

Georgia Cancer Quality Information Exchange



exchange information

*Measuring Progress,
Motivating Change*

*Georgia Cancer Research Symposium
November 5, 2009*

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 Excellence [RCCEs]

The Georgia Cancer Quality Information Exchange [The Exchange]

State Comprehensive Cancer Plan

Georgia Cancer
Quality Information Exchange



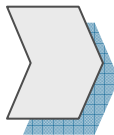
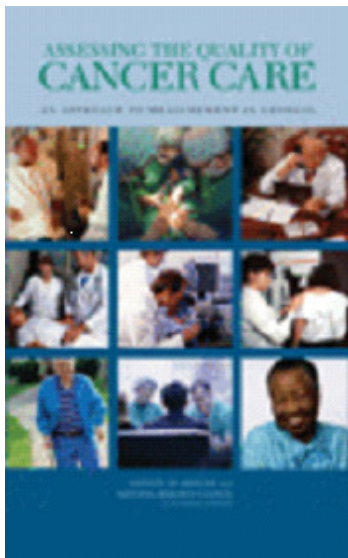


The Georgia Cancer Quality Information Exchange

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.

Exchange Dashboard – IOM Quality of Care Indicators

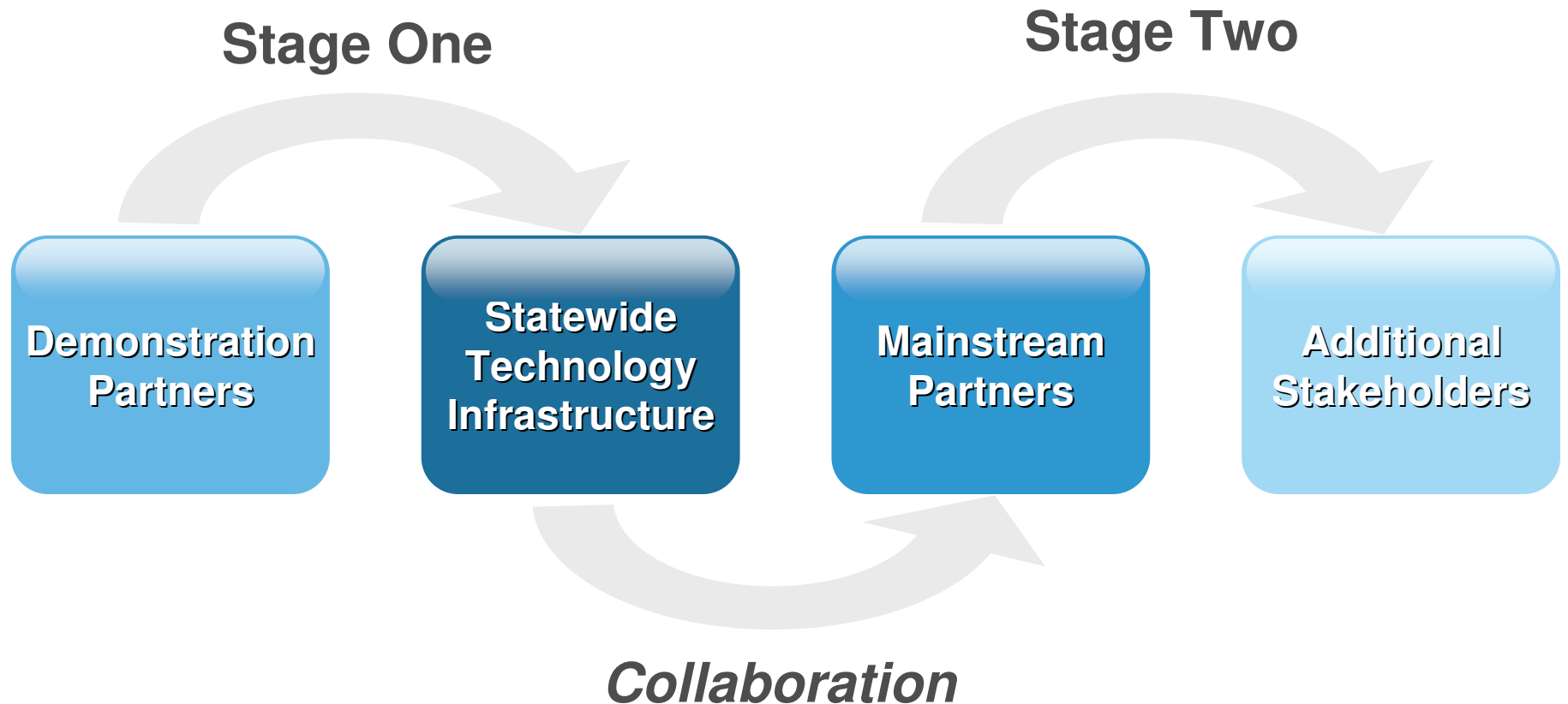


Prevention	Detection	Diagnosis	Treatment	
Adult Smoking ▲	Breast Cancer Screening ▲	Timely Breast Cancer Biopsy ▲	Participation in Clinical Trials ▲	Cancer Deaths In Hospice ▲
Adolescent Smoking ▲	Colorectal Cancer Screening ▲	Needle Biopsy For Breast Cancer ▲	Inappropriate Hormonal Therapy ▲	Hospice Length of Stay ▲
Advice to Quit Smoking ▲	Early-stage Breast Cancer ▲	Clean Margins Breast Surgery ▲	Appropriate EBRT Prostate Cancer ▲	Breast Cancer 5/10 Survival Rate ▲
Pharmacotherapy to Quit Smoking ▲	Advanced-stage Breast Cancer ▲	Hist Assessment Breast Cancer ▲	EBRT/Hormone Prostate Cancer ▲	Colorectal Cancer 5/10 Survival Rate ▲
Adult Obesity ▲	Advanced-stage Colorectal Cancer ▲	Hist Assessment Colorectal Cancer ▲	Adjuvant Radiation Breast Cons Surg ▲	Lung Cancer 5/10 Survival Rate ▲
Cancer Incidence All Sites ▲		Path Compliance for Specimens ▲	Adjuvant Hormon. Inv Breast Cancer ▲	Prostate Cancer 5/10 Survival Rate ▲
