

Georgia Data Analytics Center (GDAC)

FY 2024 Annual Report

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Executive Summary

The **Georgia Data Analytics Center (GDAC)** successfully established itself as an award-winning modern data center. GDAC has received recognition nationally and locally for its innovation, standards of excellence, and was identified as a state and local government champion. Through the commitment of its dedicated team; executive support from the Office of Planning and Budget leaders; support from the Georgia General Assembly and policy makers; and most importantly the partnership from state agencies, GDAC continues to improve its data strategy and its analytics processes. Georgia agencies and other entities have sought out GDAC to understand GDAC's best practices for its cloud infrastructure and submitted use cases for the analytics development.

GDAC was established by House Bill 197 (2019 Session) to improve "public health and well-being of Georgia residents" through data, under the oversight of the Office of Planning and Budget. For decades, connecting the "data dots" has been a challenge for the state agencies due to limited resources, difficulty in accessing the data dictionaries, and potentially cumbersome administrative processes in executing interagency data sharing agreements.

Executive Order 09.01.2023

On September 1, 2023, Governor Kemp signed an **Executive Order** directing the Georgia Data Analytics Center (GDAC) to facilitate the data exchange process between the state executive agencies and departments. This order mandates GDAC establish a data-sharing agreement template and a data-sharing request template and standardize the data sharing process within the state. In collaboration with state executive agency partners and their legal counsel, GDAC has developed and published standardized data sharing agreements and data sharing request templates for agency use, in accordance with the Executive Order.

GDAC will assist the state agencies with establishing data-sharing agreements (DSAs) and identifying the data sources upon request. Additionally, GDAC may serve as an intermediary to resolve disputes that may arise between agencies regarding data sharing.

The Executive Order requires agencies to submit copies of all data-sharing agreements executed to GDAC annually. Accordingly, GDAC has initiated an annual FY 2024 DSA survey to gather the data-sharing agreements established within the state entities. This will help the Center build a comprehensive library of the data-sharing agreements (DSAs), which will prove to be a valuable resource for future data requests within the state.

Georgia All Payer Claims Database (APCD)

GDAC efficiently managed and enhanced the research environment for the Georgia All Payer Claims Database (APCD) in FY 2024. This private and secure analytics environment is hosted by GDAC and is accessible to the researchers at the Georgia Technology Research Institute (GTRI), who released [several health data use cases](#) in FY 2024.

In partnership with the Office of Health Strategy and Coordination (OHSC), GDAC implemented Observational Health Data Sciences and Informatics ([OHDSI](#)) to bring out the value of these health data through analytics. Quarterly data ingested in January 2024 had 4.5 billion records, and in April 2024, GDAC ingested 5.6 billion records from the APCD data collections vendor.

GDAC's modern data pipelines ingested vast amounts of data within days which is a testimonial to the efficiency with which GDAC manages its data operations within the state. In FY 2024, GDAC installed large language models for GTRI, implemented firewalls and added firewall rules to allow restricted internet access to enable Windows updates and spatial data map access to the researchers via their virtual machines. The Center continually monitored the research and analytics environment throughout the year and upgraded the analytics environments and scaled databases up for the use cases to be released.

Dashboard Highlight

The health dashboards section of the GDAC website has proven to be of increased interest and has grown its data profile. In FY 2024, GDAC partnered with the Office of Emergency Medical Services (EMS) and Trauma to display EMS workforce distribution dashboards by medic's demographics, their EMS license levels, and the EMS service providers. Within two weeks of publishing this multi-page dashboard, it surpassed 1,000 views. The service provider directory has direct links to assist the public in finding and continuing education and careers, with options to search by county, city, and state. Per the State EMS Training Coordinator, *"This has already made a tremendous impact on the EMS education."* As a result, GDAC also received an additional use case request to create an EMS Education Program dashboard, which subsequently has also become a heavily utilized dashboard for the state. Both dashboards have been positively received nationally and within the state. Per the Director for the Office of the EMS and Trauma, other states were seeking a similar data center for their state.

House Bill 1013

In FY 2024, GDAC partnered with the Georgia Department of Human Services (DHS) to implement a minimal viable product for building the statewide childcare and protection data system. DHS is planning to build this statewide data system as mandated by House Bill 1013. GDAC collaborated with DHS while the data sharing agreements were being established. GDAC communicated and gathered data inventories from several state entities, including the Department of Family and Children Services (DFCS), Department of Early Care and Learning (DECAL), and the Department of Community Health (DCH). The center also evaluated several data products to support this statewide longitudinal data system (SLDS). As part of the minimal viable product, GDAC built a statewide longitudinal data system with the data from DHS (Department of Human Services) related to SNAP (Supplemental Nutrition Assistance Program) and TANF (Temporary Assistance for Needy Families) that can provide the Department with insights into program outcomes, trends, and impacts.

GDAC continues to provide data transparency to decisionmakers to aid in policy development with the goal of improving outcomes and operational efficiencies in Georgia by providing publicly accessible dashboards and data through its website. These dashboards are maintained regularly, with the data refreshed at set intervals to ensure the most accurate and up-to-date information is available to stakeholders.



