Georgia Data Analytics Center (GDAC)

FY 2023 Annual Report

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Executive Summary

The Georgia Data Analytics Center (GDAC) was established by House Bill 197 (2019 session) to consolidate data and analytics from across state government to provide transparency and accountability to lawmakers, agencies, researchers, and the public.

GDAC's objective is to support policy development that will improve **operational efficiencies** in Georgia; and provide data transparency and accountability within the state.

GDAC not only collects agency data to "paint" an overall picture for informed decision making, but also encourages state agencies to submit use cases for data analysis and visualization and, extends the opportunity to partner in the analysis of more complex issues such as healthcare access, child health outcomes, and automating outdated practices that rely heavily on spreadsheets, such as the Quality Basic Education (QBE) formula. In addition, the platform allows partnerships with researchers to conduct studies that benefit Georgians.

State agencies have gathered data for decades and analyzed these data in silos with limited ability to tell the whole story. GDAC's modern data analytics center is capable of securely harvesting, integrating, anonymizing, and aggregating these data. The Center serves as a bridge, the missing puzzle piece, in bringing agencies together to identify opportunities where data sharing can remove data barriers, increase efficiency and reporting, and generate greater insights for public consumption.

GDAC has established multiple data sharing agreements and partnerships with state agencies to improve overall data literacy and analytics within the State. Establishing these agreements has been a challenging, lengthy, and slow process, frequently resulting in redundant efforts. Competing state laws, statutes, and their interpretations are sometimes inconsistent, which have created barriers to data sharing.

Through the centralized establishment of a data repository and standardizing data sharing agreements across agencies, GDAC enables timely access to the governed data. In FY 2023, GDAC added the Department of Public Health (DPH) - Opioid, Department of Community Health (DCH) - Medicaid, and the Office of Health Strategy and Coordination (OHSC) to its list of active data sharing agreements.

GDAC continues to improve its cloud infrastructure and data engineering processes making several strides for building digital transformation in Georgia and include:

- A modern cloud organization to facilitate data democratization.
- GDAC cloud is HIPAA compliant with mandatory service control policies and guardrails enabled.
- Security alarms and alerts are continually monitored with support from the Georgia Technology Authority (GTA).
- An established data governance and advisory committee.
- State agency data partnerships and data sharing agreements.
- A publicly available website and data visualizations with data download options.

The GDAC team remains committed to improving its processes to provide transparency and accountability to Georgians through readily accessible data and analytics.

The GDAC Team would like to thank OPB Director Kelly Farr for the leadership, encouragement, and support of GDAC.

We wish you well on your future endeavors!

Stephanie Beck, Kelly Farr, Kanti Chalasani

Solomon Key, Kanti Chalasani, Salome Deka, Nichole Monroe, Sanelisiwe Nkomo, Pradeep Gutta (front)

Kanti Chalasani, Uyen Pham, Kelly Farr, Sanelisiwe Nkomo, Salome Deka, Nichole Monroe, Pradeep Gutta

GDAC
Georgia Data Analytics Center

QUICK FACTS

FY 2023 Budget: $1.9m

Georgia Data Analytics Center

Established by house bill 197 during 2019 legislative session. O.C.G.A. 45-12-150

Awards n Honors
1. 2023 State and Local Government Champion AWS Imagine
2. Project Highlight Results for America
3. 2023 Top Honors Georgia Technology Authority

Implemented "Research" infrastructure for Georgia All Payer Claims Database

Getting started with data platform for house bill 1013

7 Employees
14 Agencies in Governance Committee
16 Data sharing agreements

Data Analytics

Health Dashboards - Fast tracked health data analytics

Critical data and analytics- Medicaid data, Child welfare data, Tax credit data, Opioid data, ARPA etc.

Secured insights for legislatures for data driven decisions during 2023 Legislative session

Continued data and research use cases gathered

Published 24 public facing dashboards , 16 OPB internal dashboards

Modern Infrastructure

Implemented a modern data lakehouse to empower policy making and research in State of Georgia.

Implemented Summer Pandemic Electronic Benefits Transfer eligibility determination algorithms

Automation enabled for weekly, monthly, quarterly and annual data pipelines.

Automation enabled through infrastructure as code using DevOPS.

Data Privacy and Security enforced. HIPAA compliance and service control policies for security monitoring enabled

Quality Basic Education funding formula automation for Office of planning and Budget

GDAC Data Governance

GDAC received multiple external data requests in FY 2023. As public awareness of GDAC increases, the Data Governance Advisory Committee anticipates an increase in data requests. The committee met multiple times throughout the year to establish an effective data request process for data sharing and data management. Efficient, consistent, and easy to access policies for managing these requests is essential to long-term success and accurate tracking.

Data Sharing Approaches and Priorities

GDAC uses a multi-approach strategy to manage and respond to requests for data.

1. *Increase Publicly Available Datasets.* GDAC has published multiple aggregated data sets through its website with a data download option. Currently, there are 24 public facing dashboards for public consumption.
2. *Centralize Data Request Intake, Assignment, Review, and Tracking.* GDAC has received data/use case requests via email. However, GDAC encourages requestors to use the Use Case Submission form posted on the GDAC website. HB 197 (2019 session) outlines that GDAC can only provide aggregated data. The submission form allows the requestor to provide the data request details. GDAC works in a collaborative format where requests often require team involvement. The process from submission to completion varies depending on the type of request.
   See Figures 1-4 below to learn about the process for managing these requests.
3. *What Data Is Available?* GDAC works closely with State Agency data owners to determine what types of data are made available to researchers and requestors. The scope of each submission is thoroughly reviewed to determine if the data is available, whether data can be provided within compliance of state and federal privacy laws, and to understand the requestor's goals and objectives. Prior to release of any data, legal considerations, such as the exposure of personally identifiable information (PII) or protected health information (PHI) are considered.
4. *Centralize Data Use Agreements.* GDAC has established multiple data sharing agreements and partnerships with state agencies to improve overall data literacy and analytics within the State. Georgia state agencies have gathered vast amounts of data over the decades. Competing state laws, statutes and their interpretations are sometimes inconsistent. Establishing data sharing agreements is often a lengthy and slow process. Through the centralized establishment of a data repository and standardizing data sharing agreements across agencies, GDAC has enabled timely access to the governed data. As agreements are executed, these are then logged into an Excel template for tracking.

Managing Data Requests- Workflows

Figure 1: GDAC Website Publication Process Flow

This use case is typically requested by Georgia State Agencies to gather and share insights through the creation of a dashboard. Upon agency review and approval, the dashboard is published to the GDAC website for public consumption.
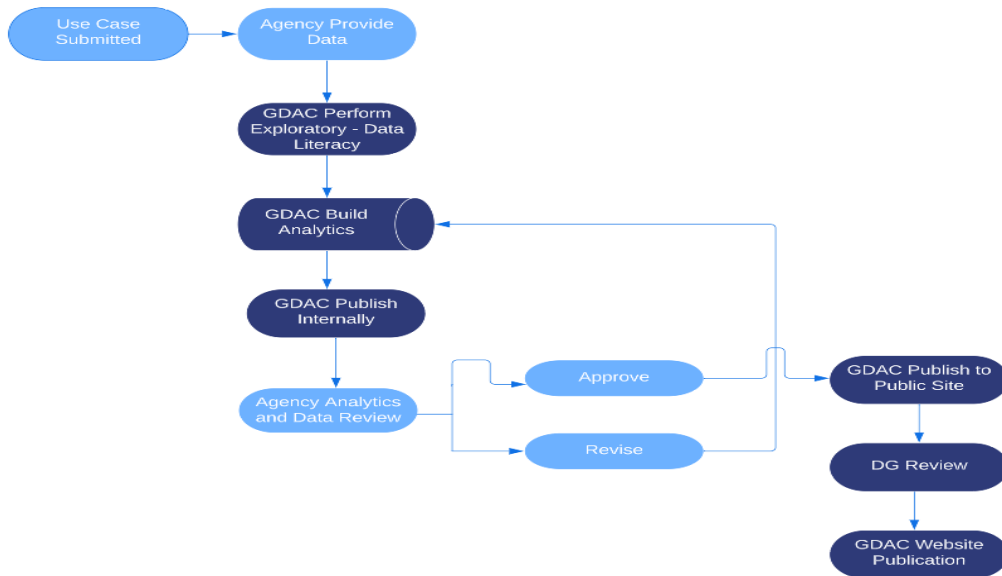
Figure 2: GDAC External Research Data Request Flow

