

A Systematic Review of Collaboration and Network Research in the Public Affairs Literature: Implications for Public Health Practice and Research

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One of the most promising practice-based approaches in public health is the development of interorganizational partnerships as a way to attain resources, share knowledge, and thus improve population health outcomes.¹ Partnerships of community agencies, public and private institutions, and concerned citizens have formed around many public health issues.² These partnerships are built on the principle that poor health stems from many factors and that amelioration requires a multi-systemic approach.³ Considered to be one of the 10 essential public health services, the mobilization of community partnerships that identify and address health problems⁴ has become a critical function of successful health departments. These collaborations focus on a range of issues, from the specific and local to broad, fundamental social determinants.^{5–8} New public health approaches are being developed to appropriately assess how an array of diverse partners are collectively and systematically addressing complex public health problems and population health goals.⁹

Despite this rise of collaborative practice in public health, empirical evidence in the public health literature to support, guide, and inform practice is lacking. This is not surprising because evidence-based studies in public health are typically epidemiological, yielding risk factors for disease and determining optimal treatment approaches. Such research has been the cornerstone of the field, but the public health literature is slowly growing to include systems research, which emphasizes complex and nested features of the organizational, economic, and policy issues that health departments must address to tackle current challenges.¹⁰ This growth in collaboration and partnership literature is slow and in large part is conducted in isolation from studies conducted in other—yet related—fields. Butterfoss et al.

Objectives. We explored and analyzed how findings from public affairs research can inform public health research and practice, specifically in the area of interorganizational collaboration, one of the most promising practice-based approaches in the public health field.

Methods. We conducted a systematic review of the public affairs literature by following a grounded theory approach. We coded 151 articles for demographics and empirical findings (n=258).

Results. Three primary findings stand out in the public affairs literature: network structure affects governance, management strategies exist for administrators, and collaboration can be linked to outcomes. These findings are linked to priorities in public health practice.

Conclusions. Overall, we found that public affairs has a long and rich history of research in collaborations that offers unique organizational theory and management tools to public health practitioners. (*Am J Public Health*. 2012;102:564–571. doi:10.2105/AJPH.2011.300286)

draw 2 conclusions about partnerships in public health: partnerships are increasingly popular strategies for addressing problems that are difficult to solve alone, and yet not enough empirical evidence exists to demonstrate their effectiveness.⁵

Much of the literature on collaboration and partnerships within and among sectors comes from the field of public affairs. Public affairs, with its focus on policy, management, and administration of public agencies, is uniquely suited to inform public health efforts. The common goal of both disciplines to solve public-sector organizational, personnel, and policy dilemmas suggests a bridge between them that has yet to be developed and examined. Characteristics of public affairs lend themselves to a framework for empirical applications in public health because of similarities in organizational bureaucratic structuring, public-good outcomes, and performance-based outcomes.

Although many disciplines are experimenting with networking, collaboration, and participatory problem-solving, most do not explore or incorporate research or experiences

outside their specific focus or discipline, and most partnerships are intra- rather than interdisciplinary.¹¹ We conducted a systematic literature review and analysis to explore how the findings from public affairs research can inform public health research and practice, specifically in the growing area of collaboration and partnerships.

METHODS

We conducted a search for articles in the top 5 peer-reviewed academic journals in the field of public affairs, according to the overall quality index and reputational score assessed by Bernick and Krueger.¹² The journals were *Administration and Society*, *Journal of Public Administration Research and Theory*, *American Review of Public Administration*, *Public Administration Review*, and *Journal of Public Policy Analysis and Management*. We identified all articles about collaboration or partnerships published during 2000 to 2009 in these highly ranked journals.

We found 225 articles that included at least 1 search term (collaboration, privatization,

governance, networks, partnership, or contracting) in the title. We then reviewed the entire article to determine whether the article met our content criteria (e.g., the article included empirical research on collaboration, networks, or partnerships in the public sector). Of those, 151 met the content criteria and were included in our analysis. Figure 1 illustrates our work flow for data gathering and analysis.

Theoretical Approach to Coding

The grounded theory approach is an emergent process with the aim “to discover the theory implicit in the data.”^{13(p2)} Researchers use inductive reasoning to identify trends and relationships apparent in the data.

