Using Social Network Analysis to Examine Capacity to Address Cancer Prevention and Tobacco Control

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Overview

- Overview of Social Network Analysis (SNA)—what it is and is not
- Sample findings from ASPIRE & RAISE Networks, other projects
- Application/relevance for Networks, states, other settings
- Resources for SNA

Social Network Analysis

- Relationships—not just "counts"

- Define the relationship—what relationship will be examined

- SNA can show us

  - Where connections are

  - Areas where connections are missing

  - Unique relationships

  - Gatekeepers and/or key players

  - Relationships in common

- Provide insight for directing work/efforts

ASPIRE TAT Network (all content areas) 2023

ASPIRE TAT Network 2019, 2021, 2023

Table 1: ASPIRE TAT Organizations by Content/Topic 2019, 2021, & 2023

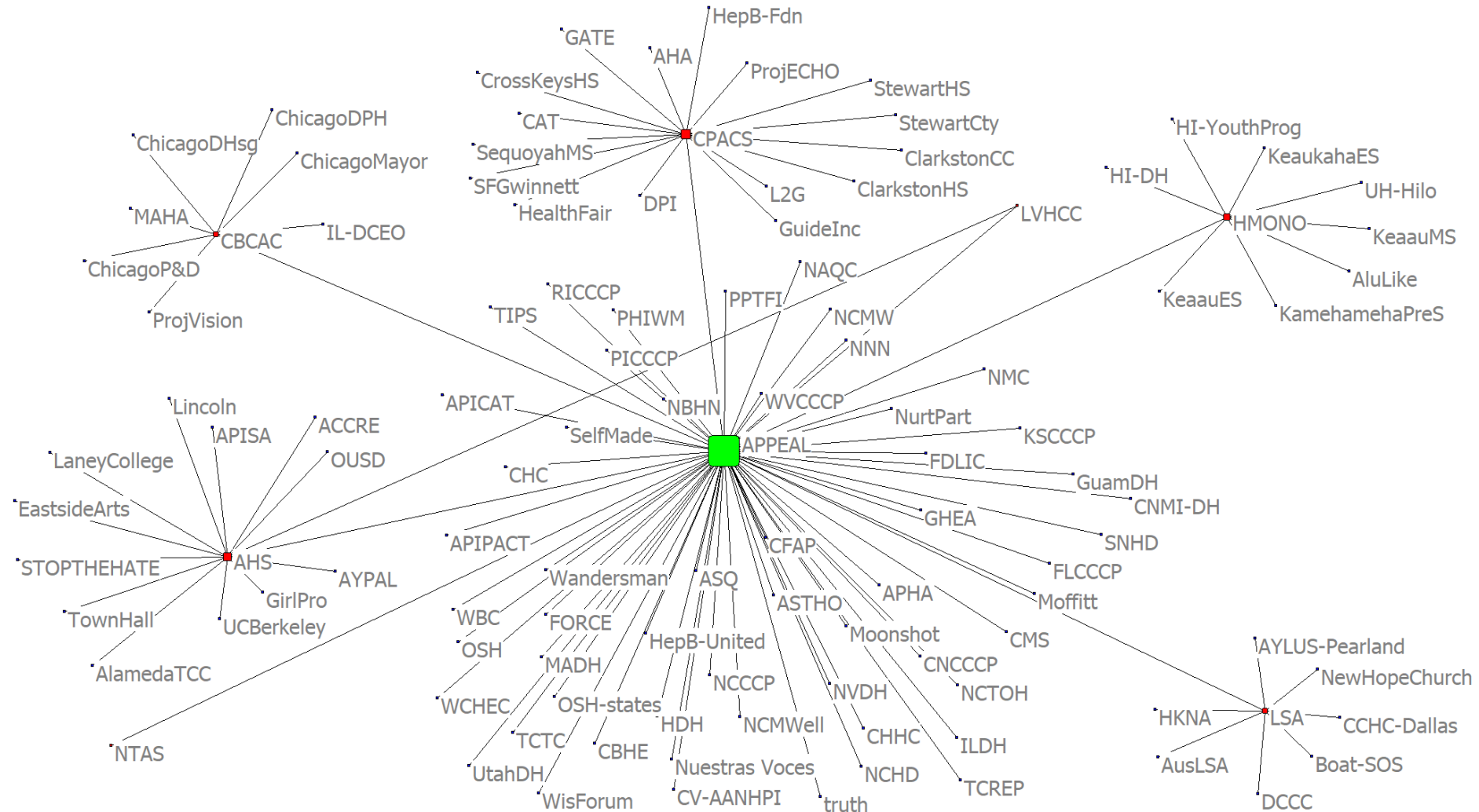| ASPIRE TAT Content/Topic	2019 # of organizations reached by TAT	2021 # of organizations reached by TAT	2023 # of organizations reached by TAT	Total all three years	Change from 2019 to 2021	Change from 2021 to 2023	Change from 2019 to 2023
Cancer Prevention	51	30	45	126	-21	15	-6
Cancer Survivorship	27	19	19	65	-8	0	-8
Cessation	11	24	45	80	13	21	34
Community Outreach	22	34	32	88	12	-2	10
E-cigarettes/Vaping	4	26	25	55	22	-1	21
HEAL	15	20	11	46	5	-9	-4
Hepatitis B	15	10	5	30	-5	-5	-10
Tobacco Control	22	33	39	94	11	6	17
Youth Engagement	n/a	43	25	68	43	-18	25
Totals	167	239	246	652	72	7	79

