

Stakeholder Network Analysis

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Workshop – Introduction to Stakeholder Network Analysis : 22 April 2026

Objectives

Objective 1

- To introduce the concept of network analysis

Objective 2

- To understand how networks can be used through research, policy and practice

Objective 3

- To highlight tools, software and core texts in network analysis

Who are key stakeholders?



COMPLEX SYSTEMS AND NETWORK
SCIENCE FOR PREVENTION AND CONTROL
OF NONCOMMUNICABLE DISEASES

*A WHO COLLABORATING CENTRE
FOR RESEARCH AND TRAINING*

- Government
- Non-governmental organisations and not-for-profit sector community groups and civil society organisations, business and the private sector
- Political parties
- Health insurance groups and other health care funders
- Donors and aid agencies, including global health initiatives
- UN agencies, including WHO
- Health workers' organisations & health care providers' networks
- Patients and health service users



Key stakeholders for implementation of public health programmes



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- Those involved in programme operations:
 - Management, programme staff, partners, funding agencies, coalition members
- Those served or affected by the programme:
 - Patients or clients, advocacy groups, community members, elected officials
- Those who are intended users of the evaluation findings:
 - Persons in a position to make decisions about the programme, such as partners, funding agencies, coalition members, and the general public or taxpayers.

Why involve stakeholders?



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Evidence shows that national health policies, strategies, and plans are more likely to get implemented effectively if their development and negotiation is inclusive of all stakeholders in and beyond the health sector



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This means engaging all stakeholders, by means of a broad consultation, in meaningful policy dialogue to build consensus on the current situation and on the values, goals and overall policy directions that will guide health policy



Why conduct stakeholder network analysis?



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- Enhance **transparency** and mitigate conflicts of interest
 - Especially in industries which often clash with NCD prevention goals (e.g., food, tobacco, and alcohol)
- Identify and harness **win-win** opportunities for cross and multisectoral action
- Identify flow of information/**communication** – who speaks to whom?



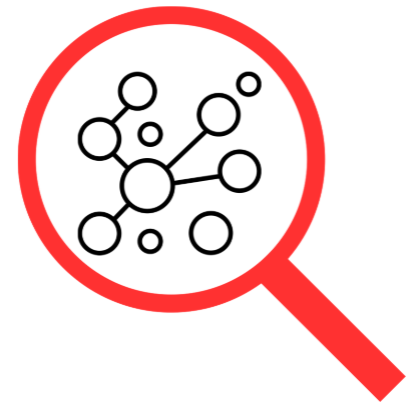
Why conduct stakeholder network analysis?



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It can grant researchers, policy-makers and public health professionals **insight** into the networks they sit within



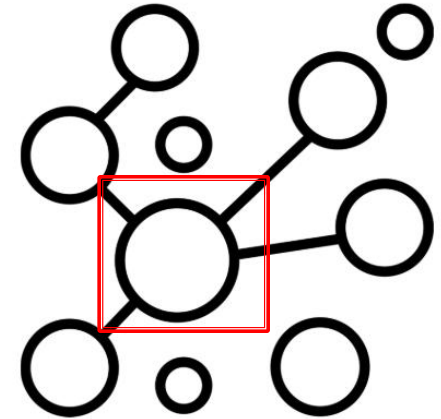
Why conduct stakeholder network analysis?



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Highlight **influential** stakeholders who can play a key role in the implementation of an intervention, project or programme



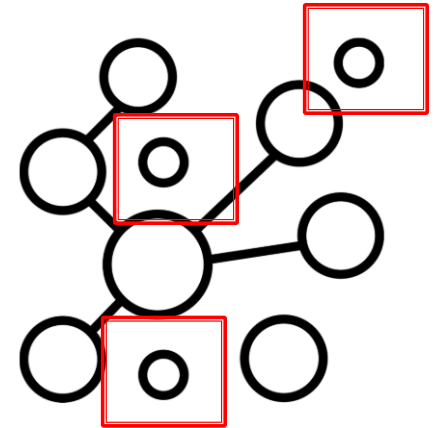
Why conduct stakeholder network analysis?



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It can identify **gaps** in networks – if and where stakeholders are missing from conversations or collaborations



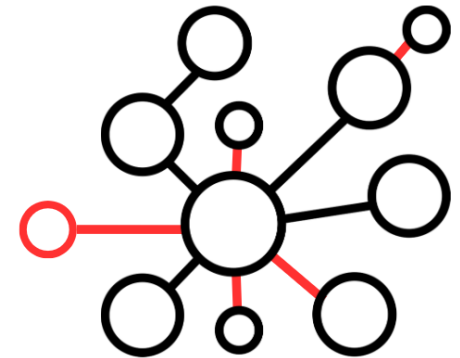
Why conduct stakeholder network analysis?



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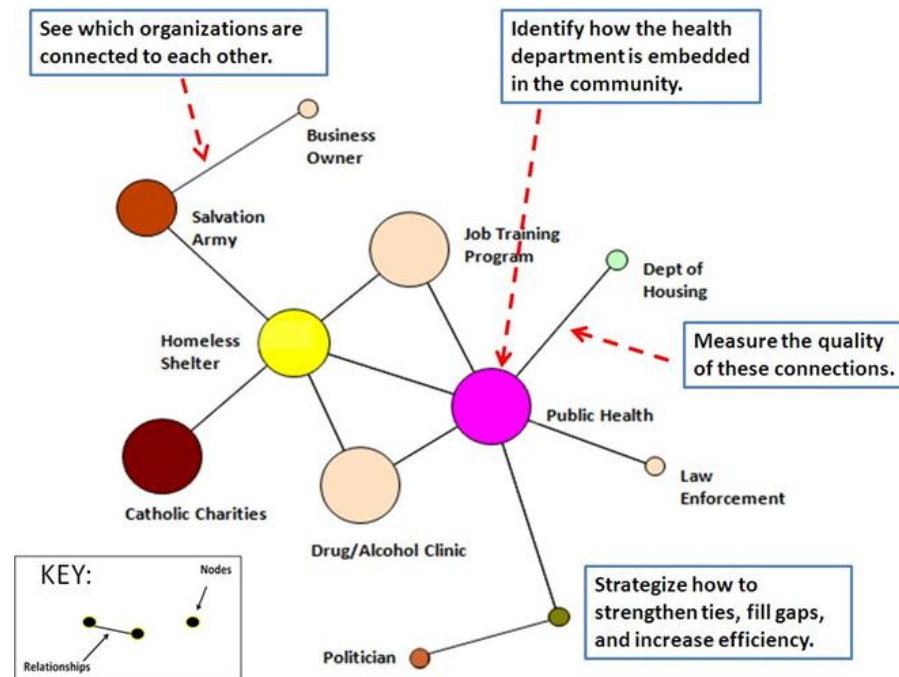
Help **shape and improve** networks to maximise success and impact of implementation