We began the process of coding the empirical findings by developing a coding scheme of topic areas that emerged from our initial reading of each article during the article selection process. Initially, we applied this coding scheme to identify empirical findings in each article; the coding form also had an area for notes and quotations. Finally, we applied axial coding to the empirical findings.

We checked interrater reliability by reviewing the entire code sheet, article by article, in the 3 most frequent code areas. Although we found that some findings could be coded in several ways, we had 90% agreement among coders.

Coding

We developed a code book in a Microsoft Access database (Microsoft, Redmond, WA) with descriptive information for each article (e.g., year published, authors, methods used) and content information (e.g., theories or major influences, findings). We coded each article for the following information: year published, author name(s), search term(s), primary research question, theories used and major influences, methods and data source, specific topic (collaboration vs networks), and empirical findings (e.g., lessons learned from the public affairs literature).

We identified the search term that triggered selection of the article; the type of method the author(s) applied, such as quantitative, qualitative, network analysis, or mixed methodologies; and the data source(s) that each author drew on for both primary and secondary data.

To assess the content of each article, we first identified the primary research question that each article addressed. We then noted any theories that the empirical research employed, as articulated by the author(s), and when available, the major influences that shaped the research (e.g., frameworks or other authors). We coded the major empirical findings of each article, reflecting the lessons learned from the public affairs literature. Each article could yield more than 1 empirical lesson learned. We were interested in what we could learn from each

article and how that lesson could inform public health (both practice and research). Finally, we identified the most substantial content (both in breadth and depth) from the public affairs literature and translated it into lessons for public health practice.

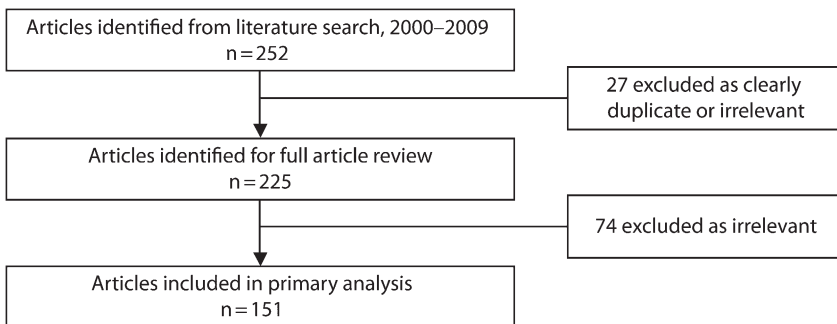
RESULTS

Table 1 summarizes the distribution of articles across the 5 public affairs journals by categories or themes. The journals with the highest yield of articles (totaling 84% of all articles) were *Administration and Society* (n=31), *Journal of Public Administration Research and Theory* (n=43), and *Public Administration Review* (n=53). The most frequent methods applied were quantitative (30%), followed by qualitative (21%), mixed methods (16%), and literature review (15%). The majority of articles (61%) were published in 2006 or later. Table 1 provides more information about each descriptive code.

We identified 17 unique codes to categorize the empirical findings from the public affairs articles: accountability, alternative to influence policy, capacity, collective decision-making and problem-solving, constructing measurement, defining collaboration, identification of stakeholders, incentives, management strategies, motivation, outcomes of collaboration, process of collaboration, public-private partnership, setting a research agenda, social determinants, structure, and trust. The majority of articles (64%) contained findings related to network structure (n=64), management strategies (n=54), and outcomes of collaboration (n=48); the frequency of the remaining types of findings ranged from 16 to 1 (Table 2).

DISCUSSION

The 3 most frequent categories of empirical findings in our review—network structure, management strategies, and outcomes of collaboration—interact and are important to collaborative efforts in public health. Network structure provided lessons on both how organizations are organized and managed and how relationships are formed and evolve over time. Management strategies offered discussions on how collaboration and networking are administered in and among public-sector organizations. Outcomes of collaboration addressed



Note. We searched for articles published in 2000–2009 with at least 1 search term (collaboration, privatization, governance, networks, partnership, and contracting) in the title. We did not include book reviews, commentaries, or letters to the editor in our search criteria.

