



# Patient Navigation Research Program (PNRP) Evaluation Design and Implementation

Amanda Greene, PhD, RN,<sup>1</sup> Paul Young, MPH, MBA,<sup>1</sup>  
Emmanuel Taylor, DrPH,<sup>2</sup> Kenneth Chu, PhD,<sup>2</sup> Roland Garcia, PhD<sup>2</sup>

<sup>1</sup> NOVA Research Company

<sup>2</sup> National Cancer Institute, Center to Reduce Cancer Health Disparities

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# Definitions

- **PATIENT NAVIGATION** refers to support and guidance offered to persons with abnormal cancer screening tests or diagnosis in accessing the cancer care system and overcoming barriers to quality, standard care.
- **PATIENT NAVIGATORS**  
Are trained, culturally sensitive health care workers who provide support and guidance throughout the cancer care continuum.  
  
Help people "navigate" through the maze of doctors' offices, clinics, hospitals, outpatient centers, insurance and payment systems, patient-support organizations, and other components of the health care system.

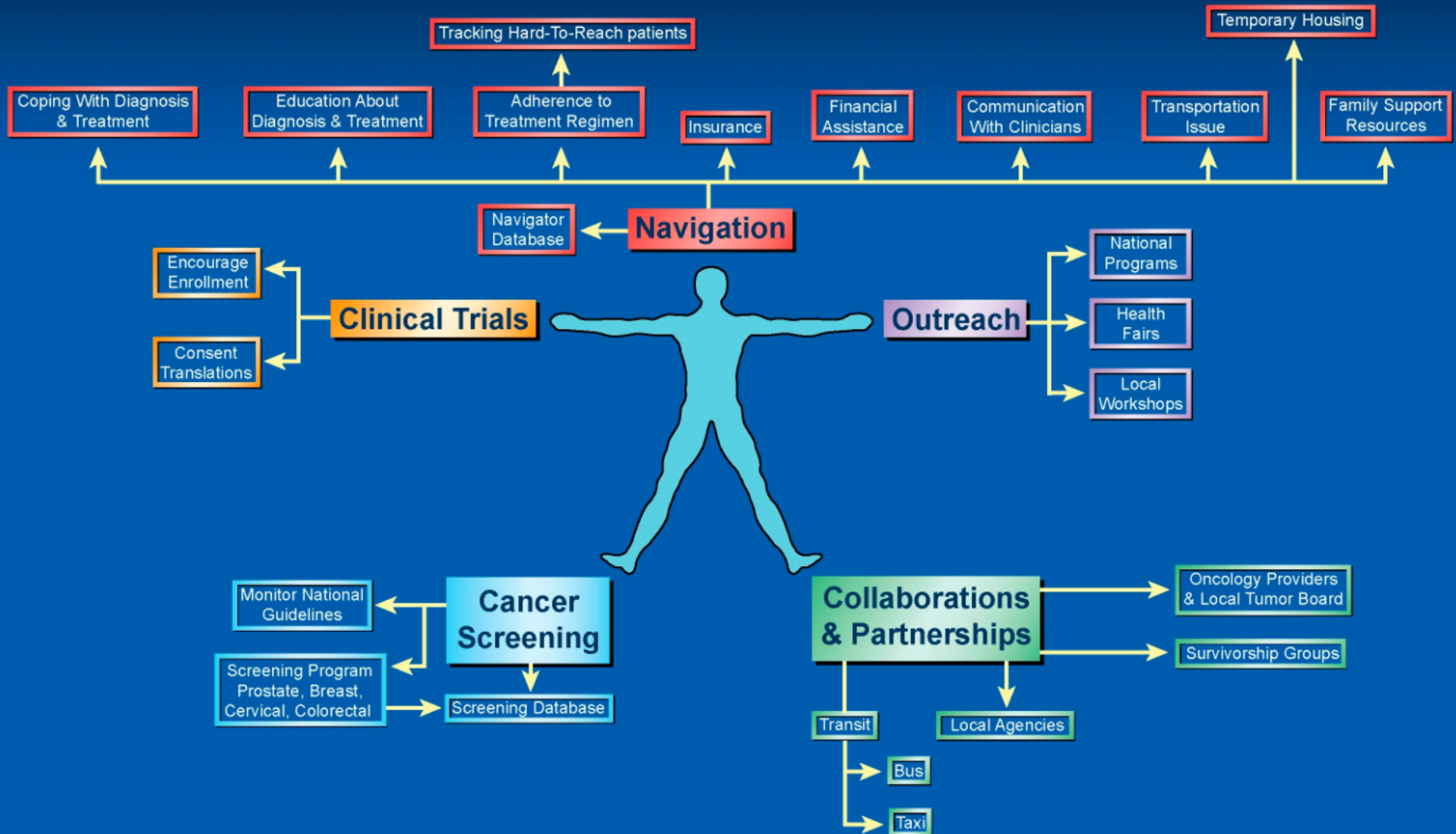
# PNRP Background

- U01 5-year cooperative grant funded by National Cancer Institute/Center to Reduce Cancer Health Disparities
- Eight awards made by NCI
- American Cancer Society funded one additional site