Table 2: ASPIRE TAT Relationships by Content/Topic 2019, 2021, and 2023

| ASPIRE TAT Content/Topic	2019 # of Ties (TAT relationships)	2021 # of Ties (TAT relationships)	2023 # of Ties (TAT relationships)	Total all three years	Change from 2019 to 2021	Change from 2021 to 2023	Change from 2019 to 2023
Cancer Prevention	47	50	84	181	3	34	37
Cancer Survivorship	25	34	34	93	9	0	9
Cessation	9	44	80	133	35	36	71
Community Outreach	20	60	60	140	40	0	40
E-cigarettes/Vaping	3	46	40	89	43	-6	37
HEAL	13	34	22	69	21	-12	9
Hepatitis B	14	18	6	38	4	-12	-8
Tobacco Control	21	58	74	153	37	16	53
Youth Engagement		78	48	126	78	-30	48
Totals	152	422	448	1,022	270	26	296

Table 3: TAT relationships by ASPIRE Partner 2019, 2021, and 2023

TAT by ASPIRE Partner	2019 # of TAT	2021 # of TAT	2023 # of TAT	Total all three years	Change from 2019 to 2021	Change from 2021 to 2023	Change from 2019 to 2023
AHS	6	0	36	42	-6	36	30
APPEAL	71	100	136	307	29	36	65
CBCAC	na	6	7	13	6	1	1
CPACS	5	29	30	64	24	1	25
HMONO	22	27	18	67	5	-9	-4
LSA	27	37	16	80	10	-21	-11
LVHCC	na	0	3	3	0	3	3
NTAS	36	40	1	77	4	-39	-35
Totals	167	239	246	652	72	7	79