These are research requests for original projects where data was not previously requested. These data are approved on a per-project basis and can only be used for scope of the approved project.
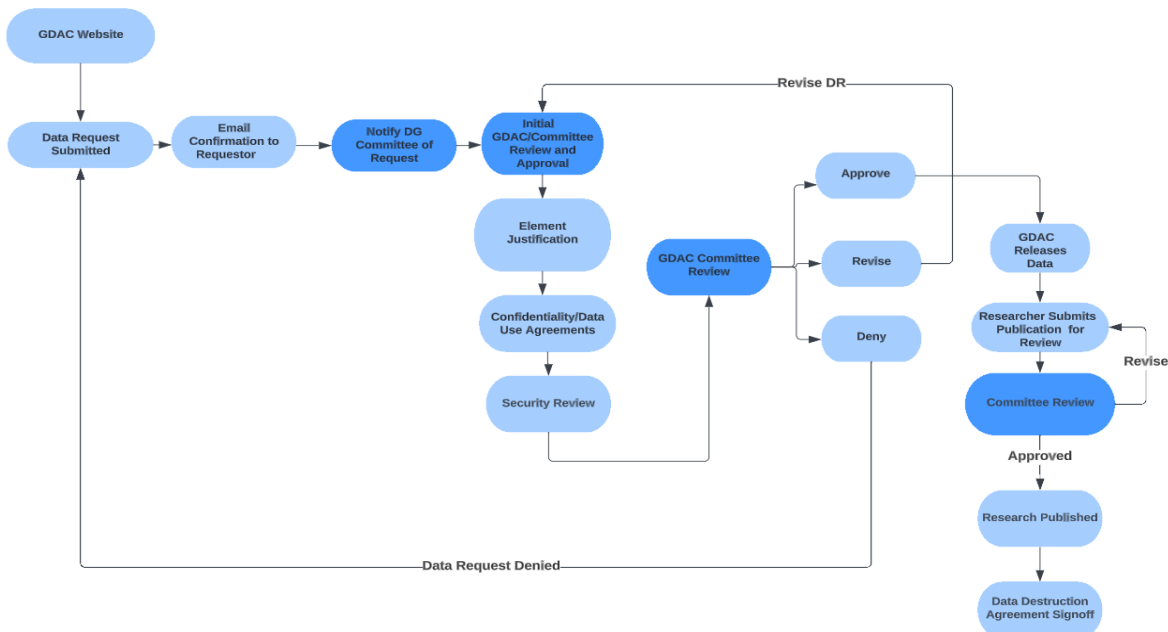
Figure 3: Agency Data Request Flow

The agency data request flow was defined for data requests from Georgia state agencies. In FY 2023 GDAC received its first agency request for data from the Department of Behavioral Health and Developmental Disabilities (DBHDD). This flow details the process that GDAC followed in delivering the data which involved an initial review of the data request and identifying the data inventory housed in GDAC. Currently the agency is working on a data use agreement with the State Accounting Office (SAO). Once completed, GDAC will transfer the data.
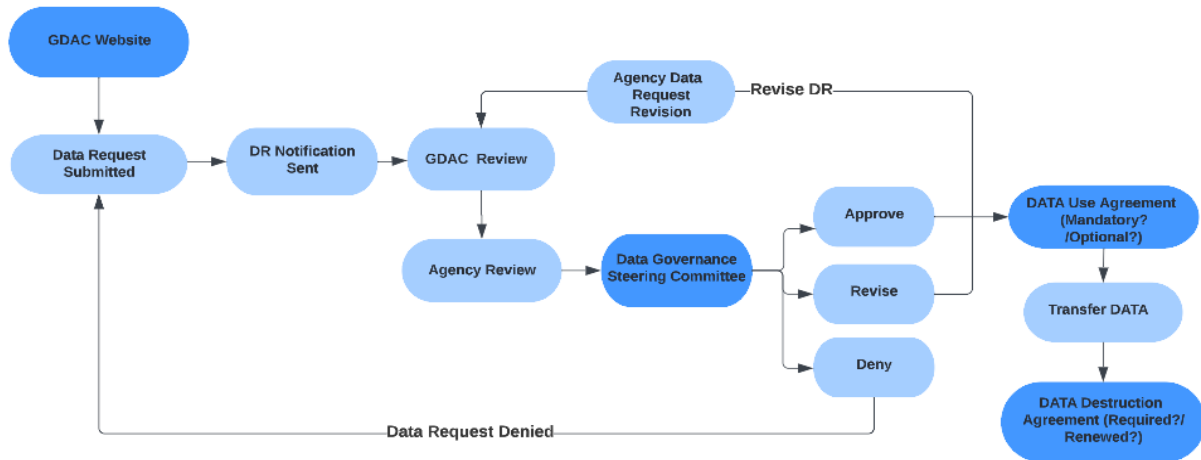
Figure 4: GDAC Policy Data Request Flow

Periodically GDAC receives data requests from legislators to assist in aiding policy decisions. This workflow addresses those requests.
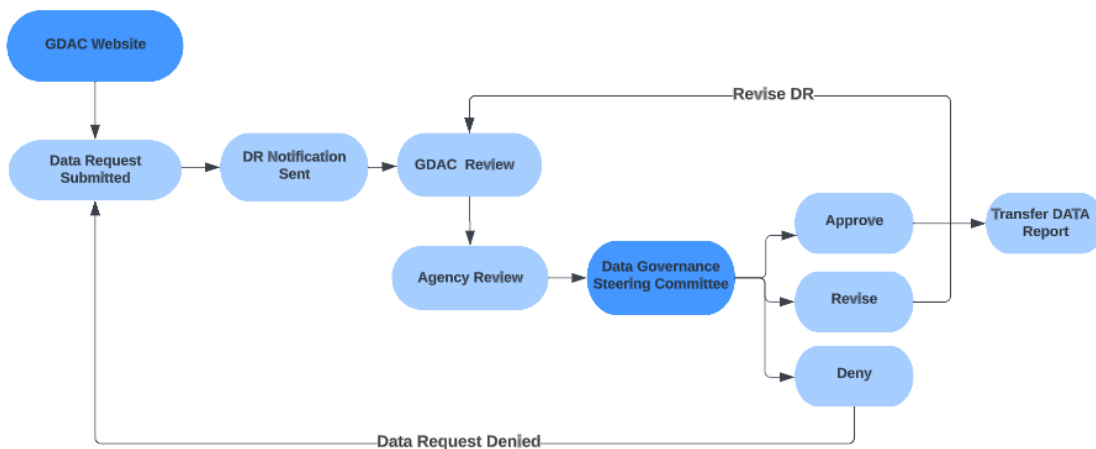
GDAC Fiscal Year 2023 Highlights

- ✓ Selected to receive top honors in the Georgia Technology Authority **2023 Technology Innovation Showcase**
- ✓ Recognized as an Amazon Web Services (AWS) **State and Local Government Champion** for innovation in building a modern GDAC data lakehouse ground up for Georgia.
- ✓ Chosen as a highlight for **2023 State Standard of Excellence** by Results for America to recognize the success of GDAC and to serve as best practices for other states.
- ✓ Enabled "research" platform for Georgia **All Payer Claims Database** (APCD).
- ✓ Created methodology, using weighted salaries to provide an equitable distribution among agencies for **Clark's Christmas Kids**, a partnership between Department of Human Services-Division of Family & Children Services, Clark Howard, and others to ensure kids in foster care receive gifts on Christmas morning.
- ✓ Collaborated with the Department of Human Services-Division of Family & Children Services to calculate issuance of summer 2022 **P-EBT** benefits for eligible children. Child welfare / foster data analytics.
- ✓ OPB Projects - ARPA quarterly reporting automation; QBE funding formula automation; Risk pool analysis; operational and budgeting analytics; DOR tax credit analytics.

Looking Towards the Future

GDAC will continue to strengthen its modern data lakehouse and its infrastructure to add additional building blocks for data sharing within State of Georgia. GDAC will be partnering with Georgia Department of Human Services (DHS) to enable a statewide data platform to provide care and protection of children as required by HB1013. This bill requires DHS to enable data sharing platform for the following agencies:

- ✓ Division of Family and Children Services
- ✓ Department of Early Care and Learning
- ✓ Department of Community Health
- ✓ Department of Public Health
- ✓ Department of Behavioral Health and Development Disabilities
- ✓ Department of Juvenile Justice
- ✓ Department of Education
- ✓ Georgia Crime Information Center

GDAC will continue discussions to bring in additional agency partners like:

- ✓ Department of Corrections
- ✓ Department of Labor
- ✓ Department of Community Services

GDAC is getting ready to support and partner with Department of Human Services to bring all these agencies data together for State of Georgia as required by HB1013. Through this project GDAC will empower State of Georgia by opening doors for the research and policy development in Georgia for child welfare management.

GDAC Strategic Goals FY2023 - FY2025

GDAC Strategic Goals	
Data Governance	✓ Ensure effective data management by streamlining data submissions, data requests and data access policies and procedures ✓ Facilitate data inventory and use-case submissions to GDAC ✓ Document and publish data governance policies and procedures ✓ Build data dictionaries and data catalogs ✓ Standardize data definitions and glossaries
Policy	✓ Work with legislatures and policy makers to facilitate smoother data sharing with GDAC ✓ Facilitate agency data inventory and use case submissions to GDAC ✓ Ensure long-term sustainability for GDAC
Agency Partners	✓ Grow data inventory and agency use cases ✓ Continue recruiting Data Governance committee members ✓ Participate in GDAC Data Governance ✓ Review and provide data and analytics feedback
GDAC	✓ Track new data and use case requests ✓ Continually ingest new data and build data analytics ✓ Maintain and enhance GDAC data architecture ✓ Build modern automated models and insights ✓ Public data publications and monthly analytics updates
Technology	✓ Work with Georgia Technology Authority to manage cloud operations ✓ Manage security control policies and guardrails ✓ User and account permission management ✓ Cloud service reviews

GDAC Data Lakehouse

GDAC's modern data lakehouse architecture provides a secure, flexible, and scalable data platform for the State of Georgia. State agencies send data from a wide variety of **data sources.** They ingest data into the **ingestion layers** using governed methods (S3 to S3 replication, Secure File Transfer Protocol (SFTP), API data pulls, external S3 synchronization etc.), and in varied data formats (encrypted, compressed, xml, delimited, Excel, Json, fixed length, text files, etc.). GDAC standardizes this data in the **storage layer** for processing as it arrive - weekly, monthly, quarterly, and annually etc. GDAC leverages automated data pipelines to manage these data ingestions and curations into the data lake.

