# "If We're Going to Change Things, It Has to Be Systemic:"

## Systems Change in Children's Mental Health

Sharon Hodges

University of South Florida

Kathleen Ferreira

University of South Florida

Nathaniel Israel

RDN Associates

**The final version of this manuscript is available at online www.springerlink.com and will be published in an upcoming issue of the American Journal of Community Psychology. When referencing Springerlink's online publication of this manuscript, please cite as:**

**Hodges, S., Ferreira, K., & Israel, N. (2012). "If we're going to change things, it has to be systemic:" Systems change in children's mental health. *American Journal of Community Psychology*. Advance online publication. doi:10.1007/s10464-012-9491-0.**

## Author Note

This research was jointly funded by the National Institute on Disability and Rehabilitation Research, U.S. Department of Education and the Center for Mental Health Services, Substance Abuse and Mental Health Services Administration under grant number H133B040024.

The USF research team wishes to thank our partners in the State of Hawaii, Marion County, IN, Placer County, CA, Region 3, NE, Santa Cruz County, CA, and Westchester County, NY for their generous collaboration and thoughtful contributions to this work.

Correspondence concerning this paper should be addressed to Sharon Hodges, Department of Child and Family Studies, MHC 2437, University of South Florida, 13301 Bruce B. Downs Blvd. Tampa, FL 33612. Email: sphodges@usf.edu, Phone: (813) 974-4651.

Abstract

Communities that undertake systems change in accordance with the system of care philosophy commit to creating new systems entities for children and adolescents with serious emotional disturbance. These new entities are values-based, voluntary, and cross-agency alliances that include formal child-serving entities, youth, and families. Describing the scope and intent of one such implementation of systems of care, a mental health administrator commented, “If we’re going to change things, it has to be systemic” (B. Baxter, personal communication, December 2, 2005). This paper explores the concept of "systemic" in the context of systems of care. Systems theory is used to understand strategies of purposeful systems change undertaken by stakeholders in established system of care communities. The paper presents a conceptual model of systems change for systems of care that is grounded in data from a national study of system of care implementation (Research and Training Center for Children's Mental Health, 2004). The model is based on Soft Systems Methodology, an application of systems theory developed to facilitate practical action around systems change in human systems (Checkland, 1999). The implications of these findings to real world actions associated with systems change in systems of care are discussed.

*Keywords:* systems of care, mental health, systems theory, soft systems methodology

# “If We’re Going to Change Things, It Has to Be Systemic:”

## Systems Change in Children's Mental Health

Systems change efforts in the public sector are often undertaken with the explicit goals of improving systems functioning and better serving community needs. This is particularly so when such efforts are conceived in response to the perceived failure of public services to achieve optimal community outcomes. In children’s mental health, a crisis brought about by inadequate and fragmented services for children with serious emotional disturbance (SED) is being addressed though a systems change effort widely known as ‘systems of care’ (Cook & Kilmer, this issue; Knitzer, 1982; Stroul & Blau, 2008; Stroul & Friedman, 1994). The system of care (SOC) concept was conceived as a values-based organizational philosophy that focuses systems change on building collaboration across child-serving sectors, families, and youth for the purpose of improving access to an expanded array of coordinated community-based services for children with SED (Stroul, 1993; Stroul & Friedman, 1986). Referenced in both the Surgeon General's report on Children's Mental Health (U.S. Department of Health and Human Services [USDHHS], 1999) and the report of The President's New Freedom Commission on Mental Health (2003), the Comprehensive Community Mental Health Services for Children and Their Families Program (CMHI) has provided nearly $1.5 billion dollars to states, regions, counties, territories, Native American and tribal organizations, and the District of Columbia for the purpose of creating comprehensive, community-based mental health services through systems of care (ICF Macro, 2010). In addition, systems of care have been supported with millions of dollars made available to state and local governments through programs such as the Child and Adolescent Service System Program (CASSP) and the State Infrastructure Grant Program. Given the level of funding

support, the SOC philosophy has arguably become the de facto child mental health policy in the United States.

Communities that undertake change in accordance with the SOC philosophy commit to developing integrated services for children and adolescents with SED and their families that are dictated by the needs and strengths of the child and family, are community-based, and are culturally competent (Stroul & Friedman, 1986, 1994). The aim of such systems change is for children and families to have access to a continuum of appropriate services and supports unencumbered by multi-agency jurisdictional fragmentation. Describing the scope and intent of one such implementation of systems of care in a 22-county behavioral health region of Nebraska, a mental health administrator commented, “If we’re going to change things, it has to be systemic” (B. Baxter, personal communication, December 2, 2005). But what does it mean to "be systemic" in SOC implementation? The originators of the SOC philosophy (Stroul & Friedman, 1986, 1994) as well as others who have developed practical resources detailing the components of SOC implementation (e.g., Pires, 2002; Stroul & Blau, 2008) have used the concept of a system without explicitly grounding the philosophy in systems theory. However, the public dialog around systems of care has more recently shifted to include some discussion of systems theory (e.g., Foster-Fishman & Droege, 2010; Friedman, 2010; Hodges, Ferreira, Israel & Mazza, 2010). We believe that an explicit application of systems theory in systems of care can improve SOC implementation by providing a useful construct for understanding the interdependencies created by systems of care as well as key strategies for facilitating SOC development.

Von Bertalanffy (1968, p.37) describes systems theory as "a general science of wholeness" and defines a system as individual elements of an organism or social phenomenon

that when taken together create a complex, emergent whole. Systems theory characterizes human systems as continuously constructed and reconstructed by individuals and groups in an ongoing process that reflects the complexity of real world experience (Capra, 1996, 2002; Checkland, 1999; Senge, 1990). From the perspective of community psychology, Foster-Fishman, Nowell, and Yang (2007) note that the term system can be used to describe a wide array of phenomena including a family, neighborhood, organization, school district, human service delivery network, coalition of organizations, or the federal welfare system. Further, more recent work by Peirson, Boydell, Ferguson, and Ferris (2011) notes that in these synergistic systems, broad objectives can be achieved that could not be accomplished by any single element of the system.

