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Thinking Through Issues in Inter-Organizational Collaboration in Health Care

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Abstract

Integrated health services networks are an emerging best practice for health service delivery. But, just as putting health professionals together to work in teams does not ineffably lead to effective teamwork, so just putting organizations together to work does not guarantee effective collaboration. Research demonstrates that integration has both benefits and liabilities. The purpose of the present article is to present conceptual tools from five theoretical domains to help health professionals anticipate, identify and think through issues in inter-team and interorganizational collaboration within integrated health networks. The tools come from theories of team culture and team development, boundary function theory, a theory of expectation dynamics, general systems theory and social network theory. Examples, drawn from the the literature and from the authors work building practice networks, teaching teamwork and collaboration, and consulting on team and inter-team issues are used to illustrate the applications of these tools.

Integrated health services networks are considered a best practice for health service delivery (Gittell et al, 2004). Networks are necessary because health issues are typically bigger than any one organization can manage, competitive methods have limited effects, the need for service typically crosses organizational boundaries and resources are constrained. These are the five conditions for which inter-organizational collaboration is essential (Gray, 1985). Within integrated health services networks, the quality of collaboration is an essential element of the networks capital (Oh et al, 2004) and may be a stronger predictor of outcomes than the internal processes of the networks individual teams and organizations (Ancona, 1990; Pfeffer, 1986).

Despite the timely emergence of integrated health systems, research on these forms of collaboration is scant (Dunlop & Holoski, 2004; Foster-Fishman et al 2001). While research in health administration suggests that time and resources are essential to effective collaboration (Zahner, 2002, 2005; Provan et al, 2003), for the most part, research on inter-organizational collaboration arises from outside health care. In human service system research, for example, collaborative alliances reduce service fragmentation (Alter, 1990; Lawless & Moore, 1989; Rosenheck, 1988). In business collaboration is considered a social and economic necessity (Trist, 1983) fundamental to gaining access to new technologies, complementary skills, economies of scale and innovation (Ring & Van de Ven, 1994; Gray, 1989). In industrial process research collaboration has

proven essential for bringing complex processes to completion on time and on budget (Hoegl, et al, 2004). In addition, the quality of public-private collaboration is considered essential in the development of effective public policy (Gray, 1985; Roberts & Bradley, 1991) and environmental politics (Bingham, 1986; Logsdon, 1991).

Along with the benefits of collaboration, liabilities are also evident.

Interdependence demands increased resource investment (Brown, 1983). It may prompt "social loafing" (McAllister, 1995) and decrease customer service and satisfaction (Ancona, 1990). Interdependence may heighten adversarial relationships (Gray, 1989), and trivial differences between essentially non-competitive groups and have the capacity to prompt in-group bias and inter-team rivalry (Brewer, 1979; Seta & Seta, 1992). Intra-team cohesion and performance can decline in response to negative inter-team differentiation (Ellemers et al 1990) and while inter-team collaboration is seen as a correction to human service fragmentation, intensely interacting systems may cause fragmentation (Rosenheck, 1988). Collaboration is slow to develop and quick to decline (Burt, 2002).

Just as putting individuals together to work in teams does not guarantee effective teamwork, integrating services within networks does not necessarily lead to effective collaboration. Choi (2002) argues that in complex interdependent

networks “traditional coordination devices, such as rules or organizational structures appear ineffective . . . [because] these settings are too complex, uncertain and interdependent to be centrally or hierarchically managed”. Health professionals working within integrated health networks need new conceptual tools to guide their inter-team and inter-organizational collaborations and to manage this vital source of network capital (Norris, et al, 2005; Ryan et al, 1996).

The purpose of the present article is to present conceptual tools from five theoretical domains to help health professionals anticipate, identify and think through issues in inter-team and interorganizational collaboration within integrated health networks. The tools come from theories of team culture and team development, boundary function theory, a theory of expectation dynamics, general systems theory and social network theory. Examples, drawn from the literature and from the authors work building practice networks, teaching teamwork and collaboration, and consulting on team and inter-team issues are used to illustrate the applications of the tools.

Interteamwork and the Internal Culture of Teams

When teams come together to work, they each bring their own distinct culture. From an intra-team perspective, a distinct team culture reflects team

cohesiveness and commitment. From an inter-team perspective, however, group distinctiveness is often a cause of two opposing processes (Choi, 2002) - in-group bias and inter-group rivalry (see, eg., Brown, 1983; Sherif & Sherif, 1953). What tools can health professionals use to understand and manage these opposing processes?

