Overview of the Georgia Cancer Quality Information Exchange

Department of Community Health
HIT Town Hall Meeting

November 4, 2010

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Hamilton Jordan 1944 – 2008
The Georgia Cancer Coalition

**Mission:** Reduce the number of cancer-related deaths in Georgia

**Goals:**
- Prevent cancer and detect existing cancers earlier
- Provide quality care for all Georgians with cancer
- Establish ongoing, collaborative processes for addressing cancer data and metrics issues in Georgia
- Build Georgia’s reputation as a destination site for cancer patients, biotechnology, and biomedical companies in the southeastern United States
- Generate a combination of state, federal and private funds to support the fight against cancer
Key Statewide Initiatives

The Georgia Cancer Coalition

Georgia Center for Oncology Research and Education [GaCORE]

NCCCP Pilot Alliance Partner

Distinguished Cancer Clinicians and Scientists

Bio Repository Alliance of Georgia [BRAG-Onc]

Regional Cancer Coalitions of Georgia

The Georgia Cancer Quality Information Exchange [The Exchange]

State Comprehensive Cancer Plan

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In 2005, the Institute of Medicine released its report “Assessing the Quality of Cancer Care: An Approach to Measurement in Georgia”. The report contained 52 quality measures developed by an independent panel of scientific experts for the purposes of:

- Gauging Georgia’s progress in improving the quality of cancer care
- Closing the gap between what is known and what is practiced in cancer care
- Identifying benchmarks for achieving the goals of the GCC
- Guiding policy and prioritize public and private investments
- Quantifying economic, geographic, racial and ethnic disparities in cancer care in Georgia

The IOM Report suggested sources of data, but did not reach conclusions as to collection methods or availability of data.
Measuring Progress, Motivating Change

“The Exchange” facilitates the design, access and retrieval of clinical information and public health data for the purposes of measuring the quality of cancer care, enhancing adherence to standards of care, and improving patient-centered care and outcomes through process change.
The Exchange Quality Metrics

Risk & Prevention
Treatment & Early Detection
Diagnosis & Staging
Treatment & Palliation

Breast
Colorectal
Lung
Prostate
All Cancers

The Exchange 52 Measures

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# The Exchange Dashboard – IOM Quality of Care Indicators

<table>
<thead>
<tr>
<th>Prevention</th>
<th>Screening &amp; Early Detection</th>
<th>Diagnosis and Staging</th>
<th>Treatment &amp; Palliation</th>
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<tbody>
<tr>
<td>3-1 Adult Smoking Rate</td>
<td>4-1 Breast Cancer Screening Rate</td>
<td>5-1 Monthly Breast Cancer Biopsy</td>
<td>6-13 Deaths in Hospice</td>
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<tr>
<td>3-2 Adolescent Smoking Rate</td>
<td>4-2 Colorectal Cancer Screening Rate</td>
<td>5-2 Needle Biopsy for Breast Cancer</td>
<td>6-14 Hospice Length of Stay</td>
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<tr>
<td>3-3 Advice to Quit Smoking</td>
<td>4-3 Early Stage Breast Cancer Diagnosis</td>
<td>5-3 Clean Margins Breast Conserving Surgery</td>
<td>6-15 Breast Cancer Survival Rates</td>
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<tr>
<td>3-4 Pharmacotherapy Offered</td>
<td>4-4 Advanced Stage Breast Cancer Diagnosis</td>
<td>5-4 Hist Assessment Breast Cancer</td>
<td>6-16 Colorectal Cancer Survival Rates</td>
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<td>3-5 Adult Obesity Rate</td>
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<td>5-5 Hist Assessment Colorectal Cancer</td>
<td>6-17 Lung Cancer Survival Rates</td>
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<td>3-6A Cancer Incidence Count (All Sites)</td>
<td>5-6 Path Compliance for Specimens</td>
<td>5-7 Pathology Reports for Breast Cancer</td>
<td>6-18 Prostate Cancer Survival Rates</td>
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<td>3-6A All Cancers Incidence Rate</td>
<td>5-8 Pathology Reports for Colorectal Cancer</td>
<td>5-9 Pathology Reports for Lung Cancer</td>
<td>6-19 Breast Cancer Mortality Rate</td>
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<td>5-11 Breast Cancer Staged Before Treatment</td>
<td>6-20 Colorectal Cancer Mortality Rate</td>
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<td>3-7 Breast Cancer Incidence Rate</td>
<td>5-12 Colorectal Cancer Staged Before Treatment</td>
<td>5-13 Lung Cancer Staged Before Treatment</td>
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<td>5-14 Prostate Cancer Staged Before Treatment</td>
<td>5-13 Lung Cancer Staged Before Treatment</td>
<td>6-22 Prostate Cancer Mortality Rate</td>
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<td>3-8 Colorectal Cancer Incidence Rate</td>
<td>5-15 Lung Cancer Incidence Rate</td>
<td>5-14 Prostate Cancer Staged Before Treatment</td>
<td>6-23 All Cancers Mortality Rate</td>
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<td>3-9A Lung Cancer Incidence Count</td>
<td>5-15 Lung Cancer Incidence Rate</td>
<td>5-16 Prostate Cancer Incidence Rate</td>
<td>6-24 Colonoscopy After Treatment</td>
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<td>3-9 Lung Cancer Incidence Rate</td>
<td>5-17 Prostate Incidence Rate</td>
<td>5-16 Prostate Cancer Incidence Rate</td>
<td>6-25 Colonoscopy After Treatment</td>
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<td>3-10A Prostate Cancer Incidence Count</td>
<td>5-18 Prostate Incidence Rate</td>
<td>5-17 Prostate Incidence Rate</td>
<td>6-26 Colonoscopy After Treatment</td>
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<tr>
<td>2-10 Prostate Cancer Incidence Rate</td>
<td>5-19 Prostate Incidence Rate</td>
<td>5-18 Prostate Incidence Rate</td>
<td>6-27 Colonoscopy After Treatment</td>
</tr>
</tbody>
</table>

