Web of Politics: Examining a tobacco control policy network using social network analysis

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Background

As part of the American Recovery and Reinvestment Act of 2009 (Recovery Act), the Department of Health and Human Services provided $372.8 million to fund the Communities Putting Prevention to Work (CPPW) Initiative. This initiative supports community public health policy efforts to improve nutrition, increase physical activity, reduce obesity, and decrease tobacco use. The St. Louis County Department of Health (DOH) was awarded a CPPW grant and is designing policy interventions aimed at decreasing the smoking prevalence, exposure to secondhand smoke, and advertising at the point of sale in St. Louis County.

As the evidence-based policy approaches are implemented by DOH and community partners, we expect to see changes in the environment with regard to individual behaviors, collaborations among community organizations, and policy and systems changes. In particular, the coordination and collaboration of a variety of partners will be essential in successfully implementing the CPPW policy strategies. We use social network analysis to evaluate how the CPPW political network forms and expands over the course of the CPPW project to ensure successful implementation of tobacco control policies throughout the St. Louis area.

Research Questions

1. What types of partners are involved in the CPPW policy network; and
2. What role(s) do the partners play in attaining policy goals.

Methods

Sample & Composition

- The initial partner list (n=30) was defined as those partners funded to work on the CPPW grant.
- New individual named by the initial participants (n=47) were asked to participate using a snowball sampling method.
- Participants were categorized into the following partner types:
  - Department of Health (DOH)
  - Leadership team
  - County Council members
  - Centers for Disease Control & Prevention (CDC)
  - Evaluation team
  - Community partners (grantees)
  - Non-Awarded grantees
  - Coalition board members
  - Coalition non-board members
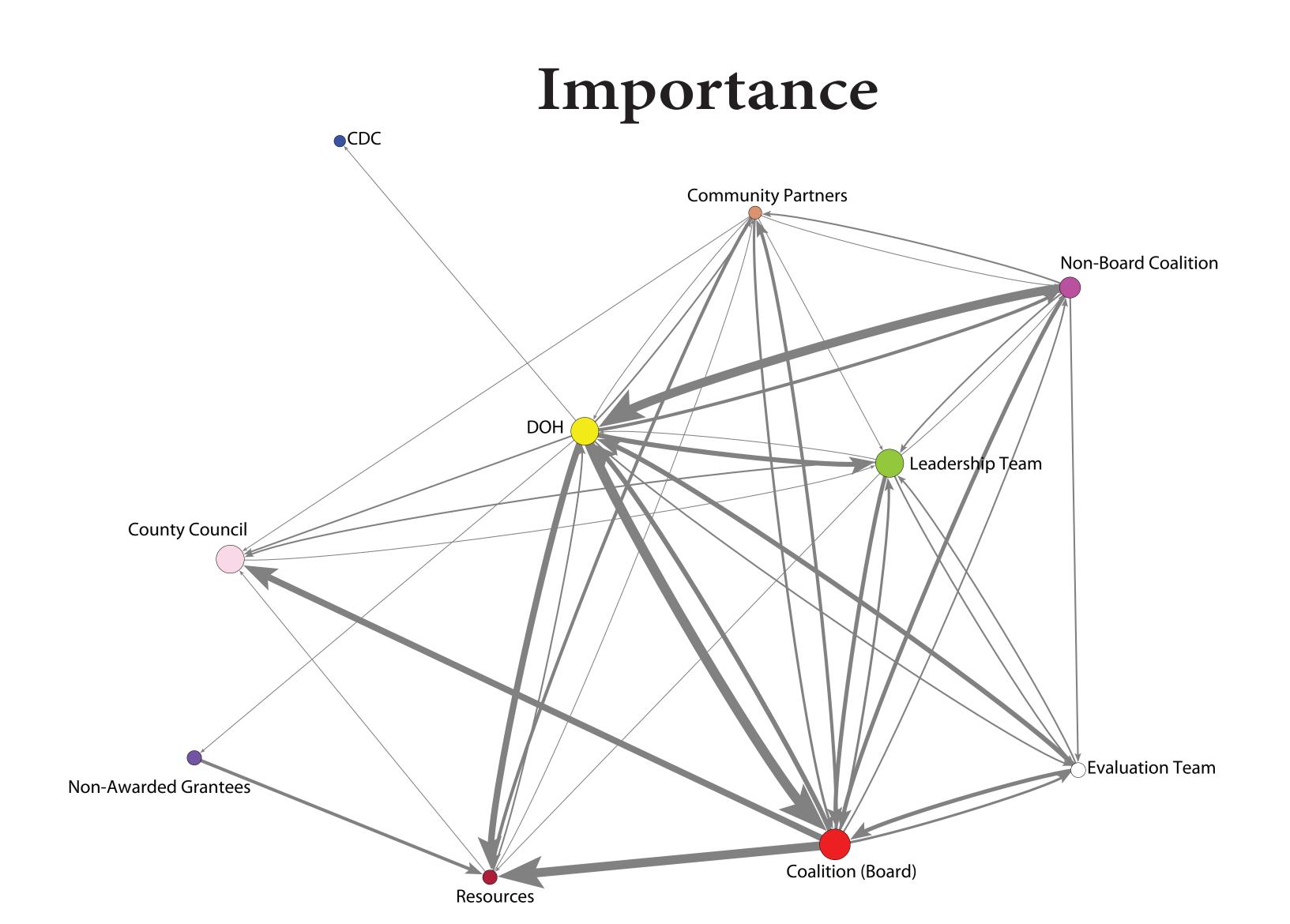 - Resources