Team Development Theory

Thalhofer (1993) argues that the quality of collaboration is determined by the levels of maturity of participating teams. In the team literature, level of maturity is most often conceptualized using stage models of team development. Bennis & Sheppard (1956) provide a five-stage model of group development in which groups cycle through five stages – Forming, Norming, Storming, Performing and Re-forming. Each stage in this model is associated with distinctive leadership and member behaviors, emotional climate, informal roles and rituals, and styles of humor (Tuckman & Jenson, 1977, Farrell, Heinemann & Schmitt, 1986, Drinka, 1991). While progression through these stages is by no means universal nor necessarily sequential, reflection on the stages of development of collaborating teams provide clues to potential sources of differentiation that might compromise collaboration.

Consider the following scenarios. In the first scenario, a team in a 'storming' stage is collaborating with a new 'forming' team. The anger and barbed humor that the storming team directs at its leader, alienates the members of the forming team who expect team leaders to provide support and direction. In a second scenario, a team in a "norming" stage humorously deprecates itself using in-jokes that signify team membership but leave participants from other teams feeling excluded. In a third scenario, members of newly forming team whose humor is more polite misunderstand the self-protective black humor that is often characteristic of high performance teams. Unrecognized, these sources of differentiation are likely to prompt in-group bias and inter-team rivalry that may compromise rather than enhance effective collaboration.

Each Team Constructs a Distinct Model of Reality

Teams develop distinct cognitive models of their working reality. These models serve to select, filter, and organize information about the world in which each team functions (Hinsz, 1995; Porac & Thomas, 1990). Though seldom fully conscious to team members (Argyris, 1994), the socially shared thinking that makes up a team's model of reality is another source of differentiation that can compromise collaboration (Fiske & Taylor, 1991). As Qualls & Czirr (1988) remind us, "with no understanding of the models within which others work [we] are likely to make inaccurate attributions about [their] motives" (p. 376). The

elements of these models include the logic of assessment, the breadth of interventions, the perception of place, and the use of language.

Qualls & Czirr (1988) describe the "ruling out" logic of assessment of an emergency care team who are searching for a definitive diagnosis. Compare this with the "ruling in" logic of community health center team who typically look beyond the presenting problem towards the social determinants of health. In between these extremes is the logic of rehabilitation or geriatric teams who seek a mix of diagnostic accuracy and functional breadth in their assessment.

The logic of assessment is often mirrored in the breadth of focus for a teams interventions. A common expression of this source of differentiation is found in the relationships between specialist and generalist practitioners. When blended with embedded attributions of status, this is a frequent cause of conflict even between teams from a single profession (Oaker & Brown, 1986). Complicating this source of inter-team differentiation is the fact that the generalist-specialist attribution is relative. A team's self perception and that of its users may be quite different and variable, resulting in a team being perceived as generalist by some and specialist by others. Like differences in the logic of assessment, misattributions arising from differences in the breadth of focus of team activity can be an unrecognized source of inter-team strain.

The sense of place created by a teams work is an additional source of differentiation. Community-based professionals work in the world of the client (Heckman & Cott, 2005) and frequently feel isolated from other professionals (Cott et al. 2008). In contrast, hospital staff live in a world surrounded by other professionals. Someone is always available to help and the next shift is in the wings to share responsibility. It is difficult for community based teams to understand the stress of a trauma team transferring a patient in a halo vest when the screws pull loose and a transfer board is not to be found. Similarly, hospital teams cannot understand the stress of working alone in the community where an opening elevator door and unlit hallways can bring danger.

Within each team, department or organization unique experiences give rise to distinctive use of language (McLuhan, 1964). In collaboration, teams may have different words for the same thing or attach different meanings to the same word and these differences are a source of misunderstanding (Perdue et al, 1990).

The person receiving care might be a "patient", a "client", a "customer", "Mr. Jones", or simply "Joe". The terms 'risk screening' or 'diagnostic workup' may be considered an art form to one team and an expensive obfuscation to another.

The title "doctor" may signify respect or domination. The terms "allied professional", "paraprofessional" or "layman" can be comfortable designations or patronising diminutions of status (Stewart, 1990). "Preventive care" might be

golden grail or a cynical cynical devolution of responsibility. "Hospitals" can symbolize caring and peace or disease and failure.

