

A Collaboration of Kentuckiana Health Collaborative and University of Louisville  
Commonwealth Institute of Kentucky

## Improving the Health of Kentuckians: The Value of an All-Payer Claims Database

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### Background

In 2021, health spending in the United States increased by 2.7% to \$4.3 trillion, representing 18.3% of the gross domestic product (GDP). The three largest healthcare expenditures were hospital care (31.1%), other personal healthcare (e.g., dental services, durable medical equipment) (16.0%), and physician services (14.9%). These costs are incurred mostly by private health insurance (28.5%), Medicaid (17.2%), and Medicare (21.2%) though a portion (10.2%) comes from out-of-pocket payments.<sup>1</sup>

While the United States spends a tremendous amount of money on healthcare, understanding the cost and quality of care presents a challenge in the face of a complex system of healthcare and insurance payments. Patients and providers are often unaware of the cost of healthcare services, leading to unexpected medical bills that can be financially catastrophic for individuals and families. A 2019 study found that 16 million adults in the United States (about 5% of the population) owed a medical debt of more than \$1,000, and 3 million adults (about 1% of the population) owed more than \$10,000.<sup>2</sup>

The Hospital Price Transparency Rule, issued by the Centers for Medicare and Medicaid Services (CMS), became effective on January 1, 2021. It requires hospitals to publicly post negotiated prices paid to physicians and healthcare facilities for 300 shoppable services in a consumer-friendly manner.<sup>3</sup> This rule was an attempt towards price transparency for healthcare services, theoretically enabling patients to shop online for prices and make informed decisions about where to receive healthcare. The rule also aims to reduce overall healthcare costs by allowing for benchmarking of hospital pricing.<sup>4</sup> Recent research, however, found that hospitals have been slow to comply with the rule. In 2022, CMS reported that more than 30% of hospitals were not fully compliant.<sup>5</sup>

A growing movement towards more transparency in healthcare price and quality has brought the discussion of All-Payer Claims Databases (APCDs) to the forefront.

### APCDs typically include:

- Medical, pharmacy, and dental claims
- Type of insurance (HMO, PPO, etc.) and contract (single, family)
- Diagnosis and procedure codes
- Health plan payments
- Data from private and public insurance types
- Claims from care provided across the continuum

### APCDs do not include:

- Patient name or other identifying information
- Claims for the uninsured
- Test results from lab work or imaging services
- Referrals
- Provider networks
- Premium information
- Denied claims
- Contractual financial data such as capitation amounts or incentive payments

Sources: AHRQ, JSI Research & Training Institute

## What is an APCD?

An APCD is a single source of healthcare claims and enrollment data for most insurance types (commercial, some self-insured employer plans, Medicare and Medicaid) at the state level.<sup>6</sup> A healthcare claim is a bill for a service provided. Because APCDs aggregate data related to the cost and use of healthcare from multiple payers and across sites and services, they serve as a tool to monitor and assess patterns in healthcare access, quality, efficiency, costs, and affordability.<sup>7</sup> One benefit of an APCD is its capability to capture data related to nearly all healthcare services provided in a state. This allows for analyses that can facilitate price transparency and support health system change to increase access and quality of care and decrease health and healthcare disparities at the state level.<sup>8</sup> Potential users of APCD data are providers, private companies, healthcare researchers, employers, academic institutions, and federal, state, and community policymakers.

APCDs are typically mandated by state legislation and require most private payers to submit healthcare claims and enrollment data. Information such as service dates, diagnosis and procedure codes, drug codes, provider type, type of insurance, member payments (e.g., co-pays and deductibles), and patient demographics are collected in an APCD. It is important to note that patients' names and identifying information are not included in the APCD.<sup>9</sup>

In December 2022, the National All-Payers Claims Database Act of 2022 (H.R. 9644) was introduced by Congressman Don Beyer. If the bill had passed, it would have created a national database of claims data and provided support for states to create or maintain their own APCD.<sup>10</sup> The federal No Surprises Act (H.R. 3630), designed to protect consumers from surprise medical bills, was signed into law in December 2022. A portion of this legislation allocates funding for grants to states to create new or maintain existing APCDs.<sup>11</sup>

## Existing Databases of Healthcare Information are Limited

Existing sources of data shed light on healthcare utilization and costs in separate fragments of the United States healthcare system. Some major sources of data are Medicare claims (provided by CMS), Medicaid claims (provided by CMS or state Medicaid departments), private insurance claims (e.g., MarketScan), national electronic health record databases (e.g., Oracle Cerner), and encounter data from the Healthcare Cost and Utilization Project (HCUP). In addition to not being inclusive of all healthcare claims, these databases have significant limitations. They include limited cost information, do not provide cost or utilization information across payers or services, and often do not include dental and vision claims. For instance, MarketScan captures commercial insurance data but uses a convenience sample that is not representative of the national population.<sup>12</sup> As another example, HCUP (the largest source of hospitalization data in the U.S.) includes data on inpatient, ambulatory, and emergency department visits, not outpatient care, limiting the ability to capture the full range and cost of services an individual may have received for a condition.<sup>13</sup> An APCD provides an opportunity for assessing population-level health, which is not possible using existing databases.

