, and Cooper 2018). National estimates of spending on low-value services range from \$760 to \$935 billion per year (Shrank, Rogstad, and Natasha 2019). Data from APCDs can be used to calculate spending on these services and promote collaborative efforts to reduce their use across the health system.

A recent study using Medicaid and commercial data from four APCDs (Colorado, Massachusetts, Virginia, and Washington) estimated that \$2.7 billion was spent on 47 low-value services during a three-year period from 2015 to 2017 (V-BID Health 2020). Although the study did not find a meaningful decrease in low-value spending over the three years, the authors describe “broad stakeholder interest in reducing low-value care” (CIVHC 2020).

Similarly, one of the recommended state-level policies to reduce spending on low-value care, cited in the Altarum Healthcare Affordability State Policy Scorecard, is to use claims data to estimate the spending on low-value care (Beaudin-Seiler, Quincy, and Cooper 2018; Lowry et al.

2022). As with price transparency and benchmarking, simply identifying providers using low-value care does not translate to a sufficient reduction in its use (Rourke 2022). Additional efforts are needed to develop incentives and approaches that can demonstrate a reduction in use.

Legislative Policy Review

Massachusetts also uses data from its APCDs to assess the implementation of state-mandated benefits. The Massachusetts Center for Health Information and Analysis (CHIA) evaluates the cost-effectiveness and medical efficacy of health benefit mandates for legislative committees before any bill is passed (CHIA n.d., 2022). For example, recent legislation mandated coverage for chiropractic services by commercial health insurance plans. The marginal cost of this mandate was estimated using data from the state's APCD. This practical use of the APCD estimated that the impact of the mandate represented just 1.04% of the statewide average of premiums paid by fully insured policy holders in 2018 and concluded that the impact was not material (CHIA 2022).

Regulatory Compliance

New Hampshire's insurance commissioner has used data from that state's APCD to examine the appropriateness and consistency of the implementation of the Mental Health Parity and Addiction Equity Act (MHPAEA) (NHID n.d.). This law requires that mental health/substance use disorder be covered at the same level as medical/surgical benefits. The commissioner used APCD data to assess utilization and reimbursement of mental health services in the private commercial health insurance market using the weighted average of commercial-to-Medicare reimbursement ratios to assess compliance (Brannen 2020). The analysis showed consistently higher reimbursement rates for primary care than for mental health care in commercial plans and raised red flags on parity compliance. In this example, the use of APCD data helped to identify potential mental health parity compliance violations in private commercial health insurance plans. The Department of Insurance used this analysis to order a written compliance assurance plan (NHID n.d.) with subsequent review and potential fines if parity was not sufficiently addressed. This novel methodology of using claims data to evaluate potential parity violations is now a part of the MHPAEA compliance tool used by the US Department of Labor (DOL) (CMS n.d.-b; DOL n.d.). APCD data provide the opportunity to assess

compliance with state and federal mandated parity laws within the commercial insurance market that states regulate.

Surprise Billing Laws

In 2020, Congress passed the No Surprises Act to protect individuals covered by commercial insurance plans against surprise bills for out-of-network emergency and other services (CMS 2022). Billing practices often led to charging more for out-of-network providers, leaving patients with large and unexpected medical bills for their share of uncovered costs. At least three states (Maine, Virginia, and Washington) are using the data from their APCDs to enforce this new law by identifying benchmark prices for key services and assessing out-of-network billing practices (Carman et al. 2021). For example, the state of Washington passed its own surprise billing act, which became effective January 1, 2020 (OHD 2019). To assess compliance, analysts use data from Washington's APCD on paid claims for services subject to protection, including emergency services as well as nonemergency services. If the insurer and provider or facility are unable to agree on out-of-network charges, the dispute is settled through arbitration, and the APCD data are used to help insurers, providers, and arbitrators in resolving these cases. It is anticipated that additional states will designate the use of APCDs in their state laws for determining the total payable amount for out-of-network services. Also included in the No Surprises Act was funding for state APCDs (described in more detail below) to institutionalize, "as a matter of national policy, the use of public and private claims databases to enhance consumer protection and market transparency" (Block 2021).