We have used two concepts – team development theory and the cognitive models of teams – to identify sources of differentiation between collaborating teams that are likely to prompt in-group bias and inter-team rivalry. Simply increasing the frequency of contact between collaborating groups is one solution to dysfunctional inter-group relations (Allport, 1954; Miller & Brewer, 1984) but research on this contact theory suggests that while necessary, it is an insufficient determinant of inter-group cooperation (Jackson, 1993). Perhaps increasing awareness of the sources of differentiation can also help us to avoid threats to collaboration.

Boundary Spanning Functions on Teams

A second set of tools for thinking about inter-teamwork is found in the critical functions approach to understanding small group behavior. Critical functions are sets of behaviors essential to effective group performance. Since first described by Benne & Sheats (1948), the focus of the critical functions approach has been two sets of intra-team functions: task functions and maintenance functions. Task

functions such as giving information and clarifying direction allow a group to achieve its objective goals, while maintenance functions, such as relieving tension and harmonizing sustain and regulate the affective components of group life. Ancona & Caldwell (1988) add a third critical function – boundary crossing functions – that serve the need for inter-team and interorganizational collaboration.

Ancona & Caldwell (1992) describe a 4-factor solution to their analysis of boundary crossing behaviors in inter-organizational contexts.. These include bringing information and/or resources from the external world , exporting information and resources to the external world, coordinating and negotiating agreements and buffering teams from external demands - so-called 'scout', 'ambassador', 'task coordination' and 'guardian' functions respectively.

The importance of social and hierarchical boundary crossing functions has been recently reviewed (Oh et al, 2005) and researchers have focused their attention on the complexity of boundary crossing behaviors. With few exceptions (eg Gittel & Weiss, 2004) this perspective is not evident in health care systems research and practice. Where teams and organizations often work in silos without an awareness of these critical functions.

Expectation Dynamics

Networks are information processing structures that take on organismic characteristics such as 'network memory' (Soda et al 2004). Outcome expectations arising from inter-team contact are a significant element of network memory (Tjosvold, 1988). They contribute, for example, to the determination of a networks need for formal mechanisms for equity sharing and collaboration or less formal controls based on trust (Gulati, 1995). While network efficiency may be enhanced when expectation dynamics favor less formal controls (Tenbrunsel & Messick, 1999; Malhotra & Murnighan, 2002), in the absence of trust, informal controls can compromise collaboration. Like the elements of team culture and awareness of boundary spanning functions, expectations dynamics emerge outside of awareness (Kotter, 1973). Collaboration may be enhanced if teams are more routinely aware each others implicit outcome expectations.

Tjosvold (1988) provides a simple structure to guide our thinking about expectation dynamics. He describes three key expectations which emerge from collaboration experiences: 1) the expectation of a "win/win" outcome, 2) the expectation that scarce resources will be distributed equally, and 3) the expectation that the burden of work will be shared. Consider each of these expectation dynamics in the context of an integrated health care network.

"Win-win" Expectations

Sustained collaboration between teams is predicated upon all participants expecting that they will gain from their inter-team work (see e.g. Brock & Doucette, 2004). Yet in many instances, teams focus on their own outcomes and one team's gain is seen as, and may in fact be, another team's loss.

When an acute care team downplays the challenging behavior of patient with Alzheimer's disease in order to gain an admission to long-term or community-based care, the acute care team might feel that it has won a discharge. From a network perspective both teams have lost because the expectations arising from the exchange will compromise the development of future collaboration.

The Expectation of Equitable Resource Allocation

While inter-organizational contact typically brings competition for scarce resources (Trist, 1983) effective collaboration requires an expectation that resources will be equitable allocated. From this perspective the longstanding inequities between hospital and community-based service funding can predictably compromise collaboration across integrated health networks.

Consider the following scenario. A hospital and a community care team are jointly planning processes to ensure a seamless continuum of hospital to

community care following orthopedic surgery. Using a common curriculum each organization is training health care assistants. The collaboration progresses until the community team discovers that the hospital budget for the training is significantly larger than their own. Joint operational planning is compromised until an agreement to share training resources is negotiated. Collaboration is enhanced when teams expect equitable distribution of resources.

Expectations on the Burden of Work

Effective collaboration requires that the burden of work is shared. But shifting rather than sharing the burden of work is a ubiquitous motif prompting anger and competition rather than collaboration (Senge, 1990). Health care examples are easy to find. In multiprofessional practice, when a team member feels that responding to call bells is not their responsibility, the burden of work is shifted rather than shared. When a community support team brings a suicidal patient to an emergency department late on a Friday afternoon, or when a family "team" treats a day hospital team as a source of respite rather than an opportunity to develop improved caregiving, the burden of work is shifted rather than shared. Through these experiences expectations develop which compromise future collaboration.

