Ensuring the Quality of Health Care:

Application of Concepts to Cancer Screening

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Panel Session on "Policy Transforming Practice: Access, Quality, and Costs of Health Care"

Dialogue for Action on Cancer Screening: Hitting the Targets

Baltimore, MD

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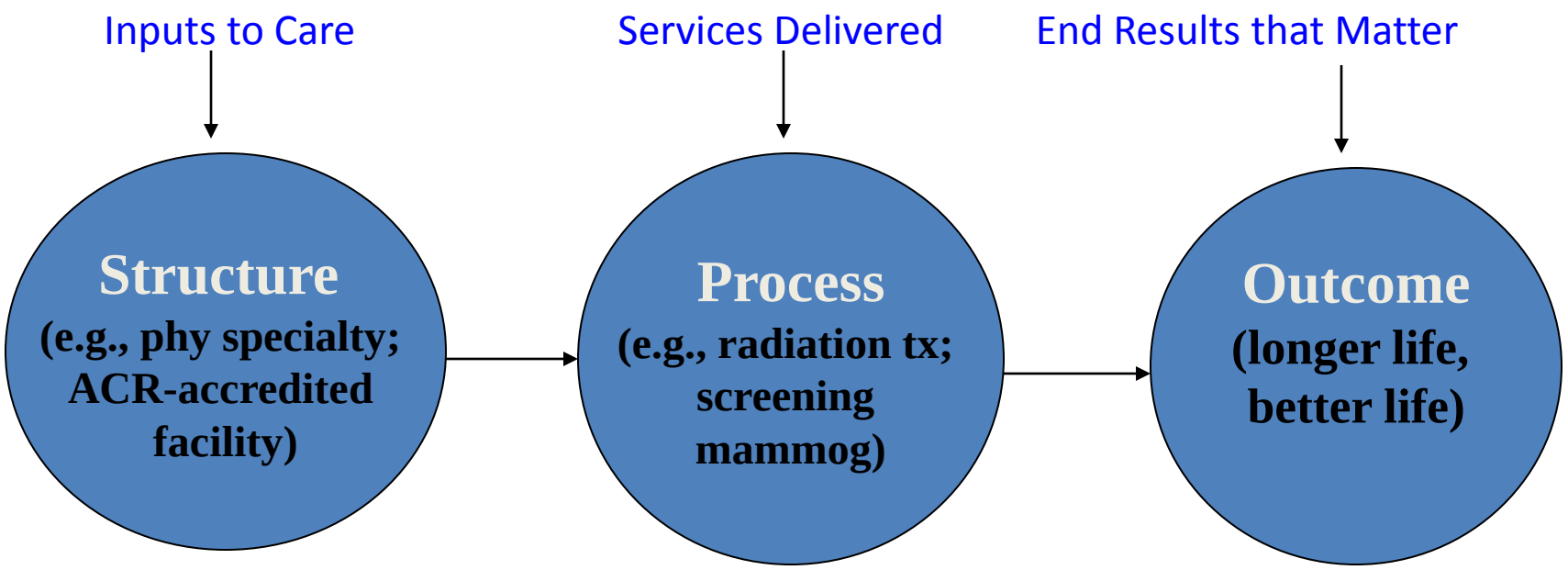
Defining "Quality" Cancer Care

- **Quality of Care** is the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge. (IOM, 1990 *)

- This means
  - -- provision of evidence-based care across the cancer continuum
  - -- in a timely and technically competent manner
  - -- with good communication and cultural sensitivity
  - -- shared decision making

* Institute of Medicine. 1990 *Medicare: A Strategy for Quality Assurance*, KN Lohr, ed., Washington, D.C.: National Academy Press.

*Donabedian's Classic Framework for Assessing Quality of Care **

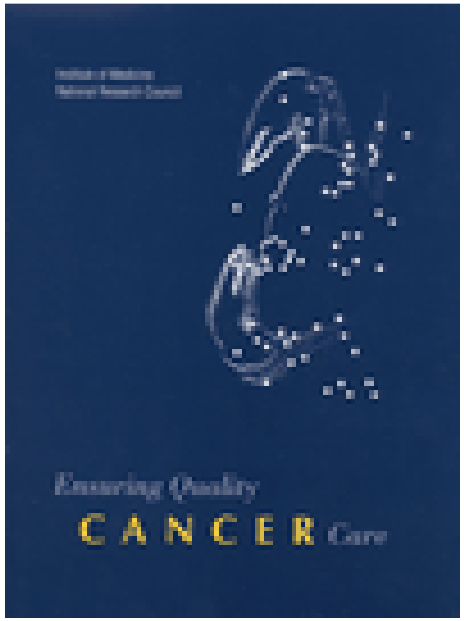


* Donabedian A. Evaluating the quality of medical care. *Milbank Mem Fund Q* 1965:44 (Suppl):166-206.

By the late 1990s, Emerging Consensus in the U.S. Cancer Research and Policy Communities:

- Far too many of the over 10 million cancer patients and survivors in the U.S. do not receive high-quality care.
- In many instances, no consensus on what constitutes "quality care"
- Even where consensus appears to exist, wide variations in practice patterns indicate significant populations disparities in receipt of quality care.

