



Galloway

Advisory by iVantage

ORGANIZATIONAL NETWORK ANALYSIS FOR HEALTH CARE

MARCH 2014

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EXECUTIVE SUMMARY

Executive Summary

The growing field of social network theory has helped to reveal a reality most business leaders are aware of but often don't fully leverage. Beyond the defined, formal structure of an organization, there is a parallel, informal network that is employed continuously to communicate information and ideas and enables the organization to get things accomplished. Social networks exist in all organizations and are organic byproducts of the encounters and personal interactions that occur daily among leaders and staff. Over time, a leader becomes aware of primary information brokers in an organization who are the most trusted sources for advice and expertise.

Increasingly, companies are employing Organizational Network Analysis (ONA) and other tools to learn more about how social networks of individuals and functions are connected to the broader organization. ONA enables an organization to see how work is really accomplished -- who talks to whom, who relies on whom for critical information, who is counted on the most for their expertise, who is in the center of the action and who is on the periphery.

ONA provides benefits to organizations and to the individuals who participate in the ONA survey. Specifically, ONA helps organizations:

- Measure the frequencies of interaction among individuals and the nature of these interactions.
- Understand how work gets done both within and outside of the formal organizational structure.
- Identify individuals who are key information brokers and connectors in the organization's social network.
- Identify and assign network leaders for key roles in organizational transformation initiatives
- Improve on-boarding of new leaders who are not yet connected to the network

For healthcare executives, ONA information can help leaders:

- Understand the effectiveness of their position in the network and opportunities to improve their network strength.
- Identify areas of improvement they can introduce based on what is required for their formal roles and responsibilities.
- Develop action plans for structural, relational and behavioral improvements in their network performance.

PROBLEM DEFINITION

Problem Definition

Most healthcare leaders have an intuitive understanding of social networks and how they shape the personal and professional lives of everyone. Social networks are pervasive in health care organizations. Hospitals and health care systems are highly-complex, social organizations where work must be coordinated and executed across numerous skill levels, departments, and business units. The quality of services provided to patients is highly dependent on the ability of providers and support staff to work together in a cooperative, seamless manner.

Healthcare leaders must be adept at navigating across institutional boundaries and working effectively with others with diverse skill sets. An awareness of network dynamics can be a significant advantage in the successful leadership and management of the organization. The more a leader can understand his or her position in the network, the better he or she can determine how to build and strengthen connections with other leaders. To accomplish this, leaders must have data for mapping their personal network and a framework for improving their network performance.

ORGANIZATIONAL NETWORK ANALYSIS

For many years, social scientists have studied human networks to better understand how groups of individuals form, interact, and share information. Through observation and data collection, researchers are able to measure and depict the web of relationships that exist within and between groups of people. Out of this work has emerged useful analytic tools and mathematical modeling that reveal complex network dynamics, identifies influential entities, and discover patterns of affiliation.

Some of these tools, like Organizational Network Analysis (ONA), have been applied to networks that exist in business organizations. ONA is the brainchild of Dr. Rob Cross, a professor at the University of Virginia McIntire School Of Commerce, who has written two books on the subject (The Hidden Power of Social Networks, 2004, and Driving Results Through Social Networks, 2009). Cross has applied the study of social networks to business enterprises, developing tools by which an organization can assess its network -- both in terms of problems and promises.

Galloway Consulting has been a leader in applying ONA processes and concepts to health care delivery organizations. Galloway has employed ONA to a wide range of health care provider organizations, including large integrated systems and smaller, single-site hospitals. Through this work, Galloway has compiled longitudinal data and analysis to gain

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insights into the unique attributes and issues that occur in healthcare organizational networks. Galloway clients have used ONA insights for a variety of purposes, including role assignment for large scale transformation projects, identification of physician leaders for EHR implementation and adoption, and support for leadership development programs.

WHAT IS ONA?