Network Questions

Each partner was asked about their general characteristics (e.g., level of experience in tobacco control, the type of organization they work for, and their primary work focus (general public health, tobacco control, communication, etc.)). They were also asked the following relational questions:

1. *Please name up to 10 people who you think are the most important to the successful completion of CPPW activities.*
2. *Please name up to 15 people with whom you had the most contact regarding CPPW activities.*
3. *For each of the partners that you have identified, please list the CPPW activities that you have worked on together in the past 6 months.*

Network Development

- Pajek 1.28 was used to analyze the network data.
- Data were collected at the individual level. Network graphics were created by collapsing individuals across partner types.
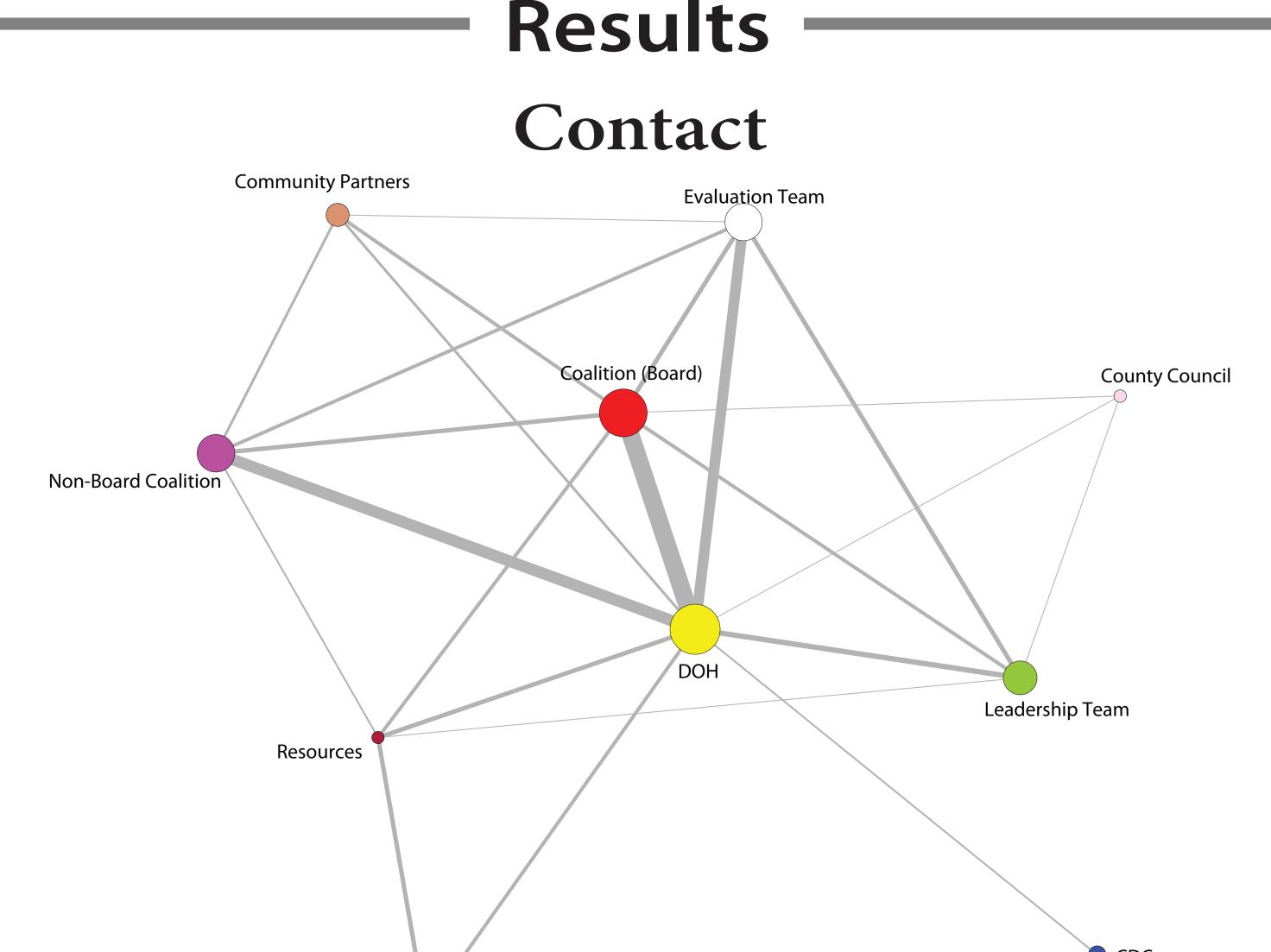
Results

Importance

The Importance network demonstrates which partners were considered the most important to the successful completion of CPPW activities.

Network Properties:
- Line thickness represents the number of nominations from one partner type to the other.
- Node size is determined by the average number of incoming nominations for partners of that type.