APCD Administrative Characteristics

The governance of APCDs varies by state. Table 1 provides an overview of the existing state APCDs, which are mostly administered by state agencies. Key data vendors, including Onpoint Health Data, NORC Data Enclave, and 3M APCD Solution Suite provide data warehouse and analytic capacity for several states (NORC n.d.; 3M n.d.; OHD n.d.). Other states contract with local data organizations or conduct in-house data analyses. The states vary in the magnitude of their state health care spending, which correlates with increased complexity and size of state APCDs, including the number of covered lives and number of public and private payers. In states with APCDs, estimates of health care spending ranged from per capita spending

Table 1 State APCDs, State Agencies, and Contractors

State	State APCDs	Year state legislation passed	Host entity	Entity type	Vendor/contractor, if applicable
Arkansas	Arkansas All-Payer Claims Database	2015	Arkansas Center for Health Improvement with support from Arkansas Insurance Department and Health Insurance Rate Review Division	State agency	N/A
California	Health Care Payments Data Program	2018	Department of Health Care Access and Information	State agency	Onpoint Health Data
Colorado	Colorado All-Payer Claims Database	2010	Center for Improving Value in Health Care	Local nonprofit	NORC University of Chicago
Connecticut	Connecticut All-Payer Claims Database	2012	Office of Health Strategy	State agency	Onpoint Health Data
Delaware	Delaware Health Care Claims Database	2016	Delaware Health Information Network	Nonprofit	Mediasoft
Florida	Florida All-Payer Claims Database Council	2016	Agency for Health Care Administration	State agency	Health Care Cost Institute
Georgia	Georgia All-Payer Claims Database	2020	Office of Health Strategy and Coordination, Governor's Office of Planning and Budgeting	State agency	Georgia Tech Research Institute
Hawaii	Hawaii Health Data Center	2016	State Health Planning and Development Agency, Hawaii Department of Health	State agency	Pacific Health Informatics and Data Center

Table 1 (continued)

State	State APCDs	Year state legislation passed	Host entity	Entity type	Vendor/contractor, if applicable
Indiana	Indiana All-Payer Claims Database	2021	Indiana Department of Insurance	State agency	N/A
Kansas	Kansas Data Analytic Interface	2012	Division of Health Care Finance, Kansas Department of Health and Environment	State agency	N/A
Maine	Maine Health Care Claims Database	2003	Maine Health Data Organization	State agency	NORC Data Enclave
Maryland	Maryland Health Care Commission Medical Care Database	2014	Maryland Health Care Commission	State agency	N/A
Massachusetts	Massachusetts All-Payer Claims Database	2010	Center for Health Information and Analysis (CHIA)	State agency	CHIA APDC Data Warehouse
Minnesota	Minnesota All-Payer Claims Database	2008	Health Economics Program, Minnesota Department of Health	State agency	Onpoint Health Data
New Hampshire	New Hampshire Comprehensive Health Care Information System	2003	New Hampshire Insurance Department and Department of Health and Human Services	State agency	Milliman, Inc.
New York	New York All-Payer Database	2011	Bureau of All Payer Systems and Informatics, New York Department of Health	State agency	Optum Government Solutions, Inc.

(continued)

Table 1 State APCDs, State Agencies, and Contractors (*continued*)

State	State APCDs	Year state legislation passed		Host entity	Entity type	Vendor/contractor, if applicable
Oregon	Oregon All Payer All Claims Reporting Program	2009		Office of Health Analytics, Oregon Health Authority	State agency	Health Services Research Institute
Rhode Island	HealthFacts Rhode Island Database	2008		Executive Office of Health and Human Services, the Department of Health, the Office of the Health Insurance Commissioner, and HealthSource Rhode Island	State agency	3M
Utah	Utah All-Payer Claims Database	2008		Office of Health Care Statistics, Utah Department of Health	State agency	Milliman, Inc.
Vermont	Vermont Healthcare Claims Uniform Reporting and Evaluation System	2009		Green Mountain Care Board	State agency	Onpoint Health Data
Virginia	Virginia All-Payer Claims Database	2019		Virginia Health Information, Virginia Department of Health	State agency	Milliman, Inc.
Washington	Washington State All-Payer Claims Database	2014		Washington State Health Care Authority	State agency/ nonprofit	Onpoint Health Data
West Virginia	West Virginia All-Payer Claims Database	2021		West Virginia Health Care Authority, Department of Health and Human Services	State agency	N/A

Note: APCD = all-payer claims database.

of \$7,552 in Utah to \$14,007 in New York (KFF 2021b) and total health care spending of \$7.95 billion in Vermont to \$270.8 billion in New York (KFF 2021c).

State APCDs are members of the NAHDO, which partners with the Institute for Health Policy and Practice at the University of New Hampshire to run the national APCD Council. The council advocates on behalf of state APCDs and provides convening and cross-state collaboration opportunities (APCDC n.d.-a). The APCD council has led a collaborative effort to develop a Common Data Layout (CDL) for APCD submissions in an effort to enhance the ability to compare cost and trend data across states. However, to date, there has been limited implementation of the CDL and limited use of APCDs across states, given financing limitations.