Organizational Network Analysis (ONA) is a survey and analytic process that helps organizations:

- Reveal the frequencies of interactions among individuals in an organization and the nature of these interactions.
- Understand how work gets done both within and outside of the formal organizational structure.
- Identify individuals who are key information brokers and connectors in the organization's social network.
- Provide insights to individuals on their position within the network and the effectiveness of their interactions with others.

ONA enables an organization to see how work is really accomplished -- who talks to whom, who relies on whom for critical information, who is counted on for their expertise, who is in the center of the action and who is on the periphery. ONA survey results identifies who within the organization are most connected to others and who are key brokers of information to other leaders.

ONA maps the connections within an organization in terms of incoming ties (connections that are from others to you) and outgoing ties (connections that are from you to others). The number of ties throughout the organization determines an individual's degree of connectivity. Leaders who have a large number of incoming ties are considered high connectors. Leaders with low scores are generally on the periphery of the organizational network.

The standard Galloway ONA evaluation is based on an on-line survey of a system's total leadership team. The survey generally takes 15-25 minutes, depending on the size of the respondent's personal network. The ONA survey requires a relatively high participation rate- 80% or better- in order to provide information that provides an accurate depiction of an organization's leadership network.

Survey participants are initially asked to answer several demographic questions indicating their role, function and tenure in the organization. Next, the respondent is asked to identify,

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from a bounded list of organizational leaders, the key individuals with whom they have the greatest degree of interface (normally those for whom there is at least weekly interaction) and are critical to getting work completed. This list usually includes all leaders in the organization- from the supervisor level to the CEO.

Survey responders are then asked questions about the nature and quality of their typical interaction with each leader they selected from the list. These questions vary, but generally include questions to help understand:

- The nature of information sought, such as clinical, business, or career advice
- The degree to which an individual is accessible - Do I need more access to this person to do my work?
- The degree to which an individual feels energized after an encounter with another.
- The trustworthiness of others- Do I trust this person with my information?
- An individual's effectiveness - How effective is my typical interaction with the person?

Respondents assess the effectiveness of these links, the levels of accessibility required to complete their work, the awareness of a person's expertise, and how they utilize these relationships to accomplish their work. The analysis reveals the frequency of ties among individuals and their effectiveness.

