

Improving systems of care for early detection, linkage, and continuous care for persons with HIV/AIDS

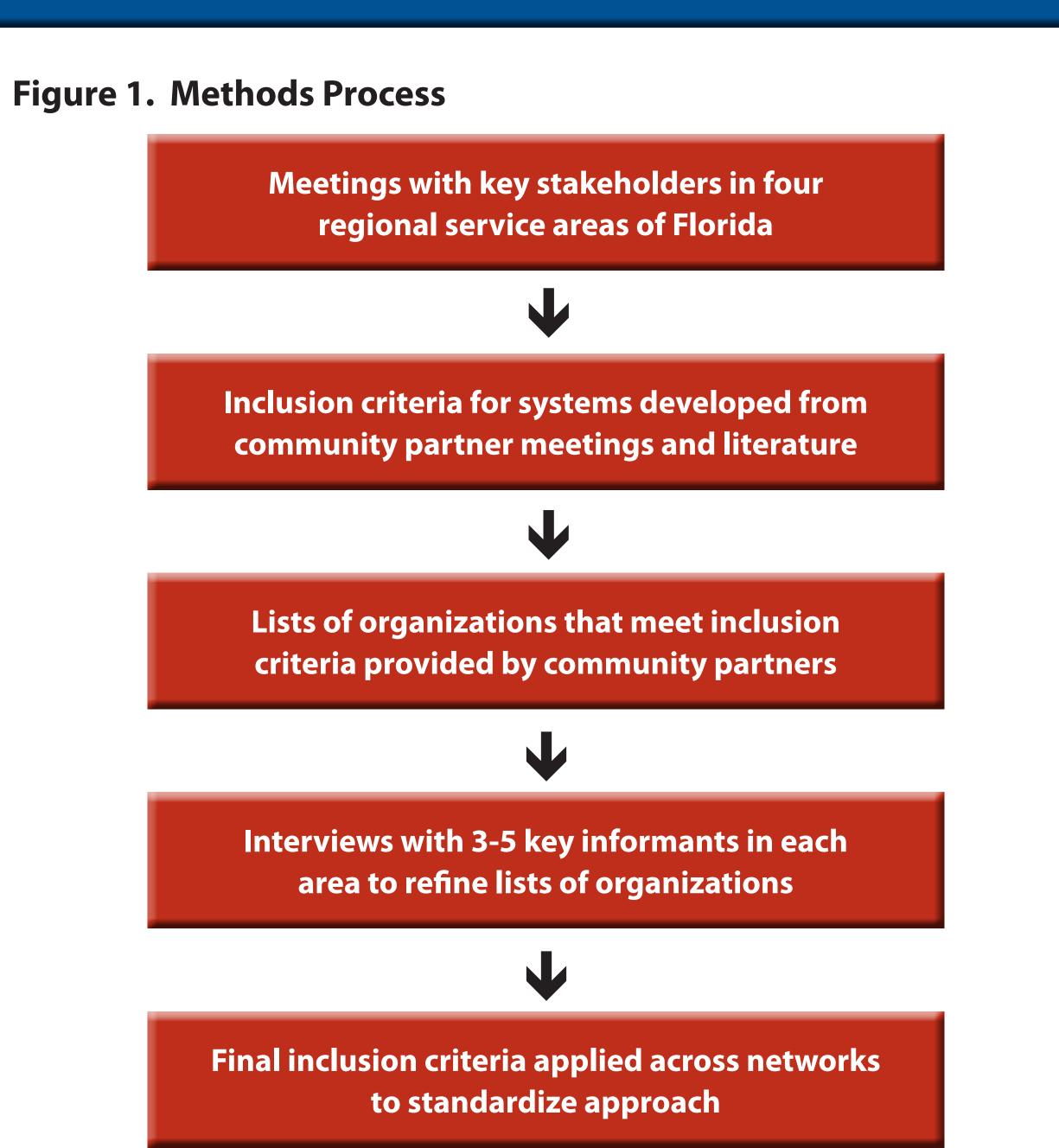
Goal

The goal of the Integrating to Improve project is to examine how public health, primary care, and community organizations work together as a system to identify, link to care, and provide continuous care for HIV patients. This research highlights the critical first step of gathering descriptive information on the systems of care that includes identifying and characterizing organizations in four regions of Florida that contribute to the outcomes of early detection, linkage, and continuous care for persons with HIV/AIDS.

