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Defining Service Coordination: A Social Work Perspective

Alicia C. Bunger, MSW
NIMH Pre-doctoral Trainee, The Brown School of Social Work, Washington University, Campus Box 1196, 1 Brookings Drive, St Louis, MO 63130

Alicia C. Bunger: aliciabunger@hotmail.com

Abstract

To address fragmentation, social workers are encouraged to "coordinate." This pilot study explores the meaning of, and factors that facilitate or prevent "coordination" and is intended as a first step toward future conceptual refinement, theory development, and system interventions. Using data from treatment guidelines archived by the National Guideline Clearinghouse (n=9) and semi-structured interviews with social workers (n=4), themes related to the definition, indicators, and perceptions of coordination were explored using a grounded theory approach. Data suggest the need for coordination is driven by complex client needs, but the quality of providers' personal relationships influence coordination. Future research might examine the impact of standardization of roles, referral procedures, and treatment philosophies.

Keywords

Service coordination; social work; service delivery; fragmentation

Fragmentation presents one of the biggest service delivery challenges for a range of human service delivery systems including adult and children's behavioral health (U.S. Department of Health and Human Services, 2003a), early childhood care and education (U.S. Department of Health and Human Services, 2003b), general and specialty health like HIV/AIDS care and treatment (IOM, 2005), to name a few. As different functions of human services become fragmented or siloed into distinct service categories, clients fall through the cracks of the system because the connections between services are either absent or problematic, or needed services are missing all together (Gillespie & Murty, 1994; Tausig, 1987).

As a result, human service agencies are encouraged to 'coordinate' their services with one another under the assumption that collaborative activity can facilitate access to services, reduce unnecessary duplication of effort, and produce a more effective and efficient social service system. By extension, it is believed that more effective systems will ultimately lead to improvements in client level outcomes, although positive effects of coordinated service delivery have yet to be captured consistently by empirical research despite considerable investments in large-scale demonstration projects designed to evaluate systems-level reforms (Bickman, Lambert, Andrade, & Penaloza, 2000; Morrissey et al., 1994; Morrissey et al., 2002).

In our roles as case managers, counselors, and other direct service providers, social workers are uniquely positioned to coordinate services by creating pathways to needed services and working across disciplines to integrate care. However, "service coordination" is rarely defined explicitly which can create confusion for social workers in the field who are responsible for coordinating services and ambiguity in how coordination is defined and measured in research examining the impact of service coordination and best practices.

Despite conceptual ambiguity and disappointing empirical findings, policy makers, funders, and public administrators have forged ahead with efforts to facilitate coordination among service providers including system transformation initiatives and mandates. Therefore, an understanding of the conceptualization and measurement of service coordination is critical for studying the impact of strategies for promoting coordination as well as the effect of coordination on service delivery and client outcomes.

This article describes a small preliminary qualitative study on coordination in human services. The purpose is to explore the meaning of "coordination" and inform future conceptual refinement, theory development, and system interventions to improve service delivery. However the existing coordination theory and definitions from the organizational literature is presented first followed by a discussion of how coordination is defined and discussed in the human services literature.

Existing Coordination Theory and Definitions in the Organizational Literature

Coordination has been studied by a variety of academic disciplines including sociology, public administration, economics, computer science, and organizational behavior (Crowston & Malone, 1993). Historically, coordination has been discussed in the organizational behavior literature as a joint process of taking action whereby organizations adjust in response to one another to accomplish shared tasks or goals. While definitions of service coordination have varied across disciplines, the construct is often defined as a process of managing interdependencies; where agencies engage in a process of exchanging needed resources, and adjust in response to one another to accomplish shared tasks or goals (Crowston & Malone, 1993; Whetten, 1981). At the heart of coordination is a relationship between organizations, and theories of inter-organizational relationships, specifically resource dependence and transaction cost economics have provided the underlying framework for studying coordination.

Resource Dependence—Resource dependence is the dominant theoretical framework in the inter-organizational relationship and coordination literature, and examines relationships based on resource exchanges between agencies (Alexander, 1995; Alter & Hage, 1993; Levine & White, 1961). According to this framework, agencies depend on the external environment, including other organizations, for the resources needed to meet their objectives. These resources may include funding, facilities, personnel, services, information, and client referrals (Reid & Zald, 1965). At an individual case-level, a worker may not have the expertise to meet all of the client's service needs, or a all the relevant information about a client and the service that s/he is receiving. When one or more of these resources is lacking, organizations are likely to partner with other agencies to meet these needs, and gain control over resource flows in the external environment (Hall, Clark, Giordano, Johnson, & Van Roekel, 1977; Van de Ven & Walker, 1984). As providers exchange needed resources (such as information, funding, or client referrals), they become increasingly interdependent over time which requires them to manage their linkages through coordination mechanisms (Cho & Gillespie, 2006).

Types of Interdependence—Thompson (1967) outlined three types of interdependencies: pooled, sequential, and reciprocal. Each type of interdependency is coordinated differently. Pooled interdependencies develop in situations where each service provider works independently, but the cumulative sum of their work contributes to the outcome. A worker at the welfare department may assist a client in applying for a Section 8 housing voucher at the same time a case manager from a local housing agency is assisting the client locate housing. Both efforts are necessary for the client to find stable housing. This type of interdependency is managed through standardization activities that identify and

define the scope of responsibility, rules, and procedures for each provider. Pooled interdependency requires the least intense interactions because organizations continue to function independently so long as their tasks have been adequately defined (Nylen, 2007).