GDAC

Georgia Data Analytics Center

QUICK FACTS

FY 2024 Budget: \$1.9m

Georgia Data Analytics Center

House bill 197
established during
2019 legislative
session. O.C.G.A.
45-12-150

Growing Partners
30+ State Entities

Small Team
5 Employees

Growing Lake
200+ - Datasets
2.5TB - Data Size
40K - Files
Ingested

Modern Infrastructure

Ingested 5.6 billion
records in April for
Georgia All Payer
Claims Database
(APCD)

Developed a minimal
viable product in
support of HB 1013

NIST800-53 Compliance
HIPAA Compliance

CrowdStrike endpoint
security enabled
Tenable vulnerability
scanning
Tableau servers
upgraded

Data/Infra pipeline
Enhancements;
Data APIs
Automated Data
profiling;
Data Observability

Data Analytics

27 public facing
dashboards

19 OBP Internal
dashboards

6 secured
dashboards for
key stakeholders
and state
legislators

GDAC Data Governance

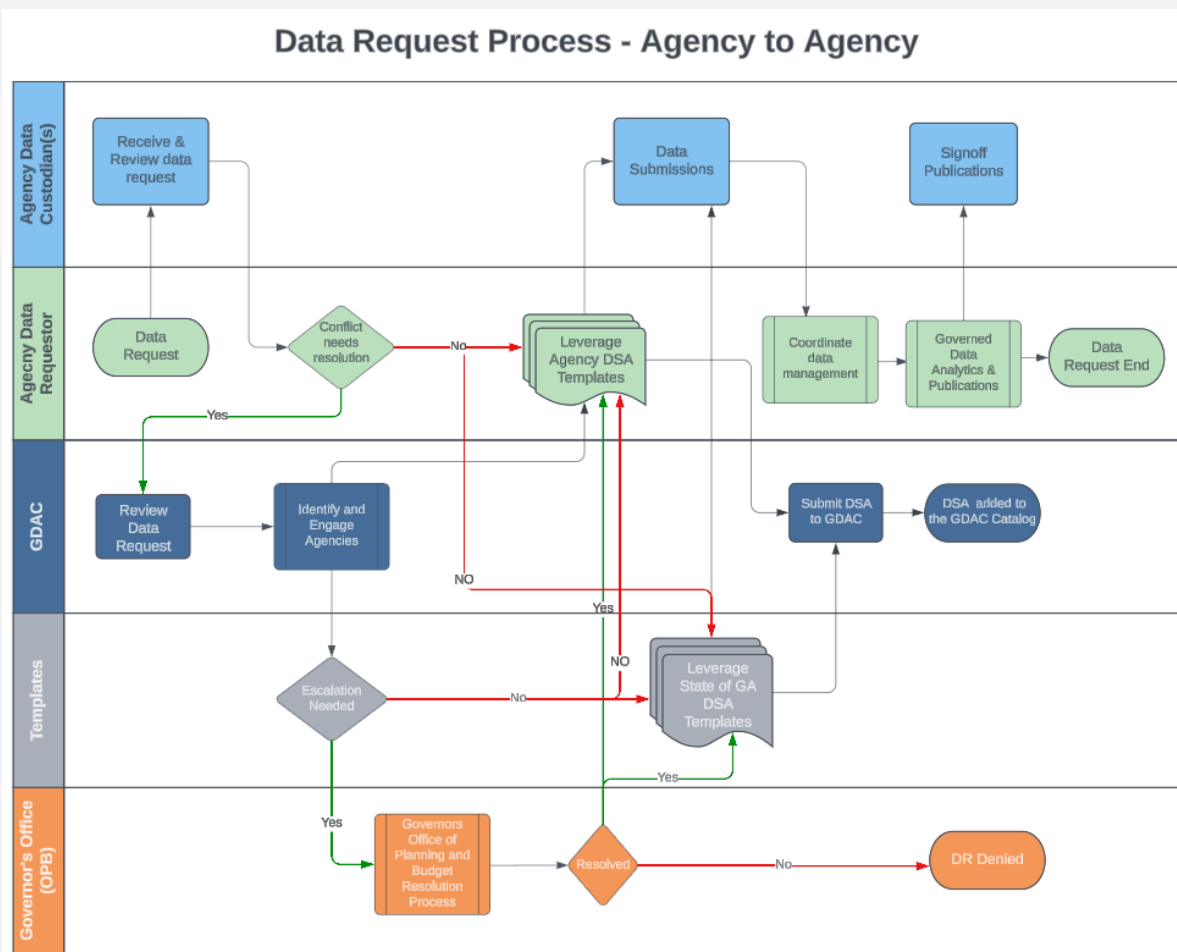
GDAC has established an effective data governance structure and data management strategy for the Center. In FY 2024, GDAC continued strengthening its partnerships with other state entities and managed the GDAC Data Governance Committee nominations. GDAC introduced a new role of the “Legal Stakeholder” to the GDAC Data Governance Committee to support the data sharing agreement template development as required by the Governor’s Executive Order. State entities actively participated by nominating their legal counsel to the Governance Committee.

