



GEORGIA DEPARTMENT
OF COMMUNITY HEALTH

Electronic Access to Lab Results



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Mission:

The mission of the Department of Community Health is to provide access to affordable, quality health care to Georgians through effective planning, purchasing, and oversight.



Partnering for Success

The Department of Community Health and the Georgia Health Information Network (GaHIN) work closely to ensure that providers and caregivers can access patient health information at the point of care to optimize outcomes and reduce costs.

Access for Authorized Medical Providers

- Clinical Viewer allows providers without an EHR to query GaHIN network
- Configured through GAMMIS Web Portal
- One click to log in to the GaHIN network
- Access to all available patient records and reports



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GAMMIS Online User Training



We have developed training on the simple steps needed to sign up to access GaHIN as well as how to navigate within the electronic record

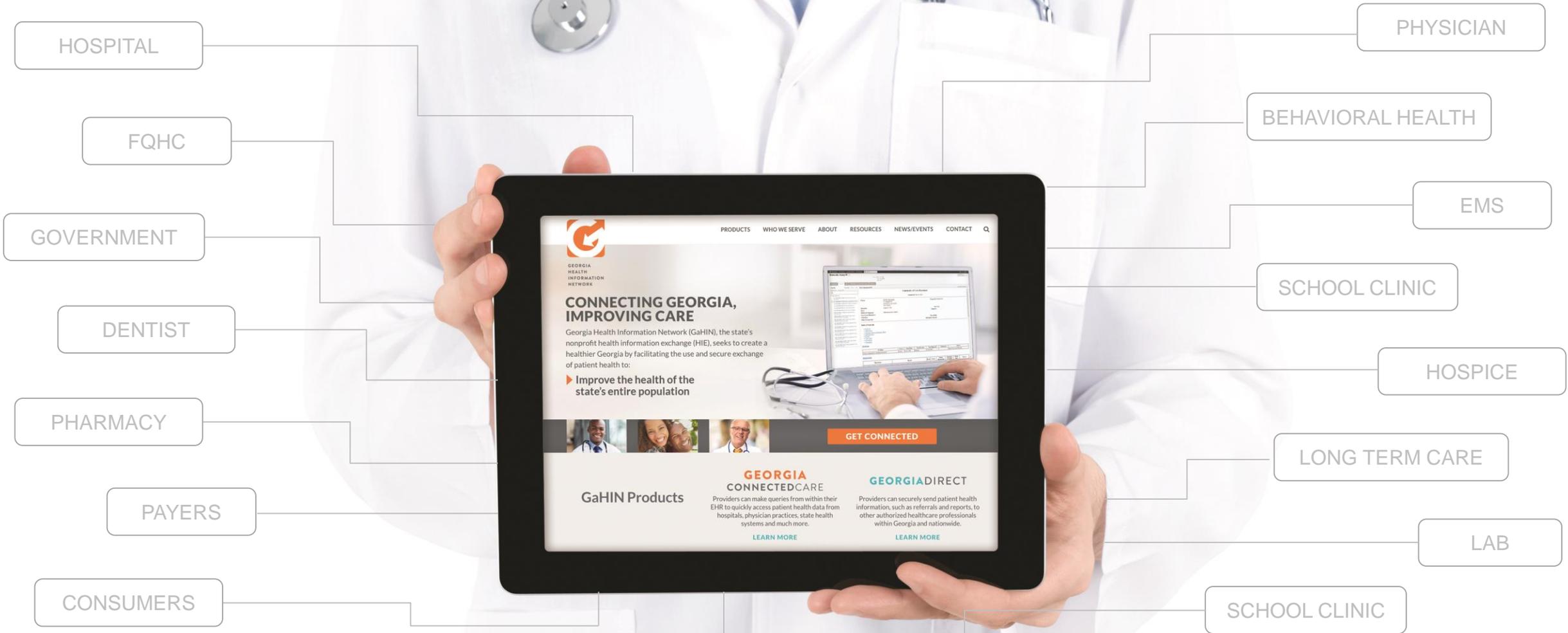
- Part 1 – accepting the Terms and Conditions required prior to access
- Part 2 – primary functions and navigation within the GAMMIS Clinical Viewer

<https://truven.adobeconnect.com/gammis-training>

You must have an active, authorized GAMMIS login and accept the terms and conditions (one time) prior to gaining access to GaHIN data

Note: Your facility may block streaming content on the internet, including content streaming from the truvenhealth.com domain. In this case, you will need to contact your IT Team for information on how to access streaming content.