ASPIRE Partners Cancer Prevention TAT 2019, 2021 & 2023

ASPIRE Partners Tobacco Control TAT 2019,2021 & 2023

ASPIRE Partners Cessation TAT 2019, 2021 & 2023

Degree centrality of ASPIRE Network 2023

Closeness centrality of ASPIRE Network 2023

Betweenness centrality of ASPIRE Network 2023

Other examples

RAISE TA & Training—all topics—FY2015 & FY2018
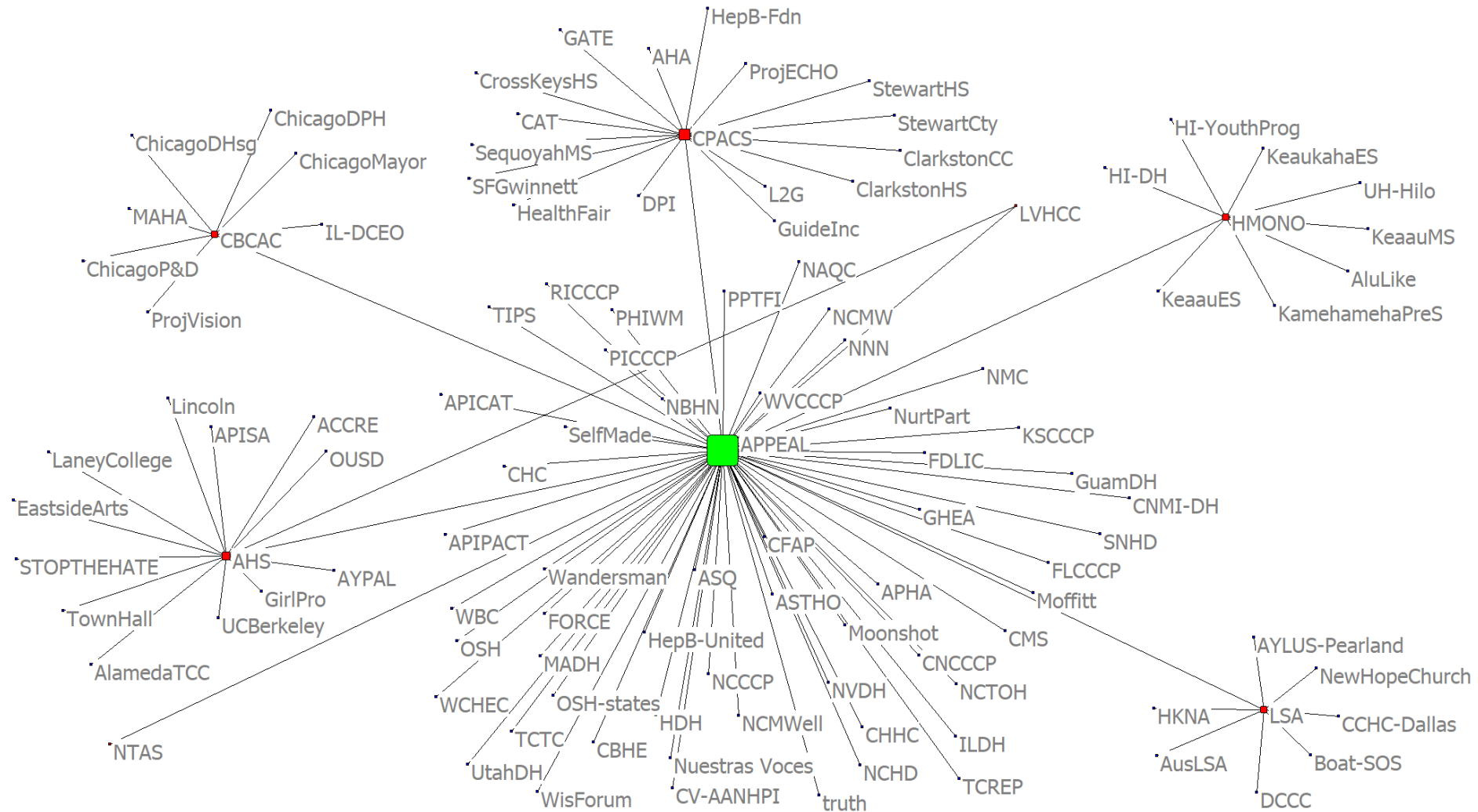
# Regenerative Agriculture Organization—Organizations it Partnered With
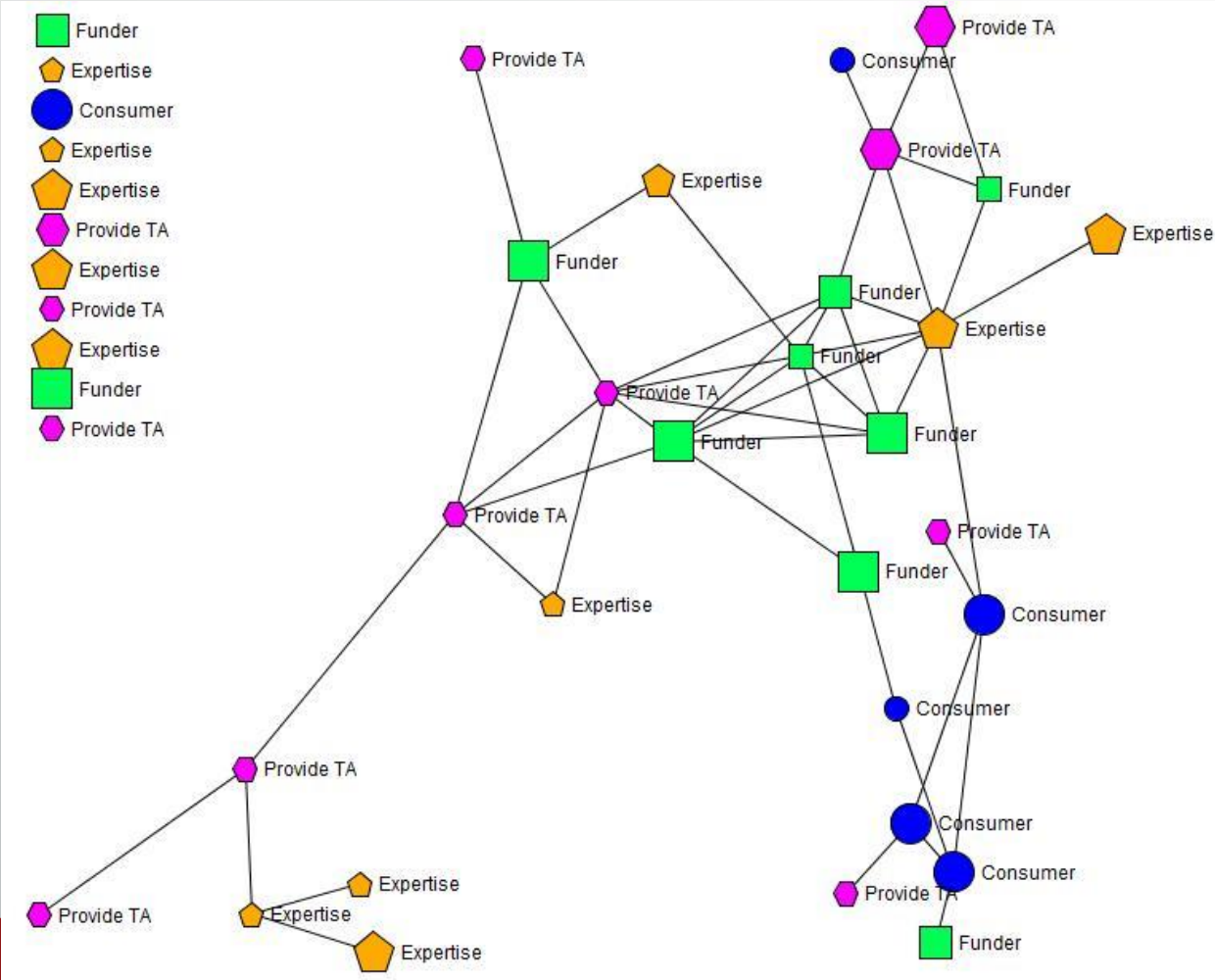