These agency legal stakeholders actively participated in the development, review, and publication of the standard data sharing agreement template for the State of Georgia. GDAC conducted multiple question and answer sessions with state executive agencies to gather feedback and address any questions regarding the templates or the Executive Order. Agencies were also requested to begin submitting their data inventories to build the state data library at the Center. This data inventory is a work in progress, and GDAC will continue to gather the data inventories on an ongoing basis.

GDAC established “sample data request flows” to demonstrate the possible approach to the data sharing process within the state.

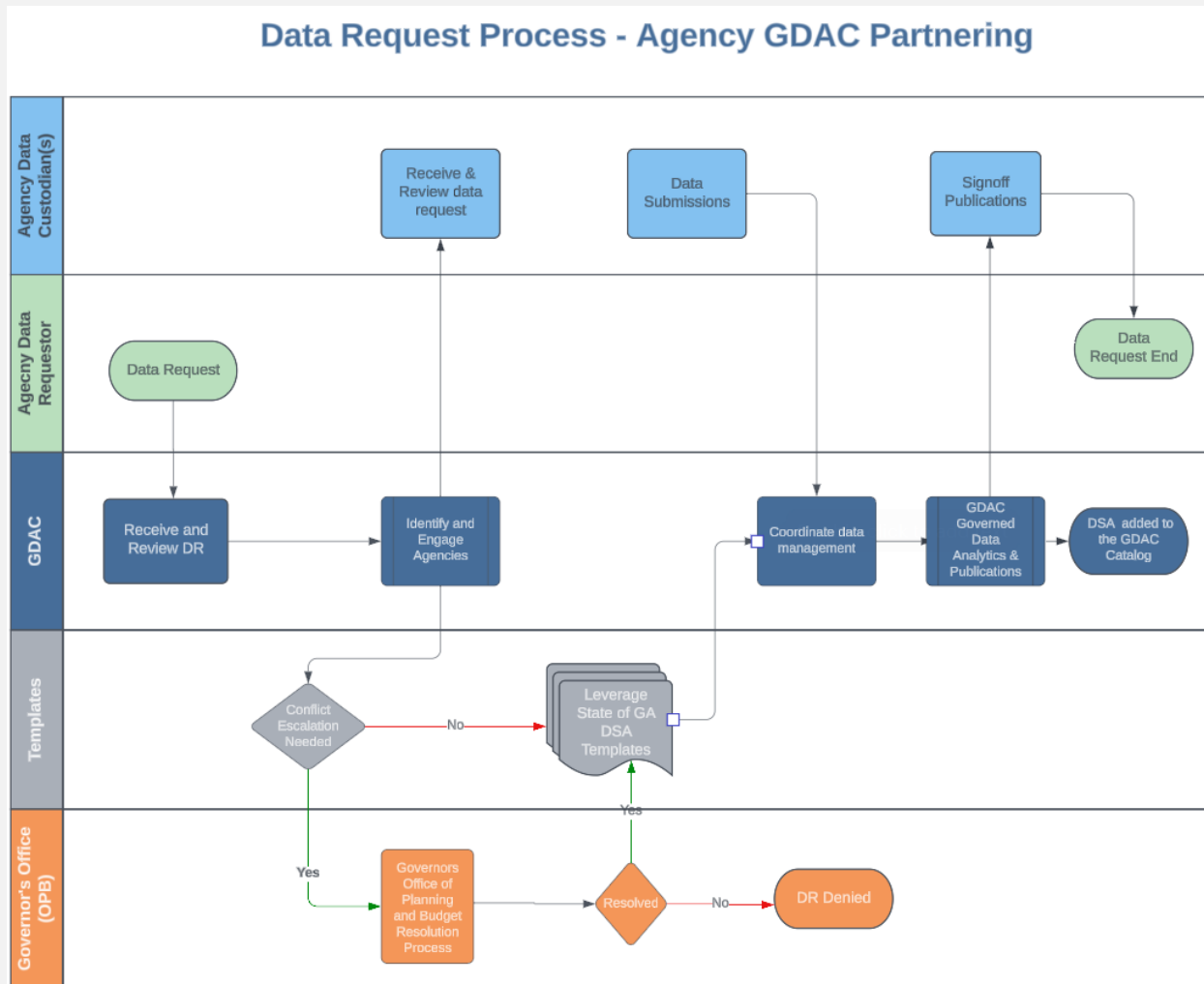
Data Request Process-Agency to Agency

Example 1- In an agency-to-agency process, the flow depicted below would have only the top two lanes in the data request process unless there is a conflict. In case of a conflict, the requesting agency can reach out to GDAC. GDAC will review the data request and available data inventories, engage with both data requesting and data fulfilling agencies and recommend data sharing strategies and options, that could potentially resolve their conflict, within the compliancy requirements for both the state and federal security and privacy laws.