## Implementation of APCDs is Increasing Across the Country

States are increasingly adopting APCDs. To date, 26 states have mandated an APCD or are in implementation (Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Indiana, Kansas, Maine, Maryland, Massachusetts, Minnesota, Nebraska, Nevada, New Hampshire, New



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Mexico, New York, Oregon, Rhode Island, Texas, Utah, Vermont, Washington, West Virginia, and Virginia).<sup>14</sup>

States have used APCDs in a variety of ways. Colorado, Washington, Maine, and Virginia have used their databases to benchmark prices that can be used in cases of surprise out-of-network bills.<sup>15</sup> Minnesota used its APCD to identify state-wide preventable hospitalizations during a one-year period and found that these visits represented \$1.9 billion in healthcare spending.<sup>16</sup> Rhode Island used its APCD to identify the top 15 symptoms of patients presenting to the state's emergency rooms (ERs) and associated costs by payer type. A key finding was that reducing avoidable ER visits could save the state \$90 million. Utah used its APCD to identify diagnoses for which people were prescribed new opioid medications and found that back pain was the most common.<sup>17</sup> This information can be used for outreach to physicians to increase their awareness of this trend and reduce new opioid medications where possible. These analyses were made possible only by the existence of an APCD that enables centralized access to healthcare data.

### Action Towards an APCD in Kentucky

Kentucky residents experience some of the worst health outcomes in the country, including the fourth lowest life expectancy in the U.S. (73.5 years compared to 78.0 years in the U.S.) and the third highest age-adjusted death rate from cancer.<sup>18,19</sup> Kentucky has also experienced the third-highest COVID-19 mortality rate at 146 per 100,000.<sup>20</sup> Without access to a comprehensive, centralized source of healthcare data, Kentucky lacks the ability to holistically understand the health of its population and, therefore, cannot effectively develop strategies to address disparities in population health and reduce cost drivers.

There have been positive steps toward the establishment of an APCD in Kentucky. In 2020, House Bill 373, an act relating to the establishment of an All-Payer Claims Database (APCD), was introduced in the General Assembly.<sup>21</sup> The bill did not move past the committee but successfully garnered attention from advocates across the state who were in support of an APCD. The bill was again introduced in 2021 (HB 74), 2022 (HB 60), and 2023 ([SB 275](#)). While these bills were unsuccessful in moving forward in the legislative process, momentum has continued to grow toward establishing an APCD in Kentucky. Organizations such as the Foundation for a Healthy Kentucky, Kentucky Voices for Health, Kentuckiana Health Collaborative, University of Louisville School of Public Health and Information Sciences, and others have collaborated to educate and advocate for an APCD in Kentucky. In February 2023, the Collaborative released a webinar, "[Health for a Change: APCD—The Big Picture](#)," to explore the potential uses and impact of an APCD in Kentucky. This partnership continues to move its advocacy work forward in anticipation of future legislative action related to an APCD. Stakeholders in Kentucky have created a vision for an APCD in the Commonwealth to "improve the health of Kentucky's children, families, communities, and workforce by providing complete and transparent information about healthcare outcomes."

### CONCLUSION

Kentucky has a unique opportunity to establish an APCD with the potential to benefit patients, payers, healthcare providers, the healthcare system, and the state by improving health outcomes and reducing costs of care. The APCD enables valuable research that can inform practice and policymaking and improve outcomes and quality of life for Kentuckians.



