Systems for Action
National Coordinating Center
Systems and Services Research to Build a Culture of Health

Strategies to Achieve Alignment, Collaboration, and Synergy across Delivery and Financing Systems

Testing an Integrated Delivery and Financing System for Older Adults with Health and Social Needs

Research In Progress Webinar
Wednesday, April 11, 2018
12:00-1:00 pm ET/ 9:00 am-10:00 am PT

College of Public Health
Center for Public Health Systems and Services Research

Funded by the Robert Wood Johnson Foundation

Agenda

Moderator:

Shana S. Moore, PhD, MPA
Director of Dissemination and Research Development, RWJF Systems for Action National Coordinating Center
University of Kentucky College of Public Health
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Presenters:

José Pagán, PhD
Professor, College of Global Public Health, and
Chair, Dept. of Public Health Policy and Management
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Q & A: Moderated by Dr. Shana Moore

Presenter

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Lifespan of Greater Rochester

April 2018

Testing an Integrated Delivery and Financing System for Older Adults with Health and Social Needs

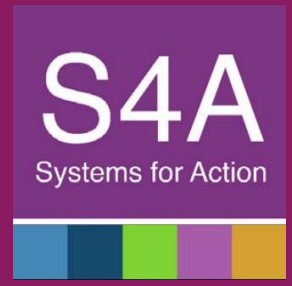
José A. Pagán, Annie Wells, Elisa Fisher

AGENDA

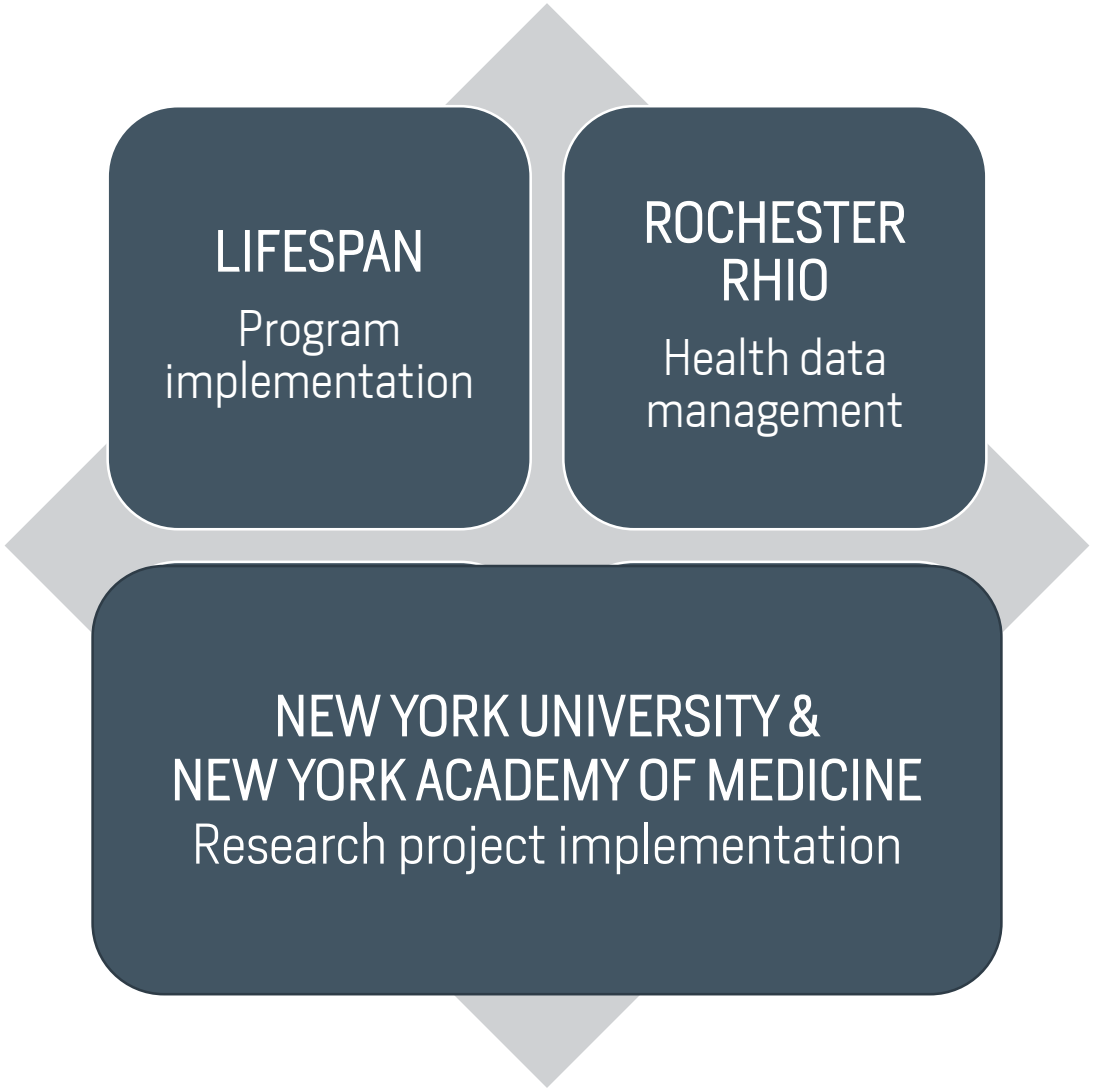
- Project Team
- Community Care Connections: Overview
- Pilot Evaluation: Findings and Lessons Learned
- Systems for Action Project
- Questions

Support for this presentation was provided by the Robert Wood Johnson Foundation through the Systems for Action National Coordinating Center, ID 75162.