GDAC's scalable **data processing layer** utilizes the power of modern cloud architecture to process and prepare unlimited data for research and analytics. The curated silver data lakehouses highly compressed data formats that provide exponential speeds for the data processing. This silver lake stores data for the data transformation and aggregation. The obfuscated data is loaded into the data warehouse and/or gold data lake for easier **consumption** into the data analytics tools and/or for generating insights through machine learning. In addition, GDAC has a triage zone to conduct exploratory data analysis and design for the new data sets.

GDAC's continuous development and continuous deployment framework enabled fast track automation. GDAC's data management methods are highly efficient and effective through the automated pipelines. Easy, repeatable data ingestion patterns and models are built using industry best practices as can be seen in the architecture diagram below.
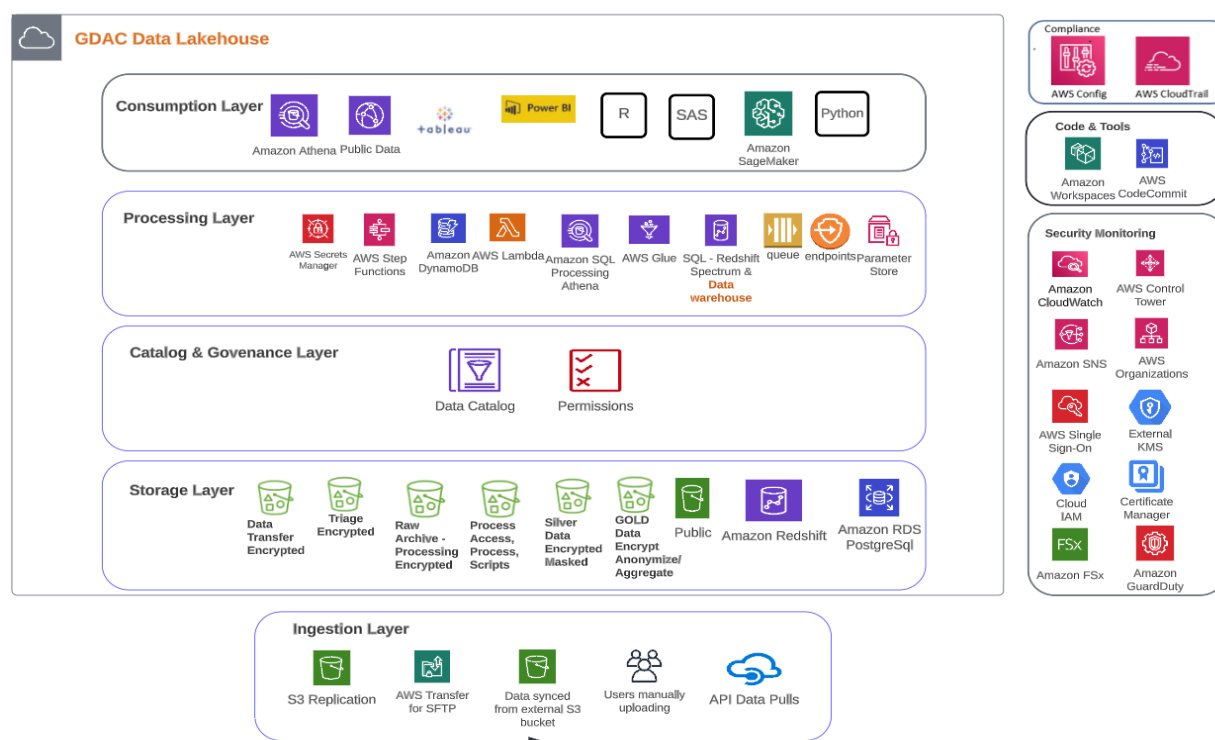
The GDAC team strengthened partnerships with agency data owners and added over 10 health analytics dashboards this year. GDAC is continually striving to improving research and large-scale analytics in Georgia.

Georgia All Payer Claims Database (APCD)

GDAC implemented infrastructure for the Georgia All Payer Claims Database (APCD) in FY 2023. GDAC implemented Observational Health Data Sciences and Informatics (OHDSI) to bring out the value of health data through analytics. GDAC partnered with the Office of Health Strategy and Coordination (OHSC) to build this private and secure analytics environment for the researchers at Georgia Technology Research Institute (GTRI). High-level architecture for this OHDSI Broadsea environment and its components within docker container technology can be seen below.
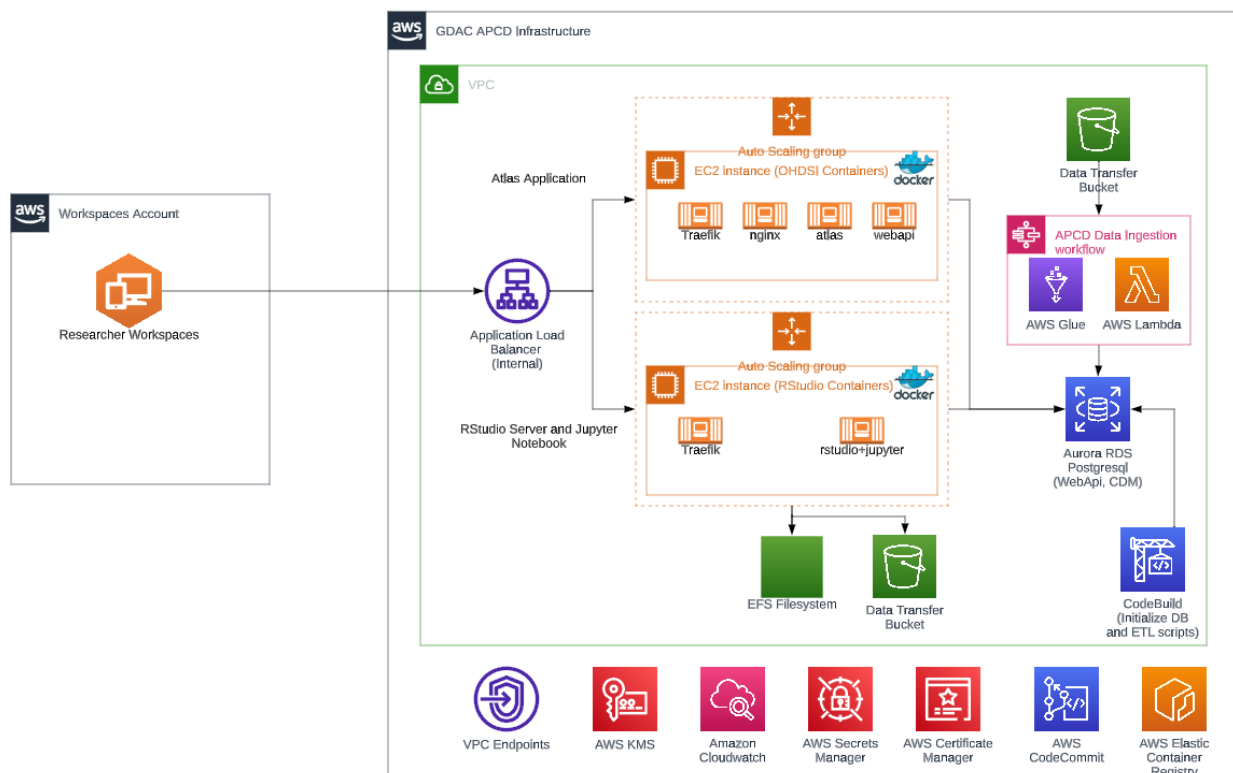
OHDSI is an open-science collaborative data platform utilized across the globe with a common data model called Observational Medical Outcomes Partnership (OMOP). APCD data is transformed into OMOP to be consumed for the health data analytics by Atlas Application. GTRI Researchers requested RStudio and/or Jupiter notebooks for additional analytics and research. GDAC researched and stood up this infrastructure with the help of a vendor. GDAC is diligently working to support researchers within the state through this platform.

Data Inventory

GDAC receives data from several agencies and departments and maintains over 200 aggregated data tables.

GDAC utilizes personally identifiable information (PII) to match individual data across data sets. The PII data are restricted to this data integration only, these data sets will not be part of the data warehouse.

See *Appendix A: Aggregated Data Tables*

Organization	Data Type
Board of Regents|University System of Georgia	Human Capital Management Data
Department of Administrative Services (DOAS)	State Agency Worker's Compensation Data, State Owned Motor Vehicle Data, Payroll Compensation, Risk Pools
Department of Community Health (DCH)	State Health Benefit Plan (SHBP), Hospital Financial Survey, Medicaid, Healthcare Workforce
Department of Community Affairs (DCA)	Section 8 participation by county data
Department of Corrections (GDC)	GDC Offender Roster
Department of Driver Services (DDS)	Driver's License Data
Department of Education (DOE)	Quality Basic Education (QBE) Funding, School Expenditure Data, FTE Data, K12 Student Data, CPI
State Charter Schools Commission (SCSC)	Charter Schools Performance Data
Department of Housing and Urban Development (HUD)	Qualified Census Tracts (QCT)
Department of Human Services (DFCS/DHS)	Foster Care Data, P-EBT, SNAP, TANF, GSU P-EBT, Longitudinal Data Project (LDP) Client and Case Data (SNAP)
Department of Public Health (DPH)	Mortality and Birth Rates; Opioid Data
Department of Revenue (DOR)	Sales and Use Tax Data, Tax Returns, Vehicle Registration, Tax Credits, NAICS historical data
Employees Retirement System (ERS)	Employee Tenure Data
Georgia Peace Officers' Standards and Training Council (GAPOST)	Emergency Medical Technicians (EMT) Data
Georgia Technology Authority (GTA)	Call Center Data
Governor's Office of Student Achievement (GOSA)	Criminal Justice Majors
House Budget and Research Office / Office of Planning and Budget	Budget and Appropriations (BATS) Data
Office of Planning and Budget | Grant Care	Covid Relief Funds Data (CRF), Nursing Home Obligations, FRL, TCSG/USG Pell
Office of Planning and Budget | Office of Health Strategy and Coordination	All Payers Claims
Secretary of State (SOS)	Voter Registration
State Accounting Office (SAO)	TeamWorks Financials & Human Capital Management (HCM) Data
State Property Commission (SPC)	Building, Land and Lease Inventory of Property (BLLIP) Data
Teachers Retirement System (TRS)	Employee Tenure Data
Travel Incorporated	Car, Air, and Hotel Travel
US Department of Transportation (USDOT)	VIN Information

FY 2022 Existing Analytics Inventory

The dashboards below were observed in the FY 2022 GDAC Annual Report.