When the work of one provider is dependent upon the prior completion of another provider's task, or resource exchange, a sequential interdependency develops (Thompson, 1967). For example, sequential interdependencies occur when separate providers are responsible for screening and treatment: an HIV medical clinic is dependent upon agencies that provide HIV counseling and testing services first, before treatment. In addition to standardization, planning and sequencing help manage sequential interdependencies. Organizations that work together by sequencing their services or activities have interactions that are slightly more intense than those that simply pool their resources because they must time their activities (Nylen, 2007).

Finally, reciprocal interdependencies result when the final outcome of collaborative work depends on providers to adjust services in response to the resources received or given (Thompson, 1967). In a case conference with a substance use treatment provider and mental health clinician, both service providers exchange information about a client with a co-occurring disorder and coordinate care by mutually adjusting the mental health and substance use treatment plans. In addition to mutual adjustment, reciprocal interdependencies may need to be managed through standardization and planning coordination mechanisms as well, and therefore is the most difficult interdependency to manage, requiring intense interactions.

Governing Interdependence—The specific rules, procedures and conditions that guide and control the relationship between organizations (Ring & Van de Ven, 1994) are the governance structure (Thomson & Perry, 2006) and are the focus of transaction cost economics (TCE) perspectives in the inter-organizational literature (Williamson, 1979; Williamson, 1981). TCE explains that organizations work together to maximize efficiency and the governance structure is a key mechanism for helping organizations align themselves so that resources can be smoothly transferred from one organization to the other thus reducing the costs of coordination. Improper alignment can lead to gaps, friction, and delays which are inefficient. For example, client referrals exchanged between organizations can be lost, information exchanges can be delayed, and conflict and confusion can arise between staff who are co-located at another agency. These inefficiencies are considered transaction costs (Williamson, 1979; 1981).

To reduce transaction costs, organizations negotiate the goals of the relationship, resources to be exchanged or obtained (money, clients, space), procedures for interactions, and accountability mechanisms (Mitchell & Shortell, 2000). The appropriate governance structure must reflect a balance between the need for organizations to adapt quickly to environmental uncertainty and the need to develop highly specific infrastructures to jointly produce a service through coordination of tasks, which requires safeguards to protect organizations from opportunism (Jones, Hesterly, & Borgatti, 1997; Williamson, 1981). These governance details can be highly formal and codified in legal contracts and or extremely informal, and based social norms. While formal contracts offer more protection, more informal relationships allows more flexibility and mutual adjustment which characterizes the type of coordination often called for in human services (Jones, Hesterly, & Borgatti, 1997).

Coordination in the Human Services Literature

The organizational literature describes how multiple organizations work across traditional organizational boundaries to access needed resources and managed their increasing

interdependence via coordination activities, the rules and procedures for which (or the govnernance) are negotiated by the partnering organizations. Descriptions of coordination activities in human services suggests that coordination appears differently depending on whether the system or community, organization or program, or individual client services is the targeted level for coordination activities (Bolland & Wilson, 1994; Mulford, Rogers, & Whetten, 1982). Of particular interest to social workers in direct practice, coordination at the case-level often involves an exchange of referrals and information among providers and other actors in the network on behalf of the same client (Reid & Zald, 1965).

Two distinct types of coordination at the case or individual client-level have been referenced in the literature: service and care coordination. In general, service coordination takes place among multiple agencies or organizations to achieve a common goal (Martinson, 1999). Service coordination responsibilities typically include assisting clients access needed and entitled services by identifying service needs and potential providers, serving as the bridge between multiple service organizations, advocating on behalf of clients, and evaluating the services provided (Bruder et al., 2005).

Care coordination is used frequently in health services and defined by the Agency for Healthcare Research and Quality (AHRQ) as, "… the deliberate organization of patient care activities between two or more participants (including the patient) involved in a patient's care to facilitate the appropriate delivery of health care services. Organizing care involves the marshalling of personnel and other resources needed to carry out all required patient care activities, and is often managed by the exchange of information among participants responsible for different aspects of care" (McDonald et al., 2007). Thus service coordination is a process of organizing services, and care coordination is a specialized type of service coordination more narrowly focused on delivering health care and treatment.

Toward a Definition and Theory of Coordination in Human Services

Despite organizational theories and the discussion in the literature, the definition of service coordination in human services is still ambiguous with little clarity and consistency in identifying and characterizing service coordination, contributing to the potential for inconsistent operationalization. Therefore, the purpose of this article is to inform theory development via two aims: the first aim is to explore the meaning of coordination from the perspectives of the organizations that encourage or recommend service coordination in treatment or practice protocols and social workers in the field. The second aim is to identify and explore factors that facilitate or prevent coordination and build a preliminary working theory.

As a starting point, a small pilot study was conducted using qualitative research methods anchored in a grounded theory approach which uses inductive reasoning to build theory. The purpose was to uncover meaning by allowing concepts and theories to emerge from the data and then compare the results with existing definitions, theories, and practice standards, rather than a pure deductive approach that tests pre-determined hypotheses (Bernard & Ryan, 2000; Strauss & Corbin, 1998). Theory is built from the data collected, and as each case is examined it is compared to the working theory which is constantly refined to fit the observations. Therefore, new meanings, concepts and relationships that might not be expected based on current theory or previous research can be uncovered.

In this pilot, first, perceptions, and mental models of coordination were explored from the perspectives of social workers in the field. Second, information and examples of service coordination described by professional organizations that set standards and protocols for practice were explored in an analysis of publicly available practice guidelines. The two data

sources reflect perceptions of the ideal and real coordination experiences in the field and were intended to be complementary.