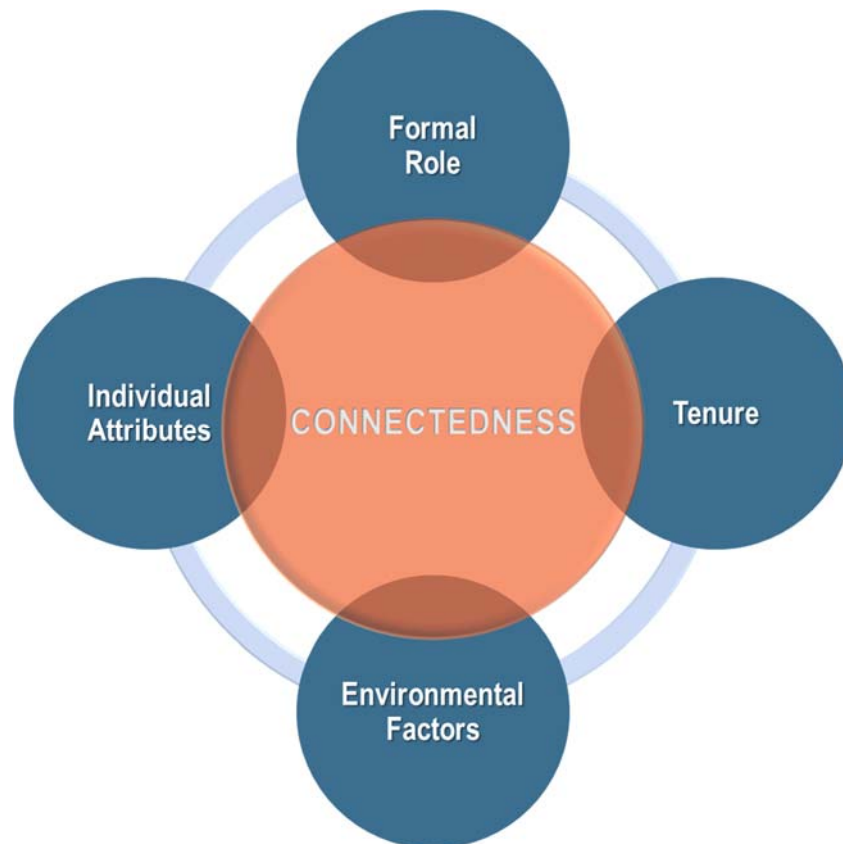
ONA SURVEY RESULTS HIGHLIGHT KEY CONNECTIONS

The ONA survey results capture the number of connections (incoming and outgoing) an individual has with other organizational leaders. As shown in FIGURE 1, the number of connections a person has is influenced by multiple factors:

- Tenure - Usually, a person who has been with the organization a long time will have some degree of interaction with most leaders, as opposed to someone who is new to their position.
- Individual Attributes - such as introversion / extroversion can impact the number of people a person interacts with
- Environmental factors - such as the size of your primary entity, geographic location (sometimes called propinquity)
- Formal Role - Generally, people at the vice president levels and above will have higher connectivity scores. A person's role should be the primary factor when answering the question "What should my connectivity and broker scores be?"

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Figure 1. Factors that impact on individual's CONNECTEDNESS to others in the organization



The number of unique ties to individuals determines the leader's overall connectivity score. Frequently, the ONA survey will reveal mid-level managers who are critical to the organizational network but lack recognition for their important contributions. For some leaders, a high connectivity score can be a red flag. For example, a high number of connections could reflect individuals who are bottlenecks to getting work done and information shared. This could indicate the need to redesign a role, increase delegation, or to reduce the number of direct connections for a leader.

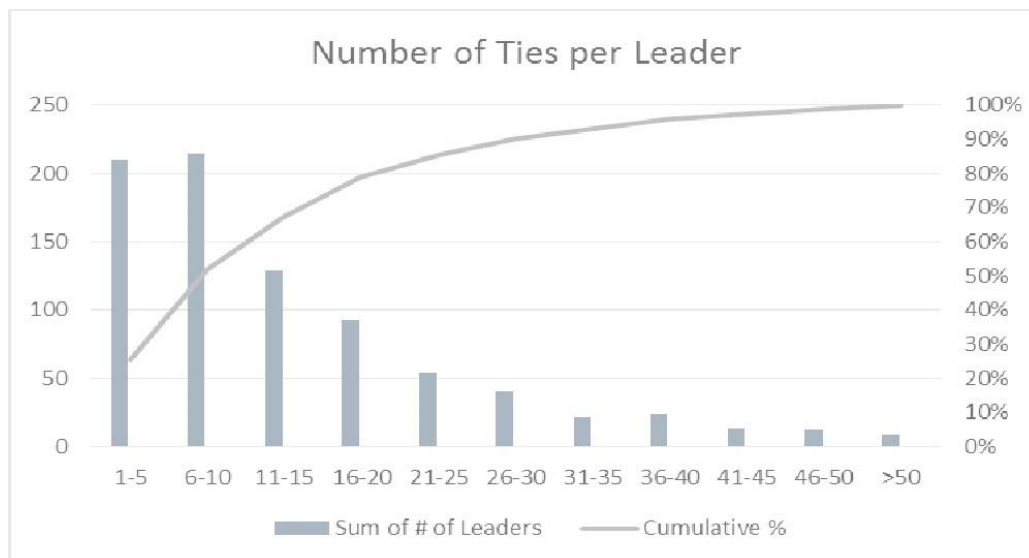
A percentile ranking score on each survey attribute is calculated for each leader. Higher scores represent a higher degree of interaction and connectivity with other individuals in the leadership team. A lower ranking is not necessarily a bad result, as some manager and supervisor roles may not require a high degree of interaction with other leaders. These same leaders may also have daily involvement with many line staff. These interactions are normally not reflected in an ONA survey that is limited to the leadership team.