Project Team



PROJECT TEAM OVERVIEW



LIFESPAN OF GREATER ROCHESTER

Lifespan "*helps older adults and caregivers take on the challenges and opportunities of longer life.*"

Lifespan serves over 30,000 people in the Greater Rochester Region annually, including older adults, people with disabilities and caregivers.

https://www.lifespan-roch.org/

LIFESPAN OF GREATER ROCHESTER

Lifespan offers over 30 services directly to community members as well as unbiased guidance and linkages to other community-based resources available locally.

NY Connects	Elder Abuse Prevention & Intervention	Health & Wellness	Caregiving	Education & Training
Care Coordination	Volunteerism	Connection to Services for Low-Income Older Adults	Emotional Wellness and Mental Health Services	Health Initiatives
Social Connections	Aging Adults with Developmental Disabilities	Home Safe Home – home modifications program	Financial Management Services	Guardianship
Geriatric Addictions Program	Ombudsman Program	Give-a-Lift Transportation & Coordination Services	Health Insurance Information Counseling & Assistance Program	Cafés at the YMCAs – Multi-Purpose Aging Resource Centers

ROCHESTER REGIONAL HEALTH INFORMATION ORGANIZATION (RHIO)

A secure, electronic health information exchange (HIE) serving authorized medical providers in Monroe, Allegany, Chemung, Genesee, Livingston, Ontario, Orleans, Schuyler, Seneca, Steuben, Wayne, Wyoming and Yates counties in upstate New York.

- *89% of providers in Greater Rochester Region benefit from Rochester RHIO.*
- *Access to data for over 1.4 million patients*

https://rochesterrhio.org/

PROJECT TEAM

RESEARCH TEAM

New York University
- José A. Pagán, PhD (PI)

The New York Academy of Medicine
- Elisa Fisher, MPH, MSW (Co-PI)
- Yan Li, PhD, (Research Scientist)

PROGRAM AND TECHNICAL LEADS

Lifespan
- Annie Wells, BA (Lifespan Technical Lead)

Rochester RHIO
- Sara Abrams, MPH (RHIO Technical Co-Lead)
- Andrea Richardson (RHIO Technical Co-Lead)

LIFESPAN'S COMMUNITY CARE CONNECTIONS PROGRAM*

Annie Wells, Director of Care Transitions

* Funded by the New York State Department of Health

ISSUES TO ADDRESS

- Most older adults interact with the medical system as they age, but few are engaged in services that address the social determinants of health.
    - 80% of modifiable health risks result from factors outside of the health care system.
- Health care is fragmented and difficult to navigate, especially for older adults with multiple health care needs.
- Health care and social services operate in silos, despite the importance of of having a comprehensive understanding of patient health and wellbeing.
- Despite the collection of large amounts of hospital data, the data are not regularly used to make the business and sustainability case for valuable services offered by local community organizations.

PROGRAM OVERVIEW:
COMMUNITY CARE CONNECTIONS

A program that integrates Lifespan's community-based aging services with the health care delivery system.

The program:

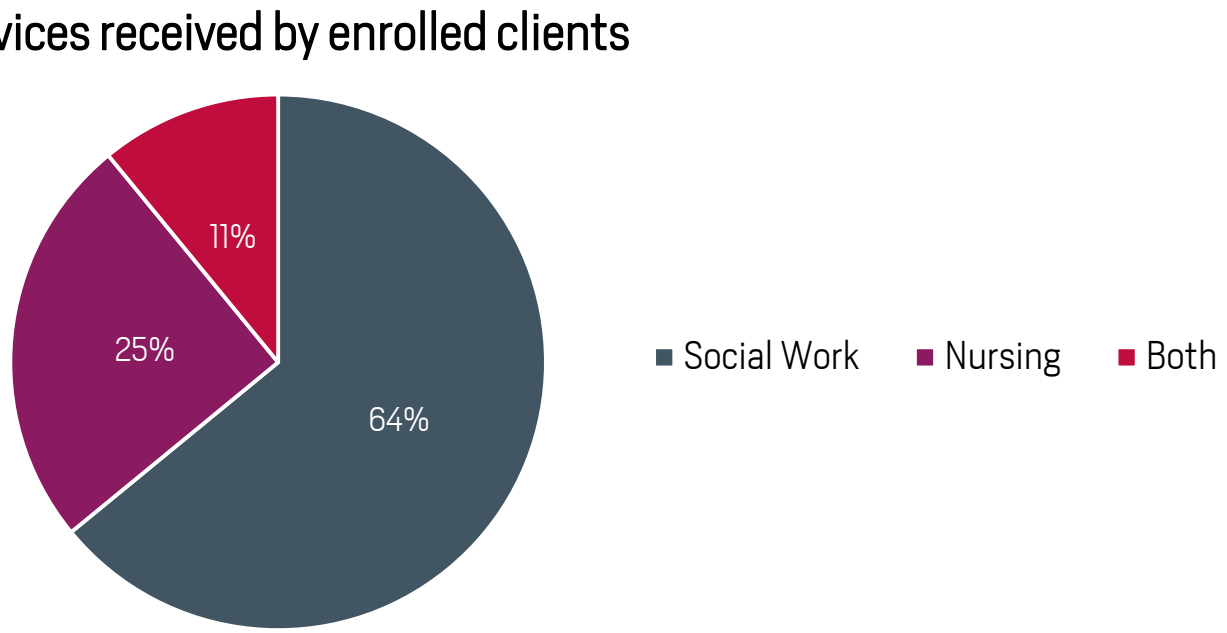
- Uses care access points to break down the traditional barriers and siloes between community-based aging services and medical systems of care
- Provides linkages to other service providers to address the social needs of older adults