Method

This article draws on two data sources. First, interviews with social workers were conducted to gather information regarding participants' perceptions of the main conceptual definitions, domains and factors related to coordination to help develop a preliminary definition and theory grounded in the realities of working in the field. Second, treatment guidelines were examined to understand how "coordination" is defined, described and explained to human service professionals. The interview protocols were reviewed by the IRB.

Sample

Four social workers with experience working in human services were asked to participate in an interview. To ensure that the definition and theory of service coordination reflected the realities of the field, it was important to recruit participants who felt comfortable talking openly about their work experiences All participants were known to and had a previously established rapport with the PI. Participants were approached by the author in person and through e-mail to participate in an interview. The purpose and voluntary nature of the project was explained and participants gave verbal consent.

Two participants were male, and two were female. All four had MSW degrees and practice experience. Although the sample was small, the participants were purposefully selected to ensure that the themes that emerged from the data were not overly biased by system type or region, and could serve as a starting point for understanding coordination experiences in general. The sample reflects social work experience in four different systems (adult mental health, children's behavioral health, child welfare and specialized healthcare) and three different regions (Midwest, Mid-Atlantic and Northeast). All four participants had experience providing direct services although two were serving in supervisory/ administrative roles at the time of the interview.

Interview Instrument

A semi-structured interview schedule based on the study aims was used in light of the exploratory nature of this project (Schensul, Schensul, LeCompte, & LeCompte, 1999). There were four main sections of each interview. There were four main sections of each interview. First, participants were first asked to describe their job. These responses yielded information about job responsibilities, the populations they serve, types of services they provide, and the general organizational context. In their descriptions, participants also tended to describe elements of their work where they were engaged in coordination activities. This phenomenon may have been influenced by their awareness of the topic of this study.

The next phase of questioning was designed to elicit participants' perceptions, understanding and meaning attached to the concept of "coordination." All participants were asked, "What does coordination mean to you?" and "In an ideal world, what would coordination look like?" Responses were followed by addition probing questions to break down the participants' definition in order to uncover deeper meanings associated with the concept. Typically, participants provided examples of situations where services were coordinated or conversely, examples of situations in which services were not coordinated well. In addition, participants tended to identify the end goals or outcomes of coordination.

The third section of the interviews was intended to explore factors related to coordination. Participants were asked to share their ideas regarding factors that that facilitated or

prevented coordination. Although participants shared relevant information about facilitators and barriers throughout the discussion, a direct line of questioning was intended to orient the participant to think of relationships between actions and conditions in their practice and their ability to coordinate. Participants shared both conditions under which coordination occurred, issues that prevented providers from coordinating, as well as strategies utilized to facilitate coordination.

The fourth section of the interview asked participants to list indicators of coordination activity. Participants were asked to describe what they would look for if they were required to assess whether their department, unit, staff or program was coordinated. The interviews concluded with an opportunity to share any last information or thoughts on the topic that were not addressed in the previous conversation.

With each interview, the author was increasingly able to hone in on the topics of interest and refine the language of the questions to elicit responses. This focus also allowed for the free deviation from the list of interview topics to explore meanings and metaphors that arose in conversations. The information provided by the first interview participant provided a foundation for understanding and probing the responses by the other participants. This allowed for differences in respondents' information to be probed to better understand the differences as well as similarities.

Treatment Guidelines – Definition and Access

Treatment guidelines are documents outlining recommendations for clinical practice and communicate expectations for practice to providers based on available evidence of effective treatment (Howard & Jenson, 1999) and have been a useful source for analyzing content related to practice standards (Perron, Bunger, Bender, & Howard, 2010). Guidelines are developed by a variety of professional organizations including the American Academy of Pediatrics, the Substance Abuse and Mental Health Services Administration (SAMHSA) and others to convey practice standards and expectations. The content of guidelines recommending coordination was analyzed for descriptions and examples of service coordination as intended for practice.

Practice guidelines archived by the National Guideline Clearinghouse (www.guidelines.gov) were searched using the terms "coordinate" and "coordination." A simple word search yielded 79 hits however, not all were relevant to this research topic and many were duplicated in the two searches. Guidelines were limited to recommendations developed by domestic entities, and mentioned coordination in the context of service delivery (as opposed to neuromuscular, motor, or other types of coordination). The selection strategy was intended to retrieve guidelines relevant to practice fields of the key informants interviewed in the study (specifically those that addressed adult mental health or substance abuse issues, children's behavioral health, and HIV care and treatment). The treatment guidelines referenced in this article are listed in alphabetical order by developer in Appendix A.

Procedure

There were three stages of data collection and analysis. First, the interviews with social workers were conducted in person and over the telephone. Due to time and travel constraints two interviews were conducted in person and two were conducted over the telephone. Interview length ranged from 30–45 minutes and detailed interview notes were taken and subsequently transcribed. Detailed interview notes were reviewed and major themes that emerged across participants were coded into free nodes, or free-standing categories using NVivo. This process was iterative: transcripts were coded and recoded two additional times until the author felt confident that the most relevant information shared by the participants

was organized into meaningful categories. Data in each node was compared for similarities and differences. At this point, it became clear that nodes could be grouped together into broader categories such as “definitions,” “characteristics,” “factors,” and “mechanisms.” Therefore the data were restructured into tree nodes, where each broad category contained several subnodes.