Systems change can be thought of as “a process of transformation in the existing structure, function, and/or culture of a system” (Peirson, et al. 2011, p. 308). In response to the challenge of understanding and facilitating systems change in human service settings, an increasingly rich dialog has developed regarding the application of systems theory to comprehensive community initiatives (Cook & Kilmer, this issue; Foster-Fishman & Behrens, 2007; Hodges & Ferreira, 2010a; Peirson, et al., 2011; White, 2000). This paper will explore the concept of "systemic" in the context of systems of care, reporting findings of a 5-year study of system implementation in six established systems of care[1] (Research and Training Center for Children's Mental Health, 2004). Applied to systems of care, systems theory can be used to describe changes in service delivery networks for children with serious emotional disturbance and their families. As dynamic entities, the development of systems of care must be sensitive to local conditions and require understanding of how changes in the component parts might affect the emergent whole. Systems theory will be used to understand strategies of purposeful systems

[1] Case Studies of System Implementation is believed to be the first research study to specifically apply systems theory to systems of care.

change undertaken by stakeholders in established SOC communities that were identified through a national study of SOC implementation (Research and Training Center for Children's Mental Health, 2004). The paper will present a conceptual model of systems change for systems of care that is grounded in data from this study. The model is based on Soft Systems Methodology, an application of systems theory developed to facilitate practical action around systems change in human systems (Checkland, 1999). Finally, the implications of these findings to actions associated with systems change in systems of care will be discussed.

## Being Systemic in Systems of Care

A great deal is known about the changes to the structure, organization, and availability of services that are intended by SOC implementation (Hoagwood, Burns, Kiser, Ringeisen, & Schoenwald, 2001; Rosenblatt, 1998; Stroul, 1993). This implementation, however, is significantly challenged by a lack of understanding regarding the processes of systems change as well as how various systems change activities interact to establish well-functioning systems of care (Hernandez & Hodges, 2003; Research and Training Center for Children's Mental Health, 2004). The literature suggests that although ***ideal*** systems serving children and youth with SED and their families would be implemented as a single, bounded, well-defined set of policies, regulations, and service practices, the ***reality*** of SOC implementation is quite different (Cook & Kilmer, 2010). The implementation of systems of care is complex due to the numerous components of any given system, incremental nature of system development, variations in community needs and strengths, changes in leadership and support over time, and the difficult balance of individual agency mandates with interagency collaborative goals (Hodges, Ferreira, Israel, & Mazza, 2006a, 2006b, 2006c, 2007, 2008, 2009). Shifts in political will and support experienced by community-based efforts in general suggest that systems change is difficult and

often unpredictable work, and not well matched to ways of thinking that presuppose orderly, stepwise change (Hernandez & Hodges, 2003).

**Soft Systems Methodology**

Systems theory offers a wide variety of approaches to understanding change in human systems including ethnography (Agar, 2004), learning organizations (Senge, 1990), systems dynamic modeling (Sterman, 2002), and complex systems (Plsek & Greenhalgh, 2001). The importance of using theory in the development of conceptual models of new and improved systems has been highlighted by Peirson and colleagues (2011). This is particularly true in systems of care because of the varied and complex nature of these systems change efforts. Soft systems methodology (SSM) provides an opportunity to develop a conceptual model of systems change through the use of systems *thinking* as a process to help us organize our thoughts (Checkland, 1999). In SSM, conceptual models derived from systems thinking are used to formulate feasible and desirable systems *practice* in "real world" change efforts (Checkland, 1999). The term "soft" in SSM stresses that human systems are not fixed entities; the *process of inquiry* is systemic. This calls for a different way of looking at change, one focused on evolving systems and strategies rather than on linear 'steps' or mechanical 'parts.' As a process of inquiry, SSM can be used to navigate between the real world experience of systems challenges and a more conceptual world of thinking systemically about these challenges in order to produce conceptual models for carrying out systems change. The models derived using SSM are intended to be tested in real world settings by targeting purposeful systems change activities that are based on the conceptual model.

Foster-Fishman and Behrens (2007) note that the model of causation in which X predicts Y is ill-equipped to deal with the complexities of systems change efforts. SSM is a particularly

useful tool for understanding systems change in the complex context of systems of care because it avoids the reductionist approaches necessary to define systems change in terms of discrete independent and dependent variables. This is accomplished by a sound grounding of systems thinking in the real world through the construction of "root definitions" of a system's intent and "rich pictures" of a problem situation (Checkland, 1999 p. 317). According to SSM, root definitions are succinct statements that describe a system and provide an explicit understanding of the intent and context of systems change. Root definitions should include facets of a system that can support problem solving and hypothesizing strategies for systems change. Rich pictures are the expression of stakeholder experiences compiled by investigators. In SSM rich pictures describe multiple stakeholder experiences of the structures, processes, and relationships that affect systems change (Checkland, 1999). The goal of rich pictures is to capture the variety of stakeholder experiences without prematurely imposing a model of systems change.

Using both rich pictures derived from the experiences of system stakeholders and a root definition expressing the criteria relevant to systems change, a conceptual model of systems change can be developed. The modeling process is iterative and should involve discussion and debate with those involved in activities of systems change. In addition, the development of a conceptual model should be increasingly oriented toward identifying practical action related to systems change (Checkland, 1999).

**Applying SSM in Systems of Care**

An application of SSM to understanding systems of care implementation is shown in Figure 1. The process of systems change, somewhat simplified from the process described by Checkland, integrates real world practice with systems thinking activities, creating a complete learning cycle. In this figure, “real world practice” indicates activities occurring above the

dashed line, and “systems thinking” refers to activities occurring below the dashed line. The root definition of systems of care, indicating the intent and context of systems change, is represented by the dotted background and permeates both real world practice and systems thinking activities. Foster-Fishman et al. (2007) suggest that many systems change efforts in the human services and community change fields ignore the systemic nature of the contexts they target. SSM establishes the context of systems change through the use of root definitions that elaborate an intended transformation by articulating the beneficiaries and participants of the systems change, potential environmental constraints, and the world view that articulates intent and gives this change meaning.

