Texas All-Payor Claims Database Biennial Report to the 89th Legislature

September 2026

UTHealth
The University of Texas Health Science Center at Houston
School of Public Health | Center for Health Care Data
1930 Old Spanish Trail | Houston | TX 77054
Ph: 713.500.9000 | https://go.uth.edu/txapcd

September 1, 2026

The Honorable Greg Abbott, Governor
The Honorable Dan Patrick, Lieutenant Governor
The Honorable Dustin Burrows, Speaker of the House

Dear Governor Abbott, Lieutenant Governor Patrick, and Speaker Burrows:

In accordance with Texas Insurance Code §38.408, I am pleased to submit the Center for Health Care Data at the University of Texas Health Science Center at Houston Texas All-Payor Claims Database (TX-APCD) biennial report to the 89th Texas Legislature. This report provides an update on the TX-APCD and contains information on the trends of health care affordability, availability, quality, and utilization.

I am available to discuss any of the issues contained in the report and to provide you with technical assistance. Please contact me at (713) 500-9433 if you have any questions or need any additional information.

Thank you for your consideration.

Sincerely,

Lee Spangler, JD, Executive Director

Texas All-Payor Claims Database

Texas All-Payor Claims Database Biennial Report

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1. Basic Description and Background of All-Payor Claims Databases

The term "All-Payor Claims Database (APCD)" is not a misnomer; it refers to a database designed to collect enrollment and claims data from as many payors as permitted under state law. According to a report issued in late 2023, 25 states currently have an APCD that is either operational or in implementation. There are two important exceptions to the general requirement for payors to submit claims information. Under United States Supreme Court case law interpreting the Employee Retirement Income Security Act (ERISA), states may not require employer-sponsored, self-funded health benefit plans governed by ERISA to submit data to an APCD.

In *Gobeille v. Liberty Mutual Insurance Company*, Liberty Mutual, as the sponsor of its employee health plan, challenged the enforceability of a Vermont law requiring the submission of eligibility, medical, and pharmacy claims data to the state's APCD, which is administered by the Green Mountain Care Board. ERISA preempts "any and all State laws insofar as they may now or hereafter relate to any employee benefit plan." The Supreme Court ruled that ERISA preempted the Vermont law, emphasizing that preemption is necessary to prevent multiple jurisdictions from imposing inconsistent or duplicative reporting requirements, which could create administrative inefficiencies and expose plans to broad liability. The Court further noted that ERISA establishes a uniform regulatory framework and that authority to require reporting from ERISA plans rests with the Secretary of Labor, not individual states. As a result, it is generally accepted that fully self-funded ERISA plans cannot be mandated under state law to submit claims data.

In addition to these ERISA-related limitations, the Texas All-Payor Claims Database (TX-APCD) cannot require the submission of claims related to services provided under the Veterans Affairs health benefit program, which is a federal program subject exclusively to federal regulation or the federal employee health program. Furthermore, transactions that occur without an insurance "claim" will not be sent to the TX-APCD. So, cash pay and uninsured data is not available from the TX-APCD. Nevertheless, the TX-APCD receives data from a substantial number of payors, as described below under "required submitters".

The "claims" relevant to APCDs, including the TX-APCD, are administrative claims submitted by health care providers. These claims document diagnoses, treatments, procedures, prices, and other health care-related events associated with services provided to individuals in a variety of settings, including hospitals, clinics, dental offices, physician practices, laboratories, and diagnostic facilities. The primary purpose of these claims is to provide sufficient information to payors to enable appropriate payment for medically necessary services. Federal regulations have standardized the electronic format for transmitting health care claims, commonly referred to as the "837 transaction." After a claim is processed, payors respond to the 837 transaction with an "835 transaction," which provides remittance advice and explains the payment and adjudication of the claim.

1.1. Required Submitters

The Texas Department of Insurance (TDI) has adopted regulations that sets out with particularity which insurance carriers must submit data to the TX-APCD.

Those entities are:

- a health benefit plan as defined by Insurance Code §1501.002, concerning Definitions;
- an individual health care plan that is subject to Insurance Code §1271.004, concerning Individual Health Care Plan;
- an individual health insurance policy providing major medical expense coverage that is subject to Insurance Code Chapter 1201, concerning Accident and Health Insurance;
- a health benefit plan as defined by §21.2702 of this title (relating to Definitions);
- a student health plan that provides major medical coverage, consistent with the definition of student health insurance coverage in 45 CFR §147.145, concerning Student Health Insurance Coverage;
- short-term limited-duration insurance as defined by Insurance Code §1509.001, concerning Definition;
- individual or group dental insurance coverage that is subject to Insurance Code Chapter 1201 or Insurance Code Chapter 1251, concerning Group and Blanket Health Insurance;
- dental coverage provided through a single service Health Maintenance Organization (HMO) that is subject to Chapter 11, Subchapter W, of this title (relating to Single Service HMOs);
- a health benefit plan as defined by Insurance Code Chapter 846, concerning Multiple Employer Welfare Arrangements;
- basic coverage under Insurance Code Chapter 1551, concerning Texas Employees Group Benefits Act;
- a basic plan under Insurance Code Chapter 1575, concerning Texas Public School Employees Group Benefits Program;
- a health coverage plan under Insurance Code Chapter 1579, concerning Texas School Employees Uniform Group Health Coverage;
- basic coverage under Insurance Code Chapter 1601, concerning Uniform Insurance Benefits Act for Employees of the University of Texas System and the Texas A&M University System;
- a county employee health benefit plan established under Local Government Code Chapter 157, concerning Assistance, Benefits, and Working Conditions of County Officers and Employees;

- group dental, health and accident, or medical expense coverage provided by a risk pool created under Local Government Code Chapter 172, concerning Texas Political Subdivisions Uniform Group Benefits Program;
- the state Medicaid program operated under Human Resources Code Chapter 32, concerning Medical Assistance Program;
- a Medicaid managed care plan operated under Government Code Chapter 533, concerning Medicaid Managed Care Program;
- the child health plan program operated under Health and Safety Code Chapter 62;
- the health benefits plan for children operated under Health and Safety Code Chapter 63;
- a Medicare Advantage Plan providing health benefits under Medicare Part C as defined in 42 USC §1395w-21, et seq.;
- a Medicare Part D voluntary prescription drug benefit plan providing benefits as defined in 42 USC §1395w-101, et seq.[1]

This represents a very large proportion of those who have some form of health coverage in Texas. Readers should note: UTHealth Houston School of Public Health Center for Health Care Data (the Center), through its own resources (meaning without General Revenue Funding), is providing the Texas Original Medicare claims data in support of the goals set for the TX-APCD. However, that data is provided pursuant to a federal program which has differing requirements for use.

1.2. Analysis of Data Submitted to the TX-APCD and Development of the TX-APCD Research Ready Resource

The TX-APCD continues to move from the initial work of data collection and conformance toward the broader statutory objective of making health care information available for transparency, policy analysis, and public interest research. The material summarized in this section reflects the Center's progress in converting payor-submitted administrative claims into standardized, research-ready information.

The TX-APCD is a statewide claims resource rather than a clinical record system. The database is built from administrative claims submitted by payors and includes medical, dental, and pharmacy claims, eligibility information, provider information, and related payment fields. Because the data are submitted using standardized layouts and are then transformed into analytic files, the database can support comparisons across payors, populations, regions, and time periods. The same standardization also supports a public reporting function and a qualified research function, both of which depend on consistent definitions and reproducible methods.

[1] 28 TAC §21.5401.

Figure 1. Overview of the TX-APCD as a statewide, standardized, and research-ready claims resource.

As with any administrative claims database, interpretation requires careful attention to what the data do and do not contain. The TX-APCD does not function as a medical record and does not include all clinical results, imaging values, vital signs, or other information that would ordinarily appear in a clinical chart. The database also does not capture uninsured care, cash-pay care, uncovered out-of-pocket spending, insurance premium payments, or certain federal program data. Race and ethnicity information and household relationships may be absent or incomplete. Nevertheless, the data remain a powerful source of health care insight because claims show diagnoses, services ordered, procedures performed, prescriptions dispensed, and allowed amounts associated with care delivery (Figure 2).

Medical Access Programs and TX-APCD Data Submission

Medical Access Programs (MAPs) are not required to submit data to the TX-APCD because they do not operate as health insurance plans and generally do not generate or adjudicate health care claims. Instead, MAPs function as locally funded health care assistance programs that provide direct access to medical services for eligible residents through designated provider networks. As a result, the claims-based reporting requirements that apply to health insurers, health maintenance organizations, third-party administrators, and other payors under the TX-APCD do not apply to MAP programs.

Under the Texas Indigent Health Care and Treatment Act (Chapter 61, Texas Health and Safety Code), counties are required to provide basic health care services to eligible low-income residents. In many areas of the state, however, this responsibility has been assumed by voter-approved hospital districts. Examples include Central Health in Travis County, JPS Health Network in Tarrant County, and the Parker County Hospital District.

When a hospital district is established, the statutory authority to provide indigent health care services transfers to the hospital district, which then administers and funds the MAP.

MAPs are intended to provide a health care safety net for individuals who have exhausted all other available coverage options and are a last resort method of supporting access to health care. As alluded to earlier, MAP enrollment does not provide an individual with an insurance product that pays claims submitted by health care providers. Instead, eligible individuals receive care directly through participating clinics, physicians, public hospitals, and other providers that contract with the local hospital district or program administrator. Because services are delivered through these direct care arrangements rather than through a claims-based reimbursement system, MAPs typically do not create the administrative claims records that form the foundation of the TX-APCD.

Consequently, health care services provided through MAP programs are not reflected in TX-APCD data. Users of the database should therefore recognize that analyses based on TX-APCD data may not fully capture health care utilization, expenditures, or service delivery associated with locally funded indigent care programs operating under Chapter 61 of the Texas Health and Safety Code. This limitation is particularly relevant in areas served by large hospital districts where MAP enrollment represents a portion of the local health care safety net.

Figure 2. Interpretive limits of administrative claims data in the TX-APCD.

The TX-APCD is currently focused on Phase III objectives related to data availability and qualified research. The technical phases of implementation began with data submission and the establishment of the submission portal, registration, notifications, service desk processes, automation, and movement of files from submission to receipt. The next phase emphasized conformance and quality, including conformance rules, quality checks, and exception logic. The current work focuses on data enhancement and data availability, including the Master Patient Index, Master Provider Registry, data linkage, public reporting, and qualified research.

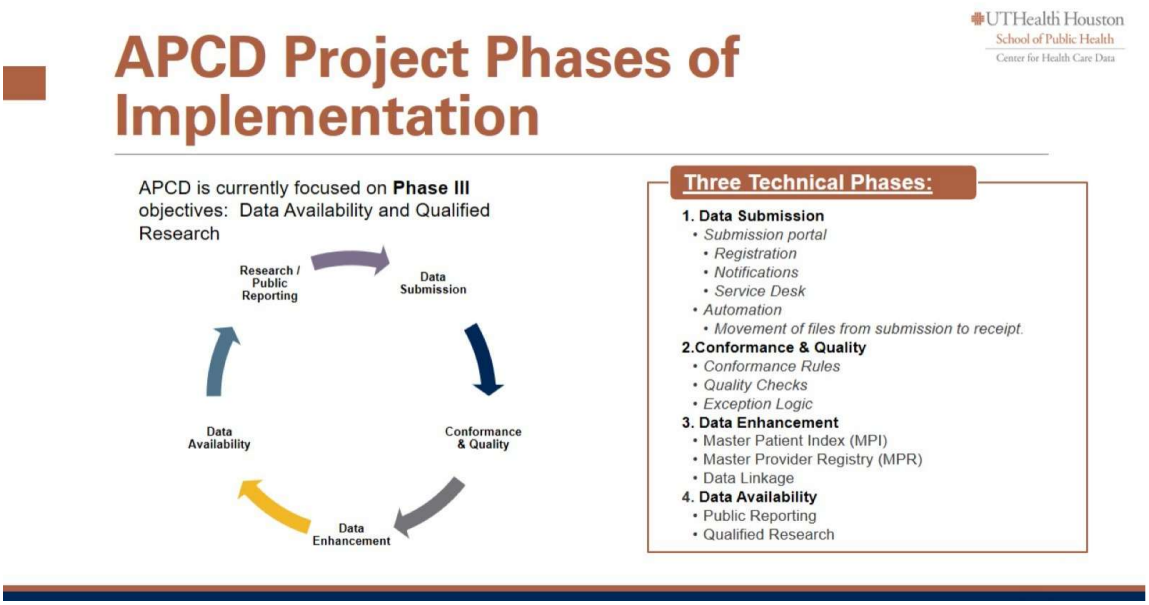


Figure 3. TX-APCD project phases of implementation and current Phase III focus.

Clinical and utilization enhancements include standardized flags for acute inpatient admissions and readmissions, person-level chronic condition measures for cohort definition and risk adjustment, and emergency department severity classification using published methodology. These enhancements are intended to make research faster, more consistent, and easier to scale across populations and study designs (Figure 4).

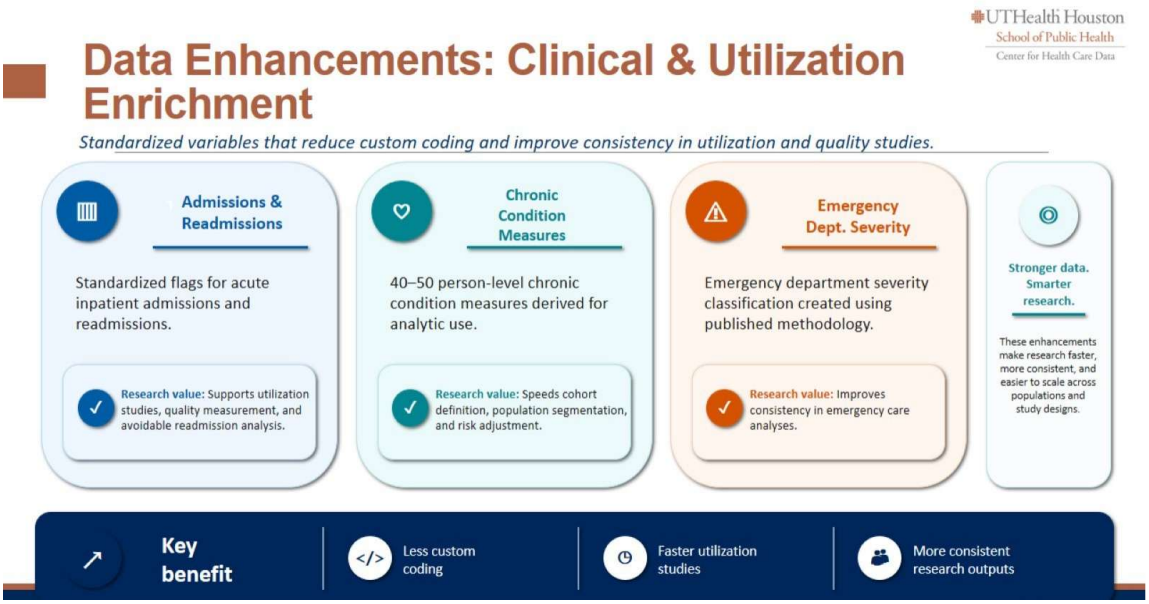


Figure 4. Clinical and utilization data enhancements.

Cost, pharmacy, and provider enhancements are similarly important. The Master Provider Registry will create a standardized provider reference layer for research and reporting.

Rendering provider attribution will help identify the provider on the claim, distinguish primary care from non-primary care, and support referral pattern analysis. Aggregated spending tables will reduce processing time and lower analytic burden for cost studies. Pharmacy classification will translate drug codes into broader therapeutic or classification groups, simplifying pharmacy analyses and reducing manual code mapping (Figure 5).

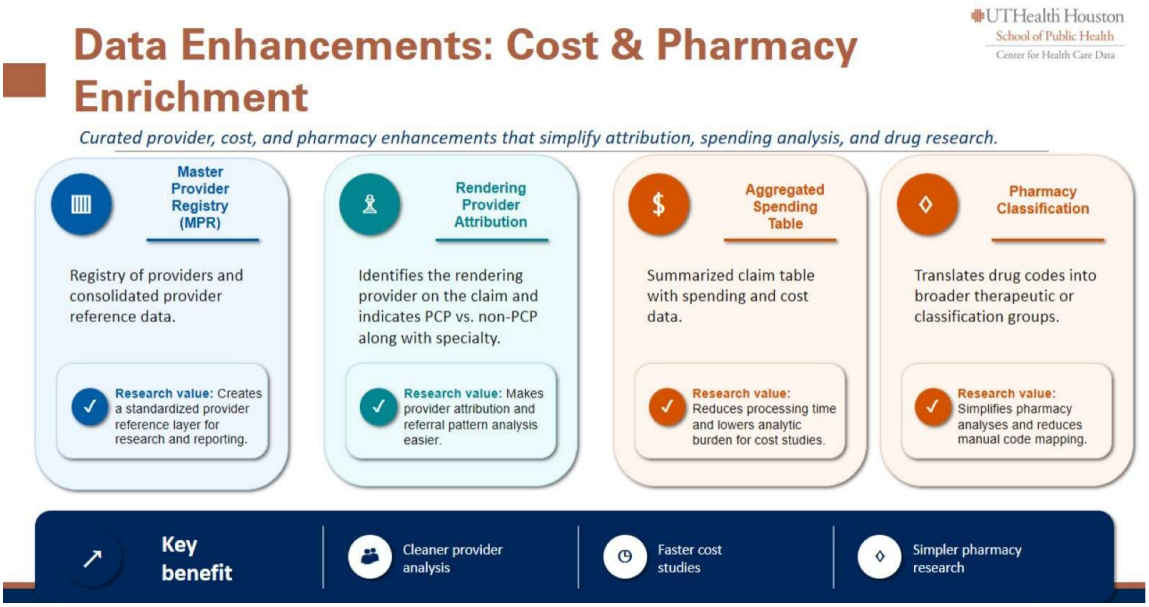


Figure 5. Provider, cost, and pharmacy data enhancements.

Identity, privacy, and linkage enhancements are foundational to more efficient research workflows. The Master Patient Index will provide a persistent person-level identifier that supports linking the same individual across files and over time, which simplifies longitudinal analysis and reduces repeated record matching work. A de-identified dataset will support broader research use and may reduce the cost of projects that do not require identified data. The Family Identification (ID) work will support algorithms to link subscribers and dependents, as well as Medicaid case number clients, for unit-like utilization, coverage, and spending studies. Mother and newborn matching will make maternal-child health research more practical and accurate by linking mothers and infants in commercial and Medicaid data (Figure 6).

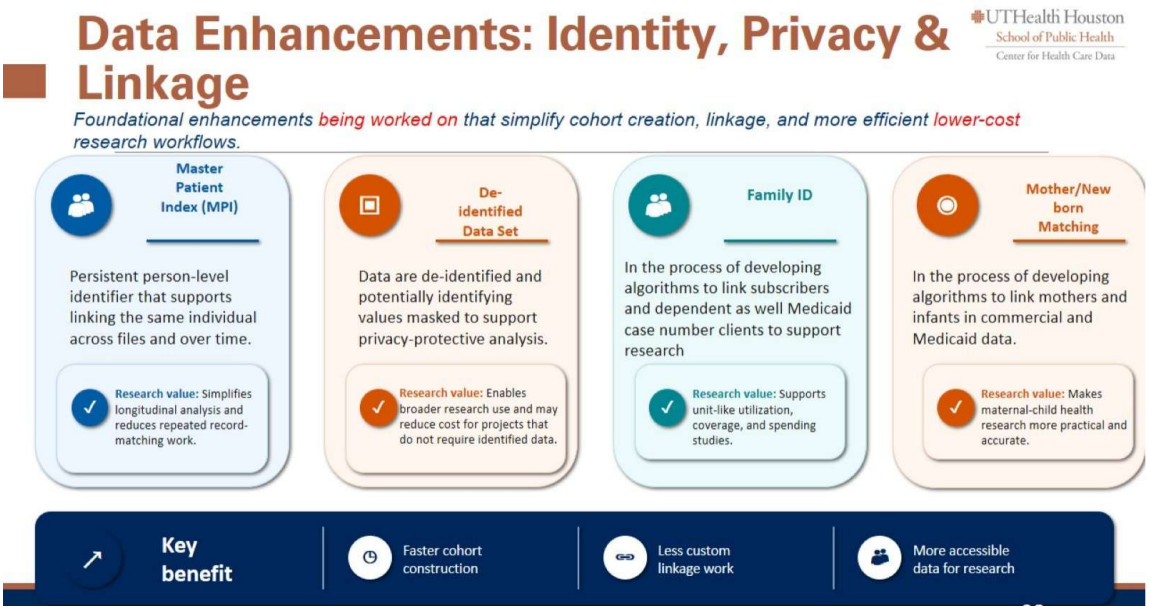


Figure 6. Identity, privacy, and linkage data enhancements.

1.3. Submitters, Covered Populations, and Market Concentration

Required submitters include medical, dental, behavioral health, Medicare Advantage, county and municipal sponsored, state, Medicaid managed care, Medicare fee-for-service through the Center, and other non-preempted plans. Fully self-funded ERISA plans are not subject to state mandatory claims submission requirements, although such plans may submit voluntarily. The distinction is important for interpreting commercial analyses because commercial data may include some self-funded ERISA enrollment, but analyses restricted to fully insured group commercial plans exclude that segment.

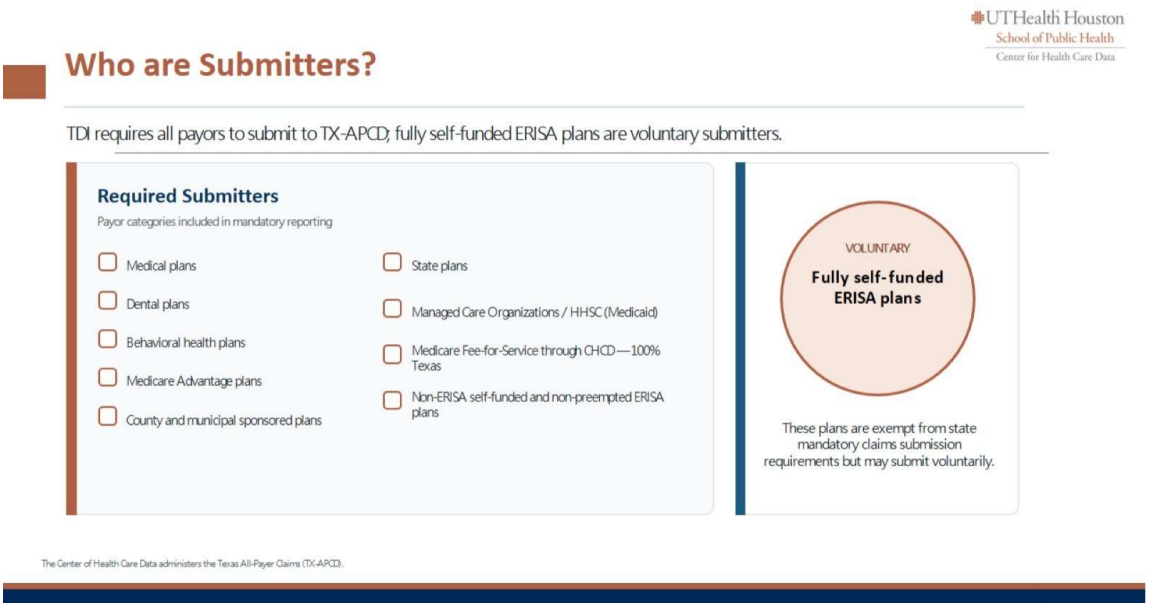


Figure 7. Required and voluntary submitter categories for TX-APCD data.

