# Integrating Health Care & Public Health to Improve HIV Early Detection and Control

*Research In Progress Webinar*

*Thursday, April 20, 2017*        *1:00-2:00pm ET/ 10:00-11:00am PT*

# Agenda

Welcome: **Richard Ingram, DrPH,** Assistant Professor, University of Kentucky College of Public Health

Integrating Health Care & Public Health to Improve HIV Early Detection and Control

Presenters: **Deborah Porterfield, MD, MPH,** RTI International and UNC Chapel Hill School of Medicine *dporterfield@rti.org and* **Christine A. Bevc, PhD, MA,** RTI International *cbevc@rti.org*

Commentary:
**Danielle Varda, PhD,** University of Colorado Denver School of Public Affairs *Danielle.Varda@ucdenver.edu* and
**Yasmin Andre,** Ryan White Clinical Quality Manager, Heart of Florida United Way, Orlando *yasmin.andre@hfuw.org*

# Questions and Discussion

# Presenters

**Deborah Porterfield, MD, MPH**
Senior Research Public Health Analyst,
  RTI International
Associate Professor, UNC Chapel Hill
  School of Medicine     *dporterfield@rti.org*

**Christine A. Bevc, PhD, MA**
Research Public Health Analyst
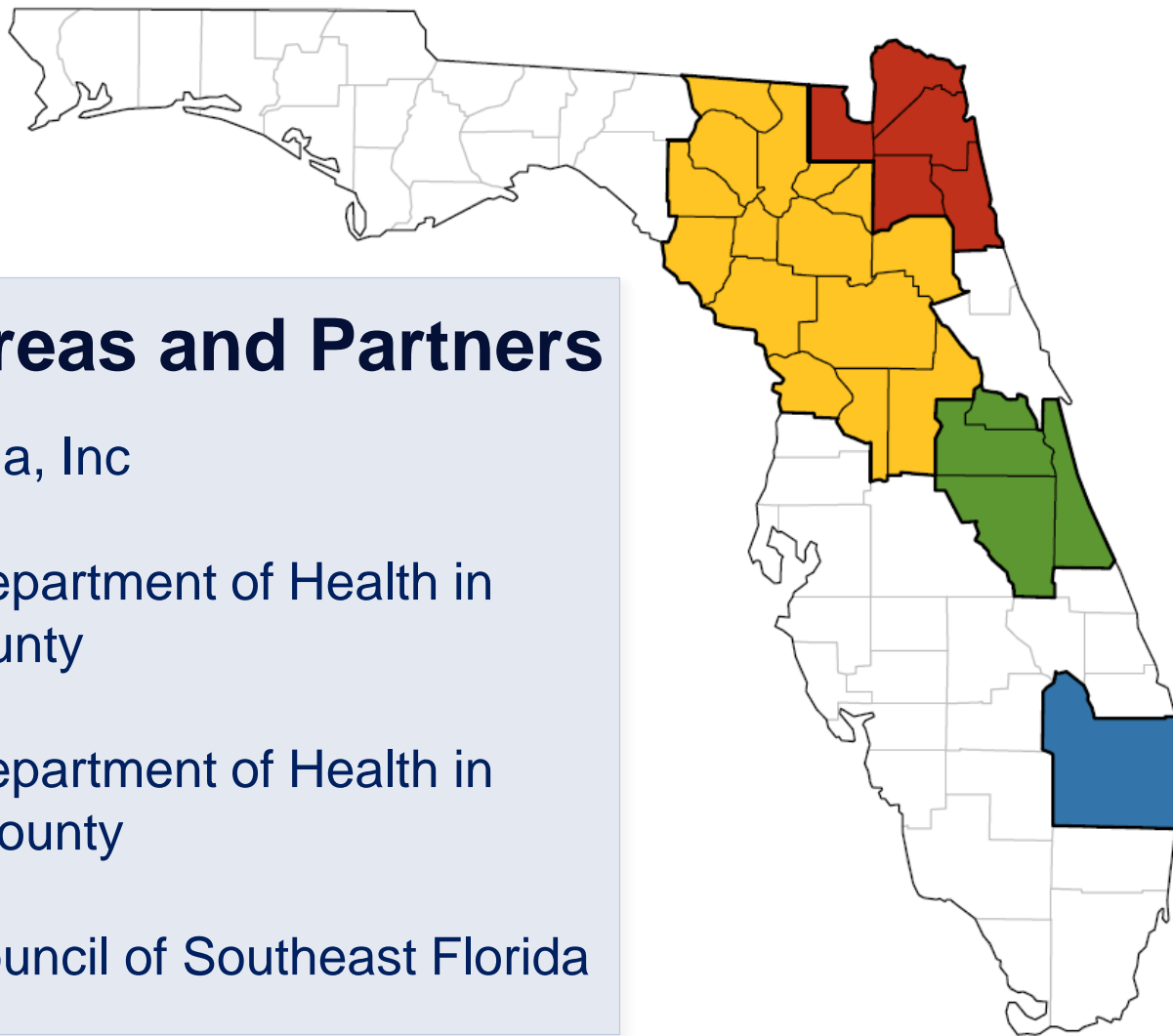RTI International *cbevc@rti.org*

# Integrating to Improve

## Integration between Health Care and Public Health to Improve HIV Early Detection and Control

# Project Team

- PI: Deborah Porterfield (RTI, UNC)
- Co-Investigators:
  - Christine Bevc (RTI)
  - Lori Bilello (UFL)
  - Max Wilson (FDOH)
- Project Manager: Caroline Husick (RTI)
- Scientific Advisor: Sara Jacobs (RTI)

