

Evaluating Community Partnerships: Application of Social Network Analysis

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Introduction

- Use of coalitions to address complex health problems; implications for evaluation
- Role of public & private organizations; implications for policy development

Overview

- Social network analysis of teen pregnancy prevention coalition
- Application of methodology not common in public health
- Background
- Methods
- Results/Discussion
- Conclusions

Background

- 2004: 7th worst among 25 largest cities for births to teens as % of total births
- 2004: 13% of girls <18 who gave birth already had babies



Methods: Data Collection

- Face-to-face interview with organization representatives to Milwaukee Adolescent Pregnancy Prevention Workgroup (APPW); 3/16 – 8/15/06
- Questionnaire with 7 items – organizational attributes & 4 items – relationships

Methods: Research Questions

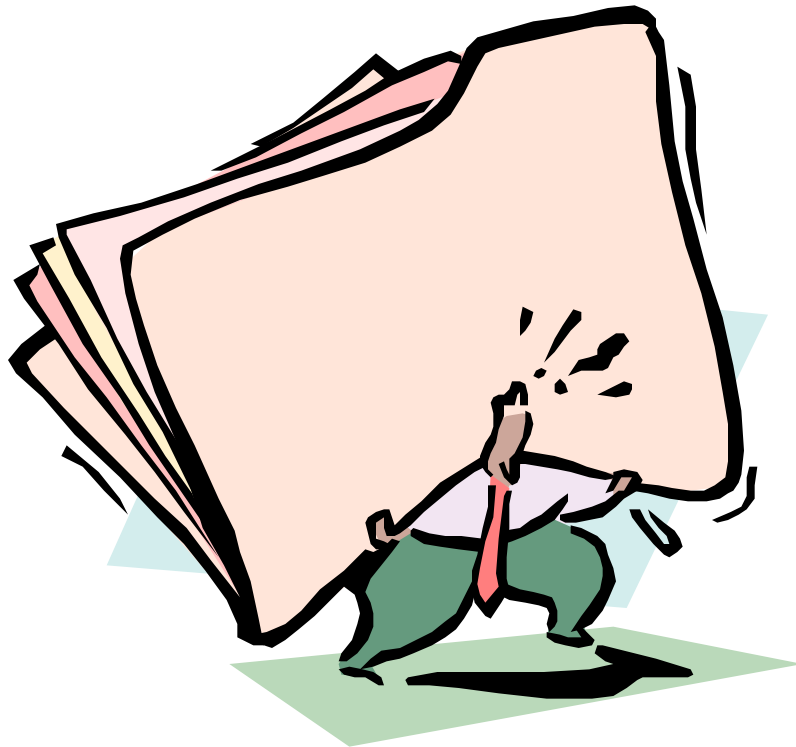
- Which organization has the most control over communication?
- Which organizations are the most important in APPW?
- What position in the network does the Milwaukee Health Department occupy?

Methods: Measures & Data Analysis

- Centrality
 - ~ Closeness
 - ~ Betweenness
- Data Analysis
 - ~ UCINET 6.1
 - ~ Netdraw 2.41

(Source: Borgatti, SP, Everett, MG, & Freeman, IC. [2002]. Ucinet for Windows: Software for Social Network Analysis. Harvard, MA: Analytic Technologies.)

Results: Interviews



- 17 of 19 organizations participated (89%)
- 20 of 22 interviews completed (91%)
- Mix of public & private community partners