A Healthy Community Initiative—Funder wanted to Assess how Organizations viewed Others' Contribution to Community Health (Viewed by others as essential)
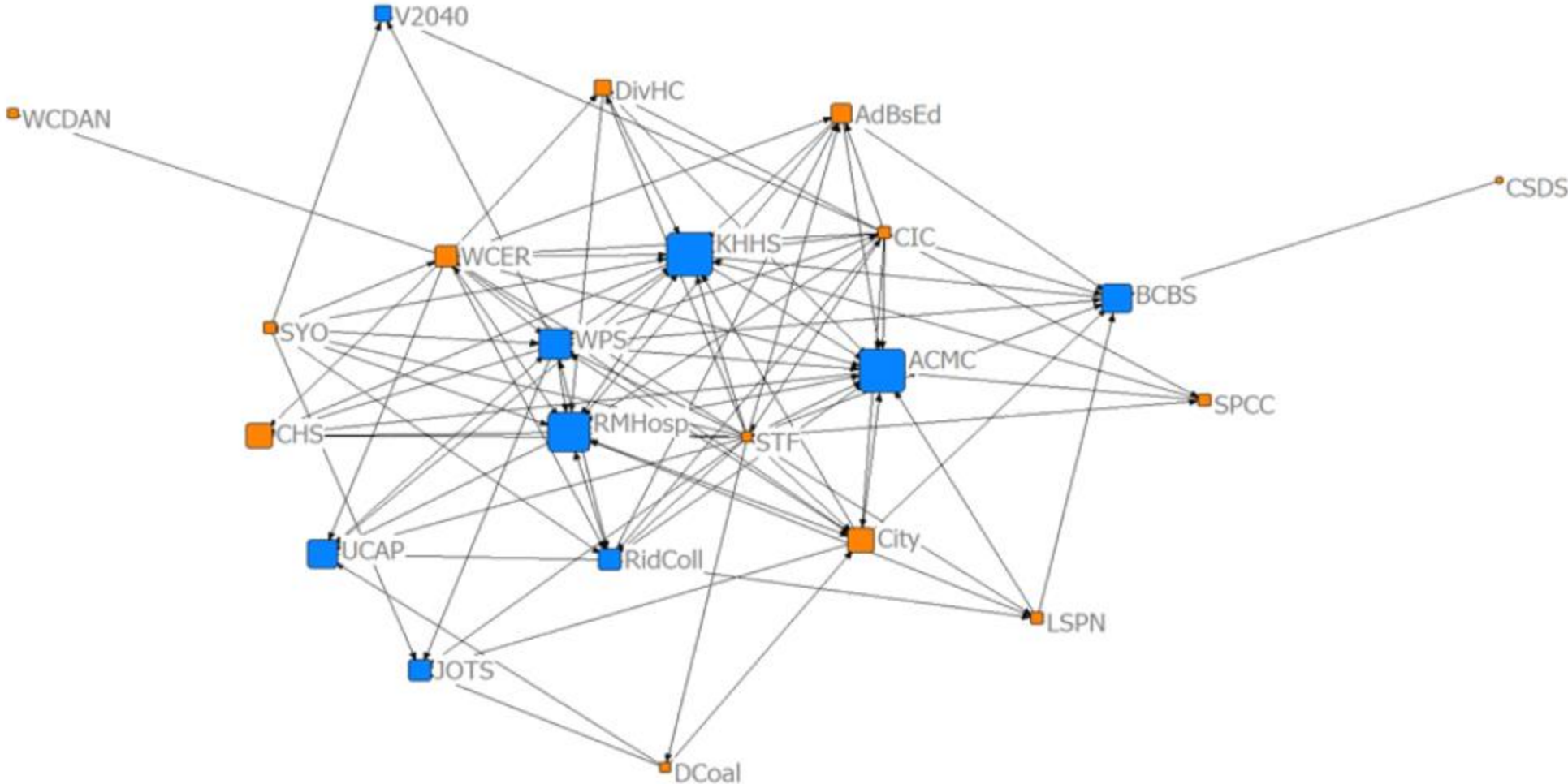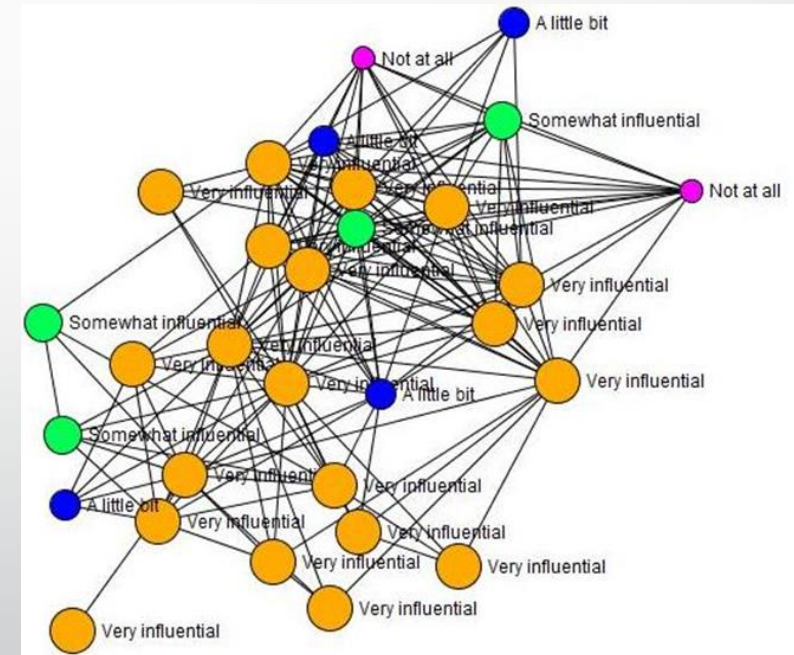
Organizations—Collaboration (collaborate monthly + year)