## **Participating Areas and Partners**

- Area 3/13: WellFlorida, Inc

- Area 4: Florida Department of Health in Duval County

- Area 7: Florida Department of Health in Orange County

- Area 9: Health Council of Southeast Florida

# Community Partner Engagement and Role

- Partners were identified by the Florida Practice-Based Research Network

- Partners have played critical roles:
  - Helping the research team learn about the unique features of each network
  - Acting as advocates for the project in their communities
  - Supporting implementation of the survey
  - Assisting in obtaining organizational outcome data from Ryan White Services Reports
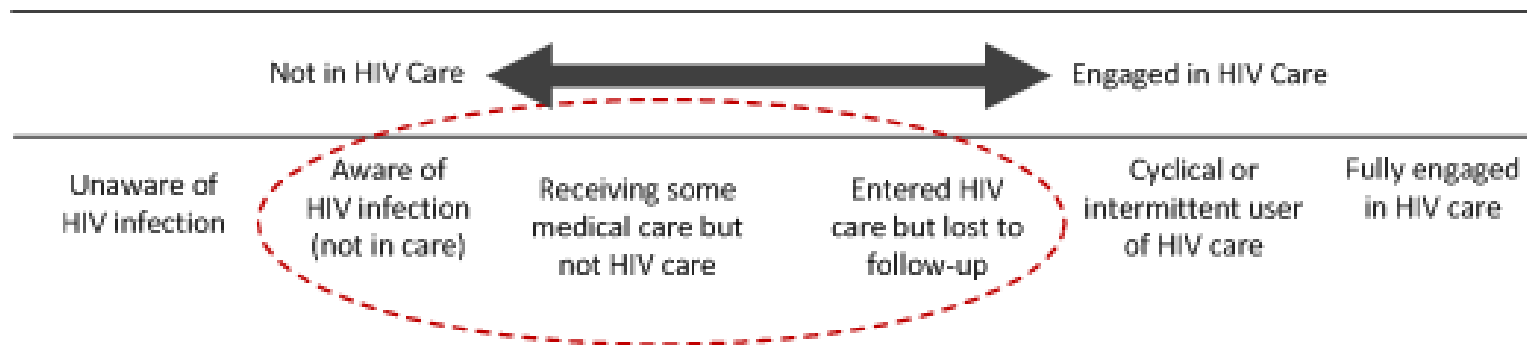
# We also thank…

# Project Background

# The Problem: Suboptimal Engagement in HIV Care

▪ HIV care takes place along a continuum or spectrum



▪ 20% of persons with HIV are not aware of their diagnosis, and significant proportions of persons present at a late stage, experience delays in care, or do not remain in care continuously (Marks et al., 2010).

# Key steps in the HIV Care Continuum

**HIV Care Continuum among Persons Living with HIV Infection in the United States, 2012**
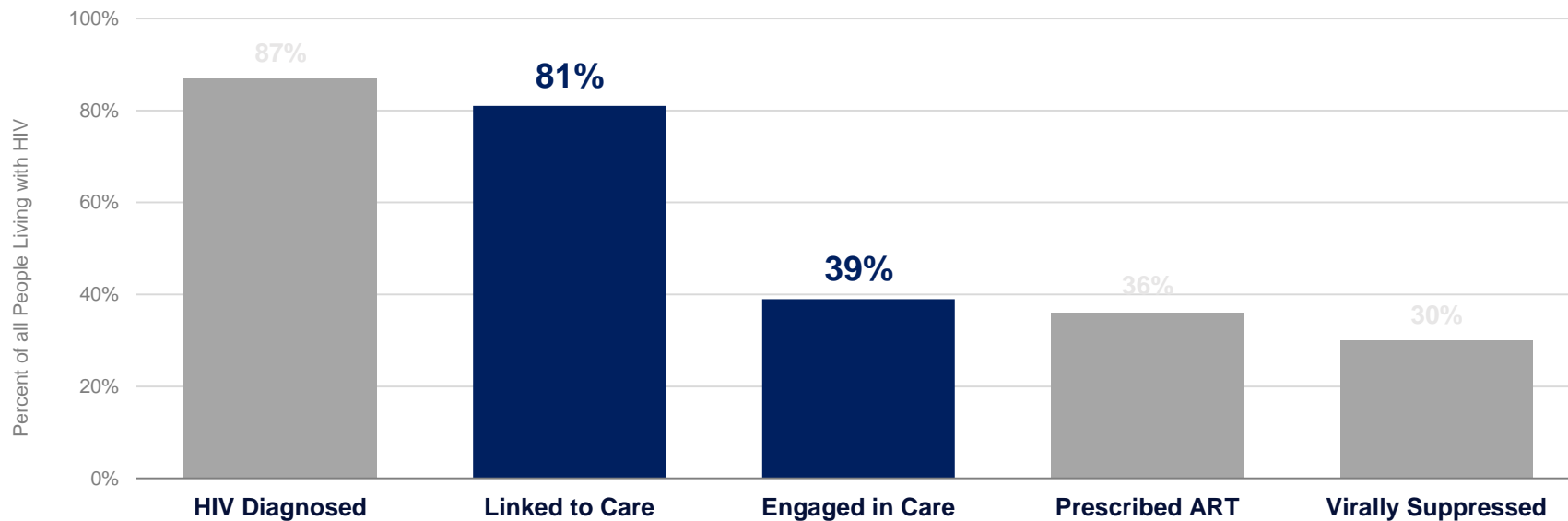


Source: National HIV/AIDS Strategy 2016 Progress Report

\*   Diagnosed is a calculated estimate based on data reported to the National HIV Surveillance System, the denominator is the estimated number of persons living with HIV (1.2 million).

