Strategies for System of Care Development:
Making Change in Complex Systems

A framework for analysis of
Case Studies of System Implementation:
Holistic Approaches to Studying
Community-Based Systems of Care

Research and Training Center Study 2

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Introduction

The systems of care concept has been described as an explicit organizational philosophy intended to create and provide access to an expanded and coordinated array of community-based services and supports for children with serious emotional disturbance (SED) and their families (Stroul, 1993; Stroul & Friedman, 1986). Although systems of care have been found to positively affect the structure, organization and availability of services (Hoagwood, Burns, Kiser, Ringeisen, & Schoenwald, 2001; Rosenblatt, 1998; Stroul, 1993), the implementation of these systems is significantly challenged by a lack of understanding regarding the factors that facilitate system development and how these factors interact to establish well-functioning systems of care (Hernandez & Hodges, 2003a).

This paper presents a framework for analysis for Case Studies of System Implementation: Holistic Approaches to Studying Community-based Systems of Care. This is a five-year national study that is part of the Research and Training Center for Children’s Mental Health (RTC) at the University of South Florida. To better understand the factors that contribute to the development of local systems of care, the research team is investigating system development within communities with established systems of care. In addition, this study is designed to test the RTC premise that there are certain system implementation factors such as collaboration and family voice, family choice, and an established provider network that, when put into practice within communities, contribute to establishing well-functioning systems of care for children with serious emotional disturbance and their families.

The concept of a system in human organizations suggests that a set of elements can come together to form a whole that has different properties than those of the individual component parts (Checkland, 1993, 1999; Gharajedaghi, 1999). Systems theory has evolved from an initial view of organizations as functional systems engaged in a linear process of achieving goals to one that

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views organizations as continuously constructed and reconstructed by individuals and groups in an ongoing process that reflects the complexity of real world experience (Checkland, 1999). Within this framework, systems of care are understood as dynamic entities that are sensitive to local conditions. More precisely, systems of care for children with serious emotional disturbance can be thought of as complex adaptive systems. They are complex in that they are made up of multiple, interconnected elements and adaptive because there is action, reaction, and learning among these elements over time. Actions taken in systems result in reactions which cause subsequent actions and reactions, making the process of establishing systems of care complex and difficult to understand.

Case Studies of System Implementation uses a multi-case, embedded case study design to investigate the implementation of community-based systems of care for children with SED and their families. The study investigates how local communities implement a system of care to achieve outcomes for a local population of children with serious emotional disturbance; whether system implementation factors are used in specific or unique combinations to develop local systems of care; how local context influences system of care development; and why and under what conditions specific system implementation factors are critical to successful system of care development.

During Year 1 of the project, the research team gathered data in two established systems of care: Placer County, CA and Region 3, NE. Both of these systems were identified through a national process and selected for this study after extensive document review and targeted telephone interviews. Data collection included the identification and rating of locally identified system implementation factors; semi-structured key informant interviews with administrators, managers, direct service staff and families; direct observation; document review; and a review of aggregate outcome data. This paper presents a framework for understanding the system development processes identified at the Year 1 sites.

Working Definition of a System of Care

The research team developed a working definition of a system of care that reflects the adaptive nature of a system and recognizes the interconnectedness of the structures, processes, and relationships inherent in a system of care using Stroul and Friedman’s (1986) system of care definition as its basis. The concepts in this definition have provided a foundation for data collection and

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2 Original System of Care Definition: “A system of care is a comprehensive spectrum of mental health and other necessary services which are organized into a coordinated network to meet the multiple and changing needs of children and adolescents with severe emotional disturbances and their families.” (Stroul & Friedman, 1986).
analysis at participating sites. The complete definition, as well as the shared understanding of each component of this definition, is provided in Table 1.