The database represents a substantial share of insured Texans. Each month, the Center receives information on approximately 18 million Texans, including Texas Medicaid clients, Texans in Texas Medicare Advantage plans, and Texans in Medicare fee-for-service coverage supplemented through files from the Centers for Medicare and Medicaid Services. The mapped coverage measures in Figure 8 show that the share of the covered population represented in the data varies by program and geography, but also demonstrate the breadth of the resource across Medicaid, Medicare, and commercial coverage. This level of coverage gives the TX-APCD the capacity to support statewide and regional analysis that would not be possible from a single payor or provider source.

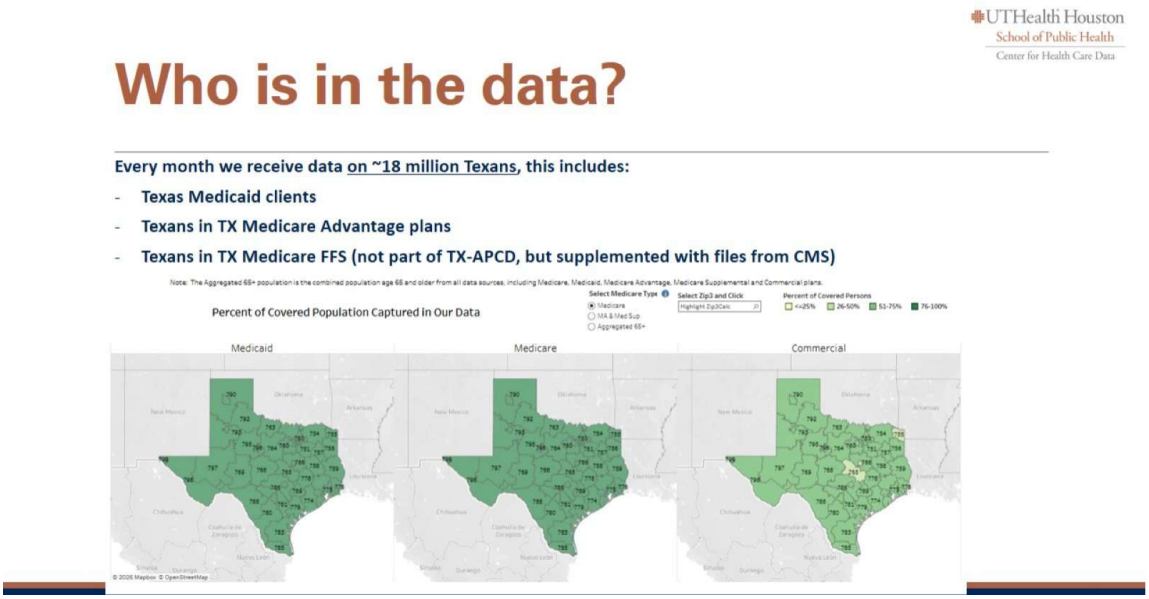


Figure 8. Covered populations represented in the TX-APCD by coverage category and geography.

The submitted data also show that coverage in Texas is concentrated among a relatively small number of large parent organizations. Aggregating submitters by company provides a clearer view of market structure than reviewing each individual submitter separately. As shown in Figure 9, a majority of Texans represented in fiscal year 2025 TX-APCD submissions continue to be covered by a relatively small number of large payors or parent organizations, a pattern consistent with prior years. Claims associated with the largest payors account for a substantial share of total claims received, with the top 10 payors representing approximately 85 percent of claims and the top 35 payors representing more than 96 percent of claims. This pattern indicates that the submitted claims data are highly concentrated among a limited number of large organizations.

Figure 9. Submitter distribution aggregated by parent company for primary medical fiscal year 2025.

1.4. Technical Narrative: Automated Review of Files Submitted by Required Submitters

Required Submitters are payors of health care—such as commercial health insurers, Medicaid managed care organizations, or other entities—who are mandated to provide monthly data submissions to the TX-APCD. These submissions supply the core datasets necessary for the administration, oversight, and analysis of health care access, utilization, and cost in Texas.

Each month, a Required Submitter must prepare a standardized set of files, which generally include:

1. **Provider File** – containing information on:

- All providers with a contracted network arrangement with the payor; and
- Any provider who submitted a claim, regardless of whether the provider is in-network.

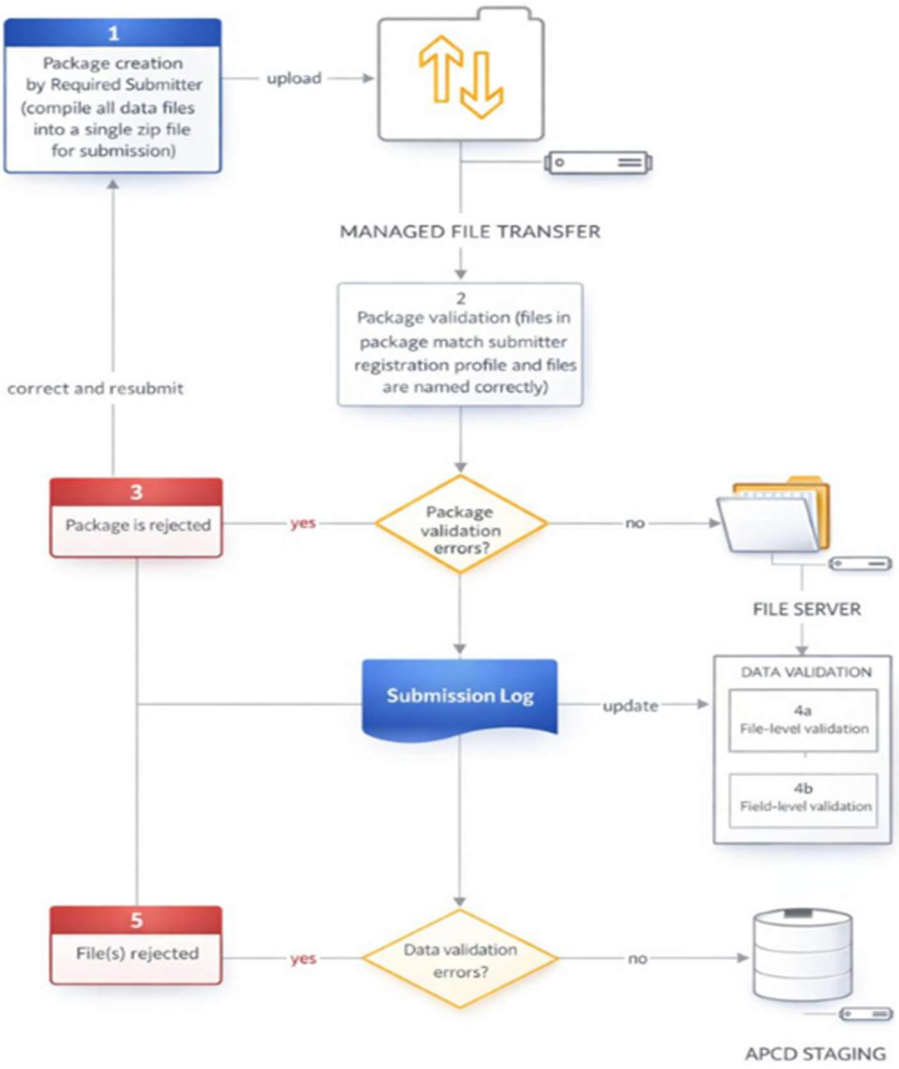
2. **Eligibility File** – listing each covered person who may receive benefits under the payor's plans.
3. **Claims Files** – one or more of the following:

- Medical Claims File
- Pharmacy Claims File
- Dental Claims File

Not all submitters produce all three claim types (e.g., a medical insurer without a dental product submits only medical and/or pharmacy claims as applicable).

All files must be packaged in a single encrypted ZIP file before submission. The automated review process is designed to ensure both technical and substantive conformity with TX-APCD requirements.

1.5. Step-by-Step Description of the Submission Process



STEP 1 — PACKAGE CREATION (BOX 1)
The Required Submitter compiles all monthly files—the Provider File, the Eligibility File, and any applicable Claims Files—into a single submission package.
This package **must** be:

- Structured as a single ZIP file, and
- Encrypted according to TX-APCD requirements.

The encryption requirement is non-negotiable. If the package is not encrypted, the system detects this condition immediately upon upload; the unencrypted ZIP file is automatically and permanently destroyed, and the submitter is notified to resubmit a compliant encrypted file.

STEP 2 — MANAGED FILE TRANSFER AND INITIAL VALIDATION (BOX 2)
Once the encrypted ZIP file is uploaded through the Managed File Transfer system, the automated process performs **package-level validation**.
This validation checks whether:

- the ZIP archive is properly encrypted.
- the files within the package correspond to the Required Submitter's registration profile (e.g., correct file types for claims the submitter is expected to produce).
- all files included are named in a format consistent with TX-APCD naming conventions.

If these conditions are not satisfied, the process moves to Box 3 (Package is rejected).

Decision Point — Package Validation Errors? (Diamond between Boxes 2 and 3)

If package-level validation identifies any errors—including missing files, incorrectly named files, unencrypted content, or mismatched file types—the system classifies the submission as invalid.

STEP 3 — PACKAGE REJECTION (BOX 3)
Submissions failing package-level validation are rejected ***automatically***.

The Required Submitter receives a notification detailing the detected deficiencies and is instructed to correct the identified issues and resubmit the package.

The process terminates for the submitted package at this step until a corrected package is resubmitted.

If the package passes package-level validation, it is forwarded into the file server for deeper data validation.

STEP 4 — FILE-LEVEL AND FIELD-LEVEL VALIDATION (BOXES 4A AND 4B)
After a valid package is accepted, each file inside the package undergoes two stages of automated validation.

4a — File-Level Validation (Box 4a)

This step confirms that individual files meet the technical and structural requirements of the TX-APCD, including:

- The file name conforms to prescribed naming standards;
- The file corresponds to the correct reporting month, submitter ID, and file type; and
- The file format matches the expected structure (e.g., delimited text, correct number of columns).

File-level validation ensures that files are technically operable and identifiable before evaluating the content of the data itself.

4b — Field-Level Validation (Box 4b)

Field-level validation is a deeper review focused on the content and formatting of the data elements inside the files.

For each record in every file, the system checks:

1. **Presence of Required Fields**
   All mandatory data fields for each file type must be included.
2. **Format/Data Type Compliance**
   Each field must conform to its defined data type, such as:

- char
- varchar
- integer
- numeric
- decimal

3. **Value Conformity and Reasonableness**
   Values must adhere to patterns and expectations specified in TX-APCD rules, such as:

- Zone Improvement Plan (ZIP) codes containing only five (5) or nine (9) numeric digits
- Dates formatted correctly (typically YYYY-MM-DD)
- Codes conforming to industry standards (e.g., CPT/HCPCS, NDC, diagnosis codes)

Files that violate field-level rules are flagged for rejection.

Submission Log Update (Center element in process flow)

During validation, submission metadata—including timestamps, submitter information, validation outcomes, and detected errors—is recorded in the Submission Log. This log supports auditing, compliance monitoring, and communication back to Required Submitters.

Decision Point — Data Validation Errors? (Diamond before Box 5)

After all file-level and field-level validation checks, the system determines whether any file contains validation errors.

If errors exist, one or more files fail data validation.

STEP 5 — FILE REJECTION (BOX 5)
Files with validation errors are rejected individually.

The Required Submitter receives a detailed error report, including:

- the file(s) affected.
- specific fields or records containing errors.
- the type of error (missing value, invalid format, unacceptable value, etc.).

The submitter must correct these errors and resubmit the affected file(s) in a new encrypted package.

If no data validation errors are found, the files are accepted and moved into APCD Staging.

FINAL STEP — APCD STAGING
Validated files are transferred into the APCD Staging environment, where they become available for downstream processing, standardization, aggregation, and eventual incorporation into the statewide claims database.

1.6. Conclusion

The automated TX-APCD submission process ensures that all files received from Required Submitters are:

1. Securely transmitted (encrypted ZIP requirement);
2. Structurally correct (package and file-level validation); and
3. Data-accurate and compliant (field-level validation).

By enforcing these validation steps, the TX-APCD maintains high-quality, consistent, and reliable datasets essential for statewide health care analysis, oversight, and policy development.

1.7. Executive Summary for Non-Technical Readers

Understanding How TX-APCD Data Submissions are Checked and Processed

Every month, health care payors in Texas (called **Required Submitters**) must send certain information to the TX-APCD. This information includes:

- a list of all health care providers who either treated someone covered by the payor or who have a contract with the payor.
- a list of all people who are enrolled in the payor's health plans.
- the medical, pharmacy, and dental claims the payor processed during the month (as applicable).

Because this information contains private health data, the payor must place all files into **one encrypted ZIP file** before sending it.

What Happens After a Payor Submits Data?

1. **Security Check**

The system first checks whether the ZIP file is properly encrypted.

- If not encrypted, the system deletes it immediately and notifies the payor.

2. **Initial Screening**

The system checks that:

- the payor sent all required files.
- the files are for the correct reporting period.
- files are named correctly.
- the payor sent only the types of files they are required to submit.

If any of these items are wrong, the entire submission is rejected and the payor must fix and resubmit it.

3. **Detailed Data Checks:**

If the package passes the first checks, each file is examined more closely. The system checks:

- whether each file is structured correctly.
- whether required data fields are present.
- whether information is in the proper format (e.g., ZIP codes must have 5 or 9 digits).
- whether the information in each field makes sense (e.g., valid dates and codes).

4. **Error Handling**

If the system finds any problems inside the data, the affected files are rejected. The payor receives an error report describing what needs correction.

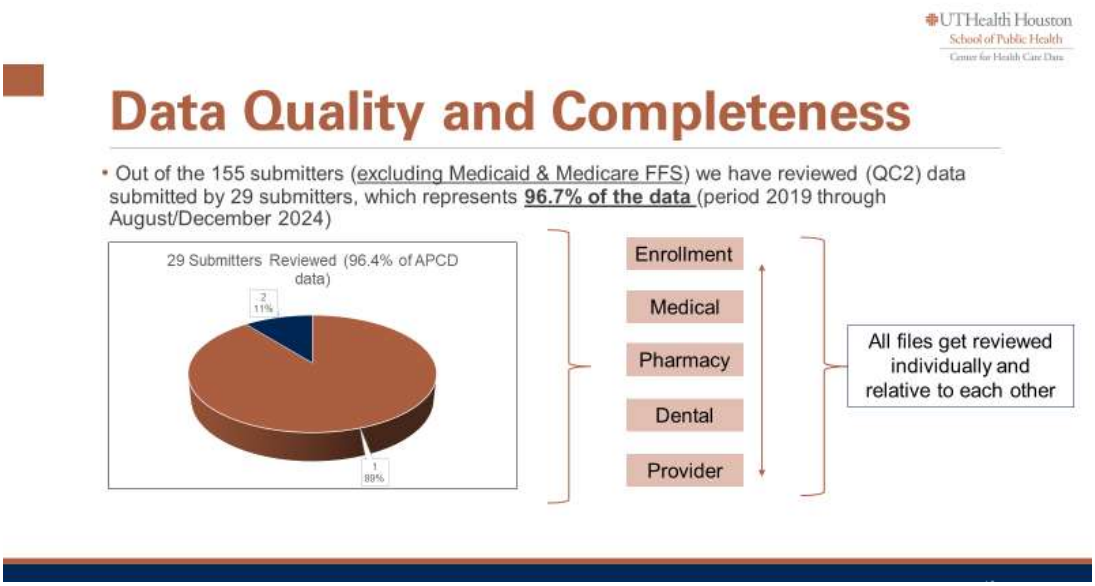
5. **Staging Approved Data**

Once all data passes all checks, it is moved to a staging area where it can be further processed and eventually added to the statewide database.

This automated process ensures that only secure, complete, accurate, and properly formatted health care data enters the TX-APCD.

This helps support:

- reliable statewide reporting.
- better analysis of health care costs and trends.
- transparency for policymakers.
- high-quality data for research and oversight.



2. Tranisition to New Database Software

2.1. Transition from Greenplum to Citus: Open Architecture, Cost Drivers, and Selection Process

The transition from Greenplum to an alternative platform was initiated by a significant increase in vendor support costs following the acquisition of the company responsible for Greenplum's development and maintenance. This change resulted in a pricing shift that nearly tripled the annual cost, elevating the licensing and support fees to over $350,000 per year.

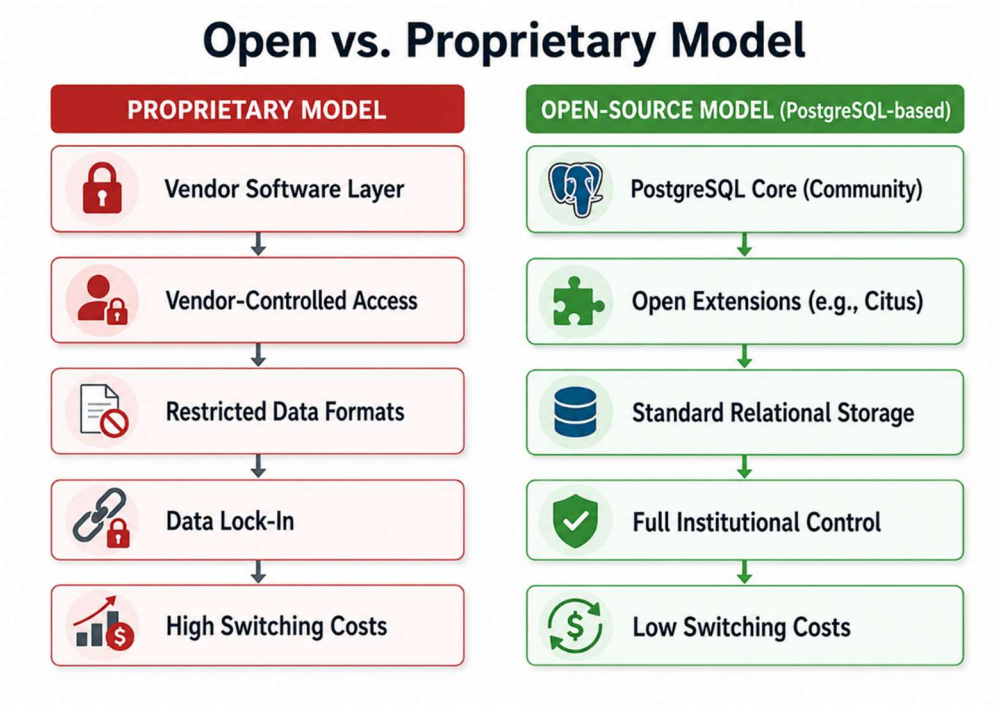
This escalation necessitated a formal reassessment of the organization's data platform strategy. While cost containment was an immediate concern, the evaluation was also grounded in a broader, forward-looking objective: to ensure long-term control, flexibility, and sustainability of the underlying data infrastructure.

OPEN-SOURCE FOUNDATION AND DATA OWNERSHIP

A critical—and ultimately decisive—factor in the evaluation was the commitment to open-source technologies. Both Greenplum and Citus (which was ultimately selected as our new database support software) are built upon PostgreSQL, one of the most widely adopted open-source relational database systems. This shared foundation provides an essential assurance: the organization's data is never bound to proprietary formats or vendor-controlled systems.

In practical terms, this means that all data remains fully accessible within standard PostgreSQL structures. There are no technical or contractual barriers preventing direct access to data, migration of the data should that be necessary, or integration with other tools. The institution retains complete posession and governance over the data environment, including the ability to replicate, export, and extend datasets without dependence on a single vendor.

This architectural openness stands in contrast to proprietary database platforms, where data is often tightly coupled with vendor-specific storage engines and access layers. By maintaining alignment with PostgreSQL, both the legacy and future-state environments ensure continuity of access, transparency, and long-term adaptability.



ARCHITECTURAL EVOLUTION: FROM GREENPLUM TO CITUS

Although both platforms are rooted in PostgreSQL, they differ in how they achieve distributed data processing. Greenplum operates as a modified PostgreSQL system with built-in distributed capabilities, whereas Citus extends standard PostgreSQL through an add-on module that enables horizontal scaling.

This distinction is meaningful from an operational perspective. Citus preserves a more "native" PostgreSQL experience, allowing the team to leverage existing expertise, tooling, and compatibility with minimal disruption. At the same time, it introduces the ability to distribute large datasets across nodes, thereby maintaining the performance characteristics required for analytical workloads.

The result is not a departure from the existing ecosystem, but rather an evolution toward a more flexible and maintainable architecture.

EVALUATION PROCESS AND INTERNAL METHODOLOGY

Following the decision to explore alternatives, the team adopted a structured and highly collaborative evaluation approach. Requirements were first defined collectively, reflecting both technical and operational priorities. These requirements included performance under load, scalability, relational integrity, ease of administration, and ecosystem maturity.

Once established, these criteria were translated into standardized testing scenarios. Each candidate platform was required to undergo the same sequence of activities, including

initial setup, ingestion of representative datasets, and execution of benchmark queries. This ensured that all platforms were evaluated on a consistent and comparable basis.

The three final contenders—ClickHouse (Tesla, Anthropic, Instacart), StarRocks (Airbnb, Coinbase, Trip.com), and Citus (Algolia, Heap, ConvertFlow)—were selected not only for their technical capabilities but also for their demonstrated adoption within demanding, large-scale production environments. The inclusion of well-known, data-intensive organizations underscores the maturity and real-world applicability of each platform.