For the complete inventory of GDAC dashboards visit gdac.georgia.gov

Population Projections

The Governor's Office of Planning and Budget is charged with the responsibility of preparing, maintaining, and furnishing official demographic data for the state (O.C.G.A. § 45-12-171). These projections are residential based, which provides a foundation for assessing future infrastructure and service needs, such as transportation planning, certificate of need, water planning, and other publicly funded projects. These projections include state and county level projections by age, sex, and race.

Vendor Expense

GDAC obtains State Agency Vendor Expense data from the State Accounting Office (SAO) enterprise financial system. These data include information about statewide contractors and expenses that exist between two or more agencies.

Payroll Compensation

The State of Georgia payroll data are collected from the State Accounting Office (SAO). These salary reports are updated monthly and present full-time employee salary rates by fiscal year, agency, employee detail, and pay type.

State Health Benefits Plan (SHBP) – Enrollment

The Georgia Department of Community Health (DCH) administers the State Health Benefits Plan (SHBP). The plan consists of three plans established by Georgia law: a plan for State employees (O.C.G.A. § 45-18-2), a plan for public school teachers (O.C.G.A. § 20-2-881), and a plan for public school employees other than teachers (O.C.G.A. § 20-2-911). Enrollment can be viewed by county, employee type, and plan group.

State Health Benefits Plan (SHBP) – Pharmacy

The State Health Benefits Plan (SHBP)- Pharmacy dashboard allows users to view prescription claims, counts, and costs for State of Georgia employees enrolled in the state health benefits plan.

State Health Benefits Plan (SHBP) – Facilities

The State Health Benefits Plan (SHBP)- Facilities dashboard allows users to view facility inpatient days, diagnosis, provider information, and costs for State of Georgia employees enrolled in the state health benefits plan. This dashboard can be used to analyze the leading causes of inpatient admissions and associated costs.

GDAC Dashboard Overview

FY 2023 Analytics Inventory Added

Qualified Census Tracts

The Department of Housing and Urban Development (HUD) is statutorily mandated to designate Qualified Census Tracts to help identify areas that qualify for the Low-Income Housing Tax Credit (LIHTC) or are considered Difficult Development Areas (DDA). This dashboard was developed to support the Grants Division of the Office of Planning and Budget to help in determining eligibility for the Improving Neighborhood Outcomes in Disproportionally Impacted Communities Grant. The grant funds investments in neighborhoods including parks, recreation facilities, sidewalks, and healthy food access in qualified census tracts in Georgia. Potential grantees can search by zip code and county to identify if their selected area qualifies as an approved census tract. As of the report date, 141 grantees were awarded for a total of $223.1 million.

American Rescue Plan Act (ARPA)

This dashboard provides obligation and expenditures for American Rescue Plan Act Funds (ARP; P.L. 117-2), the sixth COVID-19 relief bill enacted. Signed into law on March 11, 2021, the bill provided for state and local governments, education, housing, food assistance, and additional grant programs.

The largest obligations were to Water and Sewer Infrastructure $462.3 million, obligated to 115 grantees, followed by Broadband Infrastructure $405.1 million, obligated to 38 grantees.
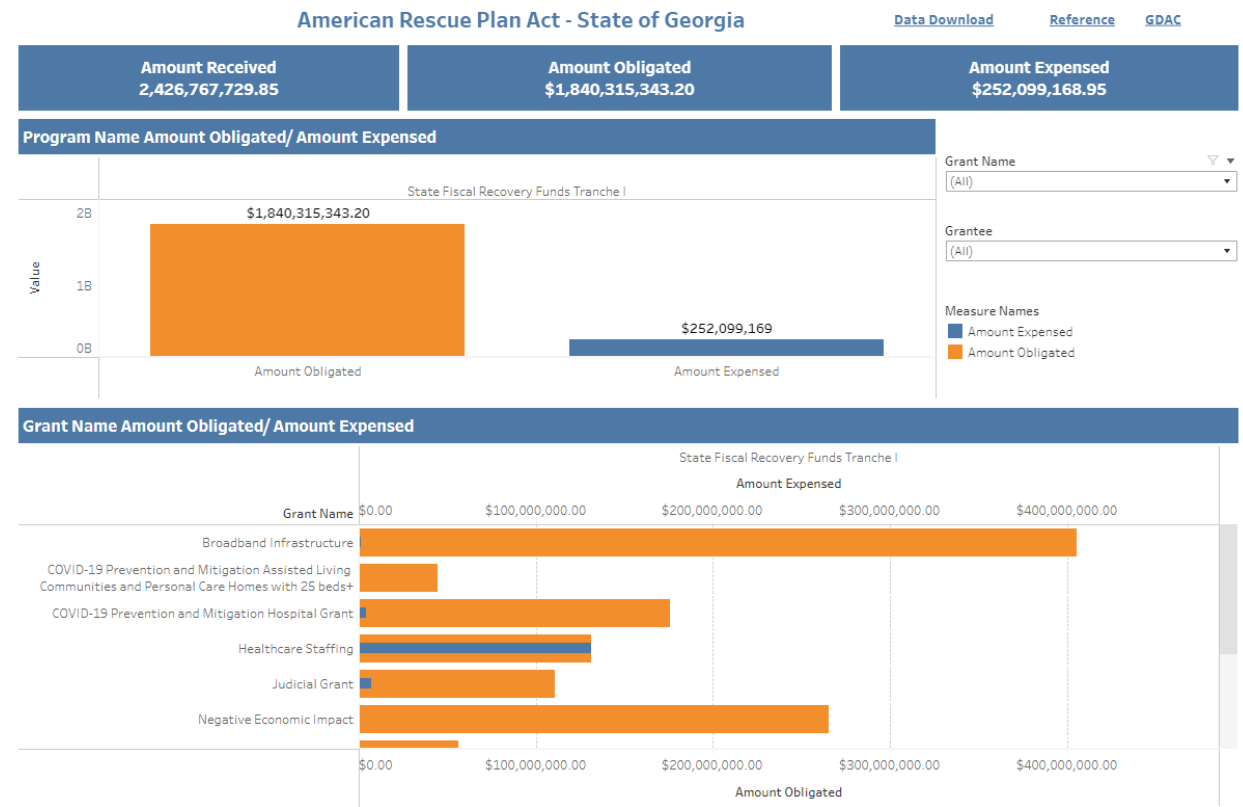
HealthCare Dashboards

The lack of access to healthcare remains a major issue across rural communities in the United States. Issues include a shortage of providers, lack of insurance, and long travel distances to hospitals due to hospital closures or none existing in the community. Of the 159 counties in Georgia, more than 50 do not have a hospital and 9 counties do not have physicians.

In FY 2023, GDAC collaborated with the Georgia Board of HealthCare Workforce (GBHCW) to create visualizations, using licensure renewal data to monitor the supply and distribution of Georgia's actively practicing health care workforce which includes physicians, physician assistants, nurses, dentists, and dental hygienists. Five dashboards were published to GDAC's website under the Health section.

Through partnership with the Department of Public Health (DPH), an emergency medical services (EMS) visualization is in progress for FY 2024.

GDAC used data obtained from the 2015-2020 annual hospital financial survey results administered by the Office of Health Planning (OHIP), a division of the Georgia Department of Community Health (DCH) to create the Hospital Financial Survey dashboard that explores patient care facility funding and expenditures. A map is provided to provide a clear view of counties that do not have a hospital and the closest possible option for care.

Hospital Financial Survey

As required under O.C.G.A. §§ 31-6-70 and 31-7-179.1 and other regulations, the Georgia Department of Community Health (DCH) administers a data survey to hospitals in Georgia. Reporting requirements were expanded in 2019 (HB 186 and HB 321) to increase hospital transparency. Direct links to hospital pricing transparency are included to help Georgians compare the cost of a hospital item or service.