Accessing GaHIN Through GAMMIS



GEORGIA
HEALTH
INFORMATION
NETWORK



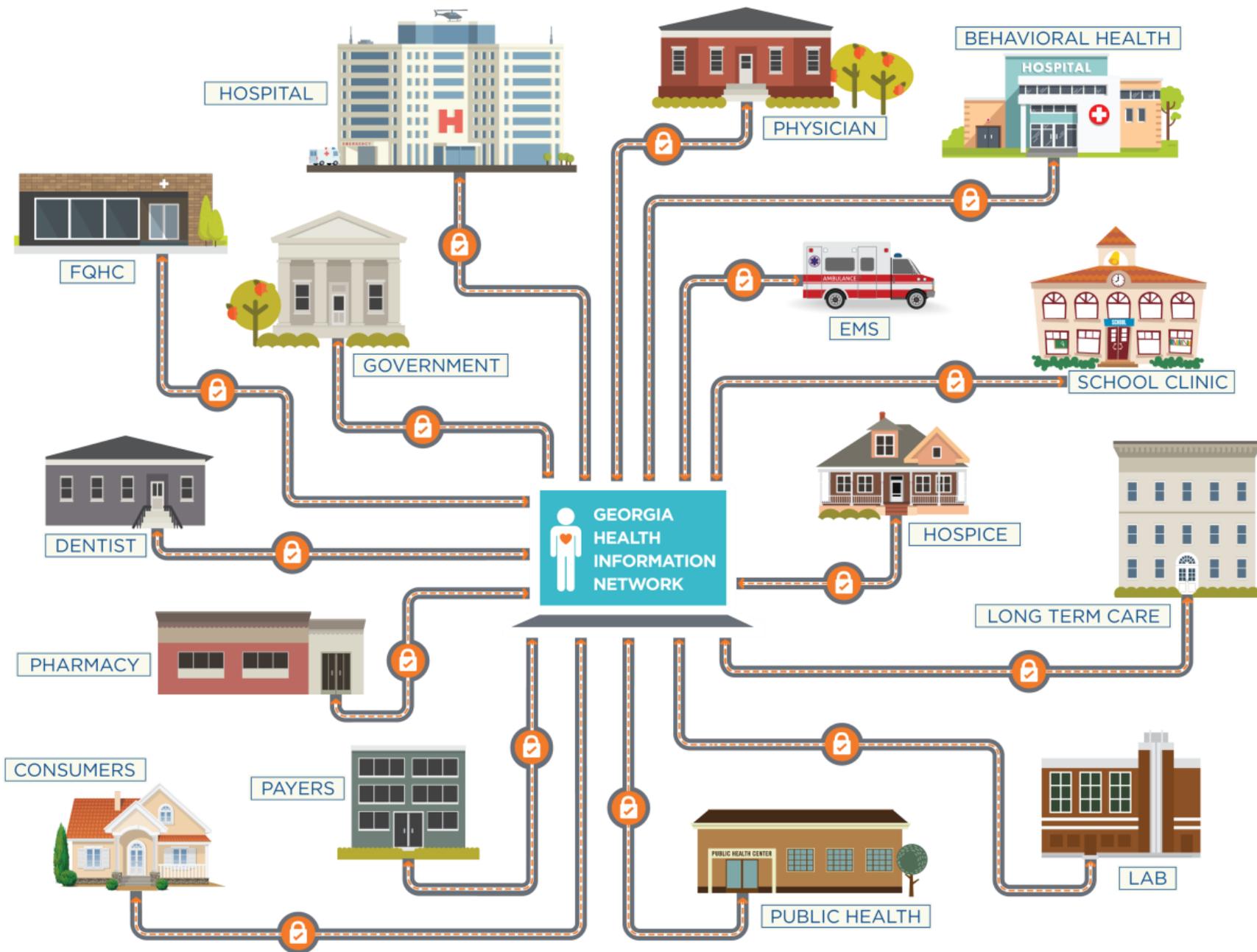
GaHIN – Georgia's Statewide Health Information Exchange

Georgia Health Information Network (GaHIN)

Dedicated to **creating a healthier Georgia** through the use and exchange of electronic health information

- Advance patient-centered healthcare
- Increase efficiency
- Improve the health of the state's entire population