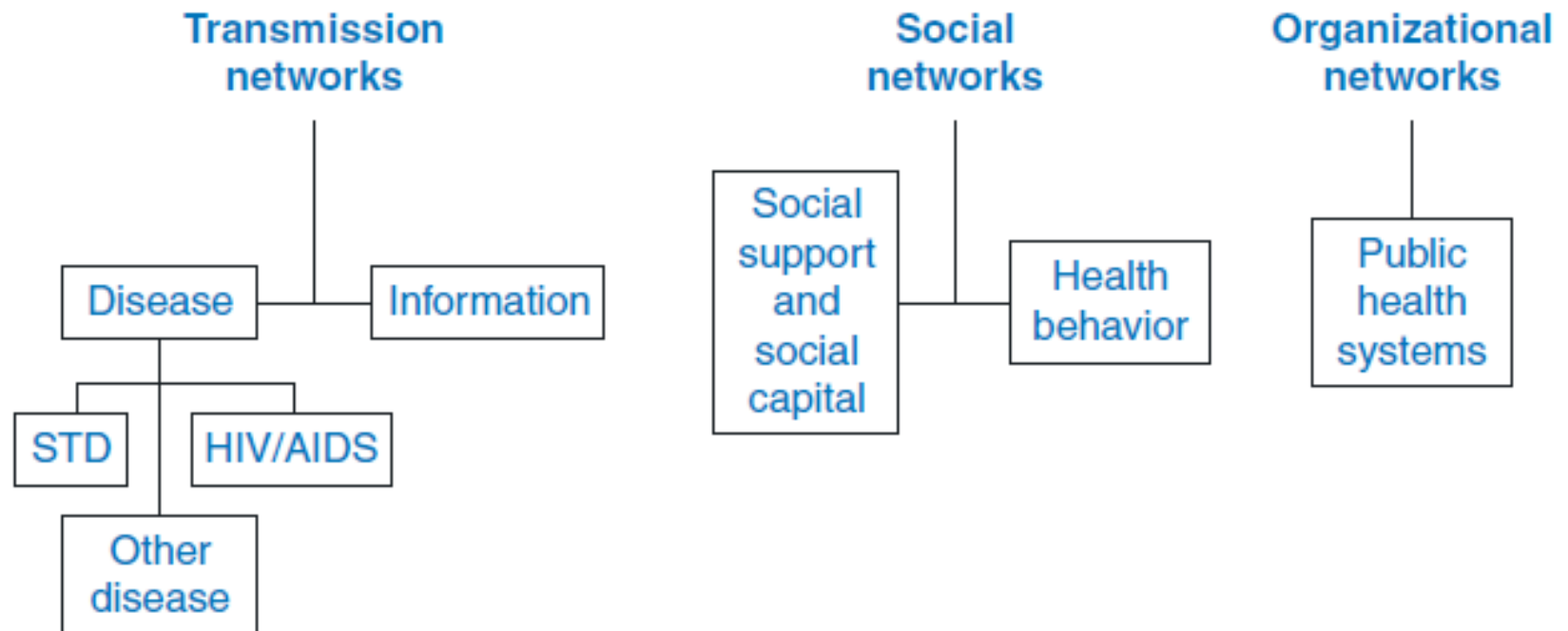
What do we mean by a “stakeholder network”?

Definition: The interactions between individuals or organisations or stakeholders in different settings.

Stakeholder network analysis (SNA) provides a set of theories, techniques and tools useful for understanding a broad range of behaviours as people and organisations interact with others.



Categorisation of network analysis in health



Why important?

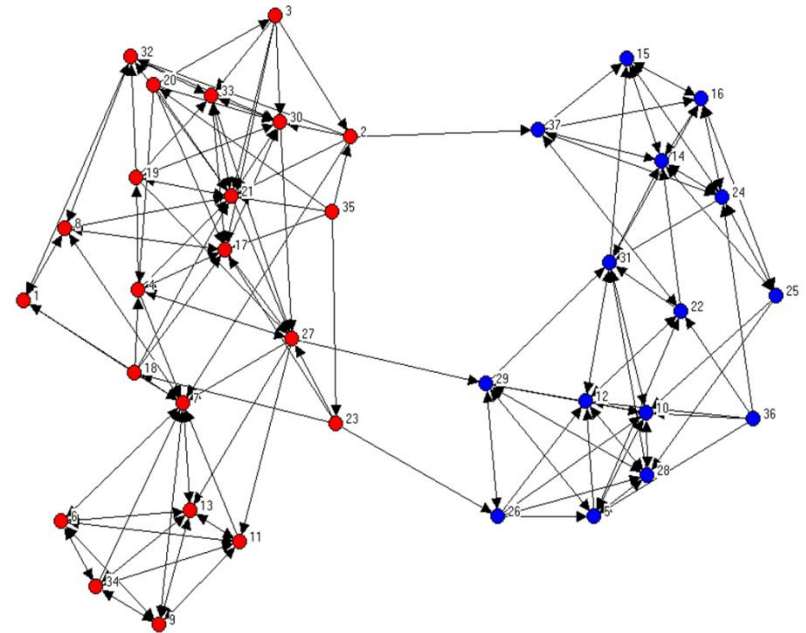
- Describes, explores, and helps understand structural and relational aspects of how people and organisations interact