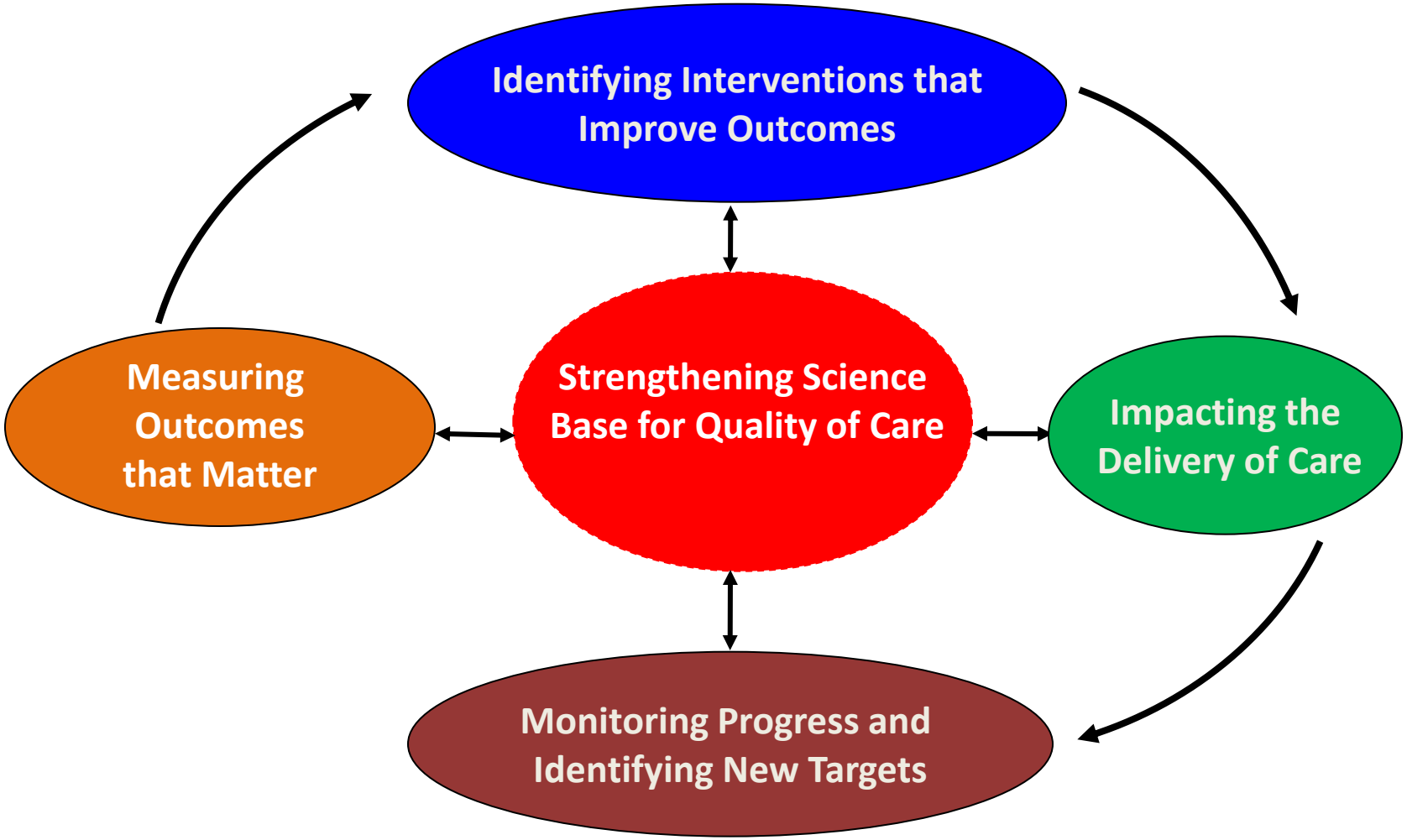
Institute of Medicine Report of 1999 *



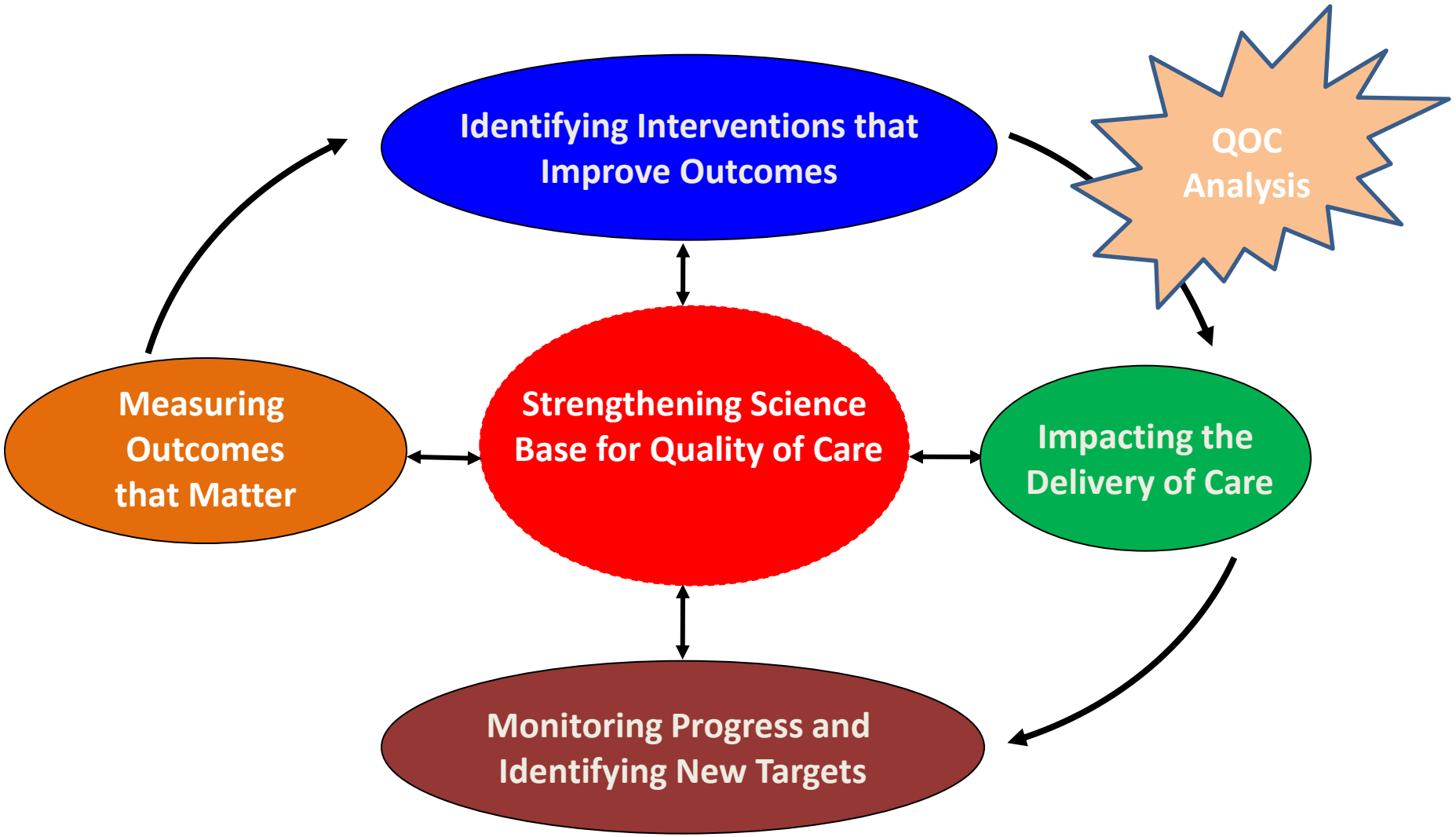
- Found significant disparities in the quality of cancer care in the United States
- Recommended that:
  - * Quality care measures be established.
  - * These measures be monitored through repeated studies.
  - * That benchmarks be established for quality improvement.
  - * Enhancing cancer registry data with additional sources on information on cancer **prevention, screening, diagnosis, and treatment** is an important pathway toward quality assessment – *and toward building a "national cancer data system"* to support a range of analyses.