\*\*   Linkage to care is the percentage of persons linked to medical care within 3 months after diagnosis (numerator) among those newly diagnosed in 2012 (denominator). Data are from 28 jurisdictions with complete reporting of CD4 and viral load test results to CDC.

\*\*\* Engaged in care, prescribed ART and virally suppressed data (numerators) come from the Medical Monitoring Project and based on people who had at least one HIV care visit during January to April 2012. The dominator is the estimated number of persons living with HIV (1.2 million).
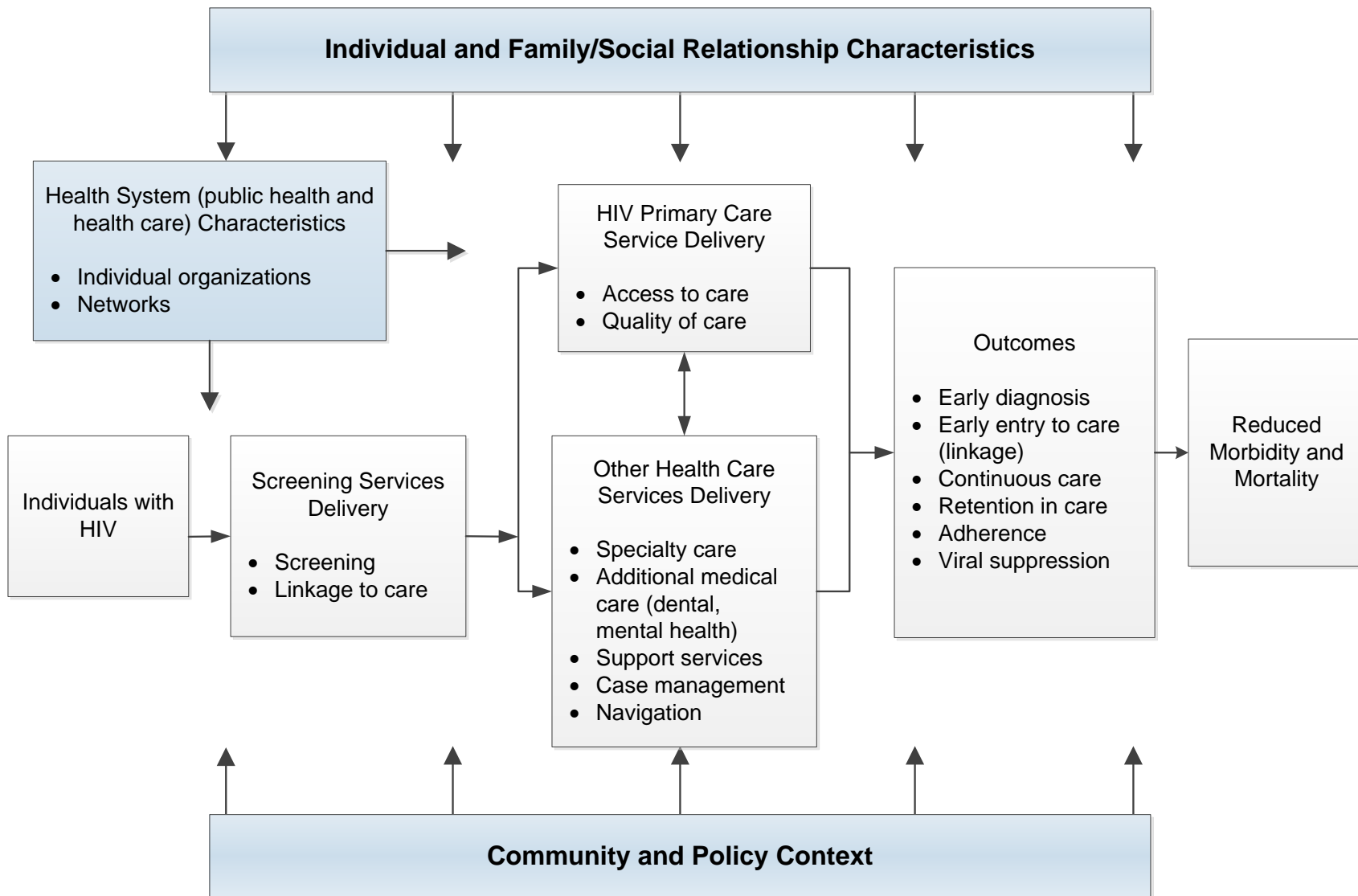
# Current Status: Fragmented System of Care

- Persons screened in public health or community settings must be linked to clinical care
  - Effective patient care is dependent upon organizational connections and a well-functioning system of care

- Siloed federal funding for HIV (i.e. CDC, Medicaid, HRSA) may contribute to fragmentation

- Gap between policy recommendations (CDC, White House Office of National AIDS Policy National Strategy) and evidence:  How to achieve a system to successfully enable linkage to care?

# Project Logic Model

**Individual and Family/Social Relationship Characteristics**

Health System (public health and health care) Characteristics

- Individual organizations
- Networks

Individuals with HIV

Screening Services Delivery

- Screening
- Linkage to care

HIV Primary Care Service Delivery

- Access to care
- Quality of care

Other Health Care Services Delivery

- Specialty care
- Additional medical care (dental, mental health)
- Support services
- Case management
- Navigation

Outcomes

- Early diagnosis
- Early entry to care (linkage)
- Continuous care
- Retention in care
- Adherence
- Viral suppression

Reduced Morbidity and Mortality

**Community and Policy Context**

# Research Aims

- Examine how public health, primary care, and community organizations work as a system to identify, link to care, and provide continuous care for HIV patients

- Determine the organizational and system characteristics associated with the outcomes of linkage to care and delivery of continuous care for persons with HIV