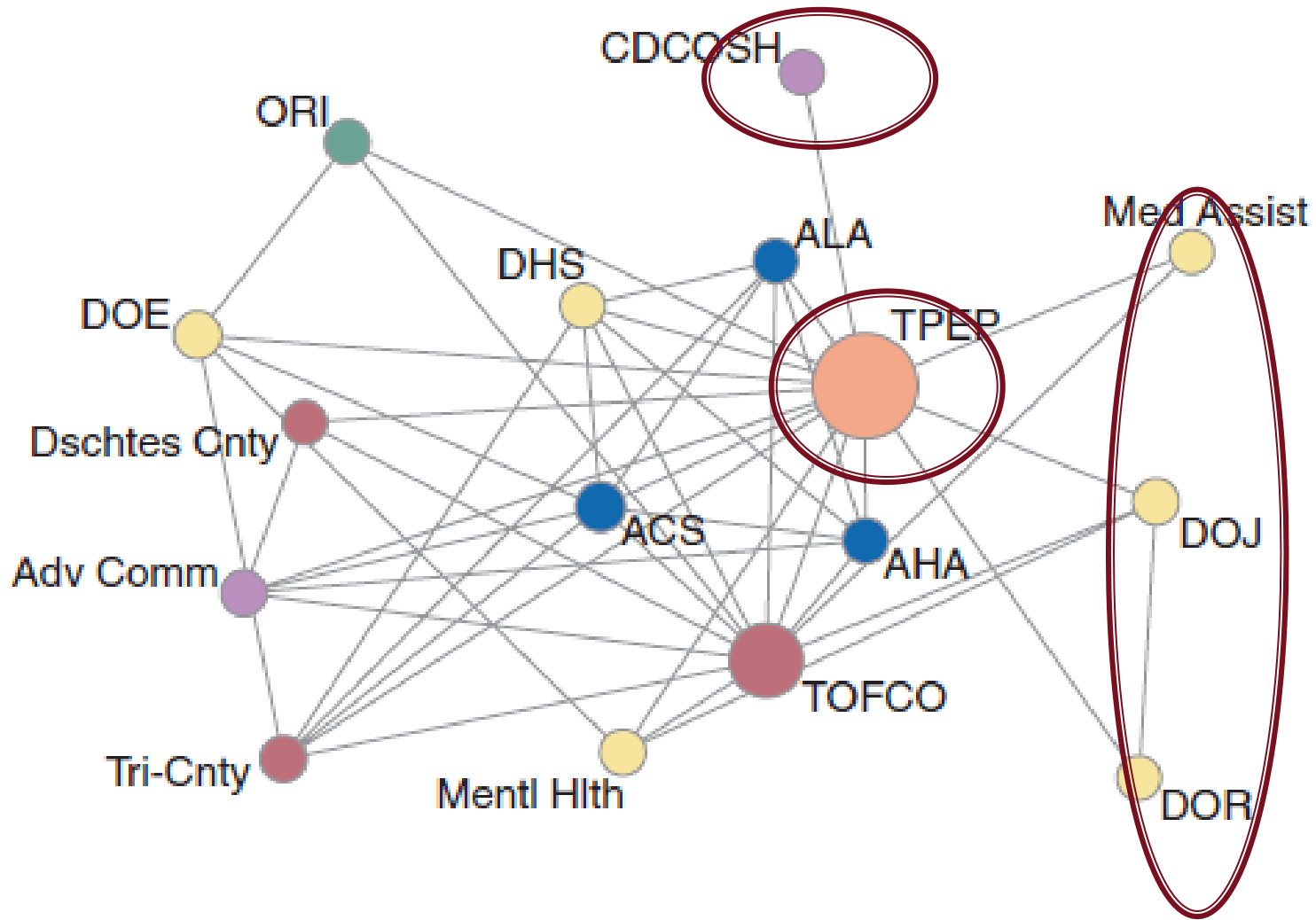
Networks have 4 important features:

1. Network analysis is a structural approach that focuses in part on patterns of linkages between stakeholders;
2. It is grounded in empirical data;
3. It makes frequent use of mathematical and computational models;
4. it is highly graphical / visual