Second, the treatment guidelines were selected and analyzed. Nine guidelines were downloaded into MS Word format, and imported into NVivo. Traditional content analytic techniques were used. First, the words “coordinate” and “coordination” were queried to identify usage of the term. Second, the rest of the guideline texts were reviewed in their entirety and other passages were identified and considered that referred to similar topics such as “collaboration” and “integration. These results were reviewed, compared, and coded into free nodes that reflected general themes. The free nodes were grouped into five general categories: definitions, recommendations, mechanisms for increasing coordination, purpose of coordination, and service delivery models.

Finally, the third phase combined the analysis of the interview and guidelines. An additional review of the interview and guideline nodes was conducted by hand to identify relationships among the concepts, specifically those that had potential to explain why and how social workers coordinate. Therefore, the data and nodes in the broad categories of “factors” and “mechanisms” were the focus of this third stage of analysis. Consistent with grounded theory approaches, a conceptual model was developed by refining the nodes (Oktay & Padgett, 2004; Strauss & Corbin, 1998). Some of the relationships among the concepts appeared to be interrelated, forming feedback loops, where certain variables may reinforce (creating exponential growth) or balance (causing plateaus or leveling off) one another over time. Consequently, the concepts were mapped as a causal loop diagram using principles of systems dynamics modeling. Causal loop diagrams are tools for illustrating complexity and interrelationships to gain insight about how processes and systems operate over time (Sterman, 2000). The relationships among the concepts are described in the next section.

Results and Discussion

Exploring Coordination

Throughout the treatment guidelines and interviews, several words and phrases were used in conjunction with coordination such as “working together,” “same page,” “multiple providers,” and “active.” The key characteristics of coordination are further explained and illustrated.

Multiple Providers, Interdependence and Same Goal—Both treatment guidelines and the interview participants illustrated situations in which coordination was necessary. These examples highlighted a condition in which there were multiple actors that needed to work together to serve a common client or client population which is consistent with conceptualizations of service and care coordination in the literature. When asked what coordination means, one participant responded, “It means that I need assistance from another agency – we have to talk together to get something done.” Similarly, one participant noted that it is a “shared investment” helping clients and another noted that coordination is “one agency or group providing a network of services that an individual needs. Working with another entity to make whatever you want to happen. It’s something positive.”

The treatment guidelines conveyed that multiple providers from different service systems are needed to achieve a common goal. For example, it is recommended that “every member of the clinical team should engage in care planning and coordination” (Guideline K in Appendix A) when caring for homeless individuals with HIV/AIDS. Similarly incarcerated

adults with substance abuse disorders "will best be served by substance abuse treatment and criminal justice systems that are working together to help them in recovery and in becoming law-abiding citizens" (Guideline H in Appendix A).

The guidelines provided further detail on the degree of multidisciplinary involvement expected of providers perhaps because of the prescriptive role of guidelines in shaping practice. Guidelines called for the joint involvement of mental health, substance abuse, medical, welfare, and school-based services to name a few and one guideline warned that failing to work with other providers or "Practicing in isolation runs counter to system-of-care principles and does not support coordination and integration of care" (Guideline A in Appendix A).

Consistency and Continuity—Participants acknowledged that pooling their efforts to support a client was insufficient for coordination. Social workers highlighted the importance of consistency or similarity in treatment approaches, and continuity of services. Coordination meant that care was delivered in a consistent manner where "everyone is on the same page," "talking in the same voice," which might resemble "a dance." These responses reflect the idea that coordinated multidisciplinary care is more than providing multiple services, but that each provider conveys the same message to the client.

Coordinated care also refers to continuous or seamless service delivery. This definitional theme emerged in both interview transcripts and the text of treatment guidelines. In interviews this phenomenon was described in terms of a "handoff" or helping a client "get to the next level of care" within a "seamless service delivery system." Treatment guidelines provided examples of transitions from one service to the next and it was defined as "continuity of care refers to coordination of care as clients move across different service systems" (Guideline A).

Types of Coordinated Service Delivery—Several potential strategies of delivering coordinated care were described in the treatment guidelines including integration, wrap-around and case management services. All three types of service delivery methods incorporate the active, multidisciplinary and shared goal environment that was used to characterize coordination but vary in the degree to which services are combined.

Integration: Service integration requires that services are combined and provided simultaneously. Particularly within the field of adult mental health, guidelines for treating co-occurring mental health and substance use disorders (Guideline I in Appendix A) mention the integration of both types of services as a way of delivering coordinated care and is described as follows:

> Integrated treatment coordinates substance abuse and mental health interventions to treat the whole person more effectively; the term refers broadly to any mechanism by which treatment interventions for COD are combined within a primary treatment relationship or service setting.

Wrap Around: Wrap around services involve multiple providers and services that may overlap in some ways, but are not combined to the same degree as integrated services. Guidelines for delivering coordinated mental health care to children (Guideline A in Appendix A) recommend wrap-around care as a method which is defined as:

> …integrated assessment and planning process that knits together services from all of the involved providers to address the strengths and needs of the child and family.

Case Management: Finally, case management involves linking a client to several needed services: a method of bridging clients from one type of service to another. Several guidelines noted that coordinated care was delivered via case managers in reference to discharge planning and other service transitions. Case management involves services that are not combined and may or may not overlap: “Clinicians should refer substance using patients for case-management to enhance service coordination of care when care is provided by multiple disciplines and in multiple settings” (Guideline E in Appendix A). Case or care management is projected to facilitate patient-centered care and implementation of recommended treatment (Guideline J in Appendix A).