Table 1. APPW Organizations by Type

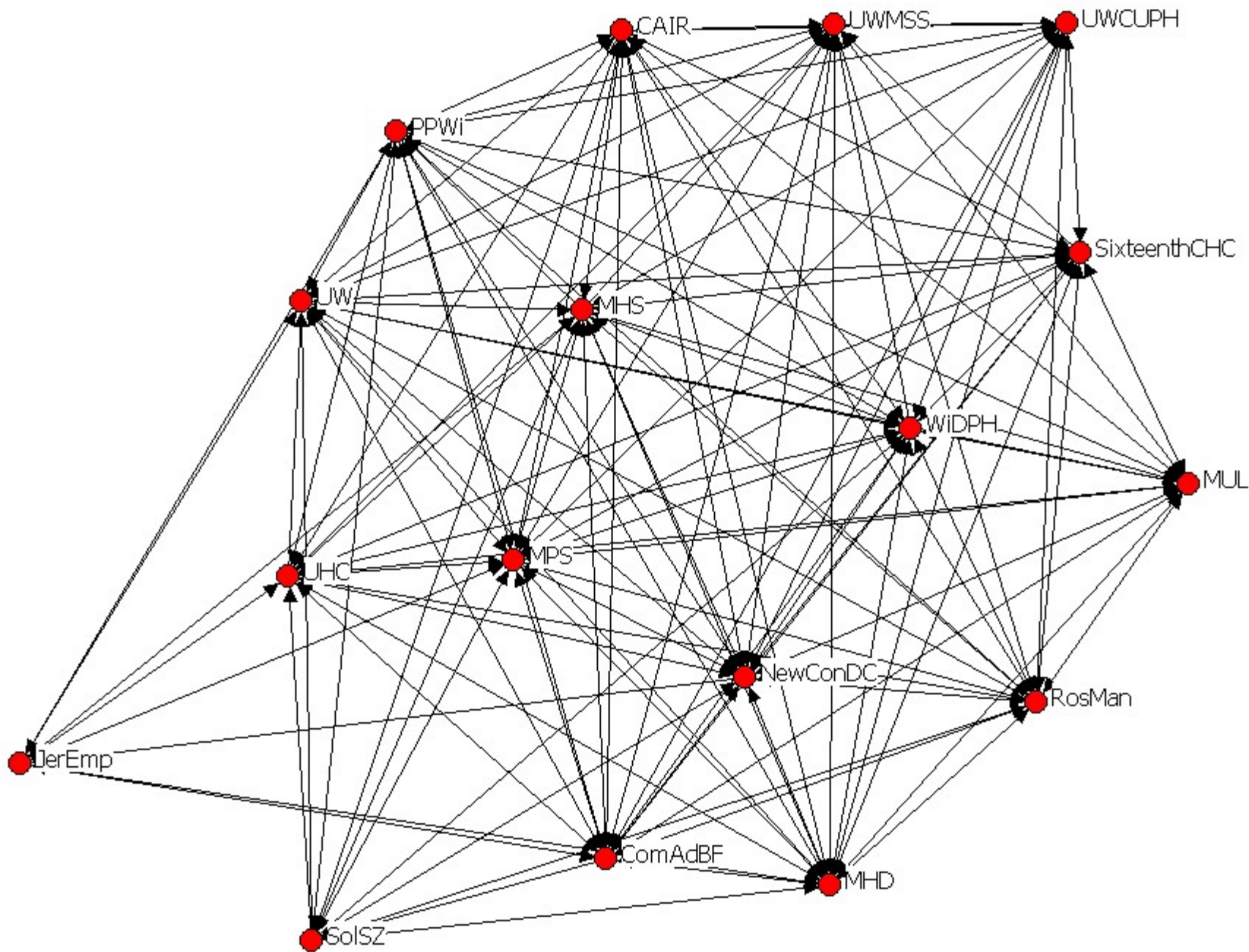
Type	#
Community-based Org	6
Public Education	1
Faith-based Org	2
Community Health Center	2
Managed Care Org	2
Public Health Agency	2
Academic Institution	3

List of Figures

- Figure 1: Sociogram for B.1 / Exchange Information & Advice; *Slide 12*
- Figure 2: Sociogram for B.1 / High Frequency Contact; *Slide 13*
- Figure 3: Sociogram for B.4 / Collaboration; Blue = MAPPC member; Triangle = Abstinence-only Program; *Slide 16*