For the purpose of this application of SSM, the root definition for systems of care includes three components of context that affect SOC implementation regardless of cultural, political, or demographic variation (Hodges et al., 2010). SOC implementation:

1. is based on the values foundational to the SOC philosophy. The fundamental association of systems of care with a strong values base provides an explicit understanding of the intent of systems change as well as potential beneficiaries and participants in systems change processes (Stroul & Blau, 2010).
2. includes voluntary alliances of child-serving entities. Because participation in systems of care is rarely mandated, roles, responsibilities, and relationships are most often formalized only by cross-agency memoranda of understanding. Membership will vary over time according to the willingness and ability of partners to participate in system activities (Child Adolescent and Family Branch, 2006).
3. integrates cross-agency networks of formal child-serving agencies as well as informal supports that include both youth and families. The values and principles of systems of

> care specify that systems change should include multiple child serving agencies (e.g., child welfare, education, juvenile justice) in addition to the public mental health entity (Child Adolescent and Family Branch, 2006).

Because root definitions establish the context for systems change, they are foundational to the three stages of the SSM process. Stage 1of SSM represents real world experiences of children, families, service providers, administrators, and policy makers in service systems for children with SED and their families. These experiences of service delivery can be used to generate rich pictures that are purposefully applied to systems thinking. Stage 2 involves systems thinking and the development of a conceptual model of systems change. Rich pictures from Stage 1 inform this conceptual model. The double arrows between Stages 1 and 2 represent iterations required to incorporate real world experiences into systems thinking in order to develop a model of activities that adequately captures the complexity of SOC implementation.

Stage 3 offers the opportunity to apply systems thinking in systems of care. In Stage 3, leaders of systems change in individual systems of care assess the feasibility and desirability of the conceptual model in order to identify specific actions that they can apply in their own systems change work. The arrow linking Stages 2 and 3 represents the transition from systems thinking back to real world application. Tests of the conceptual model in Stage 3 by practitioners of systems change generate new experiences of systems of care (represented by the arrow linking Stages 3 to 1) and completing the cycle of learning that is reflected throughout the entire SSM process. SSM allows SOC implementers to reflect on the unique circumstances of their individual system implementation efforts. As such, an SSM model of systems change can never be expected to provide a prescriptive tool or a precise set of actions to be applied to all systems

of care. Rather, the model articulates broad activities and relationships intended to be adapted in specific systems change efforts.

## A Conceptual Model of Systems Change in Systems of Care

Case Studies of System Implementation (CSSI) used SSM as a framework to investigate factors that were considered critical to systems change by local system implementers (Research and Training Center for Children's Mental Health, 2004). Investigators found that SSM supported systems thinking in the context of SOC implementation described above. The study investigated how local communities effect purposeful systems change in order to achieve outcomes for a local population of children with SED; how local context influences SOC development; and why and under what conditions specific system implementation factors are critical to successful SOC development. Based on these data, the research team developed a conceptual model of SOC implementation informed by the experiences of individuals who had undertaken SOC implementation and had sustained their efforts over time.

### Method

CSSI used a multi-site embedded case study design (Yin, 2003) to examine systems change. This was the first such study of the process of systems change within systems of care. Six systems were identified through a national nomination process and selected for this study after preliminary data collection that included extensive document review and targeted telephone interviews. Site selection criteria included that participating systems have: 1) an identified population of children/youth with SED; 2) clearly identified goals for this population that were consistent with SOC values and principles; 3) active implementation of strategies intended to achieve these goals; 4) evidence of systems change as demonstrated by outcome data indicating progress toward these goals; 5) demonstrated sustainability of systems change over time; and 6)

a willingness to reflect on both successes and challenges in systems change. The sampling strategy was intended to yield rich pictures of the experience of systems change in established systems of care as well as a variety of cultural, political, and demographic SOC contexts.

Between August 2005 and May 2008, the research team gathered data in six established systems of care: Placer County, CA; Region 3, NE; the State of Hawaii; Santa Cruz County, CA, Marion County, IN; and Westchester County, NY. Data collection included semi-structured key informant interviews with administrators, managers, direct service staff and families focused on their experience of system development and factors they believed to be critical to systems change; direct observation of naturally occurring cross-agency planning and placement meetings; review of system documents at the state and local levels; the identification of systems change strategies by a group of key stakeholders and rating of these strategies by interview participants; and a review of aggregate outcome data. In total, these data comprise a qualitative data base that includes: 307 documents that provide organization level data related to goals and intent of systems change in a historical context; 268 transcribed interviews that provide individual perspectives regarding factors that supported and impeded systems change efforts; 41 sets of observation notes of naturally occurring meetings for the purpose of offering confirmation or disconfirmation of the presence of identified implementation factors; 6 sets of stakeholder-identified factors considered critical to system development; and 113 ratings exercises for the purpose of exploring multiple perspectives on the definition, effectiveness, and difficulty in implementing the identified factors. Participants gave written informed consent for their participation in the study.

The standard for team-based qualitative analysis requires that data be coded individually by multiple team members and then compared and discussed regularly as themes are identified

(Guest & MacQueen, 2008; LeCompte & Schensul, 1999; Miles & Huberman, 1994; Silverman, Ricci, & Gunter, 1990). These conventions were used in this analysis, with team members coding data using a priori codes developed from a shared definition of systems of care (Hodges et al., 2010) and driven by research questions focused on identifying structures, processes, and relationships that support or impede systems change. Although codes were identified a priori, the team maintained a process flexible enough to allow for modification as new terms, patterns, or themes were identified by the team as it sought to answer the research questions.