FIGURE 1—Identification of articles for systematic review of public affairs research on collaboration and networks.

TABLE 1—Descriptive Statistics of Articles Studied in Review of Public Affairs Research on Collaboration and Networks

Articles	All Articles, No. (%)	<i>American Review of Public Administration</i> , No. (%)	<i>Administration and Society</i> , No. (%)	<i>Journal of Public Policy Analysis and Management</i> , No. (%)	<i>Journal of Public Administration Research and Theory</i> , No. (%)	<i>Public Administration Review</i> , No. (%)
Year						
2000	2	0	1	1	0	0
2001	13	0	6	1	4	2
2002	9	1	1	2	3	2
2003	10	0	0	3	3	4
2004	14	0	3	3	4	4
2005	11	1	3	0	5	2
2006	26	4	2	2	2	16
2007	19	0	7	0	6	6
2008	22	4	3	0	7	8
2009	25	2	5	0	9	9
Method						
Case analysis	4	2	0	0	0	2
Literature review	22	4	6	1	4	7
Meta-analysis	2	0	0	0	2	0
Mixed methods	24	0	4	2	10	8
Network analysis	10	3	3	0	1	3
Opinion	9	0	1	1	1	6
Qualitative	32	2	6	0	7	17
Quantitative	45	1	11	8	18	7
Theory building	3	0	0	0	0	3
Total ^a	151 (100)	12 (8)	31 (21)	12 (8)	43 (29)	53 (35)

^aBecause of rounding, totals may not equal 100 percent.

both long- and short-term results, as well as process and population health outcomes. Figure 2 provides a conceptual illustration of the complete list of empirical findings identified from the public affairs literature.

Network Structure

Importance to public health practice. Network structure matters because public health departments are structured differently all over the country, making it difficult for practitioners to follow a particular framework for collaboration.¹⁴ Government agencies (including public health agencies) tend to follow a traditional hierarchical structure,^{15–17} so that the role a health department might play in collaborations may be unclear.

Findings from the public affairs literature. Structural facilitators and barriers depicted in the public affairs literature can affect public

health networks, especially in how they are governed. In the public affairs literature, researchers tend to see themselves either as network scholars—those who study the practical or structural components of networks—or as students of collaboration—the process and governance of collaborative work.¹⁶ This distinction tends to be a matter of which variables the researchers select for their study, but the basic process of understanding the nature and context of working together is integral to both groups of researchers; we therefore refer to this field simply as networks, placing our findings within the systems theory context and focusing less on the linguistic distinction of the terms and more on how the empirical findings from these studies are described.

Networks commonly intersect, and managers are interconnected within these networks.¹⁷ Most collaborative structures encompass cross-sector

membership of organizations that are convened around a common mission (e.g., to address a public health issue).¹⁸ External structural facilitators contribute to successful public health networks (e.g., positive political support and continual strategic planning).

The type of organization matters because managers juggle opportunities and constraints in a mixed-sector network,¹⁹ and ultimately, success depends on the network being functional, democratic, and consensual.^{20–22} As Nutt states,

the intergovernmental environment in which social services are implemented and delivered presents complex challenges for public managers responsible for managing contract relationships.^{23(p157)}

These organizational differences can create barriers across boundaries, characterized by a lack of guiding rules, management practices,

TABLE 2—Empirical Findings From Review of Public Affairs Research on Collaboration and Networks

Lessons Learned	All Articles, No. (%)	American Review of Public Administration, No. (%)	Administration and Society, No. (%)	Journal of Public Policy Analysis and Management, No. (%)	Journal of Public Administration Research and Theory, No. (%)	Public Administration Review, No. (%)
Accountability	7	2	0	1	0	4
Alternative to influence policy	1	0	1	0	0	0
Capacity	6	0	1	1	2	2
Collective decision-making/problem solving	2	0	0	0	0	2
Constructing measurement	11	0	3	1	6	1
Defining collaboration	6	0	1	0	4	1
Identification of stakeholders	1	0	0	0	1	0
Incentives	5	0	0	1	0	4
Management strategies	54	3	10	4	25	12
Motivation	8	0	0	0	5	3
Outcomes of collaboration	48	5	10	3	18	12
Process of collaboration	2	0	0	0	1	1
Public-private partnership	15	1	3	2	2	7
Setting a research agenda	16	1	3	0	3	9
Social determinants	3	1	1	0	1	0
Structure	64	2	6	6	27	23
Trust	9	1	2	0	2	4
Total	258 (100)	16 (6)	41 (16)	19 (7)	97 (38)	85 (33)