APCD Financing

Costs of APCDs range from \$800,000 in Utah to \$5.1 million in Washington in 2020 (McAvey forthcoming). States have been creative in financing APCDs, including securing ongoing support from general fund tax dollars, premium assessments on fully insured plans, and allocations from a provider tax (McCarthy 2020). In addition, states often charge for data access and analytic services. States have found that a mix of funding sources is necessary to maintain their data systems and meet the analytic needs of the state and stakeholders.

The federal government has also played a significant role in financing state APCDs. Federal funds have flowed in a variety of ways, often without a cohesive plan or oversight. For example, states have used funds from the Affordable Care Act Rate Review Grant Program, funded by the Center for Consumer Information and Insurance Oversight (SHADAC 2014), and from the Center for Medicare and Medicaid Innovation State Innovation Model (RTI International n.d.) for APCD development. States have also funded a portion of their APCD activity through the Medicaid program, including using existing waiver authority (Klabunde 2019). Medicaid federal matching funds are allowable for costs associated with Medicaid's functional business requirements (HHS 2016). Rhode Island used an enhanced Medicaid match (90% match in the first year and 75% match in the following four years) to establish its APCD as part of its Medicaid information technology system (Bernstein and Paulson 2018). Colorado's APCD is partially financed by Medicaid (50% match) to support evaluation of Medicaid utilization, costs, and trends (Bernstein and Paulson 2018). A key point here is that historically there has been no

consistent mechanism to finance state-based APCDs; rather, there have been a variety of mechanisms pieced together by innovative and informed states. This could potentially change with the inclusion of federal funds in the No Surprises Act to implement or improve APCDs.

Recognizing the value of claims databases in informing enforcement of consumer protection and price transparency laws, alongside the fiscal constraints states face in building APCDs, Congress included funding for states to create or enhance APCDs in section 115 of the No Surprises Act. The bill provided federal appropriation of \$125 million to establish APCDs, with the criteria that states ensure both uniform data collection and privacy/security of the data collected. While the section 115 APCD grant program has not yet been established, legislative language requires those receiving grants to make aggregate data publicly available free of charge (Keith 2021).

Gobeille v. Liberty Mutual Insurance Company

Another significant challenge to the states is the lack of authority to mandate data submission for self-funded plans. The US Supreme Court dealt a setback to state APCDs in its 2016 ruling on *Gobeille v. Liberty Mutual Insurance Co.* (577 U.S. ____ (2016)), which held that the federal Employee Retirement Income Security Act (ERISA) preempted state laws that require data submission to APCDs by ERISA self-funded plans. A self-funded health plan, Liberty Mutual Insurance Company, brought the ERISA challenge against Alfred Gobeille, chair of the Vermont Green Mountain Care Board. The court concluded that Vermont's mandatory reporting requirement would interfere with ERISA's goal of establishing uniform administration of plan benefits across states (McElligott, Capwell, and Wynne 2016). In the opinion written by Justice Anthony Kennedy, the court concluded that the ruling would "prevent states from imposing novel, inconsistent, and burdensome reporting requirements on plans" (Soronon 2016).

The *Gobeille v. Liberty Mutual Insurance Co.* 6–2 decision raised concerns that the lack of data from self-insured group plans could undermine the validity of the initial premise of the APCDs—to understand total health care spending and trends at the state level. While there is no up-to-date information on the number of self-insured plans contributing data to state APCDs, most states continue to collect data from self-insured plans on a voluntary basis. There is also concern that not including self-insured plans in estimates of total spending or in analysis of key drivers of spending could bias the analysis, because those covered by self-insured plans are healthier on average than those covered by public payers, such as Medicaid and

Medicare (Brown and King 2016). Lacking data from self-insured plans certainly contributes to the number of covered lives missing in the data.

Increased Role for the Department of Labor

The Supreme Court's 2016 decision in *Gobeille v. Liberty Mutual Insurance Co.* also raised questions about the potential role of the DOL in compelling ERISA self-funded plans to submit to state APCDs. As stated in the court's opinion, "ERISA's uniform rule design also makes clear that it is the Secretary of Labor (not the states) that is authorized to decide whether to exempt plans from ERISA reporting requirements or to require ERISA plans to report data such as that sought by Vermont" (*Gobeille v. Liberty Mutual Insurance Co.*). The DOL currently requires these plans to report annual financial statements including receipt and disbursement of funds. The court noted the possibility of extending reporting requirements for self-insured plans to include claims data submitted either directly to the DOL or to the states.