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Demonstration Partners

Nancy N. and J.C. Lewis Cancer & Research Pavilion  
at St. Joseph's/Candler

HARBIN CLINIC

FLOYD

Redmond Regional Medical Center

PIEDMONT HOSPITAL

COLUMBUS REGIONAL  
John B. Amos Cancer Center

Georgia Cancer
Quality Information Exchange

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Demonstration Projects - The Process

**Initial Proof of Concept:**
- Demonstrated that indicators related to breast and lung cancer can be collected at provider sites

**Repeatability:**
- Documented initial success stories, process changes, data definitions, collection, mining and reporting strategies in a Toolkit to facilitate replication

**The Exchange Dashboard:**
- Aggregated data from four provider sites to populate *The Exchange* Dashboard
- Created initial Technology Vision for one community

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Results: Improvements in Patient Care

Real Time Cancer Patient Staging
Community tumor board used EMR to stage patients in real time. Improved timeliness of staging for all patients prior to treatment. Ensured patients are on best treatment protocols for specific cancers.

Reduced Time to Biopsy
Reduced time from abnormal mammogram to biopsy from 21+ to less than 7 days

Improved Cancer Patient Pain Management
Physicians assumed their patients’ pain was well managed, but trended data reported high levels of pain. Processes were quickly redesigned and trends tracked.
Proven Potential

- Timely dissemination of current scientific/best practice knowledge
- Improved determination of diagnosis
- Prompt optimization of treatment planning
- Education to patients regarding risky behaviors
- Outreach expansion to broad populations including those with disparities

- Communication, interaction and adoption across physician specialties and sites of care
- Reduction of variations, costs and errors through standardization of work flows
- Expansion of accrual to clinical trials
- Acceleration in patient services improvements
- Adoption of best practices locally, regionally and across the state
About Medicity

- Physician founded and managed (1998)
- 100% Healthcare Focused
- All employees dedicated to the ongoing development, marketing and support of Medicity’s clinical interoperability
  - Owned, integrated clinical interoperability, care collaboration platform
  - COTS software supplier
- 700 Hospitals under 96 unique client contracts across multiple market segments
  - Health Information Exchange
  - Hospitals and Hospital Systems
- Financially Healthy
  - Profitable
  - Majority of company owned by current employees
  - Acquired 2 competitors in the last 3 years
- Relevant Industry Partnerships

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Methods of Information Exchange

- The Exchange is configured to accept information from all Members regardless of their level of automation.

Where HIS and EMR are used for data submission, the Exchange technology is “vendor agnostic.”

All data submission provides for de-identification and is HIPAA & HITECH compliant.

Members can view their own data and state-wide aggregated data; no Member will be able to see another Member’s information.
Information Exchanged

- **Patient demographics**
- **General clinical information**: service date & location; diagnosis and procedures codes; discharge date & disposition, etc.
- **Specific clinical information**: smoking status & intervention(s); height, weight, pain assessment, etc.
- **Cancer specific clinical information**: tumor site; cancer diagnosis and staging; chemotherapy, radiation therapy and surgical procedures, etc.
- **Public health information**: cancer incidence, survival and mortality rates.
Reporting Capabilities

Executive Users:
Review & highly structured navigation of content.

Primary Tools:
Portal (SharePoint) Dashboard & Reports

Clinical Users:
Review & structured navigation of content, including OLAP cubes (via Performance Point)

Primary Tools:
Portal (SharePoint) Dashboard, Reports, & Performance Point (web-access only)

Data Analysts:
Conduct detailed analysis in support of other users and/or for publication on portal.

Primary Tools:
Performance Point (desktop & web), and Excel 2007 (desktop)

Request for New Analysis

New Analysis for Publication

Request for Further Investigation

Exchange Portal
Mission & Goals

The mission of the Georgia Cancer Coalition is to reduce the number of cancer deaths in the state. In doing so, Georgia intends to become a national leader in cancer control by accelerating prevention, early detection, treatment and research.