Note. All articles were published in 2000 to 2009. Some articles provided >1 empirical finding.

and communication mechanisms.²⁰ Instituting democratic principles such as equity, equality, and representation may help to eliminate these barriers.²²

Other ways that structure influences collaboration are complex power structures,^{24,25} size of the network,²⁶ extent of resource exchanges,²⁷ degree of trust,^{28,29} collective decision-making,³⁰ leader attributes,³¹ and the cost of collaboration.³²

Translation to public health practice. Multi-sectoral partnerships have created new structural formats in the management of public health agencies—both how organizations are organized and managed and how relationships are formed and evolve over time.^{32,33} Public health administrators may want to employ techniques that address structural aspects of networks that may in turn facilitate collaborative processes:

- Create fluid boundaries and eliminate barriers for working across organizations; barriers to enter into collaboration may exist, yet

these barriers may not be known or recognized.²⁴

- Establish rules as new members enter into collaboration to increase stability in the network³⁴; if instability is pervasive, the network system falters and fails in its collaborative goals.³⁵
- Identify adequate communication resources, management skills, and characteristics of processes that incorporate a democratic approach.²⁰
- Consider the costs of resources, time, governance, and commitments.³⁶

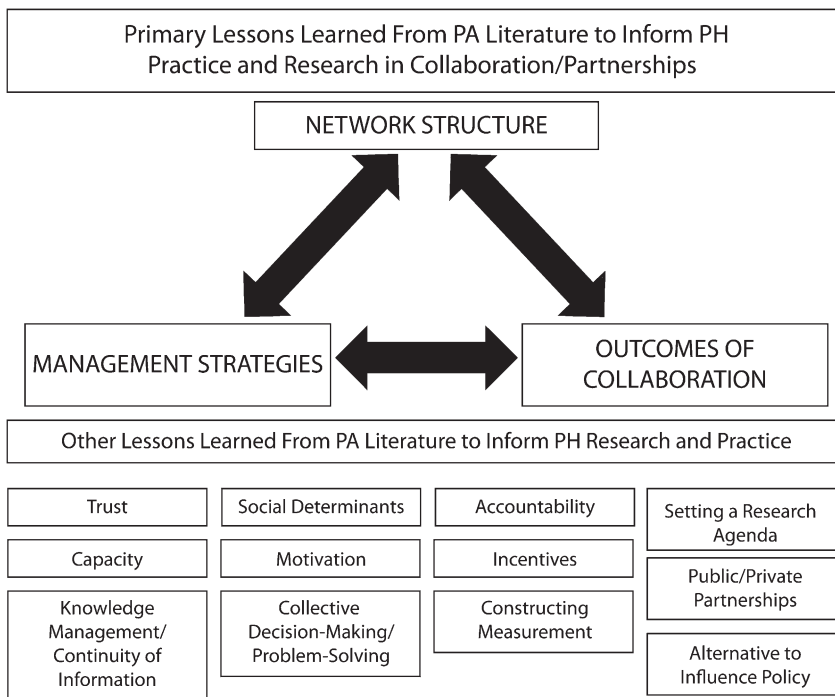
Management Strategies

Importance to public health practice. Although collaborations within public health can be highly beneficial, resulting in communities of practice, shared learning, resource exchange, and increased community capacity, among other advantages,^{2,4,9,11,37} and have been widely accepted, they are complex and thus are difficult to understand, manage, and lead. People are used to working and managing within

hierarchies rather than across them, leading to problems and challenges that limit the potential of networks.³⁸ The rise of networks as a form of interorganizational collaboration to alleviate pressing public health problems requires professionals to rethink traditional methods of managing relationships. Managers are subject to increasing performance pressures^{39,40} and are aware that how well they succeed at collaborative governance will affect their overall job performance.¹⁷

Findings from the public affairs literature. Today's public affairs literature is replete with empirical research on managing in a networked system and on understanding the conceptual and practical implications of this new management framework. These studies have identified factors that hinder or encourage effective management in complex social networks.¹²

Unlike in traditional organizational environments, more than 1 person may take on management responsibilities in a network.⁴¹ Although managers may acknowledge their role in the network, they can still find themselves



Note. PA = public affairs; PH = public health.