Galloway has found a number of consistencies in applying ONA across numerous healthcare organizations. Typically, a majority of leaders have a relatively small number of critical

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connections within the leadership team. FIGURE 2 is an example of a multi-hospital system with approximately 800 leaders. For this organization, about one-third of leaders have five or fewer key connections. At the other extreme, there are a small number of leaders with 40 or more key connections. Both groups present opportunities for improvement. Leaders with five or fewer connections should consider selectively expanding their connections to improve their centrality in the network. Leaders with a high number of connections could be overloaded and should determine how restructure their role to reduce the number of contacts requiring their direct involvement or decision-making.

Figure 2. Average Number of Ties per Leader



The ONA system also calculates the degree to which individuals or functions are central to the organization's overall network. ONA calculates two measure of centrality for each individual:

- **Betweenness:** a measure of the extent to which individuals lie along short paths between other nodes in the network. This reflects how often an individual connects unconnected people or groups.
- **Structural Hole:** a measure of the potential that a person has to bridge across the gaps in the network. This person can step in to negotiate and control the relationship between two actors divided by the whole.

Higher scores in these two metrics indicate the centrality and degree of influence an individual has in the network.

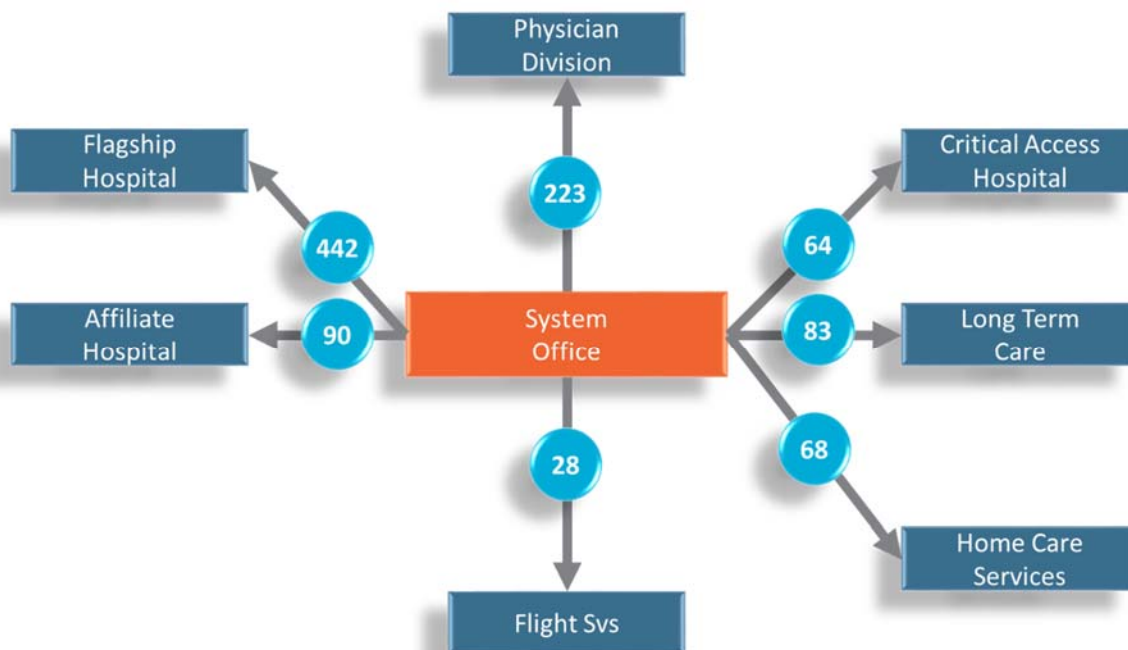
PROBLEM DEFINITION

BOUNDARY SPANNING TIES ENABLE WORKFLOW

ONA is also useful for evaluating the degree of connectivity across various organizational boundaries. In this context, boundaries can represent different functions within an organization, including vertical boundaries (between layers of management) or boundaries for operations that are geographically dispersed. The results can be evaluated at a functional, entity, or system-wide level. The term **boundary spanning** is widely used to describe any situation where an individual crosses the boundaries of a social group.