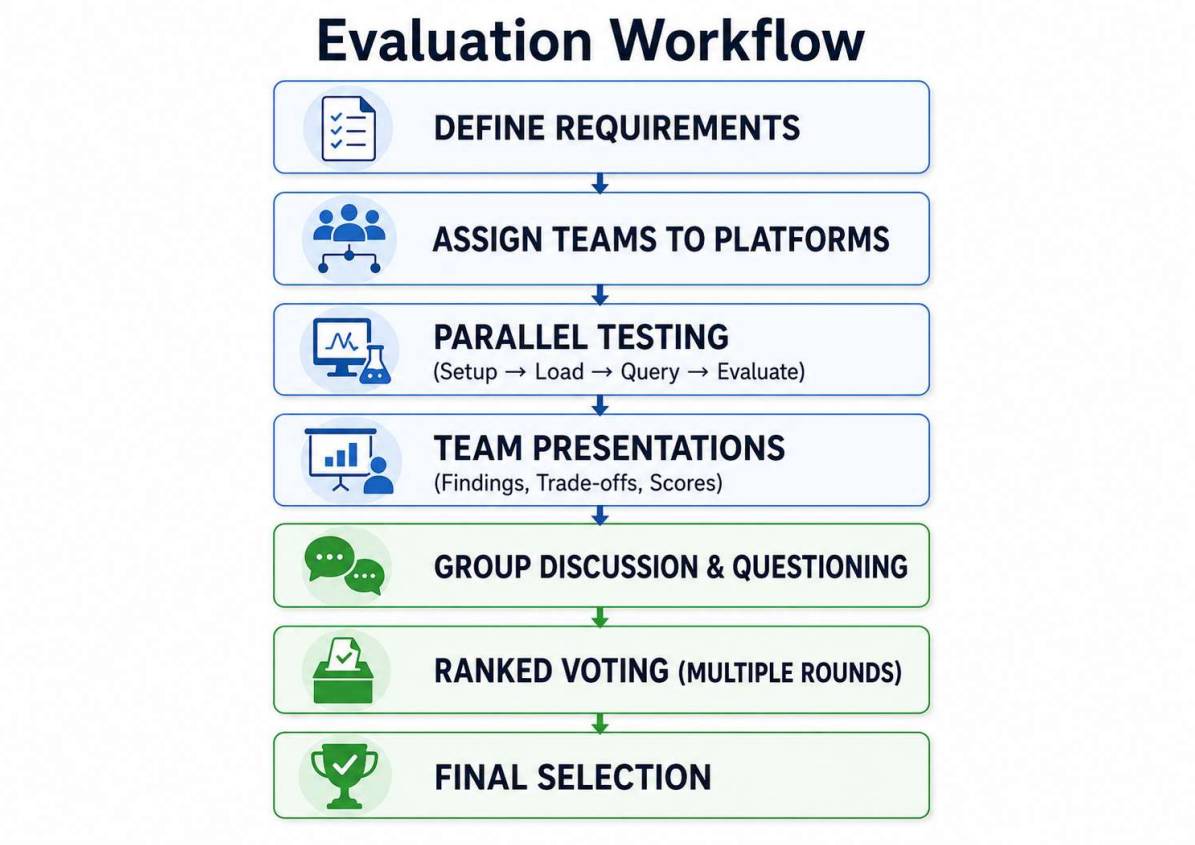
ClickHouse is a high-performance, columnar database designed primarily for analytical workloads. Its adoption by organizations such as Tesla, Anthropic, and Instacart reflects its strength in handling extremely large datasets and executing complex queries with exceptional speed. These companies operate in environments where near real-time analytics and rapid aggregation across billions of records are essential, highlighting ClickHouse's suitability for high-throughput, performance-critical use cases. However, its architecture places less emphasis on traditional relational modeling, which introduces trade-offs in flexibility for certain types of structured data workflows.

StarRocks, used by companies including Airbnb, Coinbase, and Trip.com, is similarly optimized for fast, interactive analytics, with a particular focus on real-time data processing. Its adoption within companies that rely heavily on user-driven platforms and transactional analytics demonstrates its ability to support dynamic dashboards and continuously updated data pipelines. StarRocks represents a newer generation of analytical databases that aim to bridge batch and real-time processing, though its ecosystem and long-term maturity are still evolving relative to more established PostgreSQL-based solutions.

Citus, which is fundamentally an extension of PostgreSQL, is utilized by organizations such as Algolia, Heap, and ConvertFlow—companies that require both scalability and strong relational data integrity. These use cases emphasize applications where structured data relationships, transactional consistency, and complex querying remain critical alongside growth in data volume. Because Citus builds directly on PostgreSQL, it retains full compatibility with established relational paradigms while enabling horizontal scaling across distributed nodes. This combination of scalability and familiarity distinguishes it from the other contenders and aligns closely with environments that prioritize both analytical performance and relational rigor.

To further strengthen the evaluation, the organization adopted a team-based model. Individual teams were assigned responsibility for one platform each and tasked with independently implementing, testing, and documenting their findings. This approach fostered both depth of expertise and healthy internal competition, as each team sought to demonstrate the strengths of its assigned technology.

EVALUATION WORKFLOW (GRAPHICAL)



COMPARATIVE TESTING AND DELIBERATION

Upon completion of testing, the teams reconvened to present their results. These presentations provided detailed insights into performance characteristics, implementation complexity, relational capabilities, and observed limitations. The discussion that followed allowed for cross-team questioning and clarification, ensuring that all findings were thoroughly vetted.

The results revealed a high degree of parity among the three platforms, each excelling in different areas. ClickHouse demonstrated exceptional query performance, particularly for analytical workloads, though it deviated from traditional relational paradigms. StarRocks offered strong real-time processing capabilities but was comparatively less mature in ecosystem development. Citus distinguished itself by balancing scalability with full adherence to relational database principles and PostgreSQL compatibility.

We employed a structured ranking process to reach a final decision. Multiple rounds of voting were required, reflecting the competitiveness of the field and the thoughtful consideration given to each option.

FINAL SELECTION AND STRATEGIC ALIGNMENT

Citus was ultimately selected as the preferred platform due to its alignment with both technical requirements and strategic priorities. Its ability to seamlessly extend PostgreSQL allows us to maintain use of a product which uses existing expertise while keeping the scalability needed for large datasets. Equally important, it reinforced the

commitment to open-source architecture, ensuring continued data ownership and independence from proprietary constraints.

The decision reflects a balance of performance, maintainability, and long-term flexibility. By choosing a solution that builds upon a trusted and open foundation, the organization has positioned itself to adapt to future needs without incurring unnecessary cost or complexity.

2.2. Conclusion

The transition from Greenplum to Citus reflects a deliberate shift toward a more sustainable and controlled data environment, driven by both financial realities and sound architectural principles. The change was prompted by a nearly threefold increase in licensing costs, exceeding $350,000 annually, which necessitated a reassessment of long-term platform viability. Throughout this process, maintaining an open-source foundation remained a central priority, ensuring that all data continues to reside within standard PostgreSQL structures under full institutional control. A rigorous, team-based evaluation process enabled objective comparison across leading technologies and fostered informed decision-making. Citus was ultimately selected for its ability to combine scalable performance with full PostgreSQL compatibility and operational simplicity, positioning the organization with a reliable and adaptable platform for future growth.

2.3. Executive Summary for Non-Technical Readers

The organization decided to reassess its database platform after vendor support costs for Greenplum increased sharply, nearly tripling annual expenses to more than $350,000 per year. While cost was the immediate reason for the review, the larger goal was to choose a system that would give the organization greater long-term control, flexibility, and sustainability.

A central priority was avoiding dependence on a proprietary vendor-controlled system. Both Greenplum and the selected replacement, Citus, are based on PostgreSQL, a widely used open-source database system. This means the organization’s data remains in standard, accessible formats rather than being locked into a vendor’s private technology. As a result, the institution retains control over its data, can move or export it if needed, and can continue using common tools and existing staff expertise.

The evaluation process was structured and collaborative. Teams first defined the organization’s requirements, including performance, scalability, ease of administration, reliability, and compatibility with relational data. Each candidate platform was then tested using the same process: setup, data loading, query testing, and evaluation. This allowed the organization to compare the options fairly.

Three leading options were reviewed: ClickHouse, StarRocks, and Citus. ClickHouse showed very strong performance for large-scale analytics. StarRocks offered promising real-time analytics capabilities. Citus stood out because it extended PostgreSQL while preserving familiar relational database principles, compatibility, and operational simplicity.

After team presentations, group discussion, questioning, and multiple rounds of ranked voting, Citus was selected. The decision reflected a balance of cost control, technical performance, staff familiarity, open-source architecture, and long-term flexibility.

In practical terms, the move from Greenplum to Citus is not simply a software replacement. It is a strategic shift toward a more open, sustainable, and institutionally controlled data environment. The selected platform allows the organization to continue using a trusted PostgreSQL foundation while gaining the ability to scale for large datasets and reduce dependence on costly vendor-controlled arrangements.

3. Analysis of the Trends of Health Care Affordability, Availability, Quality, and Utilization

3.1. Primary Care in Texas

The Center Research Team: Trudy Millard Krause, DrPH, Abdelaziz Alsharawy, PhD, Temitope Adekunie, MS

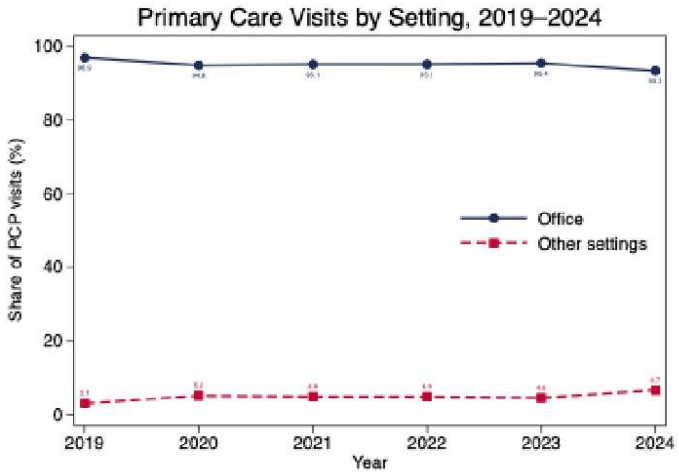
An analysis of primary care delivery in Texas using data from the TX-APCD highlights several important trends related to access, utilization, and payment. These findings reflect the stability of the primary care model in Texas.

Primary care in Texas remains firmly grounded in office-based settings, which continue to account for the overwhelming majority of patient encounters. Despite the availability of alternative delivery models in recent years, such as telehealth, the data demonstrate that in-person office visits at professional places of service remain the dominant mode of interaction between patients and providers. At the same time, there is clear evidence that non-office-based care—particularly telehealth in other than office settings or the home — has begun to slightly expand. While still a relatively small share of total encounters, telehealth utilization has grown steadily over time, indicating a gradual but meaningful shift in how patients access care and how providers extend services beyond traditional settings.

Primary care is overwhelmingly office-based

Other settings:

1. FQHC
2. Independent Clinic
3. Rural Health Clinic
4. Telehealth Provided in Patient's Home
5. Telehealth Provided other than in Patient's Home
6. Urgent Care Facility
7. Walk-in Retail Health Clinic

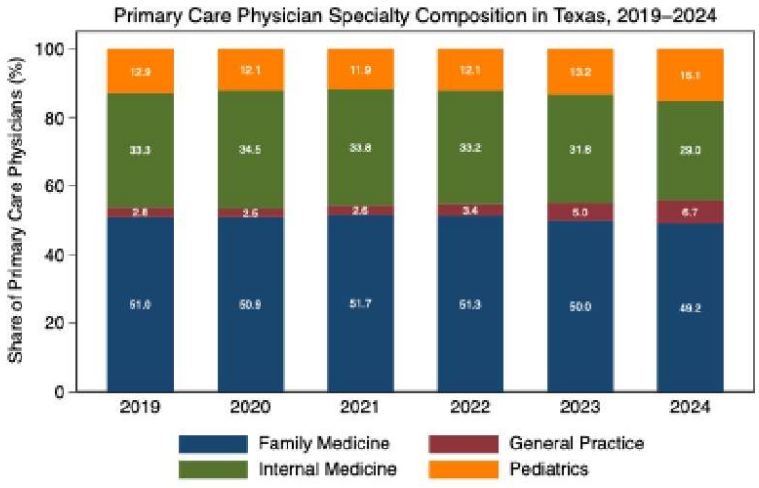


The composition of the primary care workforce is stable. Of the four primary care physician specialties we reviewed, there was little change in the composition of the physician workforce (note: this was a review of only the physician specialty workforce). There does seem to be a small trend indicating an increase in pediatrics and general practice. It is possible the increase in physicians identifying with general practice may be related to increases in telehealth.

Composition of Primary Care

Primary care workforce composition is stable over time

Modest increases in Pediatrics and General Practice

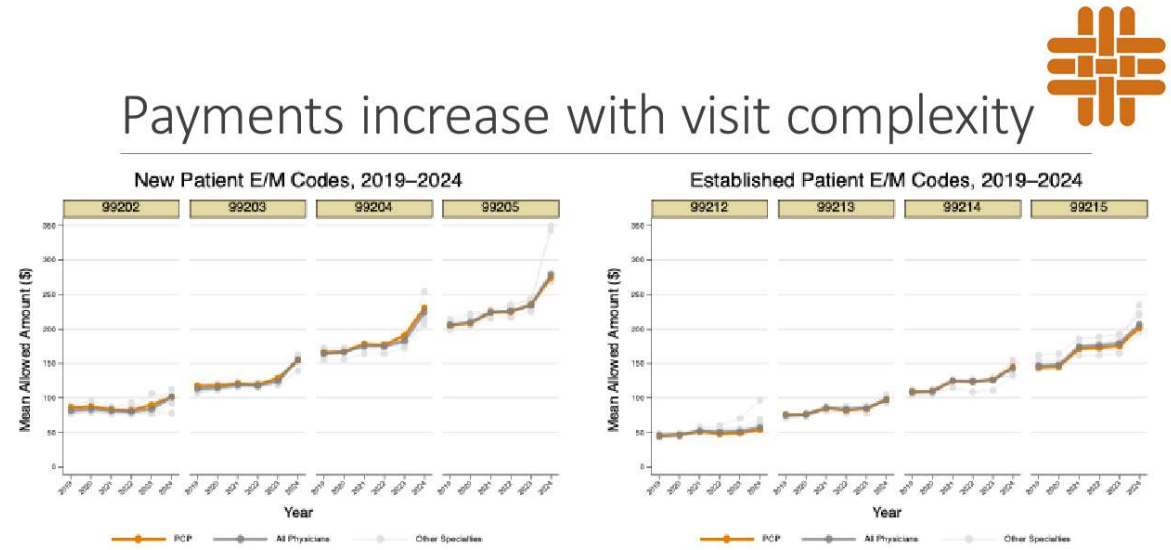


UTHealth Center for Health Care Data

"General practice" or "general medicine" is a broad, non-specialized primary care self-identification rather than a distinct modern residency-trained specialty with its own

defined fellowship pathway. Physicians described this way generally provide first-contact care for common medical problems, preventive services, chronic disease management, and referrals, but the term does not itself indicate completion of a specialty residency like pediatrics, internal medicine, or family medicine. By contrast, pediatrics requires residency training focused on infants, children, and adolescents; internal medicine requires residency training focused on adults, including complex chronic disease and hospital-based adult medicine; and family medicine requires residency training designed for comprehensive care across the lifespan, including children, adults, older adults, preventive care, and often women's health. Fellowships, when pursued, typically follow one of those formal residency pathways rather than "general practice" itself. This does NOT mean that physicians who are general practice are *untrained*, they may be physicians who completed training for another specialty, but have decided to engage in general practice.

Payment patterns reveal additional insights into the current state of primary care. Across specialties, mean payments for primary care visits have increased over time. In comparison to other physician specialties, on average, primary care physicians continue to receive lower payments per visit than physicians in other specialties, even when accounting for similar service categories. This persistent differential highlights an ongoing structural imbalance in reimbursement that may have implications for workforce sustainability and access to care.

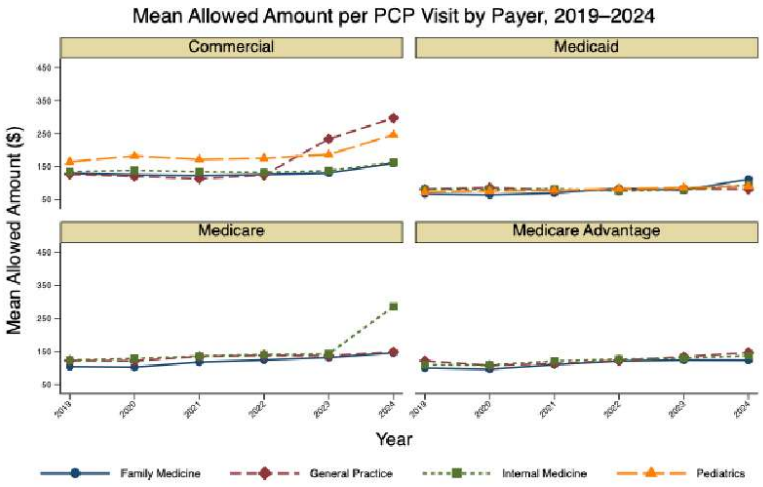


Variation in payment is also observed across payor types, with commercial insurers generally exhibiting higher payment levels and greater variability compared to public programs. This variability introduces complexity into the financial landscape of primary care and may influence provider participation, practice patterns, and geographic distribution of services. At the same time, payments are strongly correlated with visit complexity, as reflected in Evaluation and Management (E&M) coding. E&M codes are a standardized way to classify and describe how simple or complex a patient visit may be (versus a procedure code that describes a particular service). Higher-complexity visits

result in higher reimbursement, as they take more time and effort, indicating that payment models do recognize differences in clinical intensity, although the overall compensation levels for primary care remain comparatively modest.

Commercial showing highest payment level and variability across specialties

Medicaid brings down the Mean

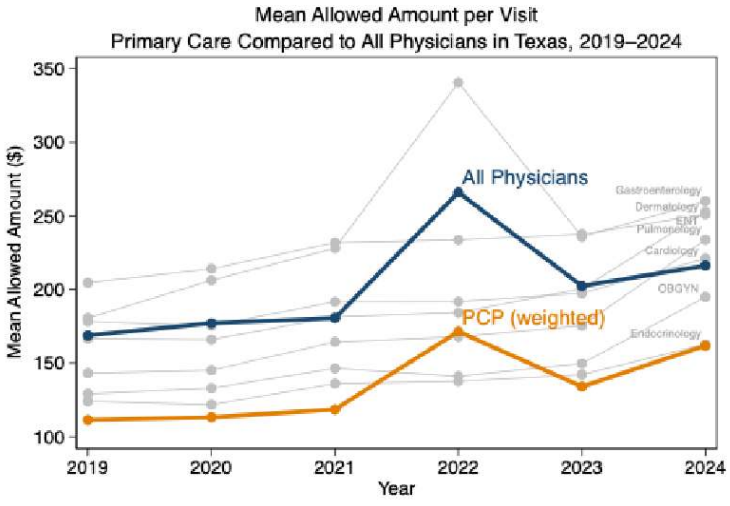


UTHealth Center for Health Care Data

Note: Data for pediatrics (Medicaid) in 2022 are currently undergoing processing and validation; thus, the mean allowed amount was estimated using linear interpolation.

PCP mean allowed amount per visit consistently below all physicians

MEAN ALLOWED AMOUNT PER VISIT	2024
PCP (weighted)	$ 162
Cardiology	$ 221
Dermatology	$ 251
Endocrinology	$ 163
ENT	$ 253
Gastroenterology	$ 260
OBGYN	$ 195
Pulmonology	$ 234
ALL PHYSICIANS (ALLOPATHIC AND OSTEOPATHIC)	$ 216



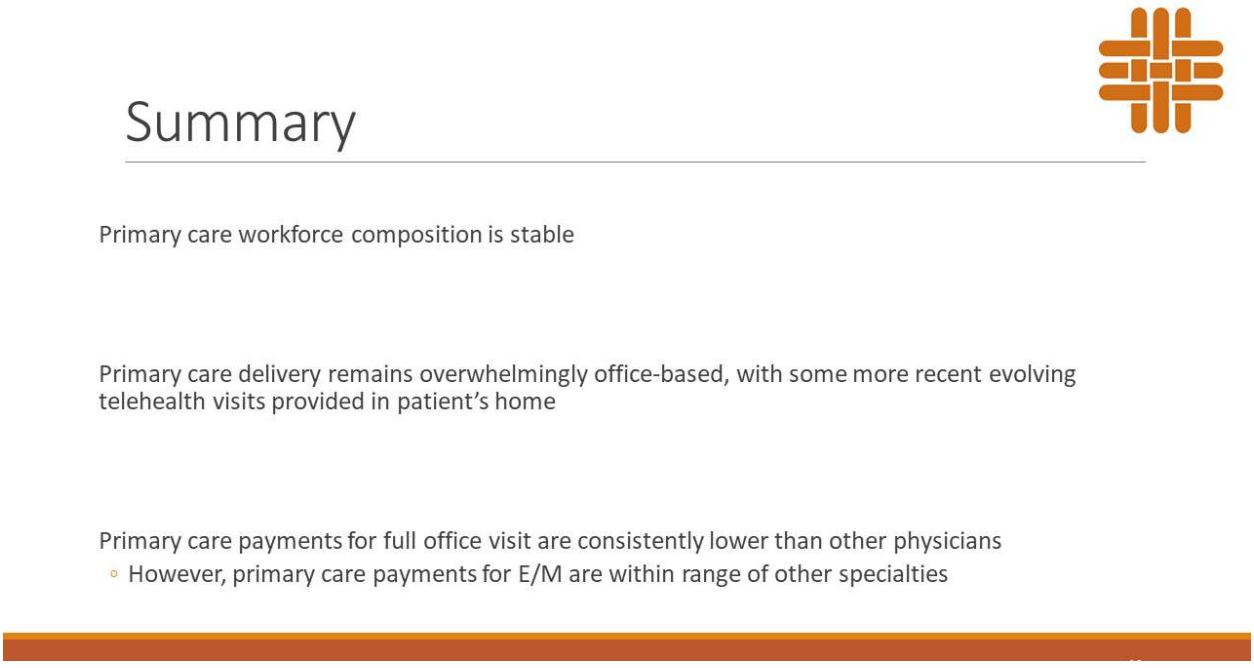
UTHealth Center for Health Care Data

Taken together, these findings suggest that primary care in Texas is characterized as stable, coupled with incremental evolution in care modalities and payment structures. Office-based care continues to anchor the system, while telehealth and other non-traditional models are expanding at the margins. Payment trends demonstrate gradual

growth but also reinforce longstanding differences in payment relative to other specialties. These dynamics collectively point to a system that is adapting to new demands while still operating within established structural constraints.

3.2. Executive Summary for Non-Technical Readers

Primary care in Texas continues to be delivered predominantly through traditional, office-based settings, which remain the primary point of access for most patients. While alternative delivery models such as telehealth in settings other than the home have expanded in recent years, they still represent a relatively small share of overall utilization, though their steady growth indicates an evolving care landscape.



The data also show that primary care providers remain central to the health care system, serving as the primary coordinators of care and managing a broad range of patient needs. Despite this critical role, payment for primary care services continues to differ from that of other physician specialties. Although average payments for primary care visits have increased over time, they remain consistently lower than payments for non-primary care services.

Payment levels vary significantly by payor type, with commercial insurance generally reimbursing at higher rates than public programs. In addition, payments increase with the complexity of the visit, reflecting differences in clinical intensity. However, these adjustments do not fully offset the overall disparity in compensation across the broader physician workforce.

Overall, the trends suggest a primary care system that remains structurally stable but is gradually evolving. Growth in telehealth, increases in payment levels, and variation across payors all point to incremental change, while the continued dominance of office-based care and persistent reimbursement differentials highlight enduring challenges within the system.

4. Commercial Spending and Group Insurance

The Center Research Team: Trudy Millard Krause, DrPH, Cecilia Ganduglia Cazaban, MD, DrPH, Lopita Ghosh, MBA, Caroline M Schaefer, MPH, Lee Spangler, JD.

All amounts in this section are expressed in adjusted 2024 dollars to facilitate comparisons across years. Average per member per year (PMPY) spending in the broader commercial data remained relatively stable from 2019 through 2024, with spending higher among women than men and substantially higher among older working-age adults than among younger adults and children. The broader commercial figure includes individuals enrolled in fully insured plans, state-sponsored and other public-sector employer health plans, individual and Affordable Care Act marketplace plans, and some individuals in self-funded ERISA plans. Figure 10 illustrates these overall patterns in the TX-APCD commercial data.