Background

In 2012, the Institute of Medicine (IOM) published a report calling for better integration between primary care and public health to improve the health of populations (IOM, 2012). Integration is hypothesized to be an important component of systems of care for persons with HIV/ AIDS. Lack of coordination among public health and communitybased organizations (CBOs) that conduct HIV prevention and screening and organizations that provide primary care contributes to late diagnosis, delayed entry into care, and poor retention in care for significant numbers of persons with HIV/AIDS (Mugavero et al., 2011; Penner & Leone, 2007).

Methods



Methods (continued)

Figure 1 outlines the steps in our process. The research team recruited four regional service areas in Florida through the practice-based research network led by University of Florida. In each area, the team worked with a lead community partner to facilitate communications and engagement from many stakeholder organizations.

In May 2015, the team met with groups of key informants in each of the four areas. Each meeting included 9 to 15 community stakeholders representing organizations such as local health departments, hospitals, and nonprofit agencies that provide services to persons living with HIV/AIDS (PLWHA). Several stakeholders in each group represented recipients of Ryan White and Housing Assistance for Persons with AIDS (HOPWA) funding. Some meetings also included peer advocates and linkage coordinators. The unique functioning and boundaries of the system of care in each area were discussed in the meetings.

Using prior research on systems of care for HIV/AIDS and lessons learned from the meetings about how systems function in the four areas, the research team developed a definition for inclusion in the systems:

Any organization that contributes to the key outcomes of early diagnosis, linkage to care, and continuous care

The team chose to use a more inclusive definition of "contributes" to the outcomes of interest rather than a definition restricted to those organizations that directly provide these services or activities.

Figure 2. Funding Sources

- Health Resources and Services Administration (HRSA) Includes Ryan White, Partnership for Care (P4C), and Minority AIDS Initiative (MAI)
- (SAMHSA)
- Department of Children and Families (DCF)
- Includes Expanded Testing Initiative (ETI) and High Impact Prevention
- Florida Department of Health (FDOH)
- County health care district Clinic fees
- Private funding

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Substance Abuse and Mental Health Services Administration

Department of Housing and Urban Development (HUD) Includes Housing Opportunities for Persons with AIDS (HOPWA) Centers for Disease Control and Prevention (CDC)

Centers for Medicare and Medicaid Services (CMS)

Figure 3. Software Systems

- CAREWare (city and state)
- eHARS
- Centrincity (EHR)
- HMS (EHR)
- Allscripts (EHR)
- PRISM (STD database)
- Provide Enterprise
- Sovera
- Health Management System
- ESSENCE
- Merlin
- EPI Gateway
- ADAP Database
- Images (surveillance)
- Provide
- FMMIS (Florida Medicaid Management)
- EvaluationWeb

The lead community partner in each area used this definition to obtain a draft roster of organizations. These rosters were to include every organization in each area that met the definition. The partners provided lists of organizations along with details on services provided and a key contact for each organization. Partners also shared lists of software systems used for surveillance and data management, lists of planning group membership, and lists of sources for funding for PLWHA in their area (see **Figures 2 and 3** for examples of each).

Next, the team worked iteratively to further define each system: they conducted interviews with 3 to 5 key informants and completed a subsequent review with each lead partner, resulting in a final list of organizations that contribute to the system of care in each area. Interviewees were given the original list of organizations developed by the community partners and were asked to add or eliminate organizations based on the inclusion definitions. The final list of organizations for each area included:

- Any organization proposed by the lead partner and confirmed by the informants;
- Any organization added by at least two informants;
- Any organization added by one informant and confirmed by the community partner; and
- All FQHCs and Registered Testing Sites not included under other criteria.

