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NCI COMMUNITY CANCER CENTERS PROGRAM

NCI Community Cancer Centers Program Evaluation—Overview

Board of Scientific Advisors Meeting

November 6, 2008

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

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NCCCP Evaluation Oversight Committee

- Chair: Mary Fennell, PhD, Brown University
- External members
  - Timothy Johnson, PhD, U of Illinois at Chicago
  - Brian Weiner, PhD, UNC, Chapel Hill
  - Jane Zapka, ScD, Medical University of South Carolina
  - Thomas Gribbin, MD, Lack Cancer Center, Grand Rapids, MI (Grand Rapids CCOP)
  - Mark Hornbrook, PhD, Kaiser-Permanente, Portland, OR
- Consultants to the Committee
  - Arnie Kaluzny, PhD, UNC Chapel Hill
  - Donna O'Brien, MHA, Consultant to the Director
- Debra Holden, PhD, PI NCCCP Evaluation, RTI International

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Presentation Outline

- Overview of evaluation
  - Evaluation questions, deliverables, and metrics
  - Evaluation challenges
  - Evaluation guiding principles
- Evaluation methods
  - Case studies
    - Year 1: Implementation highlights
  - Patient surveys
  - Economic studies
  - Research design example: quality of care
- Timeline and dissemination plans

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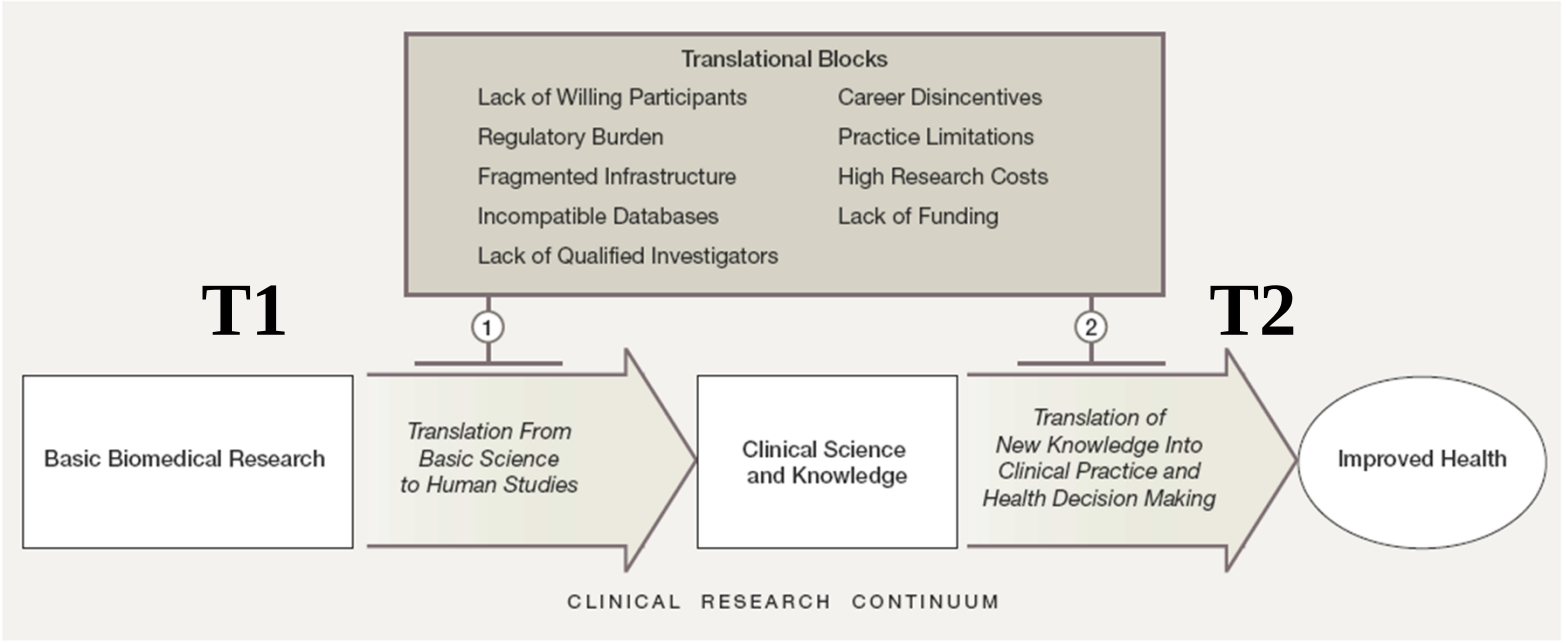
IOM Clinical Research Roundtable

Figure 1. The 2 Translational Blocks in the Clinical Research Continuum



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Sung, NS, et al. JAMA 2003;289:1278-1287.