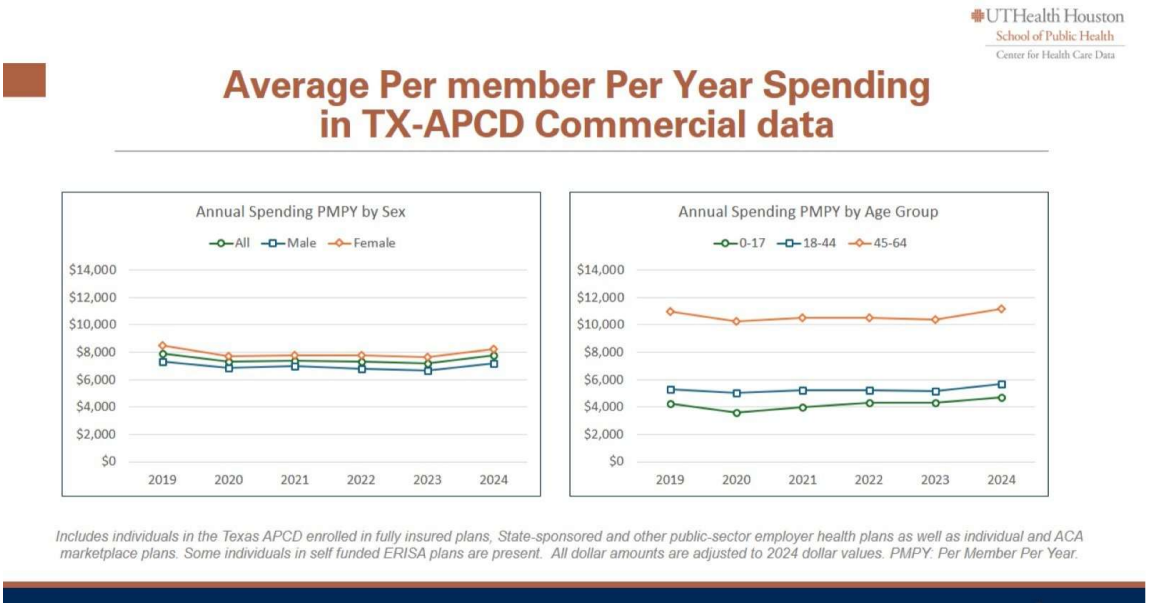


Figure 10. Average per member per year spending in the TX-APCD commercial data by sex and age group.

When the analysis is restricted to fully insured group commercial plans, the same broad patterns remain. There are no significant differences in overall PMPY spending between the overall commercially insured population and the fully insured group population represented in the analysis. Women had higher PMPY spending consistently across time, and PMPY spending increased significantly with age.

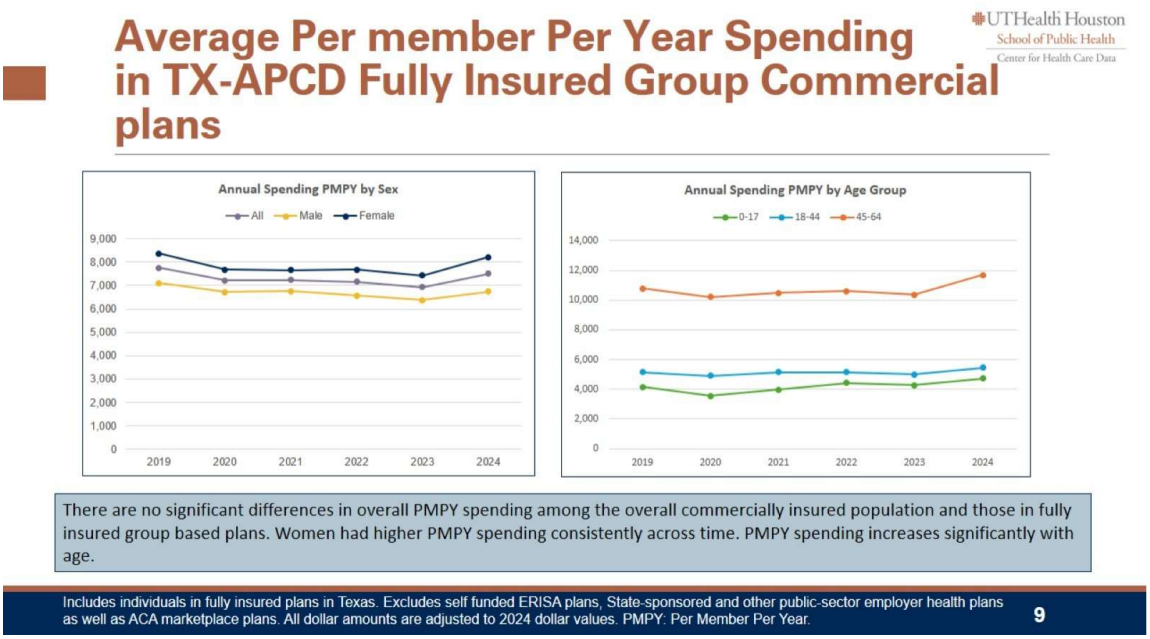


Figure 11. Average per member per year spending in fully insured group commercial plans by sex and age group.

Service-line spending provides additional detail on how commercial spending changed over the period. In fully insured group commercial plans, acute inpatient spending showed the largest relative decline, while prescription drug spending showed the largest relative increase, driven by a 2024 uptick. Professional spending remained comparatively stable, and the pattern suggests a continued shift away from inpatient settings and toward outpatient, professional, and pharmacy-related spending (Figure 12).

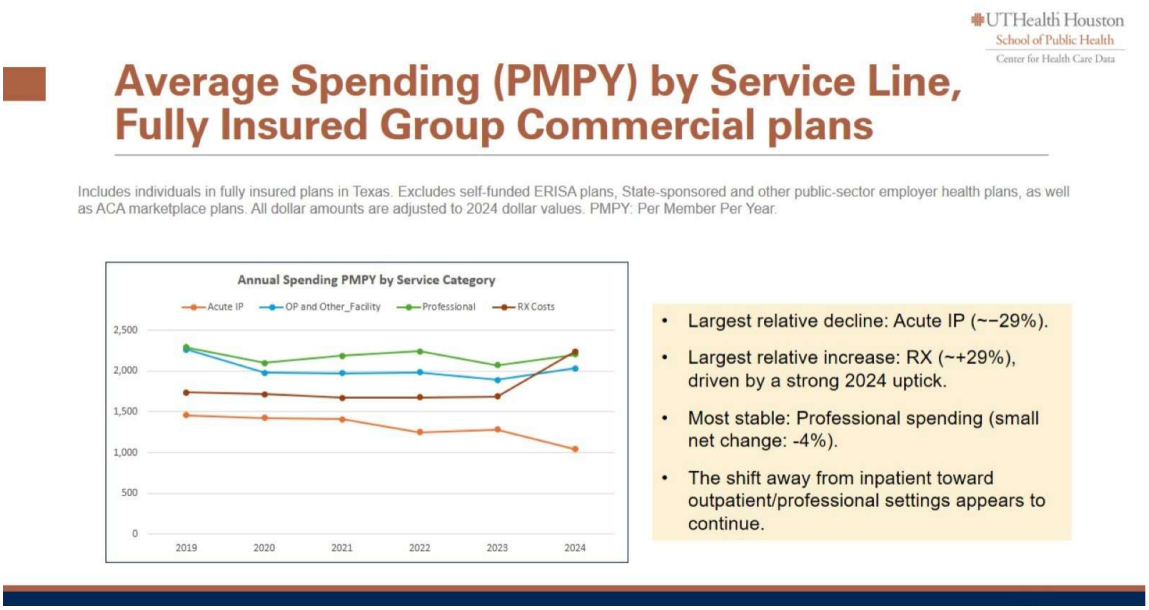


Figure 12. Average per member per year spending by service line for fully insured group commercial plans.

Sex- and age-stratified service-line analyses show that these changes are not distributed uniformly. Women had higher outpatient and professional spending throughout the period, and those categories also showed the largest absolute spending increases from years 2019 to 2024. Spending increased significantly with age, especially for adults between ages 40 and 64. Figures 13 and 14 show the same service-line spending patterns by sex and age group, demonstrating the capacity of the TX-APCD to identify variation that is masked in statewide averages.

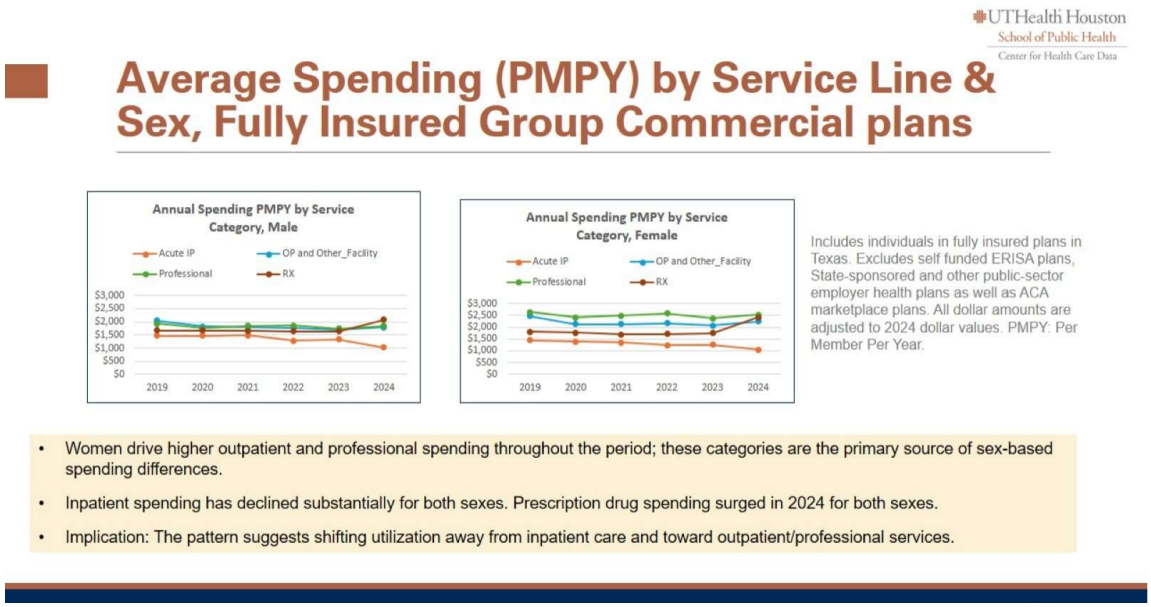


Figure 13. Average per member per year spending by service line and sex for fully insured group commercial plans.

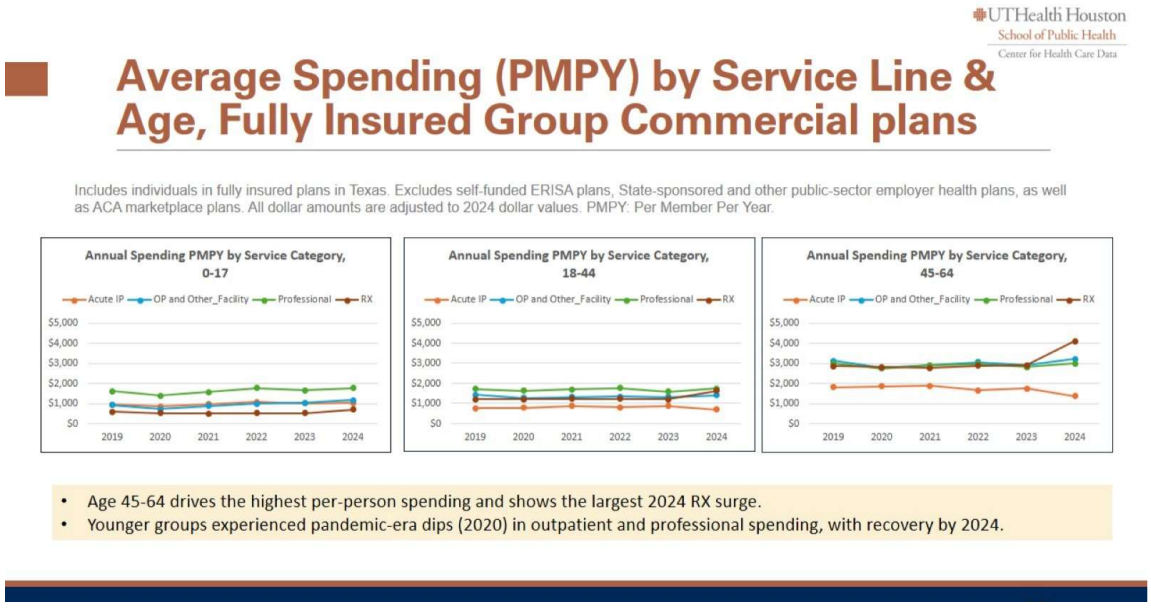


Figure 14. Average per member per year spending by service line and age group for fully insured group commercial plans.

4.1. Geographic Variation in Spending and Allowed Amounts

Among fully insured group commercial plans, average annual PMPY spending varied substantially across counties between years 2019 and 2024. Figure 15 illustrates the geographic variation in annual PMPY spending for fully insured group commercial plans.

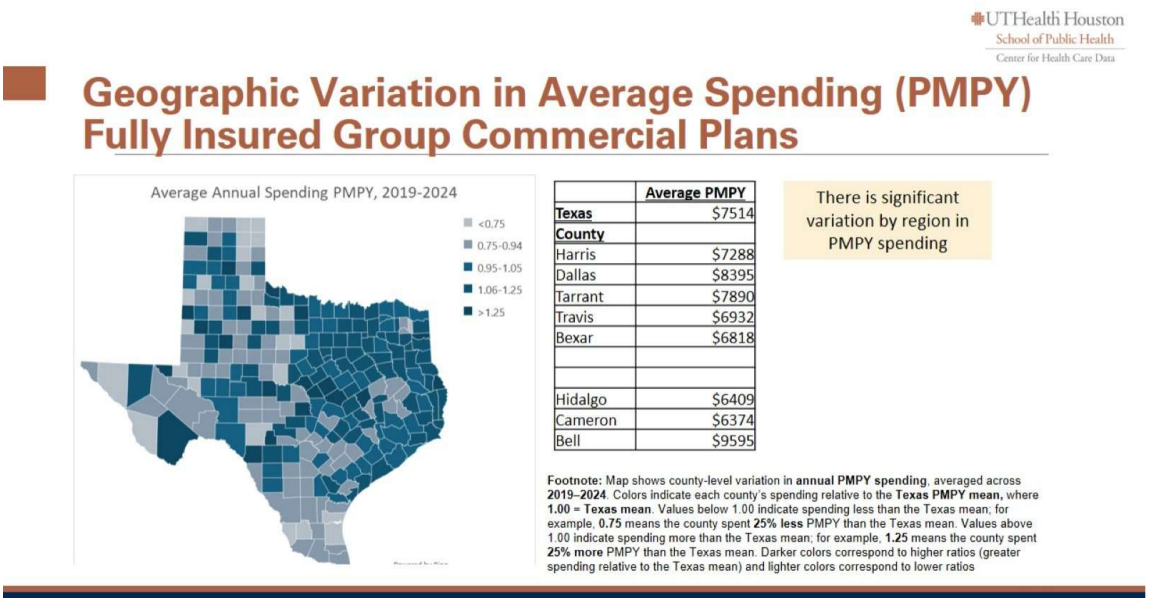


Figure 15. Geographic variation in average annual PMPY spending for fully insured group commercial plans.

Procedure-level allowed amount analysis provides another example of the value of the TX-APCD for transparency and policy analysis. Allowed amounts represent the maximum payment the insurer or plan will pay for a covered service, including the plan-paid amount and any member cost-sharing. Comparing allowed amounts for common surgical procedures by hospital referral region (HRR) demonstrates that payment levels vary across Texas even for defined procedures. Figure 16 summarizes regional variation in average allowed amounts for selected inpatient procedures. The figure shows the HRRs in Texas. HRRs are geographic areas that approximate regional health care markets for specialized inpatient care. HRRs were developed by the Dartmouth Atlas of Health Care to reflect where patients are commonly referred. Unlike county or state boundaries, HRRs are intended to follow patterns of health care use and may cross political boundaries when patients routinely travel across those boundaries for care. For instance, the HRR for the El Paso region stretches into New Mexico.

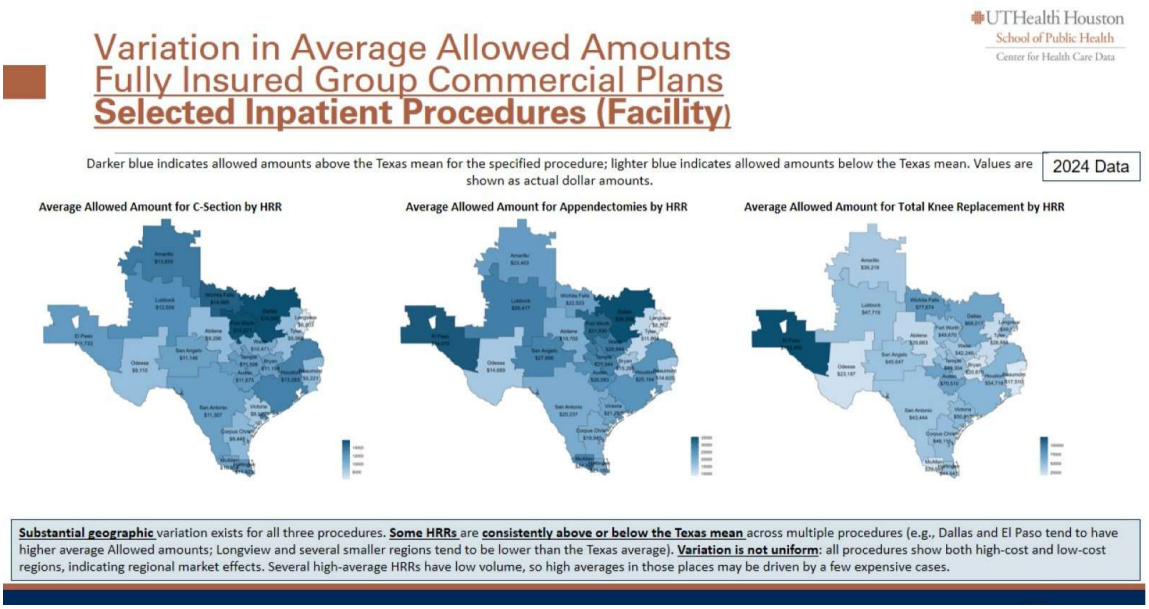


Figure 16. Regional variation in average allowed amounts for selected inpatient procedures.

The procedure-level analyses show that variation is not uniform across procedures or regions. Some HRRs are consistently above or below the Texas mean across multiple procedures, while other regions vary by service. The fact that there is variation present when comparing differing procedures shows there is some sort of local or market effect.

4.2. Executive Summary for Non-Technical Readers

Across the commercially insured population, women consistently incurred higher annual health care spending than men, and spending increased significantly with age. Older working-age adults (particularly those ages 40–64) had substantially higher spending than younger adults and children. This spending growth among adults ages 40–64, highlights this group as a key driver of health care costs.

These same patterns held true even when focusing only on fully insured group plans, indicating that the findings are consistent across different types of commercial coverage.

Spending on hospital stays (inpatient care) declined, while spending on prescription drugs increased noticeably—particularly in year 2024—and further review is necessary. Outpatient and professional services (such as physician visits and procedures) remained steady, but continue to represent a growing share of overall care. Together, these trends suggest a shift away from hospital-based care toward outpatient services and medications.

Geography plays a significant role as well. Average health care spending varies widely across Texas counties, even for people with similar insurance coverage. In addition, the prices paid for specific medical procedures differ across regions. Analysis of common inpatient procedures shows that some regions consistently have higher or lower payment levels than others, while in some areas prices vary depending on the service. These differences reflect local market conditions.

5. Sickle Cell Disease Monitoring

The Center Research Team: Trudy Millard Krause, DrPH, Heidi Russell, MD PhD, Isrrael Perez, MS, Lopita Ghosh, MBA, Chloe Dorsey, MPH

The Center, using the TX-APCD, supported the Texas Department of State Health Services, Environmental Epidemiology and Disease Registries Section, in its work to establish and strengthen a statewide sickle cell data collection system. The Texas Department of State Health Services received funding from the Centers for Disease Control and Prevention to develop a sickle cell data collection system that can inform practices and policies in Texas. As part of that effort, information from the TX-APCD was requested to enhance monitoring activities and to provide claims-based information about insured Texans living with sickle cell disease.

The purpose of the analysis is to identify insured persons with sickle cell disease and describe their payor coverage, age distribution, health care utilization, and annual spending. The analysis identified 12,713 persons with a sickle cell disease diagnosis in the year 2023. This count exceeded prior estimates reported for the state and illustrates the value of using statewide claims data to support disease surveillance. Because the TX-APCD includes multiple payor types, the analysis was able to describe the insured sickle cell population across Medicaid, commercial coverage, Medicare fee-for-service, and Medicare Advantage.

Medicaid accounted for the largest number of identified persons, with 6,850 individuals and a rate of 135 per 100,000 covered persons. The commercial population included 2,083 identified individuals and had the lowest rate shown in the payor chart, at 38 per 100,000 covered persons. Medicare fee-for-service and Medicare Advantage represented smaller counts, but their rates were higher than the commercial rate, at 91 and 92 per 100,000 covered persons, respectively. This pattern reflects the different populations represented in each payor group and underscores the importance of examining both counts and rates when interpreting the distribution of sickle cell disease across coverage types.

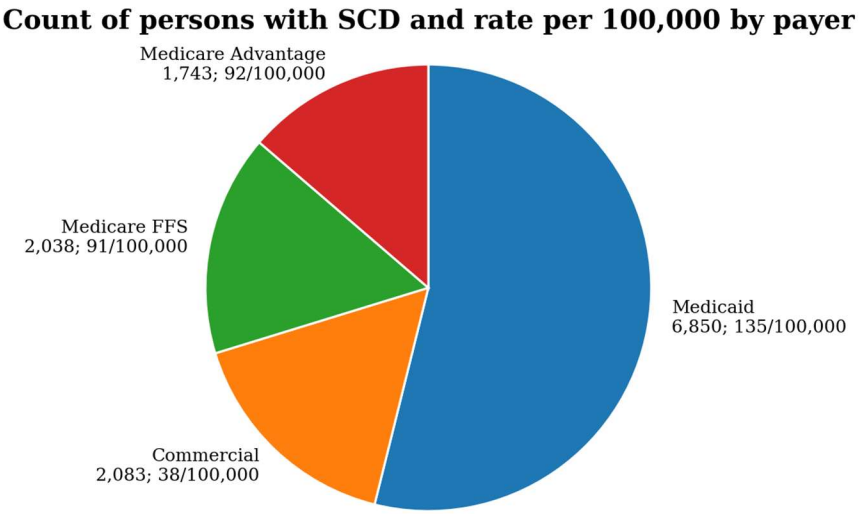


Figure 17. Count of persons with sickle cell disease and rate per 100,000 covered persons, by payor.