Section 115 of the No Surprises Act further defined the DOL's role with state APCDs, requiring the DOL to establish a standardized voluntary submission format for group health plans and convene a state all payers database advisory committee (Employee Benefits Security Administration 2021) to advise the secretary of labor on APCD reporting requirements (No Surprises Act of 2019, H.R. 3630, 116th Cong. (2019)).

The committee met during the summer of 2021 and recommended that self-funded ERISA plans be encouraged to voluntarily submit data to state APCDs via a standardized reporting format (SAPDAC n.d.). The format would be based on the APCD Council's CDL and be updated by an ongoing oversight body (APCDC n.d.-b). The committee recommended an opt-in for the submission process as a result of concerns that an opt-out approach would lead to potential litigation. The committee also recommended that the DOL play an active role in communicating the benefits of state APCDs as well as managing the data collection process.

To incentivize plan participation, the committee suggested the DOL develop a trigger strategy. Although not operationalized in the report, the trigger would be based on the level of self-funded plan participation. Should participation drop below the threshold, it would trigger the DOL to pursue congressional remedy and/or notify plans that the federal government would pursue a more active role in collecting claims data from self-insured group plans. This would face strong resistance from self-funded plans, which view additional reporting requirements as a burden.

Conclusion

The cost of health care is one of the most pressing issues facing US citizens, and state surveys show that it is the number one issue that residents want state policy makers to address (Lowry et al. 2022). Given the complexity of the US health care system, it is difficult to envision the development of policy strategies for addressing costs without foundational information on health care spending, trends, and key cost drivers. State-based APCDs provide state policy makers with a robust information system capable of monitoring health care spending as well as assisting in regulatory and legislative compliance. States that have developed their own APCDs typically have invested in the data capacity and infrastructure to leverage this resource either through state agencies or through contractors. The many use cases and reports provided highlight the potential for use not only by policy makers but also by consumers, purchasers, and providers.

Political and administrative factors can work to prevent the evidence gleaned from APCDs from improving the performance of the health care system, but that should not deter the development and improvement of important data information systems. Health reform is complex and requires a sophisticated understanding of how markets work, how prices are set, and how the system has evolved over time. Health reform is also part of a long-game strategy for policy analysts who have invested in APCDs and are ready to use evidence-based information to inform critical decision making on state health policy. The state efforts cited in this article can serve as pilots acknowledging the need for more rigorous evaluation to understand the drivers of cost and incentives for systematic change.

Additionally, the loss of data from the self-funded ERISA plans because of the *Gobeille v. Liberty Mutual Insurance Co.* decision raises concerns but may not be a deal-breaker for state APCDs. While there is no record of the number of self-insured plans that voluntarily submit medical claims data, two states—Maryland and Massachusetts—report voluntary data submission representing 25%–30% of the states' self-insured enrollees (Fiedler and Young 2020). This could potentially provide enough information to fill in the “missingness” of vital information and allow the estimation of trends within the greater self-insured market. More importantly, state APCDs collect data from their commercial health insurance plans—the market where states have significant regulatory authority. Finally, even with the limited number of self-insured claims, states are gaining experience and expertise in estimating health care spending for missing populations, as evidenced by a recent Minnesota report on chronic disease spending (MDH 2021) and Oregon's state-mandated report on total

primary care spending (OHA 2021). The APCD Council presents more examples of this kind of state activity on the council's website (APCDC n.d.-c).

The DOL's APCD Advisory Committee fell short of mandating data collection on paid claims from self-insured plans, even with a nudge from the dissenting opinions in the *Gobeille v. Liberty Mutual Insurance Co.* decision. The health insurance industry was well represented on the committee, and there was significant resistance to DOL playing a more active regulatory role in this space. The DOL Advisory Committee did, however, endorse the development of a CDL for voluntary data submission by self-insured plans, which could increase voluntary data submission and facilitate comparisons of data across states, allowing for multistate analysis. The CDL and DOL review of voluntary submission may entice some self-insured plans to participate.

However, the development of a national APCD is not completely off the table. The Agency for Healthcare Research and Quality (AHRQ) is collaborating with the office of the assistant secretary of planning and evaluation to develop a prototype for a national APCD in collaboration with key states. One objective of their work is to help fill in the gaps of missing data in state APCDs, including potential data from the Veterans Health Administration, the Federal Employment Health Benefits Program, and the Indian Health Service. They also propose using the deep bench of statistical and health data expertise in the federal agencies, and the development of models to estimate missing data and help to fully realize the potential of APCDs. Currently, President Biden's FY 2023 budget proposes \$5 million in funding for AHRQ to develop a national database that "will be a nationally representative, population-based sample of insurance claims that can be used to inform public and private policy, address equity issues, and to improve healthcare quality" (ASHEcon 2022).