Breast Cancer Incidence ▲		Path Reports for Breast Cancer ▲	Adjuvant Chemo Breast Cancer ▲	Breast Cancer Mortality Rate ▲
Colorectal Cancer Incidence ▲		Path Reports for Colorectal Cancer ▲	Adjuvant Chemo Colorectal Cancer ▲	Colorectal Cancer Mortality Rate ▲
Lung Cancer Incidence ▲		Path Reports for Lung Cancer ▲	Mammography After Treatment ▲	Lung Cancer Mortality Rate ▲
Prostate Cancer Incidence ▲		Path Reports for Prostate Cancer ▲	Colonoscopy After Treatment ▲	Prostate Cancer Mortality Rate ▲
		Breast Cancer Stage Determined ▲	Cancer Pain Assessment ▲	All Cancers Mortality Rate ▲
		Colorectal Cancer Stage Determined ▲	Prevalence of Pain Cancer Patients ▲	
		Lung Cancer Stage Determined ▲		
		Prostate Cancer Stage Determined ▲		

What are the Metrics?

- Risk/Prevention
 - Incidence Rates
- Screening and Early Detection
- Diagnosis and Staging
- Treatment & Palliation
 - Survival & Mortality Rates
- Breast Cancer
- Colorectal Cancer
- Lung Cancer
- Prostate Cancer
- All Cancers/General

From Initial Concept to Reality





- 1 Demonstration Projects
- 2 Statewide Technology Infrastructure
- 3 Future Plans

Demonstration Projects

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

- **Definition:** A structured approach to measuring quality, improving processes associated with cancer prevention, screening, diagnosis and treatment in Georgia. Each project includes evaluation, the unique perspective of the participant and is aimed at assessing the merits of widespread use of the approaches