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## REFERENCES

- <sup>1</sup> Rama, A. (March 20, 2023). Trends in Healthcare Spending. American Medical Association. Accessed online April 15, 2023 at <https://www.ama-assn.org/about/research/trends-health-care-spending>.
- <sup>2</sup> Rae, M., Claxton, G., Amin, K., Wager, E., Ortaliza, J., Cox, C. (March 10, 2022). The Burden of Medical Debt in the United States. Peterson-KFF Health System Tracker. Accessed April 15, 2023 at [https://www.healthsystemtracker.org/brief/the-burden-of-medical-debt-in-the-united-states/#Share%20of%20adults%20who%20have%20more%20than%20\\$250%20in%20medical%20debt,%20by%20geography,%202019](https://www.healthsystemtracker.org/brief/the-burden-of-medical-debt-in-the-united-states/#Share%20of%20adults%20who%20have%20more%20than%20$250%20in%20medical%20debt,%20by%20geography,%202019).
- <sup>3</sup> National Archives. Federal Register. (November 27, 2019). Medicare and Medicaid Programs: CY 2020 Hospital Outpatient PPS Policy Changes and Payment Rates and Ambulatory Surgical Center Payment System Policy Changes and Payment Rates. Price Transparency Requirements for Hospitals To Make Standard Charges Public. Accessed April 15, 2023 at <https://www.federalregister.gov/documents/2019/11/27/2019-24931/medicare-and-medicaid-programs-cy-2020-hospital-outpatient-pps-policy-changes-and-payment-rates-and>.
- <sup>4</sup> Jiang JX, Krishnan R, Bai G. Price Transparency in Hospitals-Current Research and Future Directions. *JAMA Netw Open*. 2023;6(1):e2249588. Published 2023 Jan 3. doi:10.1001/jamanetworkopen.2022.49588.
- <sup>5</sup> Holtorf AP, Kristin E, Assamawakin A, Upakdee N, Indrianti R, Apinchonbancha N. Case studies for implementing MCDA for tender and purchasing decisions in hospitals in Indonesia and Thailand. *J Pharm Policy Pract*. 2021;14(1):52. Published 2021 Jun 14. doi:10.1186/s40545-021-00333-8.
- <sup>6</sup> The Commonwealth Fund. (December 10, 2020). State All-Payer Claims Databases: Tools for Improving Health Care Value, Part 1. Accessed February 22, 2023 at <https://www.commonwealthfund.org/publications/fund-reports/2020/dec/state-apcds-part-1-establish-make-functional>.
- <sup>7</sup> Agency for Healthcare Research and Quality. (February 2018). All-Payer Claims Databases. Accessed February 22, 2023 at <https://www.ahrq.gov/data/apcd/index.html>.
- <sup>8</sup> RAND Health Care. Carman, K, Dworsky, M, Heins, S, Schwam, D, Shelton, S, Whaley, C. (June 2, 2021). The History, Promise, and Challenges of State All Payer Claims Databases. Accessed February 22, 2023 at <https://aspe.hhs.gov/sites/default/files/private/pdf/265666/apcd-background-report.pdf>.
- <sup>9</sup> JSI Research and Training Institute. Vermont Asthma Program. "The What, Who, Why, and How of All-Payer Claims Databases." Accessed March 2, 2023 at <https://www.healthvermont.gov/sites/default/files/documents/2016/12/The%20What%2C%20Who%2C%20Why%2C%20and%20How%20of%20All-Payer%20Claims%20Databases.pdf>.
- <sup>10</sup> National All-Payer Claims Database Act of 2022. H.R. 9433. 117<sup>th</sup> Congress. (2021-2022). <https://www.congress.gov/bill/117th-congress/house-bill/9644/text/ih?overview=closed&format=xml>.
- <sup>11</sup> No Surprises Act. H.R. 3630. 116<sup>th</sup> Congress. (2019-2020). <https://www.congress.gov/bill/116th-congress/house-bill/3630?q=%7B%22search%22%3A%5B%22no+surprises+act%22%5D%7D&s=1&r=1>.
- <sup>12</sup> Centers for Disease Control and Prevention. Vision and Eye Health Surveillance System. MarketScan. Accessed online February 23, 2023 at <https://www.cdc.gov/visionhealth/vehss/data/claims/marketscan.html>.
- <sup>13</sup> Agency for Healthcare Quality and Research. Healthcare Cost and Utilization Project. Accessed online February 23, 2023 at <https://www.hcup-us.ahrq.gov/>.



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- <sup>14</sup> APCD Council. Interactive State Report Map. Accessed March 2, 2023 at <https://www.apcdcouncil.org/state/map>.
- <sup>15</sup> RAND Health Care. Carman, K, Dworsky, M, Heins, S, Schwam, D, Shelton, S, Whaley, C. (June 2, 2021). The History, Promise, and Challenges of State All Payer Claims Databases. Accessed April 15, 2023 at <https://aspe.hhs.gov/sites/default/files/private/pdf/265666/apcd-background-report.pdf>.
- <sup>16</sup> McCarthy, D. (December 2020). State All-Payer Claims Databases: Tools for Improving Health Care Value. Part 2: The Uses and Benefits of State APCDs. Accessed April 15, 2023 at [https://www.commonwealthfund.org/sites/default/files/2020-12/McCarthy\\_State\\_APCDs\\_Part2\\_v2.pdf](https://www.commonwealthfund.org/sites/default/files/2020-12/McCarthy_State_APCDs_Part2_v2.pdf).
- <sup>17</sup> California Health Care Foundation. The ABCs of APCDs: How States are Using Claims Data to Understand and Improve Care. (November 2018). Accessed March 2, 2023 at <https://www.chcf.org/wp-content/uploads/2018/11/TheABCsofAPCDs.pdf>.
- <sup>18</sup> Centers for Disease Control and Prevention. Life Expectancy at Birth by State. Accessed March 2, 2023 at [https://www.cdc.gov/nchs/pressroom/sosmap/life\\_expectancy/life\\_expectancy.htm](https://www.cdc.gov/nchs/pressroom/sosmap/life_expectancy/life_expectancy.htm).
- <sup>19</sup> National Center for Health Statistics. Vital Statistics Rapid Release. Mortality Dashboard. Accessed March 2, 2023 at <https://www.cdc.gov/nchs/nvss/vsrr/mortality-dashboard.htm#>.
- <sup>20</sup> National Center for Health Statistics. Vital Statistics Rapid Release. Mortality Dashboard. Accessed March 2, 2023 at <https://www.cdc.gov/nchs/nvss/vsrr/mortality-dashboard.htm#>.
- <sup>21</sup> Kentucky Legislative Commission. Kentucky General Assembly. House Bill 373. Accessed April 10, 2023 at <https://apps.legislature.ky.gov/record/20rs/hb373.html>.