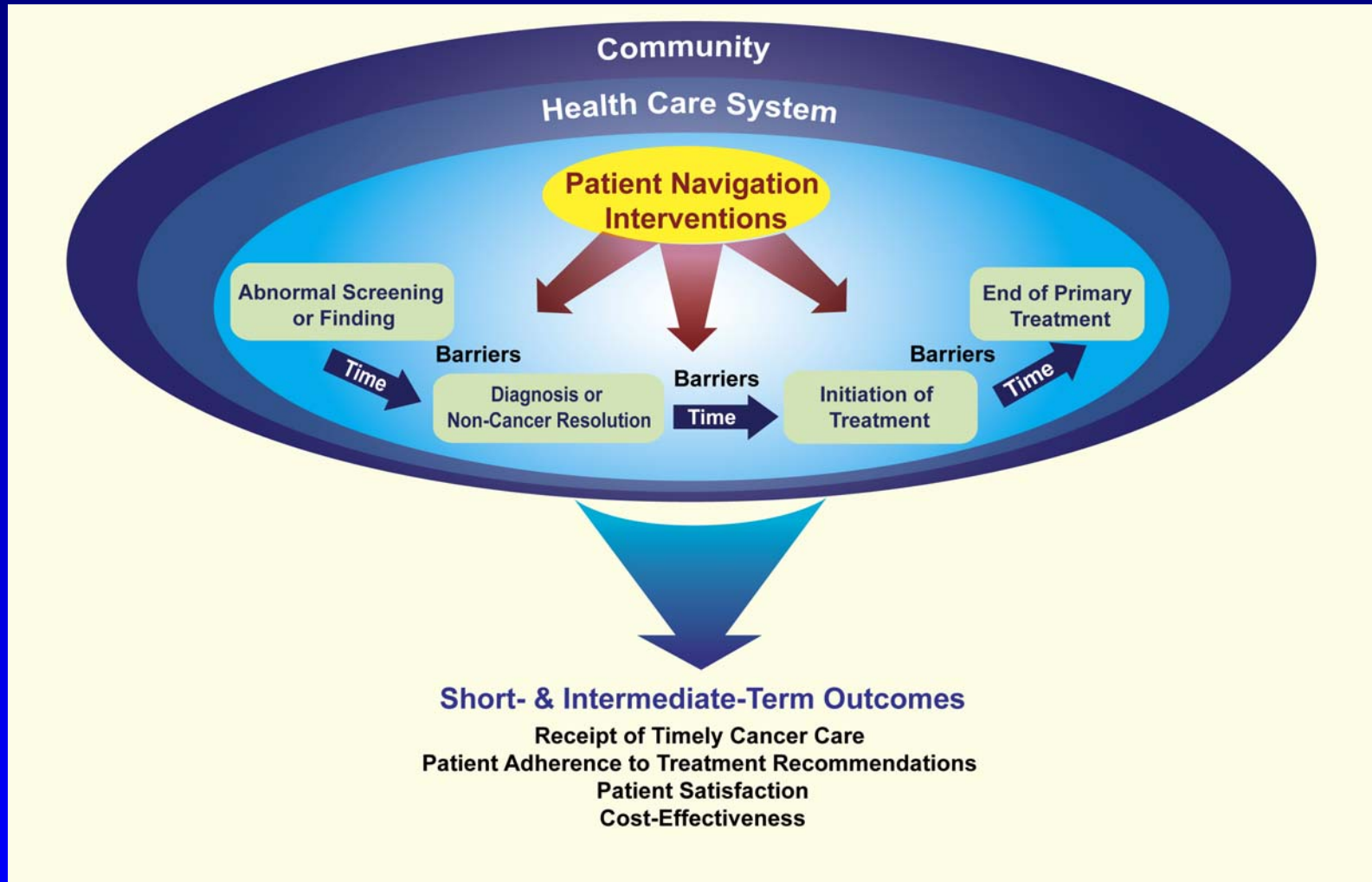
## PNRP Goal

To develop Patient Navigation interventions to reduce and ultimately eliminate disparities in cancer clinical outcomes related to lack of timely access to culturally sensitive, quality, standard cancer care (diagnosis and treatment) among populations who often experience the greatest burden of cancer.