FIGURE 2—Conceptual illustration of empirical findings from review of public affairs research on collaboration and networks.

retaining their expectations of hierarchical organizational design and face challenges such as strategic management and program evaluation in the network context.⁴² They may also encounter other barriers to effective management. For example, administrative capacity may hinder performance, regardless of the effort or skill of the manager.⁴³ The complexities that managers in public organizations face when seeking to steer network entities have been insufficiently studied.⁴⁴ Issues such as abuse of powers (e.g., interest groups or political insiders manipulating the process),^{45–47} accountability (e.g., who is responsible for results in networked system),^{48,49} lack of trust between partners or managers,⁵⁰ and lack of necessary specialized expertise and sufficient resources to manage, monitor, and enforce rules and norms in a collaborative environment⁵¹ must all be addressed in public health practice.

Translation to public health practice. For public health administrators, understanding the mindset

in collaborative network settings will facilitate choosing appropriate tools, strategies, and skill applications.⁴² Network management is a critical skill that leads to positive outcomes.⁵² The challenge for managers in public organizations is to build institutional, managerial, and professional capabilities to engage cross-boundary, knowledge-intensive problems whenever they appear.²⁴ Several strategies may be useful to public health practitioners in management of collaboration:

- Conduct a stakeholder analysis designed to help organizations think and act strategically during process formulation and issue creation.⁵³
- Gauge when additional time spent in the networked environment may not garner substantial payoffs.⁴²
- Understand the characteristics of organizational connections.^{19,54,55}
- Encourage networks within organizations because they foster social interaction, promote

shared responsibility and teamwork, and create positive social capital.⁵⁶

- Develop frameworks to consider the range of strategic options and role choices available to managers who are coordinating multisectoral networks.⁴⁴

Outcomes of Collaboration

Importance to public health practice. The processes by which public health departments have engaged partners in collaborations have varied, with few ways to measure the outcomes of these partnerships.⁵⁷ We identified some key questions that should be considered in quality assessment: How well do people leverage scarce public health dollars by collaborating? Are outcomes substantively different when partnerships are developed within and outside of public health? What are the factors in collaboration that lead to proclaimed better outcomes? How can members of a collaborative remain accountable to their funders and stakeholders? What models or frameworks for collaboration work best in public health? A deeper understanding is required of how to assess the strength of a collaborative, what motivates and moves constituents to action on public health issues, and what benefits flow from particular relationships in a collaborative.³

Findings from the public affairs literature. Outcomes of collaboration in public health include traditional population health outcomes (e.g., reduction of health disparities, increased health literacy, reduction of chronic disease, and improved direct health care services) as well as process outcomes (e.g., creation of public policy, laws, or regulation; increased education services; improved communications; sharing of resources; and creation of new sources of data). Good collaborative outcomes stem from effective communication, strong leaders and managers, concrete and focused goals, and trust. Highly effective, mature networks can develop a seamless quality that allows information, resources, and clients to flow smoothly across agencies and programs that span the organizational field for health and human services in a community.⁵⁴

However, outcome assessment remains challenging. Networks with effective outcomes are moving away from heavy reliance on reports of stakeholder attitudes and relationships

as a proxy for outcome success⁵⁸ and beginning to link outcomes to such factors as how the network is structured and the process is managed.⁵⁹ For example, some studies have found that collaborative outcomes improve because of (1) greater policy goal congruence, (2) greater diversity and policy expertise, (3) a more comprehensive mix of financial resources, and (4) joint governance structures that build capacity for collective action.⁵⁹