These survey data are downloaded annually as available from the DCH website.
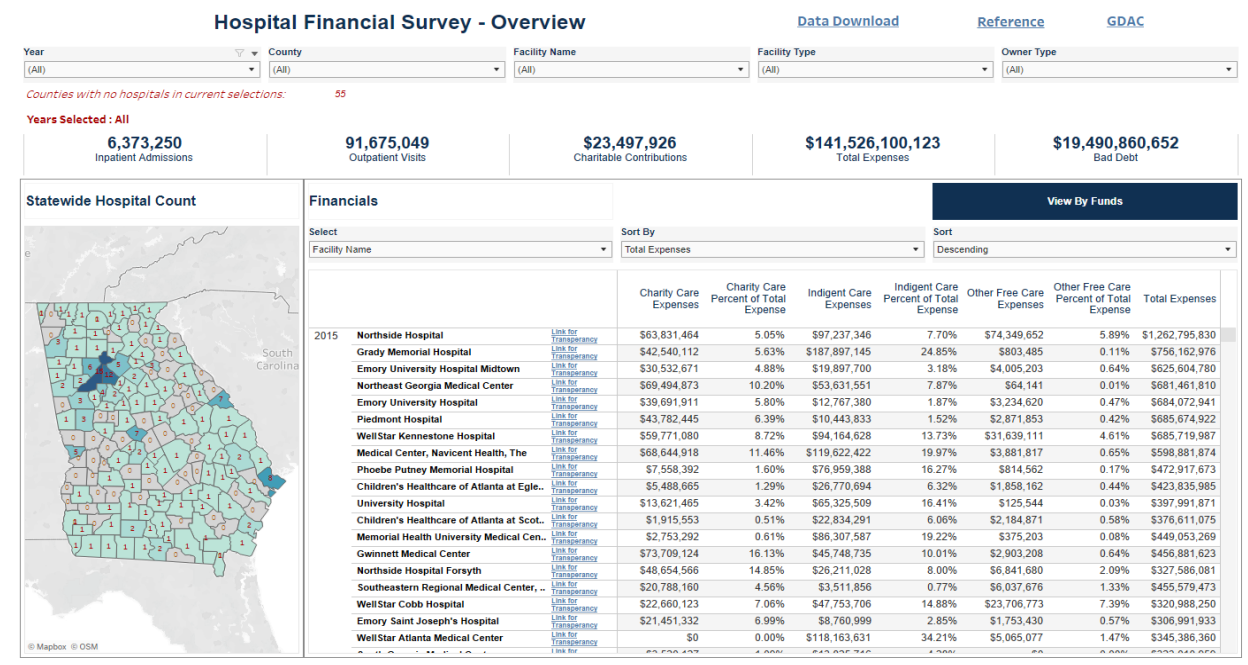
Physician Workforce

According to 2019-2020 licensure renewal data from the Georgia Board of Healthcare Workforce (GBHCW), primary care and core specialties, there are 82 counties without an OB/GYN, 90 counties without psychiatry physicians, 73 counties without emergency medicine physicians, and 80 counties without general surgery physicians.

Georgia's population* was 10,710,017 in 2020. Of the 24,914 actively practicing physicians, 54% practice in 5 counties (Fulton, Dekalb, Cobb, Richmond, Gwinnett) which accounts for 35% of the population while the remaining 46% practice in 145 counties, accounting for 65% of the population. Those 9 counties without physicians were removed from these counts. They account for 1% of the 2020 population (53,765 residents).

State of Georgia Physician Workforce

Data presented here are based on responses obtained from the 2019-2020 renewal survey

| | Data Download | Reference | GDAC |

24,914	10,711,908	44	36.21%	63.79%
Physician Count	Population	Average Hours Worked	Female Physicians	Male Physicians

County: (All) Metro Statistical Area: (All) Specialty: (All)

Workforce Distribution by County

View Workforce Demography

County	Primary Care Service Area	Physician Count	Physician Count Proportion	New Medicaid	Accept Medicare	New Medicare	Physician Rate Per 100K Residents
Total		24,914	100.00%	59.86%	66.60%	63.75%	
FULTON	22	5,438	21.83%	54.49%	63.31%	60.06%	498
DEKALB	23	3,518	14.12%	52.79%	53.04%	50.80%	458
COBB	21	1,764	7.08%	59.92%	69.67%	66.21%	230
RICHMOND	31	1,508	6.05%	56.96%	60.61%	57.96%	738
GWINNETT	25	1,349	5.41%	63.16%	69.31%	66.42%	141
CHATHAM	52	975	3.91%	60.92%	68.00%	65.85%	336
BIBB	46	766	3.07%	63.97%	71.28%	68.80%	499
MUSCOGEE	43	695	2.79%	58.56%	68.20%	65.18%	349
HALL	11	581	2.33%	66.27%	71.43%	69.36%	276
CLARKE	27	539	2.16%	62.15%	71.61%	68.65%	413
HENRY	38	377	1.51%	58.62%	72.94%	70.82%	154
DOUGHERTY	76	342	1.37%	67.25%	71.05%	68.71%	400
FLOYD	18	340	1.36%	70.59%	75.00%	73.24%	342
FAYETTE	40	331	1.33%	56.19%	75.23%	70.09%	283
CHEROKEE	15	294	1.18%	54.76%	70.75%	67.01%	110
CLAYTON	39	293	1.18%	69.62%	72.70%	70.65%	98
COWETA	41	273	1.10%	63.74%	73.99%	71.79%	178
GLYNN	93	269	1.08%	66.91%	74.35%	70.63%	313
FORSYTH	13	268	1.08%	60.07%	70.15%	67.91%	104
LOWNDES	82	266	1.07%	65.41%	70.68%	69.17%	222
COLUMBIA	31	252	1.01%	55.16%	66.27%	64.68%	156
CARROLL	19	241	0.97%	70.12%	77.18%	75.10%	194
HOUSTON	67	219	0.88%	65.30%	76.26%	72.15%	135
WHITFIELD	2	216	0.87%	67.13%	69.44%	67.13%	205

Primary Care/Core Specialty Physicians

	Family Medicine	Internal Medicine	Pediatrics	OB/GYN	General Surgery	Psychiatry	Emergency Medicine
Total Physicians	3,176	4,059	2,048	1,363	788	1,075	1,453
Counties Served	141	119	94	77	79	69	86
% of Counties Served	89%	75%	59%	48%	50%	43%	54%
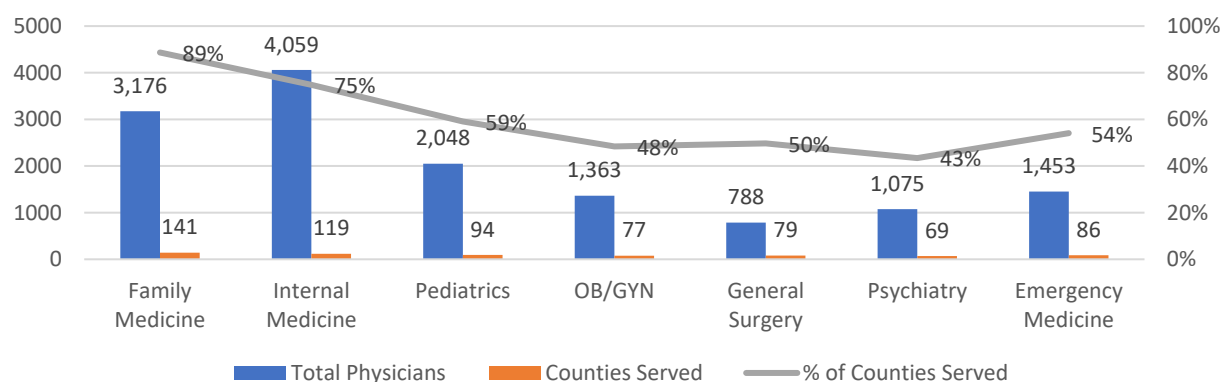
*Historical population data from GDAC website.

Physician Assistant Workforce

Renewal data for the 2017-2018 renewal survey for physician assistants indicates there were 3,810 physician assistants licensed in Georgia who worked an average of 43 hours per week. There were 33 counties without a physician assistant. Women were 63% of the physician assistant workforce population. Anesthesiology (23%), Family Medicine (10%), and Emergency Medicine (10%) were the top 3 known specialties.

State of Georgia Physician Assistant Workforce

Data presented here are based on responses obtained from the 2017-2018 renewal survey

| Data Download | Reference | GDAC |

3,810	10,711,908	43	63.04%	36.96%
Physician Assistant Count	Population	Average Hours Worked	Female Physician Assistants	Male Physician Assistants

County	Metro Statistical Area	Practicing Environment	Specialty
(All)	(All)	(All)	(All)

Workforce Distribution by County

View Workforce Demography

County	Primary Care Service Area	Physician Assistant Count	Physician Assistant Count Proportion	Inpatients Seen Per Week	Outpatients Seen Per Week	Total Patients Seen Per Week	Patients per Physician Assistant per Week	Physician Assistants Rate Per 100K Residents
STATE OF GEORGIA		3,810	100.00%	41,648	174,841	216,489	57	
STEPHENS	8	1	0.03%	0	300	300	300	4
MORGAN	27	1	0.03%	0	130	130	130	5
WAYNE	92	6	0.16%	10	750	760	127	20
RANDOLPH	70	1	0.03%	0	125	125	125	15
PIERCE	94	1	0.03%	2	120	122	122	5
OCONEE	27	19	0.50%	10	2,112	2,122	112	48
HOUSTON	67	25	0.66%	227	2,422	2,649	106	16
CALHOUN	76	4	0.10%	0	415	415	104	63
COLQUITT	78	6	0.16%	20	595	615	103	13
CHARLTON	95	1	0.03%	0	100	100	100	8
LAURENS	60	12	0.31%	229	950	1,179	98	25
FANNIN	4	3	0.08%	0	290	290	97	12
BURKE	50	3	0.08%	0	290	290	97	13
MURRAY	2	2	0.05%	20	170	190	95	5
CAMDEN	96	13	0.34%	15	1,190	1,205	93	24
PIKE	37	2	0.05%	0	178	178	89	11
MONROE	45	3	0.08%	40	225	265	88	11
TROUP	42	13	0.34%	105	1,030	1,135	87	19
LEE	76	4	0.10%	70	275	345	86	13
MCDUFFIE	32	4	0.10%	0	340	340	85	19
CARROLL	19	20	0.52%	150	1,527	1,677	84	17
NEWTON	36	12	0.31%	95	905	1,000	83	11