As is evident from recent years of state activity in health reform, not all states will choose to pursue a state-based APCD. However, those who do will find many examples of its use across the current APCD states. The usefulness of APCDs will be strengthened by federal support for a CDL and increased oversight by the DOL for voluntary data collection from self-insured plans. Although stakeholders may resist data submission, improved data collection standards and comprehensiveness will enhance state efforts to produce analyses and information to answer key policy questions and give employers insight into their own health care spending. Additional support from the federal government in filling in the needed missing data elements will also strengthen state APCDs.

State policy makers are looking for creative ways to respond to concerns from their residents about the burden of high health care spending, and APCDs provide one policy strategy that both helps to meet information needs and provides a regulatory tool for the commercial market, where states have regulatory authority. Yes, challenges exist, but significant funding for state APCD improvements in the No Surprises Act and potential new federal interest will help states enhance their APCD capacity to better understand their markets, educate consumers, and create actionable market information.

■ ■ ■

Lynn A. Blewett is a professor with the Division of Health Policy and Management at the University of Minnesota School of Public Health. She directs the State Health Access Data Assistance Center, a research and policy center funded by the Robert Wood Johnson Foundation to support state efforts that monitor and evaluate programs for increasing health care access and coverage. Her research focuses on health care policy and access.
blewe001@umn.edu

Natalie Schwehr Mac Arthur is a senior research associate with the State Health Access Data Assistance Center at the University of Minnesota School of Public Health. Her research interests include health care equity, access, and quality. Her experience includes quantitative evaluation of health policies using a range of data sources such as survey data, administrative claims data, and decision-analytic modeling. She has worked with numerous federal data sets to monitor state-level changes in key measures of health care and to provide technical assistance to state and national policy makers.

James Campbell is a doctoral student with the Division of Health Policy and Management at the University of Minnesota School of Public Health. He also is a research assistant at the State Health Access Data Assistance Center. His research interests are in health economics and health policy, with particular interest in health care financing and insurance.

Acknowledgments

The authors are grateful for the thoughtful comments from the reviewers and the editors that made this a much better article. We also would like to acknowledge the work of State Health and Value Strategies and their continued health policy work with the states and the funding from the Robert Wood Johnson Foundation that they provide to the State Health Access Data Assistance Center. The views presented are those of the authors only.

References

- 3M. n.d. “3M APCD Solution Suite.” https://multimedia.3m.com/mws/media/10848890/3m-apcd-fact-sheet.pdf?fn=3m_apcd_fs.pdf (accessed January 3, 2022).
- Anthony, Barbara, Celia Segel, and Hallie Toher. 2018. “Beyond Obamacare: Lessons from Massachusetts.” *Journal of Health and Biomedical Law* 14: 285–347. <https://cpb-us-e1.wpmucdn.com/sites.suffolk.edu/dist/e/1232/files/2018/11/BarbaraAnthonyCeliaSegelH-1851yar.pdf>.
- APCDC (All-Payer Claims Database Council). n.d.-a. Home page. <https://www.apcd-council.org/> (accessed January 3, 2022).
- APCDC (All-Payer Claims Database Council). n.d.-b. “APCD Common Data Layout (APCD-CDL).” <https://www.apcdouncil.org/apcd-common-data-layout-apcd-cdl%E2%84%A2> (accessed January 3, 2022).
- APCDC (All-Payer Claims Database Council). n.d.-c. “APCD Showcase: States Leading by Example.” <https://www.apcdshowcase.org/> (accessed March 10, 2022).
- ASHEcon. 2022. “Is a National All-Payers Claims Database on the Horizon?” Presented at the Annual Conference of the American Society of Health Economists, Hilton Austin, June 27. <https://ashecon.confex.com/ashecon/2022/meetingapp.cgi/Session/4623>.
- Beaudin-Seiler, Beth Lynn Quincy, and Rebecca Cooper. 2018. “Reducing Low-Value Care: Saving Money and Improving Health.” Healthcare Value Hub, Research Brief No. 32, November. https://www.healthcarevaluehub.org/application/files/2815/6373/2093/RB_32_-_Low_Value_Care.pdf.
- Bernstein, Tanya, and Kristin Paulson. 2018. “Funding for APCD’s via CMS Medicaid Match: Examples from Two States.” Freedman Healthcare, February 20. https://freedmanhealthcare.com/wp-content/uploads/2017/11/Medicaid-Match-Webinar_FINAL.pdf.
- Blewett, Lynn A., Kathleen T. Call, Joanna Turner, and Robert Hest. 2018. “Data Resources for Conducting Health Services and Policy Research.” *Annual Review of Public Health* 39: 437–52. doi.org/10.1146/annurev-publhealth-040617-013544.
- Block, Rachel. 2021. “How the No Surprises Act Could Improve Our Understanding of US Health Care Markets.” Milbank Memorial Fund, March 31. <https://www.milbank.org/2021/03/how-the-no-surprises-act-could-improve-our-understanding-of-us-health-care-markets/>.
- Block, Rachel, and Keanen Lane. 2021. “Supporting States in Setting Health Care Cost Growth Targets to Improve Affordability.” *Health Affairs*, May 27. <https://www.healthaffairs.org/doi/10.1377/forefront.20210526.658347/full/>.
- Brannen, Tyler. 2020. “Mental Health Parity Examinations.” New Hampshire Insurance Department, February 14. <https://www.nh.gov/insurance/consumers/documents/mental-health-parity-exam-presentation-02-14-20.pdf>.
- Brown, Erin C., and Jaime S. King. 2016. “The Consequences of *Gobeille v. Liberty Mutual* for Health Care Cost Control.” *Health Affairs*, March 10. <https://www.healthaffairs.org/doi/10.1377/hblog20160310.053837/full/>.
- Brown, Zach Y. 2019. “Equilibrium Effects of Health Care Price Information.” *Review of Economics and Statistics* 101, no. 4: 699–712.