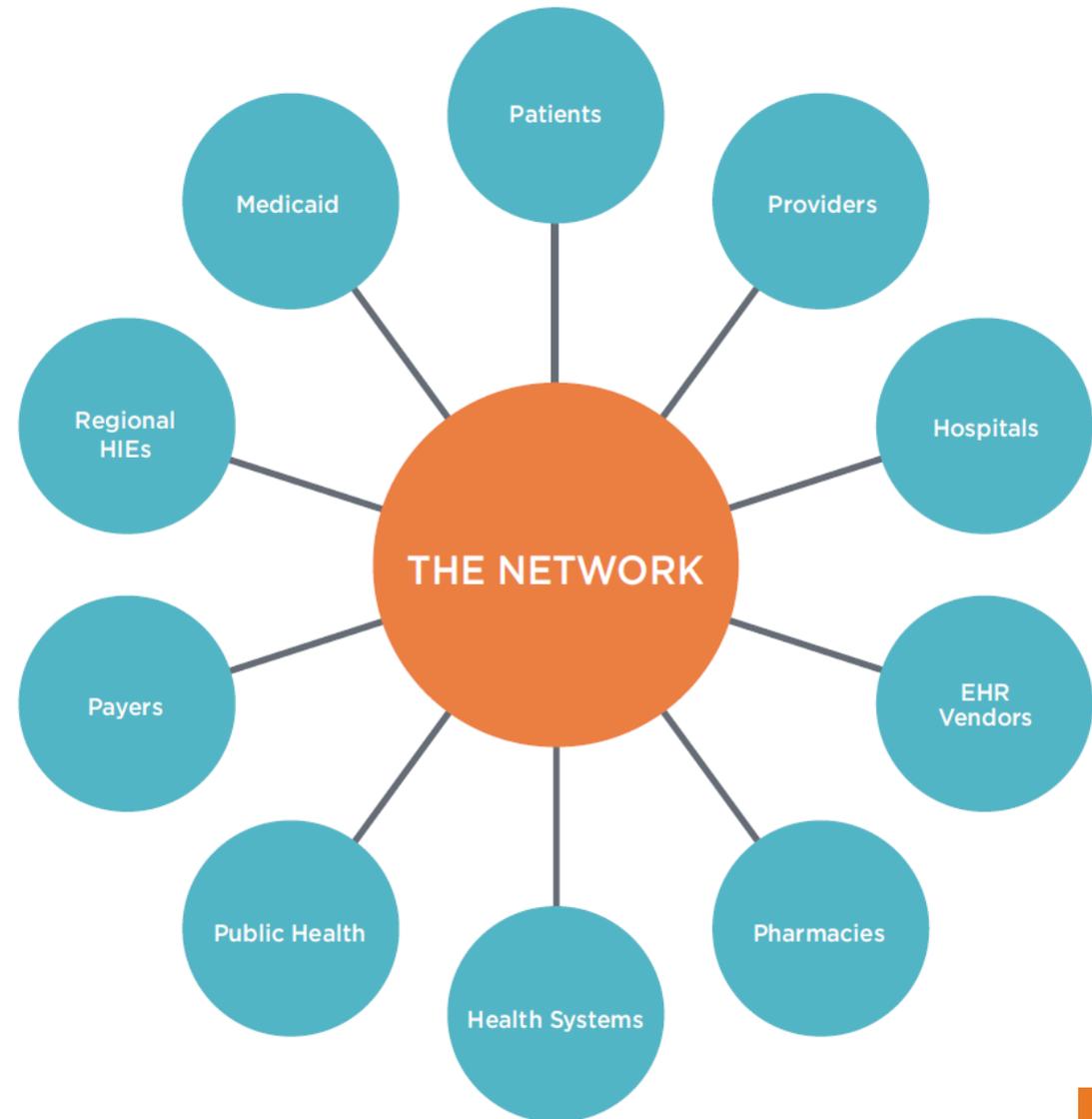
Creating a Statewide Electronic Network



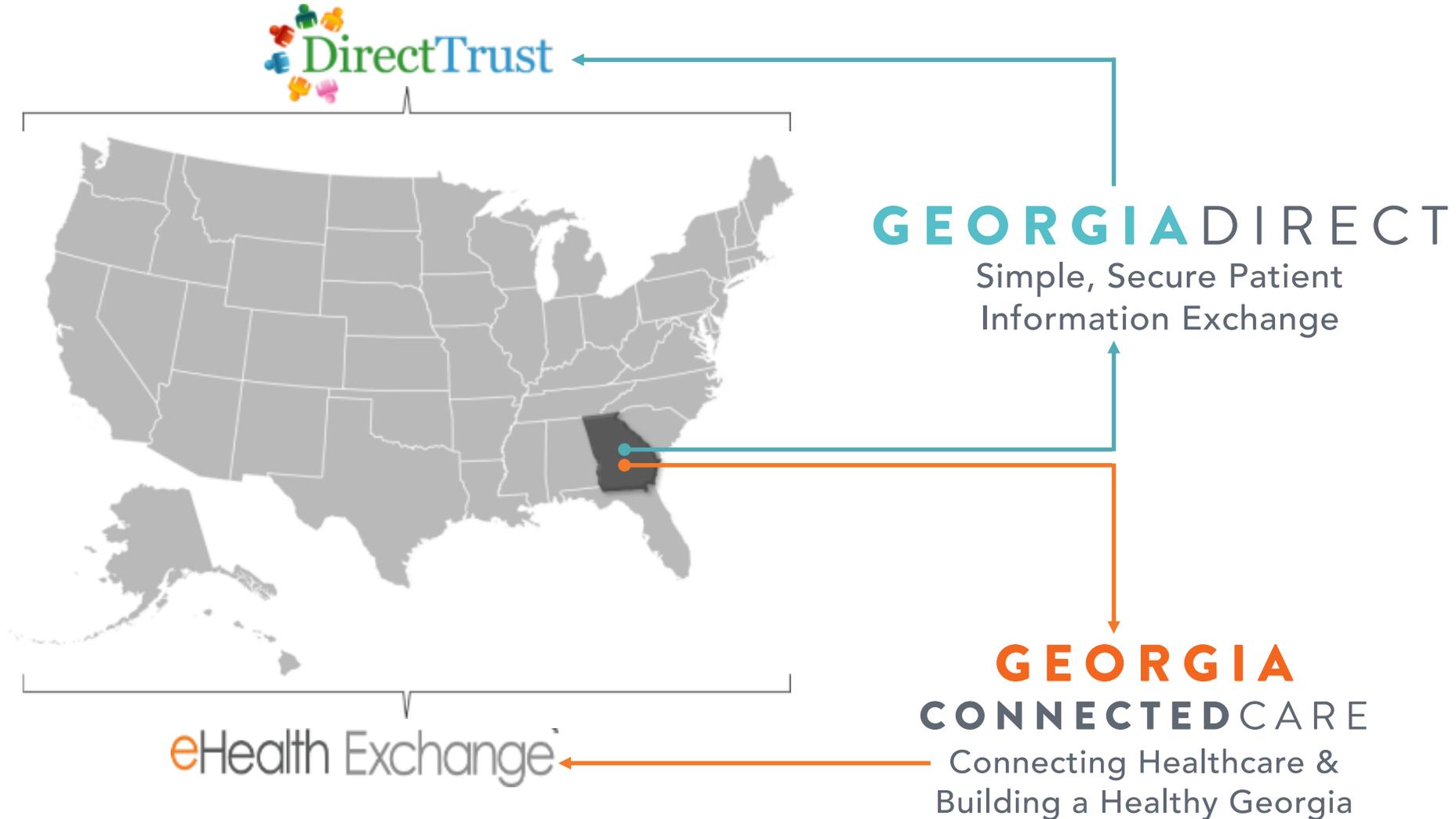
GaHIN Network Model

Federated-hybrid model, not a central repository of clinical data

- Patient information remains with the treating provider and only flows when there is authorization
- GaHIN makes an individual data repository available to Members directly connected to the Network



GaHIN Products and Services



Basic Data Exchange

Free email messaging service to securely send patient health information to other authorized healthcare professionals

2018 Totals

- 747,960 send & receive transactions
- 6,321 registered providers
- 327 member organizations

2017 Totals

- 518,169 send & receive transactions
- 5,668 registered providers
- 288 member organizations



Connecting Georgia

Robust Integrated Patient Search (Query)

Providers can use their EHR to quickly access patient health data from hospitals, physician practices, state health systems and much more

2018 Totals

- ~12,942 connected providers
- 2,388,290 queries
- 32,273,127 MPI records

2017 Totals

- ~10,644 connected providers
- 1,137,069 queries
- 29,482,458 MPI records

eHealth Exchange™



Connected Organizations

State Agencies

- GA Medicaid/Department of Community Health (DCH)
- GA Department of Public Health (DPH)
- GA Division of Families and Children Services (DFCS)
- GA Department of Juvenile Justice (DJJ)
- GA Department of Behavioral Health and Developmental Disabilities (DBHDD)

Health Systems/Hospitals

- Children's Healthcare of Atlanta (Epic)
- Emory Healthcare (Cerner)
- Grady Health System (Epic)