Main goal: To help older adults **remain in their own homes, reduce hospital admissions/readmissions and emergency department use, and reduce caregiver burden.**

PROGRAM OVERVIEW:
COMMUNITY CARE CONNECTIONS

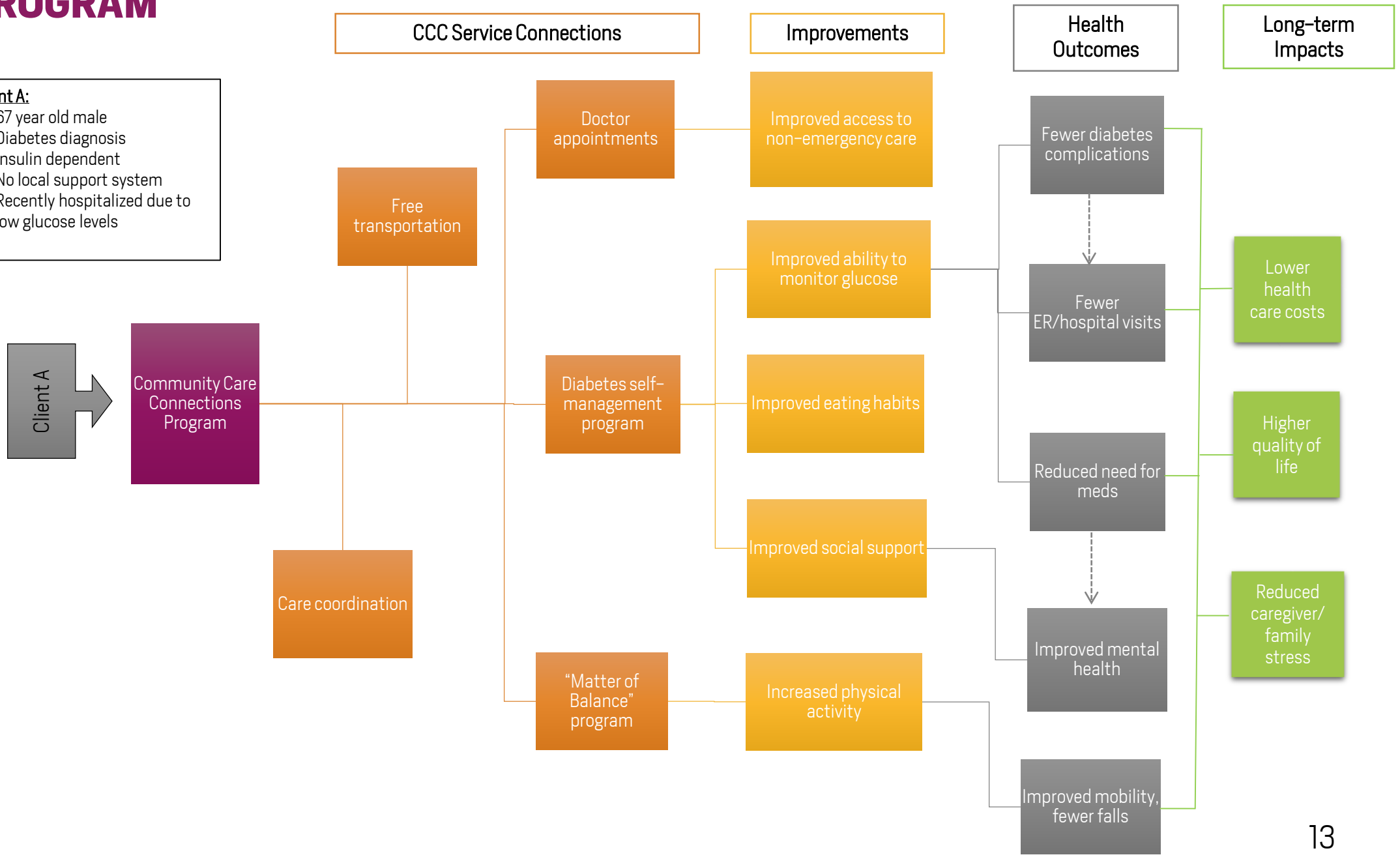
- Lifespan Social Work Care Navigators are embedded in 5 physician practices in Monroe, Ontario and Livingston counties; also receive referrals through home care agencies linked with hospitals.

- Healthcare coordinators are serving a subset of complex, high need patients.