The age distribution shows that persons with sickle cell disease were represented across all age groups. The largest age group in the analysis was adults ages 31 to 49, followed by persons age 65 and older and adults ages 19 to 30. Children and adolescents also represented a substantial share of the identified population. The presence of persons with sickle cell disease across the full age range is important for monitoring and planning because sickle cell disease requires ongoing care coordination, preventive services, acute care management, and transition planning from pediatric to adult systems of care.

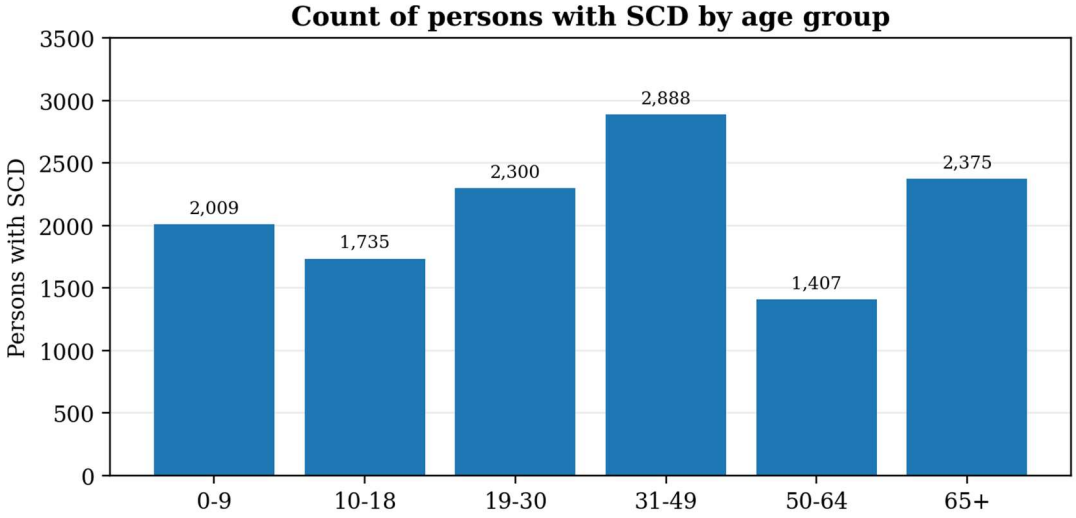


Figure 18. Count of persons with sickle cell disease, by age group.

The utilization analysis demonstrates substantial use of inpatient and emergency department services among persons with sickle cell disease. Across payor groups, emergency department visit rates were especially high, ranging from 1,807 visits per 1,000 persons with sickle cell disease in the commercial population to 2,591 visits per 1,000 persons with sickle cell disease in Medicaid. Inpatient admission rates were also high, ranging from 472 admissions per 1,000 persons with sickle cell disease in the commercial population to 961 admissions per 1,000 persons with sickle cell disease in Medicare fee-for-service. The summary further noted that readmission rates ranged from 26 percent to 32 percent of admissions, indicating that repeat inpatient use is a significant feature of the care experience for this population.

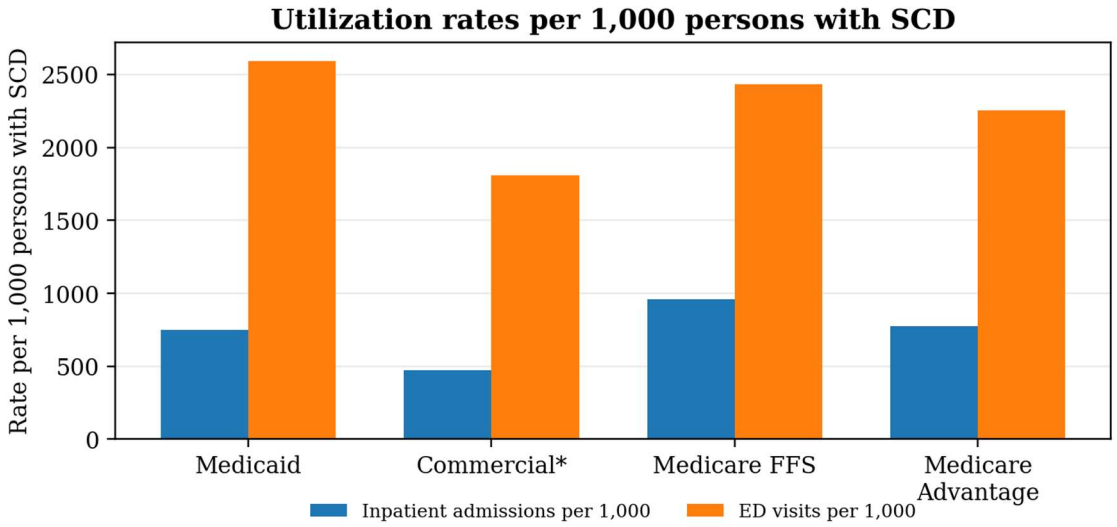


Figure 19. Inpatient admission and emergency department visit rates per 1,000 persons with sickle cell disease, by payor.

Total annual spending per person with sickle cell disease also varied across payor groups. The spending chart shows the highest PMPY spending for Medicare fee-for-service, followed by commercial coverage and Medicaid, with Medicare Advantage lower than the other payor groups shown.

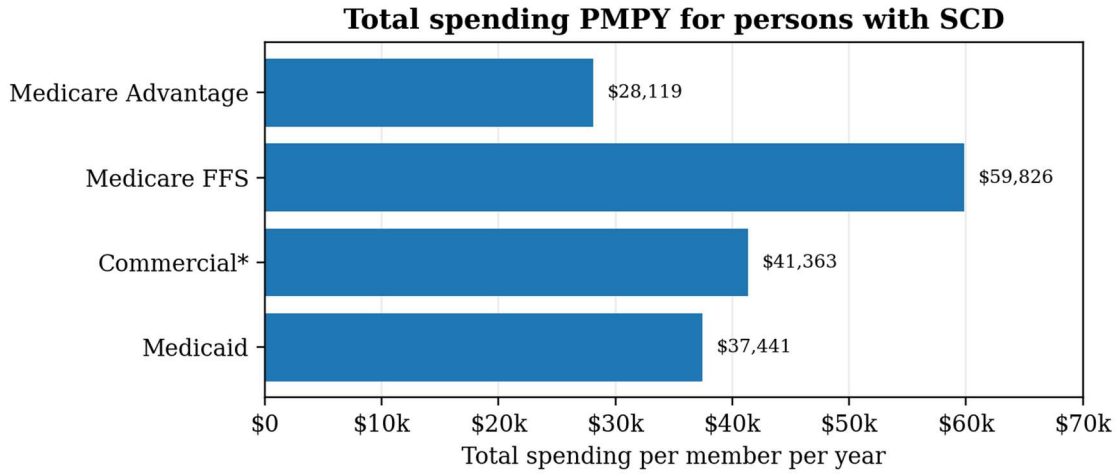


Figure 20. Total per member per year spending for persons with sickle cell disease, by payor.

Overall, the project demonstrates how the TX-APCD can support public health monitoring by complementing disease registry activities with claims-based information. The analysis provided a broader view of insured Texans with sickle cell disease, including their payor coverage, demographic distribution, utilization patterns, and spending. These findings can inform future work to improve diagnoses, treatments, survival, and quality of life for individuals with sickle cell disease in Texas, while also illustrating the value of the TX-APCD as a resource for population health monitoring and policy-relevant analysis.

6. Children and Adults with Complex Medical Conditions

The Center Research Team: Trudy Millard Krause, DrPH, Xiaorui Zhang, MS

The Center used the TX-APCD to identify and describe Texans with selected medically complex pediatric and congenital diagnoses. The analysis uses diagnosis codes to identify individuals with selected conditions, assigns each person to a single diagnosis category, and classifies each person into a payor type for each calendar year. The claims-based cohort includes individuals across the full age spectrum, including a substantial adult population with childhood-onset or congenital conditions.

Across all payors, the identified cohort included approximately 156,000 persons in the year 2022 and 155,000 persons in the year 2023. The year 2024 total was lower, at approximately 122,000 persons, with the decline concentrated among persons age 27 and older. This decline may reflect missing Medicare data for the year 2024. Because the other age groups remained comparatively stable, much of the interpretive analysis in this study focuses on complete year 2023 data across payors.

Medicaid is the primary source of coverage among children and youth in the identified cohort, particularly through age 18. Commercial coverage contributes a smaller but meaningful share for younger age groups. After age 26, Medicare and Medicare–Medicaid coverage become much more prominent. The cost analysis shows high PMPY spending across conditions and payors, with inpatient acute care, physician and ambulatory provider services, pharmacy, facility outpatient services, durable medical equipment, long-term care, and home health representing important service categories depending on the payor mix (see Figures 11–13).

6.1. Cohort Definition and Diagnostic Identification

The analysis begins by defining a diagnosis-based cohort (Figure 21). The study lists specific ICD-10 diagnosis codes for a set of rare, congenital, neurologic, and medically complex conditions, including DiGeorge syndrome, spinal muscular atrophy, Dravet syndrome, cerebral palsy, paralytic syndromes, selected brain malformation syndromes, tuberous sclerosis syndrome, CHARGE syndrome, trisomy 13 and 18, Angelman syndrome, and related conditions. Individuals were identified in claims data by diagnosis code. Each person was assigned to only one diagnosis category. When an individual had more than one listed code, the person was assigned to the “More than one code” category rather than being counted in multiple condition-specific groups.

This approach supports an unduplicated person-level analysis, which is important for interpreting counts across diagnoses and payor categories. It also means that the diagnosis categories should be interpreted as analytic assignment groups rather than as a complete clinical profile for every person. A person in the “More than one code” category may have clinical complexity that spans multiple listed conditions.

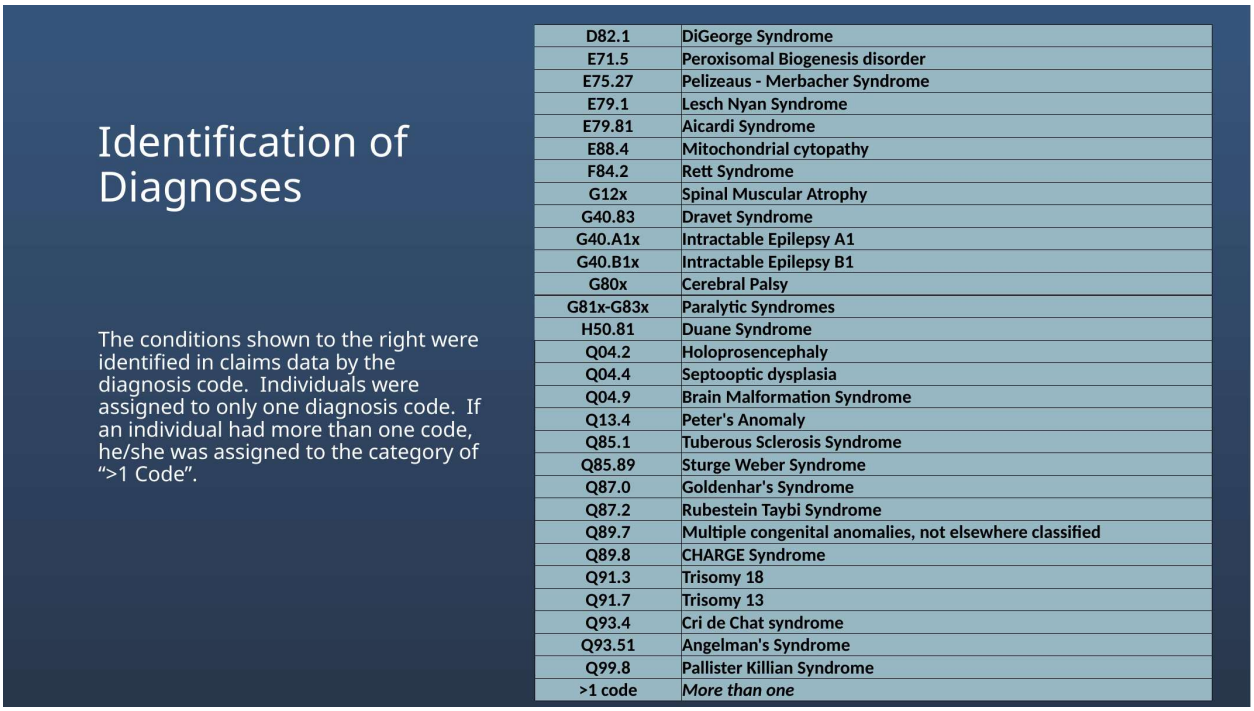


Figure 21. Diagnosis codes used to identify the cohort and the rule for assigning individuals with more than one diagnosis code.

6.2. Assignment to Payor Type

After identifying the cohort, individuals were assigned to a payor type for each calendar year (Figure 22). The analysis uses six payor categories: Medicaid only, Medicaid and commercial, commercial only, Medicaid and Medicare, Medicare only, and commercial and Medicare. This person-year classification allows the study to describe how coverage sources vary by age, diagnosis, and year. As shown in Figure 23, the study also notes two important considerations: the commercial category lacks ERISA data, and commercial coverage includes Medicare Advantage.

The classification structure is especially useful for medically complex persons because coverage may shift over time. Medicaid may dominate in childhood and adolescence, while Medicare or Medicare-Medicaid coverage becomes more visible among adults with qualifying disability or end-stage renal disease coverage pathways. The age-specific distribution, therefore, helps distinguish pediatric coverage patterns from the adult continuation of childhood-onset conditions.

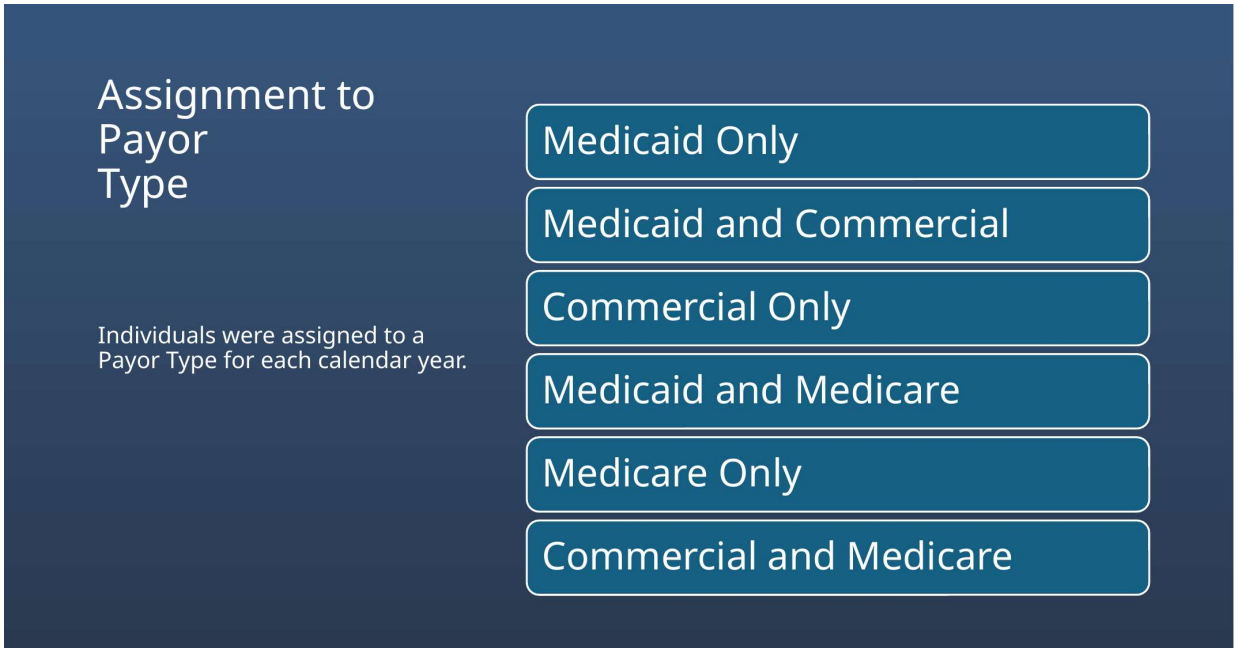


Figure 22. Payor assignment approach.

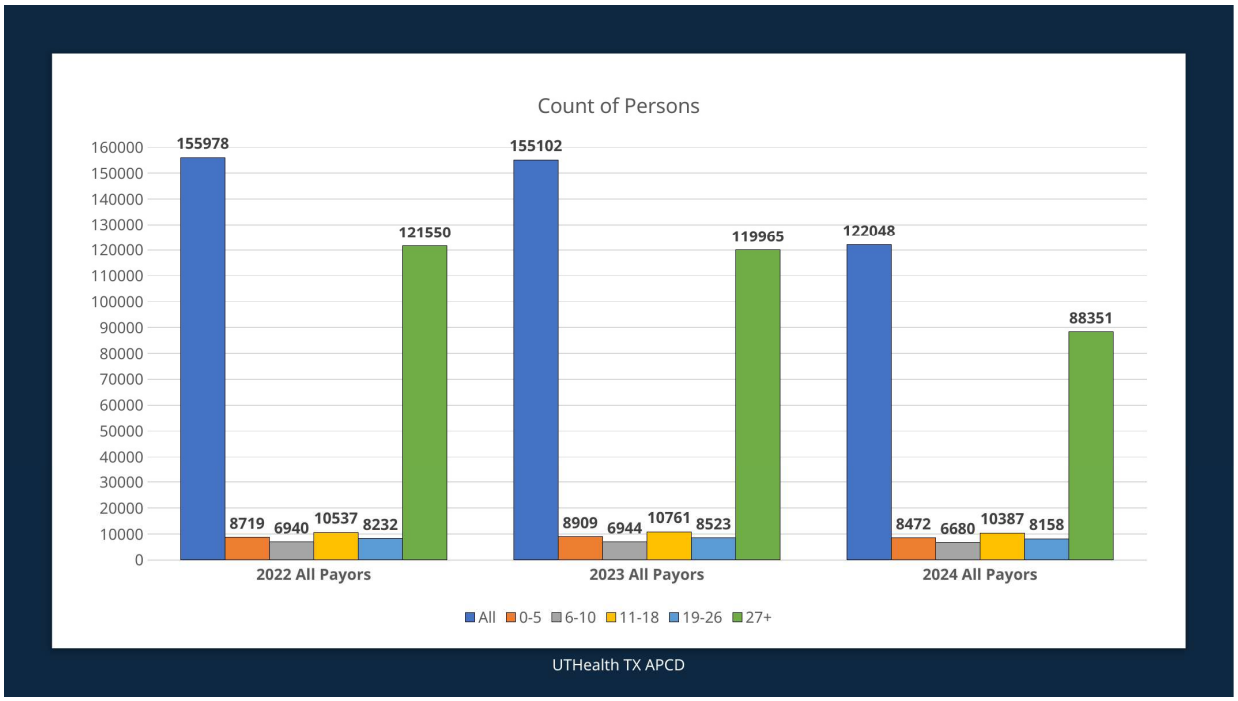


Figure 23. Payor-type categories used in the study and total cohort counts by age group for years 2022 through 2024.

6.3. Population Counts and Diagnostic Distribution

The all-ages 2023 distribution is heavily concentrated in a small number of diagnostic categories (Figure 24). Paralytic syndromes account for the largest count, followed by cerebral palsy and the “More than one code” category. The study suppresses small cells

using “NR” when counts are 10 or fewer, with totals adjusted accordingly, consistent with TX-APCD policies. This suppression rule is important because rare disorders can produce very small numbers when stratified by diagnosis, payor type, age group, and year.

The Medicaid-only view (Figure 25) shows stability across the three years for many of the largest categories, including cerebral palsy, paralytic syndromes, and the “More than one code” category. Other notable categories include spinal muscular atrophy, Pallister-Killian syndrome, CHARGE syndrome, multiple congenital anomalies, Goldenhar syndrome, DiGeorge syndrome, Rubinstein-Taybi syndrome, tuberous sclerosis syndrome, brain malformation syndrome, septo-optic dysplasia, and intractable epilepsy categories.

Disorder	Age Group	Medicaid Only	Commercial and Medicaid	Commercial Only	Medicare and Medicaid	Medicare Only	Commercial and Medicare	2023 All Payors
Paralytic Syndromes	00 - all	11664	517	10045	30244	44066	1513	98049
Cerebral Palsy	00 - all	14033	47	2039	8185	1938	112	26354
More than one code	00 - all	6797	36	785	2470	804	68	10960
Spinal Muscular Atrophy	00 - all	695	NR	507	531	2180	104	4017
Pallister Killian Syndrome	00 - all	1570	NR	427	133	407	23	2560
CHARGE Syndrome	00 - all	1308	NR	336	113	121	NR	1878
Multiple congenital anomalies	00 - all	1618	NR	176	18	11	NR	1823
Goldenhar's Syndrome	00 - all	989	NR	186	78	46	NR	1299
DiGeorge Syndrome	00 - all	964	NR	159	71	27	0	1221
Rubestein Taybi Syndrome	00 - all	769	NR	186	102	47	NR	1104
Tuberous Sclerosis Syndrome	00 - all	565	NR	188	187	62	NR	1002
Brain Malformation Syndrome	00 - all	541	NR	147	56	83	NR	827
Septooptic dysplasia	00 - all	588	0	74	23	NR	NR	685
Intractable Epilepsy A1	00 - all	274	NR	108	71	65	NR	518
Sturge Weber Syndrome	00 - all	189	NR	112	44	119	NR	464
Rett Syndrome	00 - all	290	NR	46	84	NR	NR	420
Angelman's Syndrome	00 - all	311	NR	41	45	NR	NR	397
Peter's Anomaly	00 - all	174	NR	43	18	49	NR	284
Intractable Epilepsy B1	00 - all	134	0	99	17	17	NR	267
Trisomy 18	00 - all	185	NR	47	26	NR	0	258
Lesch Nyan Syndrome	00 - all	13	0	52	15	76	NR	160
Cri de Chat syndrome	00 - all	125	0	NR	33	NR	NR	158
Trisomy 13	00 - all	113	0	11	11	NR	0	145
Holoprosencephaly	00 - all	101	NR	11	NR	NR	0	112
Aicardi Syndrome	00 - all	NR	0	NR	NR	NR	0	0
Peroxisomal Biogenesis disorder	00 - all	NR	0	0	0	0	0	NR
Pelizeaus - Merbacher Syndrome	00 - all	NR	0	NR	0	0	0	NR
Dravet Syndrome	00 - all	NR	0	0	0	0	0	NR
Mitochondrial cytopathy	00 - all	0	0	0	0	0	0	0

Figure 24. All-ages 2023 person counts by disorder and payor type, sorted by total count.

Disorder	Age Group	2022 Medicaid Only	2023 Medicaid Only	2024 Medicaid Only
Cerebral Palsy	00 - all	13416	14033	13754
Paralytic Syndromes	00 - all	11846	11664	11033
More than one code	00 - all	6697	6797	6816
Multiple congenital anomalies	00 - all	1503	1618	1455
Pallister Killian Syndrome	00 - all	1586	1570	1314
CHARGE Syndrome	00 - all	1155	1308	1130
Goldenhar's Syndrome	00 - all	961	989	989
DiGeorge Syndrome	00 - all	938	964	1016
Rubestein Taybi Syndrome	00 - all	702	769	746
Spinal Muscular Atrophy	00 - all	661	695	636
Septooptic dysplasia	00 - all	582	588	567
Tuberous Sclerosis Syndrome	00 - all	580	565	578
Brain Malformation Syndrome	00 - all	566	541	479
Angelman's Syndrome	00 - all	292	311	295
Rett Syndrome	00 - all	266	290	298
Intractable Epilepsy A1	00 - all	279	274	244
Sturge Weber Syndrome	00 - all	76	189	191
Trisomy 18	00 - all	215	185	172
Peter's Anomaly	00 - all	186	174	160
Intractable Epilepsy B1	00 - all	98	134	119
Cri de Chat syndrome	00 - all	122	125	120
Trisomy 13	00 - all	89	113	111
Holoprosencephaly	00 - all	113	101	121
Lesch Nyan Syndrome	00 - all	17	13	19
Aicardi Syndrome	00 - all	0	NR	17
Peroxisomal Biogenesis disorder	00 - all	0	NR	0

Figure 25. Medicaid-only counts by disorder for years 2022, 2023, and 2024, with small-cell suppression applied.