Visualisation of a network

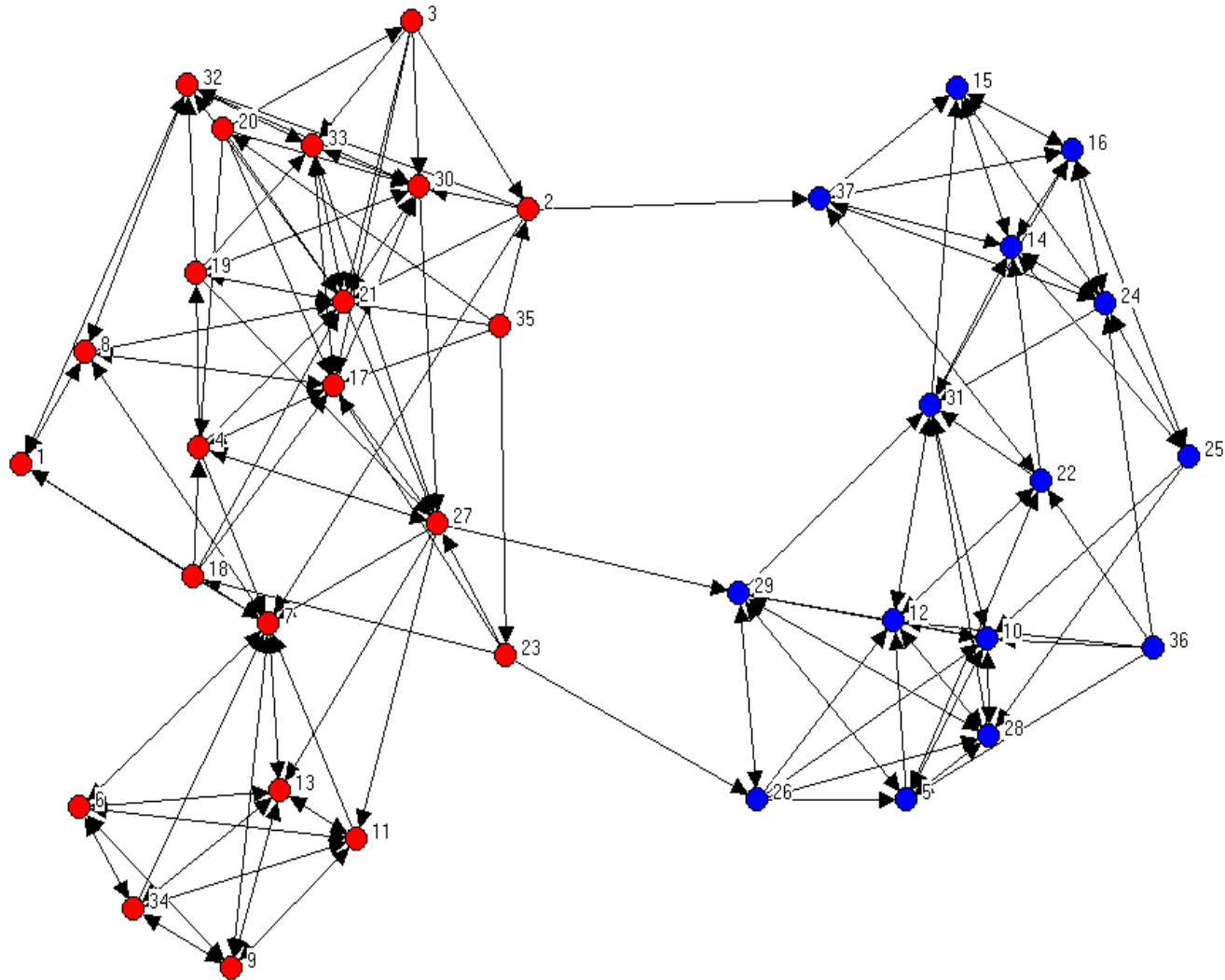
- People (or organisations/groups) are represented as **nodes**
- Relationships are represented as **ties**: colleagues, exchange of information
- **Stakeholder Network Analysis**: allows analysis using tools of mathematical graph theory



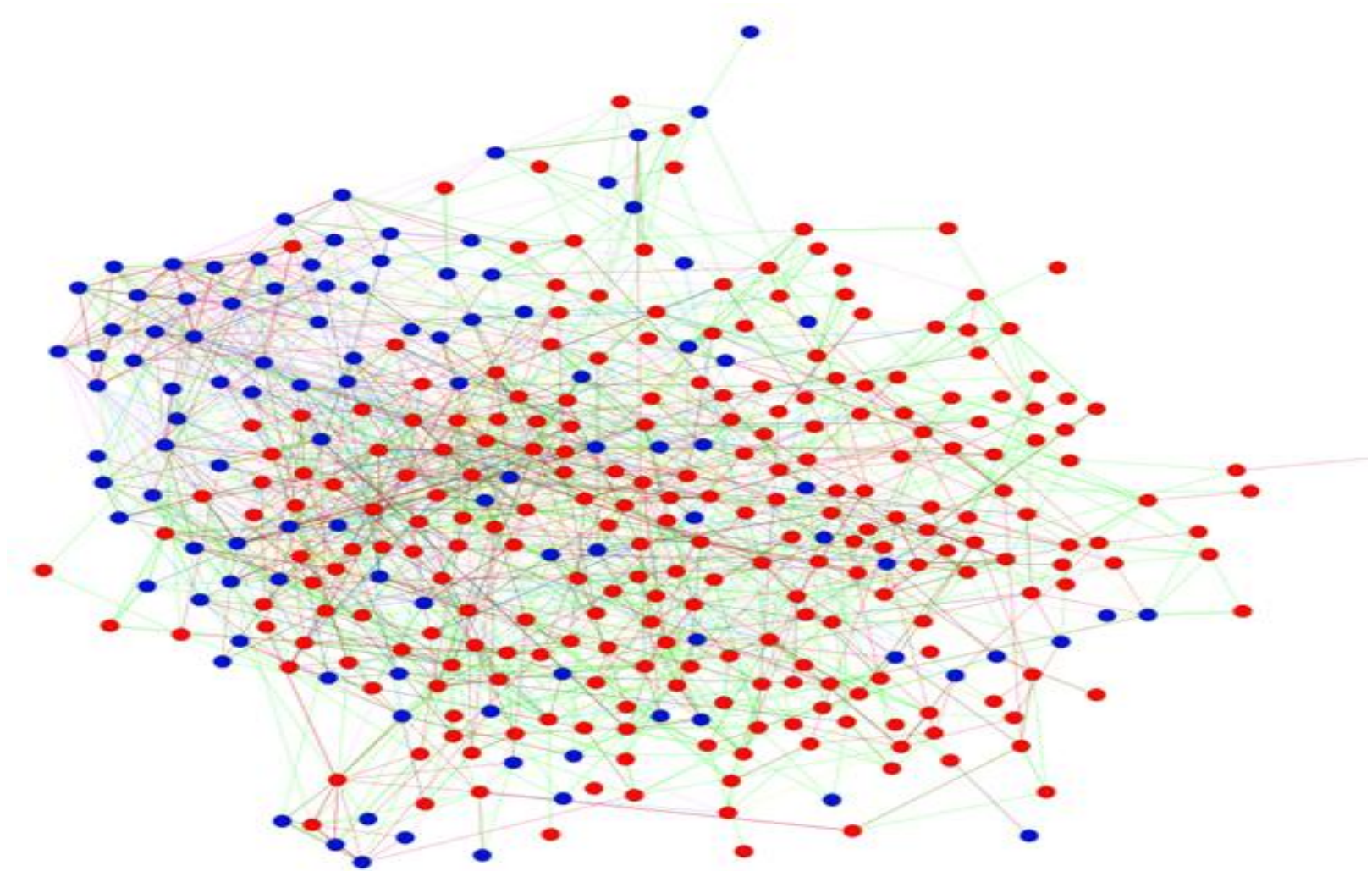


Example: A graphic representation of the key stakeholders in a tobacco control programme