Using SSM as a guiding framework, CSSI data yielded "rich pictures" of systems change in the form of site-based reports produced for six participating systems and subsequently used to inform the conceptual model. The analysis was iterative, involving considerable interaction with key research participants at each of the participating systems for the purpose of ensuring accuracy of reported findings (Creswell, 2003; Miles & Huberman, 1994). In addition to producing site-based reports (http://rtckids.fmhi.usf.edu/cssi/default.cfm), the research team worked collaboratively with system participants to explore specific aspects of the systems change strategies in more depth and disseminate findings in both research and community settings (Baxter, 2007, 2010; Brogan, 2007; Cervine, 2007; Hodges & Ferreira, 2010a; Hodges, Ferreira, Israel & Mazza, 2007; Hodges, Ferreira, Rotto & Alfreds, 2009; Rotto & McIntyre, 2010). As a whole, the data collection and analysis, formulation of a conceptual model, and dissemination of study results reflect the SSM learning cycle of incorporating stakeholder experiences of systems for children with SED into systems thinking and then making them available for application in SOC communities (as illustrated in Figure 1).

**Findings**

The analysis of CSSI data resulted in a conceptual model of systems change in systems of care. CSSI findings described below represent the systems thinking component of the SSM process (Stage 2) for systems of care. Figure 2 illustrates the conceptual model for creating change in systems of care. The core components of this model include values-based persuasion, shared goals and actions, collaborative structures, value-based outcomes, and system information flow.

**Initiating systems change.** CSSI data indicate that systems change within study sites was often initiated in response to system conditions that supported categorical and highly restrictive services. Data further indicate that to address concerns regarding service rationing, restrictive placement, cultural competence, and the need for family-driven care, initial strategies for systems change often involved efforts to extend system of care values and beliefs beyond the mental health service system to include the child welfare, juvenile probation, and education service sectors as well as youth and families (1. Value-Based Persuasion). In many cases, SOC values and principles were introduced to private community-based organizations and providers with the intended impact that SOC values would permeate the entire community. Data indicate that persuasive actions intended to shift values and beliefs are essential to initiating the process of systems change in systems of care. Even in systems in which the immediate impetus for systems change involved some level of mandate such as court involvement, the system leaders indicated that external triggers such as judicial oversight provided welcome leverage to promote change. To be effective, these actions should provide concrete examples of how the alignment of service planning and delivery with SOC values will result in benefit to children and their families. These actions should also include open discussion about how SOC values and beliefs can result in benefit to system partners in the form of improved system functioning that is

accomplished through increased trust, commitment, and shared responsibility. Finally, persuasive actions around SOC values must champion the belief that improvement is possible and that responsiveness and commitment to change will enable collaborators to transcend the fragmented conditions of service delivery.

Cross-site data indicate that shifts in values and beliefs have great power to leverage systems change because values and beliefs have potential to guide all other actions taken within the system. Participating systems were purposeful and consistent in their values-based persuasion including having them reproduced and publicly posted in common areas and meeting spaces. Westchester County, NY provides grounding in SOC values and principles through a SOC training curriculum developed for the new staff of cross-agency partners. This training is often led by family members, an active demonstration of the SOC value for family-driven care. The value for strengths-based service planning that is fundamental to SOC work with children and families is reinforced with administrators and policymakers in Marion County, IN by including a discussion of community and system strengths as the first agenda item in cross-agency planning meetings. Early and consistent efforts to create wide exposure to SOC values and beliefs provide strong impetus for change. The data also indicate that the emphasis on values and beliefs provides a significant anchor for sustaining collaboration in systems of care.

**Goals and actions.** CSSI data indicate that system goals make stakeholder values and beliefs concrete and orient system activity toward purposeful actions used to create systems change (2. Shared Expectations). As SOC values and beliefs begin to permeate the system, stakeholders use goals to establish shared expectations related to system implementation. These should include: outcome goals such as the reduction of out-of-home placements; process goals such as increasing culturally competent and individualized care; and planning goals related to

future action. Establishing shared expectations is intended to bring systems under the influence of a single plan grounded in SOC values and principles and can be used to set agreed-upon targets for action across system partners. For example, SOC stakeholders who decide to reduce restrictive placements across multiple domains may target actions that include initiating mental health assessments at all points of entry and the diversion of youth with identified mental health needs into more clinically appropriate community-based services and supports.

Goals related to cross-agency collaboration can also support changes in how systems respond or adapt to their local environment through the creation of innovative services and supports. For example, system partners in Santa Cruz, CA established therapeutic group homes and a “clean and sober” school for youth with substance abuse challenges. In Region 3, NE, child welfare and mental health partnered to develop post adoption services and supports for families involved in high needs adoptions. Goals also enable action by helping system stakeholders define a system’s scope and boundaries. Hawaii’s articulation of goals for core system practices provided both explicit and implicit rules about interagency boundaries and appropriate day-to-day action.

CSSI data indicate that shared values and expectations are, however, insufficient to implement or sustain systems change. It is only when system partners take action that values and goals become meaningful (3. System Partners Take Action). Otherwise, the system of care exists only as an expression of intent. CSSI data indicate there was a point in time when local stakeholders recognized that the traditional system structures were inadequate for achieving family-driven, culturally competent, community-based care. This recognition took shape differently across communities. For example in Hawaii, this played out in the form of a court-ordered mandate to implement systems of care; in Placer County, a Juvenile Court judge brought

agencies together; Santa Cruz stakeholders came to action through their participation in the development of statewide SOC legislation; and in Region 3, reading the original SOC monograph (Stroul & Friedman, 1986) inspired change. In each system, stakeholders decided not to accept the traditional system structure as given and took values-based action to intervene strategically in the structures, processes and relationships of the traditional system.