Data Request Process-Agency GDAC Partnering

Example 2 – In an agency- to- GDAC partnering process, the agency submits a use case to GDAC along with a data dashboard or data analysis request. The requesting agency engages with GDAC for the data request, data collection, data curation, and data analytics on their behalf. GDAC will follow the data flow defined below and engage with both agencies. The requesting agency will establish a DSA with the fulfilling agency and establish a DSA with GDAC if needed for their data publication. GDAC will add both DSA's to GDAC's DSA Library.



GDAC's Modern Data Strategy and Best Practices Include:

Data Sharing Policies

- ✚ *Legal Data Sharing Agreement Templates*
- ✚ *Data Sharing Request Template*
- ✚ *Library of established data sharing agreements within the state entities*

Data Governance

- ✚ *Governance Committee Oversight*
- ✚ *Stakeholder Engagement (Data, Business, Technical Stewards)*
- ✚ *Data Literacy, Data Access, Data Submissions*
- ✚ *Data management methodology*

Data Management

- ✚ *Modern data collection techniques*
- ✚ *Data Layouts and Diverse File Types*
- ✚ *Efficient data storage and data organization*
- ✚ *Data Quality Checks and Normalization*
- ✚ *Data integration and data analysis methods*
- ✚ *Data retention and disposal policies*
- ✚ *Data and Infra Automation Pipelines*

Data Security

- ✚ *NIST800-53 Rev5 Compliant; HIPAA Compliant*
- ✚ *Alert Monitoring, Logging, Auditing*
- ✚ *Data Encryption at Rest and In Transit*
- ✚ *Annual Compliance Audits and Updates, Team Training*
- ✚ *SSL, CrowdStrike, Tenable, etc.*
- ✚ *Authentication, Authorization, Access controls*

Data Analytics

- ✚ *Purpose Build Data Warehouse and data dashboards.*
- ✚ *Integration with Popular Analytics Tools*
- ✚ *Bring Your Own Tools, leverage purpose-built data warehouse.*
- ✚ *Prepare data for Artificial Intelligence and Machine Learning*

Infrastructure Management

- ✚ *Serverless Architecture*
- ✚ *AMS Accelerated Support, Guard Duty and Security Hub*
- ✚ *Backups, Patching, Monitoring Enabled*
- ✚ *Chief Information Security Officer (CISO) Team Continuous Engagement*
- ✚ *Efficient and Effective Resource Utilization*
- ✚ *Cost Effective*

GDAC Fiscal Year 2024 Highlights

- In partnership with the Georgia Board of Health Care Workforce (GBHCW), selected as an honoree for the Georgia Technology Authority **2024 Technology Innovation showcase**.
 - Consolidated Health Workforce Dashboard release.
 - Pain Management Clinics Dashboard release.
- All Payer Claims Database (APCD)- 5.6 billion records ingested (largest health data)
 - GDAC's All Payer Claims Database (APCD) analytics platform production roll out.
- Emergency Medical Services dashboards released and recognized within the state and across the nation.
- State Charter Schools Commissions Accountability dashboards released.
- Department of Human Services Use Cases
 - SNAP (Supplemental Nutrition Assistance Program) and TANF (Temporary Assistance for Needy Families) statewide longitudinal data system.
 - Minimal viable product released, showing the end-to-end implementation for HB1013 Statewide Childcare Data System.
- Tax credit transfer dashboard developed in collaboration with the Georgia Department of Revenue (DOR) for the state economist.
- Quality Basic Education funding formula computation data product successfully rolled out.
- Georgia Risk pools data product released.

Looking Towards the Future

As the buzz of Artificial Intelligence (AI), Generative AI, Machine Learning (ML), and Deep Learning (DL) ramps up, GDAC is exploring opportunities to leverage new technology within the boundaries of applicable state and national AI policies or regulations.

For example, GDAC has explored several AI based tools and models in FY 2024 that could aid the state in data anomaly detections and entity resolution. GDAC will continue to train staff on the latest technology to allow the Center to enhance the data ingestion process, refine the data observability and build additional data quality pipelines, leverage machine learning techniques for data processing and analysis, and adopt data preparation and curation techniques for artificial intelligence.

GDAC will establish a technology platform to facilitate the Georgia All Payer Claims Database (APCD) data request process. It will partner with GTRI to build an analytics code repository for the state and enhance infrastructure to provide access to additional memory optimized scalable resources.

GDAC Strategic Goals FY2025

GDAC Strategic Goals	
Data Governance	<ul style="list-style-type: none"> ✓ 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	<ul style="list-style-type: none"> ✓ 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	<ul style="list-style-type: none"> ✓ 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	<ul style="list-style-type: none"> ✓ 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	<ul style="list-style-type: none"> ✓ Work with Georgia Technology Authority to manage cloud operations. ✓ Manage security control policies and guardrails. ✓ User and account permission management. ✓ Cloud service reviews.

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 analytics and any purpose-built datasets.