- Gwinnett Health System (RelayHealth)

Regional HIEs

- Georgia Health Connect (GaHC) (Liaison)
- GRACHIE/Chatham HealthLink (Cerner)
- HealtheConnection (Cerner)
- HealthIE Georgia (Azalea)

Care Management Organizations

- Amerigroup (with IHE)
- CareSource
- Peach State
- WellCare

Specialty Connections

- Atlanta Gastroenterology Associates (Greenway)
- Georgia Partnership for Telehealth (Azalea)

National Exchange

- Veterans Health Administration
- Department of Defense
- DaVita Healthcare Partners
- Alabama (AOHR)
- East Tennessee HIE (etHIN)
- South Carolina HIE (SCHIEEx)
- North Carolina HIE (NCHIEA)





Why Provide Electronic Access to Lab Results

ONC on Electronic Access to Lab Reports

- In a national survey of providers, a majority of EHR-adopters reported having been alerted to critical lab values by their EHR system in the last 30 days
- 74% of providers reported that using an EHR system enhanced patient care¹
- EHRs can help you and your organization improve health care quality and better manage and analyze incoming lab results ***in ways that matter to patients***



The Value of Electronic Access to Lab Results

- Alert clinicians to lab values outside normal ranges¹
- Give your organization the ability to better manage incoming lab results
- Enable clinicians in your organization to identify and target groups of patients with abnormal lab results for follow-up care
- Help your organization order fewer tests due to better availability of lab results²
- Help clinicians identify needed lab tests
- Enable clinicians to order lab tests electronically, helping your organization improve care coordination