6.4. Age and Coverage Patterns

The age-by-payor findings show a consistent pattern: Medicaid covers the majority of identified persons under age 19. This pattern is visible in the top three diagnosis categories—cerebral palsy, paralytic syndromes, and more than one diagnosis—as well as in the next group of diagnoses. Commercial-only coverage is present across pediatric age groups but generally represents a smaller share than Medicaid. Medicare categories become much more prominent in the adult age groups, especially among persons age 27 and older.

For the top diagnoses, Figure 26 highlights substantial Medicaid-only counts among children and youth and large Medicare-related counts among adults. This pattern reflects both the clinical continuity of childhood-onset conditions into adulthood and the public coverage pathways that support individuals with significant disability or long-term complex needs.

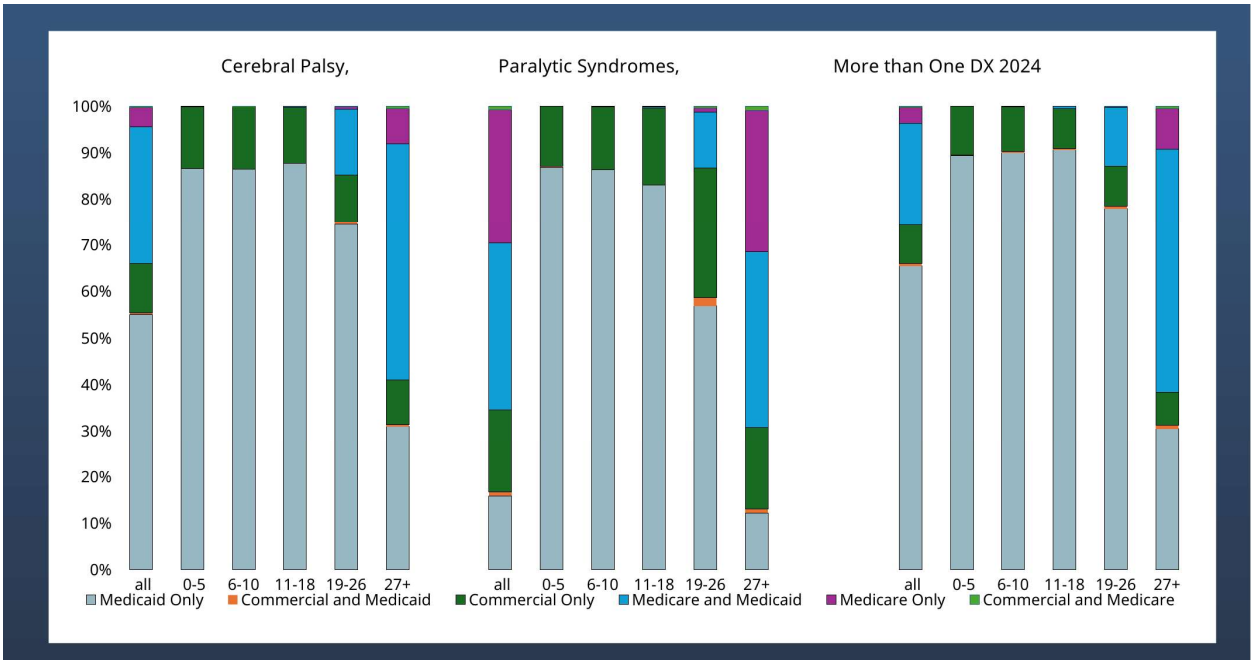


Figure 26. Top three diagnoses by count, showing age group by payor and the percentage of payor by age group.

The next three diagnosis categories (Figure 27)—multiple congenital anomalies, CHARGE syndrome, and Pallister-Killian syndrome—show a similar pediatric Medicaid concentration, especially in younger age groups. These conditions are generally rarer than the top three categories, so small changes in counts or payor mix can appear more pronounced when viewed in stratified tables.

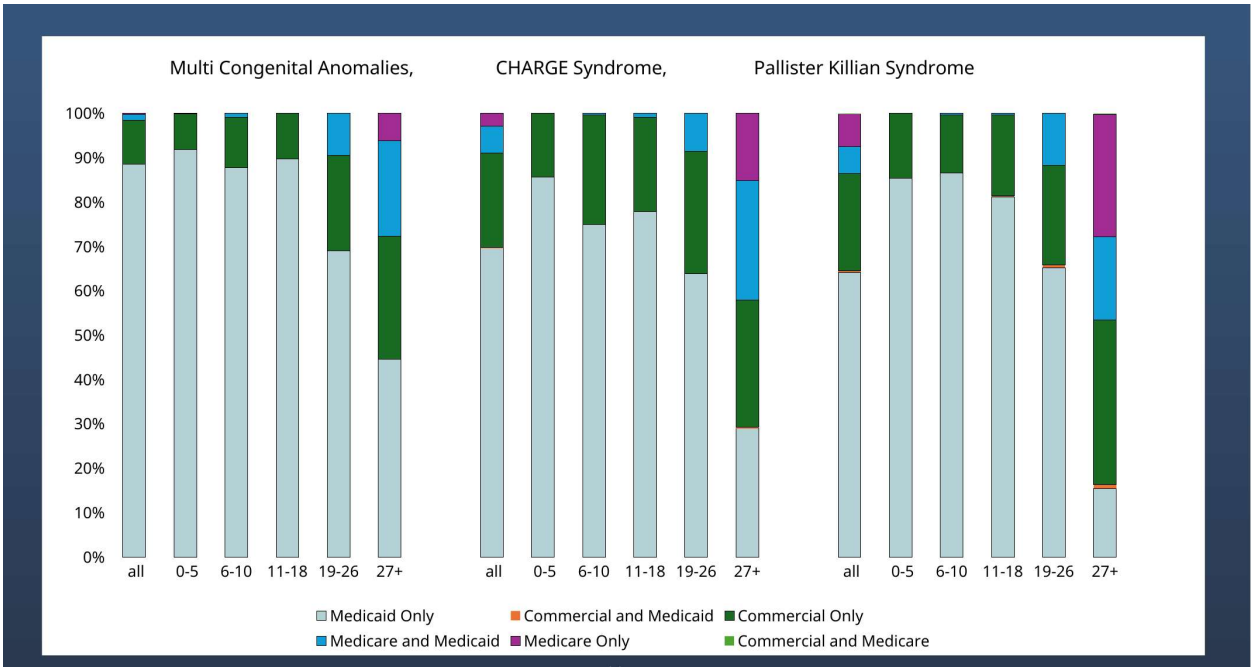


Figure 27. Next three diagnoses by count, showing age group by payor and the percentage of payor by age group.

6.5. Aggregated Condition Results by Age and Payor

The aggregated-condition Figure 28 provides a clearer population-level view across all selected diagnoses. Across years 2022, 2023, and 2024, Medicaid represents the bulk of coverage for children ages 0–5, 6–10, and 11–18. Medicaid remains the largest category for ages 19–26, although the Medicare-and-Medicaid category becomes more visible in this transition-age group. For the 27-and-older group, Medicare-only and Medicare-and-Medicaid coverage account for much larger shares, while Medicaid-only represents a smaller share than in the pediatric groups.

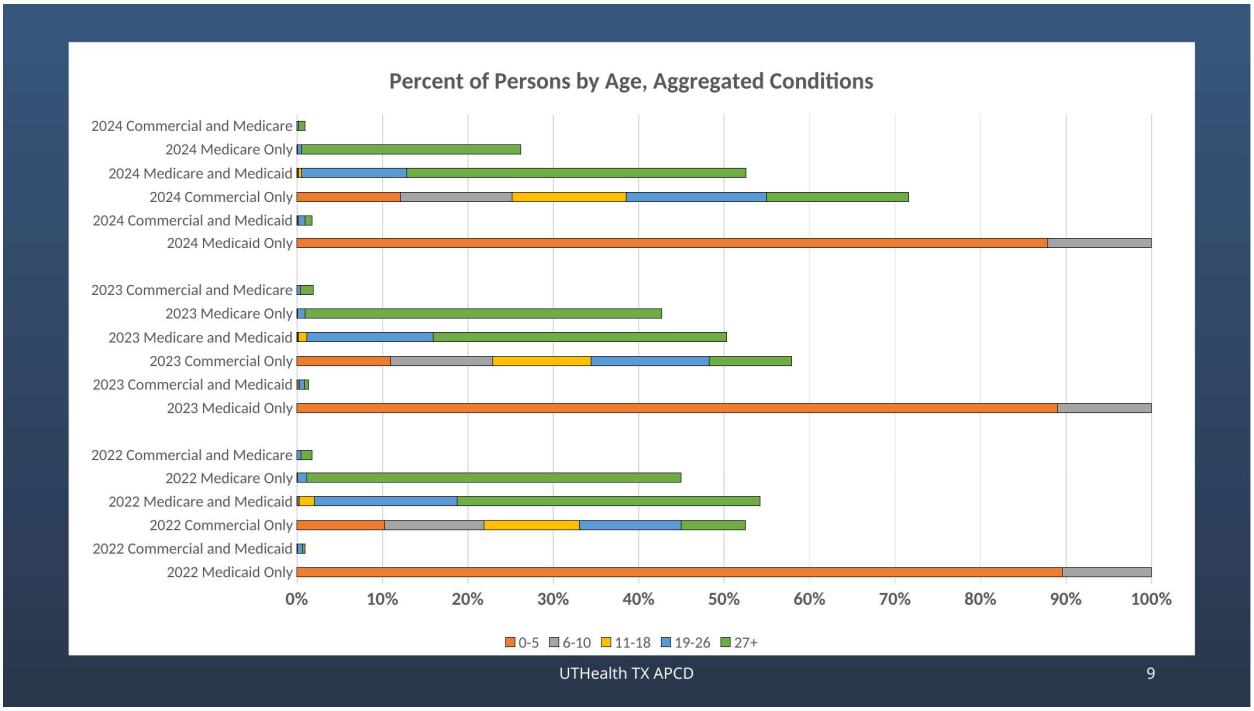


Figure 28. Aggregated conditions: percent of persons by age, year, and payor.

The 2023-only view in Figure 29 makes the transition particularly clear. In the year 2023, Medicaid-only coverage accounts for roughly 89 percent of persons ages 0–5, about 88 percent of ages 6–10, about 87 percent of ages 11–18, and about 69 percent of ages 19–26. By age 27 and older, Medicaid-only coverage falls to approximately 12 percent, while Medicare-only and Medicare-and-Medicaid become the dominant categories. This pattern supports the presentation's summary observation that Medicaid covers most young people in the cohort, while Medicare coverage takes over after age 26.

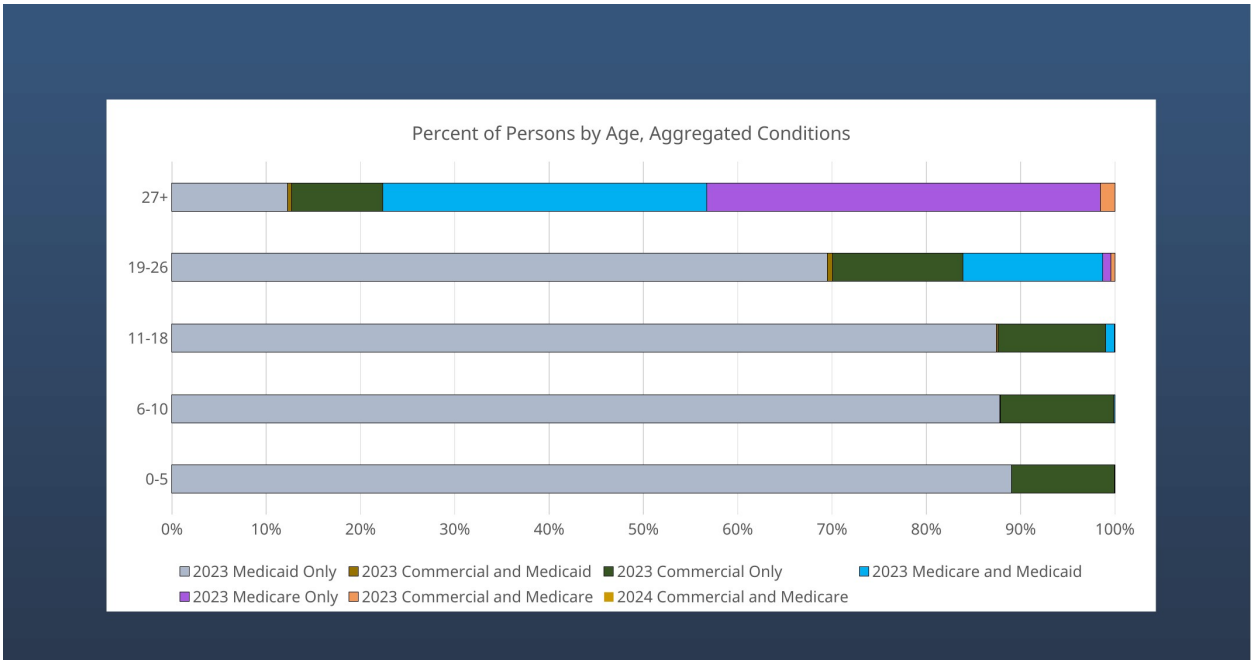


Figure 29. Aggregated conditions: 2023-only view of percent of persons by age and payor.

6.6. Per-Member-Per-Year Spending

The PMPY results indicate that medically complex conditions are associated with substantial annual spending (Figure 30). In the year 2023, the weighted mean PMPY for the aggregated cohort was approximately $73,026 across all ages, with the highest age-specific weighted mean among children ages 0–5. Several payor categories show particularly high PMPY values for younger age groups, although some of these cells may reflect relatively small populations and should be interpreted with caution.

The condition-level PMPY table in Figure 31 highlights substantial variation by diagnosis and payor. Values over $100,000 PMPY are emphasized in the study, and several conditions exceed that threshold for at least one payor type. The "More than one code" category is especially notable, with high PMPY values across multiple payor types, which is consistent with the likelihood that individuals assigned to this group may have overlapping or compounded medical complexity.

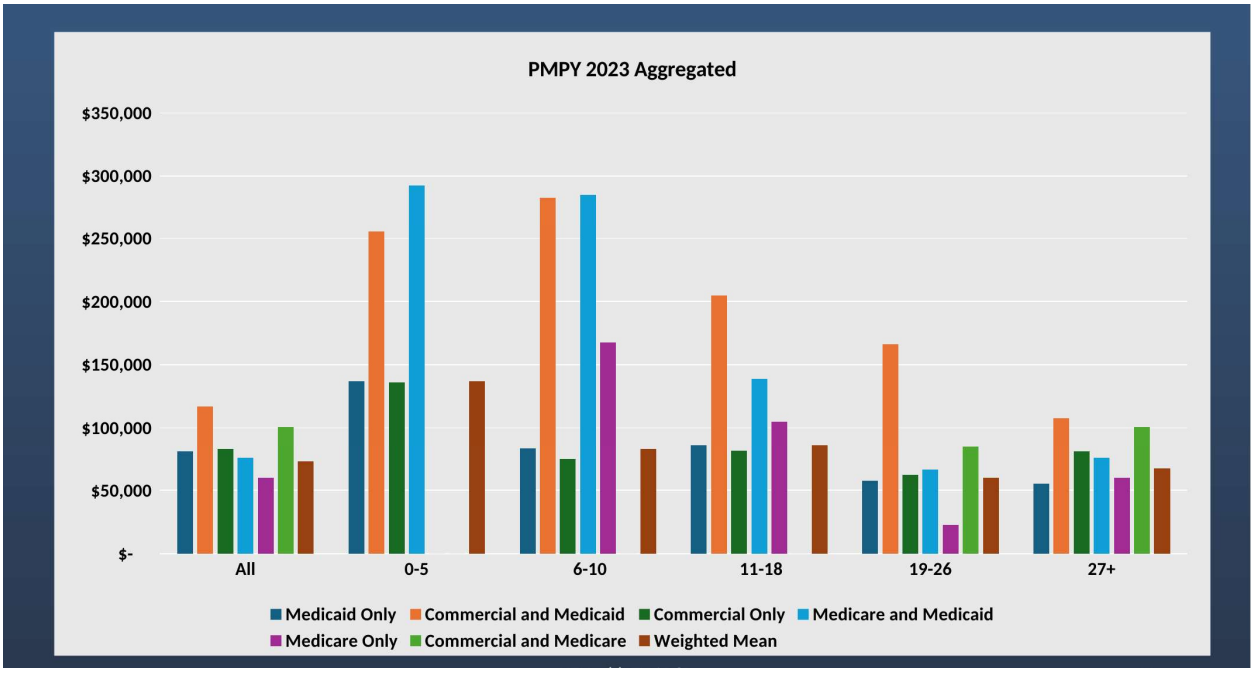


Figure 30. PMPY spending for year 2023 across aggregated conditions by age group and payor.

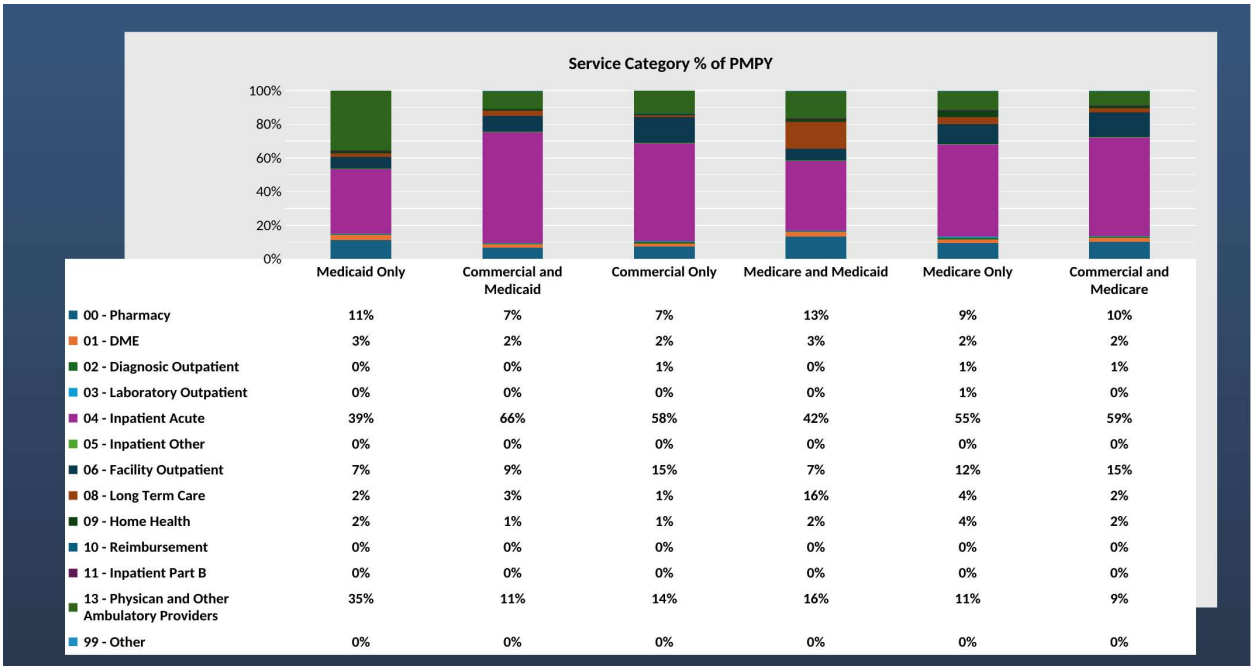
Disorder	2023 PMPY					
	Medicaid Only	Commercial and Medicaid	Commercial Only	Medicare and Medicaid	Medicare Only	Commercial and Medicare
01 - DiGeorge Syndrome	$ 62,629	$ 18,894	$ 44,047	$ 34,813	$ 26,229	$ -
03 - Pelizeaus - Merbacher Syndrome	$ 102,214	$ -	$ 91,016	$ -	$ -	$ -
04 - Lesch Nyan Syndrome	$ 64,966	$ -	$ 26,062	$ 125,468	$ 19,300	$ 121,045
05 - Aicardi Syndrome	$ 189,994	$ -	$ 82,043	$ 10,619	$ 80,708	$ -
07 - Rett Syndrome	$ 74,899	$ 662	$ 89,832	$ 65,644	$ 26,700	NR
08 - Spinal Muscular Atrophy	$ 167,578	$ 34,343	$ 112,806	$ 81,930	$ 50,197	$ 94,896
10 - Intractable Epilepsy A1	$ 24,867	$ 31,796	$ 18,700	$ 51,996	$ 35,128	$ 15,758
11 - Intractable Epilepsy B1	$ 20,915	$ -	$ 29,522	$ 19,948	$ 18,940	$ 240,105
12 - Cerebral Palsy	$ 57,356	$ 55,070	$ 46,351	$ 38,878	$ 28,213	$ 43,556
13 - Paralytic Syndromes	$ 75,963	$ 119,016	$ 89,877	$ 84,826	$ 61,332	$ 102,293
15 - Holoprosencephaly	$ 86,346	$ 26,276	$ 27,542	$ 30,273	$ 6,036	$ -
16 - Septooptic dysplasia	$ 42,427	$ -	$ 35,485	$ 57,230	$ 9,450	$ 4,927
17 - Brain Malformation Syndrome	$ 58,255	$ 45,472	$ 44,339	$ 65,546	$ 27,348	$ 11,018
18 - Peter's Anomaly	$ 32,168	$ 46,777	$ 5,377	$ 36,501	$ 21,417	$ 44,516
19 - Tuberous Sclerosis Syndrome	$ 71,258	$ 20,706	$ 46,450	$ 63,721	$ 33,604	$ 2,989
20 - Sturge Weber Syndrome	$ 23,155	$ 123,073	$ 28,651	$ 41,320	$ 32,795	$ 2,139
21 - Goldenhar's Syndrome	$ 49,041	$ 1,325	$ 40,334	$ 43,768	$ 38,220	$ 325,205
22 - Rubestein Taybi Syndrome	$ 67,189	$ 19,449	$ 31,216	$ 36,949	$ 22,332	$ 82,985
23 - Multiple congenital anomalies, not elsewhere classified	$ 120,585	$ 4,390	$ 117,647	$ 56,224	$ 48,164	$ 6,760
24 - CHARGE Syndrome	$ 78,519	$ 18,952	$ 43,588	$ 37,463	$ 35,935	$ 82,816
25 - Trisomy 18	$ 110,537	$ 59,987	$ 89,370	$ 27,771	$ 117,103	$ -
26 - Trisomy 13	$ 63,452	$ -	$ 105,539	$ 54,290	$ 175,897	$ -
27 - Cri de Chat syndrome	$ 57,418	$ -	$ 33,438	$ 14,731	$ 52,095	$ 4,779
28 - Angelman's Syndrome	$ 23,646	$ 28,371	$ 46,650	$ 26,583	$ 23,646	$ 5,655
29 - Pallister Killian Syndrome	$ 68,963	$ 116,921	$ 80,681	$ 89,796	$ 74,294	$ 53,933
99 - More than one code	$ 145,079	$ 234,468	$ 155,681	$ 92,667	$ 84,658	$ 185,015

Figure 31. Condition-level PMPY spending for year 2023 by payor, with high-cost cells highlighted in the source slide.