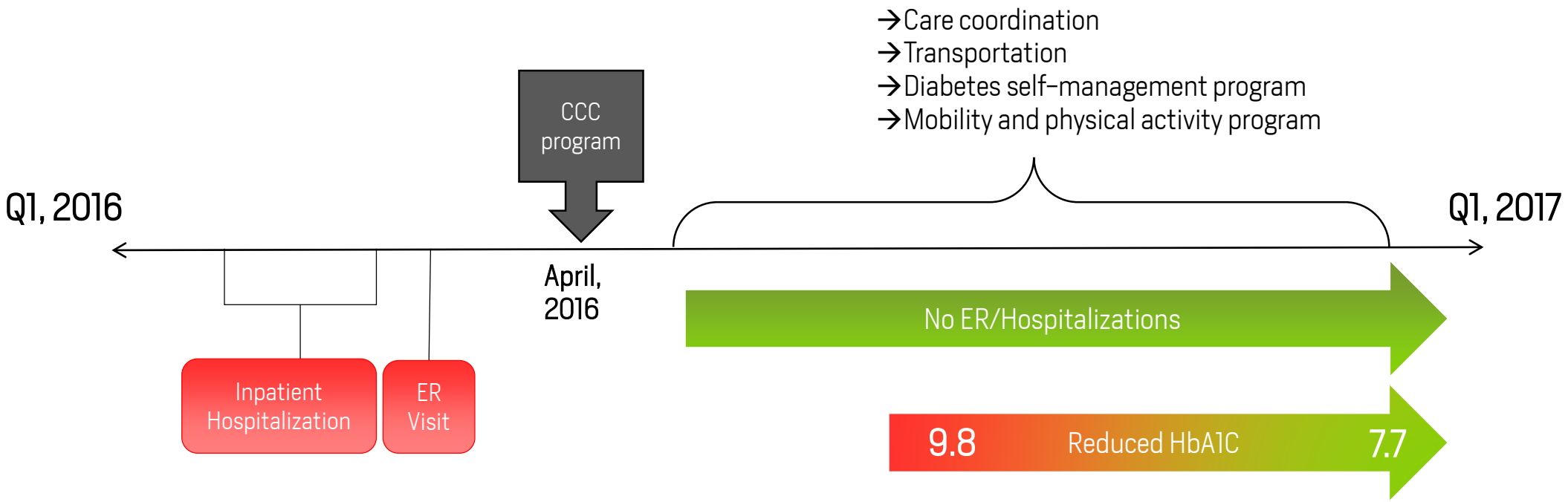
CCC PROGRAM

Client A:
- 67 year old male
- Diabetes diagnosis
- Insulin dependent
- No local support system
- Recently hospitalized due to low glucose levels



CCC PROGRAM

2016–2017 Timeline: Client A



Average costs* for patients age 65 or older
Hospitalization: $13,907
ER Visit: $918

Among patients with diabetes, those with controlled HbA1c have health care costs that are 2–8x lower than those with uncontrolled HbA1c**

*NYAM calculations based on 2014 data from the Medical Expenditure Panel Survey, adjusted to December 2016 using the Consumer Price Index for medical care (U.S. city average, all urban consumers). The sample included for the average cost calculations included adults 65 years of age and older with Medicare or Medicaid health insurance coverage which had a hospitalization stay or an emergency department visit.

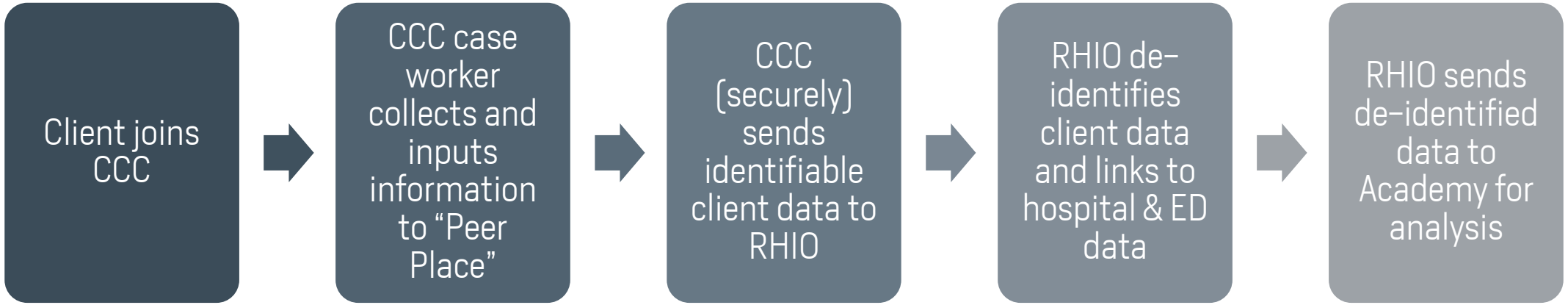
**American Diabetes Association. (2013). Economic costs of diabetes in the US in 2012. *Diabetes care*, *36*(4), 1033–1046.

PILOT EVALUATION FINDINGS

PILOT EVALUATION

- 6-month (180 days) pre-post analysis of inpatient hospitalizations and emergency department visits for all CCC clients who provided informed consent to participate.
- Data provided by Rochester RHIO (Regional Health Information Organization).
- Total of 325 clients with 6 months of data available.

PILOT DATA



- **Peer Place Customized Platform:** Demographics, diagnoses, community services needs and referrals and standardized wellness assessments, conducted at intake and case closure.

- **Rochester RHIO Data:** Hospital inpatient and emergency encounters from health systems in Greater Rochester Region.