**Table 1: System of Care Definition**

<table>
<thead>
<tr>
<th>Elements of the System of Care Definition</th>
<th>Shared Understanding of Concepts</th>
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<tr>
<td>An adaptive network of structures, processes, and relationships grounded in system of care values and principles that effectively provides children and youth with serious emotional disturbance and their families with access to and availability of services and supports across administrative and funding boundaries.</td>
<td>Incorporating action, reaction, and learning over time (Holland, 1995)</td>
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<td>A set of linkages across people, organizations or communities (Capra, 2002; Schensul, LeCompte, Trotter II, Cromley, &amp; Singer, 1999)</td>
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<td>Specified roles, responsibilities, and authorities that define organizational boundaries and enable an organization to perform its functions (Bolman &amp; Deal, 1997; Plsek, 2003; Theirry, Koopman, &amp; de Gilder, 1998)</td>
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<td>Methods of carrying out organizational activities often involving sequences or a set of interrelated activities that enable an organization to perform its functions (Bolman &amp; Deal, 1997; Plsek, 2003; Theirry, Koopman, &amp; de Gilder, 1998)</td>
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<td>Trust-based links creating connectedness across people and organizations (Folke, Hahn, Olsson, &amp; Norberg, 2005)</td>
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<td>As defined by Stroul and Friedman (1994) and Hernandez, Worthington, &amp; Davis (2005)</td>
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<td>Data that demonstrate progress toward goals or desired effects (Hernandez &amp; Hodges, 2001; Hodges, Woodbridge, &amp; Huang, 2001)</td>
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</tr>
<tr>
<td>An identified local population of children and youth and their families (CMHS, 2002; Hernandez &amp; Hodges, 2003b)</td>
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<td>Ability to enter, navigate, and exit appropriate services and supports as needed (CMHS, 2003, 2004; Farmer et al., 2003)</td>
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</tr>
<tr>
<td>Unrestricted by categorical administrative and funding boundaries (Pires, 2002; President’s New Freedom Commission on Mental Health, 2003; Stroul and Friedman, 1994)</td>
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**Leverage Points in System of Care Development**

The concept of leverage points is useful in understanding how local system developers have accomplished change and met the challenges inherent in planning and implementing their systems of care. Leverage points are defined as “places within a complex system where a small shift in one thing can produce big changes in everything” (Meadows 1999, p.1). For systems of care,
leverage points can be defined as places of influence where system planners and implementers intervene strategically in their existing system context in order to affect the development of their system of care. The concept of leverage points is significant to systems of care development for the following reasons:

- The identification of leverage points specific to systems of care can illuminate key strategies for system development.
- The complex adaptive nature of systems of care makes it difficult for system planners and implementers to know which system interventions will produce desired change. Identification of leverage points will allow planners and implementers to better relate action to change.
- The identification of leverage points critical to system of care development can provide important strategies for expanding the capacity of systems to meet the needs of underserved and inappropriately served children and youth.
- The well being of individual children with serious emotional disturbance and their families depends on our ability to provide access and availability of services and supports, so it is critical to maximize the advantage created by any system development efforts. The identification of key leverage points can help system planners and implementers maximize that advantage.

Drawing on Meadows’ (1999) work, the research team has identified ten points of leverage specifically related to system of care development. These leverage points cluster into four categories that describe the types of interventions that can be used to accomplish system change. In applying the leverage points framework to systems of care, the research team identified the four categories as: Structures Leverage Points that relate to specified roles, responsibilities, and authorities that define organizational boundaries and enable an organization to perform its functions; Information Leverage Points that address the availability of feedback to system stakeholders; Goals Leverage Points that relate to the expectations and intended outcomes of system change; and Values/ Beliefs Leverage Points that address the intrinsic philosophy that is fundamental to the system of care. Categories and their corresponding leverage points are listed below in Table 2.