- Develop resources to improve HIV systems of care based on the study findings

# Project Methodology

# Project Milestones & Methods

- Planning meetings with organizational representatives in four areas
- Follow up discussions to determine size and characteristics of each network
- Survey data collection from all organizations to measure connections
- Collection of secondary data from CAREware and testing sites to measure outcomes
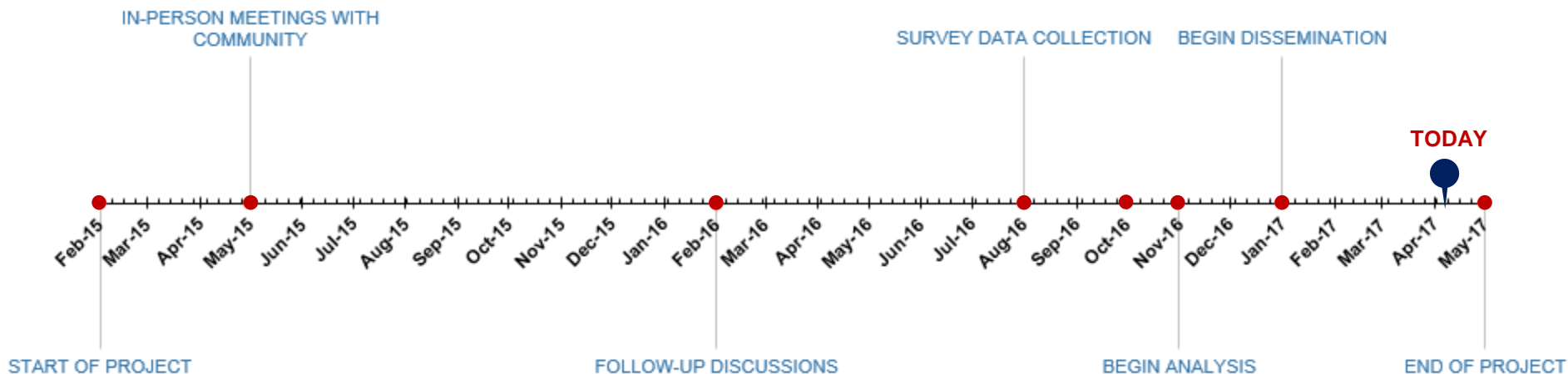
# Identifying Organizations & Regional Systems of Care

- Followed an iterative process of refinement

- **Partners were provided the definition of an organization that was part of the system: *one that contributes to the key outcomes of early diagnosis, linkage to care, and continuous care.***

  - Initial draft by community partners in each region,

  - Interviews with organizational staff in each region (n=3-5/Area)

  - Discussions with state-level stakeholders (FDOH, community health center association)

  - Final review and confirmation by community partner

**PARTNER**
Program to Analyze, Record, and Track Networks to Enhance Relationships

- Originally funded by the Robert Wood Johnson Foundation, the goal of PARTNER is to gather data on how organizations work together to achieve improvements in population health.

- PARTNER was originally intended for use by public health departments, but has expanded to any organization/individual involved in collaboration

- The tool is typically used by collaboratives to:
  - measure how organizations in a collaborative are working together;
  - assess where and how the collaborative should strengthen their partnerships in the collaborative; and
  - chart progress in the relationships and activities of the collaborative.

*Source: www.partnertool.net*

# Analysis of Organizational and Relational Data

- Identify variation in the number and types of relational ties between the testing organizations (i.e. CHDs and CBOs) and HIV clinical care organizations; and between the HIV clinical care organizations and other types of organizations providing support and case management services.

- Understand how characteristics of the organizations are associated with patterns of their relational ties
  - *For example, those organizations that provide fewer services or offer more specialized services are more likely to need to refer clients for care than more comprehensive providers, demonstrating a potential gap in these systems.*

- Assess, for a subset of organizations providing HIV clinical care, which organizational and relational measures are associated with improved continuous care.

# Results

# Summary of Four Areas and Systems

|  | Area A | Area B | Area C | Area D |
|---|---|---|---|---|
| **Population** | 1,357,594 | 2,457,041 | 1,343,633 | 1,473,270 |
| **No. orgs total (network)** | 69 | 81 | 44 | 77 |
| **No. orgs total (surveyed)** | 34 | 41 | 35 | 44 |
| **Response rates (n,%)** | 19 (56%) | 19 (46%) | 15 (43%) | 14 (32%) |
| HIV Counseling & Testing Providers | 15 | 11 | 7 | 12 |
| Linkage Service Providers | 13 | 6 | 5 | 7 |
| HIV Medical Care Providers | 9 | 7 | 5 | 7 |