* Institute of Medicine, 1999. *Ensuring Quality Cancer Care.* Eds Hewitt M and Simone JV, Nat'l Academy Press

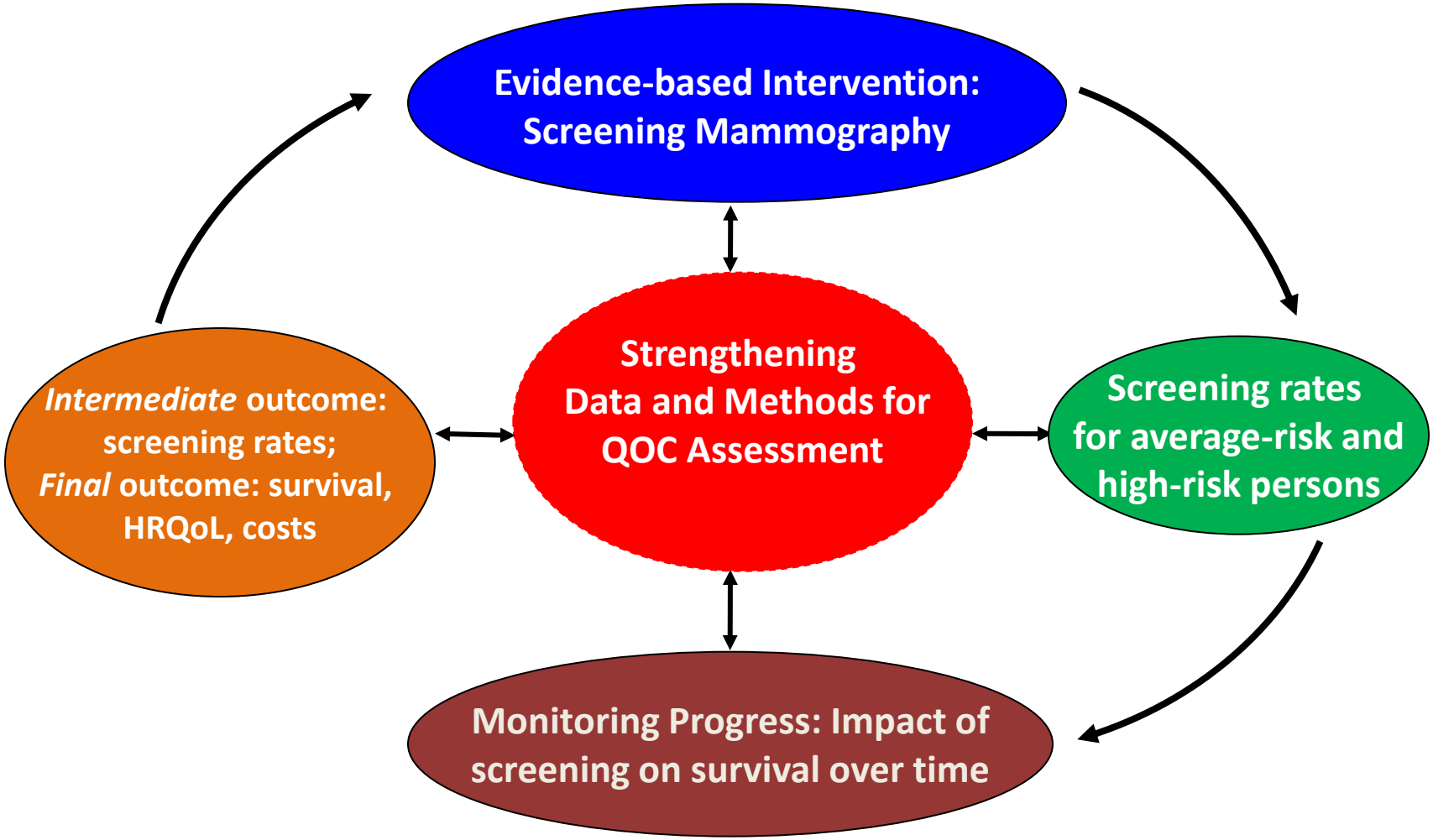
Cancer Care Quality Improvement Cycle



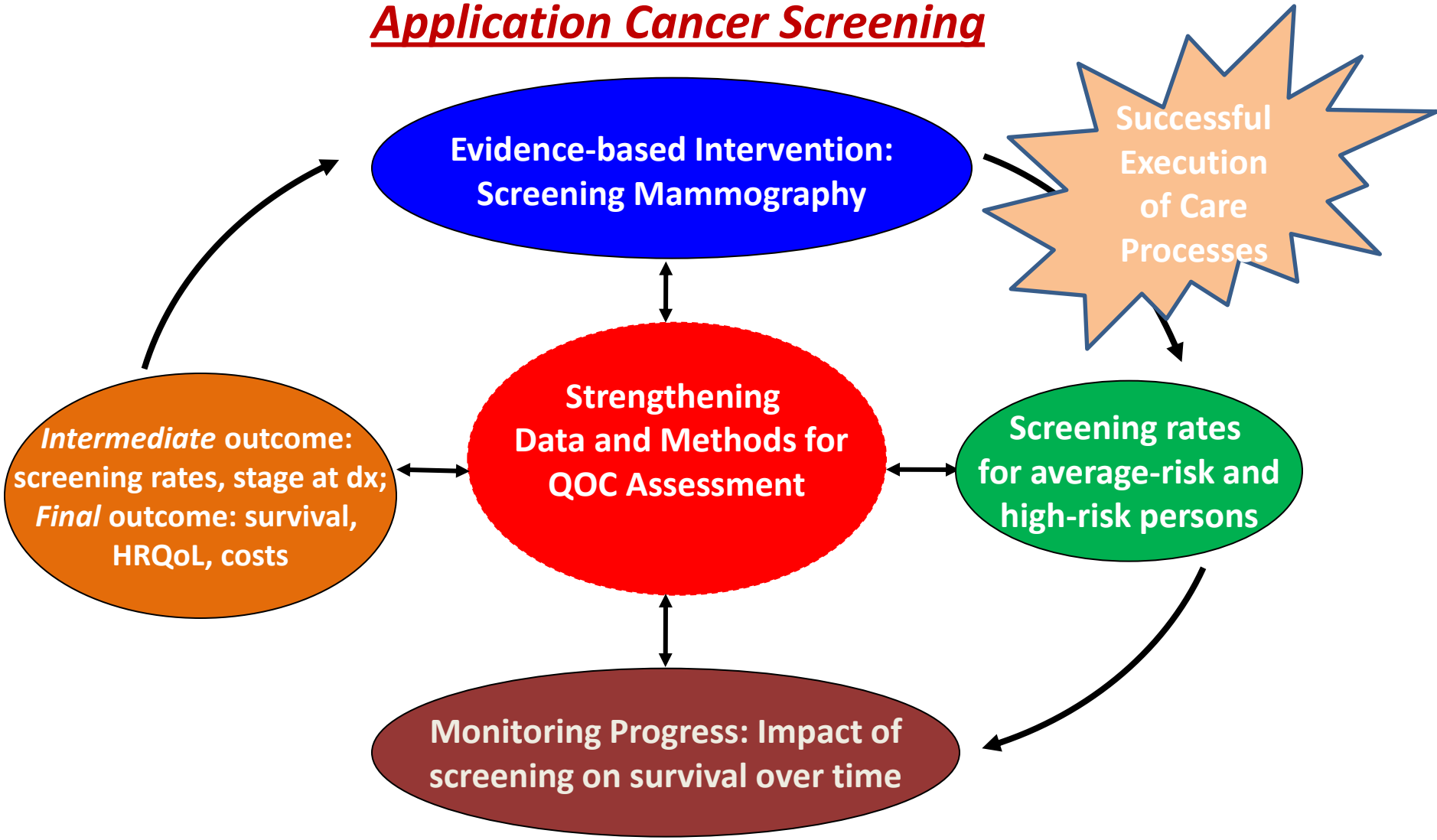
Cancer Care Quality Improvement Cycle



Cancer Care Quality Improvement Cycle:
Application Cancer Screening



Cancer Care Quality Improvement Cycle:
Application Cancer Screening



Measuring Outcomes that Matter

For Screening Mammography……

- *Potential **Benefits**:*

  - Decrease in breast cancer mortality

  - Improved quality-of-life, given detection at earlier disease stage and possibly less aggressive treatment required

- *Potential **Harms**:*