Connecting a Social Work Definition of Coordination to the Literature—Based on the data in this pilot study, coordination is characterized as a process involving multiple entities working toward a shared goal. The definition of coordination that emerged from the data is consistent with resource dependence theory which explains inter-organizational relationships in terms of interdependence (Pfeffer & Salancik, 1978). From an organizational perspective organizations or providers from different units work together when they depend on one another for complementary resources (such as service expertise).

The potential strategies for coordinating these service interdependencies that are described in the treatment guidelines somewhat reflect coordination mechanisms in the organizational literature (Thompson, 1967). Case-management might represent pooling resources, while wrap-around and integration represent progressively more complex coordination mechanisms that involve planning and reciprocal or mutual adjustment.

While the treatment guidelines, especially, emphasize the interdependence of service activities and coordination mechanisms reflect the resource dependence perspectives in the organizational literature, social workers went a step further by highlighting how consistency and continuity are important, potentially indicating how coordination is unique in human service settings.

Facilitators and Barriers

Factors that facilitate or prevent coordination emerged from the interview and guideline data including client-level factors, personal relationships, and institutional factors. These concepts and their relationships to one another are explained and mapped below. (A full diagram of the concepts explored is contained in Appendix B).

Client-Level Factors—Both the social work participants and the treatment guidelines mentioned the role of client-level factors, in particular severity of symptoms and multiplicity of service needs on the need for coordinated services. The guideline for practice in children’s mental health systems (Guideline A in Appendix A) explains, “Children with complex needs are generally served by multiple agencies and without active coordination of care, these children are at risk of receiving fragmented care that fails to address their overall needs.”

Social workers described how the severity of illness or symptoms and the complexity of service needs drove the need for services from multiple types of providers, creating conditions where providers depend on the aggregate impact of one another’s service expertise on client outcomes. Having “many providers… meant that they were really sick,” and “as the patient becomes more acute, there are more players involved” which “… tested this kind of coordination.” However, sometimes the multidisciplinary nature of coordination and the complexity of the problem meant that there are “too many people involved” which presents a barrier to effective coordination. Therefore, while client needs drive the need for

coordination, the difficulties and challenges of multiple providers involved in care balance the driving client-level factors of coordination (Figure 1).

The Role of Personal Relationships on Information Sharing and Referrals—In each interview, participants discussed the interpersonal relationships among providers, the exchange of information, and referrals patterns and provided rich information about how the interconnectedness of service provider networks influence coordination of care over time. The impact of personal relationships on the exchanges of information and referrals that facilitated service coordination became clear and these relationships are explained further (Figure 2).

Personal Relationships: The personal relationships that providers develop with one another are key drivers of service coordination, at least according to the social workers in the field. When asked how coordination happens, one social worker paused and explained, “I think it’s about… on my microlevel, about relationships between individuals and agencies. That occurs before and after you get a client.” On an organizational level, another respondent pointed out “[I] require linkages but a lot of things become coordinated because of the directors. They know each other.” These relationships are reinforced over time because:

> … what happens is that you coordinate with people you have good relationships with, and then hopefully it becomes a reciprocal thing. You work with someone on a client and then the next client comes in and you’re like, “oh, let me call your caseworker, I know him or her and we can work together to help you stay well.”

The data suggest a reinforcing feedback loop where good personal relationships drive coordination, which in turn enhances the personal relationship over time. Theoretically, negative relationships may stifle coordination, and the development of a positive personal relationship which is explored next.

Conflict: While relationships are important in relation to service coordination, there is potential for conflict and personal or professional politics to negatively influence personal relationships, which could impact service coordination. In particular, working with medical providers or psychiatrists who may be higher in the service hierarchy, or entities with greater authority (like court systems) can breed tension and conflict which “creates a hostile working relationship. You talk about whose fault it is and you start pointing fingers.”

Two strategies for addressing potential conflicts were noted: one strategy involves negotiating procedures for working together while the other involves matching or aligning treatment approaches. First, social workers described the importance of clear role definitions and expectations: “We are constantly stepping on each others’ toes. It’s not clear what everyone’s role is and we need to define a way of doing things.” Second, consistent, congruent or complementary treatment philosophies were perceived to reduce conflict. Situations where “there are very real disagreements about what should happen with a given client” create the potential for conflict where, “one of the providers does not agree with that approach to clients… so they are less likely to want to kind of play with you.” This same social worker discussed the importance of an “underlying treatment framework that spanned the programs or coordinators.”

A consistent treatment philosophy could enhance coordination because providers would approach treatment from a similar framework, potentially minimizing disagreements. The developers of the treatment guidelines recognize this difficulty as well and recommend a unified approach (Guideline I in Appendix A). However, this strategy is difficult: “That’s hard because programs don’t share a theoretical framework… some of them don’t even have a theoretical framework!”

Shared Information: Personal relationships are important for sharing information among providers and this shared information directly impacts service coordination. Although the social workers highlighted the importance of being "on the same page," expectations for information exchanges to facilitate this common understanding were found in the treatment guidelines. One guideline (A) explicitly states, "Information sharing across service providers in the case of multiagency-involved youth is essential to effective service coordination."

Social workers also expected that information about a client and the treatment goal would be shared with them. Participants discussed the utility of interagency or treatment team meetings and case conferences as "a mechanism for communication." Treatment guidelines (Guideline A in Appendix A) also recommended that providers attend meetings to "facilitate the consistency of communication across providers."

However, the time needed for regular meetings, telephone conversations and other forms of communication was a drawback. One of the participants recounted, "…she would meet with outside providers all the time for like an hour. The problem is that it really required some time." Another participant discussed how some professionals rarely attended treatment team meetings because of the time commitment and the fact that they were not compensated for their time spent coordinating. Although communication is essential to coordination, the time costs associated with communicating with providers (which is amplified when there are multiple providers involved) is a cost of coordination which may negatively impact service coordination.