Government agencies/departments
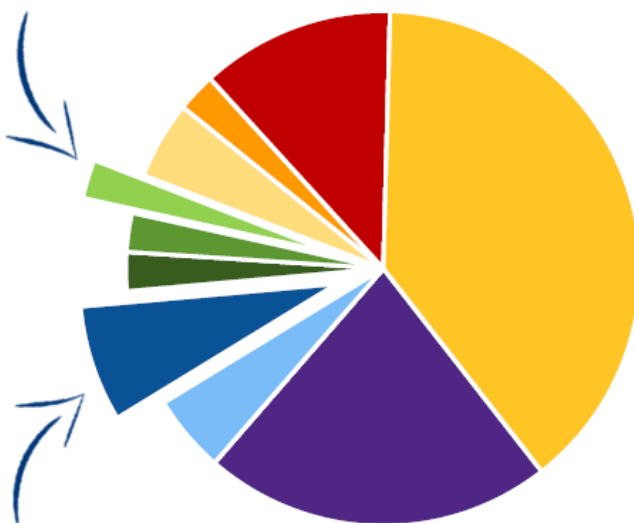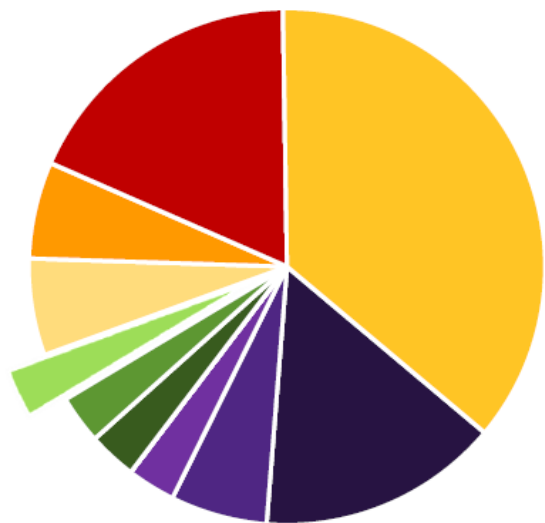
Mental health providers
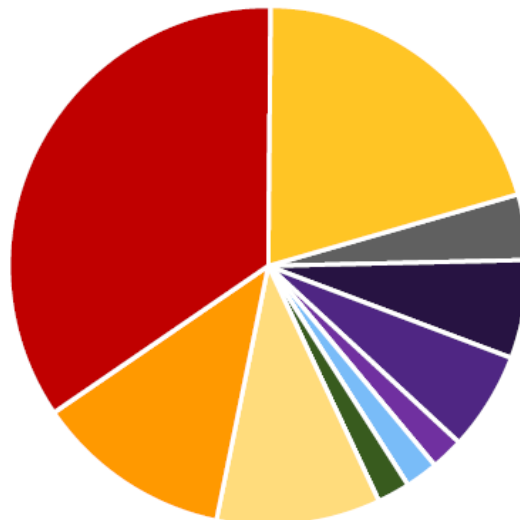
Membership composition varies by Area

- Community-based organizations
- County health departments
- Faith-based organizations
- FQHCs*
- Government agencies/departments
- HIV clinics (Non-health departments)
- Hospitals (ED, inpatient, affiliated clinic)
- Legal aid/service providers
- Mental health providers
- Other medical providers
- K-12 schools/education
- Prisons/correctional facilities
- Private providers
- University-affiliated clinics
- Veterans Administration*

# Describing the Regional Systems of Care

- **Organizational (Provider) Level**

  – **Size of the organization, appx. 450 patients (0 up to 3,000)**

  – **Range of services**
    - 67% provide testing services (range: 47-86%)
    - 46% provide linkage services (range: 32-68%)
    - 42% provide HIV medical care services (range: 33-50%)
    - 60% provide one or more evidence-based/informed programs or activities shown to increase linkage and continuous care (range: 40-74%)

  – **On average, providers reported receiving funding from average of 4 different sources (range: 1-15)**
    - 66% receive any type of Ryan White funding, includes A-D

# Describing the Regional Systems of Care

- **Systems Level**

  – **Most frequent reported relationship – Client referrals (66%)**
    - *Refer clients for range of services, average 13 providers (range:1-53)*
    - Routine frequency of interaction – "About once a month"
    - High level of mission congruence – "A great deal"

  – **Top reported facilitators and barriers**
    - Common goals and patient-centered focus
    - Limited staff/resources and perceived competition for funding/resources/deliverables