# Patient Navigator Roles



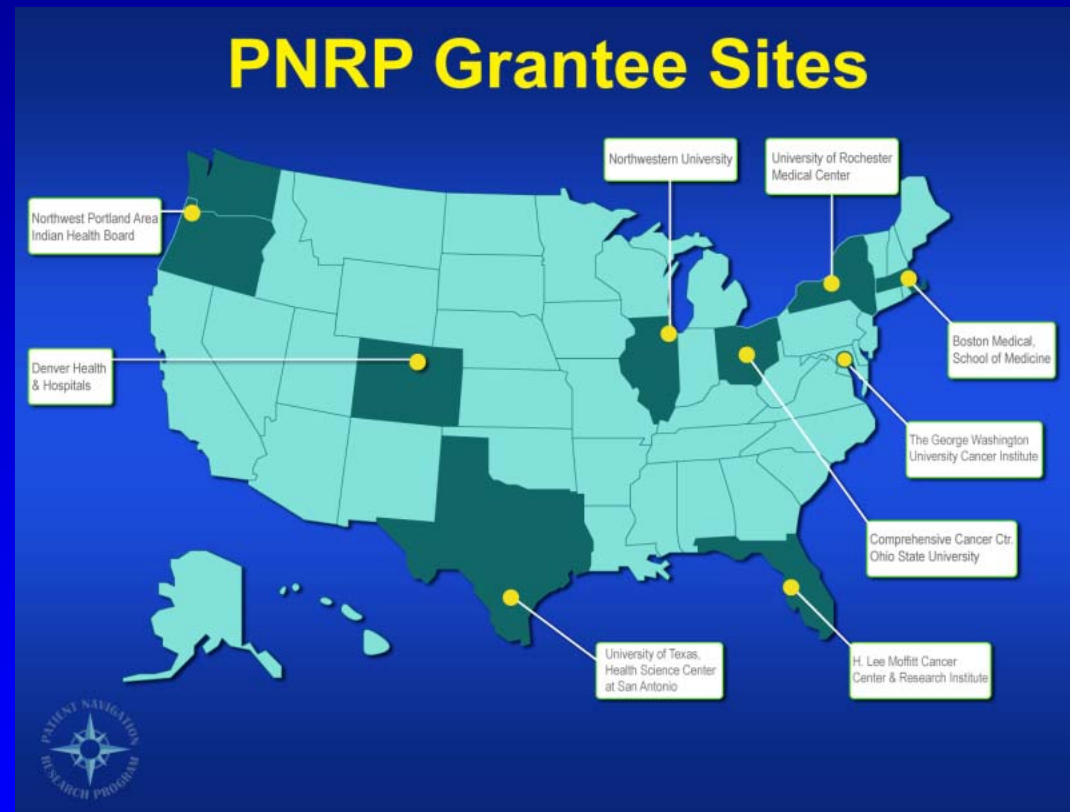
# Evaluation Purpose



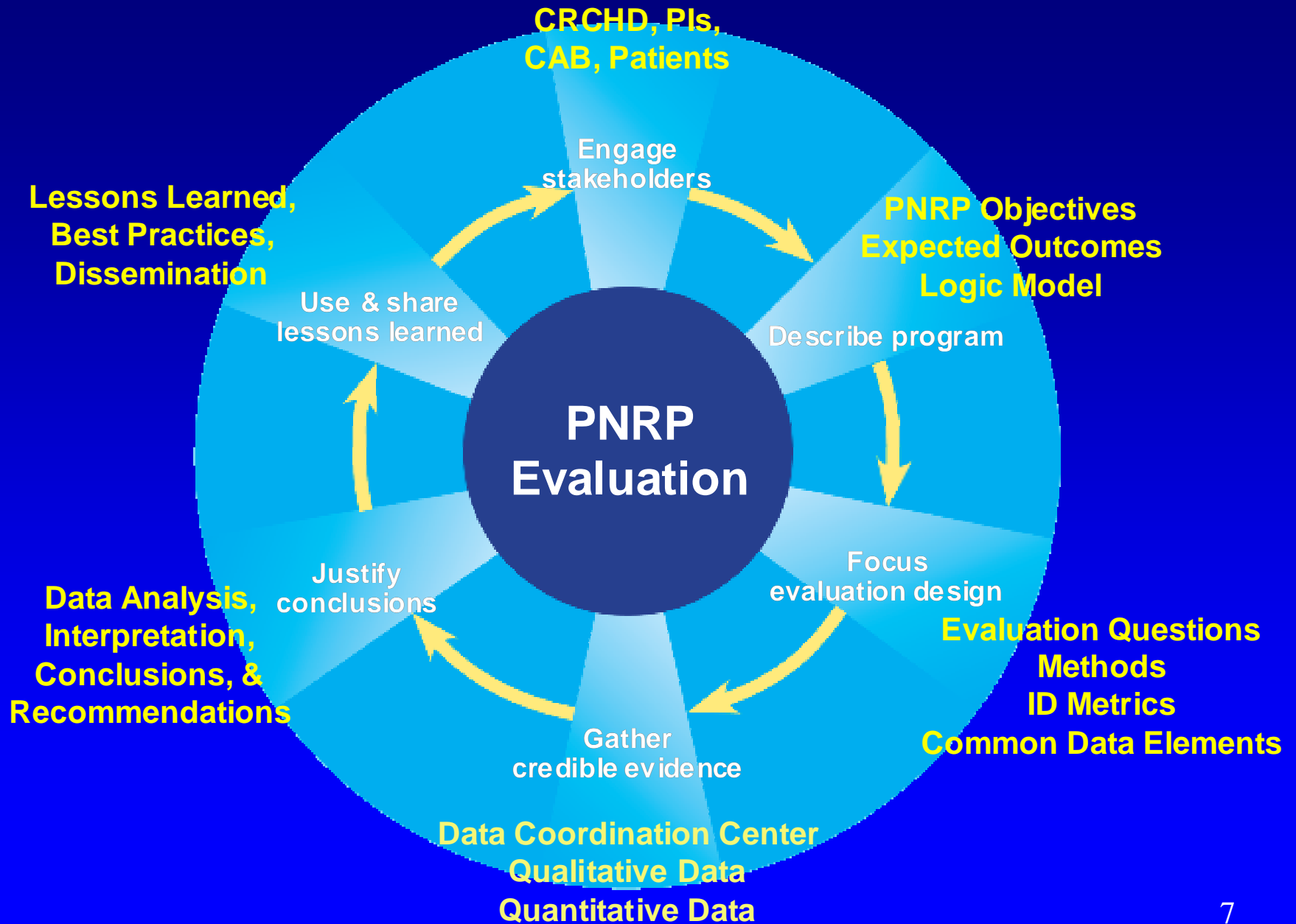
**PURPOSE:** To test effectiveness of Patient Navigation interventions in reducing time to delivery of standard cancer care in racial/ethnic minority and underserved populations and in improving patient satisfaction in a cost effective manner.