Physician Assistant Practice Environment Distribution

- College or University, 0.8%
- Community Health Center, 1.8%
- Physician Practice Management Org, 2.2%
- Solo Physician Practice, 15.0%
- Hospital-Clinic, 29.5%
- Other, 19.2%
- Hospital-University, 14.1%
- Multi-Specialty Physician Group, 17.0%
- Nursing Home or LTC Facility, 0.4%
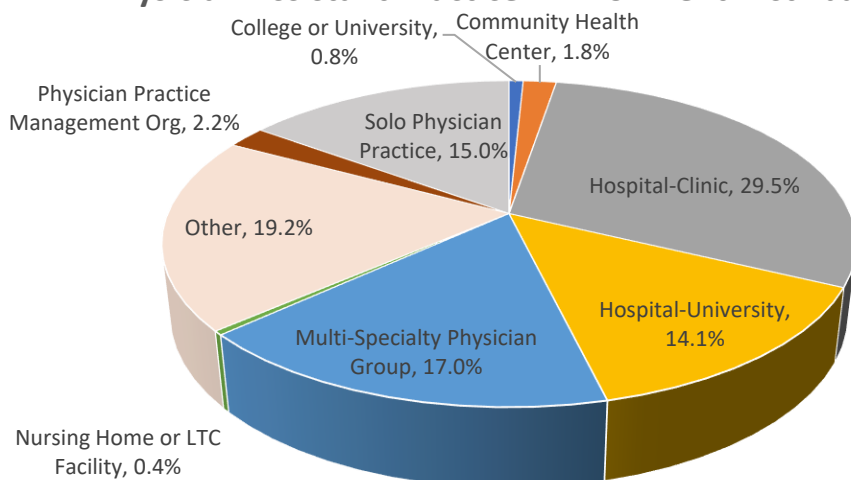
Nursing Workforce

Nursing survey renewal data for 2018-2019 shows that there was a total of 164,524 actively practicing nurses working in the state of Georgia. Of this, 14% are nurses from out of state with 17% contributing to Georgia's advanced practice workforce. The average age of a nurse was 48, with 89.9% female, 7.6% male, and 2.5% unknown. Registered nurses accounted for most of the nursing population at 118,057 licensed nurses. Although there were counties reported during the same period with no physicians, all counties had at minimum one licensed practical nurse and one registered nurse.

These data are based on the residential location provided by licensees during licensure.

State of Georgia Nursing Workforce

Data presented here are based on the residential location provided by licensees during licensure, and on roster of nurses actively licensed in 2018 and 2019

	Data Download	Reference	GDAC

County (All) **Metro Statistical Area** (All)

* Advanced Practice Nurse

Statewide Counts

141,117 — Total

10,711,908 — Population

1,329 — Nurse Rate per 100K Residents

48 — Average Age

89.93% — Female Nurses

7.65% — Male Nurses

Workforce County Distribution
225 — 2,541

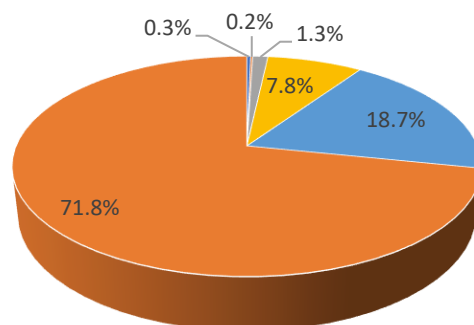| County	Primary Care Service Area	Total Nurses	Registered Nurses	Licensed Practical Nurses	*Practitioners	*Anesthetists	*Midwives	*Psychiatric Mental Health	Nurse Count Proportion	Nurse Rate per 100K Residents
STATE OF GEORGIA	Not Applicable	141,117	99,711	28,299	11,026	1,395	437	249	100.00%	1,329
OUT OF STATE	Not Applicable	23,407	18,346	2,433	1,860	664	76	28	16.59%	
FULTON	22	11,265	8,610	1,101	1,270	180	64	40	7.98%	1,059
GWINNETT	25	10,993	8,586	1,308	962	71	40	26	7.79%	1,174
COBB	21	9,948	7,590	1,240	944	102	49	23	7.05%	1,309
DEKALB	23	8,801	6,443	1,244	920	98	44	52	6.24%	1,159
CHATHAM	52	4,452	3,263	764	369	46	6	4	3.15%	1,538
COLUMBIA	31	3,953	3,117	482	238	110	1	5	2.80%	2,522
HENRY	38	3,788	2,707	725	313	24	15	4	2.68%	1,615
CHEROKEE	15	3,766	2,981	451	275	38	14	7	2.67%	1,455
BIBB	46	2,872	1,994	584	245	43	4	2	2.04%	1,875
MUSCOGEE	43	2,869	1,980	596	246	41	3	3	2.03%	1,466
RICHMOND	31	2,825	1,908	791	98	21	2	5	2.00%	1,395
HOUSTON	67	2,496	1,729	525	215	19	7	1	1.77%	1,581
HALL	11	2,343	1,707	403	205	16	8	4	1.66%	1,146
FORSYTH	13	2,316	1,906	214	167	15	10	4	1.64%	948
COWETA	41	2,117	1,620	302	152	36	3	4	1.50%	1,426
FAYETTE	40	2,047	1,613	183	205	23	14	9	1.45%	1,789
WALTON	26	1,888	1,448	294	135	8	1	2	1.34%	1,996
DOUGLAS	20	1,883	1,304	429	138	8	3	1	1.33%	1,287
LOWNDES	82	1,845	1,274	391	158	15	6	1	1.31%	1,571
CLAYTON	39	1,755	1,069	607	72	2	2	3	1.24%	601
FLOYD	18	1,675	1,144	411	100	17	1	2	1.19%	1,701
CARROLL	19	1,601	1,097	402	71	24	4	3	1.13%	1,334
PAULDING	21	1,568	1,179	284	94	2	7	2	1.11%	930
BARTOW	17	1,357	971	269	98	13	6	0	0.96%	1,260
JACKSON	27	1,300	999	162	119	14	5	1	0.92%	1,781
NEWTON	36	1,289	869	338	72	3	7	0	0.91%	1,154
ROCKDALE	24	1,287	905	264	100	10	4	4	0.91%	1,416
CLARKE	27	1,286	977	156	118	22	12	1	0.91%	1,002

Nurse Distribution by Specialty
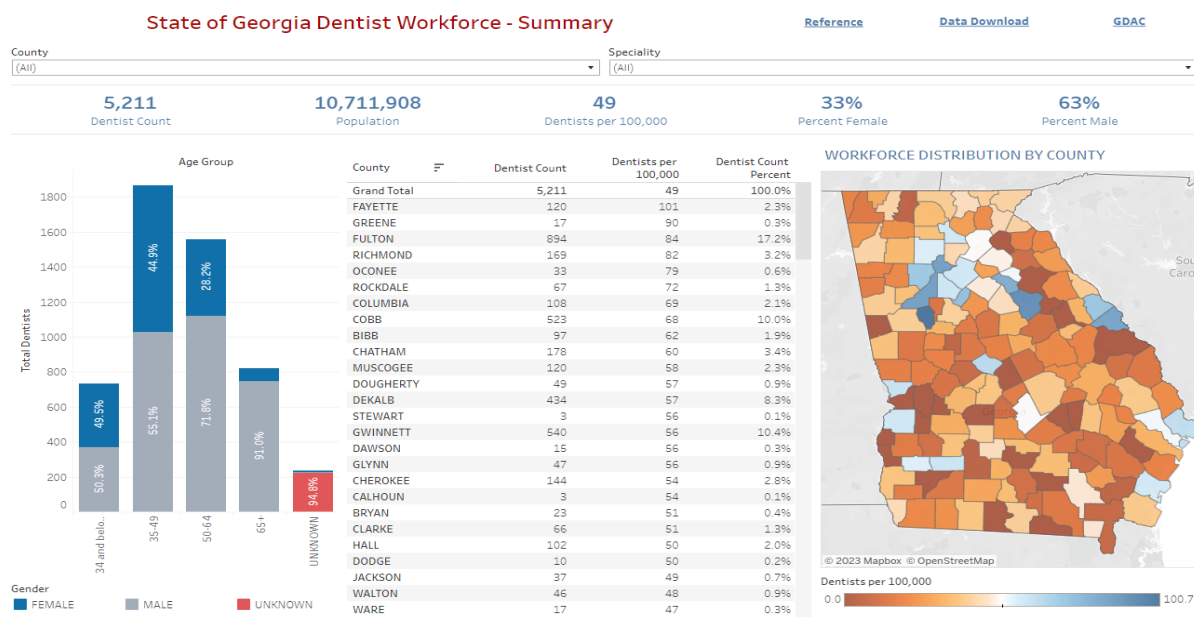
0.3% 0.2% 1.3% 7.8% 18.7% 71.8%

- midwives*
- psychiatricmental health*
- nurse anesthetists*
- nurse practitioners*
- licensed practical nurses
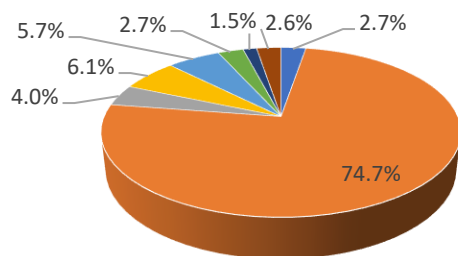- registered nurses

*advanced practice nurse

Dentist Workforce

Dentist licensure renewal data for 2020-2021 show that there were 5,211 actively practicing dentists in the State of Georgia covering 137 counties. Of this workforce 45.9% practice in Fulton, Gwinnett, Dekalb, and Cobb County. Most of the dentist licensees were male at 63%, followed by female at 33% percent. Both genders age was mostly in the range of 35-49. The most common specialty was General Dentistry (3,893 dentists) and the least common was oral and maxillofacial radiology (1 dentist).