- Carman, Katherine G., Michael Dworsky, Sara Heins, Dan Schwam, Shoshana Shelton, and Christopher Whaley. 2021. "The History, Promise, and Challenges of State All Payer Claims Databases: Background Memo for the State All Payer Claims Database Advisory Committee to the Department of Labor." RAND Health Care, June 2. https://www.aspe.hhs.gov/sites/default/files/migrated_legacy_files//200696/apcd-background-report.pdf.
- CHCF (California Health Care Foundation). 2018. "The ABCs of APCDs: How States Are Using Claims Data to Understand and Improve Care." November. <https://www.chcf.org/wp-content/uploads/2018/11/TheABCsofAPCDs.pdf>.
- CHIA (Center for Health Information and Analysis). n.d. "Mandated Benefit Reviews." <https://www.chiamass.gov/mandated-benefit-reviews/> (accessed January 3, 2022).
- CHIA (Center for Health Information and Analysis). 2022. "State Mandated Health Insurance Benefits and Health Insurance Costs in Massachusetts." January. <https://www.chiamass.gov/assets/docs/r/pubs/2022/Comprehensive-MBR-Updated-January-2022.pdf>.
- CIVHC (Center for Improving Value in Health Care). n.d. "Shop for Care." <https://www.civhc.org/shop-for-care> (accessed January 3, 2020).
- CIVHC (Center for Improving Value in Health Care). 2020. "Low-Value Care in Colorado." March. https://www.civhc.org/wp-content/uploads/2020/03/Low-Value-Care-Public-Report_FINAL.pdf.
- CMS (Centers for Medicare and Medicaid Services). n.d.-a. "Econometric Analysis of State Health Expenditures: Methodology and Model Specifications." <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/State-Model-14.pdf> (accessed January 3, 2022).
- CMS (Centers for Medicare and Medicaid Services). n.d.-b. "Warning Signs—Plan or Policy Non-Quantitative Treatment Limitations (NQTLs) That Require Additional Analysis to Determine Mental Health Parity Compliance." <https://www.cms.gov/ccio/resources/regulations-and-guidance/downloads/mhpeachecklistwarningsigns.pdf> (accessed January 3, 2022).
- CMS (Centers for Medicare and Medicaid Services). 2021. "NHE Fact Sheet." December 15. <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NHE-Fact-Sheet>.
- CMS (Centers for Medicare and Medicaid Services). 2022. "No Surprises: Understand Your Rights against Surprise Medical Bills." January 3. <https://www.cms.gov/newsroom/fact-sheets/no-surprises-understand-your-rights-against-surprise-medical-bills>.
- Commonwealth Fund. 2020. "Profiles of State All-Payer Claims Databases." December. https://www.commonwealthfund.org/sites/default/files/2020-12/McCarthy_State_APCD_Profiles_Dec2020.pdf.
- DOL (US Department of Labor). n.d. "Self-Compliance Tool for the Mental Health Parity and Addiction Equity Act (MHPAEA)." <https://www.dol.gov/sites/dolgov/files/EBSA/laws-and-regulations/laws/mental-health-parity/self-compliance-tool.pdf> (accessed January 3, 2022).