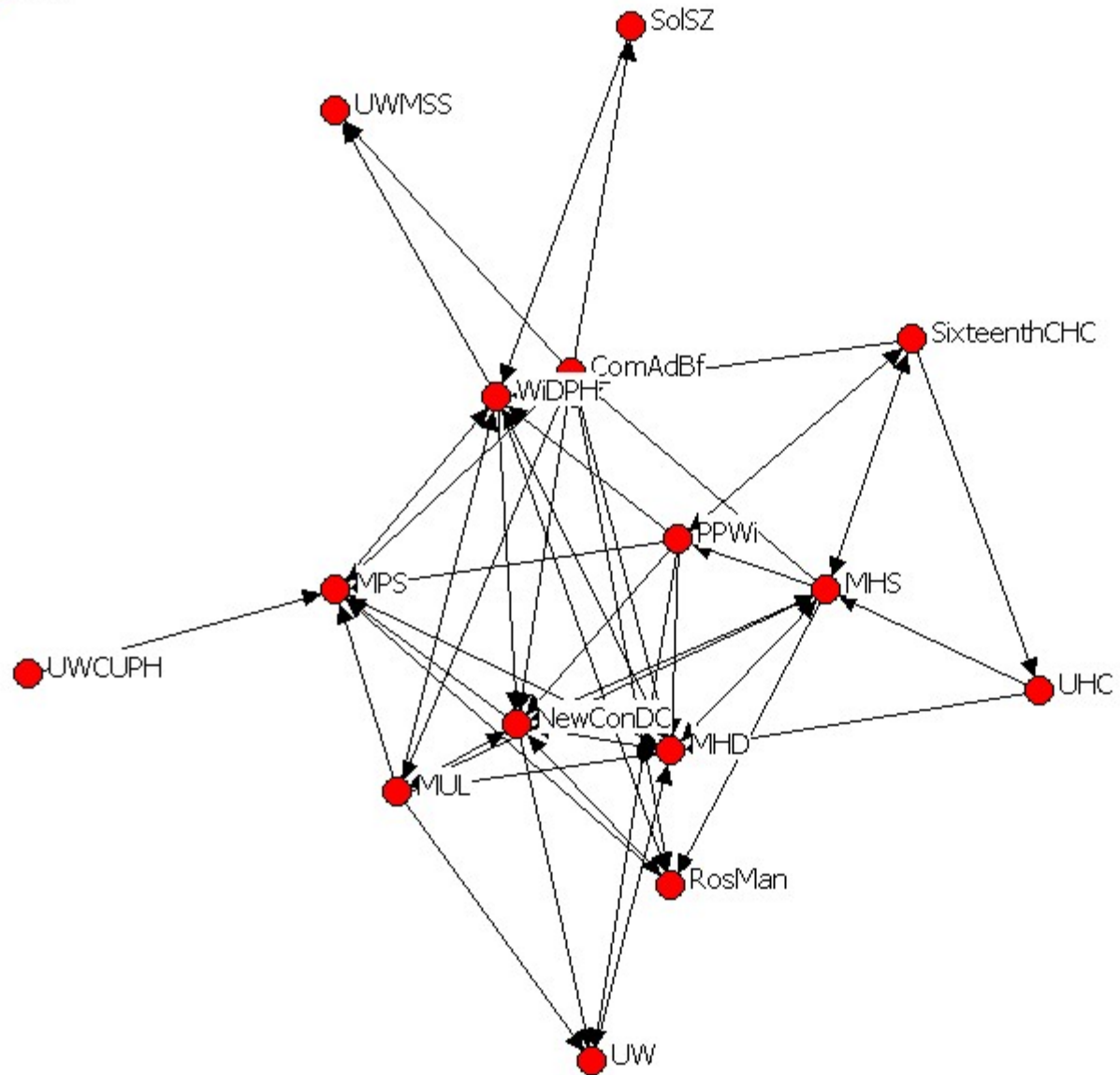
Which organization has the most control over communication?

- Closeness:
 - ~ MPS: most important
 - ~ next 2 clusters: ComAdBF & MHD; NewConDC & PPWi
- Reach:
 - ~ ComAdBF, MHD & MPS can reach all others in 1 step.
 - ~ All orgs can reach MPS in 1 step.