Boundary spanning ties are critical for coordinating patient care and resources across a multi-entity health system. For example, FIGURE 3 shows the number of outbound connections between leaders in System Services and leaders in the entities they serve. The number of connections can give the organization a sense of information flow between entities and the extent to which each entity relies on corporate services in completing their work.

Figure 3. Outbound Connections from System Office to Other System Entities



Cross-entity ties vary considerably with a leader's role and function. Typically, a senior executive will have a higher number of ties across a system than a department head or manager. Similarly, administrative services, case management, financial services, and information technology will have a greater number of cross-entity ties than other functions.

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FIGURE 4 shows some examples of how the number of cross-entity ties varies with a leader's position. In this example, the hospital CEO has 30 incoming ties that originate from outside the hospital they serve. This is almost double the incoming ties from within their hospital. Others at the Director and Manager levels have fewer ties from outside their primary entity.

Figure 4. Comparison of Boundary Spanning Ties by Role (EXAMPLES)

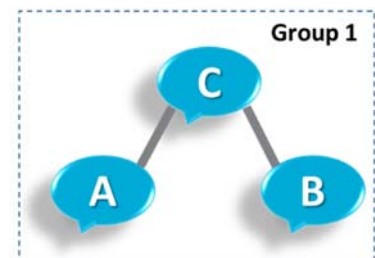
Entity	Function	Role	Incoming Ties Internal	Incoming Ties External
Affiliated Hospital	Administration	CEO	16	30
System Services	IT Services	CIO	32	17
Affiliated Hospital	Diagnostic Services (incl. Lab / Radiology)	Manager	8	1
Physician Practice Division	Patient Care (Physician Offices)	Director	5	1
Affiliated Hospital	Medical Records	Director	6	2
System Services	Performance Improvement	Consultant	3	6

IDENTIFY BROKERS AND THEIR ROLES

ONA results also help to identify key “brokers” in the organization. Brokers possess the capacity to make connections across roles, functions, and departments. Brokers are highly-connected leaders who control information flow in the organization and are instrumental in driving change and innovation.

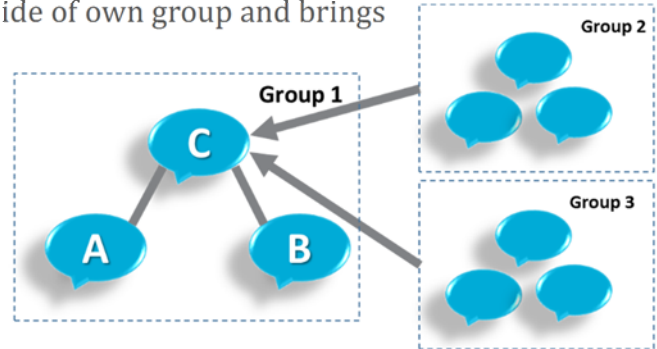
ONA output provides data on an individual's “broker” score, which is a measure of an individual's influence in the leadership network. The number of ties across functions and boundaries determines an individual's “broker” capacity. There are five primary roles that brokers play within the organization, all having to do with the transmission of information.

- **Coordinator** (internal collaborator) - Connects and shares information within one's own group. Trusted and valued by peers in group.