6.7. Service Category Composition of Spending

Figure 32 breaks the year 2023 PMPY spending into major categories. Inpatient acute care accounts for a large share across payors and appears especially prominent for commercial categories and Medicare-only coverage. Physician and other ambulatory provider services also represent a major share, especially for Medicaid-only coverage. Facility outpatient, pharmacy, durable medical equipment, long-term care, and home health services also contribute meaningfully, with the mix varying by payor type.

Total reimbursement across all payors, conditions, and ages was approximately $7.93 million and that hospice spending of approximately $13.84 million is included in the inpatient-other category. Spread across the approximately 155,000 identified persons, hospice spending is less than $1 PMPY. Figure 32 further notes that commercial coverage appears to include a substantial inpatient acute component, while Medicare-and-Medicaid coverage includes a notable durable medical equipment component.



	Medicaid Only	Commercial and Medicaid	Commercial Only	Medicare and Medicaid	Medicare Only	Commercial and Medicare
00 - Pharmacy	11%	7%	7%	13%	9%	10%
01 - DME	3%	2%	2%	3%	2%	2%
02 - Diagnosic Outpatient	0%	0%	1%	0%	1%	1%
03 - Laboratory Outpatient	0%	0%	0%	0%	1%	0%
04 - Inpatient Acute	39%	66%	58%	42%	55%	59%
05 - Inpatient Other	0%	0%	0%	0%	0%	0%
06 - Facility Outpatient	7%	9%	15%	7%	12%	15%
08 - Long Term Care	2%	3%	1%	16%	4%	2%
09 - Home Health	2%	1%	1%	2%	4%	2%
10 - Reimbursement	0%	0%	0%	0%	0%	0%
11 - Inpatient Part B	0%	0%	0%	0%	0%	0%
13 - Physican and Other Ambulatory Providers	35%	11%	14%	16%	11%	9%
99 - Other	0%	0%	0%	0%	0%	0%

Figure 32. Service category percentage of year 2023 PMPY by payor type.

6.8. Executive Summary for Non-Technical Readers

This study uses the TX-APCD to better understand Texans with complex medical conditions across both pediatric and adult populations. The analysis identifies individuals using diagnosis codes and tracks their health coverage, service use, and spending patterns over time.

Across all payors, approximately 155,000 individuals were identified in year 2023 (Figure 23). These individuals represent a high-need, high-cost population requiring extensive health care services across multiple settings. While the overall population size remains relatively stable year over year, some variation in the year 2024 likely reflects incomplete Medicare data rather than true population change.

A key finding of the study is the central role of Medicaid in covering children and adolescents, particularly those under age 19 (Figures 7–10). Medicaid remains the dominant source of coverage through young adulthood, reflecting eligibility pathways tied to disability and income. However, as individuals age, Medicare and combined Medicare-Medicaid coverage become increasingly prominent, especially among those age 27 and older (Figures 9 and 10).

Importantly, commercial insurance provides substantial coverage across all age groups, even within this high-cost population. While commercial coverage represents a smaller share than Medicaid in pediatric populations, it remains consistently present in every age category and contributes meaningfully to overall coverage (Figures 4, 7, and 8). This highlights the critical role of employer-sponsored and other private insurance in supporting individuals with complex conditions alongside public programs.

The distribution of conditions is concentrated among a relatively small number of diagnoses, with paralytic syndromes, cerebral palsy, and individuals with multiple conditions accounting for a large share of the population (Figure 24). These conditions often involve lifelong care needs that extend into adulthood, reinforcing the importance of continuous coverage across payor types.

Health care spending for this population is substantial. In the year 2023, average annual spending exceeded $73,000 per person (Figure 30), with even higher costs observed in certain conditions and payor categories (Figure 31). Spending is driven by a combination of inpatient care, physician services, outpatient care, pharmacy, durable medical equipment, long-term care, and home health services (Figure 32). The mix of services varies by payor, but inpatient and ambulatory care consistently represent major cost drivers.

In summary, this study demonstrates that Texans with complex medical conditions rely on a multi-payor system in which Medicaid, Medicare, and commercial insurance each play significant roles. Medicaid is foundational in early life, Medicare becomes critical in adulthood, and commercial insurance provides important and sustained coverage across all ages.

7. Harris County Health Department Project on Chronic Disease Prevalence to Inform Public Health Planning

The Center Research Team: Trudy Millard Krause, DrPH, Isrrael Perez, MS, Jixin Fu, MS, Elizabeth Caballero, MBA, Lopita Ghosh, MBA, Chau Truong, PhD

The Harris County Office of Epidemiology Surveillance and Emerging Disease requested analytical support from the Center to use the TX-APCD to examine the prevalence of selected chronic illnesses among Harris County residents. The project produced county-specific prevalence information with geographic and demographic detail, allowing Harris County to assess health outcomes across ZIP codes, payor sources, sex, race where available, and age groups through dashboards.

7.1. Select Examples and Information

For the purposes of this report, we have selected three examples[2] from the dashboard and project to highlight: diabetes, mental health, and Alzheimer's disease.

First, the diabetes example shows how a single chronic condition can be reviewed across sex, race, and age categories for a defined insured population. Figure 33 presents a tabular prevalence-rate display for diabetes. This type of display allows public health staff to compare prevalence across demographic groups rather than relying only on an overall county rate. The result provides the Harris County Office of Epidemiology the ability to compare disease prevalence within a specific payor population across demographic groupings, including sex, race, and age. In a professional report, this figure supports discussion of where diabetes burden may vary across groups and where more targeted prevention or management strategies may be needed.

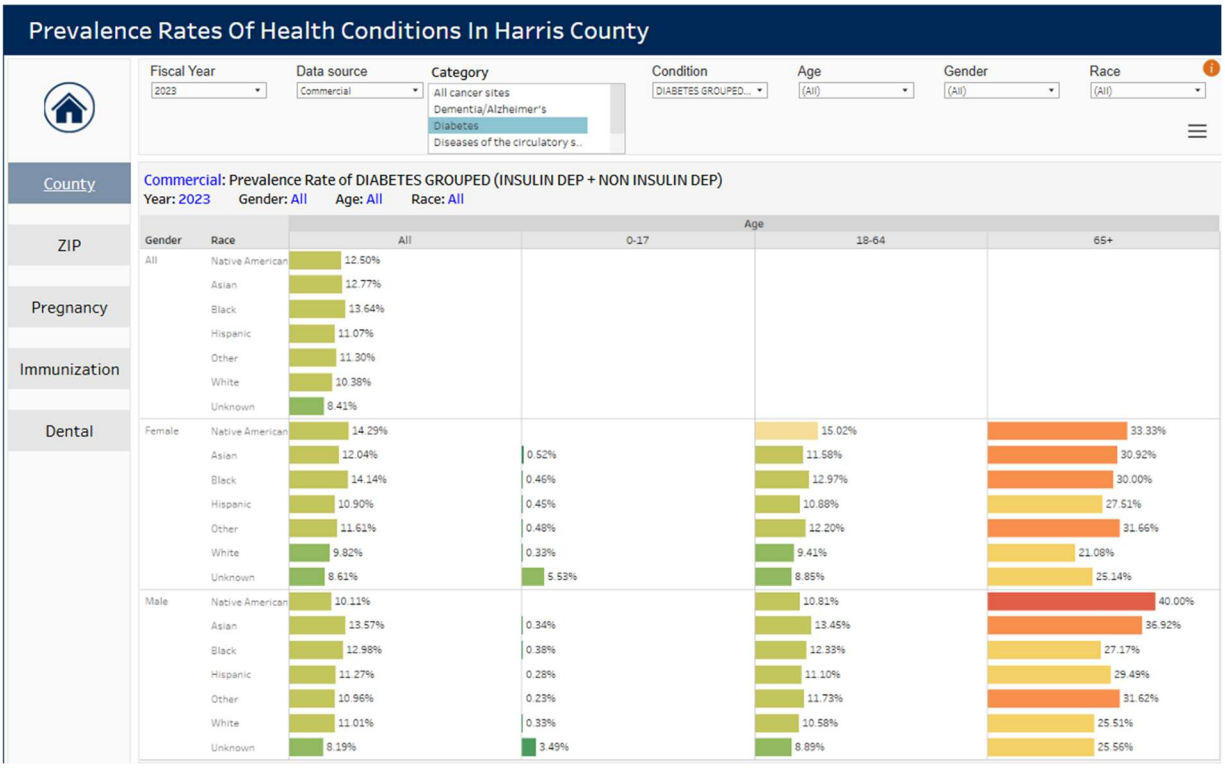


Figure 33. Diabetes prevalence among commercially insured persons in Harris County, reported by sex, race, and age group.

Second, the mental health maps show that prevalence information can be displayed geographically and compared across primary insurers. The side-by-side county maps for commercial, Medicaid, and Medicare populations make it possible to look for ZIP-code level variation and payor-specific patterns. These results can suggest where outreach, prevention programs, or follow-up analysis, may be most appropriate.

[2] **Source note:** Narrative and figures were prepared from the provided Harris County Health Department source document. Figure images are reproduced from the source document and discussed as examples of the chronic disease prevalence results available to Harris County.

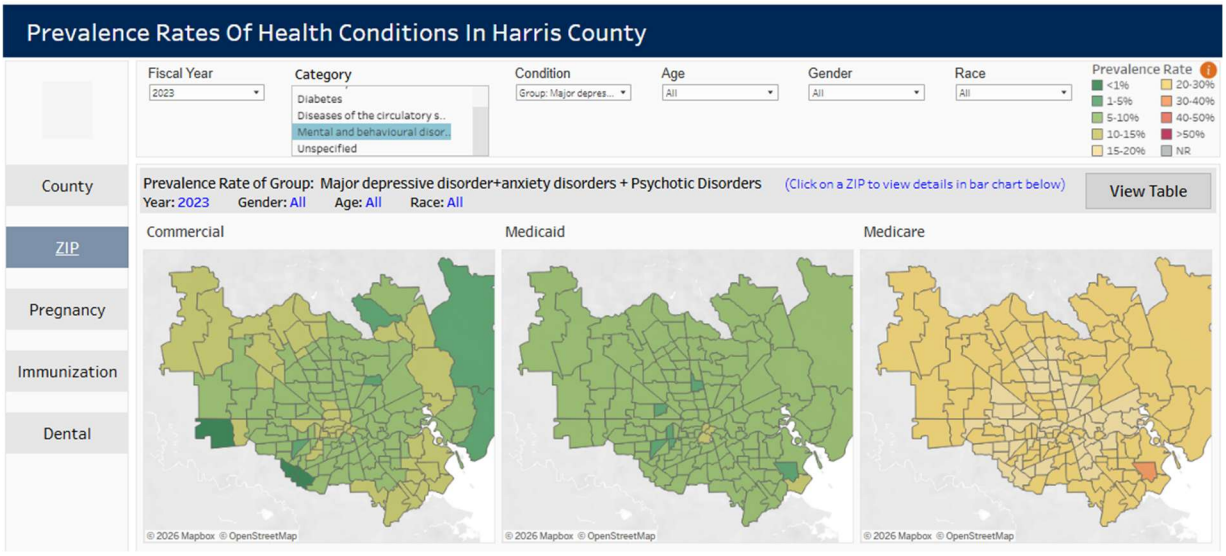


Figure 34. Heat maps of mental health condition prevalence in Harris County by primary insurer.

Third, the Alzheimer's disease example shows how condition-specific prevalence can be examined for the Medicare population by sex and race. This type of result is particularly valuable for conditions associated with older adult populations because it allows the Harris County Office of Epidemiology and Health Department to review differences within a high-relevance coverage group and to consider whether observed patterns align with service needs, community resources, or disparities in access to care. Figure 35 focuses on Alzheimer's disease within the Medicare population and displays prevalence by sex and race. The result provides a condition-specific view for a population in which Alzheimer's disease is especially relevant, and it supports demographic comparisons that can inform planning for older adult health needs.

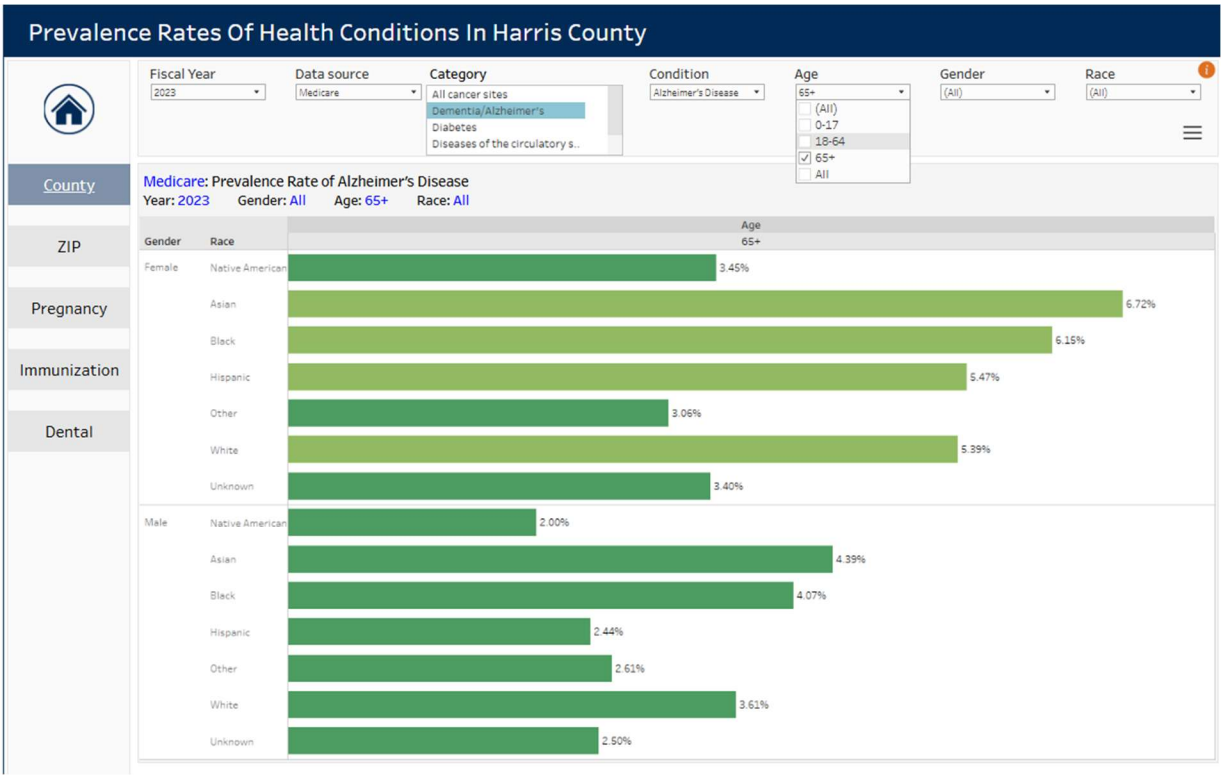


Figure 35. Alzheimer's disease prevalence in Medicare by sex and race in Harris County.

7.2. Public Health Significance

The Harris County results show that county-level chronic disease monitoring can be strengthened when prevalence is reported by place, payor, and demographic characteristics. The diabetes, mental health, and Alzheimer's disease examples each provide a different lens on chronic disease burden: demographic comparisons, geographic variation, and condition-specific patterns within a relevant payor population.

Taken together, the outputs give Harris County a more detailed basis for identifying disparities and targeting public health strategies. Instead of relying only on broad survey estimates or countywide totals, the Health Department can use the results to identify ZIP codes and population groups where chronic disease prevalence appears elevated, develop more focused interventions, and monitor whether future patterns change over time.

This project demonstrates the practical value of the TX-APCD for local health departments by delivering a clear, central result: the data products provide Harris County with actionable information on chronic disease prevalence across communities and populations. The figures illustrate how these insights can directly inform planning decisions, guide resource allocation, and support ongoing monitoring of chronic illness in a county.

8. Comparative Analysis of State-Funded Health Care Services and Major Cost Drivers Across State Agencies

The Center Research Team: Trudy Millard Krause, DrPH, Cecilia Ganduglia Cazaban, MD, DrPH, Rachel Naeve, MPH, Maria Ukhanova, MD. PhD, Caroline M Schaefer, MPH, Jixin Fu, MS, Madhuri Sankaranarayanapillai, PhD, Regina Hansen, MPH, Lopita Ghosh,MBA, Chau Troung, PhD

8.1. Background

The 2020-21 General Appropriations Act (GAA), House Bill (H.B.) 1, 86th Legislature, Regular Session, 2019 (Article IX, Health Related Provisions, Section 10.06) called on state agencies that pay for the health care of Texans to coordinate data to identify outliers and improvements for efficiency and quality that could be implemented within each health care system. The project, referred to as "The 5 Agencies Project," brought together five key agency providers of health care benefits: Texas Department of State Health Services (DSHS), Employees Retirement System of Texas (ERS), Texas Health and Human Services Commission (HHSC), Texas Department of Criminal Justice (TDCJ) & Teacher Retirement System of Texas (TRS). The 5 Agencies were joined by The University of Texas Health Science Center at Houston (UTHealth) Center for Health Care Data (the Center). The 5 Agencies Project was renewed by the 87th and 88th Legislatures in their respective 2021 and 2023 regular sessions.

In 2025, the directives set forth in Article IX, Section 10.06 (entitled "Cross-Agency Coordination on Healthcare Strategies and Measures") were replaced by Article III (p. III-205, Section 12 "All Payor Claims Database") of the GAA, Senate Bill (S.B.) 1, 89th Legislature, Regular Session (referred to as "APCD Project"). The directive for the current APCD Project that relates to the previous Cross-Agency Coordination on Healthcare Strategies and Measures (a.k.a. The 5 Agencies Project) is to issue biennial reports to include a comparative analysis of state-funded health care services and major cost drivers across and among state agencies providing state health care services.

The project's initial legislative report, submitted September 1, 2020, contains a comprehensive background section and can be found online on ERS's website. The project's second legislative report, submitted September 1, 2022, and the project's third legislative report, submitted September 1, 2024, can be found online on HHSC's website.

Data Portals and Large-Scale Data Collection

During the first biennium, the Center developed data portals for each of the four agencies providing data, as well as a fifth interactive data portal to show cross-agency data and provide meaningful comparisons across all agencies. Through analysis of the cross-agency data, the Workgroup identified efficiency opportunities. Initial analyses of the data across agencies' portals identified clear differences in the agencies' data collection methods, services provided, and populations served. Once it was evident that the state would greatly benefit from standardized data collection and reporting processes, the Workgroup made great strides in developing the ability to compare metrics across agencies, which allowed improved analyses of variations in service utilization, expenditures, and outcomes.

A key achievement of this project has been the successful collection and aggregation of widely disparate data, in varying formats, from multiple sources and on an extremely large scale. The four current data repositories include data from 1540 sources representing more than 1.338B records for approximately 13.5M lives totaling more than $304B in expenditures over 9 fiscal years (September 1 – August 31, 2016 – 2024). Agencies contributing data (ERS, HHSC, TDCJ, and TRS) access metrics presenting health care costs and quality via agency-specific interactive health care data information portals. All participating agencies can also access an interactive comparative data portal that shows cross-agency data to facilitate meaningful comparisons.

8.2. Outcomes and Measures

The data within the data warehouses are linked to cloud-based Tableau® tools that support advanced data visualizations and reporting. Each agency's interactive portal allows authorized users to select from multiple analytic categories (represented as page tabs). The categorical tabs contain additional variables that can be selected to generate a variety of information about agency populations and other metrics of interest about agency-specific information.

The agencies can view detailed intra-agency data in their portal, as well as compare cross-agency metrics using a cross-agency data portal. See Table 1 for a list of the measures available on the Comparative data portal. Users can select year or three-year trend, gender, age group, plan type, health condition, and other metrics as appropriate. These selections enable the user to target queries specifically to address issues, compare trends across time, and assess variations.

Figure 36 provides a comparison of the average cost of medical care over time for members of HHSC, TRS and ERS, and for inmates of TDCJ. Note: costs reported for TDCJ are only those incurred from community providers. Costs are shown Per Inmate/Member Per Year (PIPY/PMPY).

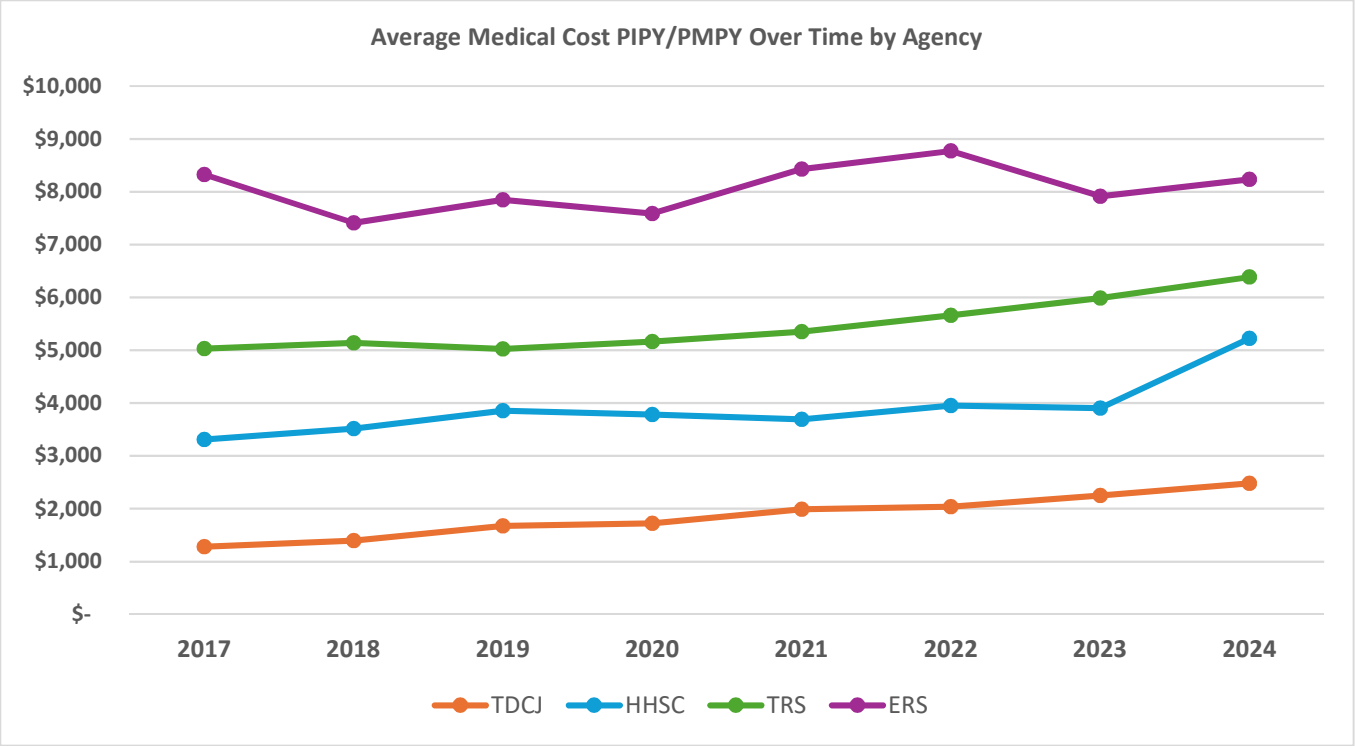


Figure 36. provides a comparison of the average cost of medical care in fiscal year (FY) 2024 PIPY/PMPY by age group and state agency.