Aggregated Data Tables

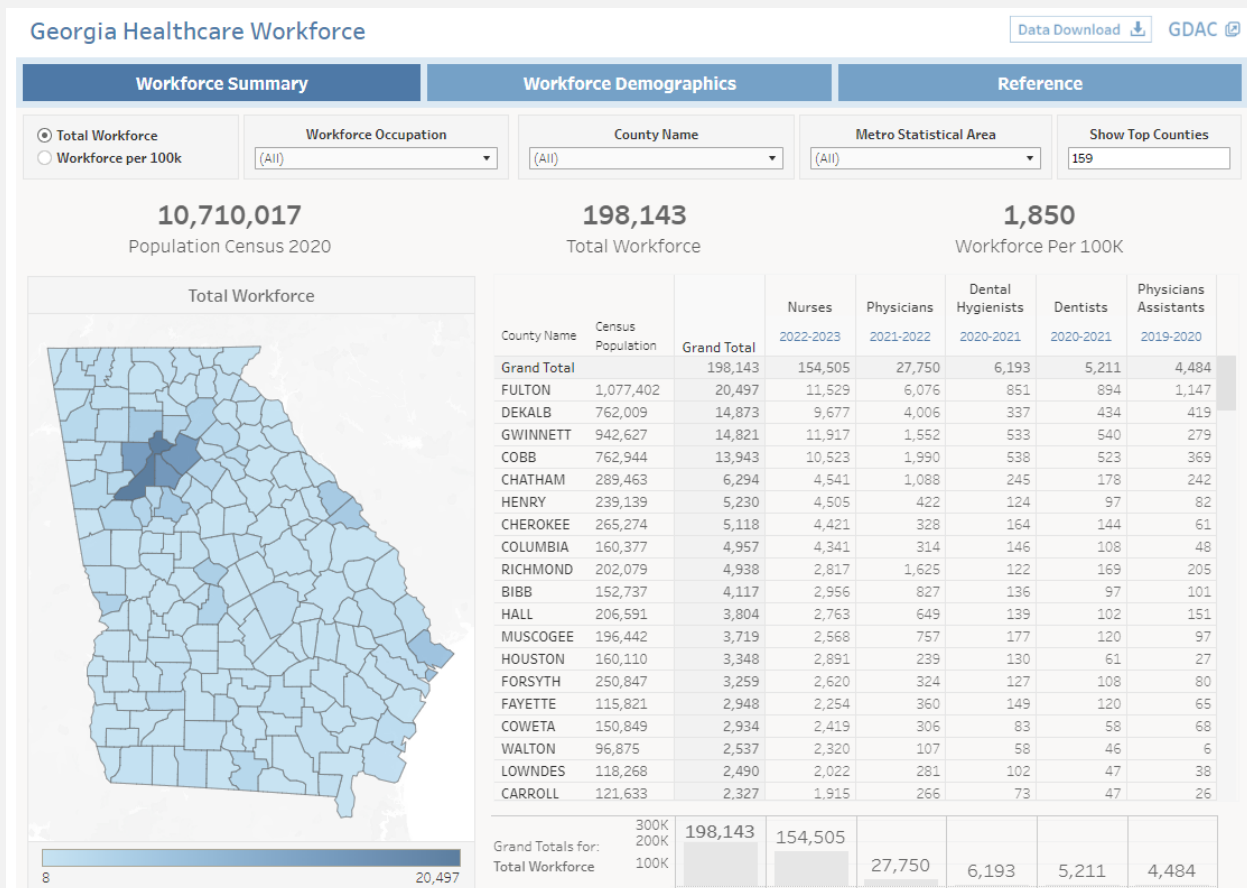
Organization	Data Type
Board of Regents University System of Georgia	Human Capital Management Data, USG Pell
Centers for Medicare & Medicaid Services	Medicaid Health Care Quality Measures, Medicaid Drug Utilization
Department of Administrative Services (DOAS)	State Agency Worker's Compensation Data, State Owned Motor Vehicle Data, Risk Pools
Department of Community Health (DCH)	State Health Benefit Plan (SHBP), Hospital Financial Survey, Medicaid, Healthcare Workforce, Pain Management Clinics
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; EMS Workforce; EMS Education Programs
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 Payer Claims Database (APCD)
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

GDAC Dashboards Overview

FY 2024 Analytics Inventory Added

Consolidated Healthcare Workforce

GDAC obtains Healthcare Workforce data from the Georgia Board of Health Care Workforce (GBHCW). This dashboard provides a consolidated view of Georgia's actively licensed healthcare workforce including physicians, physician assistants, nurses, dentists, and dental hygienists.



State of Georgia Pain Management Clinics

There are 250 pain management clinics licensed in Georgia for the treatment of chronic pain for nonterminal conditions using Schedule II, or Schedule III-controlled substances. This dashboard allows users to access where these clinics are located and provides a detailed listing of each clinic by county, zip code, and full address. Pain management clinics span across 59 of Georgia's 159 counties. Approximately 90% of the clinics are in urban areas (which comprises 19 counties) compared to rural areas (140 counties).