<table>
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<th>Table 2: System of Care Leverage Points</th>
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<td><strong>Values/Beliefs Leverage Points</strong></td>
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<td>1. Power to Transcend Paradigms</td>
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<td>2. Mindset of the System of Care (SOC)</td>
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<td><strong>Goals Leverage Points</strong></td>
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<td>3. SOC Goals</td>
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<td>4. SOC Self Organizing</td>
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<td>5. SOC Rules</td>
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<tr>
<td><strong>Information Leverage Points</strong></td>
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<td>6. Structure of SOC Feedback</td>
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<td>8. Structure of the SOC</td>
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<td>9. SOC Stabilizers</td>
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<td>10. Parameters of the SOC</td>
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Data collected at the initial two case study sites are being analyzed using the leverage points framework. This analysis will consider which leverage points were used strategically by planners and implementers as these systems of care were developed, and which leverage points have been most effective in establishing and sustaining these systems. Although the leverage points provide an initial framework for analysis, the process of moving from data to meaning is iterative. Continued analysis of Year 1 data as well as data from additional sites in Years 2 and 3 will contribute to the ongoing development of this framework.

A brief definition for each system of care leverage point is provided below as well as examples of each as they relate to system of care development.

**Definitions for System of Care Leverage Points**

The leverage point definitions are presented according to the leverage point categories, beginning with the Values/Beliefs Leverage Points and moving toward the Structures Leverage Points.

**Values/Beliefs Leverage Points:** Related to the intrinsic philosophy that is fundamental to the system of care.

1. **Power to Transcend SOC Paradigms**—The ability to reflect upon SOC assumptions, tolerate discomfort, and be open to new ways of thinking and acting.

   Examples:
   - The idea that there is always room for new growth and system development
   - The idea that no one discipline, philosophy or person provides all of the answers
   - The idea that system goals will continue to evolve
   - The idea that regardless of the amount of effort and investment expended toward a particular goal, the system may need to reconsider its direction

2. **Mindset of the SOC**—The shared understanding from which the SOC is developed. This represents commonly held values and beliefs about what is important for children and families.

   Examples:
   - System development grounded in system of care values and principles that are widely held within and across service sectors
   - Cross agency commitment to the idea that the needs of the child and family come first
Goals Leverage Points: Related to the expectations and intended outcomes of system change.

3. **SOC Goals**—Broad-level goals that direct the SOC and bring it under the control of a single plan.
   - Examples:
     - A system goal to serve children and families within their own communities
     - A system goal to increase the ability to provide culturally competent and individualized care
     - A system goal to serve all families in the environment they desire (home, office, school, etc.)

4. **SOC Self Organizing**—The power of stakeholders to change how the SOC responds or adapts to its environment. This includes changes in the system structure, information flow, and rules. System of care development efforts can be considered system self-organizing.
   - Examples:
     - Stakeholders creating opportunities to provide innovative services and supports in order to individualize services
     - Stakeholders creating opportunities to co-locate interagency staff within the same office
     - Stakeholders creating opportunities to form interagency case management teams

5. **SOC Rules**—Explicit and implicit rules that define the scope of action and boundaries of the SOC.
   - Examples:
     - Rules that add family members to key policy councils
     - Rules that establish interagency governance structures
     - Rules that delegate power and authority to service teams
     - Rules that allow for more flexible use of funds

Information Leverage Points: Related to the availability of feedback to system stakeholders.

6. **Structure of SOC Feedback**—Structures that provide for the provision of feedback when and where it is needed.
   - Examples:
     - Structures that support the dissemination of outcome data to planners and implementers in time for decision-making
     - Structures that support the availability of mental health assessments to dependency or juvenile court judges in time for critical decisions
• Structures that support the timely availability of information for clinical decision-making

7. **SOC Feedback**—Positive and negative feedback loops that provide information on system performance to stakeholders. Positive feedback loops provide information that reinforces the continuation of current practice. Negative feedback loops generally measure performance relative to a goal or standard and provide information that signals the need to make a change.