Methods (continued)

Figure 4. Sample Network

Interviewees also provided insights on ways in which organizations in each area might work together or be connected. In the next phase of this project, the researchers will assess how the organizations connect to one another using social analysis methods. The result of this work will include network diagrams showing how organizations in each area connect to one another (see **Figure 4**).

Results

Table 1. Network Composition

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Area	Total Number of Organizations	Ryan White Part A Providers	Ryan White Part B Providers	Ryan White Part C or D Providers	Testing Site (certified)	Testing Site (unofficial)	Private Practice	Community Health Center	Case Management	Linkage	Housing (e.g. HOPWA)
Α	36	7	5	4	15	0	18	2	11	17	2
В	28	12	7	2	15	0	12	6	16	15	7
С	16	7	2	0	8	0	0	4	5	5	1
D	43	1	9	1	29	1	6	19	4	5	6
Total	123	27	23	7	67	1	36	31	36	42	16
Average	30.75	6.75	5.75	1.75	16.75	0.25	9	7.75	9	10.5	4

In the initial lists of organizations, the average system size was 31 organizations (range: 16 to 43). Each system contained a unique balance of local health departments, private practices, community health centers, and private nonprofits.

Ryan White Part B providers comprised an average of 18% of organizations in each network (range: 13% to 25%). Ryan White Part A providers comprised an average of 35% of organizations in each of the three networks that includes an Eligible Metropolitan Area (EMA) (range: 19% to 44%). Three of the four networks had a small number of Ryan White Part C or D providers that comprised an average of 5% of the organizations in each network (range: 0% to 11%).

Approximately one-quarter (27%) of organizations were private practices (range: 0% to 50%). Community health centers were a similar proportion (24%) of organizations (range: 6% to 44%). Many organizations in the network served multiple roles within the system. Over half (53%) of the organizations included were certified HIV

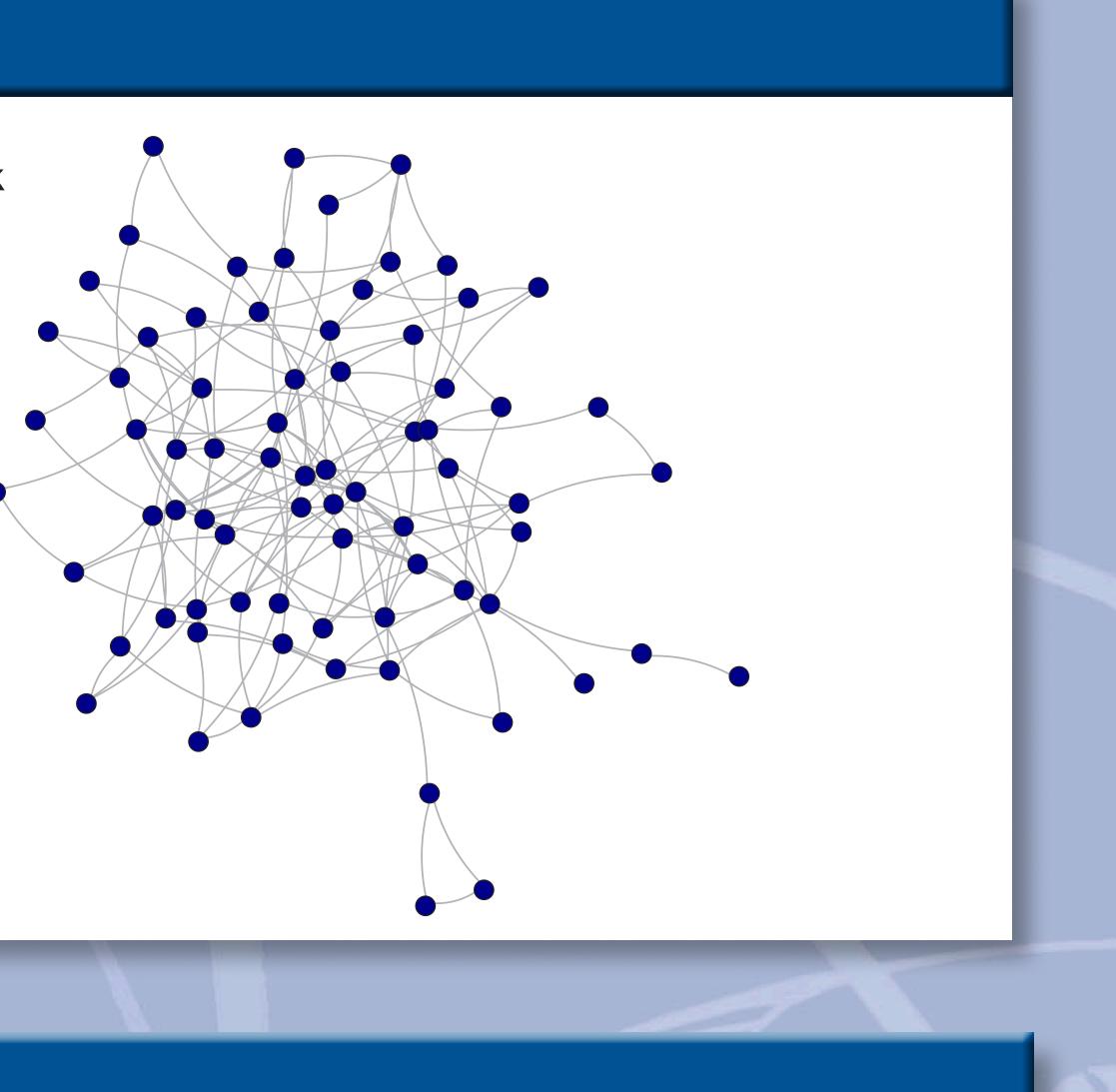
Table 2. Evolution of Lists of Organizations