**Collaborative structures.** Structural changes are those related to specified roles, responsibilities, and authorities that enable a system to perform its functions. CSSI data indicate that the development of collaborative structures can be used as a tool of systems change in order to institutionalize SOC values in day to day practice (4. Develop Collaborative Structures). Collaborative structures include changes in the physical arrangement of services such as the co-location of cross-agency staff, changes in budgetary authorities that facilitate decision making regarding service eligibility and placement, and the creation of cross-agency liaisons to facilitate smooth transition of children across environments such as home and school. CSSI data indicate that collaborative structures are often supported by interagency MOUs that provide clear guidance around decision making and conflict resolution processes. Many also require annual review, revision, and recommitment by collaborating partners so that broader changes and adaptations can be incorporated. Such collaborative structures can be used to moderate the impact of existing rules and regulations so that new system responses are more aligned with SOC values and principles. For example, Placer County, CA moderated the traditional single agency structure for judicial out-of-home placement recommendations by creating a multi-agency placement review team with responsibility to put forth a shared judicial recommendation. It is important to note that collaborative structures are limited in their impact in that they function as a catalyst for systems change only to the degree that they are anchored in shared values and

expectations. CSSI data indicate that without strong grounding in shared SOC values and expectations, structural changes are unlikely to facilitate or sustain the positive outcomes intended by systems change efforts.

**The role of system information.** CSSI data indicate that the communication of information, both formal and informal, is a key mechanism for facilitating systems change across all components of the conceptual model (System Information). The form and format of information exchange can include the formal review of data at regular meetings as well as day-to-day conversations among cross-agency partners and family advocates that are enabled by the co-location of services. The structure and availability of system information supports an informed responsiveness to local conditions among system partners, reinforcing system values and beliefs and expanding the knowledge of system participants. For example, information systems that provide system partners real time child placement and cost data supports the value of youth being served in least restrictive and most clinically appropriate community-based settings. In addition, information availability allows partners to take action in response to local needs and to make system adaptations as local conditions or concerns change. CSSI data indicate that when the content of system feedback is both timely and relevant to issues of system performance, it can support flexibility and responsiveness of decision making. In addition, the structure and availability of information can be strategically designed to support achieving specific agreed-upon goals.

Information flow is comprised of multiple activities that occur in real time rather than a singular effort that is sequenced in relation to the other activities of systems change. Because activities associated with information flow affect all activities of systems change, they can be used incrementally to shape the direction of this change. All of the systems participating in CSSI

established multiple processes for sharing SOC results with system partners and used information flow to create opportunities for discussion and shared decision making. For this reason, system information is not represented as a numbered activity in the conceptual model, but instead as a set of related activities that link the other systems change activities together in iterative cycle of change.

**Value-based outcomes.** CSSI data indicate that, over time, system partners are able to produce outcomes more in keeping with the expressed values of systems of care such as individualized, family-driven, culturally and linguistically competent care (5. Value-Based Outcomes). Examples of this shift to value-based system outcomes abound in the rich pictures of study participants. Placer County stakeholders strategically interrupted their cycle of group home placements by providing home-based and wraparound care. Savings from the reduction of more restrictive placements allowed the expansion of day treatment and other community-based services for troubled youth. Hawaii stakeholders interrupted the cycle of out-of-state placements and redirected resources to the development of community-based care by building local case management services and evidence-based practices. Region 3 Behavioral Health Services in Nebraska created the Professional Partner Program, an intensive therapeutic care management program that uses the wraparound approach in coordination with family teams. Outcomes demonstrated included a reduction in out-of-home placements and juvenile crime as well as improvement in school performance and attendance. It also reduced the number of children and youth who were being made state wards simply to gain access to services. Santa Cruz stakeholders interrupted the cycle of office-based services by moving most of their service delivery time into the community. This shift has supported the growth of a community-based system that extends beyond agency partners to engage families and community-based providers.

## Discussion

What does it mean to "be systemic" in SOC implementation? How do the systems change activities represented in the conceptual model moderate traditional service delivery outcomes? Study participants described their initial system conditions as driven by federal and state regulatory structures that enforced criteria restricting eligibility for services and supports, reduced the range of community-based services, and reinforced categorical funding. Although rarely explicit regarding values and goals, data indicate that the traditional service delivery structures often rewarded service rationing, restrictive placement, and professional-driven care over family-driven, culturally competent, and community-based care. Stakeholders in the participating systems initiated systems change through actions designed to interrupt aspects of the traditional system functioning that they believed led to outcomes such as high rates of out-of-community placements and the use of restrictive care settings. The net effect of their systems change activities—persuasive activities around values and beliefs, establishing shared system goals, anchoring actions in SOC values, developing collaborative structures, and infusing their systems with information—was a shift away from the traditional structure-driven outcomes to outcomes that were directed by explicit values and beliefs.

Six lessons derived from the systems change experiences within these sites can be applied in other systems change initiatives:

1. **Create an early and consistent focus on values and beliefs**. This can be accomplished by system leaders introducing system of care values to potential system partners with a particular focus on how these values will allow partners to better serve the children and families in their care. The emphasis on values and beliefs provides a significant anchor for system development regardless of the challenges faced. For example, responding to a series of

fire setting incidents committed by youth with emotional disturbance, Westchester County, NY system leaders brought together mental health, juvenile justice and fire department personnel to develop a community-based response that would meet the individual needs of these youth in a less restrictive and more clinically appropriate way.

2. **Translate shared beliefs into shared responsibility and shared action**. In doing so, system leaders can cultivate specific opportunities for partners to take collaborative action as a strategy to empower change and achieve value-based outcomes. For example, private non-profit mental health agencies in Marion County, IN physically moved mental health staff to centrally located interagency care coordination teams so they could contribute therapeutic services to children and youth being served by multiple public agencies including education, juvenile justice, and child welfare. These staff worked as key members of the interagency teams, but remained on the payroll of their home agencies.