Referrals: Discussions of coordination elicited feedback on referrals. In fact, it was often one of the first thoughts about coordination shared in the interviews, "For me, some of it has to do with referrals. Who gets the patient next? You know that's sort of a weird way of looking at it but, who is next responsible for the person's treatment?" Referrals are a way of linking clients to services. The program administrator who participated in the project noted the importance of referrals in coordinating care and that linkages are critical for helping clients access services from multiple providers.

Several concepts related to referral processes emerged. First, timely responses especially for children's services could have immediate impact on safety: "kids are high priority and it's expected that [referrals] are turned over in a certain amount of time." Second, standard or set processes for referrals were described. Treatment guidelines (Guideline C in Appendix A) called for "coordination of mental health referrals through effective written protocols" and social workers also noted that having "a set way of doing things" or a plan helped the referral process. Finally, an administrator talked about linkage agreements among organizations: "It strengthens coordination because it forces people to work together. It specifies what tasks are to be completed and is a formal agreement."

Other Direct Factors—Two additional factors perceived to directly influence service coordination were discussed throughout the interviews (Figure 3): power to make decisions and incentives for coordination. First, one social worker noted that treatment decisions were made and "things got done because there were people with power." Often, resources must be exchanged to provide care and front line-staff involved in a team of providers may not have the authority in their work environment to make such decisions. When individuals who have power to make decisions on behalf of their agency are involved, services can be coordinated more easily.

Government grants that encourage or provide incentives to providers to create linkages, or work together to deliver services was also noted as a strategy that can be used to coordinate services at the case-level by "encouraging coordination between systems." An example was

offered by one of the participants of a grant opportunity from the US Department of Housing and Urban Development where an HIV care and treatment services program leveraged their funds in order to obtain additional vouchers for people living with HIV/AIDS who were homeless. The availability of these opportunities may lead to coordination at administrative levels and provide incentives for additional coordination among providers at the case-level.

Connecting Identified Facilitators and Barriers with the Literature—Throughout the interviews with social workers, the exchange of information and referrals (or the resources needed to provide services and care) emerged as the means by which services are coordinated remaining consistent with resource dependence. Although the data appear to support the dependence and exchange perspectives, the social workers highlighted how "softer" personal relationships among providers influence how clients are referred, information is shared, and services are coordinated.

Familiarity and the quality of personal relationships among providers have been more recently examined by health services researchers (as opposed to more traditional inter-organizational theories that explain partnerships in terms of economics, or resource dependence). For example, Gittell and colleagues have developed the concept and measure of "relational coordination" among multi-disciplinary professionals within health care settings (Gittell, 2000; Gittell, 2002). Gittell defines effective coordination as frequent, timely, and accurate communication in addition to relationships characterized by shared goals, shared knowledge, and mutual respect. In addition, other research in human services has highlighted the frequency of conflict (Zapka et al., 1992) due to conflicting treatment philosophies (Gillespie, Colignon, Banerjee, Murty, & Rogge, 1993), resistance to changing philosophies and approaches (Ryan, Garnier, Zyphur, & Zhai, 2005) and other ideological differences among clinicians and organizations. The more diverse the group of organizations and individuals, the greater potential for conflicts.

As the social workers in this pilot study noted, specifying procedures for working together, or the governance structure may help reduce conflict (or the "costs" of coordination) among providers. Transaction cost economics scholars (Williamson, 1979; 1981) typically emphasize the need for a governance structure which may be as formal as a written contract or highly informal such as a verbal agreement. Regardless, the way the partnership is structured can help minimize conflict, while allowing providers the flexibility in their relationship to adjust in response to one another and coordinate their services.

Outcomes of Service Coordination

In both the interviews and treatment guidelines, expected outcomes of coordinated activities were discussed in the form of goals, purposes, and intent. There were two main types of outcomes that emerged: system-level and client-level (Figure 3).

Service coordination was perceived to impact system-level outcomes such as continuity, comprehensiveness, and quality of care. First, enhanced coordination facilitates transitions to different services where the indicator of success is a "handoff" where the client reaches "the next level of care." Second, as noted in the interviews coordination leads to "comprehensive services in the network" where "clients get the services that they want," and is a hallmark of quality care.

Ultimately, the purpose of coordinating services for clients is to improve outcomes. Improvements in client-level outcomes result in a reduction of symptom severity and problem complexity, which reduces the need for service coordination. Treatment guidelines were clear about the role that coordination has on individual client-level indicators. For example, "The members of the TIP consensus panel feel strongly that effective collaboration

between the criminal justice and substance abuse treatment systems can result in better treatment for offenders and ultimately, a reduction in crime" (Guideline H in Appendix A). In effect, effective coordination (or treatment) works as a balancing feedback loop in the system which has the potential to reduce the need for such complex partnerships. However, interviewees were less optimistic:

> Does coordination lead to different outcomes? … I don't mean to downplay coordination or intersystem care. I just think that like, if you are sick and there aren't that many ways to cure you, coordination isn't going to help that. If you are less ill, it isn't going to cure you but… there are a lot of treatment options. it [coordination] just isn't going to be the lynchpin for outcomes. I think there are imperfect interventions. Not as perfect as people think they are. Especially for people whom a lot of coordination is going to be required.

Although the model illustrates a link between service coordination and client outcomes, the complexity of the model and the multitude of factors (included and not yet included) illustrate the challenge ahead for researchers and practitioners to improve service delivery.