- Employee Benefits Security Administration, Department of Labor. 2021. “State All Payers Data Base Advisory Committee.” *Federal Register*, March 2. <https://www.federalregister.gov/documents/2021/03/02/2021-04241/state-all-payer-claims-databases-advisory-committee>.
- Fiedler, Matthew, and Christen Linke Young. 2020. “Federal Policy Options to Realize the Potential of APCDs.” USC-Brookings Schaeffer Initiative for Health Policy, October. <https://www.brookings.edu/wp-content/uploads/2020/10/APCD-Final.pdf>.
- HHS (US Department of Health and Human Services). 2016. “Transcript of the June 17, 2016, NCVHS Hearing on Claims-Based Databases for Policy Development and Evaluation: Overview and Emerging Issues.” June 17. <https://ncvhs.hhs.gov/transcripts-minutes/transcript-of-the-june-17-2016-ncvhs-hearing-on-claims-based-databases-for-policy-development-and-evaluation-overview-and-emerging-issues/>.
- Keith, Katie. 2021. “Coverage Provisions in the 2021 Appropriations and COVID-19 Stimulus Package.” *Health Affairs*, January 4. <https://www.healthaffairs.org/doi/10.1377/hblog20210104.961016/full>.
- KFF (Kaiser Family Foundation). 2019. “Health Insurance Coverage of the Total Population.” <https://www.kff.org/other/state-indicator/total-population/?dataView=0¤tTimeframe=0&selectedDistributions=employer—non-group&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D> (accessed September 21, 2022).
- KFF (Kaiser Family Foundation). 2021a. “Average Family Premiums Rose 4% This Year to Top \$22,000; Employers Boost Mental Health and Telemedicine amid COVID-19 Pandemic, Benchmark KFF Survey Finds.” November 10. <https://www.kff.org/health-costs/press-release/average-family-premiums-rose-4-this-year-to-top-22000/>.
- KFF (Kaiser Family Foundation). 2021b. “2020 Health Care Expenditures per Capita by State of Residence from Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group. National Health Expenditure Data: Health Expenditures by State of Residence, 1991–2020.” <https://www.kff.org/other/state-indicator/health-spending-per-capita/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D> (accessed October 10, 2022).
- KFF (Kaiser Family Foundation). 2021c. “2020 Health Care Expenditures by State of Residence.” <https://www.kff.org/other/state-indicator/health-care-expenditures-by-state-of-residence-in-millions/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D> (accessed October 10, 2022).
- Klabunde, Madelyn. 2019. “SHADAC Resource on Required Evaluation Plans for DSRIP/Delivery System Reforms through 1115 Waivers.” SHADAC, October 14. <https://www.shadac.org/news/shadac-resource-required-evaluation-plans-dsrrip-delivery-system-reforms-through-1115-waivers>.
- Lassman, David, Andrea M. Sisko, Aaron Catlin, Mary Carol Barron, Joseph Benson, Gigi A. Cuckler, Micah Hartman, et al. 2017. “Health Spending by State 1991–2014: Measuring per Capita Spending by Payers and Programs.” *Health Affairs* 36, no. 7: 1318–27. <https://www.healthaffairs.org/doi/pdf/10.1377/hlthaff.2017.0416>.