State of Georgia Pain Management Clinics Overview

[Data Download](#)
[Reference](#)
[GDAC](#)

County Summary

Zip Code Summary

Clinic Listing

County

(All)

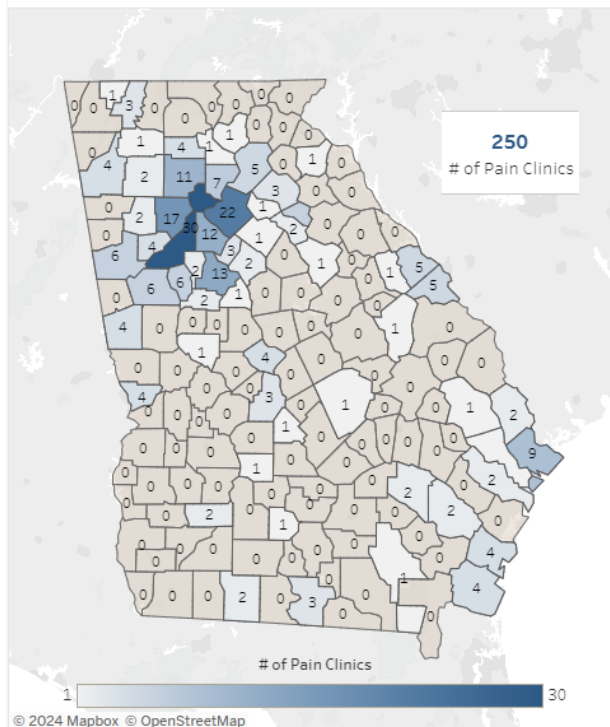
Urban/Rural

(All)

Metro Statistical Area

(All)

Pain Clinics County Distribution


[Click the county to view detail](#)

Year	County	# of Pain Clinics	Census Population	Clinics Per 100K Population
2023	FULTON	30	1,077,402	3
	GWINNETT	22	942,627	2
	COBB	17	762,944	2
	HENRY	13	239,139	5
	DEKALB	12	762,009	2
	CHEROKEE	11	265,274	4
	CHATHAM	9	289,463	3
	FORSYTH	7	250,847	3
	FAYETTE	6	115,821	5
	COWETA	6	150,849	4
	CLARKE	6	127,795	5
	CARROLL	6	121,633	5
	RICHMOND	5	202,079	2
	HALL	5	206,591	2
	COLUMBIA	5	160,377	3
	TROUP	4	70,214	6
	PICKENS	4	33,127	12
	MUSCOGEE	4	196,442	2
	GLYNN	4	85,568	5
	FLOYD	4	98,604	4
	DOUGLAS	4	147,988	3
	CAMDEN	4	55,388	7
	BIBB	4	152,737	3
	WHITFIELD	3	103,837	3
	ROCKDALE	3	90,939	3
	LOWNDES	3	118,268	3

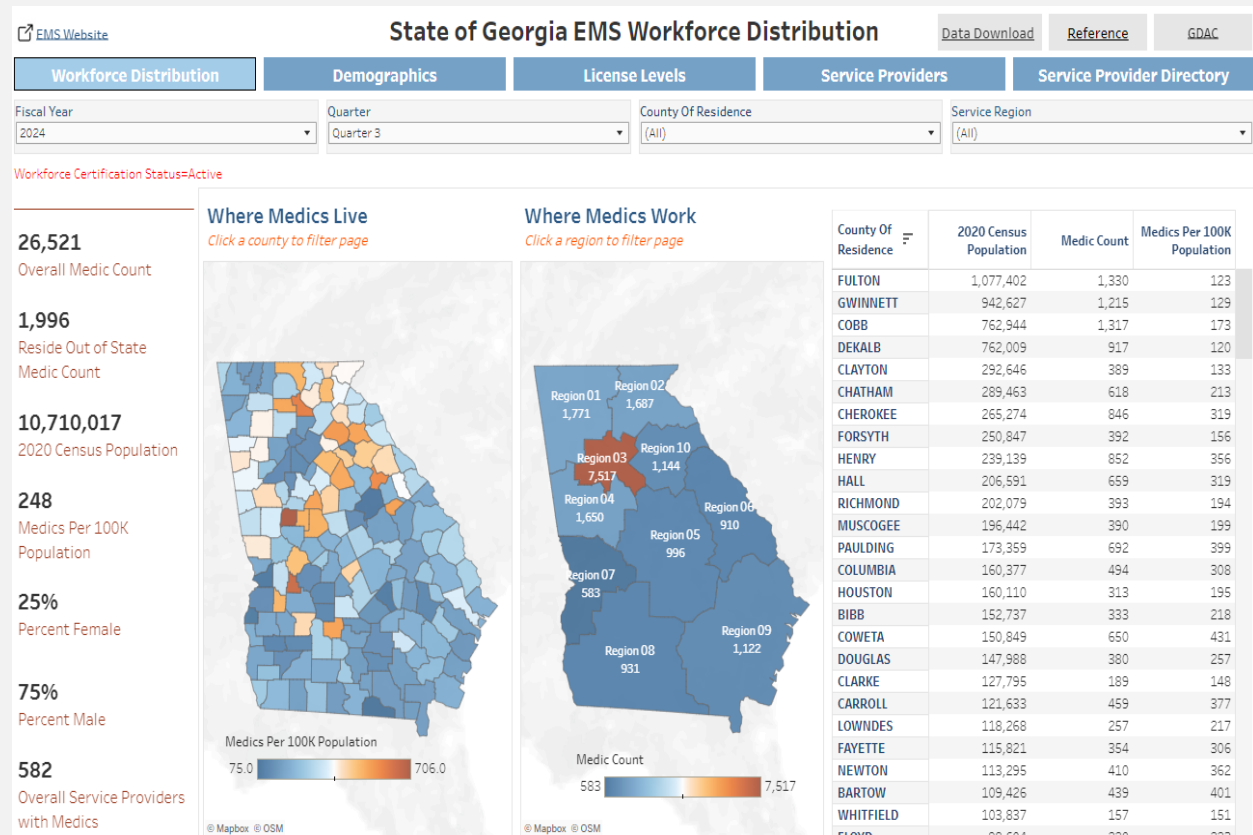
Emergency Medical Services (EMS) Workforce