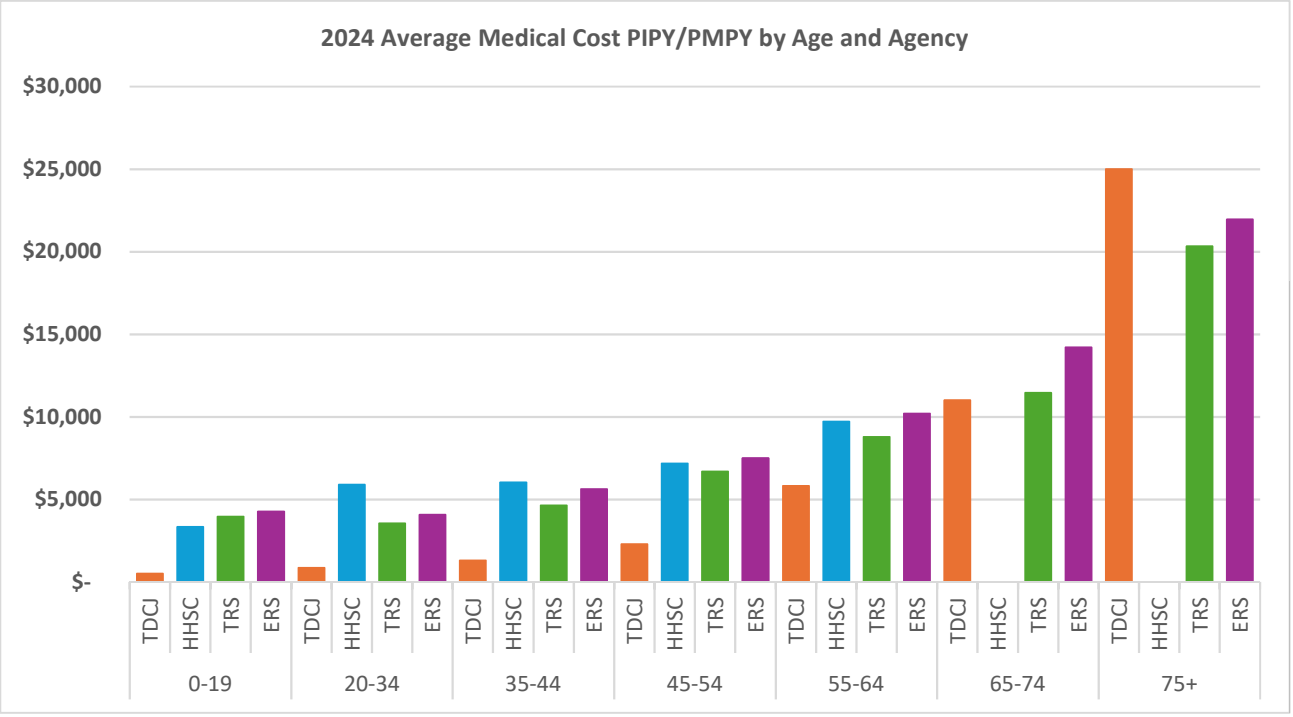


Figure 37. provides a comparison of the average allowed amount per Emergency Department visit over time by state agency.

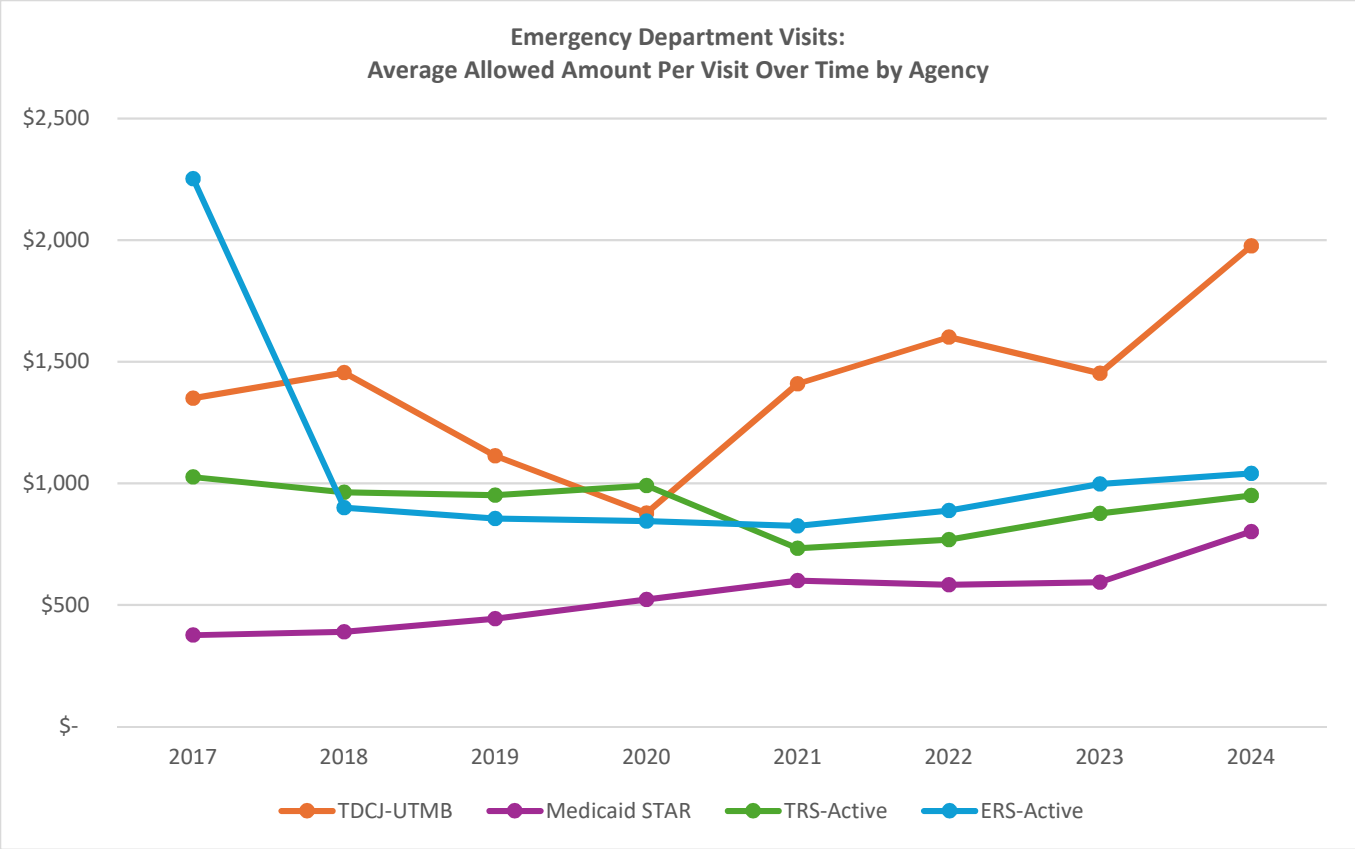


Figure 38. provides a comparison of the average allowed amount per acute hospital admission in FY2024 by age and agency.

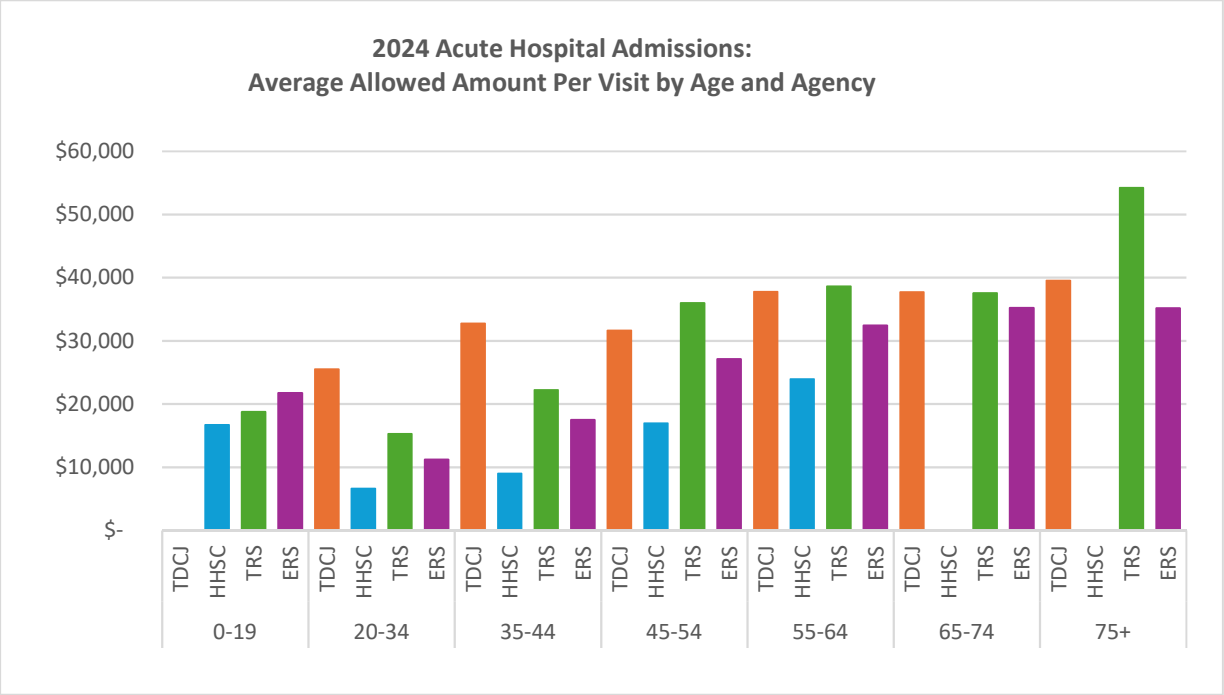


Figure 39. Acute hospital admissions average allowed amount per visit by age.

8.3. Value-based Care

The 5 Agencies Project directed the agencies to collaborate on the development and implementation of potential value-based payment strategies. The workgroup selected two focus areas with high levels of interest to the agencies: a) reducing self-harm events among youth, and b) improving maternal health outcomes. Two special-topic sub-workgroups reviewed health care data and key metrics from agency-specific and cross-agency data findings; reviewed information on programs and interventions used by health plans, state agencies, foundations, and other entities; explored opportunities for interventions that could improve value; and recommended strategies for implementation by the agencies.

The Self-Harm sub-workgroup recommended improving early intervention and follow-up care to reduce self-harm events for youth age 10–19 years old by supporting development of pathways to integrate behavioral health care with primary care. To promote primary care physicians (PCPs) feeling supported and prepared to address mental health issues at primary care visits, the state agencies collaborated to amplify the work of current state initiatives that support integration of behavioral and primary health care, specifically the Texas Child Mental Health Care Consortium (TCMHCC) Child Psychiatry Access Network (CPAN).[3] The participating agencies developed two HHSC-led webinars on self-harm and suicide prevention that informed primary care and other providers, as well as the public, about indicators, language, and other strategies around self-harm and suicide prevention,

[3] Texas Child Mental Health Care Consortium. *Texas Child Psychiatry Access Network (CPAN).* The University of Texas System. Date accessed, May 15, 2024.

including CPAN resources. The first webinar on suicide prevention and CPAN resources occurred on October 4, 2023, and 441 attended. The second webinar on preventing non-suicidal self-injury and CPAN resources took place on October 18, 2023, and 291 attended. Most participants were not enrolled in CPAN, and nearly half said they planned to enroll after attending the webinars.

The Maternal Health, Safety, Quality, and Equity (MaHSQE) sub-workgroup recommended advancing cross-agency maternal health quality by: 1) improving data monitoring and recording to facilitate better assessment of maternal health outcomes; 2) strengthening provider engagement and referral networks to ensure timely and appropriate care for pregnant and postpartum women, particularly those at higher risk (e.g., pregnant women with Opioid and Substance Use Disorder [OSUD]); and 3) supporting current successful initiatives to improve maternal health outcomes through increased awareness, outreach, and provider engagement, specifically the DSHS TexasAIM[4] initiative, DSHS Hear Her Texas[5] campaign, and the TCMHCC PeriPAN[6] program. To improve data monitoring and recording, several analyses were added to the agencies' portals so agencies can evaluate their respective rates and trends for maternal health-related measures. To strengthen provider engagement and referral networks and support current successful initiatives to improve maternal health outcomes, the MaHSQE sub-workgroup developed a Grand Rounds continuing education training module. The training that took place on March 26, 2025, and 455 attended. Over 90% of participants said the presentation provided them with strategies for applying best/evidence-based practices into their job or practice.

[4] Texas Department of State Health Services. *Texas Alliance for Innovation on Maternal Health (TexasAIM).* Maternal and Child Health: Campaigns, Programs & Activities - Maternal and Child Health. Date accessed, May 15, 2024.
[5] Texas Department of State Health Services. *Hear Her Texas.* Maternal and Child Health: Campaigns, Programs & Activities - Maternal and Child Health. Date accessed, May 15, 2024.
[6] Texas Child Mental Health Care Consortium. *Perinatal Psychiatry Access Network (PeriPAN).* The University of Texas System. Date accessed, May 15, 2024.

Table 1. List of Measures on the 5 Agencies Comparative Portal

1. Unique Member/Inmate Count
2. Average Annual count
3. Average Medical Cost PIPY/PMPY
4. Average Pharmacy Cost PIPY/PMPY
5. Average Total Cost PIPY/PMPY (Medical and Pharmacy)
6. High-Cost Claimant Unique Member/Inmate Count
7. High-Cost Claimant Average Annual Count
8. High-Cost Claimant Median Medical Cost PMPY
9. High-Cost Claimant Median Pharmacy Cost PMPY
10. High-Cost Claimant Median Total Cost PMPY (Medical and Pharmacy)
11. Count of Inpatient Visits
12. Count of Outpatient Visits
13. Count of Professional Visits
14. Count of Emergency Visits with no Inpatient Admission
15. Count of Hospital 30 Day Readmissions
16. Rate of Inpatient Visits
17. Rate of Outpatient Visits
18. Rate of Professional Visits
19. Rate of Emergency Visits with no Inpatient Admission
20. Rate of Hospital 30 Day Readmissions
21. Average Allowed Amount per Acute Hospital Admission
22. Average Allowed Amount per Emergency Visit
23. Average Allowed Amount per Outpatient Visit
24. Average Allowed Amount per Professional Visit
25. Prevalence Rate for Cancer
26. Prevalence Rate for Chronic Kidney Disease
27. Prevalence Rate for Chronic Pain
28. Prevalence Rate for Congestive Heart Failure
29. Prevalence Rate for Diabetes
30. Prevalence Rate for HIV and AIDS
31. Prevalence Rate for Hypertension
32. Prevalence Rate for Low Back Pain
33. Prevalence Rate for Major Depression
34. Prevalence Rate for Serious Mental Illness
35. Average Total Cost PMPY of Medical and Pharmacy for Cancer
36. Average Total Cost PMPY of Medical and Pharmacy for Chronic Kidney Disease
37. Average Total Cost PMPY of Medical and Pharmacy for Chronic Pain
38. Average Total Cost PMPY of Medical and Pharmacy for Congestive Heart Failure
39. Average Total Cost PMPY of Medical and Pharmacy for Diabetes
40. Average Total Cost PMPY of Medical and Pharmacy for HIV and AIDS
41. Average Total Cost PMPY of Medical and Pharmacy for Hypertension

42. Average Total Cost PMPY of Medical and Pharmacy for Low Back Pain
43. Average Total Cost PMPY of Medical and Pharmacy for Major Depression
44. Average Total Cost PMPY of Medical and Pharmacy for Serious Mental Illness
45. Ratio of Average Cost PMPY to Total Cost PMPY for Cancer
46. Ratio of Average Cost PMPY to Total Cost PMPY for Chronic Kidney Disease
47. Ratio of Average Cost PMPY to Total Cost PMPY for Chronic Pain
48. Ratio of Average Cost PMPY to Total Cost PMPY for Congestive Heart Failure
49. Ratio of Average Cost PMPY to Total Cost PMPY for Diabetes
50. Ratio of Average Cost PMPY to Total Cost PMPY for HIV and AIDS
51. Ratio of Average Cost PMPY to Total Cost PMPY for Hypertension
52. Ratio of Average Cost PMPY to Total Cost PMPY for Low Back Pain
53. Ratio of Average Cost PMPY to Total Cost PMPY for Major Depression
54. Ratio of Average Cost PMPY to Total Cost PMPY for Serious Mental Illness
55. Acute Inpatient Admissions for Cancer
56. Acute Inpatient Admissions for Chronic Kidney Disease
57. Acute Inpatient Admissions for Chronic Pain
58. Acute Inpatient Admissions for Congestive Heart Failure
59. Acute Inpatient Admissions for Diabetes
60. Acute Inpatient Admissions for HIV and AIDS
61. Acute Inpatient Admissions for Hypertension
62. Acute Inpatient Admissions for Low Back Pain
63. Acute Inpatient Admissions for Major Depression
64. Acute Inpatient Admissions for Serious Mental Illness
65. Emergency Visits for Cancer
66. Emergency Visits for Chronic Kidney Disease
67. Emergency Visits for Chronic Pain
68. Emergency Visits for Congestive Heart Failure
69. Emergency Visits for Diabetes
70. Emergency Visits for HIV and AIDS
71. Emergency Visits for Hypertension
72. Emergency Visits for Low Back Pain
73. Emergency Visits for Major Depression
74. Emergency Visits for Serious Mental Illness
75. Readmissions within 30 Days for Cancer
76. Readmissions within 30 Days for Chronic Kidney Disease
77. Readmissions within 30 Days for Chronic Pain
78. Readmissions within 30 Days for Congestive Heart Failure
79. Readmissions within 30 Days for Diabetes
80. Readmissions within 30 Days for HIV and AIDS
81. Readmissions within 30 Days for Hypertension
82. Readmissions within 30 Days for Low Back Pain
83. Readmissions within 30 Days for Major Depression
84. Readmissions within 30 Days for Serious Mental Illness
85. Rate of Pregnancies Per 1000 Population

86. Percent of Cesarean Deliveries for Low-Risk Pregnancies by the Society for Maternal-Fetal Medicine (SMFM)
87. Percent of Pregnancies resulting in Live Births
88. Precent of Low-Birth-Weight Newborns
89. Annual Allowed Amount by Clinical Classifications Software Refined (CCSR)
90. Top 10 Drug Classes Based on Percent of Pharmacy Spent (Based on Count of Inmates/TDCJ)
91. Risk Score by 3M Clinical Risk Group
92. Count of Inpatient Hip Replacement
93. Count of Outpatient Hip Replacement
94. Count of Inpatient Knee Replacement
95. Count of Outpatient Knee Replacement
96. Count of Inpatient Spinal Surgery
97. Count of Outpatient Spinal Surgery
98. Cost of Inpatient Hip Replacement
99. Cost of Outpatient Hip Replacement
100. Cost of Inpatient Knee Replacement
101. Cost of Outpatient Knee Replacement
102. Cost of Inpatient Spinal Surgery
103. Cost of Outpatient Spinal Surgery
104. Average Length of Stay in Days for Inpatient Hip Replacement
105. Average Length of Stay in Days for Outpatient Hip Replacement
106. Average Length of Stay in Days for Inpatient Knee Replacement
107. Average Length of Stay in Days for Outpatient Knee Replacement
108. Average Length of Stay in Days for Inpatient Spinal Surgery
109. Average Length of Stay in Days for Outpatient Spinal Surgery
110. Annual Exam Rate
111. Adult Depression Screening Rate
112. Influenza Vaccination Rate
113. Obesity Rate
114. Weight Counseling Rate for Obesity
115. Tobacco Usage Rate
116. Tobacco Cessation Rate
117. Breast Cancer Screening Rate
118. COVID-19 Severity Score (Calendar Years 2020-2022)

9. Reporting on Applications

9.1. Applications Approved

The TX-APCD is required to report on application submission and process. Data Application Review Committee approved six applications, had one application pending review, and did not disapprove any applications. The date an application is complete is when the TX-APCD receives an application with all relevant fields completed, with any necessary documentation, and the application is signed by the requestor. The tables below summarize the status of all applications received during the reporting period.

During the reporting period, the TX-APCD Data Application Review Committee approved seven applications and did not disapprove any applications. The tables below summarize the status of all applications received during the reporting period. All primary investigators for Institutions of Higher Education hold the title of Assistant Professor, Associate Professor, or Professor.

Name	Organization	Project Title	QRE class	Purpose	Date Completed	Decision Date
Justin Benzer, PhD	UTHealth Houston	Teamwork in Cancer Survivorship: Mapping Care Networks and Continuity Across Oncology, Primary Care, and Specialty Providers in Texas	Institution of Higher Education	Improve quality of health care	2/13/2026	2/19/2026
Yucheng Hou, MPP, PhD	UTHealth Houston	Hospital Variation in Surgical Episode Spending: Implications for Mandatory Bundled Payment Models	Institution of Higher Education	Improve quality of care or reduce costs	2/13/2026	3/19/2026
Natalia Serna, PhD	Stanford University	Procurement Auctions in Medicaid Managed Care: Optimal Design and Impacts on Health Outcomes	Institution of Higher Education	Improve quality of health care	5/7/2026	5/21/2026
Caitlin Murphy, MPH, PhD	University of Chicago	Project Pegasus: Pregnancy Complications	Institution of Higher Education	Improve quality of health care	2/13/2026	2/19/2026

		in AYA Cancer Survivors				
Robert Town, PhD	University of Texas at Austin	The Impact of the No Surprises Act on Provider Network Formation and Reimbursement Rates	Institution of Higher Education	Increase transparency, Improve quality of care or reduce costs	6/11/2026	6/18/2026
Brian Briscombe	RAND	National Hospital Price Transparency Study	501(c)(3) organization public-interest research on health care delivery	Increase transparency, Improve quality of care or reduce costs	6/5/2026	6/26/2026
Charles Miller	Texas 2036	Modeling health care affordability reforms for the Texas state employees and teachers	501(c)(3) organization public-interest research on health care delivery	Improve the quality of care or reduce the cost of care	8/4/2026	8/20/2026

9.2. Applications Neither Approved or Disapproved

No data applications are pending as of September 1, 2026.

9.3. Applications Disapproved

No data applications were disapproved during the reporting period.

UTHealth | School of Public Health | Center for Health Care Data
The University of Texas Health Science Center at Houston
1930 Old Spanish Trail | Houston | TX 77054
Ph: 713.500.9000 | https://go.uth.edu/txapcd

Texas All-Payor Claims Database Biennial Report to the 89th Legislature
September 2026