3. **Recognize that opportunities for action related to systems change are not linear.** Planning is an important component of system implementation, but system implementers must take advantage of unanticipated opportunities to leverage systems change when and where they occur. For example, realizing that their outcome and cost data showed significant savings resulting from their integrated care coordination unit, system leaders in Region 3, NE convinced funders to reinvest dollars saved into an early intervention care coordination program. This response to an unanticipated opportunity was not part of their strategic plan but aligned well with broader SOC goals.

4. **Know that being concrete does not mean being static.** Being concrete about values and intent of systems of care allows stakeholders to be flexible in system response and proactive in system development. For example, faced with high numbers of youth served out of state and

in restrictive settings, system leaders in Hawaii developed a menu of appropriate evidence-based practices and guidelines for implementation through contract providers. This facilitated the return of children and youth to services in their home communities and established a broad array of potential services allowing the system to individualize services and supports for children and families. In addition, ongoing quality improvement data supported their ability to periodically assess and modify the types and dosage of evidence-based practices needed in individual communities.

5. **Structural change, without a solid anchor in values and beliefs, rarely has the sustained positive impact that SOC implementers seek.** Establishing an interagency governance body is a common structural change made in systems of care. When SOC values are not shared across members, activities requiring shared responsibility and action are impeded. System leaders work diligently to promote values and beliefs in younger and less experienced staff to minimize the impact of retirement and other forms of attrition. For example, Placer County, CA initiated formal training in SOC values and beliefs for future governance members to mitigate the impact of these transitions.

6. **The system emerges from the individual choices and actions of stakeholders throughout the system**. This includes family members, youth, front-line staff, and community partners. To support and reinforce stakeholder actions that are in keeping with SOC values and principles, system partners provide ongoing SOC training to a broad array of stakeholders. SOC values are then made concrete for stakeholders by embedding small actions into day-to-day work. For example, in keeping with the SOC value of being strengths based, trainings, interagency meetings, family team meetings, governance meetings that make up a system of care frequently begin with a discussion of “strengths.”

### Closing the Loop on System Learning

The SSM framework requires integrating conceptualizations of systems change into real world application in order to complete the learning cycle. For CSSI, this required disseminating research findings in real time and in such a way that supported a link between research evidence and action. The research team employed a multi-level dissemination strategy initially grounded in community action (Hodges & Ferreira, 2010b). Building upon site-based reports intended for local reflection and advocacy, dissemination was expanded to state and national policy and practice audiences as well as the research community as cross-site findings were incorporated. The trajectory of research dissemination included the site-based reports, nationally disseminated issue briefs, invited national trainings and development of a community workbook based on study findings, the use of findings in graduate and in-service curricula in children's mental health, and peer-review publications that include a book chapter and journal special issue. Although CSSI did not track specific uses of the conceptual model in community-level systems change initiatives, wide dissemination of CSSI products is indicated by documented web-based downloads that includes 45,826 downloads of site-based reports and 41,484 downloads of issue briefs (for more information see http://rtckids.fmhi.usf.edu/cssi/default.cfm).

## Conclusions and Next Steps

This paper focused on systems thinking and the use of SSM to develop a conceptual model of systems change that is based on strategies undertaken by stakeholders in established systems of care. The research team found that SSM offered a useful construct for investigating systems change resulting in a model that can be applied broadly by system implementers to better understand the interdependencies and the shifting system boundaries inherent in systems of care. Although the findings of this study indicate that systemic change is not step-wise in a

linear sense, the preeminence of establishing value-based persuasion and shared expectations over implementing structural change does suggest the importance of prioritizing stakeholder actions. SSM is particularly useful in that it offers an alternative to discrete checklists of interventions and sets of rules for systems change that imply that change is a linear function in which certain actions yield predictable system results.

The conceptual model presented in this paper identifies key components of the systems change process in systems of care and clarifies the relationships among these components. The value of SSM and systems thinking is that it allows SOC stakeholders to focus on the whole of system transformation while maintaining attention to the component parts of their intended change. In doing so, systems thinking provides structure to ideas for change that directly link stakeholder experiences of the current service system to a concrete vision of transformation and improved outcomes. Systems thinking also helps stakeholders identify strategic opportunities for change and supports a concrete transition from ideas to actionable steps. Ultimately, systems thinking allows stakeholders to use information in a way that provides flexibility and responsiveness to local conditions and supports learning over time. This grounding in learning is, perhaps, the most valuable aspect of SSM and systems thinking.

Although the research team tracked the dissemination of research findings related to the conceptual model, the study design did not include tracking how communities put these findings to practical use in their systems change initiatives or the results of such efforts. We strongly believe that continued research examining the *processes* of systems change, in particular practically useful explorations to how change occurs, is important to a variety of complex community initiatives including systems of care. Continued research and evaluation focused on the circumstances, contingencies, and actions that support and impede systems change is an

important area of inquiry for systems of care and would be well served by community psychology's inter-disciplinary partnerships and community-engaged approaches.

## References

Agar, M. (2004). We have met the other and we're all nonlinear: Ethnography as a nonlinear dynamic system. *Complexity, 10*(2), 16-24. doi: 10.1002/cplx.20054

Baxter, B. (2007, February). How a shared definition for system of care supports family involvement. In S. Hodges (Chair), *Featherless bipeds: How definitions impact system implementation*. Symposium conducted at the 20th Annual Research Conference: A System of Care for Children's Mental Health: Expanding the Research Base, Tampa, FL.

Baxter, B. (2010). For families, actions speak louder than words. *Evaluation and Program Planning, 33*(1), 39-40. doi: 10.1016/j.evalprogplan.2009.05.011

Bickman, L., & Hoagwood, K. (2010). Special Issue: Making the real world ideal. *Administration and Policy in Mental Health and Mental Health Services Research, 37*(1-2).

Brogan, M. (2007). Building evaluation using the system of care concept. In S. Hodges (Chair), *Featherless bipeds: How definitions impact system implementation.* Symposium conducted at the 20th Annual Research Conference: A System of Care for Children's Mental Health: Expanding the Research Base, Tampa, FL.