Main Findings:
- County council members were deemed the second most important group in the network (see pink node).
- Coalition board members, County Council, DOH, and Leadership team members were most frequently recognized as important.
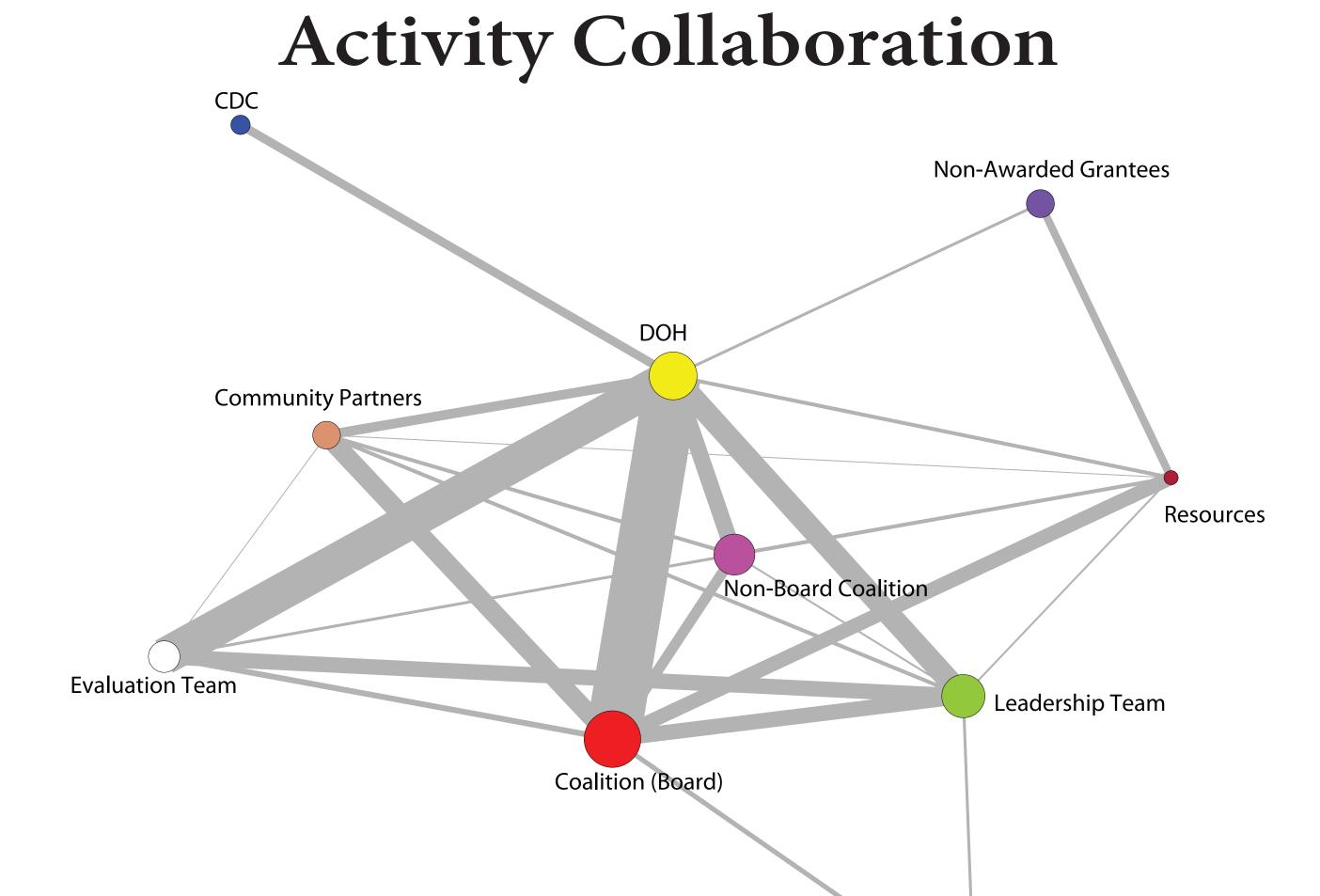
Contact

The Contact network demonstrates which partners contacted each other regarding CPPW activities.

Network Properties:
- Line thickness represents the number of contacts between each node.
- Node size is determined by the average number of contacts for partners of that type.

Main Findings:
- County council members only had a minimal amount of contact with three of the other nine groups in the network.
- Coalition members (board and non-board), DOH, Leadership team, and Evaluation team members were in contact with the most people.

Activity Collaboration

The Activity Collaboration network demonstrates which partners worked together on CPPW activities.

Network Properties:
- Line thickness represents the number of pairs between each node working together and the number of activities they are working on together.
- Node size is determined by the average number of partners people of that partner type worked with.

Main Findings:
- County council members only collaborated at a minimal level with two groups.
- Coalition members (board and non-board), DOH, and Leadership team members worked with the greatest number of partners on activities.

Conclusions

1. **Policymakers were identified as important**

   Even though the County Council was not on the original partner list (i.e., not paid to work on the CPPW Initiative), they were spontaneously named as important partners in successfully achieving CPPW activities.

2. **Importance did not necessarily translate to high levels of contact or activity collaboration**

   Local policymakers were deemed important but were not well integrated into the network, only communicating and collaborating at minimal levels with few of the other stakeholders. Since the CPPW activities focus on policy and environmental change, it is essential for policymakers to be more involved in the CPPW contact and collaboration networks.

3. **Social network analysis is useful in policy evaluation**

   Social network analysis can help to identify relationship patterns that may require amelioration in order to achieve policy goals. Identifying potential problems early in the policy development process may improve the effectiveness of the network.