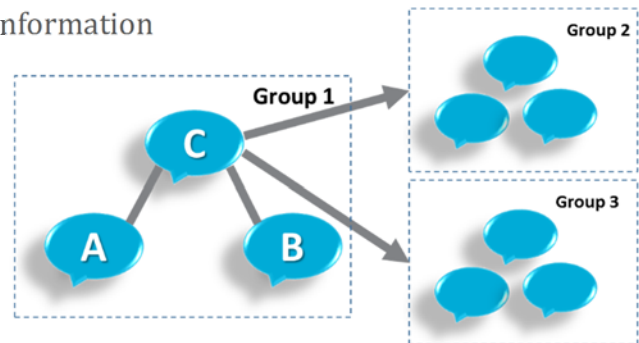


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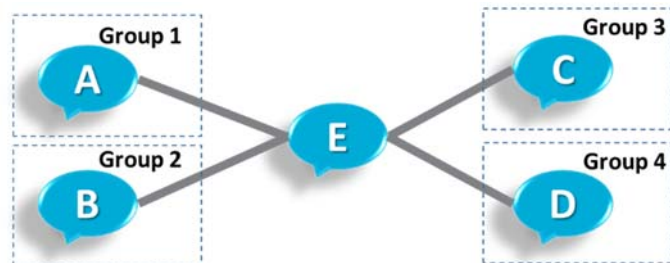
- **Gatekeeper** - Takes information from outside of own group and brings information to the group. Can be key to building momentum OR a stumbling block that slows or biases information exchange.



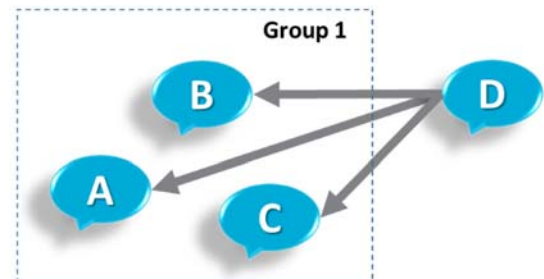
- **Representative** (spokesperson) - Takes information from one's own group and transmits to individuals outside of the group.



- **Liaison** (bridge builder) - Connects individuals from many different groups. A useful change agent role, with likely the highest networking skills and social capital. Often provide vision of options due to more access to diverse information.



- **Consultant** (facilitator) - Connects individuals in the same group who are not in your own group.



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ONA provides survey respondents with a score for each of the broker roles. This information enables an individual to understand his or her unique role in the network and the strengths and weaknesses of those roles. Ranking high in all of these roles is neither common nor necessary. Different roles require different strengths and key connections. When confronted with this information, leaders should determine which broker roles are most supportive of their formal roles and responsibilities.

Galloway Consulting has developed normative benchmarks (percentile rankings) based on ONA results from a cross section of clients. These are general guidelines to provide context for leaders. These guidelines should not be seen as absolutes; each individual's roles and responsibilities will vary from organization to organization. FIGURE 5 provides some examples of expected percentile ranking ranges for some selected health system roles.

Figure 5. Examples of Broker Role Percentile Rankings for Selected Roles

Functional Area	Role	Coordinator	Gatekeeper	Representative	Liaison	Consultant	Total Broker Score
Acute Patient Care (Nursing)	Executive (VP or Above)	75%-100%	75%-100%	75%-100%	75%-100%	75%-100%	75%-100%
Administrative Services	Manager	26% - 50%	26% - 50%	26% - 50%	26% - 50%	0% - 25%	26% - 50%
Case Management / Quality Management	Program / Department / Service Line Director	26% - 50%	26% - 50%	26% - 50%	51%-74%	51%-74%	51%-74%
Diagnostic Services	Program / Department / Service Line Director	26% - 50%	26% - 50%	51%-74%	51%-74%	26% - 50%	51%-74%
Health Information Management (HIM / IT)	Executive (VP or Above)	51%-74%	75%-100%	51%-74%	26% - 50%	75%-100%	51%-74%
Physician Services / Medical Staff Office	Manager	26% - 50%	0% - 25%	26% - 50%	0% - 25%	0% - 25%	0% - 25%
Support & Facility Services	Program / Department / Service Line Director	51%-74%	51%-74%	51%-74%	26% - 50%	26% - 50%	51%-74%
Financial Services & Access	Executive (VP or Above)	75%-100%	75%-100%	75%-100%	51%-74%	75%-100%	75%-100%