Capra, F. (1996). *The web of life: A new scientific understanding of living systems*. New York: Anchor Books.

Capra, F. (2002). *The hidden connections: Integrating the biological, cognitive, and social dimensions of life into a science of sustainability.* New York: Doubleday.

Center for Mental Health Services. (2000). *Family guide to systems of care for children with mental health needs*. Retrieved from http://mentalhealth.samhsa.gov/publications/allpubs/Ca-0029/default.asp

Cervine, D. (2007, February). Defining interagency collaboration through a common understanding of systems of care. In S. Hodges (Chair), *Featherless bipeds: How definitions impact system implementation*. Symposium conducted at the 20th Annual Research Conference: A System of Care for Children's Mental Health: Expanding the Research Base, Tampa, FL.

Checkland, P. (1999). *Systems thinking, systems practice*. Chichester: John Wiley & Sons Ltd.

Child Adolescent and Family Branch. (2006). *Helping children and youth with serious mental health needs: Systems of care.* Retrieved from http://systemsofcare.samhsa.gov/newinformation/docs/SOCfactsheet.pdf.

Cook, J. R., & Kilmer, R. P. (2010). Defining the scope of systems of care: An ecological perspective. *Evaluation and Program Planning, 33,* 18-20. doi: 10.1016/j.evalprogplan.2009.05.006.

Cook, J. R., & Kilmer, R. P. (this issue). Systems of care: New partnerships for community psychology. *American Journal of Community Psychology*.

Day, C., & Roberts, M. C. (1991). Activities of the child and adolescent service system program for improving mental health services for children and families. *Journal of Clinical Child Psychology, 20,* 340-350.

Felix v. Cayetano Consent Decree (1993). Civil No. 93-00367-DAE, United States District Court for Hawaii.

Foster-Fishman, P. G., & Behrens, T. (2007). Systems change reborn: Rethinking our theories, methods, and efforts in human services reform and community-based change. *American Journal of Community Psychology, 39*(3), 191-196. doi: 10.1007/s10464-007-9104-5

Foster-Fishman, P. G., & Droege, E. (2010). Locating the system in a system of care. *Evaluation and Program Planning, 33*(1), 11-13. doi: 10.1016/j.evalprogplan.2009.04.001

Foster-Fishman, P., Nowell, B., and Yang, H. (2007). *Putting the system back into systems change: A framework for understanding changing organizational and community systems.* American Journal of Community Psychology, 39, 197-215. doi: 10.1007/s10464-007-9109-0

Friedman, R. (2010). Real change in the real world: An achievable goal. *Administration and Policy in Mental Health and Mental Health Services Research, 37*(1-2), 154-159. doi: 10.1007/s10488-010-0271-6

Guest, G., & MacQueen, K. M. (2008). *Handbook for team-based qualitative research*. Walnut Creek, CA: AltaMira Press.

Hernandez, M., & Hodges, S. (2003). Building upon the theory of change for systems of care. *Journal of Emotional and Behavioral Disorders*, 11(1), 19–26. doi: 10.1177/106342660301100104

Hoagwood, K., Burns, B., Kiser, L., Ringeisen, H., & Schoenwald, S. (2001). Evidence-based practice in child and adolescent mental health services. *Psychiatric Services, 52*(9), 1179-1184.

Hodges, S., & Ferreira, K. (February 5-6, 2009). *Leveraging change in your system of care: Findings from case studies of system implementation*. Training facilitated at the Comprehensive Community Mental Health Services for Children and Their Families Program New Communities Strategic Planning Meeting, Gaithersburg, MD.

Hodges, S., & Ferreira, K. (2010a). Special Issue: Systems of care. *Evaluation and Program Planning, 33*(1).

Hodges, S. & Ferreira, K. (2010b). *Strategies for Accelerating Research Dissemination: Relationships and Potential Impact*. Poster presented at the 3rd Annual NIH Conference on the Science of Dissemination and Implementation: Methods and Measurement. Washington, D.C.

Hodges, S., Ferreira, K., Israel, N., & Mazza, J. (2006a). *Leveraging change in the Hawaii system of care: Site report for case studies of system implementation*. Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, Department of Child & Family Studies. Available: http://rtckids.fmhi.usf.edu/rtcpubs/study02/HawaiiSiteReports-2007.pdf

Hodges, S., Ferreira, K., Israel, N., & Mazza, J. (2006b). *Leveraging change in the Placer County California children's system of care: Site report for case studies of system implementation.* Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, Department of Child & Family Studies. Available: http://rtckids.fmhi.usf.edu/rtcpubs/study02/PlacerCountySiteReport-2007.pdf

Hodges, S., Ferreira, K., Israel, N., & Mazza, J. (2006c). *Leveraging change in the Santa Cruz County California children's system of care: Site report for case studies of system implementation*. Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, Department of Child & Family Studies. Available: http://rtckids.fmhi.usf.edu/rtcpubs/study02/Santa_Cruz_Site_Report_2007.pdf

Hodges, S., Ferreira, K., Israel, N., & Mazza, J. (2007). *Leveraging change in the Region 3 behavioral health services Nebraska system of care: Site report for case studies of system implementation.* Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, Department of Child & Family Studies.

Hodges, S., Ferreira, K., Israel, N., & Mazza, J. (2008). *Leveraging change in the Westchester County, NY system of care: Site report for case studies of system implementation.* Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, Department of Child & Family Studies.

Hodges, S., Ferreira, K., Israel, N., & Mazza, J. (2009). *Leveraging change in the Marion County Indiana system of care: Site report for Case Studies of System Implementation.* Tampa, FL: University of South Florida, The Louis de la Parte Florida Mental Health Institute, Department of Child & Family Studies.

Hodges, S., Ferreira, K., Israel, N., & Mazza, J. (March 2007). *Featherless bipeds: How definitions impact system implementation*. Symposium presented at the 20th Annual Research Conference: A System of Care for Children's Mental Health: Expanding the Research Base, Tampa, FL.