JAMA

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Overarching Evaluation Questions

- What changes in each program component and for the cancer service line overall seem to be facilitated by NCCCP?
- What organizational requirements are necessary to effectively manage/implement NCCCP?
- What changes and elements are sustainable and potentially replicable?

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Assessing Program Performance

- Healthcare disparities
- Clinical trials
- Quality of care
- Survivorship
- Biospecimens
- Information technology

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Assessing Organizational Requirements

- Extent of institutional & management leadership commitment
- Adequacy of NCCCP organizational structure and resource support
- Sites' capacity to learn and change
- Effectiveness in establishing partnerships:
  - within their community
  - with other NCCCP program pilot sites
  - with national organizations (e.g., NCI Comprehensive Cancer Centers)

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Assessing Sustainability and Replicability

- Economic sustainability of the program
  - "Return on investment" to NCI
  - Alignment of the "social case" of NCI program goals with the "business case" for pilot site continued participation
- Replicability depends upon external comparisons with community-based Cancer Center programs not in the pilot

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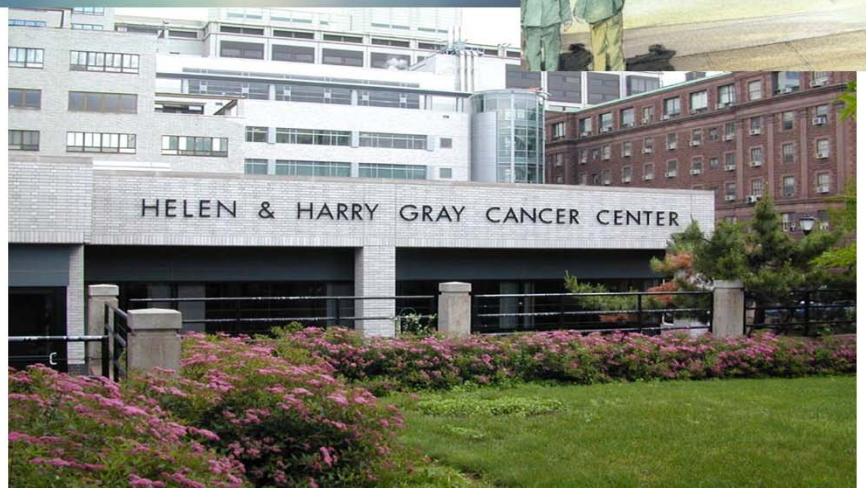
Evaluation Challenges —Community Cancer Centers Vary on So Many Factors



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Evaluation Guiding Principles

- Measures of interest are grounded in theory and current understanding in the literature
- This current understanding was used to develop a guiding conceptual framework in selecting outcomes
- Multi-level and multi-method approach to increase reliability of findings
- Triangulation of findings will help interpret program development and performance over time

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Evaluation Methods

- Case studies
  - Quantitative measures tracked over time
  - Qualitative measures of change in program structure and processes
- Patient surveys
- Economic studies

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Case Studies

- Mixed methods approach to collect and analyze quantitative and qualitative data on key pilot outcomes
- Longitudinal, multiple case study design is being used to
  - Understand NCCCP implementation
  - Assess change in site performance over time
  - Determine NCCCP structures and processes associated with successful performance

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Year 1: Implementation Highlights

- Hospital leadership support was evident at most sites (e.g., allocation of funds, visibility of program in system/hospital)
- New partnerships were being created among NCCCP sites with numerous NCI-designated Cancer Centers (e.g., Moffitt, UNC Lineberger, Yale)
- Relationships with physicians with regard to developing NCCCP program components are challenging because most sites operate in a private practice model
- Most sites have limited experience in outreach and screening, particularly among disparate groups
  - Challenges exist in identifying, measuring, and developing strategies to increase services for populations with health disparities

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Patient Surveys

- **Purpose**: Understand the experience with care in the NCCCP pilot from the patient's perspective, with regard to
  - Access to clinical trials and survivorship care
  - Coordination of care (e.g., multidisciplinary care and patient navigation)
- **Approach**: Sample NCCCP patients twice, 15 months apart, to assess change over time
  - 475 patients/site each time will be sampled

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Economic Studies

- Micro-cost study
  - To identify average and/or incremental costs associated with NCCCP activities, by site
    - NCI-funded and supplemental cost totals
    - “Return on investment”
- “Business case”/“strategic case” for participation
  - From organizational leadership perspective:
    - Expected short and long-run financial impact
    - Other associated strategic goals
- Program sustainability will be addressed

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Illustrative Example – Quality of Care

Specific Aims:

1. To what extent do sites increase multidisciplinary care for their patients?
2. How is patient centeredness of care increased across sites?
3. How does quality of care (for key quality indicators) change at NCCCP sites when compared to other, similar hospitals?

