Summary of Findings from Network Literature Review

I. Introduction and Methodology

This literature review was undertaken to provide an informed foundation upon which to build a program to support networks to become stronger and more effective.

An initial literature review focused on articles found via internet search comprising those that studied networks from a business/economics perspective as well as psychological and sociological perspectives indicating that networks are viewed as being interdisciplinary in nature. Then, individual seminal articles on the subject and those cited most frequently in the initial articles were selected. While the content of most of the articles pertain to inter-organizational networks in the US, rather than in the low and low-middle resource countries in which we work, there were many transferable lessons and the conclusion of this desk review brings these threads together.

II. Inter-organizational Networks: Definitions, Purposes, and Types

In 2001 Peter Drucker, often referred to as the “father of modern management theory,” predicted that “The greatest change in the way business is being conducted is the accelerating growth of relationships based not on ownership but on partnership.” This is the essence of inter-organizational networks.

While any organization can be considered to be a network in and of itself, there are many definitions for inter-organizational networks. According to researchers, inter-organizational networks are collaborative groups who come together to work toward a common purpose (Popp et. al.), transcend legal and hierarchical boundaries, structure, temporal and geographic boundaries (Meyer and Rowan 1991, as referenced by Jensson and Nybakk 2013, Huerta et. al., 2006).

A more comprehensive definition is offered by Shuman and Twombly (2009) “A collaborative network is a collection of businesses, individuals and other organizational entities that possess the capabilities and resources needed to achieve specific outcome[s]” with an emphasis on collaboration. “Collaboration is a purposeful, strategic way of working that leverages the resources of each party for the benefit of all by coordinating activities and communicating information within an environment of trust and transparency.” (Shuman and Twombly, 2009)

Finally, some other researchers, notably Mitchell, 1969 and Polodny and Page (1998), emphasize the long term nature of relationships between and among the partners that is facilitated by the members themselves. Polodny and Page also characterize networks as having “a distinct ethic or value-orientation on the part of the exchange partners.”

Many people refer to inter-organizational networks as being similar to the electronic networks in that they are composed of nodes (the members) and the circuits (or ties) between the nodes.
Drawing from these definitions and our network experience in the international development world, a working definition for the purpose of this review and a Network Development Program might be “Inter-organizational networks are voluntary groups of organizations that are socially-constructed and self-organizing groups that have a common purpose and serve the collective and individual needs of the members and the clients they, in turn, serve.”

While there are many types of networks that exist globally ranging from contractual networks established for commercial and business applications (e.g. joint ventures, partnerships, and alliances) and public service networks set up to deliver services for government or other social service programs, we will focus on voluntary networks.

Some voluntary networks include trade and professional associations established to professionalize a specific industry and those composed of non-profit organizations run on contributions, including religious and advocacy organizations and those providing health and other public service.

III. Benefits and Success of Inter-organizational Networks

The benefits and definitions of success depend on why the network was original formed. Often organizations join networks in response to external factors, including:

- Complexity, uncertainty, and/or what many researchers refer to as “wicked problems” existing in current operating environment requiring more resources than one organization can provide
- Changes in regulatory structures and legislation pertaining to the sector
- The need for information gathering (including health data sets that pertain to an entire segment of the population across organizational boundaries)
- The perceived value in having a network serve as a bridge between individual organizations and communities by representing a full range of available services (across the spectrum of members).
  (Cordero-Guzmàn)

Some of the internal reasons that organizations form networks include a desire to leverage strengths, learn, spread risks, create stability, increase recognition of the importance/power/quality of the individual organization by virtue of membership, or because their mission and vision are more likely to be achieved by combining resources generating additional funding that may come from participation in a network.

This means that the success of a network can be said to be meeting the stated purpose of the network and fulfilling the needs of its members. This includes converting a shared vision and purpose into action and results and providing clear and added value to the members. The value proposition related to the success of a network can be defined in terms of Shuman and Twombly’s Principal #1: “Organizations and people only actively engage in collaboration when the benefit they derive is greater than the time, effort and other resources it takes to collaborate.”

If meeting the needs of its members is the definition of success, then the measurement of success must take place at two levels – the network itself and the members. In speaking primarily of networks of
service delivery organizations, Provan and Milward focus the need to measure success at three levels – the network, the members and the individuals served. The measurements should include those pertaining to the network’s efficiency and effectiveness, the contributions of the members to the success of the network and the satisfaction of network members with the benefits provided. At the member level the measures of success might revolve around commitment to the network and willingness to contribute to its ongoing success as well as satisfaction with the benefits of membership relative to their contribution. Then the individuals served by the member organizations must be satisfied with the services provided by the members (in this case health care services) and the administration of those services.