 **PIEDMONT
HOSPITAL**
a CENTURY of BETTER CARE

HARBIN
CLINIC

FLOYD

 **Redmond**
Regional Medical Center
The Center of Attention

- **Demonstration Partners:** Are *Thought Leaders* in the state of Georgia who are committed to working with the Georgia Cancer Coalition to improve Georgia's performance on key metrics and establish Georgia as a national leader in this effort

 **COLUMBUS
REGIONAL**
John B. Amos Cancer Center

Demonstration Projects

Initial Proof of Concept:

- Demonstrated that indicators related to breast and lung cancer can be collected at provider sites (St. Joseph/Candler)

Repeatability:

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

The Exchange Dashboard:

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

Results

- Timely dissemination of current scientific/best practice (“what we know”) knowledge
- Improved diagnosis
- Optimal treatment planning
- Education and advise regarding risky behaviors
- Screening reminders, alerts & immediate scheduling
- Outreach to broad populations including those with disparities
- Debate, interaction and alignment across physician specialties and sites of care
- Reduction of variability – which decreases costs and error – through standardization of work flows
- Expanded accrual to clinical trials through linkage to GA-CORE
- Improved patient service
- Adoption of “best practice’ locally, regionally and across the state



Improvements in Patient Care

Real Time Cancer Patient Staging

Community tumor board uses EMR to stage patients in real time to improve timeliness of staging for all patients prior to treatment to ensure patients are on best treatment protocols for specific cancers.

Reduced Time to Biopsy

Reduction of time from abnormal mammogram to biopsy
Reduced from 21+ to less than 7 days

Improved Cancer Patient Pain Management

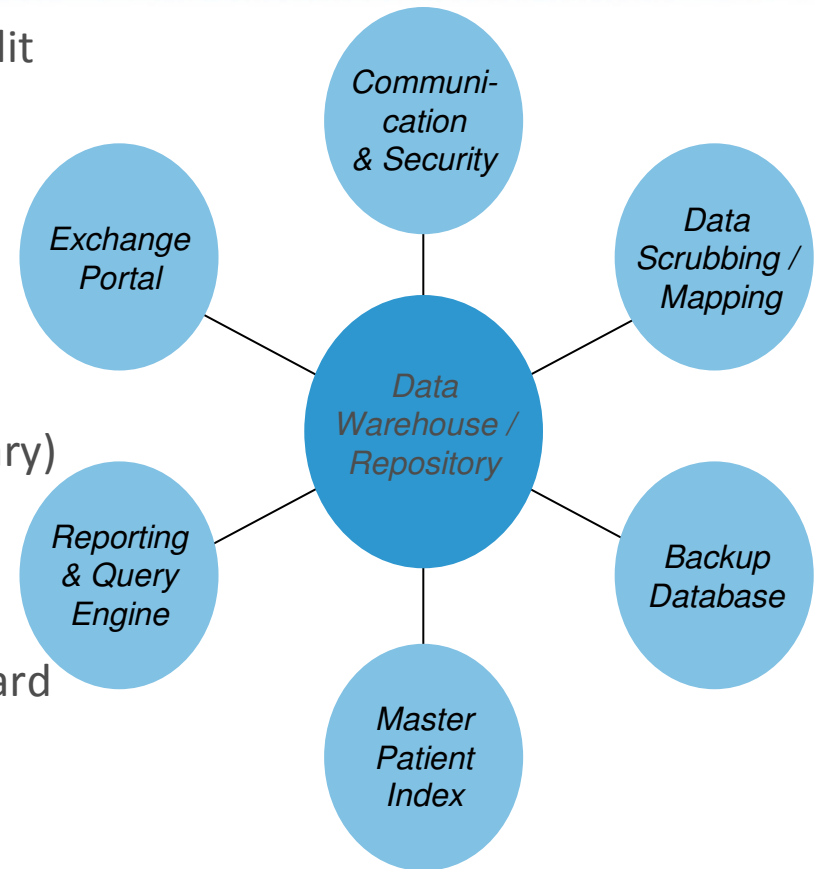
Pain is quickly becoming accepted as the fifth vital sign. Physicians assumed their patients' pain was well managed. Trended data reported high levels of pain, processes were quickly redesign and trends