The public affairs literature shows links between collaboration and outcomes. A commentary on *Healthy People 2010* found,

Communities that are eager to improve the health of specific at-risk groups have found that they are more likely to be successful if they work collaboratively within their communities and if the social and physical environments also are conducive to supporting healthy changes.^{60(p3)}

Another study found that long-term health improvements can be achieved when people work together to effect change and employ concrete measures of progress for collaborative projects.³²

Working together does not necessarily ensure successful outcomes, and cooperation may not always result.⁵¹ We found that a solid understanding of the barriers to effective collaboration is also critical and is discussed often in the public affairs literature on outcomes. Uncertainty and lack of trust can lead to inability to reach desired outcomes.⁵⁰ In addition, when a public funding agency does not remain involved, the effectiveness of the collaboration may be diminished.⁶¹

Translation to public health practice. Public health leaders are eager to understand how to analyze the collaborations in which they are involved so that they can determine whether resources expended on partnership or collaborative development are well spent. It is important to understand how collaboration in public health is linked to health outcomes, how public health departments can maximize resources to develop these collaborations, how networks are used to build public health constituencies, and how public health departments can remain accountable to their funders and stakeholders.³

Findings from the research linking collaboration to outcomes in public affairs can be translated to public health:

- Establishing relationships with partners before they are needed can prevent inefficiencies and misunderstandings.⁶²
- Examining collaborative service delivery models used by the organizations involved in the collaborative mechanism helps determine the most fluid coordination process.^{55,63}
- Focusing the mission of the collaborative on the public good, rather than on individual motivations, can improve outcomes.⁶⁴
- Managerial networking, managerial quality, and selected stabilizing features contribute to program performance.^{20,24}
- Outcomes may be enhanced by policy goal congruence, policy expertise, financial resources, and joint governance structures that build capacity for collective action.^{31,59}
- Evaluation plans and tools have been developed to assess performance outcomes.^{55,57,65}

Limitations

We only reviewed articles published in a 10-year period, and we chose not to review books or book chapters published during that time because of coding issues. We limited our search to articles whose titles contained at least 1 of our search terms. We selected this approach after first attempting to search abstracts of the 5 journals over the 10 years. The result was overwhelming, and the majority of articles were not relevant to our objective.

Because of these limitations, we may have missed some relevant articles; however, we are confident that our results would not have been altered in any significant way by the addition of any articles that did not show up in the title search. Therefore, we believe that our approach was the most appropriate for this effort.

Conclusions

Our findings suggest areas in which public affairs research can inform public health practice to strengthen agency collaboration, structure, and management. As public health departments (and their collaborative partners) continue to develop their work in networked settings, it is essential that research and data inform their practice. Our systematic literature review found that public affairs research can uniquely contribute to the practice of public health in the broad area of collaboration.

Overall, we found that (1) public affairs has a long and rich history of research in collaborations, much of which can inform public health practice; (2) public affairs research offers unique organizational theory and management tools to public health practitioners; and (3) public affairs research offers management theory and techniques that may aid an already overburdened public health system that must do more with much less.

Interestingly, the 3 domains (network structure, management strategy, and outcomes of collaboration) highlighted in our empirical findings are clearly linked, reflecting the complex and interrelated nature of systems work. Networks that are structured in particular ways (e.g., centralized vs decentralized, formal vs informal, temporary vs long term) likely lend themselves to different management strategies (e.g., hierarchical vs vertical, majority rule vs consensus, strategic vs bureaucratic), which when maximized may strengthen the capacity of a network to produce clear and valid outcomes. We hypothesize that the interconnected nature of these 3 domains explains their prevalence in the literature. This in turn leads us to believe that other factors, reported on less often in the literature (e.g., trust, motivation, accountability), may not affect networks as obviously but are in need of greater attention. ■

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Contributors

D. Varda designed the study, built the data repository, collected data, analyzed and interpreted the data, and drafted and revised the article. J.A. Shoup and S. Miller helped to design the study, build the data repository, collect data, analyze and interpret the data, and draft and revise the article.

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Human Participant Protection

No protocol approval was needed for this study because it used publicly available data and did not involve human participants.

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