The challenges in the implementation of this 3-tiered approach to measurement include:

- There may not be a way to measure the satisfaction of the ultimate beneficiaries in a sufficiently rigorous manner, especially outside of service delivery. Imagine a network of universities and trying to evaluate the precise impact on individual students at the universities.
- There is often not enough donor funding to allow for such an expansive study.
- Network success is related to so many factors that, according to Raab et. al., it is impossible to measure the success factors with standard “linear” analysis. Therefore, these researchers used Qualitative Comparative Analysis (QCA) which is based on Boolean algebra to test the Milward, et. al. conclusions regarding the efficiency and sustainability of networks.¹

IV. Network Sustainability

Network Sustainability has been found to be a function of the following:

- **Vision/Purpose.** Having a membership base (whether homogenous or heterogeneous) that is committed to a common purpose and willing to work with each other in a non-competitive and dynamic manner is key.
- **Member composition.** Some networks are composed of members that are providing the same services or have the same perspectives and others are composed of members with different, but complementary services. The main thing is that “When organizations come together because they share goals, experiences, methods, perspectives, and sometimes practices, the network is more likely to work better and the programs are more likely to be sustained.” (Cordero-Guzmán, P. 433) This suggests that the purpose will drive the composition of the membership and that it is important to have a way of assessing what individuals and/organizations might be best suited to become members.
- **Trust** is related to member composition and is the most commonly cited requirement for a network to be successful and sustainable, although Podolny and Page p.61 argue that some level

¹ Boolean algebra was introduced by George Boole in his first book *The Mathematical Analysis of Logic* (1847), and set forth more fully in his *An Investigation of the Laws of Thought* (1854) and goes from the mathematical algebraic concepts of true or false to logic a algebra which includes “and,” “or,” and “not.” [http://en.wikipedia.org/wiki/Boolean_algebra](http://en.wikipedia.org/wiki/Boolean_algebra) and [http://www.doc.ic.ac.uk/~dfg/hardware/HardwareLecture01.pdf](http://www.doc.ic.ac.uk/~dfg/hardware/HardwareLecture01.pdf). Raab et.al. believe this to be a more appropriate way of expressing the relationships between and among the many that Milward et. al. identified because it comes closer to reflecting complexity in the network.
of trust can be replaced with well-written contracts that the partners in the network adhere to over time. This is unlikely to be the case in the inter-organizational networks that we encounter.

- **Governance.** Networks have various governance structures because as Shuman and Twombly p.4 point out in their “Principle #2: Collaborative networks are fit for the purpose. The purpose determines how the network is structured.” This means that there is no “good” or “bad” way for a network to be structured as long as it works for that network.

- **Leadership.** A network must have a strong organization/individual/administrative body that “choreographs” the network. (Milward, et. al., Provan and Milward, Raab et. al. and Shuman and Twombly p.5) In voluntary networks, the “choreographer” is frequently a Secretariat funded by a donor or via fees paid by the members, or a founding or dominant member could choose to take on this responsibility. In more informal networks where there is currently no such person or entity, there may be an election process among the members to determine who will play this role for a determined period of time, or the tasks will simply rotate among the members. In general, however, leadership within a voluntary network is characterized by inspiration, influence, planning, and organization.

- **Communication.** A network must have a communication plan and delivery method designed to respond to member expectations. In a network map, the configuration of communications would be reflected in the ties between and among members (the ties, or connections, between the nodes). Depending on the purpose and structure of the network it will need to develop an optimal density (higher density represents more ties between and among members). In general, denser networks promote stronger group norms, more learning and trust, and reduce “opportunistic behavior.” (Jensson and Nybakk, 2013, p. 21). As with governance, there is no value judgment in whether a network is more or less dense; the “shape” of the network will reflect its purpose and governance structure.

- **Predictability of funding.** To the extent that the network is providing funds to the members, it is critical that there be stability in that relationship in order to maintain the network. (Milward et. al., Raab et.al). Where the network does not provide funding, there is more likely to be instability as the individual members compete for funding.

- **Age of the network.** Raab et. al. found in their research that once networks are 3 years or more from their launch, they are more likely of being sustained over time.

- **Networks and individual member relationships.** There is evidence that networks form largely around pre-existing organization-to-organization and individual-to-individual (“socio-centric” Perkins et. al.) relationships where the actors have worked together in the past, know each other well, and are relatively small in number. The strength of these bonds creates
“resilient trust” (Ring) thereby allowing the network to withstand changes in its environment and challenges to its existence.