- 1 Demonstration Projects
- 2 Statewide Technology Infrastructure
- 3 Future Plans

Technology Components – *The Exchange*

- Security technology for data access controls, audit trails and protection of patient identifiers and enabling compliance with HIPAA
- Web Portal Software for Data Collection and Upload
- Master Patient Index Software for common patient aggregation
- Data normalization tools (including data dictionary) to combine data from disparate sources
- Data warehouse and analytical database
- Data analytical tools
- Data reporting tools including executive dashboard
- Technical Infrastructure
 - Communication servers
 - Data acquisition and staging servers
 - Data warehouse servers
 - Analytics software servers
 - Web presentation servers
 - Disaster recovery and backup



Proof-Of-Concept – Phased Approach

Phase I: Design

4-6 weeks

- Technical assessment of Proof of Concept Exchange Members
- Interface design
- Security design
- Dashboard design
- Reporting requirements
- Detailed planning for phases II and III

Phase II: Build

3-6 months

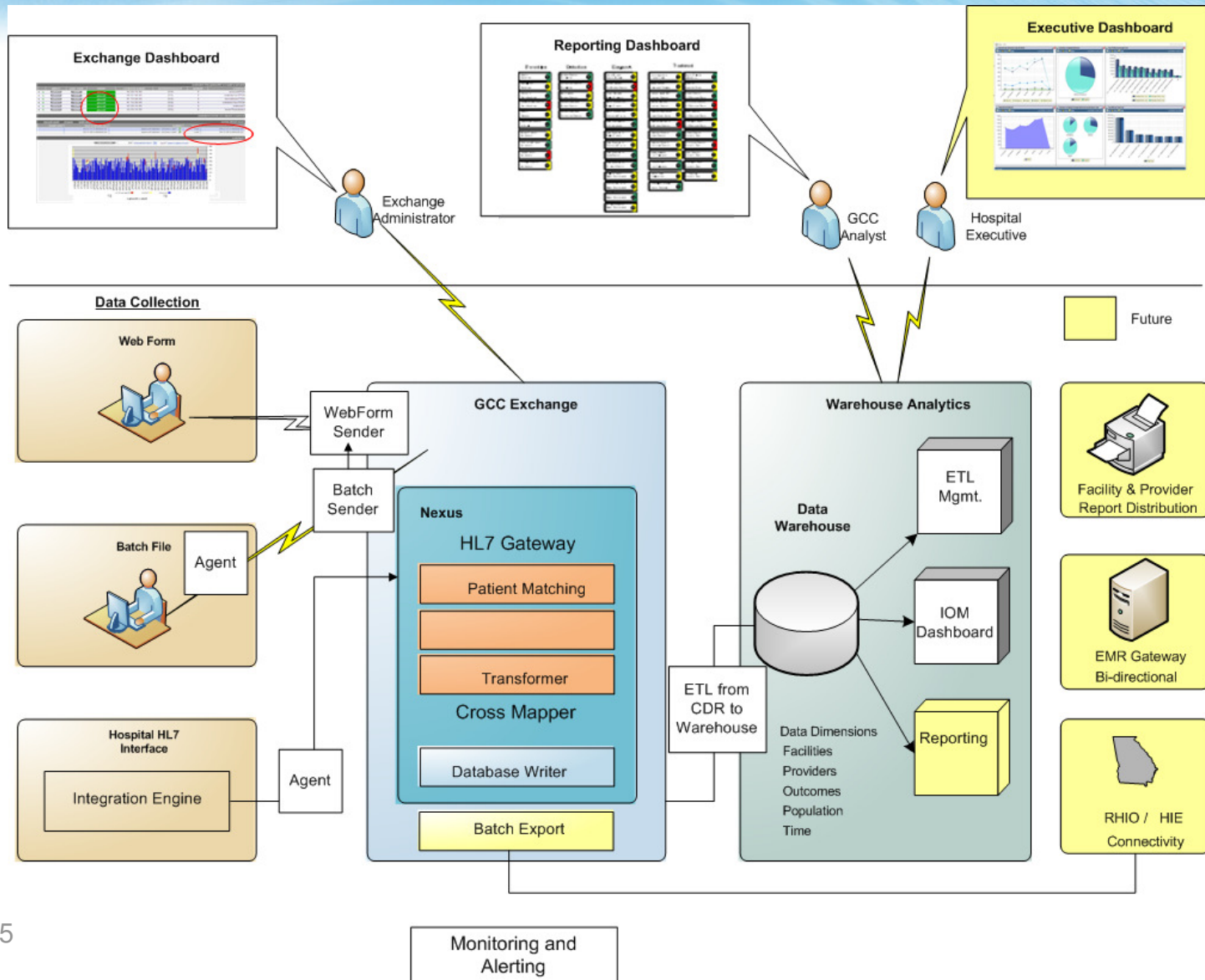
- Data Center hardware and software implementation
- Build and test interfaces
- Build and test data entry functions for manual sites and public health data
- Set up/modify Cancer Data Analytics Warehouse
- Build and test data loading routines
- Build and test data aggregation
- Build and test Master Patient Index
- Build and test patient de-identification/re-identification
- Build and test Dashboard and Reports