# Why CRCHD/PNRP Has an Evaluation Contractor

- Cross-site program evaluation
- Coordination across multiple PNRP sites
- Data quality control & assurance
- Central data aggregation & progress reporting
- CRCHD reporting of impacts & outcomes
- Assistance in technology transfer



# Program Evaluation Steps



# Evaluator's Role

## EVALUATION

- Evaluation design & implementation
- Standardized protocols & metrics
- Statistical analyses
- Interpretation of program findings
- Conclusions & recommendations
- Dissemination
- Cost-effective analysis

## DATA COORDINATION

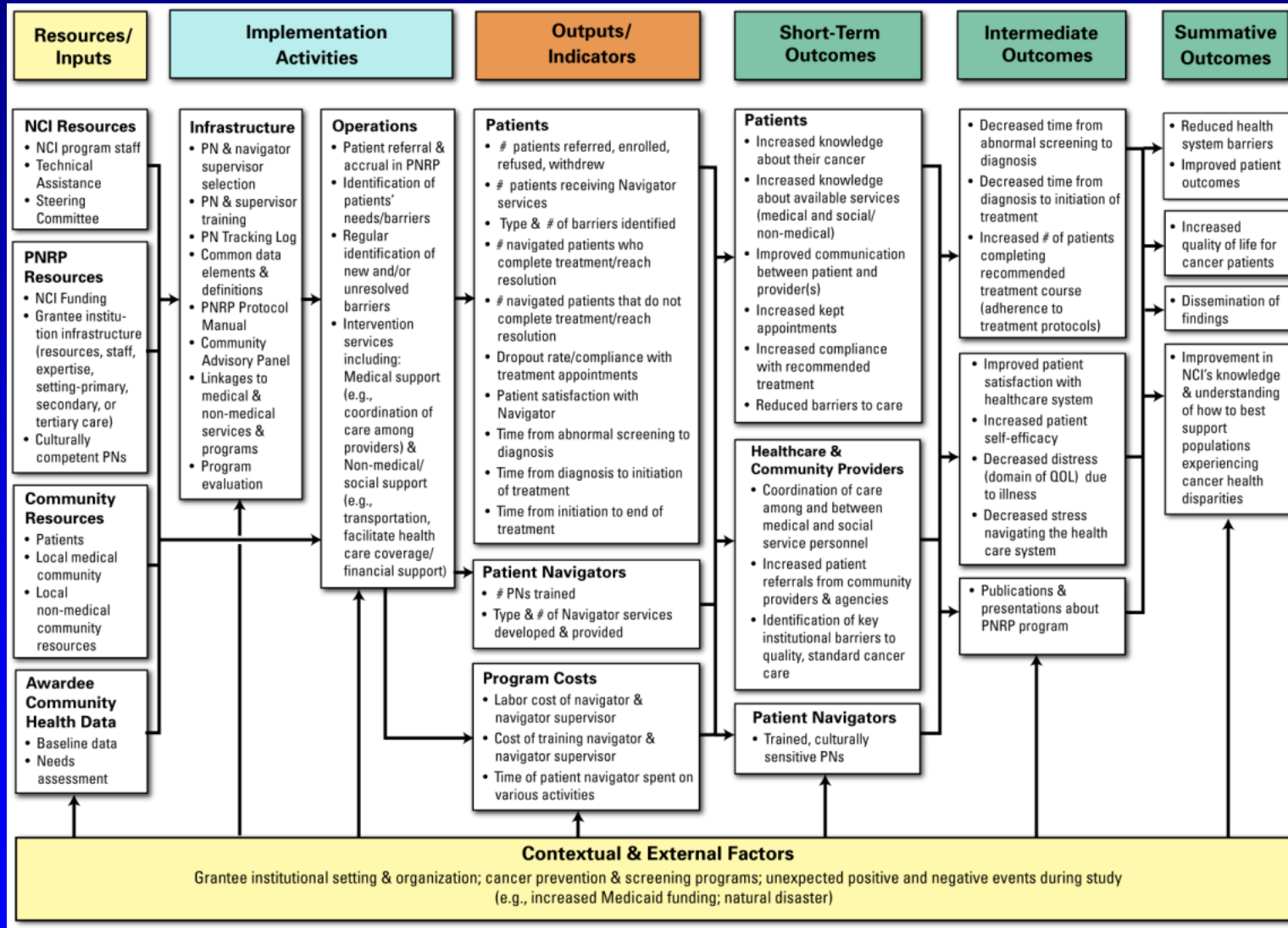
- Central data aggregation & data management system
  - Quarterly data uploads
  - Monitor data quality
  - Establish accrual & timeliness reporting systems
- Technical assistance