   Examples of positive feedback loops:
   • Satisfaction surveys indicating improved family satisfaction
   • Placement reports indicating improved stability of placement
   • Reports on stability of staff

   Examples of negative feedback loops:
   • Placement reports indicating increased rates of out-of-home placements
   • Budget reports indicating overspending
   • Reports on staff turnover

**Structures Leverage Points:** Related to specified roles, responsibilities, and authorities that define organizational boundaries and enable an organization to perform its functions.

8. **Structure of the SOC**—Physical arrangements, relationships, and decision points within the SOC that determine the breadth of environments in which a child and family can access supports.

   Examples:
   • Organizational relationships within and across traditional child-serving service sectors such as education, child welfare, juvenile justice and mental health
   • Location and physical arrangement of offices and programs
   • Defined catchment areas of child service sectors

9. **SOC Stabilizers**—Structures and processes that maintain the SOC in its current state and act to buffer against change. There are two functions of buffers that require different interventions: the act of stabilizing to maintain progress made, and the process of destabilizing buffers to affect change and disrupt the status quo.

   Examples of maintaining:
   • Structures and processes utilized to maintain family organizations
   • Funding mechanisms that stabilize braided or blended funding processes

   Examples of destabilizing:
• Changing funding mechanisms such as Medicaid reimbursement rates and managed care eligibility guidelines
• Limiting the power of professional guilds and unions to return the system to care-as-usual

10. **Parameters of the System of Care (SOC)**—Constants that are external to the SOC and are expected to remain relatively fixed over time.

   Examples:
   • State and federal laws, regulations, and guidelines that establish the mandates and authorities of child-serving sectors
   • Political and economic climate at the local, state, and federal levels

**Discussion**

The purpose of *Case Studies of System Implementation* is to understand factors that are critical to local system of care implementation, both holistically and in relation to one another. This discussion is based on preliminary analyses of Year 1 data. The discussion focuses on the potential utility of the leverage points framework for understanding system of care implementation. Detailed site-based and cross-site findings will be available as analyses are completed.

Initial analyses of Year 1 data suggest that site-identified system implementation factors represent concrete examples of points of leverage used by local system planners/implementers to intervene in their existing community context in order to develop a local system of care. There is, however, an important distinction to be made between these local implementation factors and the broader concept of leverage points. Leverage points are domains of potential influence through which system of care planners/implementers *can* (but may not) choose to intervene in their current community context in order to produce a system of care. The ten leverage points defined in this paper are believed to be accessible to system planners/implementers, but may not be used at a given point in time. Local implementation factors represent the *actual* choices made for the purpose of system of care development. To be identified as a local implementation factor by the research team, factors must be both articulated by local planners/implementers as important to system of care development and observable to the research team.

The Year 1 analyses further suggest that the 10 system of care leverage points can be arranged within a pyramid in which leverage points at the top of the pyramid demonstrate greater potential to influence system change than leverage points at the bottom of the pyramid (See Figure 1). Actions that are associated with leverage points at the top of the pyramid represent attempts by system planners/implementers to instill a set of values and goals that support
behaviors of system stakeholders in pursuit of a system’s identified goals. Actions associated with leverage points at the bottom of the pyramid typically represent attempts to structure or regulate behaviors of system stakeholders by clearly delineating appropriate actions and activities. Finally, the effect of successful implementation of Values/Beliefs Leverage Points is the beginning of a cascade of efforts to create a self-organizing system.

Figure 1: Strategies for System of Care Development: Making Change in Complex Systems

Data from the Year 1 sites indicate that established systems of care choose to expend their greatest efforts at the top of the leverage points pyramid, focusing system change efforts on reshaping the values, beliefs, and mindset of persons engaged in children’s services. Efforts that follow typically include enactment of goal and information leverage points, and occasionally include efforts to shift system structures. The data suggest that, over time, system change efforts focused high on the pyramid can encompass actions related to leverage points lower on the pyramid. In contrast, implementation of structures leverage points without first making use of higher order leverage points creates a rigid and inflexible system governed and guided by bureaucratic constraints.