Friendships Among Students in One Classroom (12 year olds)



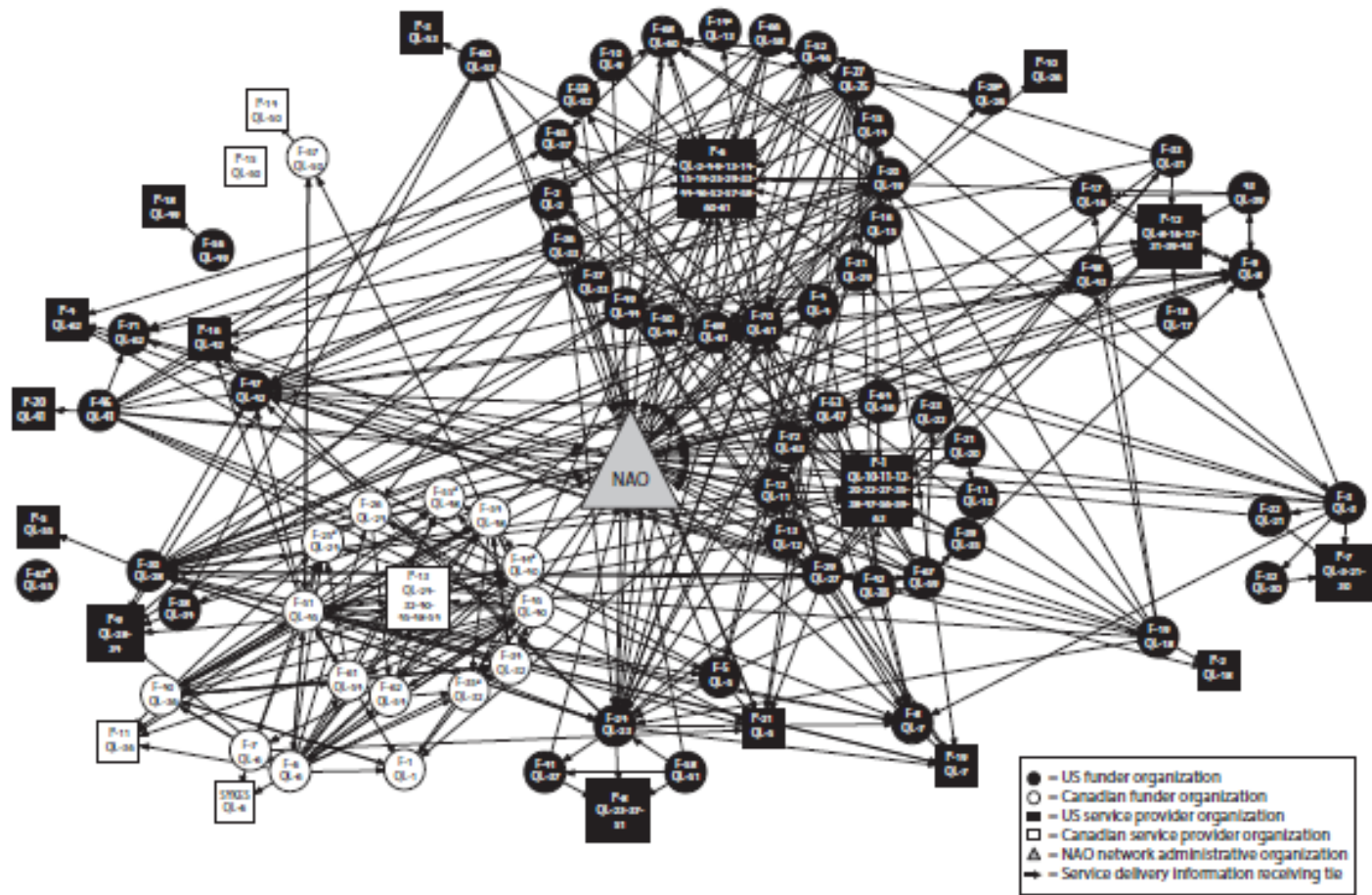
Relationships of 10th graders (15-16 year olds)



Coevolution of Information Sharing and Implementation of Evidence-Based Practices Among North American Tobacco Cessation Quitlines

Liesbeth Mercken, PhD, Jessie E. Saul, PhD, Robin H. Lemaire, PhD, Thomas W. Valente, PhD, and Scott J. Leischow, PhD

Am J Public Health. 2015 Sep;105(9):1814-22



Note. F = funder; NAO = network administrative organization; P = service provider; QL = quitline.
*Nonrespondent.