# Coordinating Care across the Regional Systems

*Weighted nodes, unweighted edges – Linkage service providers in red*
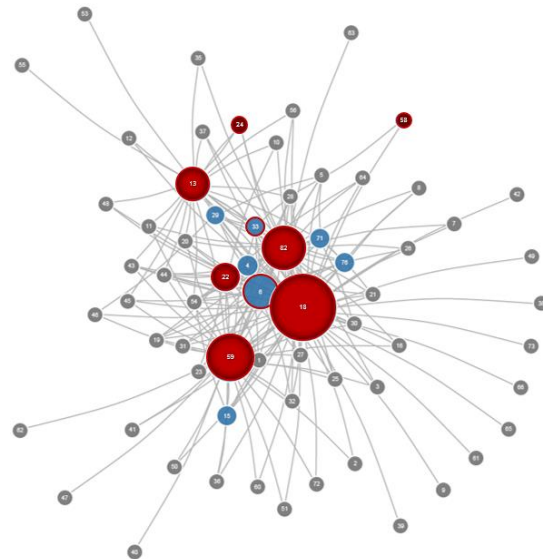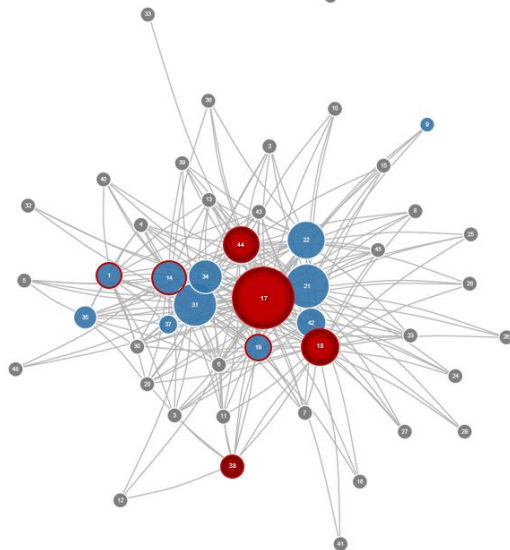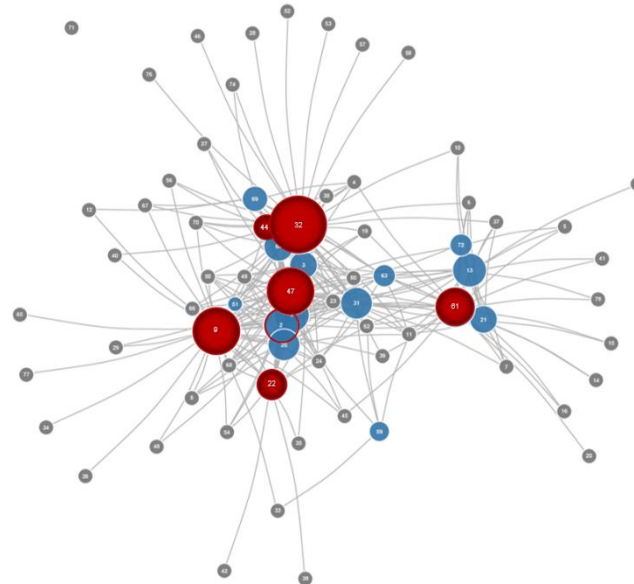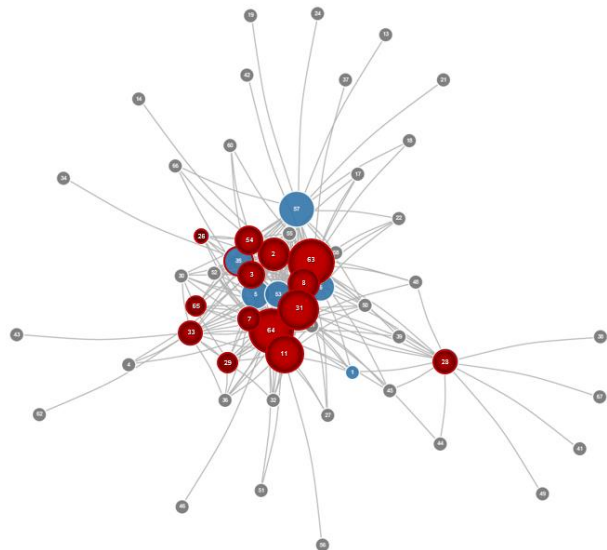
# Examining Critical Linkages to Care

*Referrals for services from providers that refer for linkages services to those that provide linkage services (red)*



Lines represent <u>referrals for</u> linkage services

Not everyone is connected

Organizations that <b><u>refer for</u></b> linkage services

**Area network contains 308 connections; referral network for linkage services contains <u>6</u> connections**
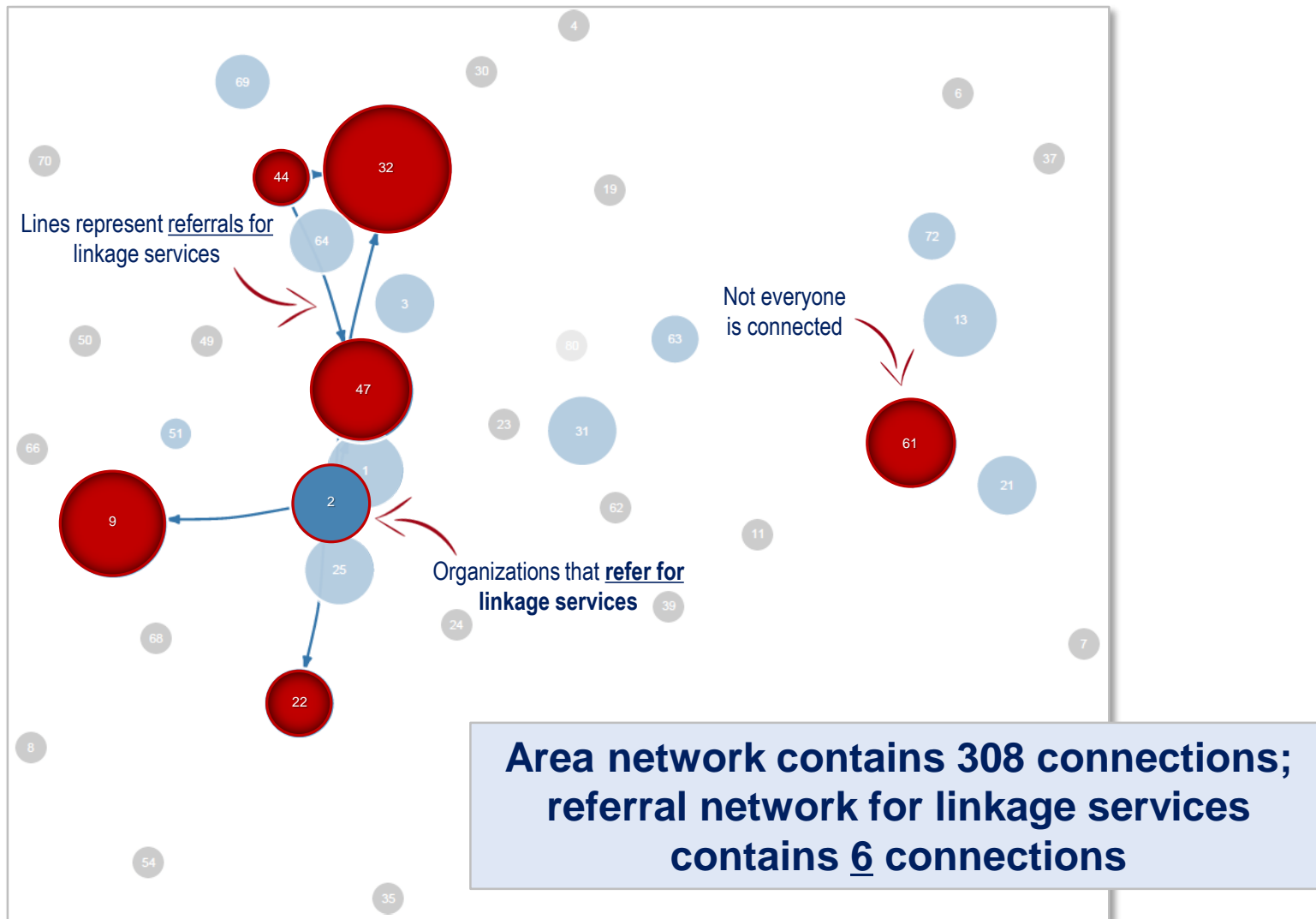
# Maintaining Connections for Continuous Care