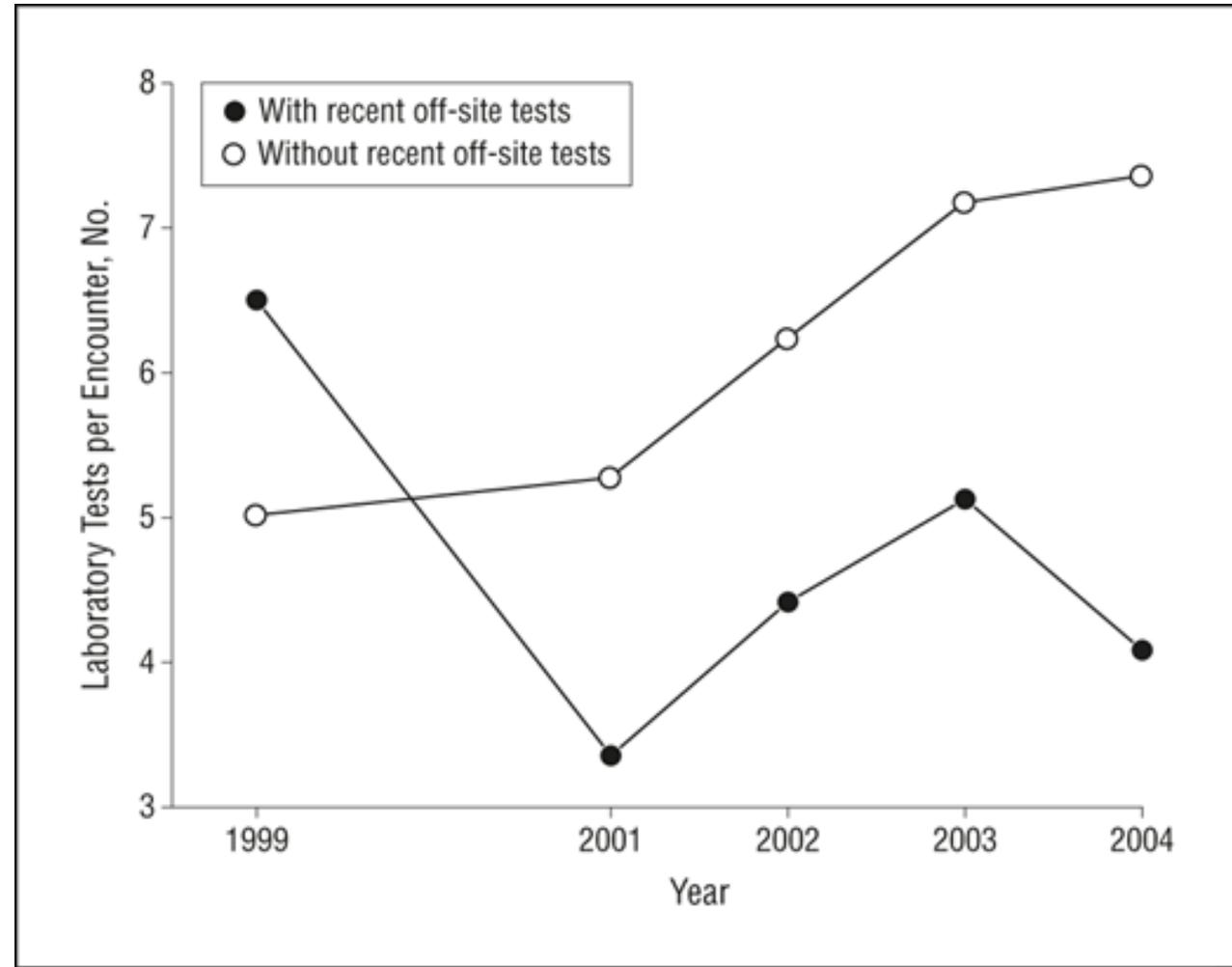
Research – Effect of Health Information Exchange on Volume of Laboratory Testing

- Retrospective study to investigate whether the availability of laboratory test results from a nonencounter hospital reduced the number of subsequent laboratory tests at the encounter hospital
- All new outpatient consultations at 2 affiliated academic hospitals between January 1, 1999, and December 31, 2004, were studied – cohort of 117,606 patients



Research – Effect of Health Information Exchange on Volume of Laboratory Testing (cont.)

The number of laboratory tests performed after encounters that had recent off-site laboratory tests decreased by 49% after introduction of the HIE



Research – Effect of Health Information Exchange on Volume of Laboratory Testing (cont.)

- Demonstrated that the introduction of an internal HIE was associated with a significant decrease in the number of laboratory tests ordered for patients new to the provider when recent laboratory results were available from another institution
- Our results indicate that the reduction in laboratory tests may be as high as 50%; potentially translate into significant savings in settings where patients frequently receive care at multiple institutions
- “Our research confirms the hypothesis that having access to the patients' laboratory test results influences the decision process in regard to ordering further tests, which supports the predictions of financial savings made in the HIE cost-benefit models.”



Accuracy of Electronic Lab Results

- 2016 study examined the accuracy, completeness, and formatting of laboratory test results and pathology reports transmitted from the laboratory to the EHR
- Participants from 45 institutions retrospectively reviewed results from 16 different laboratory tests, including clinical and anatomic pathology results, within the EHR used by their providers to view laboratory results
- Results were evaluated for accuracy, presence of required elements, and usability
- Both normal and abnormal results were reviewed for tests, some of which were performed in-house and others at a reference laboratory



Accuracy of Electronic Lab Results (cont.)

- Overall accuracy for test results transmitted to the EHR was greater than 99.3% (1052 of 1059)
- There was lower compliance for completeness of test results, with 69.6% (732 of 1051) of the test results containing all essential reporting elements
- Institutions that had fewer than half of their orders entered electronically had lower test result completeness rates
- The rate of appropriate formatting of results was 90.9% (98 of 1010)



Accuracy of Electronic Lab Results (cont.)