Diffusion of Policies through Networks





Social Science & Medicine

Volume 145, November 2015, Pages 89–97



Diffusion of innovations theory applied to global tobacco control treaty ratification

Thomas W. Valente^a,  , Stephanie R. Dyal^a, Kar-Hai Chu^a, Heather Wipfli^a, Kayo Fujimoto^b

- Analysed the 10-year diffusion of the Framework Convention for Tobacco Control
- Dynamic diffusion model using multiple trade and communication networks
- Contagion, opinion leadership, susceptibility, and infectiousness vary over time
- GLOBALink, a tobacco control communication forum, accelerated treaty diffusion

ANATOMY OF A SOCIAL NETWORK

CLOSURE

Building trust within a cluster

BROKERAGE

Connecting clusters

BETWEENNESS

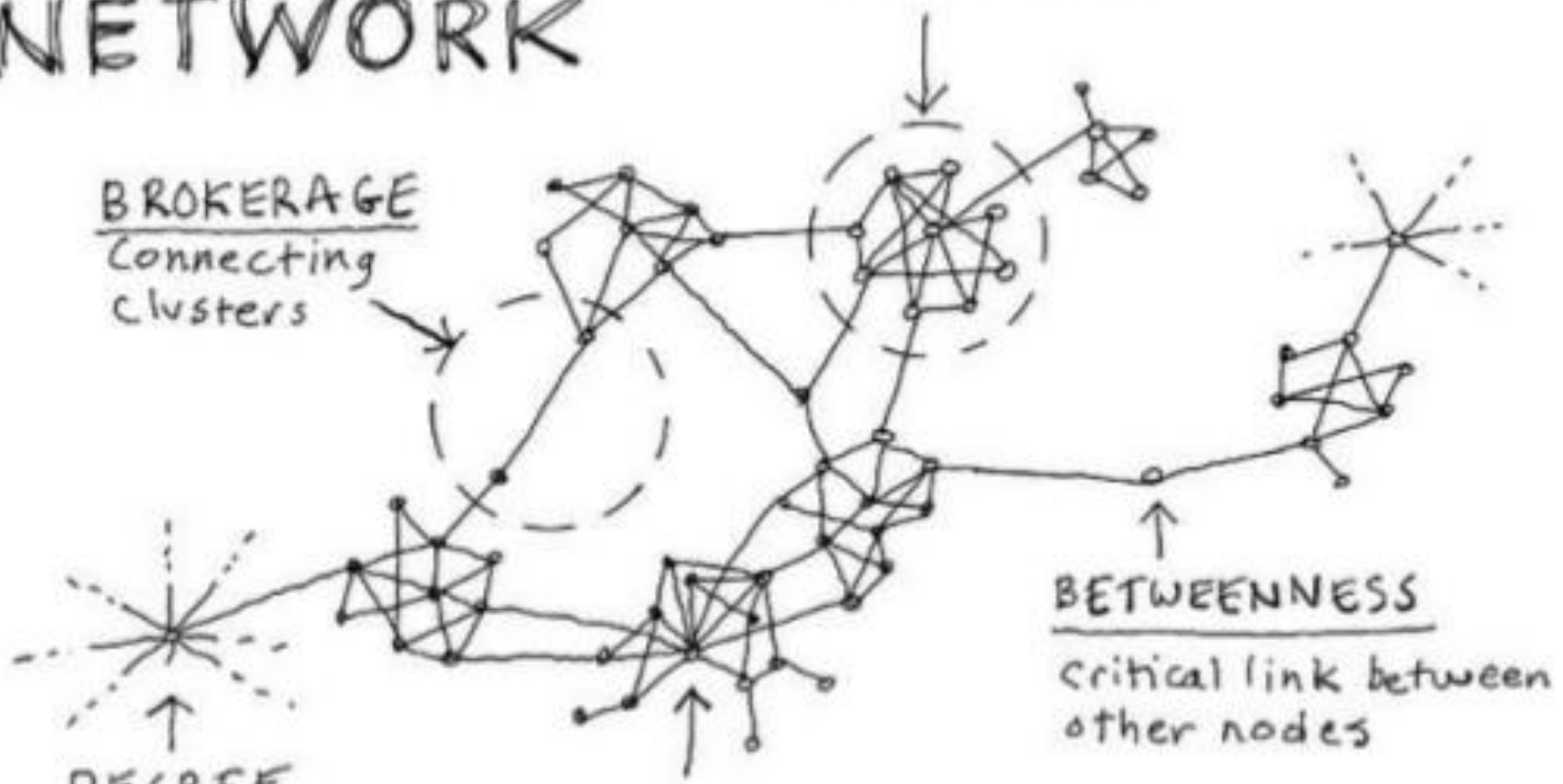
critical link between other nodes

DEGREE

Number of connections

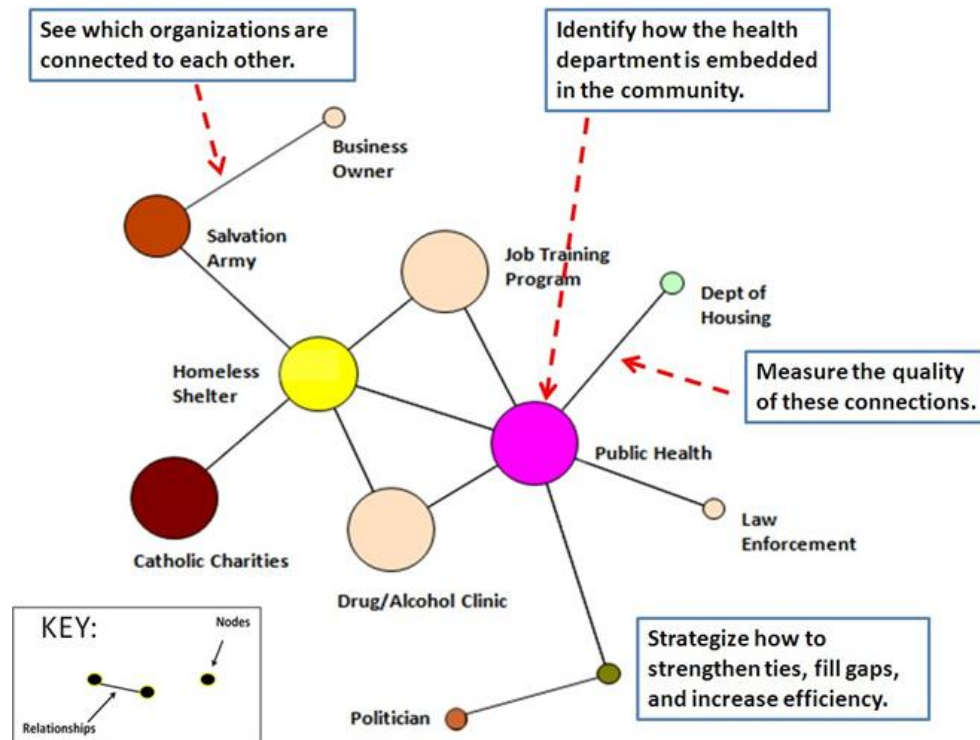
CLOSENESS

How easily a node can make connections



Operationalising collaboration as networks

- Public health collaboratives
- Operationalized as “networks”
- Stakeholder network analysis is a method used to measure the number *and* quality of relationships among organisations