- Lowry, Elise, Annaliese Johnson, Amanda Hunt, and Tad Lee. 2022. "States Hold Keys to Health Care Affordability, but Are They Using Them?" *Health Affairs*, February 8. <https://www.healthaffairs.org/doi/10.1377/forefront.20220204.765285/>.
- McAvey, Kevin. Forthcoming. "Realizing the Promise of All Payer Claims Databases: A Federal and State Action Plan." Manatt Health.
- McCarthy, Douglas. 2020. "State All-Payer Claims Databases: Tools for Improving Health Care Value, Part 1." Commonwealth Fund, December 10. <https://www.commonwealthfund.org/publications/fund-reports/2020/dec/state-apcds-part-1-establish-make-functional>.
- McElligott, James P., Jr., Jeffrey R. Capwell, and Robert B. Wynne. 2016. "Supreme Court: ERISA Pre-empts Vermont's Health Data Collection Law as Applied to Self-Insured Health Plans." McGuire Woods, March 3. <https://www.mcguirewoods.com/client-resources/Alerts/2016/3/Supreme-Court-ERISA-Pre-empts-Vermont-Health-Data-Collection-Law>.
- MDH (Minnesota Department of Health). 2021. "Treated Chronic Disease Prevalence and Spending in Minnesota." December 8. <https://www.health.state.mn.us/data/apcd/docs/chroniccond2016supplement.pdf>.
- Mehrotra, Ateev, Michael E. Chernew, and Anna D. Sinaiko. 2018. "Promise and Reality of Price Transparency." *New England Journal of Medicine* 378, no. 14: 1338–54.
- MHPC (Massachusetts Health Policy Commission). 2021. "2021 Annual Health Care Cost Trends Report." September. <https://www.mass.gov/doc/2021-health-care-cost-trends-report/download>.
- MHPC (Massachusetts Health Policy Commission). 2022. "Notice Pursuant to 958 CMR 10.05 of Requirement to File a Performance Improvement Plan." January 27. <https://www.mass.gov/doc/notice-of-requirement-to-file-a-performance-improvement-plan-mgb-01272022/download>.
- Milbank Memorial Fund. n.d. "Health Care Cost Growth Target Values." <https://www.milbank.org/focus-areas/total-cost-of-care/peterson-milbank/health-care-cost-growth-benchmarks-by-state/> (accessed March 10, 2022).
- NASBO (National Association of State Budget Officers). 2021. "State Expenditure Report. Overview: Fiscal 2019–2021." <https://www.nasbo.org/mainsite/reports-data/state-expenditure-report> (accessed September 21, 2022).
- NCSL (National Conference of State Legislatures). 2021. "Transparency and Disclosure of Health Care Prices." September 7. <https://www.ncsl.org/research/health/transparency-and-disclosure-health-costs.aspx>.
- NHID (New Hampshire Insurance Department). n.d. "Mental Health Parity Examinations." <https://www.nh.gov/insurance/consumers/parity-examination-reports.htm> (accessed January 3, 2022).
- NORC (National Opinion Research Center). n.d. "NORC Data Enclave." <https://www.norc.org/Research/Capabilities/Pages/data-enclave.aspx> (accessed January 3, 2022).
- OHA (Oregon Health Authority, Oregon Department of Consumer and Business Services). 2021. "Primary Care Spending in Oregon: A Report to the Oregon Legislature." August. <https://www.oregon.gov/oha/HPA/ANALYTICS/PCSpendingDocs/2021-Oregon-Primary-Care-Spending-Methodology-and-Glossary.pdf>.

- OHD. n.d. “Analytic Solutions.” <https://www.onpointhealthdata.org/analytics-solutions> (accessed January 3, 2022).
- OHD (Onpoint Health Data). 2019. “Washington Looks to Its APCD to Support Balance Billing Protection Act.” November. <https://www.onpointhealthdata.org/news/washington-looks-to-its-apcd-to-support-balance-billing-protection-act>.
- Rourke, Elizabeth J. 2022. “Ten Years of Choosing Wisely to Reduce Low-Value Care.” *New England Journal of Medicine* 386, no. 14: 1293–95.
- RTI International. n.d. “State Innovation Models (SIM) Round 2. Model Test Annual Report Three.” <https://downloads.cms.gov/files/cmimi/sim-rd2-test-ar3.pdf> (accessed January 3, 2022).
- SAPDAC (State All-Payer Claims Databases Advisory Committee). n.d. “State All Payer Claims Databases Advisory Committee Report with Recommendations under Section 735 of the Employee Retirement Income Security Act of 1974.” <https://www.dol.gov/sites/dolgov/files/ebsa/about-ebsa/about-us/state-all-payer-claims-databases-advisory-committee/final-report-and-recommendations-2021.pdf> (accessed January 3, 2022).
- SHADAC (State Health Access Data Assistance Center). 2014. “State All-Payer Claims Database (APCD) Snapshots.” March 10. https://www.shadac.org/sites/default/files/Old_files/CCIIO%20Cycle%20III%20APCD%20Grants%203-10-2014_.pdf.
- Shrank, William, Teresa Rogstad, and Parekh Natasha. 2019. “Waste in the US Health Care System.” *JAMA Network* 322, no. 15: 1501–9. <https://www.jamanetwork.com/journals/jama/fullarticle/2752664>.
- Soronen, Lisa. 2016. “SCOTUS Pre-empts State All-Payers Claims Database Laws.” National Conference of State Legislatures, March 2. <https://www.ncsl.org/blog/2016/03/02/scotus-pre-empts-state-all-payers-claims-database-laws.aspx>.
- V-BID Health (Value Based Insurance Design Health). 2020. “Utilization and Spending on Low-Value Medical Care across Four States.” May. <https://vbidhealth.com/docs/APCD-LVC-Final.pdf>.
- Waugh, Lisa, and Douglas McCarthy. 2020. “How the Massachusetts Health Policy Commission Is Fostering a Statewide Commitment to Contain Health Care Spending Growth.” Commonwealth Fund, March 5. <https://www.commonwealthfund.org/publications/case-study/2020/mar/massachusetts-health-policy-commission-spending-growth>.