Phase III: Deploy

3-4 months

- Production mode
- EMR interface feeds
 - Manual data entry
 - Flat file transfer
- “Live” Dashboard with:
- Drill-down capability
 - Trending

POC Architecture and Data Flow



Exchange Portal – for GCC

The image shows two overlapping screenshots of the Georgia Cancer Quality Information Exchange (GCC) portal. The top screenshot displays the home page with the following content:

- Header: Georgia Cancer Quality Information Exchange and GEORGIA CANCER COALITION logo.
- Navigation: HOME, GCC, EXCHANGE MEMBERS, ADMIN.
- Search: Search bar with a magnifying glass icon.
- Breadcrumbs: You are here: Home.
- Administrator Account | Logout
- External Links: Georgia Cancer Coalition.
- Welcome to the Georgia Cancer Coalition Portal.
- Mission & Goals: The mission of the Georgia Cancer Coalition is to reduce the number of cancer deaths in the state. In so doing, 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.

The bottom screenshot shows the same portal with the 'GCC' menu item expanded into a dropdown menu:

- HOME
- GCC**
- EXCHANGE MEMBERS
- ADMIN

The dropdown menu items are:

- Data Submission
- Reports
- New User Enrollment
- Indicator Dashboard
- Nexus Manager
- Encounter Level
- Patient Level
- Summary Level
- Population Data
- Quality Data
- Benchmark Data
- Mortality Rates

Footer: HOME | GCC | EXCHANGE MEMBERS. Copyright 2009 by Georgia Cancer Coalition, Powered by Medicity.

- Administrative (GCC)
 - Monitor Data Traffic
 - Input Standards/Benchmarks
 - Input Summary Public Health Data
 - Perform Summary Analyses