BENEFITS OF ONA

Benefits of ONA

ORGANIZATIONAL BENEFITS

ONA provides useful insights for organizations and for individuals. For organizations, ONA survey results enable companies to:

- Measure the frequencies of interaction among individuals in an organization and the nature of these interactions.
- Understand how work gets done both within and outside of the formal organizational structure.
- Identify individuals who are key information brokers and connectors in the organization's social network.
- Improve on-boarding of new leaders who are not yet connected to the network

ONA results can help organizations identify components of the network that can impede innovation and collaboration. Three common examples are:

- Fragmentation - Collaboration breaks down across functional lines, technical capabilities and occupational subcultures in ways that undermine innovation and performance
- Domination - The voices of a few central network members overshadows new, innovative thinking from others
- Insularity - Work groups fail to recognize and leverage relevant external expertise, resulting in higher costs and delays and lower performance.

ONA information is also valuable for supporting large-scale transformation initiatives. Galloway clients have used ONA information to:

- Build better collaboration and coordination across departments and functions and across sites (such as regional health systems)
- Identify individuals with key strengths as:
 - Innovators
 - Energizers
 - Influencers
- Leverage the network to drive communication initiatives
- Accelerate the assimilation and development of new leaders
- Serve as an informational basis for leadership development

BENEFITS OF ONA

FIGURE 6 provides guidelines for assigning leaders with networking strengths to formal roles in a transformation initiative.

Figure 6. Aligning ONA results with transformation leadership roles

Roles in Organization		Coordinator	Gatekeeper	Representative	Liaison	Consultant	Advisor	Mentor	Innovator	Energizer
	Executive Sponsor				★		★	★		
	Team Leader	★	★	★	★		★	★		
	Meeting Facilitator					★		★	★	★
	Team Member	★	★	★	★	★	★		★	
	Analyst					★	★			
	Communicate		★	★						
	Culture Change				★	★		★		★

INDIVIDUAL LEADER BENEFITS

Individuals can also benefit from the personal information provided by the ONA survey. Specifically, ONA results enable individuals to:

- Understand the effectiveness of their position in the network and opportunities to improve their network strength.
- Identify areas of improvement in their broker roles based on what is required for their formal roles and responsibilities.
- Develop action plans for structural, relational and behavioral improvements in their network performance.

FIGURE 7 shows a summary of the personal networks for two Patient Care Managers. Manager A has a total of 10 connections. Nursing Division connections make up 80% of the connections and 50% of connections are at the same (horizontal) manager level.

Figure 7. Comparing the Personal Network of Two Patient Care Managers

Patient Care Manager - A				
Management Level		Nursing Division	Other Division	Percentage of Network
Vice President		1		10%
Director/Service Line Leader			1	10%
Manager		4	1	50%
Supervisor		3		30%
	Total	8	2	
Percent of Network		80%	20%	

BENEFITS OF ONA

Patient Care Manager - B				
Management Level		Nursing Division	Other Division	Percentage of Network
Vice President		1	3	31%
Director/Service Line Leader			2	15%
Manager		3	2	38%
Supervisor		2		15%
	Total	6	7	
Percent of Network		46%	54%	

In contrast, over half of manager B's connections are outside of the Nursing Division and 46 percent of the connections are with leaders above the manager level. From the comparison, manager B appears to have a stronger position in the overall network and is better positioned to connect the Nursing Division with other entities in the system. Finally, manager B has a greater number of vertical ties with leaders higher up in the management hierarchy.