These data are collected from the Georgia Board of Dentistry (GBD) and are updated as received.

State of Georgia Dentist Workforce - Summary
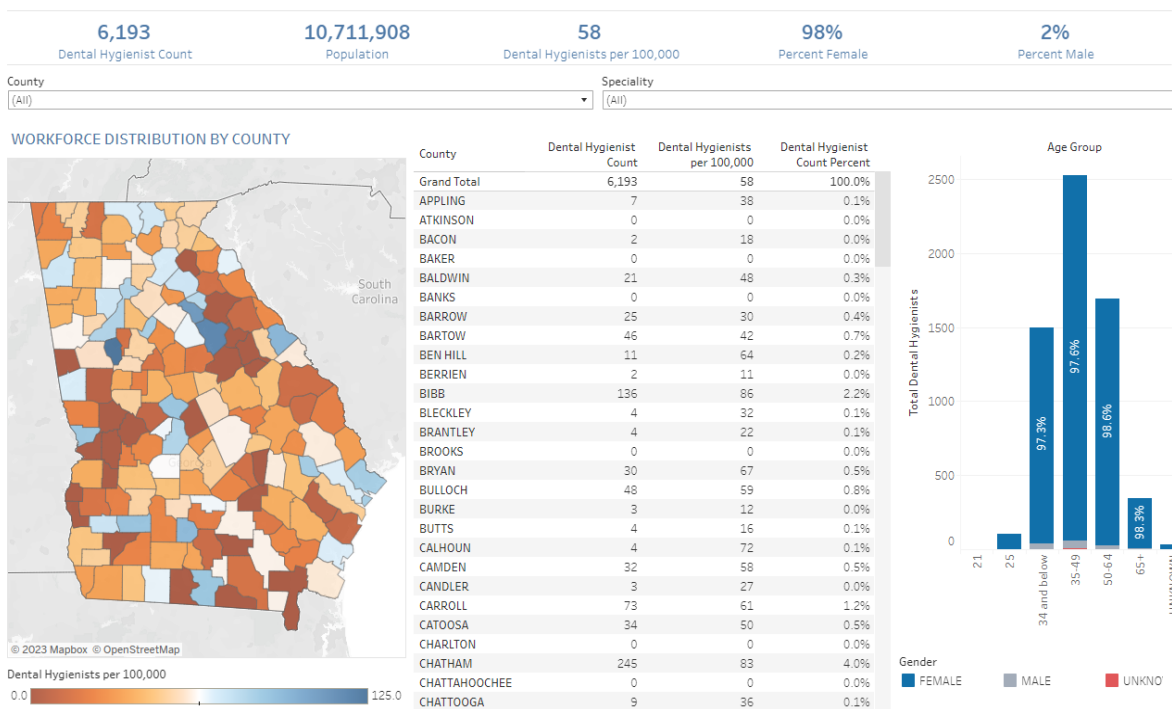

Dentist Distribution by Specialty

- Endodontics
- General Dentistry
- Oral and Maxilofacial Surgery
- Orthodontics & Dentofacial Orthopedics
- Pediatric Dentistry
- Periodontics
- Prosthodontics
- Other

Dental Hygienist Workforce

Licensure renewal data for 2020-2021 show that there were 6,193 actively practicing dental hygienists in the State of Georgia covering 137 counties. Of this, 98% were female and 2% male with the majority for both genders in the age range of 35-49. The most common practice area was general dentistry (5,326 hygienists) followed by pediatric dentistry (502 hygienists).

These data are collected from the Georgia Board of Dentistry (GBD) and are updated as received.

Dental Hygienist Distribution by Specialty

- Dental Public Health - General Dentistry - Pediatric Dentistry - Periodontics - Other
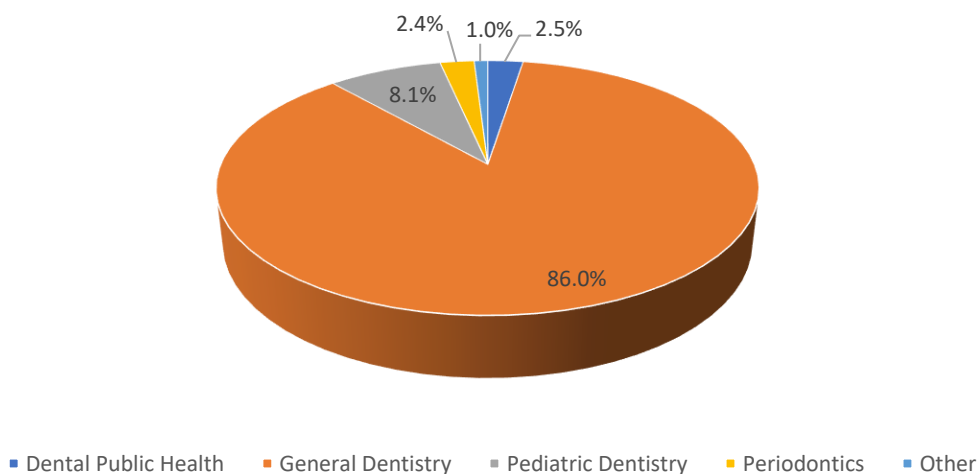
Appendix A: Aggregated Data Sources

Organization	Table Name
Georgia General Assembly/Office of Planning of Budget	bats_programdata
Georgia General Assembly/Office of Planning of Budget	bats_programfunding
Georgia General Assembly/Office of Planning of Budget	bats_agency
Georgia General Assembly/Office of Planning of Budget	bats_budgetchange
Georgia General Assembly/Office of Planning of Budget	bats_budgetchangedata
Georgia General Assembly/Office of Planning of Budget	bats_budgetchangefunding
Georgia General Assembly/Office of Planning of Budget	bats_commonchange
Georgia General Assembly/Office of Planning of Budget	bats_fundsource
Georgia General Assembly/Office of Planning of Budget	bats_lookup
Georgia General Assembly/Office of Planning of Budget	appropriationsubchairs
University System of Georgia Board of Regents (USG BOR)	bor_employee
University System of Georgia Board of Regents (USG BOR)	bor_ position
University System of Georgia Board of Regents (USG BOR)	bor_class_indicator
University System of Georgia Board of Regents (USG BOR)	bor_employee_status
University System of Georgia Board of Regents (USG BOR)	bor_flsa
University System of Georgia Board of Regents (USG BOR)	bor_full_partime
University System of Georgia Board of Regents (USG BOR)	bor_institution_addresses
University System of Georgia Board of Regents (USG BOR)	bor_pay_frequency
University System of Georgia Board of Regents (USG BOR)	bor_jobcode_jobtitle
University System of Georgia Board of Regents (USG BOR)	bor_regular_temporary
University System of Georgia Board of Regents (USG BOR)	bor_workercomp_agency
Department of Administrative Service (DOAS)	dlossrun
Department of Administrative Service (DOAS)	dpaymenttransactions
Department of Administrative Service (DOAS)	dmedicalbilldetail
Department of Administrative Service (DOAS)	worker_comp_agency
Department of Administrative Service (DOAS)	motor_vehicle
Department of Community Affairs (DCA)	low_medium_income
Department of Community Health (DCH)	ga_dch_dataprobe_lookups
Department of Community Health (DCH)	ga_dch_dataprobe_lookups_2
Department of Community Health (DCH)	pharmacy from sfy 2016 to current
Department of Community Health (DCH)	prof from sfy 2016 to current
Department of Community Health (DCH)	facility header from sfy 2016 to current
Department of Community Health (DCH)	facility details from sfy 2016 to current
Department of Community Health (DCH)	eligibility from sfy 2016 to current
Department of Driver Services (DDS)	active_registrations_citizens
Department of Human Services (DHS)	fs_ma_tf
Georgia Department of Education (GaDOE)	earnings
Georgia Department of Education (GaDOE)	instruction
Georgia Department of Education (GaDOE)	sch_dist_addresses
Georgia Department of Education (GaDOE)	qbe_program
Georgia Department of Education (GaDOE)	qbe_school_district
Georgia Department of Education (GaDOE)	qbe_school_term
Georgia Department of Education (GaDOE)	qbe_earnings
Department of Revenue (DOR)	tax_report_file