Core Dimensions of Connectivity in Public Health Collaboratives

Dimension	Measures
Membership	Organizational identification by name, type, and other organizational characteristics (e.g. size, mission of organization)
Network Interaction	Network patterns and positions identified by subgroups, key players, etc.
Role of HD	Convener/facilitator vs. equal member
Frequency of Interaction	Types and levels of communications among members
Organizational Value to the Collaborative	Power, involvement, resources
Trust	Reliability, shared belief in mission, opportunity for frank discussion
Reciprocity	Evidence of mutual exchange of resources

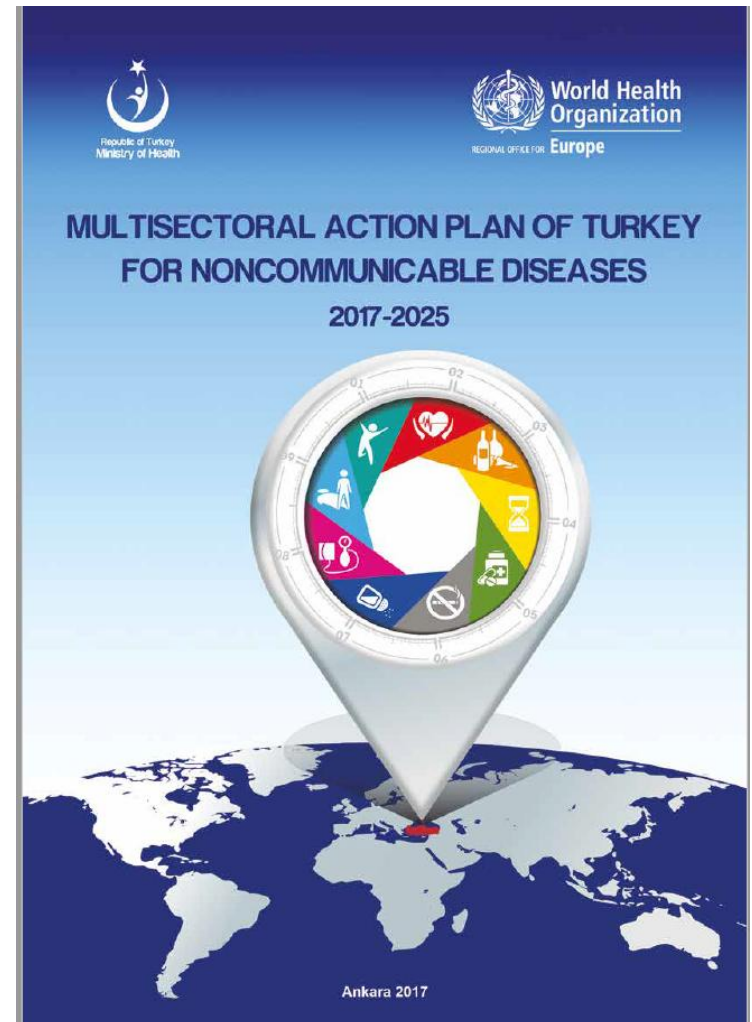
Varda et al. Core dimensions of connectivity in public health collaboratives. J Public Health Management Practice 2008.

Network Analysis of Stakeholders in Turkey



To undertake stakeholder network analysis to understand:

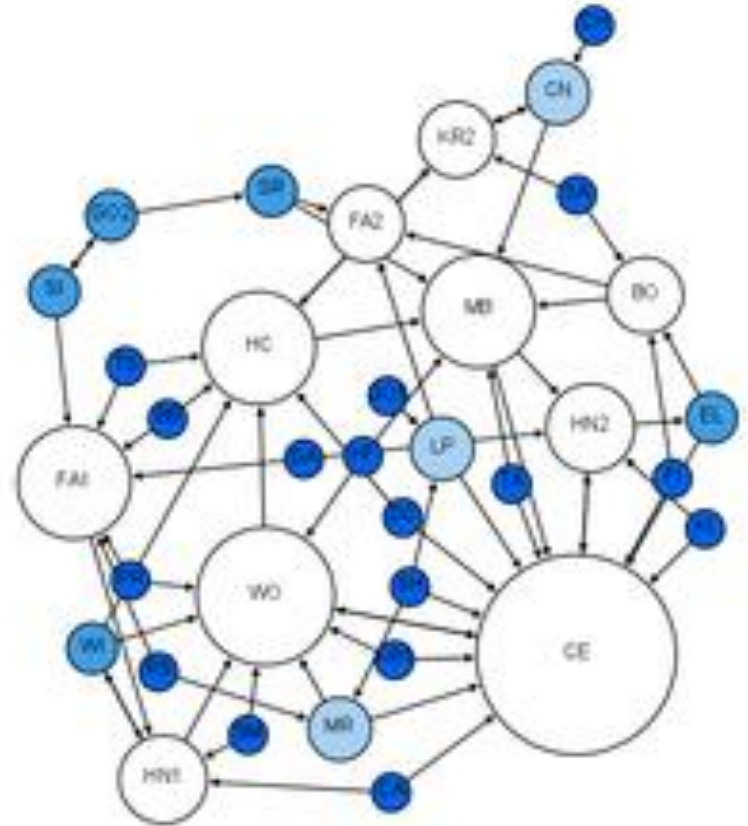
- Characteristics of the networks
- Structure of the network
- Communication
- Influence
- Trust
- Function
- Identify strategies for further strengthening and sustainability