  - "Overdiagnosis" → possible tx of insignificant cancers

  - False-positive tests → additional testing & anxiety

  - False-negative tests → potential delay in cancer diag

  - Radiation-induced breast cancer

Identifying Interventions that Improve Quality

For Screening Mammography, recommendations are.....

- **American Cancer Society**

  - Women age 40 and over should have annual mammogram so long as they are in good health

  - Women at high risk (>20% lifetime risk) should get MRI and mammogram annually.

(but also.....)

- **U.S. Preventive Services Task Force**

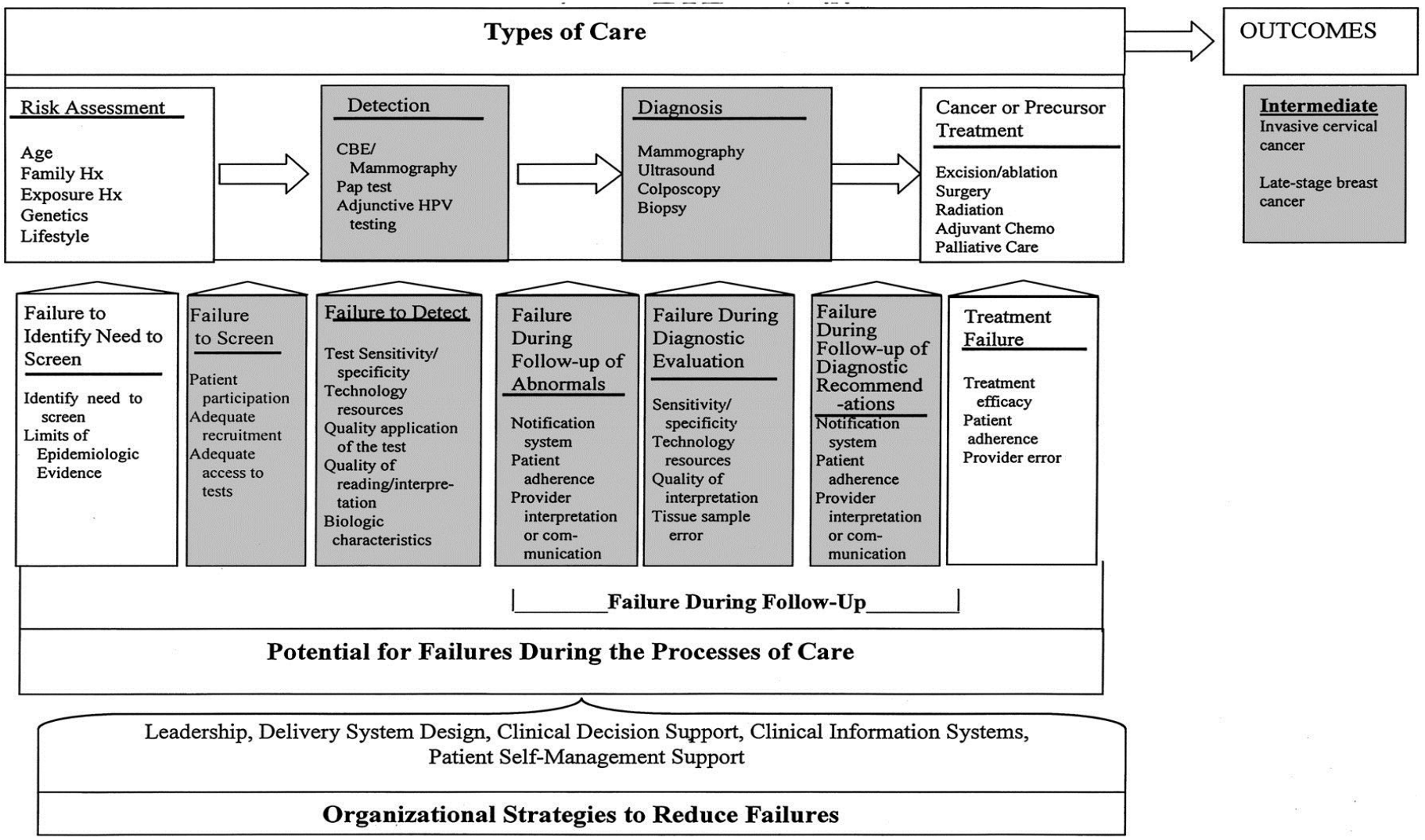
  - Women 50-74 should have biennial mammogram (Grade B rec)