ONA data also provides feedback to individuals on a number of performance attributes as perceived by their peer leaders. These include:

- Energy - How energized are leaders when they have interactions with you?
- Expertise - To what extent do leaders turn to you for technical expertise or business advice?
- Mentoring - To what extent do leaders turn to you for career advice or professional development?
- Innovation - To what extent do leaders view you as a source for innovation and new ideas?
- Accessibility - How accessible are you as judged by others on the leadership team?
- Trust - To what extent do other leaders seek you for confidential advice?

It is important for leaders to understand how they are rated on these initiatives, particularly by those who rate the leader as "critical" to performing their work.

PERSONAL NETWORK ANALYSIS (PNA)

After reviewing ONA survey results, many leaders seek strategies for improving the effectiveness of their network. Galloway Consulting provides a tool that is complementary to the ONA work and represents the next step in how individuals can further assess and

BENEFITS OF ONA

build their personal network. The Personal Network Analysis (PNA) is a highly-effective tool for helping individuals diagnose and strengthen their network effectiveness.

The on-line PNA survey assesses three specific dimensions of the personal network: structural, relational, and behavioral. Leaders who foster these three dimensions are more likely to succeed in their roles than those who allow their networks to form serendipitously.

Structurally, high performers do not necessarily have larger networks in terms of numbers but they do display a greater tendency to guard against insularity and forge ties that bridge network barriers. Relationally, high performers tend to invest energy in boundary-spanning relationships that extend their abilities and influence in the organization. Finally, in a self-assessment of behavioral activity, high performers engage in actions that are typical of touted emotional intelligence and those with the ability to build high-quality relationships.

As part of the PNA survey, those persons identified as important to their network may receive an email requesting a confidential assessment of the leader and their networking capabilities. This information enables a comparison between the self-assessment and those that are most connected to the participant. Frequently, there are gaps identified in terms of self-perception and the perception of others which can provide invaluable opportunities for growth and development

PNA produces a customized, self-study guide that enables a leader to create action plans for improving the effectiveness of their network. This process can be integrated into a leader's career assessment and planning, or into an organizational leadership development program.

SUMMARY- HIGH PERFORMING NETWORKS

Summary- High Performing Networks

ONA can be a powerful tool for helping organizations understand the dynamics of their leadership network and for building better network capacity and functionality.

Specifically, organizations can use ONA insights to:

- Foster organization leadership teams that are adaptable to external change
- Reduce silos and other barriers that causes insularity and impede innovation
- Reduce and minimize points of overload in the network
- Build connectivity to individuals and functions that are on the network periphery

The growing challenges of healthcare management will require leaders who have the skills to work effectively and efficiently across highly-complex organizations. The more managers understand their organization's leadership network, the better they leverage this information to get things done. By understanding the dynamics of their own personal network, leaders can achieve growth and satisfaction in their own roles and career.

CALL TO ACTION

Call to Action

More than ever, healthcare leaders and their organizations are struggling to transform their operations to survive and thrive in the new healthcare.

“Healthcare leaders know about change. The need to adapt – as individuals, as organizations and as an industry – is obvious. What is less apparent are the leadership skills that are most important in today’s uncertain and complex environment.”¹

Sustainability of any transformational change **begins** with an effective leadership team that can work effectively together. Tomorrow’s healthcare leaders certainly must meet business objectives as they have in the past. However, the nature of the new challenges under the new healthcare will require a breed of “do whatever it takes” frontrunners that adapt quickly, learn from their mistakes, and remain in professional control while staying committed to organizational excellence.

These leaders must have insights into the leadership network to answer the questions:

How well do you know your leader skills and those of your organization?

Who are the innovators and key influencers within your leadership team?

Who are the energizers and mentors who are vital to organizational transformation?

Who are the “bridge-builders” who can link others across organizational silos?

¹ Center for Creative Leadership, revised 2011, Addressing the Leadership Gap in Healthcare

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Gary Auton, MBA has over 25 years of experience in providing strategic and operational advisory services to hospitals, health plans, physician practices, employer health coalitions, and state and federal agencies.

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