*Referrals for services from providers that refer for HIV medical care services to those that provide HIV medical care services (red)*



Organizations that **refer for** HIV medical care services

Organizations that **provide** HIV medical care services

Lines represent <u>referrals for</u> HIV medical care services
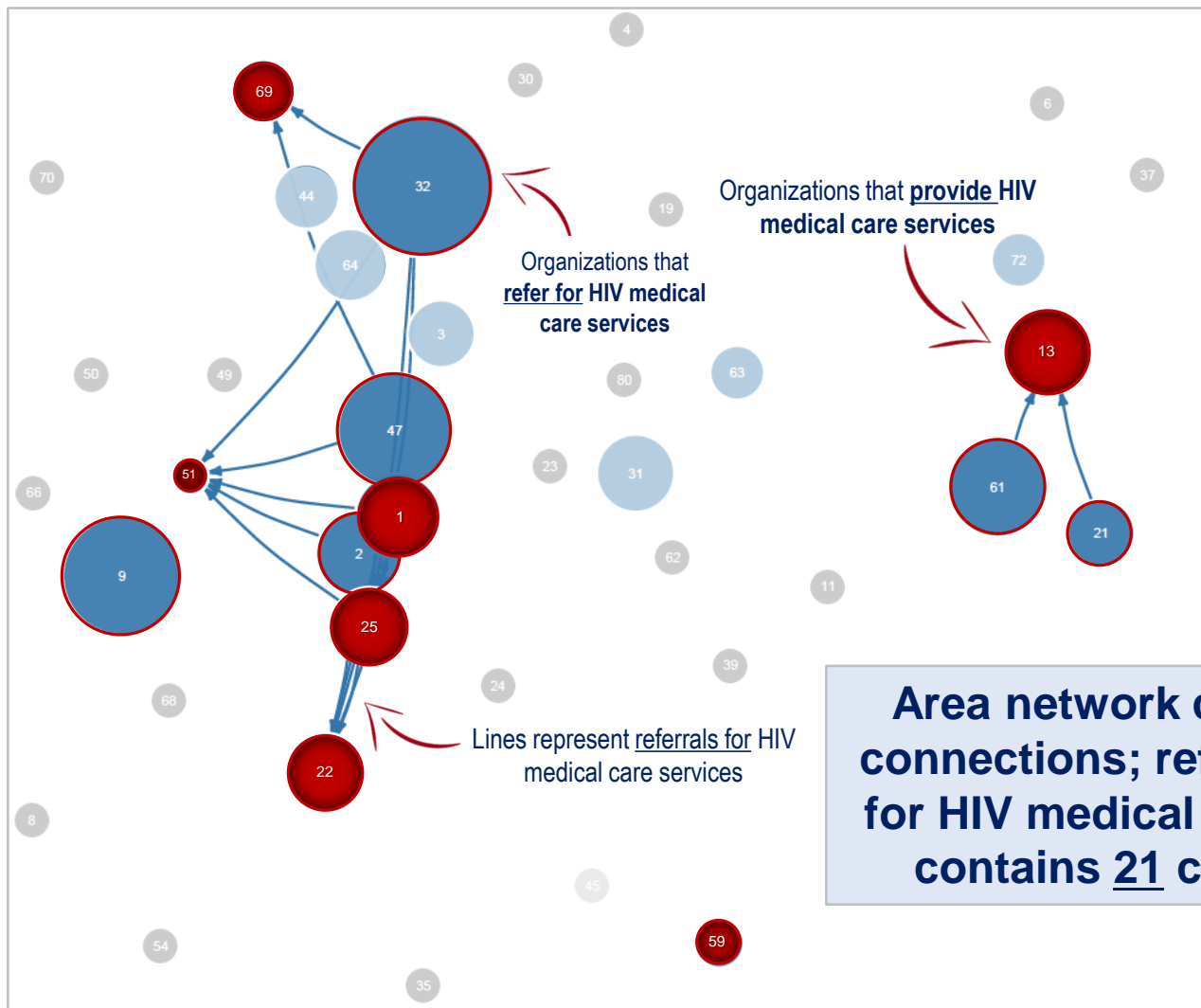
**Area network contains 308 connections; referral network for HIV medical care services contains <u>21</u> connections**

# Findings and Conclusions

- High average of provider connections ($\mu$ =17, range: 1-58), given the large number and diversity of organizations in each area

- Relatively low number of client referrals for linkage to care (range: 6-26) compared to continuous care (range: 4-21) and all interactions (range: 220-310)

- Potential to increase referrals for services and avoid network "isolates"
  - *Opportunities to improve care to clients*
  - *Identify new providers for service referrals*

# Importance of Critical Linkages

- **Research Aim 1: Examine how public health, primary care, and community organizations work as a system to identify, link to care, and provide continuous care for HIV patients**

  - Providers that offer fewer services exhibit higher levels of interaction compared to more comprehensive service providers.