This dashboard allows the Office of EMS and Trauma and stakeholders to view the status of the EMS workforce in Georgia. Insights are provided into the makeup of the EMS workforce that aid in creating and aligning strategies for maintaining and improving the strength of the workforce over time.

Strategy 1) Public transparency on the makeup and distribution of medics stratified to population, county of residence, and actively working for a licensed EMS agency.

Strategy 2) Identify areas (regions and counties) that are underserved.

Strategy 3) Provide a repository of EMS agency contact information to licensed EMS provider for employment opportunities.

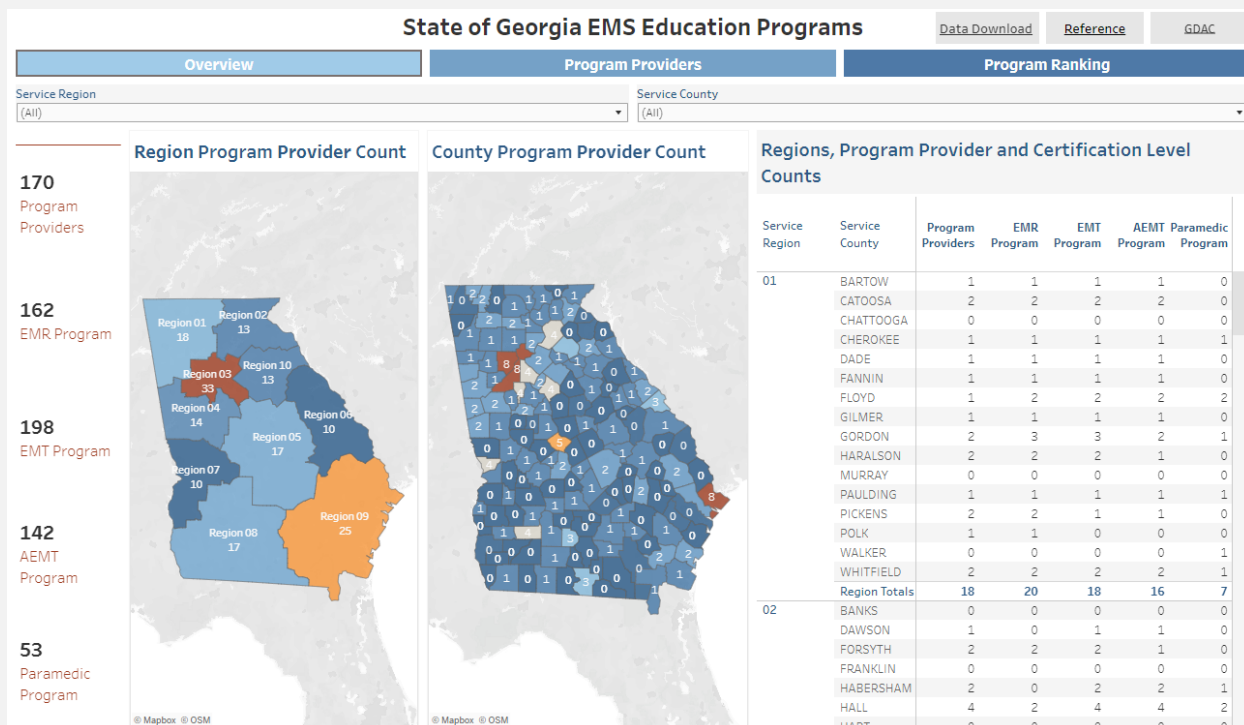


Emergency Medical Services (EMS) Education Programs

Georgia's large, diverse EMS educational system consists of many different sponsor types ranging from Technical College System of Georgia (TCSG), University System of Georgia (USG), EMS agencies, fire departments, hospitals, and private entities. Students enter an EMS educational program at various levels to complete their education.