Connecting Social Workers' Intended Outcomes with the Literature—The system and client-level goals of coordination that were identified by social workers and in the treatment guidelines differ from the hypothesized impact of coordination based on inter-organizational theories. Resource dependence theory and transaction cost economics posit that coordination helps organizations access resources and maximize efficiency (respectively): both of these outcomes are organizational-level economic outcomes which stand in contrast to the system and client-level outcomes that relate to access, quality and symptom improvement. In human services, the ultimate goal of service coordination is to make an impact at the client level and has nothing to do with economic benefits for the organization. Therefore, coordination theories from the organizational literature may not provide an adequate explanation and framework for understanding and studying coordination in human services, and a setting-specific theory may be warranted.

Conclusions

This initial inquiry was intended to contribute to a greater understanding of the meaning, related factors, and outcomes of service coordination. Based on the results of this preliminary study, service coordination is characterized by multiple providers working together to serve the same client (interdependence) in a consistent and continuous manner. Thus coordination is a process that involves more than simply organizing services. To do so effectively, providers may use several types of coordination mechanisms depending on the service needs of the client. Therefore, future research evaluating the extent to which services are coordinated may consider using several process indicators such as the number of providers involved, the amount of information, referrals or other resources shared, time to follow up with a new referral, or adjust services in response to information learned from a colleague.

The results also provide new insight into the conditions, strategies and issues that arise when providers work together to coordinate their services on behalf of a client, laying the groundwork for a preliminary theory of coordination in human services. The causal loop diagram demonstrates how the need for service coordination is driven by severe and complex client needs, but the quality and history of providers' relationships with one another (and the information and referrals exchanged) drive the coordination process. Interventions targeting providers' interactions such as standardization and formalization of roles, expectations, referral processes, agreements and treatment philosophies could facilitate coordination, and ultimately improved client-level outcomes.

This pilot study highlights how relational qualities shape coordination, which has been the focus in other human services research. As highlighted by other human service researchers, coordination depends on more than the need for resources or complementary service expertise. Human services research can make a unique contribution to the coordination knowledge-base by continuing to examine the complex interactions among client needs, interdependence, the quality of provider relationships and coordination.

Furthermore, traditional resource-based views of inter-organziational coordination may not be entirely relevant when examining coordination in human services. The goal of coordination in human services is to improve client-level outcomes however, resource dependence and transaction cost economics explain how organizations coordinate to achieve economic goals such as accessing resources and maximizing efficiency. Therefore the conditions and factors related to coordination that are highlighted by these organization theories may not be similarly salient in coordinating human services at the client-level.

Methodological Limitations and Future Directions

One of the primary limitations of this study is the small sample of interview participants. Although the four participants touched upon similar topics and themes lending some trustworthiness to the data, there was still variation in responses to indicate that there are additional relationships and ideas to be explored. All participants were known to the author which might have influenced the information offered in the interviews. For instance, one of the participants assumed the author's familiarity with her job responsibilities and situations where she coordinated services. This study was also limited by the inability to conduct all four interviews face-to-face. This limitation may be balanced by the previously-established rapport between the author and participants.

Moving beyond the abstract definition developed in this study to an operational definition and theory will be a challenge given the ambiguity and multi-dimensionality of coordination. This study is a first step of a grounded theory approach for understanding service coordination. Continuing with the grounded theory approach begun in this pilot, subsequent phases of this line of research should continue to examine social work perspectives to determine whether similar patterns of major themes and relationships emerge. Alternative qualitative approaches could help "unpack" service coordination. In particular, ethnographic approaches might be useful for understanding service coordination in settings such as treatment team meetings. Using different sampling approaches to capture voices from service sectors beyond those highlighted in this study (e.g. welfare, developmental disabilities, veteran's affairs, disaster management) would help uncover new insights that emerge from the data and ensure applicability across systems. Finally, the conceptual framework can be refined through a series of member-checking activities where the causal loop diagram is shown to social workers to compare the relationships in the model to their own practice experiences.

Service coordination is a critical process for social workers and other professionals who work across the boundaries of multiple systems on behalf of clients with severe and multiple service needs. This pilot study offers a preliminary conceptualization of service coordination as a process driven by interpersonal relationships but influenced by facilitating factors and barriers in organizations and systems. However, further development of definition and framework of service coordination is necessary for building a sound body of practice knowledge that can inform effective solutions for addressing fragmentation in human service delivery systems.

Acknowledgments

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Figure 1.
Need for Service Coordination