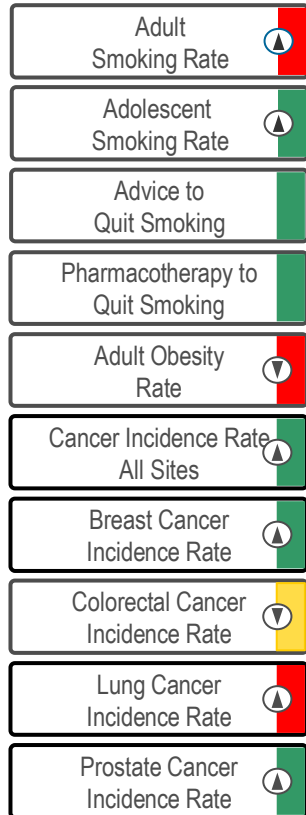
Exchange Portal – for Members

The top screenshot shows the 'Home' page of the Georgia Cancer Quality Information Exchange. It features a navigation bar with 'HOME', 'GCC', 'EXCHANGE MEMBERS', and 'ADMIN'. Below the navigation bar, there is a 'Welcome to the Georgia Cancer Coalition Portal' section with a 'Mission & Goals' section and a list of goals. The bottom screenshot shows the 'Exchange Members' page, which lists members like Harbin Clinic, Piedmont Hospital, and J.B. Amos Cancer Center. A dropdown menu for 'Exchange Member Resources' is open, showing options like 'Data Submission', 'Reports', 'New User Enrollment', 'Relink Pseudonymized Patient', 'My Dashboard', 'Nexus Manager', 'Encounter Level', 'Patient Level', 'Summary Level', 'Survival Rates', and 'Pathology Quality Control'.

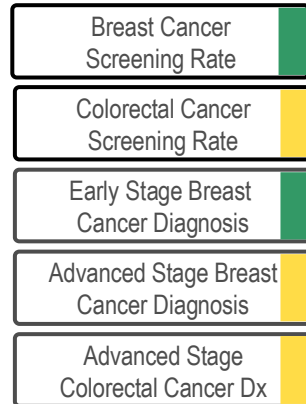
- Administrative
 - Monitor Data Submissions
 - Perform Corrections
- Data Entry
 - Upload Batch Files (e.g. Excel Spreadsheets)
 - Manual Data Entry for Sampled Indicators
- Clinical
 - Access to Dashboard
 - Standardized Reports
 - Perform Ad Hoc Analyses