## STAKEHOLDER ENGAGEMENT

- Progress data/intermediate results reporting
- Early indicators of successes & issues
- Other PN programs comparisons



# Logic Model: Modeling Expected Outcomes



# Capturing Expected Outcomes Evaluation Questions

## PROCESS

- Navigator interventions
- Navigator training, competency, case load
- Matching patient/navigator
- Professional vs. lay navigator
- Community (social) networks

## OUTCOME

- Time
  - Abnormal finding to diagnosis
  - Diagnosis to initiation of treatment
  - Initiation of treatment to end of primary treatment
- Patient satisfaction
  - With navigator/navigation
  - With cancer care delivery system
- Improvement in Quality of Life
- Cost-effectiveness

# Common Data Elements

## Patients

- Demographics
- Socioeconomic status
- Family history
- Comorbidity

## Cancers

- Breast
  - Cervical
  - Colorectal
  - Prostate
- Eligibility  
Diagnostic Work-up  
Definitive Diagnosis  
Stage of Disease  
Clinical Trials  
Treatment

## Instruments

- Satisfaction
- REALM
- IES
- CASE-General
- CASE-Cancer

## Patient Navigator

- Demographics
- Socioeconomic status
- Activities/actions

## PN Performance

### Checklist

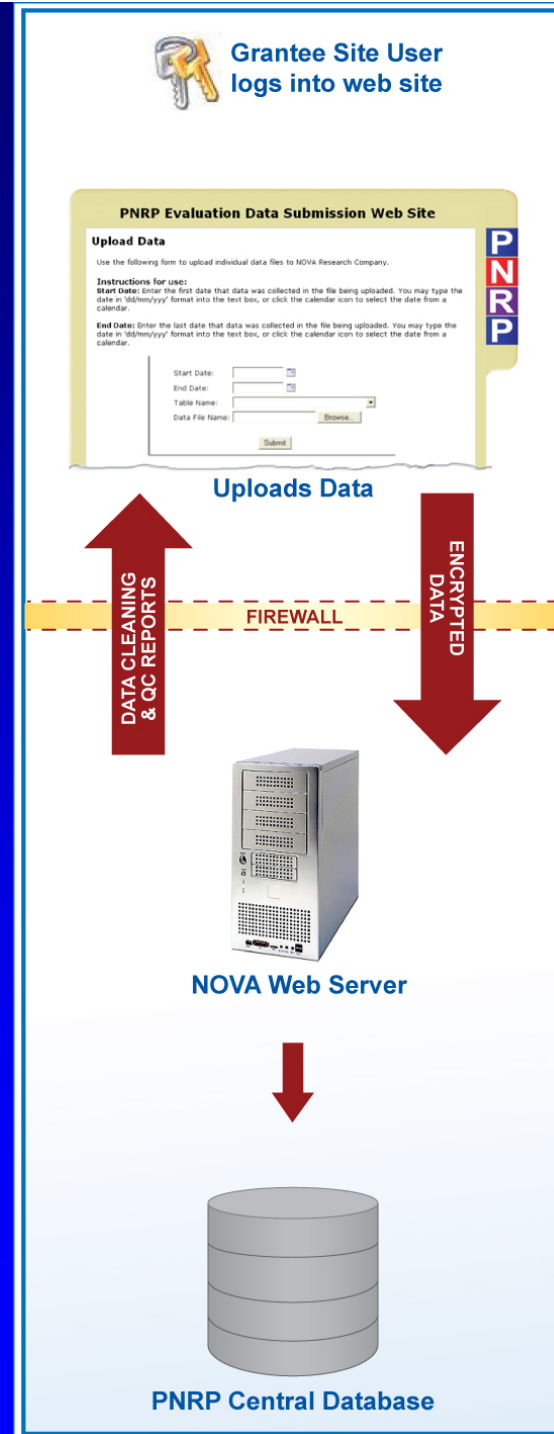
- Client interaction
- Care management
- PN intervention
- Documentation