- **Member staff capacity development.** “While networks are viewed as a better way to address complex issues and address sustainable development …[their success and sustainability] is dependent on whether the actors involved can effectively join forces with clear intentions to collaborate… To build capacity, organizations will need to support learning and development of their workforce to effectively engage in relationship building, cross-cultural communications, information sharing, and coordination of tasks.” Specifically, capacity needs to be built around “developing a shared vision, building trusting relationships, participatory leadership, identifying collaborative action plans, clearly defining roles within the network, and measuring joint success.” (Hobrecht, et. al.)

While the factors that determine sustainability can, when posed in the negative, point to factors leading to failure of networks and indicate where network strengthening might be needed to ensure that the positive factors are in place. Sustainability can also be a function of how well the network as a whole or through the managing partner/Secretariat handles tensions and challenges that are typical in a network.

Some specific tensions and challenges that arise in networks include:

- **Conflict.** Collaboration may not be “natural” to the members and there may be conflicts over any number of issues – network management and governance, the positions of various members within the network and power relationships (see below), and competition of members for funding and “market share.” To the extent that compromise cannot be reached or that trust is broken, Milward et al and Raab et. al. found that the best way to deal with conflict in voluntary networks is to have a strong manager of the network. Being the arbiter of conflict would be one of the primary functions of the “choreographer” mentioned earlier.

- **Network v. member interest.** There may not be a clear demarcation between the role and needs of the network and those of the individual members. If the member benefits are not taken into consideration, the members will leave the network. Therefore, the roles and needs of the network and those of the members must be carefully managed. Again, this is where the coordinator/“choreographer” would be engaged.

- **Power relationships.** Power issues arise when one or a few organizations dominate the network and use their power for their own benefit. Ideally, working in a network, would give small organizations an equal voice in network management and activities, but they will be discouraged if they don’t have that opportunity.

V. **Conclusion: Implications for Strengthening Health Sector Networks in Developing Countries**

The results of this desk review suggest that there are many leverage points for strengthening networks in developing countries where the networks that we work with tend to be:

- **Voluntary and, generally, less formal** than most of the inter-organizational networks frequently studied.
- **Donor funding** of the network is the norm. This implies that few members may be sufficiently invested in the network to provide funding (in the form of fees) or time (as volunteers). In this case, there is no significant pressure for the networks to meet the benefit expectations of the members, just to meet the requirements of the donors. There is more push out to the members than pull from the members so, the members are more likely to view themselves as beneficiaries rather than a full participants in a cause or result. Since many of the networks do not facilitate funding to the members and many of the members compete with each other for donor funds, there is less incentive for health service delivery members, particularly, and other members with overlapping missions to collaborate effectively in a network.

- **Vision and purpose** are often not clear. For that reason, members may not feel compelled to join or may feel ambivalent about their membership. In addition, members expect that the network will have intermediate successes and these need to be demonstrated on a regular basis. (Cordero-Guzmán,

- **Member composition** may not be seriously considered from the standpoint of entry or exit from the network or working together to achieve a compelling purpose.

- **Trust, Governance and Leadership** are not likely to be fully developed and require development and/or strengthening.

- **Member staff capacity development**, as referred to in the literature, must be addressed and member staff may also need development of technical skills in their areas of focus.
Attachment 1: Definitions of Inter-organizational Networks

Every organization is a network, but networks transcend barriers including legal and hierarchical boundaries. Other barriers transcended - Huerta, Casebeer, & VanderPlaat (2006), with their interest in using networks to enhance service delivery, define networks as “a group of three or more autonomous organizations working together across structural, temporal and geographic boundaries to implement a shared population health or health services strategy” (as referenced by Inter-organizational networks: A critical review of the literature to inform practice February 27, 2013 p. 13 Janice K. Popp, MSW, RSW; Gail MacKean, MPA, PhD; Ann Casebeer, MPA, PhD; H. Brinton Milward, PhD; Ronald Lindstrom PhD, FCCHLp. 13).

The definition used by Popp et al. “collaborative inter- organizational networks where three or more organizations are working together toward a common purpose. Since common purpose is integral to this definition, these networks consist mostly of public and non-profit organizations rather than competitive, for-profit organizations” p.15

Mitchell’s definition “…long term relationships among organizations that are facilitated by the organization’s members.” (Mitchell 1969, as referenced in Jensson and Nybakk 2013, p. 3)

Meyer and Rowan’s definition is “Institutional theory defines organizations as systems of coordinated activity that are develop in complex networks of relationships and boundary expanding exchanges.” (Meyer and Rowan 1991, as referenced by Jensson and Nybakk 2013, p. 9)
Appendix 1: References