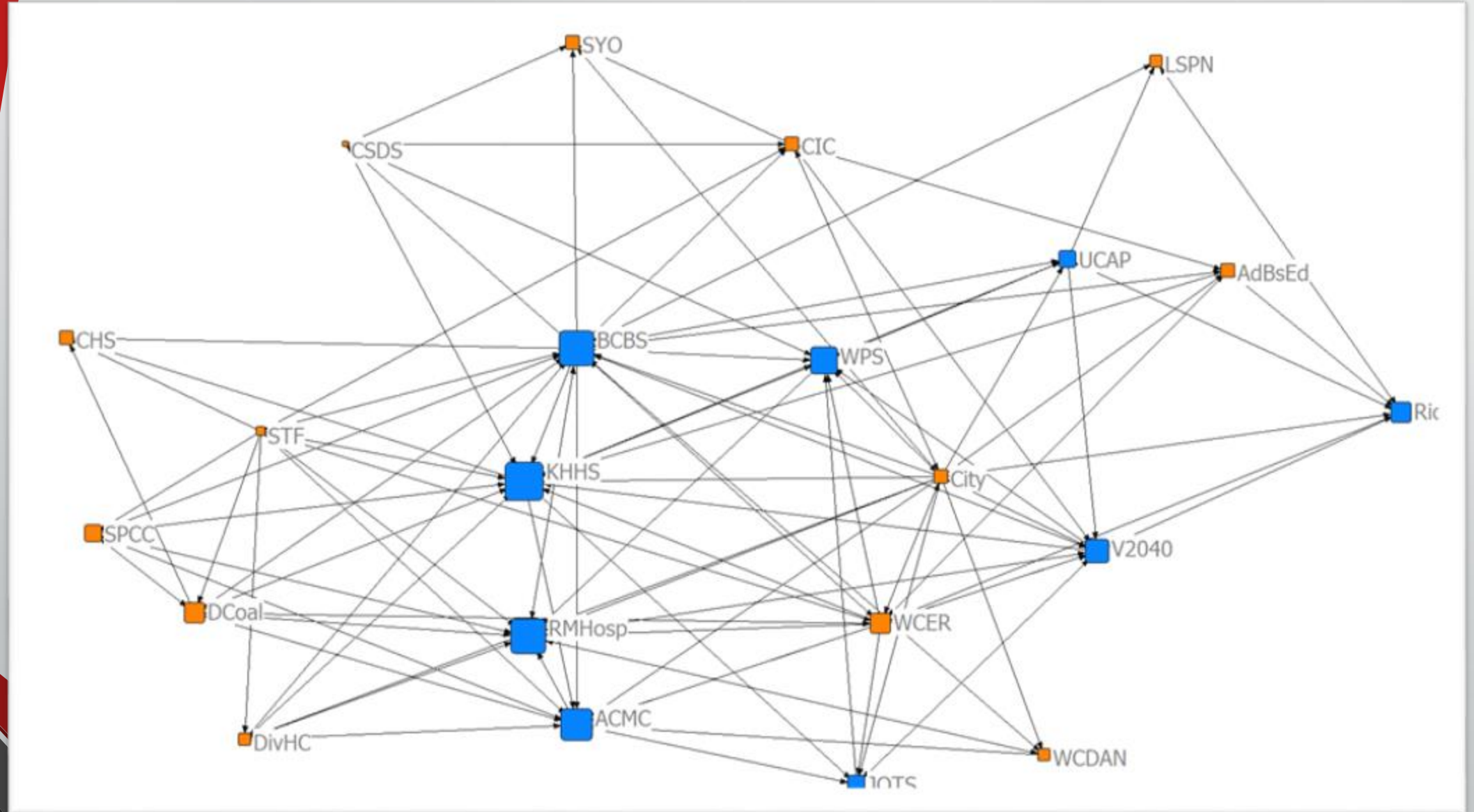
Example from Personal Network Analysis: Leadership Fellow's networks contain more individuals perceived to be influential in tobacco control
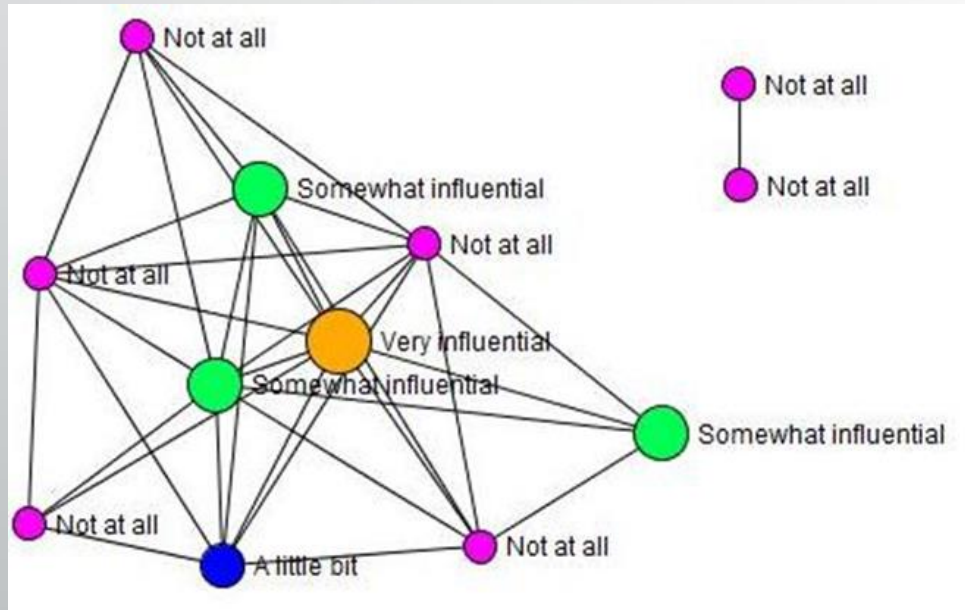
Baseline (Fellow #108)