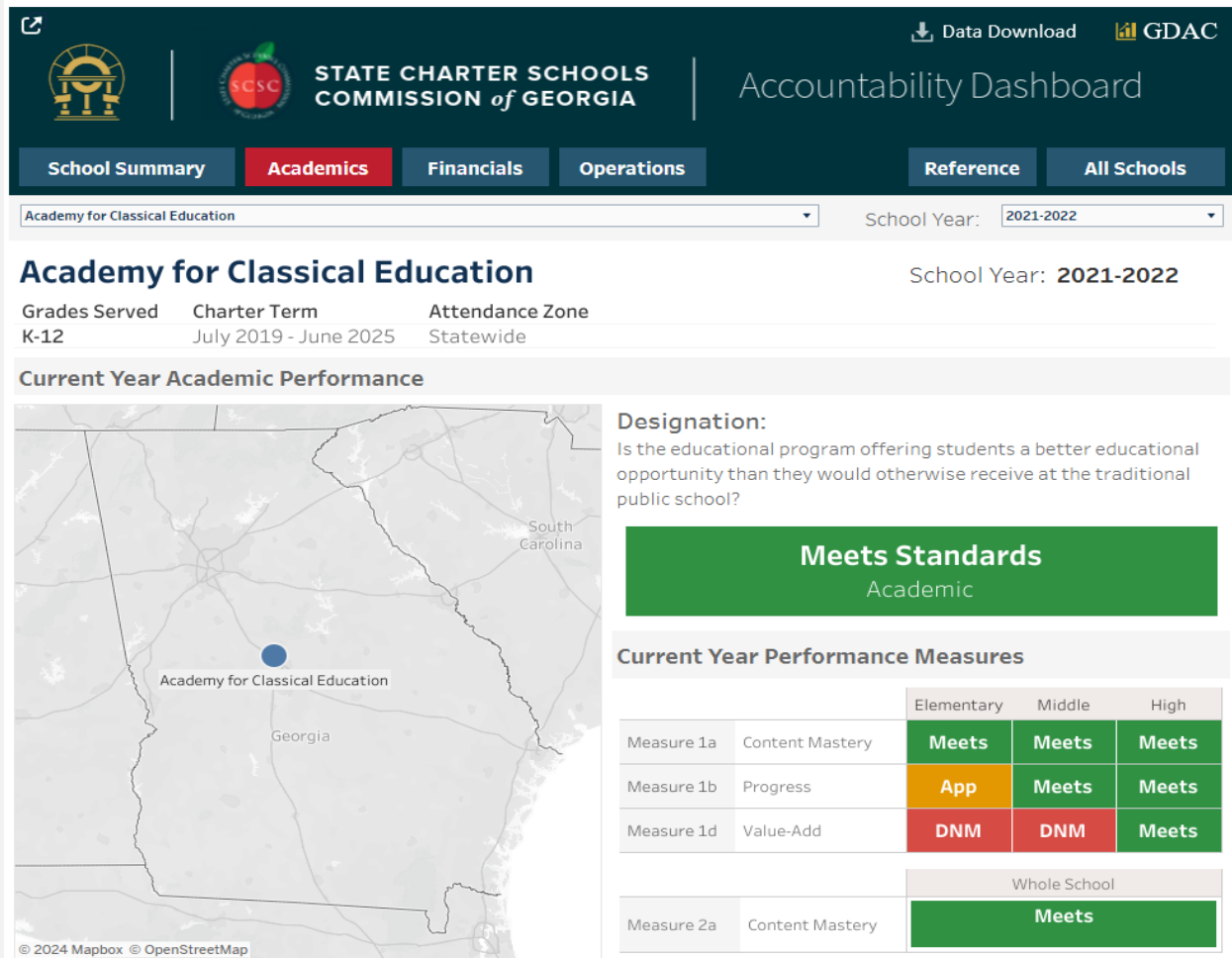
The State of Georgia EMS education dashboard allows users to view EMS education program and student distribution by county, region, and program providers. Direct links to provider websites and contact information are also included.

In early 2023, the Office of EMS and Trauma (OEMST) announced intent to report Georgia's EMS initial education program pass rates for every EMT, AEMT, and Paramedic Program. A program ranking tab is included where users can view program pass rates and student enrollment versus completion rates.



State Charter Schools Commission- Accountability Dashboard

The State Charter Schools Commission of Georgia (SCSC) uses a Comprehensive Performance Framework (CPF) to assess state charter school performance in three critical areas: achievement, financial viability, and operational compliance. The CPF is used to promote transparency and objectivity by clarifying SCSC performance expectations and by providing schools with an annual assessment of where they stand regarding charter renewal. GDAC was tasked with recreating this dashboard previously hosted by the Georgia Technology Authority (GTA). Enhancements were added for optimized viewing on mobile phone and tablet devices.



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