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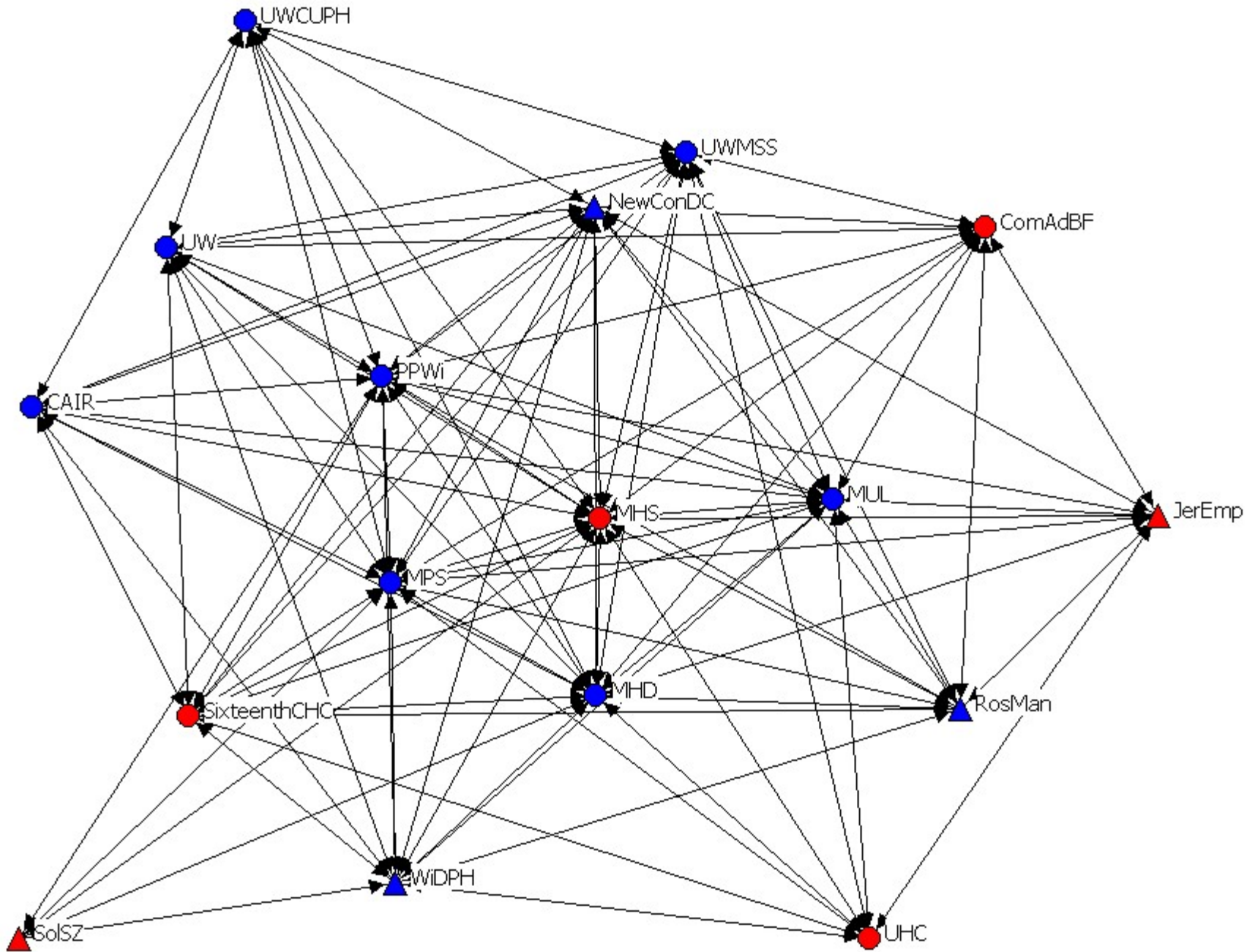


Which organizations are the most important in APPW?

- Betweenness:
 - ~ Compare on 4 relations
 - ~ Core group of 7 organizations
- Overall network:
 - ~ range of heterogeneity among organizations
 - ~ network is not highly centralized

Table 2. Betweenness: Comparison for 4 Relationships

Relation	Exch Info/B1	High Freq/B1	Contacts/B2	Collab/B4
Org	MPS	MHD	PPWi	MHD
Org	MHD	MHS	MHD	MPS
Org	ComAdBF	ComAdBF	MPS	MHS
Org	PPWi	WiDPH	WiDPH	PPWi
Org	NewConDC	NewConDC	MHS	WiDPH
Variance	7.423	202.686	19.078	4.384
Cent. Index	2.02%	14.35%	4.10%	3.40%



What position in the network does MHD occupy?

- Occupies central positions in 4 relationships
- Acts as important coordinator, or broker, in network
- Does not dominate network as whole

Discussion

- Broker positions vary depending on relationship.
- School district & health department have important positions in APPW.
- Position of 2 faith-based organizations raises key questions for APPW.

Discussion



- Preliminary descriptive study
- Study limitations
- Future research

Conclusions

- Use centrality measures to identify important broker and isolate positions.
- Identify patterns of cooperation and/or conflict in network.

Conclusions

- Set stage for evaluating and enhancing coalition effectiveness.
- Highlight policy issues through examination of structures and relationships.

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