Appendix A: Aggregated Data Sources

Organization	Table Name
Teachers Retirement System (TRS)	trs_tenure
Employee Retirement System (ERS)	ers_tenure
State Property Commission (SPC)	building
State Property Commission (SPC)	buildingfacadetype
State Property Commission (SPC)	buildingimprovementtype
State Property Commission (SPC)	buildingmechanicalsystemtype
State Property Commission (SPC)	buildingrooftype
State Property Commission (SPC)	buildingsecondaryusetype
State Property Commission (SPC)	buildingstructuretype
State Properties Commission (SPC)	entity
State Properties Commission (SPC)	landlord
State Properties Commission (SPC)	leasedbuilding
State Properties Commission (SPC)	leasedbuildingexpense
State Properties Commission (SPC)	otherasset
State Properties Commission (SPC)	property
State Properties Commission (SPC)	propertydeed
Office of Planning and Budget (OPB)	pbcs_account
Office of Planning and Budget (OPB)	pbcs_agency_prog_subprog_fstypestate
Office of Planning and Budget (OPB)	pbcs_agency
Office of Planning and Budget (OPB)	pbcs_agency_prog_subprog_objclass
Office of Planning and Budget (OPB)	pbcs_agency_prog_subprog_positionctn
Office of Planning and Budget (OPB)	pbcs_agency_prog_sub_fstype_fedother
Office of Planning and Budget (OPB)	pbcs_program
Office of Planning and Budget (OPB)	pbcs_subprogram
Office of Planning and Budget (OPB)	nursing home obligation
Office of Planning and Budget (OPB)	nursing home expense
Office of Planning and Budget (OPB)	grant management (arpa)
Office of Planning and Budget (OPB)	airport_codes
Travel Inc.	car_itinerary
Travel Inc.	hotel_itinerary
Travel Inc.	cartype
Georgia Technology Authority (GTA)	service desk
State Accounting Office (SAO)	concurtravelexpenses
State Accounting Office (SAO)	ps_divers_ethnic
State Accounting Office (SAO)	ps_personal_data
State Accounting Office (SAO)	ps_action_tbl
State Accounting Office (SAO)	ps_actn_reason_tbl
State Accounting Office (SAO)	ps_addresses
State Accounting Office (SAO)	ps_bus_unit_tbl_fs
State Accounting Office (SAO)	ps_chartfield1_tbl
State Accounting Office (SAO)	ps_class_cf_tbl
State Accounting Office (SAO)	ps_company_tbl
State Accounting Office (SAO)	ps_dept_tbl
State Accounting Office (SAO)	ps_dx_com_fund_src
State Accounting Office (SAO)	ps_dx_emp_cls_mail
State Accounting Office (SAO)	ps_dx_empl_nosec_v
State Accounting Office (SAO)	ps_dx_employee_vw2

Organization	Table Name
State Accounting Office (SAO)	ps_dx_emply_nt_vw2
State Accounting Office (SAO)	ps_dx_emplys_nt_vw
State Accounting Office (SAO)	ps_dx_enc_tbl
State Accounting Office (SAO)	ps_dx_fast_scrty_3
State Accounting Office (SAO)	ps_dx_flsa_dollar
State Accounting Office (SAO)	ps_dx_flsa_jobcode
State Accounting Office (SAO)	ps_dx_gls4092x_tbl
State Accounting Office (SAO)	ps_dx_job_pers_vw2
State Accounting Office (SAO)	ps_dx_ld_history
State Accounting Office (SAO)	ps_dx_posdata5_tbl
State Accounting Office (SAO)	ps_dx_prsn_dta_vw2
State Accounting Office (SAO)	ps_dx_reprts_to_vw
State Accounting Office (SAO)	ps_dx_vacant_posn
State Accounting Office (SAO)	ps_earnings_tbl
State Accounting Office (SAO)	ps_employees
State Accounting Office (SAO)	ps_eoaw_stepinst
State Accounting Office (SAO)	ps_eoaw_userinst
State Accounting Office (SAO)	ps_ep_appr
State Accounting Office (SAO)	ps_ep_appr_xref
State Accounting Office (SAO)	ps_ethnic_grp_tbl
State Accounting Office (SAO)	ps_fund_tbl
State Accounting Office (SAO)	ps_gl_account_tbl
State Accounting Office (SAO)	ps_itm_cat_tbl
State Accounting Office (SAO)	ps_job
State Accounting Office (SAO)	ps_job_family_tbl
State Accounting Office (SAO)	ps_jobcode_tbl
State Accounting Office (SAO)	ps_jrnl_header
State Accounting Office (SAO)	ps_jrnl_ln
State Accounting Office (SAO)	ps_kk_activity_log
State Accounting Office (SAO)	ps_kk_budget_hdr
State Accounting Office (SAO)	ps_kk_budget_ln
State Accounting Office (SAO)	ps_kk_cf_value
State Accounting Office (SAO)	ps_kk_liquidation
State Accounting Office (SAO)	ps_kk_source_hdr
State Accounting Office (SAO)	ps_kk_source_ln
State Accounting Office (SAO)	ps_ledger
State Accounting Office (SAO)	ps_ledger_kk
State Accounting Office (SAO)	ps_location_tbl
State Accounting Office (SAO)	ps_names
State Accounting Office (SAO)	ps_pay_trms_tbl
State Accounting Office (SAO)	ps_per_org_asgn
State Accounting Office (SAO)	ps_po_hdr
State Accounting Office (SAO)	ps_po_line
State Accounting Office (SAO)	ps_po_line_distrib
State Accounting Office (SAO)	ps_position_data
State Accounting Office (SAO)	ps_posn_history2
State Accounting Office (SAO)	ps_posn_incumbent
State Accounting Office (SAO)	ps_program_tbl
State Accounting Office (SAO)	ps_project_fs

Appendix A: Aggregated Data Sources

Organization	Table Name
State Accounting Office (SAO)	ps_sal_grade_tbl
State Accounting Office (SAO)	ps_sal_plan_tbl
State Accounting Office (SAO)	ps_sal_step_tbl
State Accounting Office (SAO)	ps_set_cntrl_rec
State Accounting Office (SAO)	ps_sjt_class_all
State Accounting Office (SAO)	ps_sjt_dept
State Accounting Office (SAO)	ps_sjt_opr_cls
State Accounting Office (SAO)	ps_tl_empl_data
State Accounting Office (SAO)	ps_tl_trc_tbl
State Accounting Office (SAO)	ps_tl_rptd_time
State Accounting Office (SAO)	ps_vchr_acctg_line
State Accounting Office (SAO)	ps_vendor
State Accounting Office (SAO)	ps_vendor_addr
State Accounting Office (SAO)	ps_vendor_addr_phn
State Accounting Office (SAO)	ps_vndr_hdr_ind_cl
State Accounting Office (SAO)	ps_voucher
State Accounting Office (SAO)	psoprdefn
State Accounting Office (SAO)	pstreenode
State Accounting Office (SAO)	psxlatitem
State Accounting Office (SAO)	xlattable_vw
State Accounting Office (SAO)	ledgergroup_lkp
State Accounting Office (SAO)	ledger_lkp
State Accounting Office (SAO)	transactn_source_lkp
State Accounting Office (SAO)	vendor_classes
State Accounting Office (SAO)	5_digit_nigp_codes
State Accounting Office (SAO)	use_procard
State Accounting Office (SAO)	po_line_status
State Accounting Office (SAO)	po_status
State Accounting Office (SAO)	po_type
State Accounting Office (SAO)	jccp_job_code_crosswalk
State Accounting Office (SAO)	nigp_codes
State Accounting Office (SAO)	distrib_ln_status
State Accounting Office (SAO)	ps_dx_paychk_opb_v
State Accounting Office (SAO)	flsa_lookup
State Accounting Office (SAO)	doc_facility_lookup
State Accounting Office (SAO)	agency_lkp
State Accounting Office (SAO)	ps_dx_paychk_opb_v
State Accounting Office (SAO)	ps_pay_earnings
State Accounting Office (SAO)	ps_paygroup_tbl
State Accounting Office (SAO)	ps_pay_oth_earns
State Accounting Office (SAO)	ps_dx_pay_tax_er_v
State Accounting Office (SAO)	ps_py_tax_class
State Accounting Office (SAO)	ps_dx_pay_ded_er_v
State Accounting Office (SAO)	ps_pay_check_earns
State Accounting Office (SAO)	ps_pay_calendar
State Accounting Office (SAO)	ps_voucher_line
Department of Family and Children Services (DFCS/DHS)	hotel_stays
Department of Family and Children Services (DFCS/DHS)	foster care services
Department of Family and Children Services (DFCS/DHS)	foster care population

Appendix A: Aggregated Data Sources

Organization	Table Name
Department of Family and Children Services (DFCS/DHS)	placementtypes
Department of Family and Children Services (DFCS/DHS)	placementclosereasons
Department of Family and Children Services (DFCS/DHS)	datateamupload1
Department of Family and Children Services (DFCS/DHS)	data_lake_listofservices
Department of Family and Children Services (DFCS/DHS)	datalake_fostercare_costs_a
Department of Family and Children Services (DFCS/DHS)	diagnosed_characteristics
Department of Family and Children Services (DFCS/DHS)	rmvl_reasons
Department of Family and Children Services (DFCS/DHS)	placement_list
Department of Family and Children Services (DFCS/DHS)	services
Department of Revenue (DOR)	sas_ledger_transactions
Department of Revenue (DOR)	sas_addresses
Department of Revenue (DOR)	sas_certificate
Department of Revenue (DOR)	sas_cor_return_info
Department of Revenue (DOR)	sas_fit_return_info
Department of Revenue (DOR)	sas_fund
Department of Revenue (DOR)	sas_iit_return_info
Department of Revenue (DOR)	sas_cmp_return_info
Department of Revenue (DOR)	sas_wth_return_info
Department of Revenue (DOR)	sas_naics
Department of Revenue (DOR)	sas_artificial_claims
Department of Revenue (DOR)	sas_par_return_info
Department of Revenue (DOR)	dor_tax_credit_look_up
Georgia Department of Education (GaDOE)	weightedformula_2020_2023i
Georgia Department of Education (GaDOE)	fte enrollment by grade fiscal year2022-3 data
Georgia Department of Education (GaDOE)	fte enrollment by grade fiscal year2022-1 data
Department of Correction (GDC)	opb - gdc offender roster
Secretary of State (SOS)	georgia_daily_voterbase_012022
Population Projections	ctys_regions
Population Projections	regional commissions
Population Projections	projections_data2060
Technical College System of Georgia	tcsg_pell_zip
Department of Housing and Urban Development (HUD)	tract_zip
Department of Housing and Urban Development (HUD)	qualified_census_tracts
State Charter Schools Commission (SCSC)	scsc_opb_data
State Charter Schools Commission (SCSC)	scsc_summary_data