Test Result Transmission Methods	No. (%)
In-house–performed test results	
Electronic: instrument to LIS to EHR	261 (61.8)
Manual entry in LIS; electronic transmission to EHR	140 (33.2)
Electronic transmission from middleware to EHR	18 (4.3)
Manual entry in EHR	3 (0.7)
Reference laboratory performed test results	
Electronic: reference laboratory to LIS to EHR	128 (84.8)
Manual entry in LIS and electronic transmission to EHR	11 (7.3)
Scanned, copy/paste, etc, into EHR	10 (6.6)
Electronic: reference laboratory to EHR	1 (0.7)
Manual entry in EHR	1 (0.7)





Accessing Lab Results Through GaHIN

Accessing Lab Results Through GaHIN

Current

- GeorgiaDirect secure email transmission of lab results
- Incorporation in CCD/longitudinal patient record

Future

- Integration with Quest and LabCorp
- Connections with independent labs

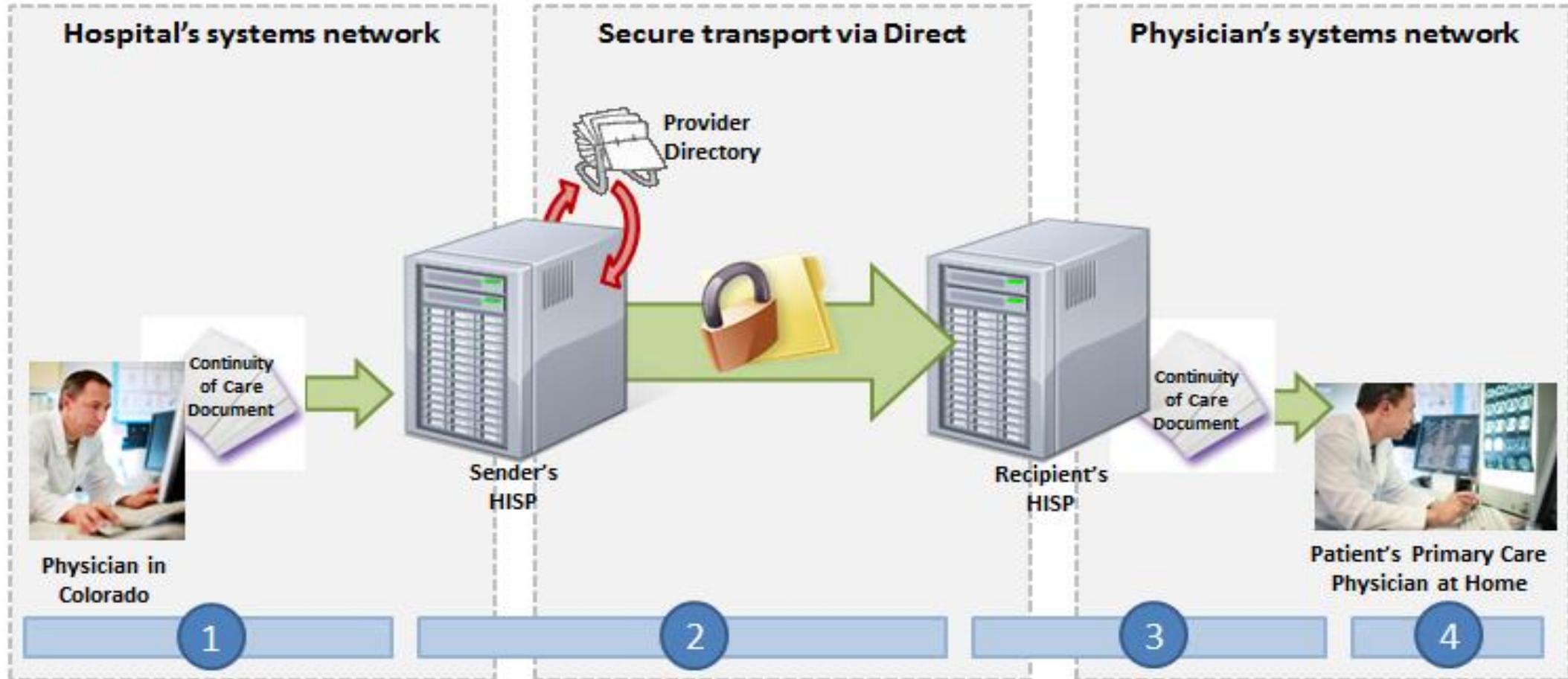


Using GeorgiaDirect to Share Lab Results

- A patient visits his primary care physician for a routine visit
- The primary care physician determines that lab work should be performed, so the patient schedules an appointment with a local reference lab
- Once the lab tests have been completed, the reference lab uses secure email to electronically deliver the lab results to the primary care physician



Using GeorgiaDirect to Share Lab Results



Searching Electronic Patient Information

- Georgia ConnectedCare offers access to comprehensive patient information, including CCDs and longitudinal patient data