  - Decision to start regular, biennial mammograms before age 50 should be an individual one, taking account of patient context and values in weighing benefits and harms (Grade C rec)

  - Insufficient evidence to judge merits of MRI or digital mammography (Grade I statement)

Successful Execution of Care Processes for Screening and Diagnosis

(And What Can Go Wrong along the Way)



Zapka J G et al. *Cancer Epidemiol Biomarkers Prev* 2003;12:4-13

AACR Cancer Epidemiology, Biomarkers & Prevention

Screening and Diagnosis Rates for Average-Risk and High-Risk Persons

For Screening Mammography (based on U.S. NHIS survey data)……

- **Average-Risk women, % screened within last 2 yrs:**
  - 68.5 (overall) *
  - 62.9 (age 40-49) *
  - 75.9 (ages 50-64) *
  - 67.1 (age 65+) *
  - 72.4 (age 50-74) **
- **Cancer Survivors** (one group of higher-risk women), **% screened in last 2 yrs:**
  - 74.2 (2008) ***
  - 75.3 (2010) ***

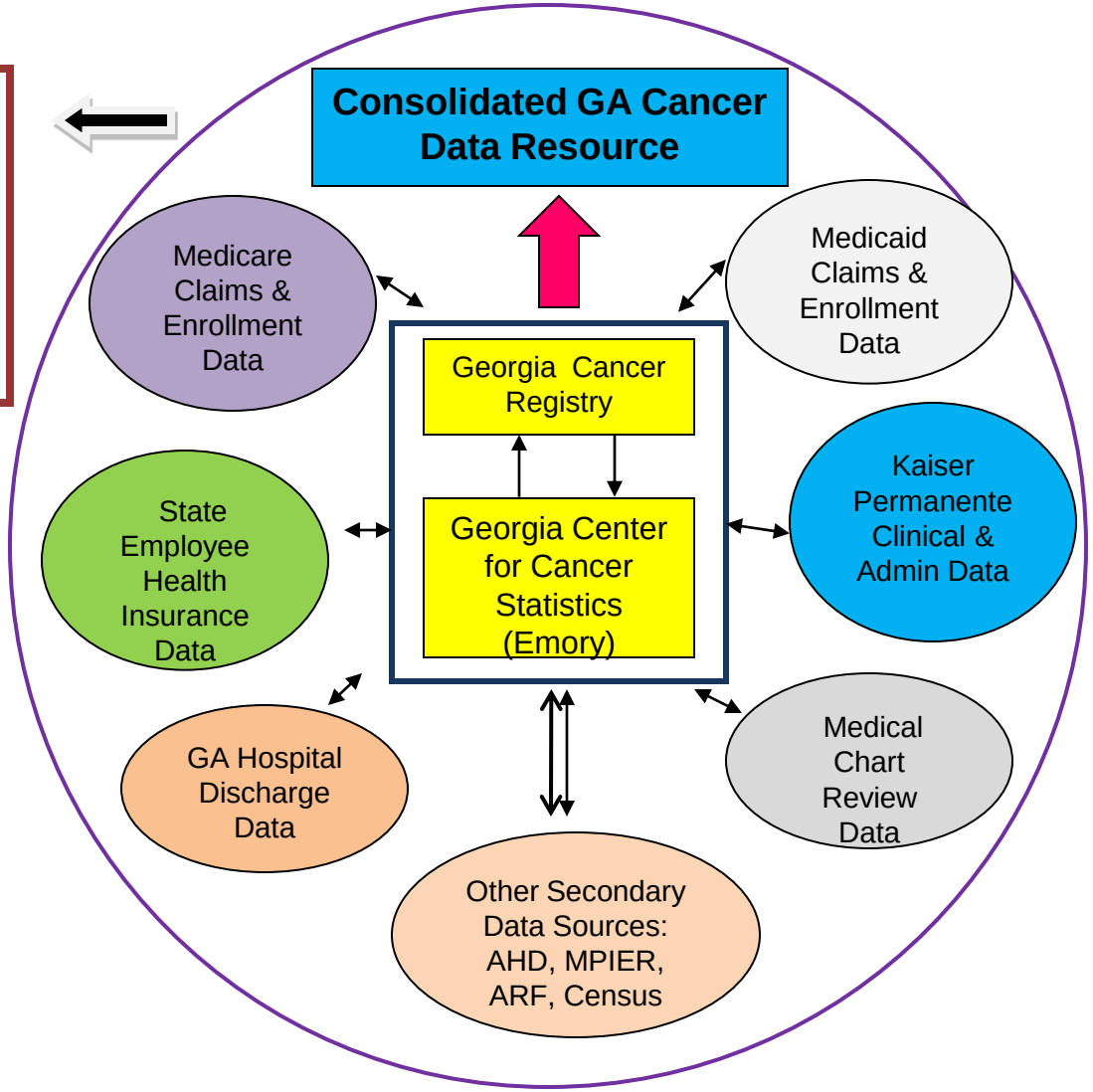
* Breen N, et al. Update on mammography trends: Comparisons of rates in 2000, 2005, and 2008. *Cancer* 2011;117(10):2209-2218.

** U.S. Centers for Disease Control and Prevention. *Morbidity and Mortality Weekly Report,* January 27, 2012.

*** Clarke TC, et al. Trends in adherence to recommended cancer screening: the U.S. population and working cancer survivors. *Frontiers in Oncology* December 12, 2012, Vol 2, Article 190 (www.frontiersin.org).