## PN Tracking Log

- Patient barriers
- PN activities

## Resources & Costs

# PNRP Web-based Data Collection and Coordination



# Evaluation Matrix—example

Objectives	Expected Outcomes	Evaluation Question	Indicators	Data Elements	Info Sources	Data Collection Methods
Reduce time between an abnormal screening test & definitive diagnosis.	Time from abnormal screening to diagnosis is decreased.	Compared to controls, do navigated patients receive more timely cancer care diagnosis & treatment?	# Navigated patients # Control patients # Patients who complete treatment or reach resolution # Patients who do not complete treatment or reach resolution Time from abnormal finding to diagnosis	Patient demographics Time Variables related to Diagnostic work-up & treatment	Enrolled patients Medical records	Patient interview Medical record abstraction

# PNRP Data Analysis

- Quantitative Analysis
  - Descriptive
  - Multivariate
  - Trend
- Qualitative Analysis
  - Descriptive
  - Themes
- Economic Analysis
  - Summary measures of program costs
  - Cost-consequence analysis
  - Incremental cost-effectiveness

# PNRP

## Projected number of patients by cancer site

Breast (9)		Cervical (5)		Colorectal (5)		Prostate (5)		TOTAL	
Abnl Screen	Cancer	Abnl Screen	Cancer	Abnl Screen	Cancer	Abnl Screen	Cancer	Abnl Screen	Cancer
8,602	964	4,162	575	5,757	793	928	266	19,449	2,598

**Total N = 22,047**

Data as of 6/30/07

# PNRP

## Enrolled number of patients by cancer site

Breast (9)		Cervical (5)		Colorectal (5)		Prostate (5)		TOTAL	
Nav <sup>1</sup>	Ctl <sup>2</sup>	Nav	Ctl	Nav	Ctl	Nav	Ctl	Nav	Ctl
399	277	262	48	74	48	71	56	806	429

<sup>1</sup> Nav = navigated patients

<sup>2</sup> Ctl = control patients

**Total N = 1,235**

Data as of 6/30/07



# Selected Characteristics of Navigated Patients

<b>Age (mean)</b>		41.5
<b>Race/Ethnicity</b>	Black/AA	27%
	Hispanic/Latino	43%
	AI/AN	< 1%
	White	26%
	Other	3%
<b>Gender</b>	Female	92%
	Male	8%
<b>Primary Language</b>	English	79%
	Spanish	14%
	Other	6%

As of 6/30/07

# Selected Characteristics of Patient Navigators

<b>Age (mean)</b>		40.3
<b>Race/Ethnicity</b>	Black/AA	21%
	Hispanic/Latino	40%
	White	24%
	AI/AN	5%
	Other	10%
<b>Gender</b>	Female	84%
	Male	16%
<b>Primary Language</b>	English	79%
	Spanish	14%
	Other	6%

As of 6/30/07

# Use of PNRP

## Evaluation Findings

- Lessons learned & best practices
- Support patient access to cancer care system
- Assess impact of patient navigation on timely receipt of cancer care
- Encourage collaborations & partnerships
- Support long-term research to eliminate cancer health disparities
- Determine if patient navigation services can be delivered cost-effectively to warrant insurance reimbursement

# Lessons Learned from Evaluation

- Decision by consensus takes time
- Specification & definition of variables is iterative
- Decision & specification in theory vs. practice
- Design must adjust for different models/settings
- Addressing internal & external threats to validity

# Acknowledgements

## CRCHD PNRP Program Evaluation Team

Dr. Emmanuel Taylor

Dr. Roland Garcia

Dr. Ken Chu

Dr. Mary Ann Van Duyn

## PNRP Grantee Sites

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Northwestern & University of Illinois  
at Chicago

Denver Health & Hospital Authority

George Washington University

Northwest Portland Area Indian Health  
Board

Ohio State University

H. Lee Moffitt Cancer Center &  
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University of Rochester

University of Texas Health Science  
Center at San Antonio