The screenshot displays the user interface for a patient's electronic health record. At the top, a navigation bar includes 'Dashboard', 'Census', and 'My Patients', along with a search icon and the user's name 'User: addinician'. Below this, the patient's name 'Demoski, Helen' is shown with a dropdown arrow. To the right, patient details are listed: 'Age / Gender 26 Female', 'DOB 8/27/1987', 'MRN N/A', 'Allergies N/A', and 'Unit Room N/A'. A central menu bar contains 'Dashboard', 'Summary', 'Reports', 'Labs', and 'Lab Reports', with 'Labs' and 'Lab Reports' highlighted by an orange box. On the left, a 'Hierarchy Options' panel includes a 'Select Hierarchy' dropdown set to 'Default', and buttons for 'Delete Selected Hierarchy' and 'Add New Hierarchy'. The main area features a horizontal timeline with dates '11/3' and '11/4'. Below the timeline are navigation buttons: 'First Cols', 'Prev Cols', 'Shift Col', 'Date:' with an input field, 'Search', 'Shift Col', 'Next Cols', and 'Last Cols'. At the bottom, a status bar indicates 'Showing columns 1-5 of 5 (11/3/2013 04:25 to 11/5/2013 23:32)'. A logo is visible in the bottom right corner.



Patient Profile: Labs

Dashboard ← Censu My Patients Q | User: addclinician

Demoski, Helen ▼

Age / Gender 26 Female Allergies N/A
 DOB 8/27/1987 Unit Room N/A
 MRN N/A

Dashboard Summary Reports Labs Lab Reports

Hierarchy Options

Select Hierarchy: Default ▼
 Delete Selected Hierarchy
 Add New Hierarchy
 Selected Hierarchy Name: Default
 Report-based:
 Time Compression: None ▼
 Timeline Order: Ascending ▼

Page Actions

Display Most Recent Column:
 Organize All Panels:
 Graph Checked Row Lab Data
 Filter Result Rows

Legend

A Abnormal
 AA Critically Abnormal
 H High
 HH Critically High
 L Low
 LL Critically Low

Panel Shortcuts

[BMET](#)
[CBC](#)
[CHEM24S](#)
[COMP METABOLIC PNL](#)
[LYBGCR](#)
[LYTESBG](#)
[NA](#)

Timeline: 11/3 11/3 11/4

← First Cols ← Prev Cols ↔ Shift Col Date: Search Shift Col ↔ Next Cols → Last Cols →

Showing columns 1-5 of 5 (11/3/2013 04:25 to 11/5/2013 23:32) [Switch to Print View](#)

BMET

Check/uncheck all rows **Most Recent** 11/3/2013 04:25 11/3/2013 09:33 11/5/2013 05:20 11/5/2013 12:09 11/5/2013 23:32

<input type="checkbox"/> BUN	H	26				H	26
<input type="checkbox"/> CL		104					104
<input type="checkbox"/> CO2		26					26
<input type="checkbox"/> K		4.3				4.3	4.3
<input type="checkbox"/> NA	L	136			L	136	L 136

CBC

Check/uncheck all rows **Most Recent** 11/3/2013 04:25 11/3/2013 09:33 11/5/2013 05:20 11/5/2013 12:09 11/5/2013 23:32

<input type="checkbox"/> HCT	L	28.6				L	28.6
<input type="checkbox"/> HGB	L	10.2				L	10.2
<input type="checkbox"/> WBC	H	16.6				H	16.6

CHEM24S

Check/uncheck all rows **Most Recent** 11/3/2013 04:25 11/3/2013 09:33 11/5/2013 05:20 11/5/2013 12:09 11/5/2013 23:32

<input type="checkbox"/> CL		104				104	
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COMP METABOLIC PNL

Check/uncheck all rows **Most Recent** 11/3/2013 04:25 11/3/2013 09:33 11/5/2013 05:20 11/5/2013 12:09 11/5/2013 23:32

<input type="checkbox"/> BUN		20	20				
<input type="checkbox"/> K		4.4	4.4				

LYBGCR

Check/uncheck all rows **Most Recent** 11/3/2013 04:25 11/3/2013 09:33 11/5/2013 05:20 11/5/2013 12:09 11/5/2013 23:32

<input type="checkbox"/> CO2		26	25	26	26		
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Patient Profile: Labs

Dashboard Summary Reports **Labs** Lab Reports

11/3 11/3

← First Cols ← Prev Cols ⇐ Shift Col Date: [] [Se

Showing columns 1-5 of 5 (11/3/2013 04:

Hierarchy Options

Select Hierarchy: Default ▾

Delete Selected Hierarchy

Add New Hierarchy

Selected Hierarchy Name: Default

Report-based:

Time Compression: None ▾

Timeline Order: Ascending ▾

Page Actions

Display Most Recent Column:

Organize All Panels:

Graph Checked Row Lab Data

Filter Result Rows

BMET

<input type="checkbox"/> Check/uncheck all rows	Most Recent	11/3/2013 04:25	11/3/2013 09:33	11/5/2013 05:20	11/5/2013 12:09	11/5/2013 23:32
<input type="checkbox"/> BUN	H 26				H 26	
<input type="checkbox"/> CL	104					104
<input type="checkbox"/> CO2	26					26
<input type="checkbox"/> K	4.3				4.3	4.3
<input type="checkbox"/> NA	L 136				L 136	L 136