Follow-up (Fellow #108)

Collecting SNA Data

- ASPIRE & RAISE: Administered annual questionnaire via Survey Monkey to active Partners

- In-person interviews to gather data

- UCINet and NetDraw for analysis and visualization

- EgoNet software for personal network data

Examples of Application

- Examine relationships between Network members

- Examine reach of a program or initiative to communities/partners—pre/post to assess growth of reach

- Dissemination of information

- Relationships among community partners

- Individual networks (personal network analysis)

SNA Resources

Books:

- **Analyzing Social Networks.** Borgatti, SP, Everett, MG, & Johnson, JC. 2013. SAGE Publications. This is a great guide on how to use UCINet software—very helpful resource.

- **Social Network Analysis, A Handbook.** Scott, J. 2009. SAGE Publications.

- **Social Network Analysis: Methods and Applications.** Wasserman, S & Faust, K.

Workshops/Training:

- **LINKS Center for Social Network Analysis** at Gatton College of Business and Economics, University of Kentucky https://links.uky.edu/

- **INSNA: The International Network for Social Network Analysis.** https://www.insna.org/

- **American Evaluation Association** (https://www.eval.org/)

- **The Evaluators Institute** (https://tei.cgu.edu/)

Personal Networks:

- Workshops/courses: Universitat Autonoma de Barcelona Research Group on Personal Networks and Communities in Barcelona, Spain. https://webs.uab.cat/egolab/

- **Conducting Personal Network Research: A Practical Guide.** McCarty, C, Lubbers, MJ, Vacca, R, & Molina, JL. 2019. Guilford Press.

Thank you!

Questions?

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