testing sites (range: 42% to 67%). Approximately one-third (32%) of organizations provided case management services (range: 9% to 57%). Approximately one-third (36%) provided linkage services (range: 12% to 54%). A smaller number (13%) provided housing services, such as those funded by Housing Opportunities for Persons with AIDS (HOPWA) (range: 6% to 25%). Urban areas had more organizations that provided case management and linkage services, which were comparatively rare in organizations located in the single area without an EMA.

Table 2 demonstrates how the lists evolved after interviews with stakeholders and iterative review with the community partners and research time. Conversations with stakeholders added an average of 11 organizations to each network (range: 4 to 22). Stakeholders confirmed that all organizations on the initial list should remain. The researchers added additional organizations to each network whose core purpose aligned with the inclusion criteria for the study. These organizations included all Federally Qualified Health Centers (FQHCs) and Registered Testing Sites that were not added to the lists by a community partner or stakeholder. An average of 34 (range: 19 to 47) FQHCs and testing sites were added to each network. The final lists include an average of 76 organizations (range: 48 to 96).

Area	Number of Organizations: Initial	Total Number of Organizations: Final	Number of Organizations Added by Stakeholders	Number of Organizations Added by Inclusion Criteria
A	36	63	4	23
В	28	96	22	46
C	16	48	13	19
D	43	96	6	47
Total	123	303	45	135
Average	30.75	75.75	11.25	33.75





Conclusions

Early results from the Integrating to Improve project shed light on the structure and composition of systems of care for persons with HIV/ AIDS in four areas in Florida. Initial results highlight the diversity of network structures, indicating differences in urban versus rural areas. The iterative review process with stakeholders revealed additional categories of organizations, such as private practices and hospitals, that care for PLWHA but were not frequently identified by the lead community partners. The research team also found several categories of organizations, including FQHCs and Registered Testing Sites, that typically serve PLWHA but were not universally identified by community partners or stakeholders.

The next phase of this study is a survey of all organizations in the four areas. Analysis of the survey using social network analysis methods will provide data on how these organizations interact and work together as a system. Findings will be used to develop information and resources for HIV systems of care improvement.

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