PILOT EVALUATION: DEMOGRAPHICS

Demographics	% (N)
Age	
60–69	23.69 (77)
70–79	30.55 (99)
80+	44.14 (143)
Unknown	1.54 (5)
Race	
Asian	0.92 (3)
Black/African American	13.85 (45)
White (Latino/a)	1.54 (5)
White (Non-Latino/a)	75.38 (245)
2 or more	0.31 (1)
Other/Not Available	8.00 (26)

Demographics (continued)	% (N)
Poverty status	
<100% FPL	10.46 (34)
<185% FPL	24.62 (80)
>185% FPL	30.77 (100)
Not Available	34.15 (111)
Living situation	
Alone	36.90 (120)
With Spouse	32.00 (104)
With Others (relatives or non-relatives)	19.38 (63)
Not Available	11.72 (38)

PILOT EVALUATION: HEALTH CHARACTERISTICS

Health Characteristic	% (N)
Health Insurance	
Medicare (A,B,C and/or D)	88.62 (288)
Medicaid (or Medicaid pending)	18.78 (61)
Disabled	
Yes	64.81 (210)
Quality of Life Score (out of 5)	
3 or lower	66.46 (216)
4–5	33.54 (109)
Has caregiver	
Yes	44.33 (129)
No	55.67 (162)

PILOT EVALUATION: SUMMARY

- Decrease in hospitalizations
- Decrease in emergency department (ED) visits
- Decrease in costs

PILOT EVALUATION: FINDINGS
CHANGE IN HEALTH CARE UTILIZATION

Average # of hospitalizations and ED visits per client			
	Pre-intervention	Post-intervention	P-value
Hospitalizations	0.15	0.07*	0.01
ED visits	0.56	0.39*	0.01

Notes: (i) Estimates based on The New York Academy of Medicine's analysis of data provided from the Rochester Regional Health Information Organization (RHIO) and Lifespan. (ii) Analyses based on 180 days of data for 325 clients enrolled in CCC program between June 2016 and April 2017.

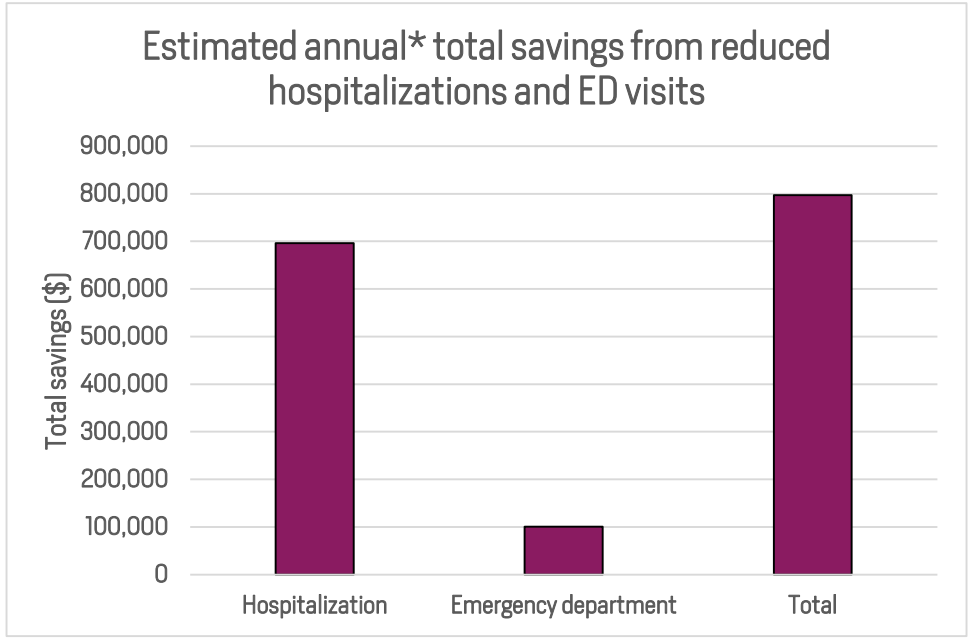
PILOT EVALUATION: FINDINGS
MULTIPLE HOSPITALIZATIONS / ED VISITS

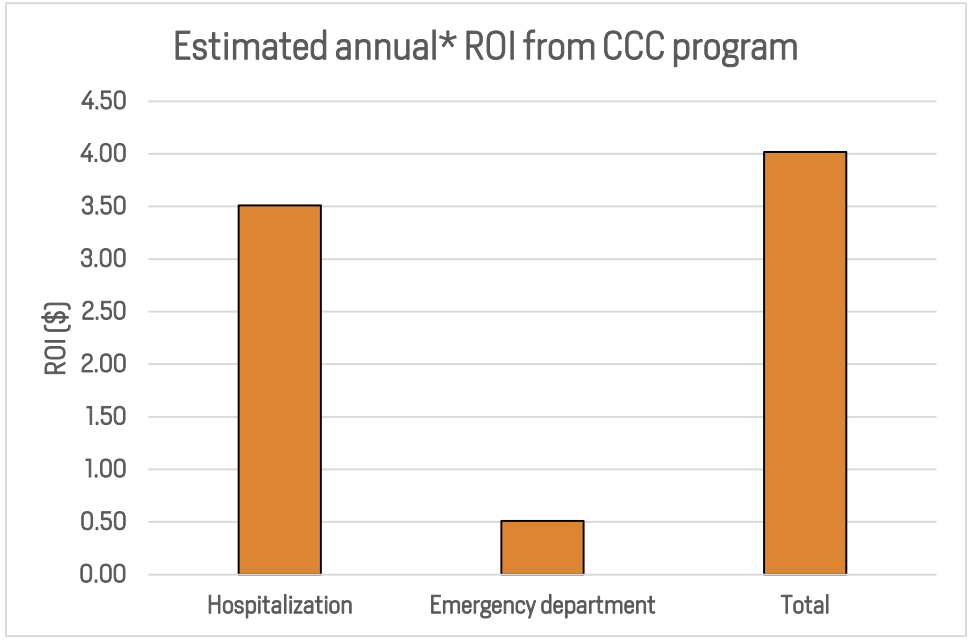
Number of hospitalizations/ED visits per client: Counts and % change			
	Count Pre-intervention (n)	Count Post-intervention (n)	Percentage change * (%)
Hospitalizations			
0	291	301	3.4
1 or more	39	16	-59.0
ED visits			
0	226	250	10.6
1	56	50	-10.7
2 or more	43	25	-41.9