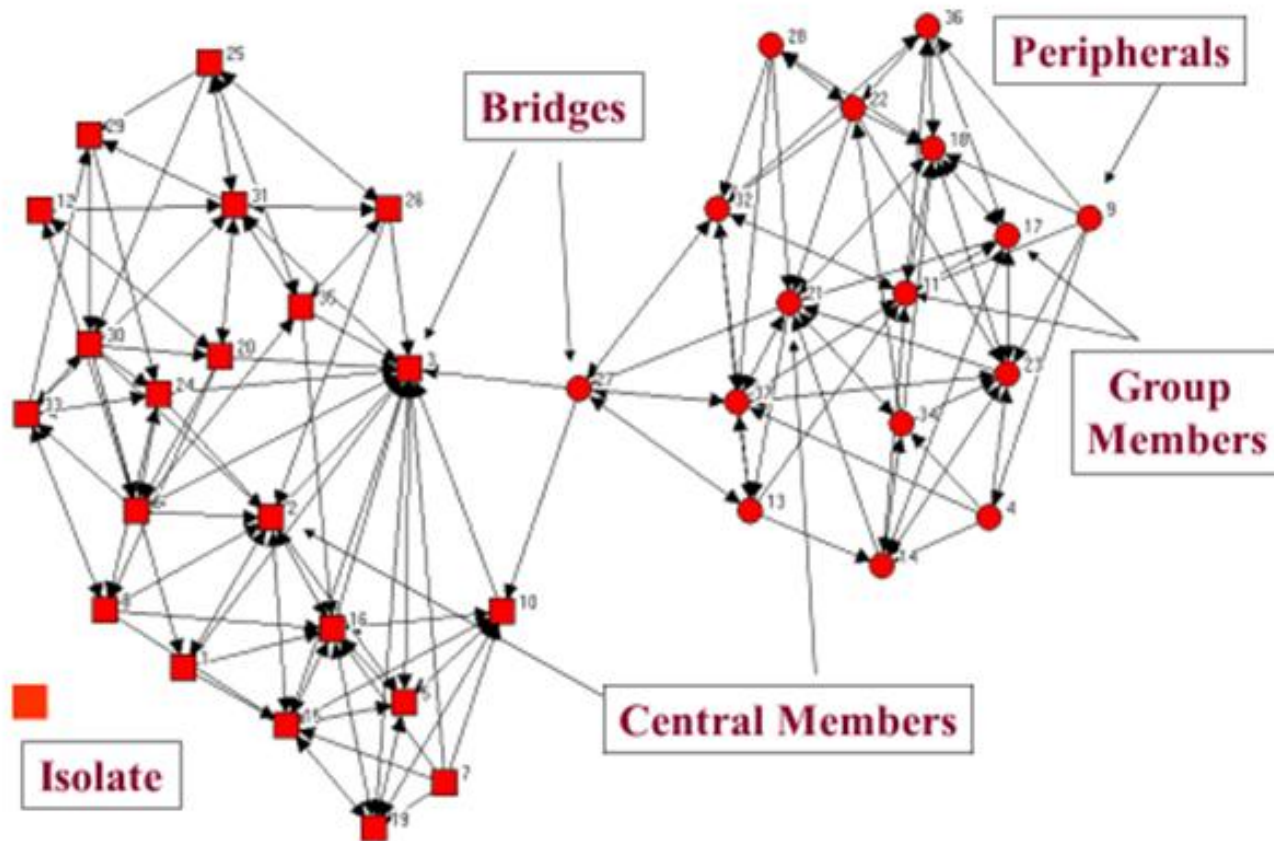
- Identification of the current stakeholders involved and how they are linked
- To understand how certain organisations are embedded in the network;
- To provide a description of the structure and characteristics of the network, how its participants communicate with each other and how influential they are
- To measure the quality of these connections;
- Identification of areas and strategies for further strengthening the participation and involvement of key stakeholders.

Methods

- > 100 stakeholders
- Eligible participants: named contributors in the Multi-sectoral Action Plan of Turkey for NCDs
- Socio-centric data (i.e. complete network)
- 33-item stakeholder network questionnaire
 - strength of relationships
 - trust
 - exchange of communication and resources
 - sustainability



- Network visualisations
- Change agents
- Boundary spanners
- Detect communities, cliques, components



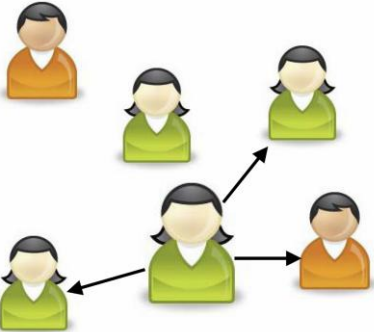
Discussion



- Network science can help
- Better understand multi-sectoral stakeholder networks
- Inform network intervention approaches to improve efficiency and effectiveness of the network
- Strategies to sustainability the network
- Dynamic network – changing actors; changing organisations; changing aims and objectives; changing actions

<https://stakeholdernet.org/>

Relational data



data:

1	8	32	7	7
2	32	21	30	37
3	2	17	21	30
4	19	17	27	21
5	28	29	12	22
6	9	11	34	13
7	13	9	6	8
8	1	7	32	21
9	6	7	11	13
10	28	29	5	31
11	34	9	6	7
12	22	28	10	31
13	7	6	9	11
14	24	16	15	25
15	16	24	14	14
16	15	24	14	37
17	33	30	27	8
18	7	21	1	17
19	32	30	33	21
20	17	21	30	4
21	30	32	19	33
22	12	37	31	14
23	17	18	27	26
24	14	15	16	37
25	10	14	28	16
26	29	5	28	12
27	4	13	7	11
28	5	10	12	29
29	26	5	10	31
30	21	33	32	19
31	10	15	12	16
32	30	21	33	8
33	17	21	30	32
34	11	9	6	7
35	17	2	23	21
36	10	5	24	22
37	16	14	15	22

1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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