We have considered three expectations: win-win solutions, resource equity, and shared burden of work. Three significant elements in the development of collaboration within integrated health networks.

Systems Theories

The tools we have considered so far focus our attention on the internal characteristics of collaborating teams. But when teams collaborate a system emerges and systems have rules of their own (Buckley, 1968). We will consider three elements from systems theories that may help health professionals think about issues in collaboration: feedback loops, the relationship between redundancy and diversity, and the effect of information exchange between system components differing in their level of internal organization.

Feedback Loops

Systems are self-recursive, their outputs feedback as inputs to the system. From a systems perspective, the feedback may be either positive or negative. These two feedback processes, widely taken to refer to reward or punishment, originated in systems theory (Bertalanffy, 1950) where their meaning is different. In systems theory, feedback processes have more pragmatic definitions that

refer to system stability or homeostasis. From this pragmatic perspective, positive feedback upsets stability, while negative feedback preserves it. Mapping feedback loops using these more pragmatic definitions can reveal why attempts to implement change sometimes have unintended consequences (Maruyama, 2003).

Busto-Gonzalez & Garcia (1999) demonstrate the emergence of unintended consequences in their studies of outpatient surgery wait-list management. Initially a positive feedback loop was seen in which scarce resources reduced surgery time and increased wait-lists. In turn, people used the emergency department, to access surgery further depleting available resources and causing longer wait lists. A policy was introduced in which long wait lists triggered access to fee enhanced, extended hours. An unintended consequence of the policy was an expectation of higher salary only achievable if wait-lists remained high. Lowered productivity during regular clinics preserved the wait-lists. The unintended consequence took the form of a negative feedback loop preserving system homeostasis.

Redundancy and Diversity

The second principle of the general systems theory that we consider asserts that systems survive to the extent that they reduce unnecessary redundancy while preserving requisite diversity (Ashby, 1956). Service templates and best practice guidelines are methods for reducing redundancies and achieving system

efficiencies. But these approaches to reducing redundancy founder on the reality of contextual diversity. Crabtree et al (2001) provide compelling evidence of practice diversity across family practices whose emergent daily patterns of work are likened to a form of improvisational “practice jazz” (Miller et al, 2001). So ubiquitous is the need to adapt templates and guidelines to meet the requisite diversity required by context that an evidence base has emerged to guide it (Fervers et al 2006).

Information Exchange and Subsystem Organization

The third general systems theory rule that might help us think through issues in inter-team and inter-organizational collaboration states that when information is exchanged across the boundaries of subsystems that differ in their level of internal organization, the effect of the exchange is an increase in the level of organization of the more highly organized subsystem, often at the expense of the less organized subsystem (Margalef, 1975).

Consideration of this principle sometimes leads to counter intuitive solutions to inter-organizational dilemmas. When systems issues arise in an integrated health system, for example, the traditional solution is to bring representatives of the subsystems together for discussion; but there may be more important first steps. Consider, for example, the implementation of an e-health record across a

network of hospital and community providers. Computers were in place in the hospitals for many years while the community agencies had minimal computerization. Even though the initiative would redress this imbalance, the hospital staff always seemed to learn more quickly, they already had templates for managing particular issues, and their security infrastructure was elaborate. In comparison the community teams felt slow and awkward, pressured to adopt available (hospital) templates and existing (hospital) security systems. Hospital representatives perceived stubbornness and lack of skill on the part of their community partners. Collaboration was compromised and while both teams identified a need to improve communications, the counter-intuitive solution suggested by the systems principle was to increase the capacity of the community teams before bringing the two groups together to collaborate.

Similarly, a clinical program had become fragmented along multi-professional fault lines. It was a case of teams within teams. The nursing side had been newly staffed as a result of a hospital restructuring to work with an in-place, allied health team. The nurses felt that when they spoke up during team meetings they ended up being told what to do. As a result, nursing staff remained relatively quiet. We applied the systems rule. Rather than bringing the two groups together to discuss the situation, facilitation was focused on increasing the level of organization of the nursing team in this context. Several months later an

examination of dialogue during clinical rounds revealed there were no longer differences in the rates of participation of the program's staff.

Managing collaboration issues using these principles of systems theory

Mapping feedback loops, finding ways to preserve diversity while reducing unnecessary redundancy and considering the internal organization of collaborating teams are three ideas from General Systems Theory that can help us think through otherwise confusing interorganizational issues and arrive at solutions that appear counter-intuitive.