Strengthening Data and Methods for Monitoring Progress over Time: a Georgia-based Demonstration Study

Applications:
Quality of Care Assessment and Comparative Effectiveness Research



Overview of the GA Cancer Registry "Augmenting" Study

SPECIFIC AIMS

1) Link GA Cancer Registry data to multiple administrative files

2) Subject each bilateral linked data set to rigorous data quality checks

3) Apply each bilateral linked data set to quality-of-care assessment

Focus on National Quality Forum (NQF)-endorsed metrics for breast cancer and colorectal cancer. ***Further application to breast cancer surveillance screening.***

4) Design the alpha version of a "Consolidated Georgia Cancer Data Resource"

Georgia Registry would create linked, de-identified analytical data sets tailored for specific analyses by drawing selectively from one, some, or all of the administrative/clinical data files → a "linkage of linked files"

Application to Breast Cancer Surveillance Screening (Mammography) for Women Enrolled at KPG and Diagnosed with 1st Primary Breast Cancer, 2002-2005

Adherence rates for those continuously enrolled at KPG for at least 4 years post diagnosis of Stage I-III breast cancer ***at any age*** *(N=613)*

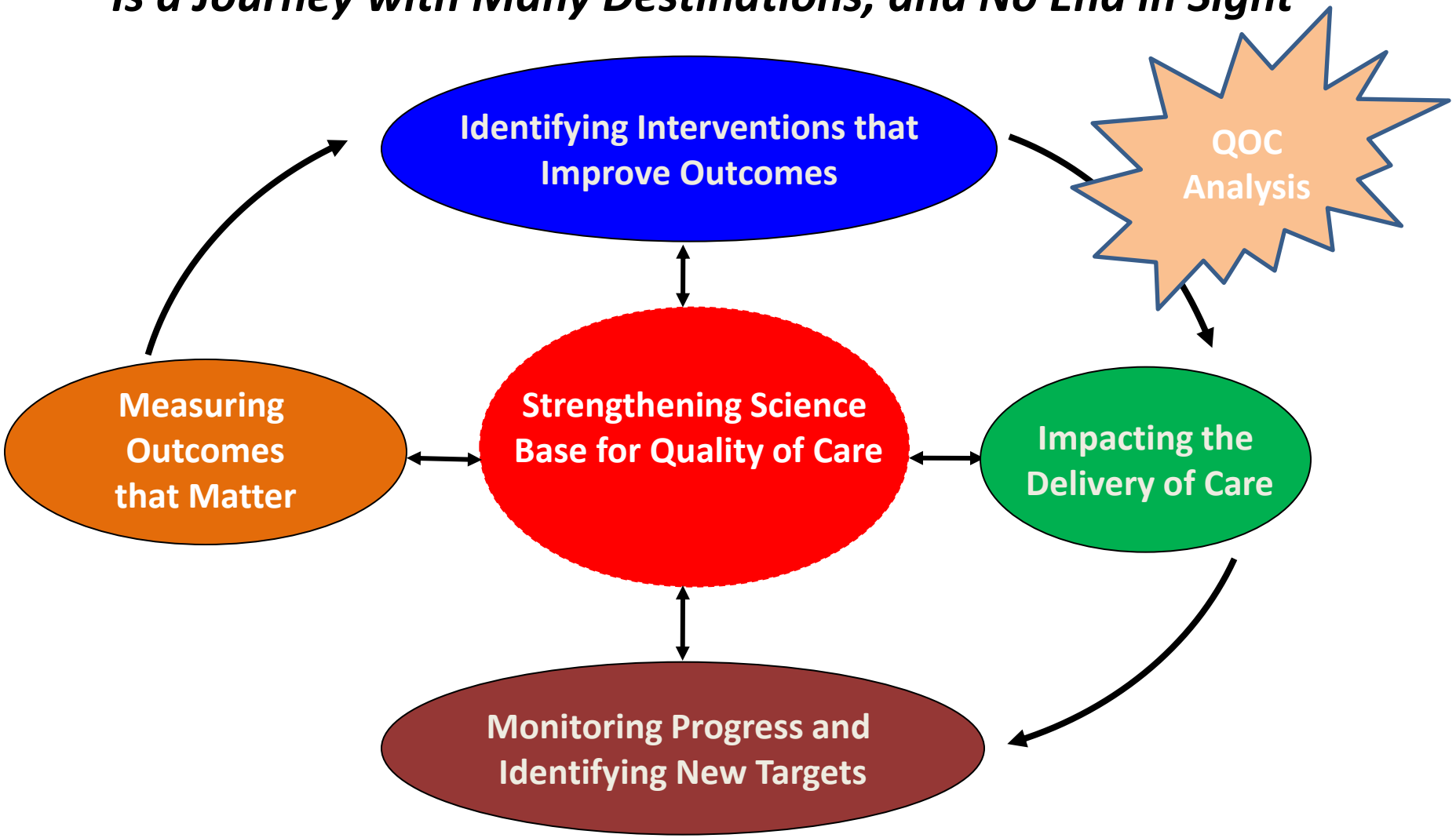
Screening Interval Since Date of Diagnosis	***% Screened***	
First 6-12 months	**60**	
In Year 2	**81**	
Within 2 years		***90***
In Year 3	***77***	
Within 3 years		***91***
In Year 4	**76**	
Within 4 years		***92***

Breast Cancer Surveillance Screening (Mammography) for Women Enrolled at KPG and Diagnosed with 1st Primary Breast Cancer at Age 45 or Younger, 2002-2005

*Adherence rates for those **thus at elevated risk for a second cancer** who were continuously enrolled at KPG for at least 4 years post diagnosis of Stage I-III breast cancer (N=154)*

Screening Interval Since Date of Diagnosis	***% Screened***	
First 6-12 months	***52***	
In Year 2	***82***	
Within 2 years		***91***
In Year 3	***61***	
Within 3 years		***92***
In Year 4	***68***	
Within 4 years		***93***

In Sum: Achieving Quality Health Care – and Cancer Screening – Is a Journey with Many Destinations, and No End in Sight



Thank you!