    - *Assumption: Organizations that provide fewer services are more likely to have a greater number of ties (i.e., interactions) with other organizations for those services that they do not provide. Extent to which organizations are likely to refer clients for specialized medical care or support services, because their range of services is more limited.*

  - Focus on subset of network relations, client referrals (n=726)

    - *Specific services, including providers of testing (n=45), linkage (n=31), and continuous care (n=28)*

# Limitations

- **General to all systems-based research**
  - Developing definitions/inclusion criteria for organizations
  - Developing comprehensive and valid list of organizations meeting the criteria

- **Maintaining engagement with community partners**
  - Delays due to IRB approval
  - Interruptions due to two major disasters

- **Low response rate to organizational survey**

- **Limited Ryan White outcome data**

# Implications for Policy and Practice

- HIV/AIDS service delivery networks are complex with numerous types of organizations contributing to outcomes

- Network methods have great potential for studying these complex systems; however, perceived participation in system of care is likely a driver of response rate (e.g. evidenced by 66% RW-funded organizations among respondents)

- Areas for system improvement include focusing on the necessary ties/referrals to improve linkage and continuous care

# Interested in Learning More?

## Save the Date!

*AcademyHealth PHSSR Interest Group Meeting*

We will be presenting detailed results from all four participating areas of Florida to an audience of public health systems researchers, along with local and national policy makers.

**AcademyHealth**
**ANNUAL**
**RESEARCH MEETING**
**TODAY'S RESEARCH DRIVING TOMORROW'S OUTCOMES**

## Contact Us

- **You may reach the entire i2i team at i2i@rti.org.**

- **You may contact individual team members directly using the contact information to the right.**

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# Project Updates

*go to: http://www.publichealthsystems.org/integration-health-care-and-public-health-improve-hiv-early-detection-and-control*

# Commentary

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Ryan White Clinical Quality Manager
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# Questions and Discussion

# Webinar Archives
*http://systemsforaction.org/research-progress-webinars*

## Upcoming Webinars

Wednesday, May 3, 12-1pm ET/ 9-10am PT
**IMPLEMENTATION AND DIFFUSION OF THE NEW YORK CITY MACROSCOPE ELECTRONIC HEALTH RECORD SURVEILLANCE SYSTEM**
*Katharine (Tina) McVeigh, PhD, MPH, New York City Department of Health and Mental Hygiene*

Thursday, May 11, 1-2pm ET/ 10-11am PT
**CROSS-JURISDICTIONAL RESOURCE SHARING AND THE SCOPE AND QUALITY OF PUBLIC HEALTH SERVICES**
*Justeen Hyde, PhD, Investigator, VA Center for Healthcare Organization & Implementation Research and Debbie Humphries, PhD, MPH, Clinical Instructor in Epidemiology, Yale School of Public Health; a Public Health PBRN DIRECTIVE Project*

# Thank you for participating in today's webinar!
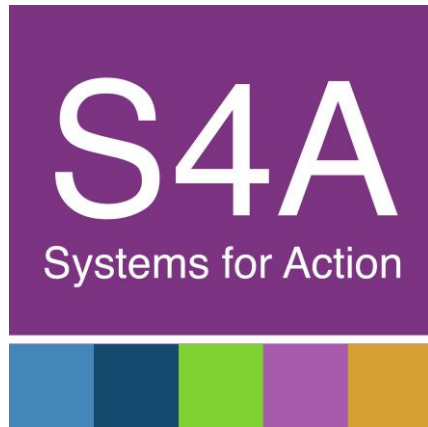
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## www.systemsforaction.org

*For more information about the webinars, contact:*

Ann Kelly, Project Manager  *Ann.Kelly@uky.edu*  859.218.2317

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# 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.

# Speaker Bios

**Deborah Porterfield, MD, MPH** (Principal Investigator) is a Senior Research Public Health Analyst at RTI International, with training in health services research, public health, internal medicine, and preventive medicine, and six years of public health practice experience at the NC Division of Public Health. Dr. Porterfield's work in Public Health Systems and Services Research has focused on performance measurement in state and local health departments in cancer and diabetes with projects for the Centers for Disease Control and Prevention. An additional area of focus is integration between public health and primary care, with past project work for the Agency for Healthcare Research and Quality and PCORI.

**Christine A. Bevc, PhD, MA** (Co-Investigator) is a Research Public Health Analyst at RTI International. Dr. Bevc's work in Public Health Systems and Services Research has focused on applying her expertise in social networks and social science research methods to better understand and improve interorganizational relationships and collaboration. Her research broadly focuses on organizational behavior, environment and society, and disasters, with past work for the Centers for Disease Control and Prevention and National Science Foundation.

**Danielle Varda, PhD,** specializes in collaborative governance and network leadership, focusing specifically in Public Health Systems and Services Research. Her research focus is on evaluating the network structure of interorganizational collaborations between the public, private, and nonprofit sectors and the subsequent network effects of these recorded interactions. She has developed two highly adopted software tools which use models and methods of network measurement. With funding from the Robert Wood Johnson Foundation, she developed a software tool (PARTNER, [www.partnertool.net](www.partnertool.net)) that uses Social Network Analysis to administer a survey and link to an analysis tool, to measure and monitor collaborative activity over time.

**Yasmin Andre** graduated from the University of Central Florida in 2012 with a Bachelor of Science in Health Services Administration and is currently a graduate student of the Executive Health Services Administration program. She has over 5 years of non-profit and grant administration experience in the field of public health. Yasmin currently serves as the Clinical Quality Manager for the Ryan White Part B/GR program at Heart of Florida United Way, responsible for ensuring delivery of a quality continuum of care through the development and routine maintenance of the quality management program for Area 7.