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
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
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
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

DirectTrust

Simple, Secure Patient Information Exchange

eHealth Exchange

Connecting Healthcare & Building a Healthy Georgia
Connecting Georgia

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
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)
- HealthHIE 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 (SCHIEX)
- 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 care\(^1\)
• 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 ranges\(^1\)
- 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 results\(^2\)
- 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

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)
### Test Result Transmission Methods

#### In-house–performed test results

<table>
<thead>
<tr>
<th>Method</th>
<th>No. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic: instrument to LIS to EHR</td>
<td>261 (61.8)</td>
</tr>
<tr>
<td>Manual entry in LIS; electronic transmission to EHR</td>
<td>140 (33.2)</td>
</tr>
<tr>
<td>Electronic transmission from middleware to EHR</td>
<td>18 (4.3)</td>
</tr>
<tr>
<td>Manual entry in EHR</td>
<td>3 (0.7)</td>
</tr>
</tbody>
</table>

#### Reference laboratory performed test results

<table>
<thead>
<tr>
<th>Method</th>
<th>No. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic: reference laboratory to LIS to EHR</td>
<td>128 (84.8)</td>
</tr>
<tr>
<td>Manual entry in LIS and electronic transmission to EHR</td>
<td>11 (7.3)</td>
</tr>
<tr>
<td>Scanned, copy/paste, etc, into EHR</td>
<td>10 (6.6)</td>
</tr>
<tr>
<td>Electronic: reference laboratory to EHR</td>
<td>1 (0.7)</td>
</tr>
<tr>
<td>Manual entry in EHR</td>
<td>1 (0.7)</td>
</tr>
</tbody>
</table>
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
### Patient Profile: Labs

#### Demoski, Helen

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

#### Lab Results

**BMET**
- **BUN:** 26
- **CL:** 104
- **CO2:** 26
- **K:** 4.3
- **NA:** 136

**CBC**
- **HCT:** 26.5
- **Hgb:** 10.2
- **WBC:** 16.6

**CHEM12**
- **BUN:** 20
- **K:** 4.4

**COMP METABOLIC PNL**
- **BUN:** 26
- **CO2:** 26

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**Legend**

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

**Panel Shortcuts**

- BMET
- CBC
- CHEM12
- COMP METABOLIC PNL
- LYSOCR

**Reports**

- First Cols
- Prev Cols
- Shift Cols
- Next Cols
- Last Cols

Switch to Print View
### Patient Profile: Labs

#### Labs

**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
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BUN</td>
<td>✔</td>
<td>H</td>
<td>26</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CL</td>
<td></td>
<td></td>
<td>104</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>CO2</td>
<td></td>
<td></td>
<td>26</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>K</td>
<td></td>
<td></td>
<td>4.3</td>
<td>4.3</td>
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<td></td>
</tr>
<tr>
<td>NA</td>
<td></td>
<td>L</td>
<td>136</td>
<td>L</td>
<td>136</td>
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#### CBC
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</thead>
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<td>L</td>
<td>28.6</td>
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# Patient Profile: Lab Reports

**Demoski_changed, Helen**

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

## CBC

<table>
<thead>
<tr>
<th>Acuity</th>
<th>Type</th>
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<th>Normal Range</th>
<th>Status</th>
<th>Date</th>
<th>Comment</th>
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</thead>
<tbody>
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<td>%</td>
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<tr>
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<td>g/dL</td>
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<td>F</td>
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</tr>
<tr>
<td>H</td>
<td>WBC</td>
<td>16.6</td>
<td>k/mm³</td>
<td>4.0-10.5</td>
<td>F</td>
<td>11/5/2013 23:32:00</td>
<td></td>
</tr>
</tbody>
</table>

## BMET

<table>
<thead>
<tr>
<th>Acuity</th>
<th>Type</th>
<th>Value</th>
<th>Units</th>
<th>Normal Range</th>
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<tr>
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<td>8.2</td>
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<tr>
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<tr>
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<td>mEq/L</td>
<td>127-140</td>
<td>F</td>
<td>11/5/2013 23:32:00</td>
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</tbody>
</table>
Patient Profile: Lab Reports
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.