* = Positive direction (more people with 0 occurrences, fewer people with any/multiple occurrences)

Notes: (i) Estimates based on The New York Academy of Medicine's analysis of data provided from the Rochester Regional Health Information Organization (RHIO) and Lifespan. (ii) Analyses based on 180 days of data for 325 clients enrolled in CCC program between June 2016 and April 2017.

PILOT EVALUATION: FINDINGS
SAVINGS





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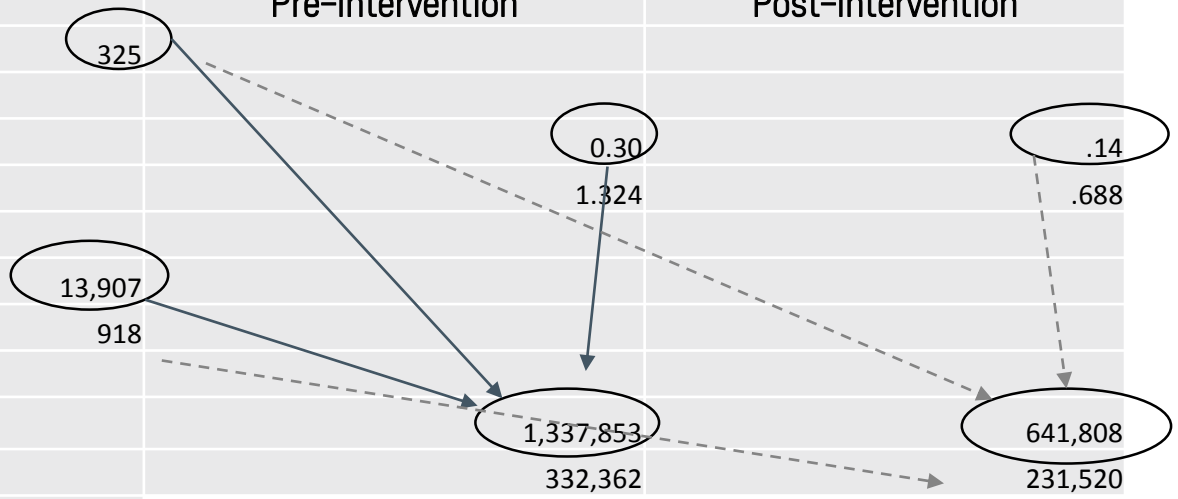
Every dollar spent on the CCC program generates $4.02 in savings resulting from reduced hospitalizations and emergency department visits

Table. Annual Return on Investment (ROI) from the CCC program

		Pre-intervention	Post-intervention
Number of patients		325	
Average number per client			
Hospitalizations			0.30
Emergency department visits			1.324
Cost per patient ($)			
Hospitalizations		13,907	
Emergency department visits		918	
Total costs ($)			
Hospitalizations			1,337,853
Emergency department visits			332,362
Total CCC program costs ($)	198,250		
Total Savings ($)			
Hospitalizations	696,045		
Emergency department visits	100,842		
ROI ($)	4.02		