The Exchange: *Measuring progress, Motivating change*

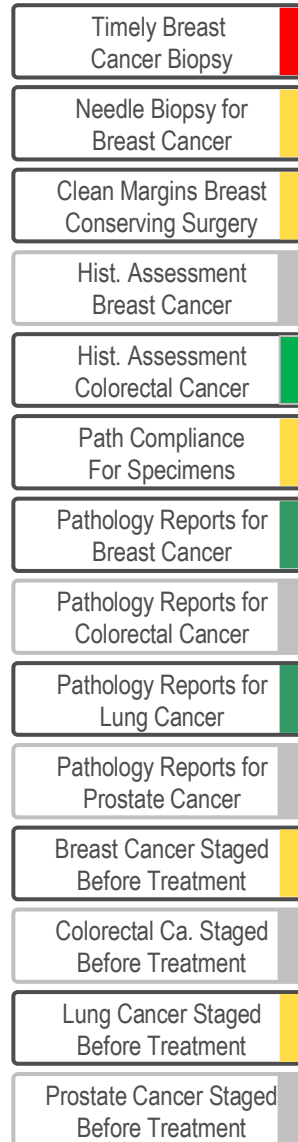
Prevention



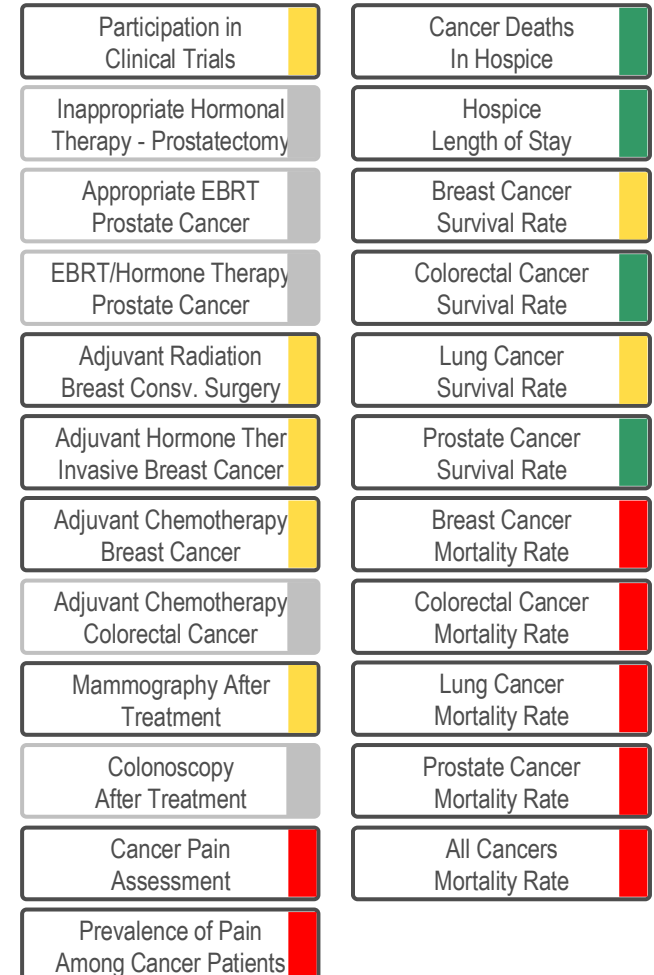
Screening & Early Detection



Diagnosis & Staging



Treatment & Palliation

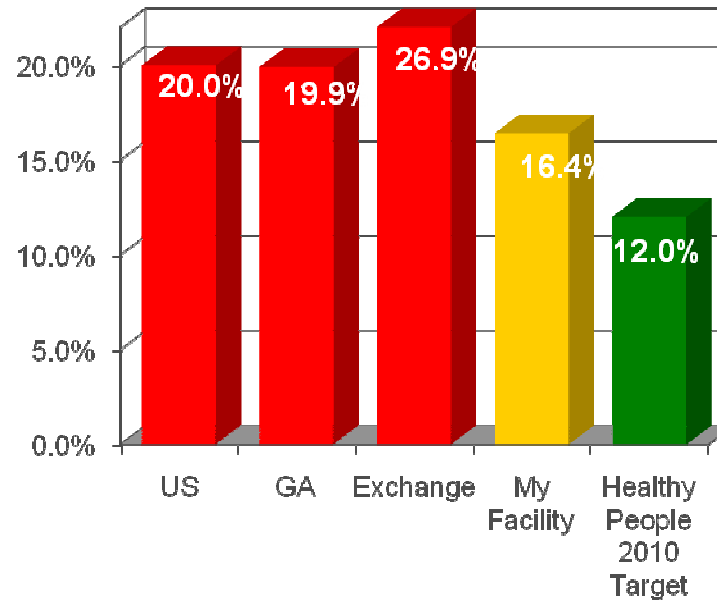


Key:

- Currently available Data
- Future Demonstration Projects
- Better than National rate/Target
- Equal to or slightly worse than National rate/Target
- Significantly worse than National rate/Target
- Improving
- Steady
- Declining
- ▲
- ▼

The Exchange: *measuring progress.... motivating change*

3-1 Adult Smoking Rate



Prevention

- Adult Smoking Rate
- Adolescent Smoking Rate
- Advice to Quit Smoking
- Pharmacotherapy to Quit Smoking
- Adult Obesity Rate
- Cancer Incidence Rate All Sites
- Breast Cancer Incidence Rate
- Colorectal Cancer Incidence Rate
- Lung Cancer Incidence Rate
- Prostate Cancer Incidence Rate

alliation

- Cancer Deaths In Hospice
- Hospice Length of Stay
- Breast Cancer Survival Rate
- Colorectal Cancer Survival Rate
- Lung Cancer Survival Rate
- Prostate Cancer Survival Rate
- Breast Cancer Mortality Rate
- Colorectal Cancer Mortality Rate
- Lung Cancer Mortality Rate
- Prostate Cancer Mortality Rate
- All Cancers Mortality Rate