Social Network Theories

Social network theories provide the last set of conceptual tools we will consider. Using the methods of social network analysis (see Wasserman et al, 1994), network theorists examine the 'ties' or relationships between interacting elements rather than the elements themselves.

Granovetter (1973, 1983) demonstrated the strength of weak ties between members of a network. Because strong ties tend to preserve the status quo, systems comprising strong ties are more like to resist innovation. When networks

resist innovation, progress might be achieved by building on the strength of weak ties. The contributions of external consultants, for example, may be an instance of the strength of weak ties. On the other hand, the strength of strong ties may be most important in contexts of risk and interdependence when high levels of trust are necessary across a network (Uzzi, 1996).

Burt (1992) outlines a social network theory which examines the value of ties that span 'structural holes' within a network. Health care teams, even those working 'next door' to one another seldom interact with one another. When teams are distributed geographically as they are in integrated health systems the risk of structural holes increases and the value of ties that span them is increased. Burt describes the often informal nature of the ties that bridge structural holes such as managers who golf together. But formal ties also exist. In health care discharge planners and community case managers might be considered to have formal responsibilities to bridge structural holes.

Lin (1986) builds on the theories of relational ties and examines the way in which connectedness across a network contributes to resource mobilization during episodes of turbulence and strain. Wellman (2001) develops the idea of networked individualism - the ways in which networks form around people or ideas and the impact of these individualized networks within more general systems. Informal opinion leaders within health systems (Hiss et al. 1978; Ryan,

2002), the people to whom others turn most frequently for advice are examples of networked individualism. The networked individualism concept also suggests that we consider the network of service providers that cohere around an individual patient and find ways to enhance their collaboration which may be unique, ad hoc, and boundary spanning.

Together, social network theories provide conceptual tools that can be used in a prescriptive manner to enhance the quality of collaboration (McGrath & Krackhardt, 2003). And, social network analysis (Wasserman et al 1994) the research tool of social network theorists provides a tool with which to examine collaboration that, with rare exceptions (see eg. Foster-Fishman et al, 2001; Winick, 1961; Coleman et al, 1966; Miller et al., 2001), have been overlooked by researchers in health care.

Summary

Just as putting people together to work does not lead inexorably to effective teamwork, so putting teams and organizations together to form networks does not necessarily lead to effective collaboration. In this era of integrated, patient-focused health care, three sets of competencies are required: clinical competencies, interprofessional competencies and interorganizational

competencies. Our academies are experts in training clinical competencies and are increasingly effective in preparing new health professionals for interprofessional practice. But, the inter-organizational collaboration skill set remains on the horizon. The purpose of this article is to highlight conceptual tools from five theoretical domains that practicing health professionals might use to think through these complex collaboration issues.

Each theory is necessarily incomplete. Each theory provides a map and we know that the map is not the territory. Reality is always more complex than the tools we have to explain it. The theories overlap and seldom is one more effective than another, except perhaps in clarifying our thinking about specific situations. Still, as Francis Bacon is reported to have said “truth arises more readily from error than confusion” and theory helps us see error in our thinking. Theories of team development and culture, boundary function theory, a theory of expectation dynamics, general systems theory, and social network theories provide useful tools to help us think our way out of the thicket of potential confusion lying in wait within integrated health networks.

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Table 1: A summary of conceptual tools

The concepts	Key ideas
<p>Team culture and team development theory.</p> <p>The culture of teams and team models of reality</p>	<p>Forming, storming, norming, performing, reforming</p> <p>Logic of assessment, breadth of intervention, perception of place, language</p>
<p>Boundary spanning functions</p>	<p>Ambassador, scout, task coordinator and guardian</p>
<p>Expectation dynamics</p>	<p>Equitable distribution of resources, burden of work shared, win/win outcomes</p>
<p>Systems theory, feed-back loops & unintended consequences</p> <p>A determinant of systems survival</p> <p>The internal organization of subsystems</p>	<p>Positive feedback and deviation amplification Negative feedback and homeostasis.</p> <p>Reduce unnecessary redundancy and preserve requisite diversity.</p> <p>Information exchanged between subsystems with different levels of internal organization often increases the level of organization of the most highly organized subsystem often at the expense of the least.</p>
<p>Social network theories</p>	<p>Innovation diffusion and the strength of weak ties. The strength of strong ties when inter-dependence and risk is high. Structural holes and social capital. Relational ties and resource mobilization. Individualized networks.</p>