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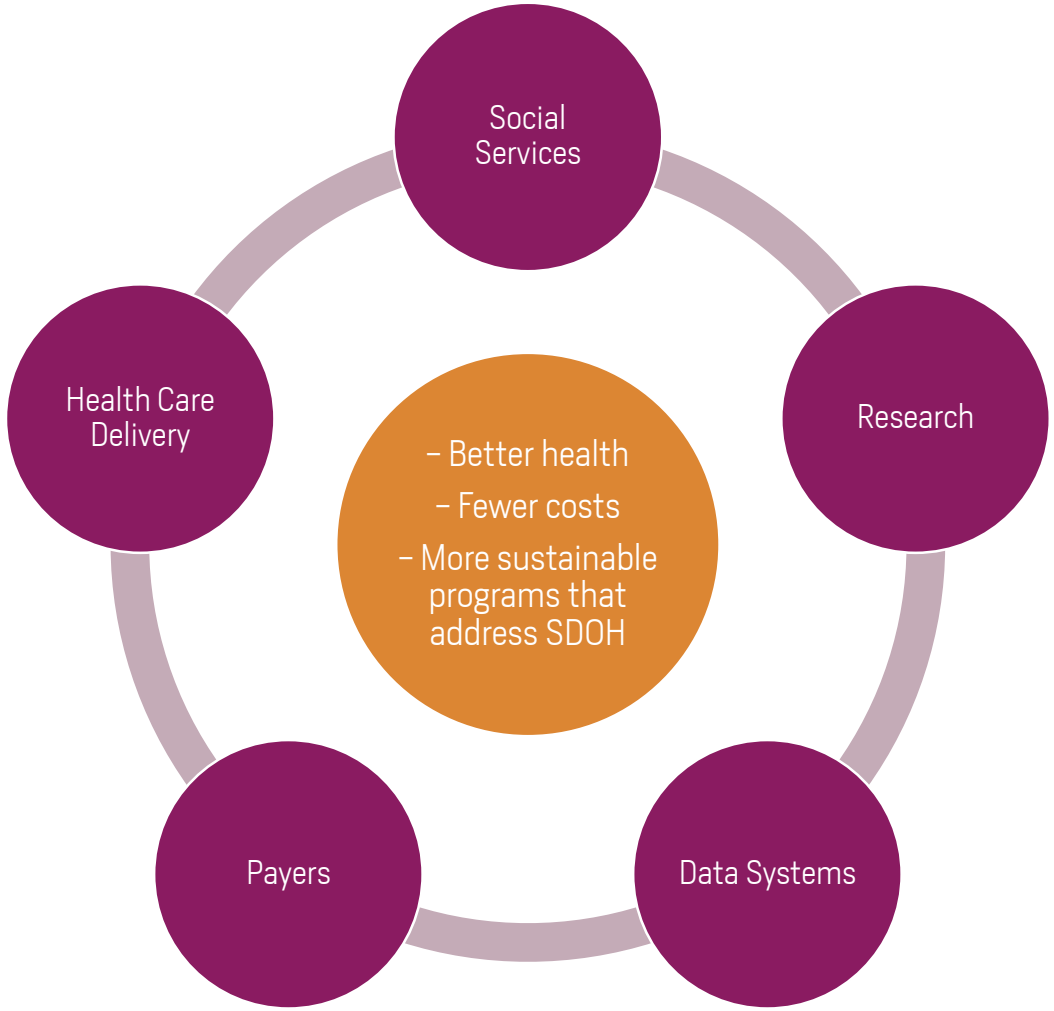
LESSONS LEARNED

- Consistent, structured communication among partners is critical to troubleshoot potential problems and issues, understand the full effects of the program, and identify areas of improvement.
- Creating visualizations of actual and hypothesized program impacts can be vital in conversations around long-term effects of the program.
- Cost analyses broken down by population of interest is essential in making the case for sustainability.
- Prepare for lack of clarity of different aspects of a project (e.g., understanding how data are collected, variation in data quality, and data availability).

SYSTEMS FOR ACTION
CCC PROJECT

SYSTEMS FOR ACTION: PROJECT GOALS

To test the ability of multiple systems in Greater Rochester to work together in aligning services and delivering efficient, effective care that addresses both the social determinants of health and health care needs.



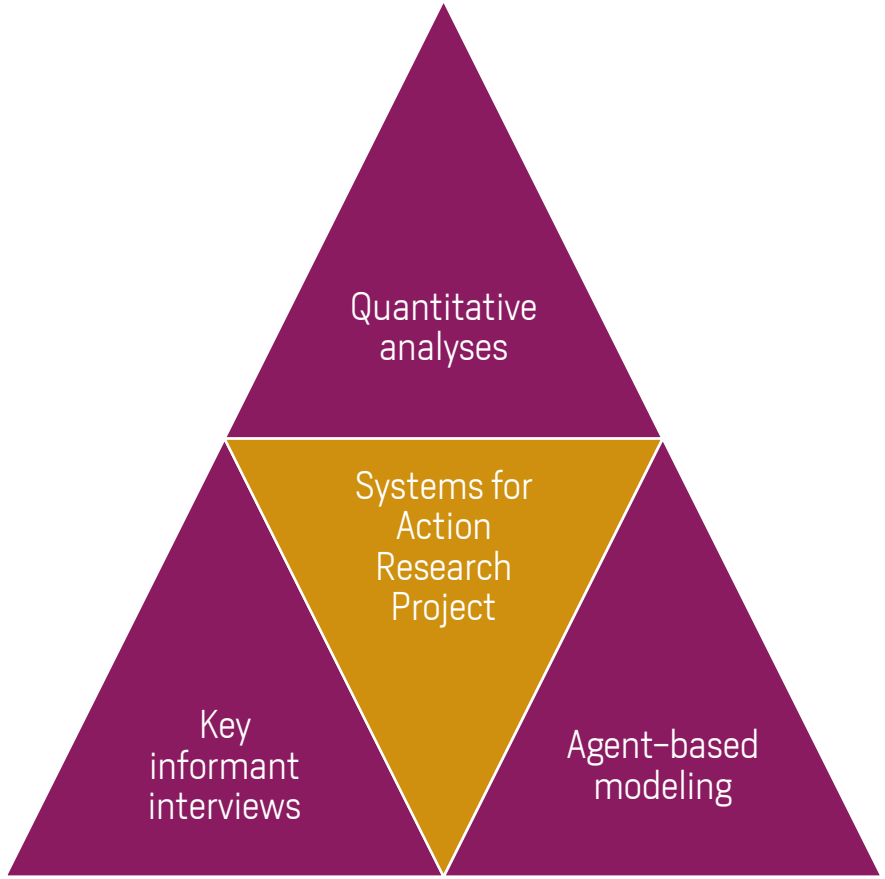
SYSTEMS FOR ACTION: RESEARCH OBJECTIVES

1) Build upon pilot evaluation using a **rigorous, mixed-methods approach** to assess the impact of CCC on:
    - Health outcomes,
    - Health care utilization patterns, and
    - Health care costs.
2) Assess barriers and facilitators to alignment across multiple systems that impact health, health care, and health care costs.
3) Analyze the "optimal mix" of social services for improving health outcomes and lowering health care costs, and how this optimal mix varies based on characteristics of the population being served.