CBC

<input type="checkbox"/> Check/uncheck all rows	Most Recent	11/3/2013 04:25	11/3/2013 09:33	11/5/2013 05:20	11/5/2013 12:09	11/5/2013 23:32
<input type="checkbox"/> HCT	L 28.6					L 28.6



Patient Profile: Lab Reports

* Demoski_changed, Helen

Age / Gender 65 Female
DOB 4/21/1950
MRN N/A

Dashboard Summary Reports Labs Lab Reports Encounter Journal

Search Clear

Sort By: Result Date Specimen Date

Print selected lab reports

CBC

Date: 11/5/2013 23:32:00
Accession Number: 6A23C1EC
Status F Status Date 11/5/2013 23:32:00

Acuity	Type	Value	Units	Normal Range	Status	Date	Comment
L	HCT	28.6	%	37.0-47.0 %	F	11/5/2013 23:32:00	
L	HGB	10.2	G/DL	12.5-16.0 G/DL	F	11/5/2013 23:32:00	
H	WBC	16.6	K/CUBMM	4.0-10.5 K/CUBMM	F	11/5/2013 23:32:00	

BMET

Date: 11/5/2013 23:32:00
Accession Number: C265B9F2
Status F Status Date 11/5/2013 23:32:00

Acuity	Type	Value	Units	Normal Range	Status	Date	Comment
N	K	4.3	MMOL/L	3.6-5.5 MMOL/L	F	11/5/2013 23:32:00	
N	CL	104	MMOL/L	98-107 MMOL/L	F	11/5/2013 23:32:00	
N	CO2	26	MMOL/L	22-31 MMOL/L	F	11/5/2013 23:32:00	
H	BUN	26	MG/DL	8-25 MG/DL	F	11/5/2013 23:32:00	
L	NA	136	MMOL/L	137-145 MMOL/L	F	11/5/2013 23:32:00	



Patient Profile: Lab Reports

Dashboard
Summary
Reports
Labs
Lab Reports
Collaborate
Import - Export
Simple Import - Export
New Summary
↓ Mo

Sort By: Result Date Specimen Date

CBC Select to print

Date: 3/27/2014 23:32:00

Accession Number: 6A23C1EC

Status: F **Status Date:** 3/27/2014 23:32:00

Acuity	Type	Value	Units	Normal Range	Status	Date	Comment
L	HCT	28.6	%	37.0-47.0 %	F	3/27/2014 23:32:00	
L	HGB	10.2	G/DL	12.5-16.0 G/DL	F	3/27/2014 23:32:00	
H	WBC	16.6	K/CUMM	4.0-10.5 K/CUMM	F	3/27/2014 23:32:00	

BMET Select to print

Date: 3/27/2014 23:32:00

Accession Number: C265B9F2

Status: F **Status Date:** 3/27/2014 23:32:00

Acuity	Type	Value	Units	Normal Range	Status	Date	Comment
N	K	4.3	MMOL/L	3.6-5.5 MMOL/L	F	3/27/2014 23:32:00	
N	CL	104	MMOL/L	98-107 MMOL/L	F	3/27/2014 23:32:00	
N	CO2	26	MMOL/L	22-31 MMOL/L	F	3/27/2014 23:32:00	
H	BUN	26	MG/DL	8-25 MG/DL	F	3/27/2014 23:32:00	
L	NA	136	MMOL/L	137-145 MMOL/L	F	3/27/2014 23:32:00	

BMET Select to print

Date: 3/27/2014 12:09:00

Accession Number: DF65B9F2

Status: F **Status Date:** 3/27/2014 12:09:00

Acuity	Type	Value	Units	Normal Range	Status	Date	Comment
N	K	4.3	MMOL/L	3.6-5.5 MMOL/L	F	3/27/2014 12:09:00	



Current Status

- Working closely with Quest Diagnostics and LabCorp – two largest lab providers in Georgia
- Legal agreements in review with attorneys
- Biggest change – will require providers **opt in** to share results



Summary

- Proven value in incorporating lab results into EHR
- Proven value – clinical and financial – in sharing those results
 - Speeds care delivery based on comprehensive patient information
 - Reduces need for duplicate testing
- In Georgia, electronic sharing already available
 - GeorgiaDirect
 - Georgia ConnectedCare
- Currently connecting to Quest and LabCorp
 - Will be contacting providers in coming months to request opt-in
 - Next steps will be connecting to independent labs



QUESTIONS??



Georgia Health Information Network

June Webinar:

How Interoperability Helps Practices Improve Patient Care and Operations

Wednesday, June 26, 2019, 11 a.m. – 12 p.m.

<https://dch.georgia.gov/webinars>



Future Webinars

The Role of Medication Fill Data in Measuring Adherence and Preventing Abuse

Wednesday, July 24, 2019, 11 a.m. – 12 p.m.

How Interoperability Helps Hospitals Improve Patient Care and Care Coordination Across the Continuum of Care

Wednesday, August 28, 2019, 11 a.m. – 12 p.m.

<https://dch.georgia.gov/webinars>



**Please participate in the brief survey
following this webinar.**