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Evaluation Methods – Quality of Care

1. Collect multidisciplinary care specific data through baseline, interim, and final assessment survey of sites and case study.
2. Conduct survey and focus groups of patients early in the program and at the end of the pilot.
3. Track performance based on innovative (real time) Rapid Quality Reporting System (RQRS) reporting

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Evaluation Outcomes – Quality of Care

- Improved coordination of care and decreased time from diagnosis to treatment for patients newly diagnosed with cancer
- Increased perceptions among patients about communication among physicians involved in their care
- Evidence of enhanced quality of care on key National Quality Forum-endorsed breast cancer and colorectal cancer diagnosis and treatment measures

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Methods and Data Sources Timetable

Evaluation Methods and Data Sources	Y1	Y2	Y3
Programmatic Data			
Site surveys	Baseline	Interim	Final
Quarterly progress reports	Quarterly	Quarterly	Quarterly
Network meeting minutes & projects	Monthly	Monthly	Monthly
Subcontract deliverables			●
Evaluation Data			
Site visits (i.e., interviews with program staff, key stakeholders)	●	●	●
Patient focus groups		●	●
Patient survey		●	●
Micro-cost study	●	●	●
Strategic case interviews		●	●
Comparative data analysis (i.e., with NCDB via RQRS)		●	●
Assessment of secondary data (e.g., American Hospital Association)	●	●	●

● = one data collection point

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Dissemination Plans

- Periodic reporting to inform NCI leadership and advisory boards
  - Evaluation design report (fall 2008)
  - Cross-site case study report (fall 2009 & 2010)
  - Patient survey reports (fall 2009 & 2010)
  - Economic study reports (fall 2009 & 2010)
- Manuscripts and presentations to inform cancer research and evaluation science

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EXTRA SLIDES

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Conceptual Framework Overview

- NCCCP is currently an idea about a desired outcome
  - While some “pillars” (e.g., clinical trials) are more specific, overall NCCCP is an evolving program, set of practices, specific metrics, and improvement targets
- Therefore, pilot sites are not so much adopting and assimilating NCCCP as they are *inventing it* in collaboration with NCI

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Conceptual Framework Overview

- Therefore, organizational theory and management science are needed to answer three key evaluation questions:
  - **Sense-making:** Are pilot sites fully grasping the idea of the NCCCP?
  - **Operationalizing:** How well are sites applying the idea to their specific situation?
  - **Learning:** Based on lessons learned, can sites make the necessary organizational and programmatic changes to succeed?

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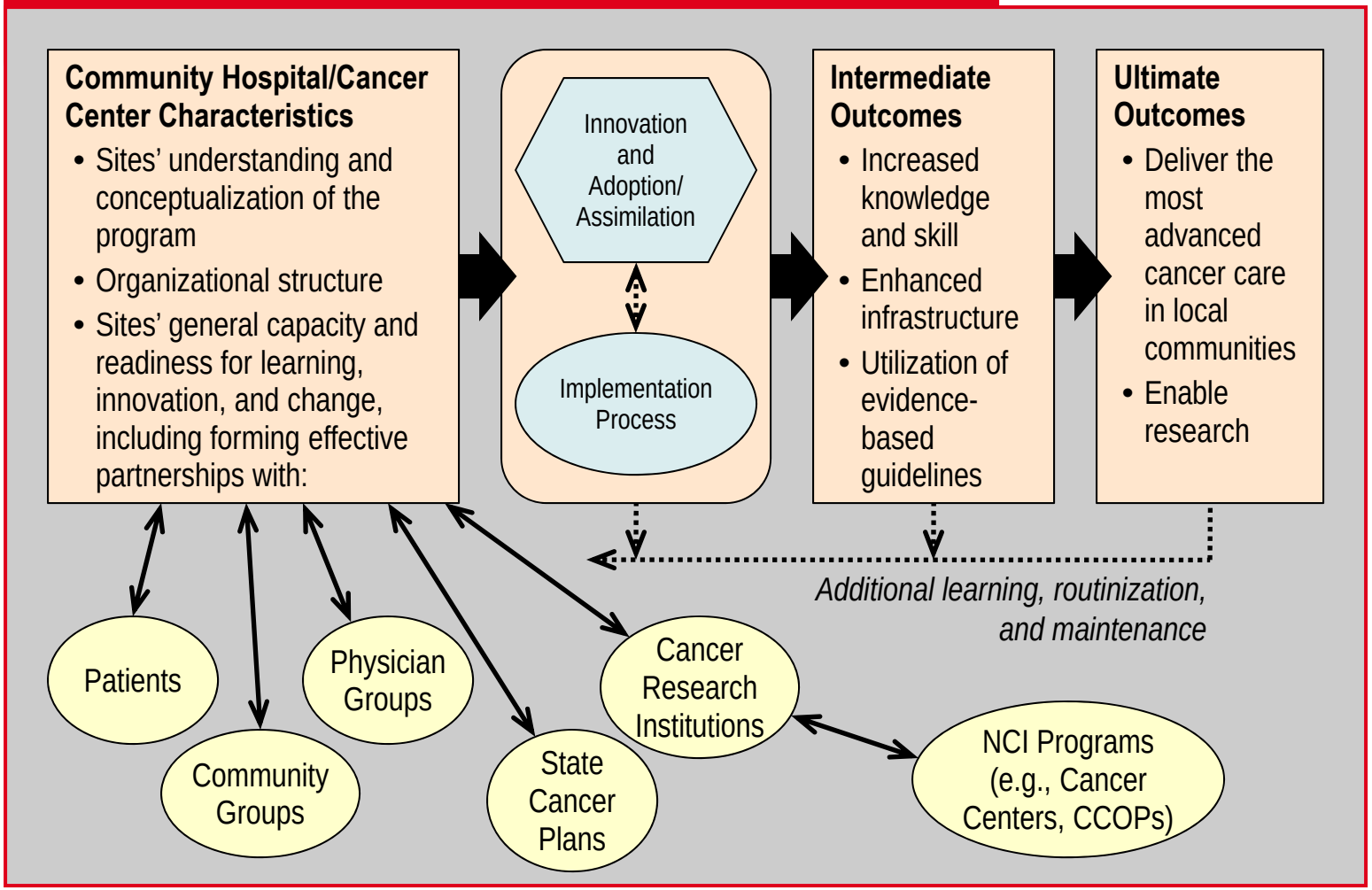
Conceptual Framework