S4A PROJECT COMPONENTS:
MIXED METHODS APPROACH

Use a mixed methods approach to achieve research objectives:

- Quantitative analysis of secondary data
- Qualitative analysis of interview data with key informants
- Agent-based modeling to test different approaches to service connection and delivery



S4A RESEARCH PROJECT
QUANTITATIVE ANALYSIS

Analysis of health care utilization data enables us to develop a more comprehensive and accurate understanding of the impact of the CCC program on health outcomes and costs in the context of other ongoing health reform initiatives. It will build upon analyses included in pilot evaluation by:

- Including a larger sample,
- Adding a comparison group, created using propensity score matching of secondary data provided by the Rochester RHIO, and
- Incorporating difference–in–differences and regression analyses.

S4A PROJECT:
QUALITATIVE ANALYSIS

Conduct **key informant interviews** with CCC staff, referring providers (including physicians, home care agencies, and others), and participants (i.e. patients) in the program. Qualitative analysis will enable us to explore:

- Perceived impact on staff, providers and participants daily functioning, and job satisfaction and/or quality of life,
- Program impact on system alignment and communication across sectors and facilitators and barriers to successful service and care integration, and
- Recommendations for adaptation, expansion, and replication.

Data will be analyzed in Nvivo using iterative process involving repeated reviews of coded text, as well as both inductive and deductive approaches to theme identification.

S4A PROJECT:
AGENT-BASED MODELING

Using The New York Academy of Medicine Cardiovascular Health Simulation (NYAM-CHS) Model (NYAM-CHS), we will conduct **simulated clinical trials** and **compare short-term and long-term health outcomes to assess differential impacts of various service combinations**. This will provide us with:

- Improved understanding of the potential long-term impacts of integrating social and health care services
- Greater insight into the mechanisms through which the CCC program functions
- Replication and translation to new communities with different populations

S4A PROJECT STATUS

- Protocol finalization and IRB Approval
  - Tailored interview guides for various types of key informants (staff, providers, patients/clients)
  - Recruitment planning and strategy
- Assessing data availability for propensity score matching and developing analysis strategy
  - Applied for and received approval from RHIO Secondary Use Committee to utilize de-identified RHIO data on non-participating patients to create a control group.
- Literature reviews to support systems science analysis component

Questions?

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Upcoming Webinars

Archives

http://systemsforaction.org/research-progress-webinars

Upcoming

Wednesday, April 25, 2018 12-1pm ET/ 9-10am PT

TESTING A SHARED DECISION-MAKING MODEL FOR HEALTH AND SOCIAL SERVICE DELIVERY IN EAST HARLEM

New York City Department of Health and Mental Hygiene

Principal Investigators: Carl Letamendi, PhD, MBA, and Rachel Dannefer, MPH, MIA

Wednesday, May 9, 2018 12-1pm ET/ 9-10am PT

UNCOMPENSATED CARE PROVISION AND THE IMPLEMENTATION OF POPULATION HEALTH IMPROVEMENT STRATEGIES

Systems for Action National Program Office, University of Kentucky College of Public Health

Principal Investigator: CB Mamaril, PhD

Wednesday, May 23, 2018 12-1pm ET/ 9-10am PT

INTEGRATING CROSS-SECTORAL HEALTH AND SOCIAL SERVICES FOR THE HOMELESS

University of Utah and University of North Texas

Principal Investigators: Jesus Valero, PhD, and Hee Soun Jang, PhD

Acknowledgements

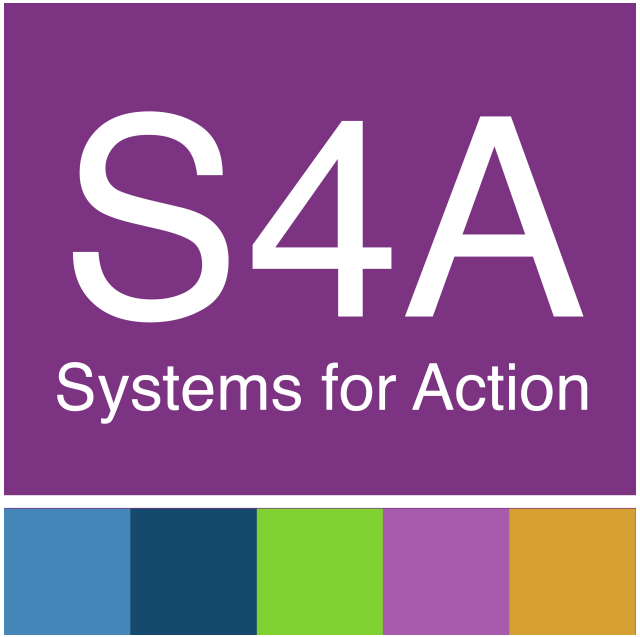
Systems for Action is a National Program Office of the Robert Wood Johnson Foundation and a collaborative effort of the Center for Public Health Systems and Services Research in the College of Public Health, and the Center for Poverty Research in the Gatton College of Business and Economics, administered by the University of Kentucky, Lexington, Ky.

College of Public Health
Center for Public Health Systems and Services Research

and

Gatton College of Business and Economics

Questions?



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