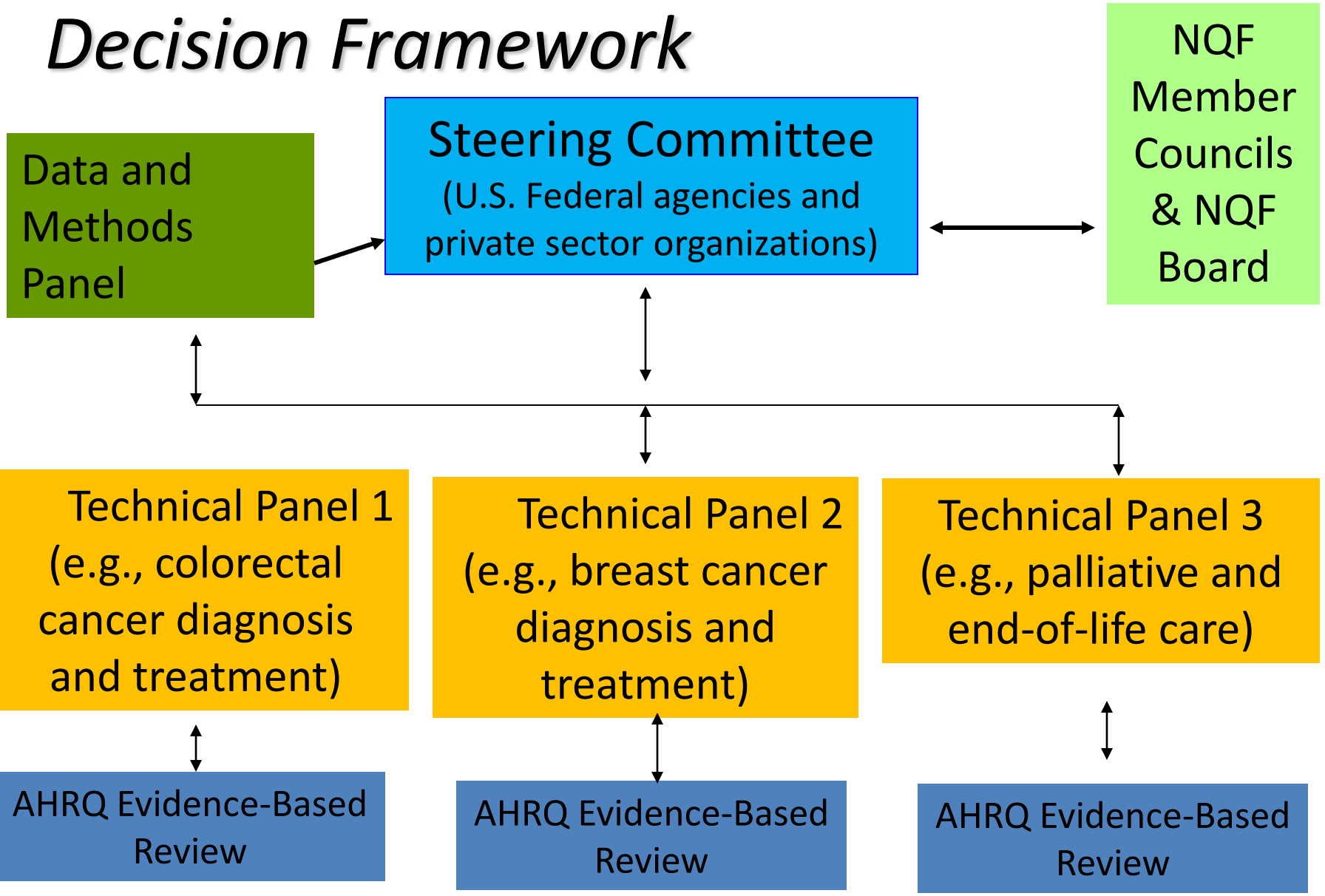
Extra Slides for Q & A

NQF Cancer Quality Measures Project

- *In 2002, **a coalition of 4 federal agencies** [NCI, Agency for Healthcare Research and Quality (AHRQ), Centers for Disease Control and Prevention (CDC), and the Centers for Medicare and Medicaid Services (CMS)] **spearheaded the creation of a public-private effort**:*
  - Convened by the non-profit ***National Quality Forum (NQF)***
  - Purpose: identify measures of cancer care quality for (1) **accountability (A)**, (2) **quality improvement (QI)**, and (3) **monitoring/surveillance (S)**.

- Driving Questions:
  - Where are the most critical quality "gaps"?
  - How can we measure and close those gaps?

NQF Cancer Quality Measures Project Decision Framework



NQF Issued the Following Consensus-based Measures (for Hospital or Systems-level Accountability Application) in April 2007…

Breast Cancer

- Radiation tx should be administered within 1 yr of dx for women under 70 receiving breast conserving surgery (A).
- Combination chemo tx should be considered or administered within 4 mos of dx for women under 70 with AJCC T1cN0M0, or Stage II or III hormone receptor negative breast cancer (A).
- Tamoxifen or third-generation aromatase inhibitor should be considered or administered within 1 yr of dx for women with AJCC T1cN0M0, or Stage II or III hormone receptor positive breast cancer (A).

NQF Measures…..(continued)

Colorectal Cancer

- Adjuvant chemo tx should be considered or administered within 4 mos of dx for patients under 80 with AJCC Stage III (lymph node positive) colorectal cancer (A).
- At least 12 regional lymph nodes should be removed and pathologically examined for resected colon cancer (QI).
- Radiation therapy should be considered or administered within 6 months of dx for patients under the age of 80 with clinical or pathological AJCC T4N0M0 or Stage III receiving resection for rectal cancer (S).

(Note: in a parallel decision process, the American Society of Clinical Oncology (ASCO) and the National Comprehensive Cancer Network (NCCN) endorsed this same measure set.)

Building the Enterprise: Early steps in Georgia……

"Using Cancer Registry Data and Other Sources to Track Measures of Care in Georgia"

- A 3-year (9/09 – 9/12), 500K grant to Emory jointly by Association of Schools of Public Health and Centers for Disease Control and Prevention, with funding provided by National Cancer Institute

- ***Overarching goals***

  - Contribute toward development of an integrated, sustainable state-level data system to support cancer outcomes research along the continuum: prevention, detection, diagnosis, treatment, survivorship, end-of-life. Initial focus: *treatment.*

  - Support state-level policy objectives (e.g., Data and Metrics objectives in new GA Comprehensive Cancer Control Plan)

Adherence to NQF Metrics (%)

(2002-2005 incident cases)

Across All Plans (Medicare, Medicaid, SHBP, Kaiser)

	Registry-based	Claims-based	Composite (either/or)
Breast Cancer			
Rad Tx after BCS	75	92	94
Chemo Tx for HR- Patients	66	76	82
Hormonal Tx for HR+ Patients	47	22	59
Colorectal Cancer			
Chemo Tx for Stage III Colon	55	72	79
Rad Tx for Advanced-stage Rectal (sample too small)	72	74	77