Environment: Health care market, characteristics of community served, and linkage with the NCCCP pilot national research network



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Case Study

- Quantitative data:
  - Baseline Assessment Survey on key staffing, organizational, programmatic and utilization indicators completed by sites in 12/07
  - Repeat of Assessment Survey at interim (11/08) and again at end of pilot (11/09)
  - Analysis of secondary data sources, such as quality indicator data derived from the Commission on Cancer National Cancer Data Base (Fall 2009, Summer 2010)
  - Selected program data collected by Sites and NCCCP Subcommittees (e.g., clinical trial accrual data, data from Breast Screening Tracking Tool) (Annually)

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Case Study

- Qualitative data:
  - State-of-the-art qualitative data collection and analysis using N*Vivo software to code findings from:
    - Interviews of key stakeholders (e.g., lead physicians, PI, hospital leaders)
    - Applications, progress reports, and other program documents
    - Focus groups with patients and caregivers

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Preliminary Implementation Assessment

- Highlighted findings:
  - Understanding of NCCCP and vision
  - Building/refining organizational structure
  - Sites' general capacity and readiness for change
  - Feedback on National Network

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Understanding of NCCCP and Vision

- Core teams generally understand the broad vision of NCCCP but greater clarity is needed for
  - Ultimate goals and metrics
  - Fit and function across program components
- Specific vision for the application of the program to each site is under development
  - Work plans seemed to be helpful at most sites in forming a common vision
- Most sites are struggling with communicating complexity of NCCCP

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Organizational Structure

- Structure of oncology services varies across sites in terms of how well integrated they are within an organizational unit (as opposed to spread across units)
- Effective teams seem to coordinated committees that meet regularly to discuss ways to integrate
- Relationships with physicians are challenging because most sites operate in a private practice model. Sites are working on strategies to motivate physicians to be involved with NCCCP.

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Sites' General Capacity and Readiness to Learn

- Leadership support was evident at most sites (e.g., allocation of funds, visibility of program in system/hospital)
- Hospitals have had to dedicate more resources and time than expected, but they are rising to the challenge to do so
- Use/development of IT is critical and a challenge for many sites due to lack of staff and/or lack of a system all private practice agree to use
- Effective partnerships were being established among NCCCP sites with numerous NCI-designated Cancer Centers (e.g., Moffitt, UNC Lineberger, Yale)

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Feedback on National Network

- Sites generally appreciate the efforts of creating the NCI Network and hope to
  - Learn new strategies from each other
  - Share lessons learned and best practices
  - Become better informed of NCI's expectations

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Site Visit Summary

- First year has largely focused on “sense-making” and to some degree operationalizing
  - Very difficult to invent a coordinated and integrated program
  - Lot of accomplishments made in figuring out how to work effectively with new groups internal to sites
- Sites are poised for implementation and learning in Year 2
  - Anxious to move farther and faster both within their site and across the Network