All of the Coalition's activities, programs, and budget have been organized around five goals:

1. Prevent cancer and detect existing cancers earlier
2. Provide quality care for all Georgians with cancer
3. Establish ongoing, collaborative processes for addressing cancer data and metric issues in Georgia
4. Georgia will become a destination site for cancer patients, biotechnology, and biomedical companies in the southeastern United States
5. Generate a combination of state, federal, and private funds to support the fight against cancer
Indicator Ratio Comparison - August 2010

3-1 Adult Smoking Rate

- Actual: 21.28%
- GCC Target: 12.00%
- Nation: 18.00%
- State: 19.00%
### Analytical Chart - Monthly 3NH Indicators

**Measures:** Actual Monthly, Indicators: 3-1 - Adult Smoking Rate, Facilities GEC

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<th>R Dec '09</th>
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**Done**

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### Cancer Cases by Tumor Site for Year 2009

#### Total Cases for - Breast

<table>
<thead>
<tr>
<th>Tumor Site</th>
<th>Cancer Incidents</th>
</tr>
</thead>
<tbody>
<tr>
<td>C500 - Nipple</td>
<td>1</td>
</tr>
<tr>
<td>C501 - Central portion of breast</td>
<td>31</td>
</tr>
<tr>
<td>C502 - Upper-inner quadrant breast</td>
<td>56</td>
</tr>
<tr>
<td>C503 - Lower-inner quadrant breast</td>
<td>28</td>
</tr>
<tr>
<td>C504 - Upper-outer quadrant breast</td>
<td>157</td>
</tr>
<tr>
<td>C505 - Lower-outer quadrant breast</td>
<td>31</td>
</tr>
<tr>
<td>C506 - Axillary tail of breast</td>
<td>2</td>
</tr>
<tr>
<td>C508 - Overlapping lesion of breast</td>
<td>111</td>
</tr>
<tr>
<td>C509 - Breast NOS</td>
<td>64</td>
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<tr>
<td><strong>Total for Breast:</strong></td>
<td><strong>481</strong></td>
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</tbody>
</table>

#### Cancer Cases By Tumor Site - Breast

- **C500 - Nipple**
- **C501 - Central portion of breast**
- **C502 - Upper-inner quadrant breast**
- **C503 - Lower-inner quadrant breast**
- **C504 - Upper-outer quadrant breast**
- **C505 - Lower-outer quadrant breast**
- **C506 - Axillary tail of breast**
- **C508 - Overlapping lesion of breast**
- **C509 - Breast NOS**
### Cancer Cases by Stage of Disease for Year 2009

#### Tumor Site Group

<table>
<thead>
<tr>
<th>Tumor Site Group</th>
<th>Stage of Disease</th>
<th>Cancer Cases</th>
<th>% Stage Count</th>
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<tbody>
<tr>
<td>Colorectal</td>
<td>Not applicable</td>
<td>4</td>
<td>2.2</td>
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<td></td>
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<td>13.4</td>
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<td>Stage 0</td>
<td>4</td>
<td>2.2</td>
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<td>Stage 1</td>
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<td>Stage IIA</td>
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<td>Stage IIB</td>
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#### Group Total

<table>
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<tr>
<th>Cancer Cases</th>
<th>% Stage Count</th>
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</thead>
<tbody>
<tr>
<td>186</td>
<td>100</td>
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</tbody>
</table>

#### Cancer Cases by Stage of Disease

- Blue: Not applicable
- Orange: Not Available
- Green: Stage 0
- Red: Stage 1
- Dark Blue: Stage IIA
- Dark Gray: Stage IIB
- Light Blue: Stage IIIA
- Light Gray: Stage IIIC
- Yellow: Stage IV
- Beige: Unknown

Report: Cancer Cases Summary by Stage of Disease  
Generated for: GCC  
Execution Time: 9/24/2010 8:23:45 AM  
Page 1 of 1
From Initial Concept to Reality

Collaboration

Demonstration Partners
Statewide Technology Infrastructure
Initial Members
Additional Members

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Moving Forward:
From Infrastructure Development to Mainstream Rollout.

- Collaboration
  - 40 ACoS accredited cancer centers & their associated physician practices and networked hospitals

- Goals
  - 8 sites by mid-year 2011
  - Complete rollout by 2013

- Links to GCC programs
  - Clinical trials network
  - Bio-repository
  - NCCCP
  - Cancer researchers

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Challenges

• Deployment
  • Approximately 40 Commission on Cancer accredited programs in state, most with associated private oncology practices

• Sustainability
  • Development costs funded by state
  • State funds no longer available

• Value Proposition
  • Cancer programs have competing priorities and limited funding
  • Value lies in future with minimal short-term ROI
  • P4P incentives currently do not exist

• Implementation
  • Requires time and talent commitments from programs
Opportunities

- Quality of cancer care improvement throughout state will drive:
  - Improved survivorship experiences for patients and care givers
  - Improved palliative care services that can lead to decreases in emergency room visits and inpatient admissions
  - Long term decreases in incidence and mortality rates

- Demonstrated quality has potential to stem outmigration of cancer patients to other states

- Incorporation of The Exchange into the broader statewide HIE effort
  - Provides experience in and reporting of quality elements for meaningful use
  - Acquired technology supports EMPI, RLS, provider portal, virtual community health record and analytics
  - Provides a consistent mechanism for quality reporting for cancer cases