Home

Next

More

Colorectal Ca. Staged Before Treatment

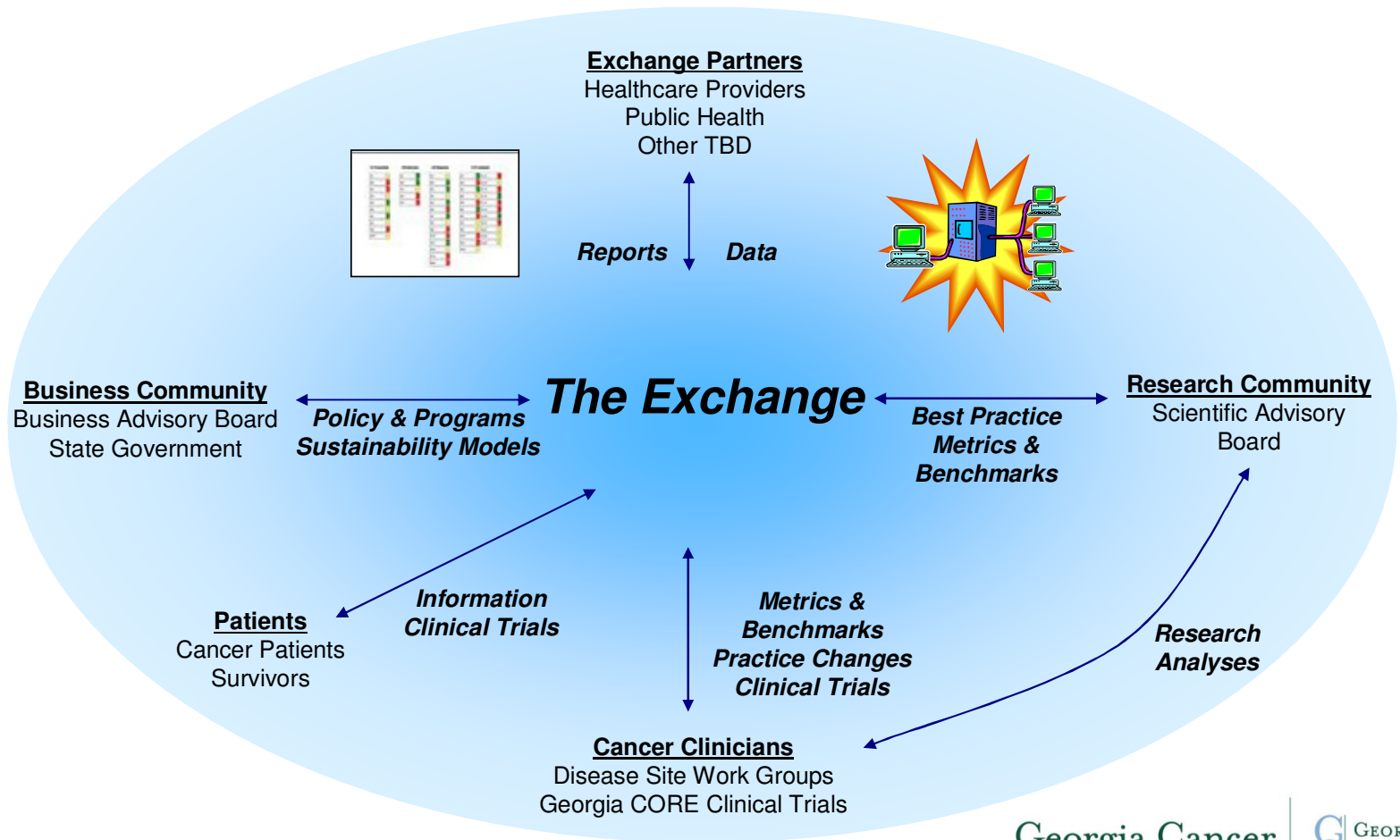
Lung Cancer Staged Before Treatment

Prostate Cancer Staged Before Treatment

Prevalence of Pain Among Cancer Patients



The Vision





Implications

- One disease (cancer), one state (Georgia), and one application (quality metrics) can serve as a “stalking horse” for other diseases, states/nations and health information exchanges
- A statewide quality dashboard can incorporate:
 - Electronic medical records
 - Evidence based medicine
 - Quality measurement
 - Clinical decision support
- Lessons can be learned through:
 - Successful demonstration projects
 - Development of a statewide technology infrastructure
- Successes allow us to bridge the gap between scientific research & delivery of care
- Innovative approaches exist for building momentum, collaboration and success!

The background is a vibrant blue with a dynamic, abstract design. It features several large, semi-transparent arrows pointing in different directions, creating a sense of movement and flow. The overall aesthetic is modern and technological, with a focus on light and shadow effects.

exchange information

Discussion