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3 The Study 2 team noted that Meadows does not specifically address the impact of trusting human relationships within the system. These relationships permeate the system and appear to have a substantial impact upon each of the identified leverage points.
Opportunities for action across the leverage points are not linear, and acting on values and beliefs does not automatically lead to changes in mindset or follow to the derivation of goals and then to system self-organizing. However, actions at leverage points higher up the pyramid generally enable or facilitate a greater range of change than leverage points lower on the pyramid, maximizing the return on systems change efforts. The structures and processes that are established as a result of actions at leverage points from the top of the pyramid enable the continuous development and maintenance of a system of care as outlined by Stroul and Friedman (1986) and Stroul (1993) and represented by the RTC’s theoretically-derived system implementation factors (Friedman, in press).

Preliminary analyses of Year 1 local system implementation data also suggest that the theoretically-derived RTC implementation factors may well be characteristic of ideal and well-functioning systems of care. These characteristics consist of system structures, processes and methods that support well-functioning systems of care. For example, RTC factors such as an established Provider Network and Range of Effective Services and Supports represent structures that are characteristic of ideal or well-functioning systems of care. Provider Networks are the result of local actions to develop systems of care and become characteristic of well-functioning systems of care. Similarly, RTC Factors such as Collaboration and Family Voice can be characterized as processes representative of a well-functioning system, and having a widely-held Theory of Change or a shared foundation of Values and Principles are methods of supporting a well-functioning system of care.

It is useful to consider the relationship among system of care leverage points, local system implementation factors, and the RTC implementation factors (See Figure 2). Leverage points describe the range of possible actions (and their likely impact) available to continuously develop a system. These leverage point reflect potential for system change, but do not necessarily represent action taken at the local level to create system change. In contrast, site-identified local implementation factors represent actions taken to impact local system of care development. These actions are identified by local system planners and implementers as critical to their efforts and can be used repeatedly and over time to access points of leverage in system change. The RTC factors describe the characteristics of a well-functioning system of care. Preliminary analyses suggest that the interchange between leverage points and local implementation factors produces system change over time in the direction of this ideal and well-functioning system.

These preliminary findings point to the potential usefulness of assessing local system of care development efforts within the framework of Meadows’
Leverage Points. Specifically, predictions regarding the relative effectiveness of systems change efforts can be generated from this framework. Individual systems of care that strategically deploy resources at points of greatest leverage are expected to develop more rapidly and with greater fidelity to system of care values and principles. Future data collection across eight additional systems of care will aid in delineating the extent to which leverage points serve as indicators of efficient system progress towards implementation of a resilient, value-based system of care.

Figure 2: Role of Leverage Points and Local a Implementation Factors to a Well-Functioning System of Care as defined by the RTC Implementation Factors
Conclusion

The research team is currently conducting data analysis of the Year 1 sites utilizing the System of Care Leverage Points framework to identify strategies and points of intervention critical to local system development. Preliminary results indicate that the leverage points framework is useful in organizing how systems affect change and in making predictions regarding the likely effects of different systems change efforts. It is anticipated that this framework will be modified as a better understanding of system of care implementation develops. The guiding research questions for this study were developed to help people better understand the factors that contribute to system of care development and how these factors interact to establish well-functioning systems.

As applied research, this study strives to contribute knowledge and generate potential solutions for the purpose of improving the implementation of community-based services for children with serious emotional disturbance and their families. This will include knowledge related to how system implementation factors are operationalized and their role in creating systems of care; knowledge of how system implementation factors relate to one another to achieve system of care goals and what unique combination of factors may contribute to system of care development; and knowledge of how factors are organized to carry out theories of change for systems of care across different local contexts. Finally, it is hoped that this study will build understanding of and give credence to the strategies local communities undertake in developing systems of care and will provide greater understanding of how communities develop systems of care that meet the unique needs of their children with serious emotional disturbance and their families.
References


disturbances (Rev. ed.). Washington, DC: Georgetown University Child Development Center, CASSP Technical Assistance Center.