Figure 2.
Facilitators and Barriers of Coordination

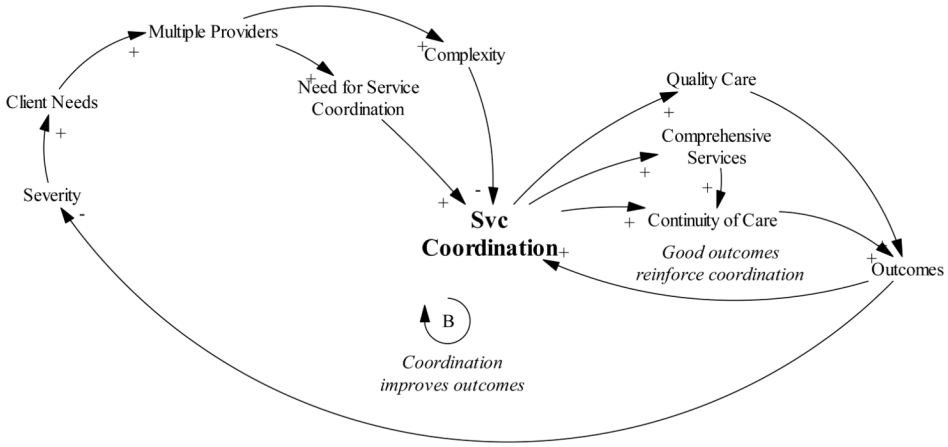
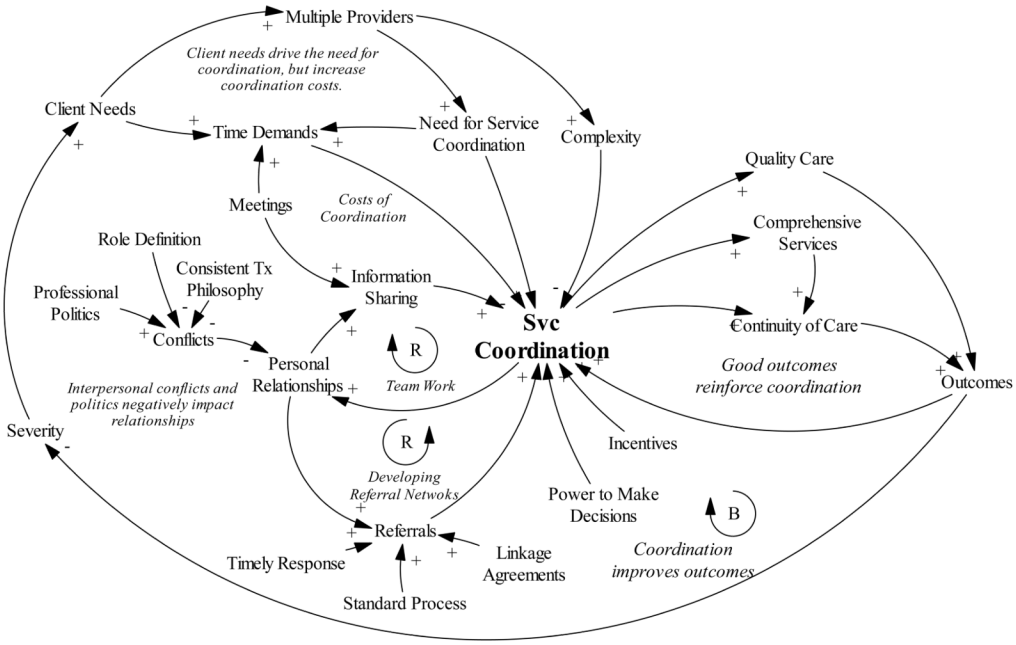


Figure 3.
Outcomes of Service Coordination



Appendix B.
Comprehensive Model of Service Coordination

Appendix A

Treatment Guidelines Analyzed

Guideline	Abbreviation	Citation
A	AACAP, 2007	Winters NC, Pumariga A, Work Group on Community Child and Adolescent Psychiatry, Work Group on Quality Issues (2007). Practice parameter on child and adolescent mental health care in community systems of care. *Journal of the American Academy of Child and Adolescent Psychiatry 46*(2):284–99.
B	AAP, 2003	Percelay JM, American Academy of Pediatrics, Committee on Hospital Care (2003). Physicians' roles in coordinating care of hospitalized children. *Pediatrics, 111*(3), 707–9.
C	AAP, 2004	Taras HL (2004). School-based mental health services. *Pediatrics, 113*(6), 1839–45.
D	ICSI, 2007	Institute for Clinical Systems Improvement (ICSI) (2007). *Diagnosis and management of attention deficit hyperactivity disorder in primary care for school-age children and adolescents*. Bloomington (MN): Institute for Clinical Systems Improvement
E	NYSDH, 2006	New York State Department of Health (2006). *Working with the active user*. New York (NY): New York State Department of Health.
F	NYSDH, 2007	New York State Department of Health (2007). *Primary care approach to the HIV-infected patient*. New York (NY): New York State Department of Health.
G	PHSTF, 2007	U.S. Public Health Service Task Force, Perinatal HIV Guidelines Working Group (2007). *Public Health Service Task Force recommendations for use of antiretroviral drugs in pregnant HIV-1-infected women for maternal health and interventions to reduce perinatal HIV-1 transmission in the United States*. Rockville (MD): U.S. Public Health Service.
H	SAMHSA, 2005a	Peters RH, Wexler HK (2005). *Substance abuse treatment for adults in the criminal justice system:* Treatment improvement protocol (TIP); no. 44.. Rockville (MD): Substance Abuse and Mental Health Services Administration (SAMHSA)
I	SAMHSA, 2005b	Center for Substance Abuse Treatment (2005). *Substance abuse treatment for persons with co-occurring disorder: Treatment Improvement Protocol no. 42*. Rockville (MD): Substance Abuse and Mental Health Services Administration (SAMHSA)
J	ICSI, 2008	Institute for Clinical Systems Improvement (2008). *Major depression in adults in primary care.* Bloomington (MN): Institute for Clinical Systems Improvement
K	NHCHC, 2003	Conanan, B., London, K., Martinez, L., Modersbach, D., O'Connell, J., O'Sullivan, M., Raffanti, S., Ridolfo, A., Post, P., Santillan, R.M., Song, J., Treherne, L. (2003). *Adapting your practice: Treatment and recommendations for homeless patients with HIV/AIDS*. Nashville, TN: Health Care for the Homeless Clinicians' Network, National Health Care for the Homeless Council, Inc.