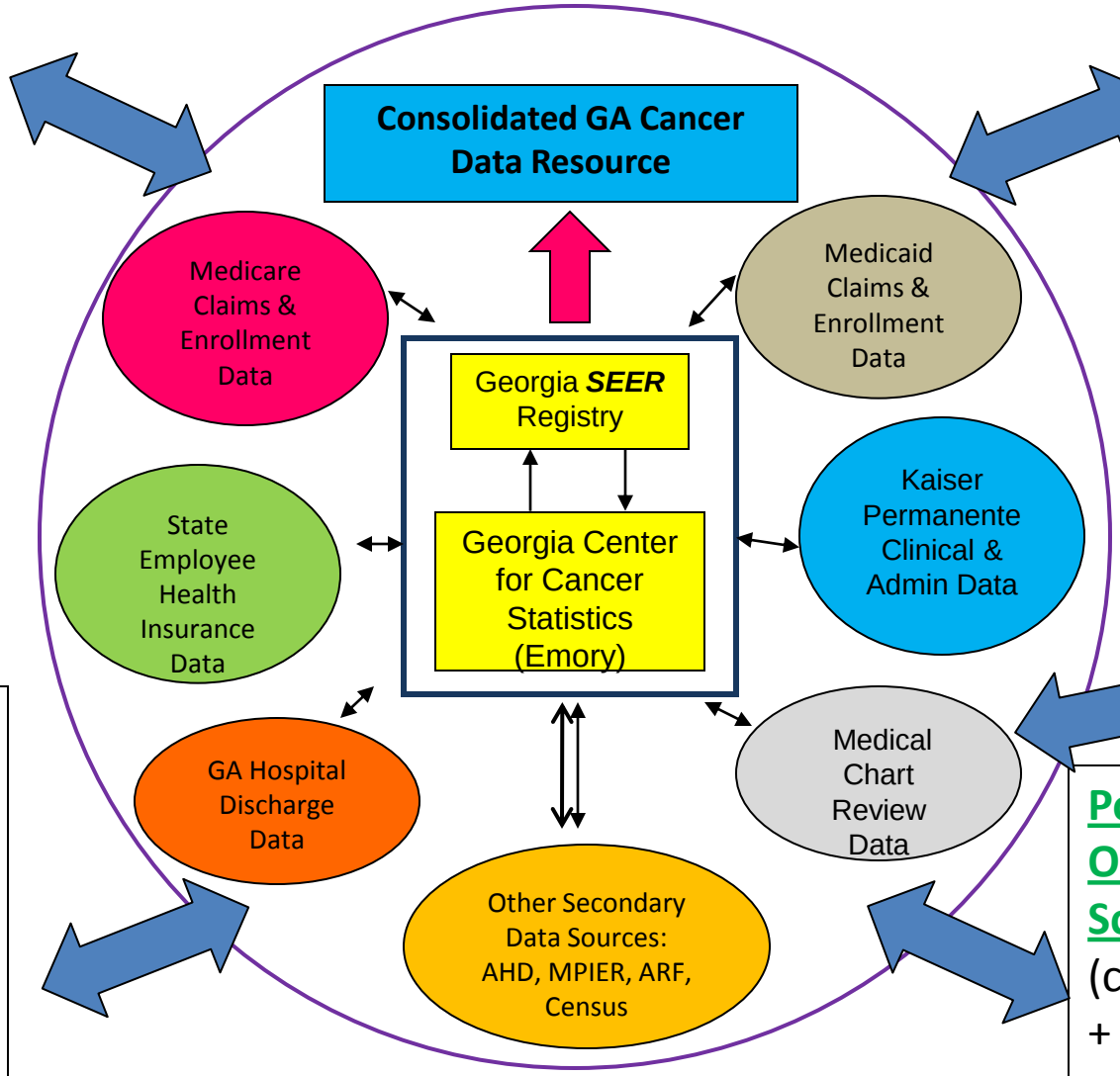
Growing the Enterprise….

Additional Clinical & Administrative Date Sources

- Other Private Payers in GA
- Oncology Practices (e.g., GA Cancer Specialists)
- Obtaining rapid access to claims files

Biospecimen Resources

- BRAG-Onc (Bio-Respository Alliance of Georgia for Oncology)
- SEER Residual Tissue Repository



Rapid Case Ascertain-ment *via* CoC's Rapid Quality Reporting System

HRQOL including ePRO

Pop-Based Data On Cancer Screening (cancer survivors + at-risk persons without previous cancer)

Project Team for the GA Data Augmenting Study

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Principal Investigator
Kathleen Adams, PhD, Emory
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Amy Chen, MD, Emory
Christopher Flowers, MD, Emory
David Howard, PhD, Emory
Douglas Roblin, PhD, Kaiser Permanente of Georgia
Kevin Ward, PhD, Emory (and Director of the GCCS and Georgia SEER Program)

<u>Consultant</u>
Cathy J. Bradley, Virginia Commonwealth University

<u>Contractors (institutional)</u>
Thomson Reuters Healthcare
Kaiser Permanente of Georgia

<u>Data Development and Exchange Agreements</u>
Georgia Department of Public Health (especially A. Rana Bayakly, director, Georgia Comprehensive Cancer Registry)
Georgia Department of Community Health, including Medicaid program and State Health Benefit Plan

Sustaining the Enterprise

What is Required?

(1) An ongoing stream of compelling cancer research and policy questions

-- Quality of care, with a heightened focus on tracking adherence to screening recommendations among insured individuals → ***the essential role of multiple third-party payer data sets in tracking screening adherence in at-risk populations under age 65***

-- Comparative effectiveness research (*and PCORI now on the scene*)

-- Economic evaluations, including cost effectiveness analysis

-- Safety & efficacy of newly approved products

(2) Partners, public and private, who either have the data or can collect the data needed to augment the registry

-- CMS (Medicare and other files, including on hospitals & physicians)

-- Medicaid and other state agencies

-- Private insurers and managed care organizations

-- Healthcare data management & analysis firms

-- Pharma & device industry

Sustaining the Enterprise

What is Required?

(3) Funding -- possible sources:

-- Federal grants & contracts (but can data systems be adequately supported simply through investigator-initiated research awards??)

-- State funding

-- Private insurers and managed care organizations

-- Industry

-- Philanthropy

(4) Successful management of administrative, legal, ethical issues*

-- Many partnerships for data linkage and ongoing use will require MOUs, Data Exchange Agreements, or other legally binding and clarifying documents.

-- Need to establish organizational platforms, and corresponding leadership & management structure, to facilitate ongoing collaboration by data partners, the sharing of information, and consensus decision making about use of linked data sets.

* Lipscomb J, Gillespie TW. State-Level Cancer Quality Assessment and Research: Building and Sustaining the Infrastructure. *Cancer J* 2011;17:246-256.