Hodges, S., Ferreira, K., Israel, N., & Mazza, J. (2010). Systems of care, featherless bipeds, and the measure of all things. *Evaluation and Program Planning*, 33, 4-10. doi: 10.1016/j.evalprogplan.2007.11.002

Hodges, S., Ferreira, K., Rotto, K., & Alfreds, M. (March 2009). *Research in real world settings: Rapid ethnography as community-based participatory research*. Topical discussion at the 22nd Annual Research Conference: A System of Care for Children's Mental Health: Expanding the Research Base, Tampa, FL.

Katie A. v. Bonta (2002). Case No. CV02-5662 AHM, United States District Court for the Central District of California.

Knitzer, J. (1982). *Unclaimed children: The failure of public responsibility to children and adolescents in need of mental health services*. Washington, DC: Children's Defense Fund.

LeCompte, M. D., & Schensul, J. J. (1999). *Designing & conducting ethnographic research* (Vol. 1). Walnut Creek, CA: Altamira Press.

Miles, M., & Huberman, M. (1994). *Qualitative data analysis: an expanded sourcebook*. Thousand Oaks, CA: Sage Publications.

Peirson, L. J., Boydell, K. M., Ferguson, H. B., & Ferris, L. E. (2011). An ecological process model of systems change. *American Journal of Community Psychology, 47,* 307-321. doi: 10.1007/s10464-010-9405-y

Plsek, P. E., & Greenhalgh, T. (2001). Complexity science: The challenge of complexity in health care. *British Medical Journal, 323*(7313), 625-628. doi: 10.1136/bmj.323.7313.625

Research and Training Center for Children's Mental Health. (2004). *Case Studies of System Implementation: Holistic Approaches to Studying Community-Based Systems of Care: Study 2*. Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, Research and Training Center for Children's Mental Health.

Rosenblatt, A. (1998). Assessing the child and family outcomes of systems of care for youth with serious emotional disturbance. In M. Epstein, K. Kutash, & A. Duchnowski (Eds.), *Outcomes for children and youth with behavioral and emotional disorders and their families* (pp. 329-362). Austin, TX: PRO-ED.

Rosie D. v. Romney (2006). Civil Action No. 01-30199-MAP, United States District Court for the District of Massachusetts.

Rotto, K., & McIntyre, J. (2010). Evolutionary drift in systems of care development. *Evaluation and Program Planning, 33*(1), 21-23. doi: 10.1016/j.evalprogplan.2009.05.007

Senge, P. (1990). *The fifth discipline: The art & practice of the learning organization.* New York: Doubleday.

Silverman, M., Ricci, E. M., & Gunter, M. J. (1990). Strategies for increasing the rigor of qualitative methods in evaluation of health care programs. *Evaluation Review, 14*(1), 57-74. doi: 10.1177/0193841X9001400104

Sterman, J. D. (2002). All models are wrong: Reflections on becoming a systems scientist. *System Dynamics Review, 18*(4), 501-531. doi: 10.1002/sdr.261

Stroul, B. (1983). *Child and adolescent service system program: Concept paper*. Rockville, MD: National Institute of Mental Health.

Stroul, B. A. (1993). *Systems of care for children and adolescents with severe emotional disturbances: What are the results?* Washington, DC: Georgetown University Child Development Center.

Stroul, B. A., & Blau, G. M. (Eds.). (2008). *The system of care handbook: Transforming mental health services for children, youth, and families*. Baltimore: Paul H. Brookes.

Stroul, B. A., & Blau, G. M. (2010). Defining the system of care concept and philosophy: To update or not to update? *Evaluation and Program Planning, 33*(1), 59-62. 10.1016/j.evalprogplan.2009.06.003

Stroul, B. A., Blau, G. M., & Friedman, R. (2010). *Updating the system of care concept and philosophy*. Washington, DC: Georgetown University Center for Child and Human Development, National Technical Assistance Center for Children's Mental Health.

Stroul, B. A., Blau, G. M., & Sondheimer, D. L. (2008). Systems of care: A strategy to transform children's mental health care. In B. A. Stroul & G. M. Blau (Eds.), *The system of care handbook: Transforming mental health services for children, youth, and families* (pp. 3-23). Baltimore: Paul H. Brookes.

Stroul, B., & Friedman, R. M. (1986). *A system of care for severely emotionally disturbed children & youth*. Washington, DC: CASSP Technical Assistance Center, Georgetown University Child Development Center: U.S. Dept. of Education, Office of Educational Research and Improvement, Educational Resources Information Center.

Stroul, B., & Friedman, R. M. (1994). *A system of care for children and youth with severe emotional disturbances* (Rev. ed.). Washington, DC: CASSP Technical Assistance Center, Center for Child Health and Mental Health Policy, Georgetown University Child Development Center.

The President's New Freedom Commission on Mental Health. (2003). Achieving *the promise: Transforming mental healthcare in America.* Final report. (DHHS Publication SMA-03-3831). Rockville, MD: The President's New Freedom Commission on Mental Health US Department of Health and Human Services.

U.S. Department of Health and Human Services. (1999). Mental health: A report of the Surgeon General. Chapter 3: Children and mental health. Rockville, MD: Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health.

U.S. Department of Health and Human Services. (2010). *Cooperative agreements for the Comprehensive Community Mental Health Services for Children and Their Families*

*Program Request for Applications (RFA) No. SM-10-005*. Washington, DC: Substance Abuse and Mental Health Services Administration, Center for Mental Health Services.

Von Bertalanffy, L. (1968). *General system theory: Foundations, development application*. New York, NY: George Braziller, Inc.

White, L. (2000). Changing the “whole system” in the public sector. *Journal of Organizational Change Management, 13,* 162-177.

Yin, R.K. (2003). *Case study research: Design and methods, Vol. 5* (3rd ed.). Thousand Oaks, CA: Sage Publications, Inc.

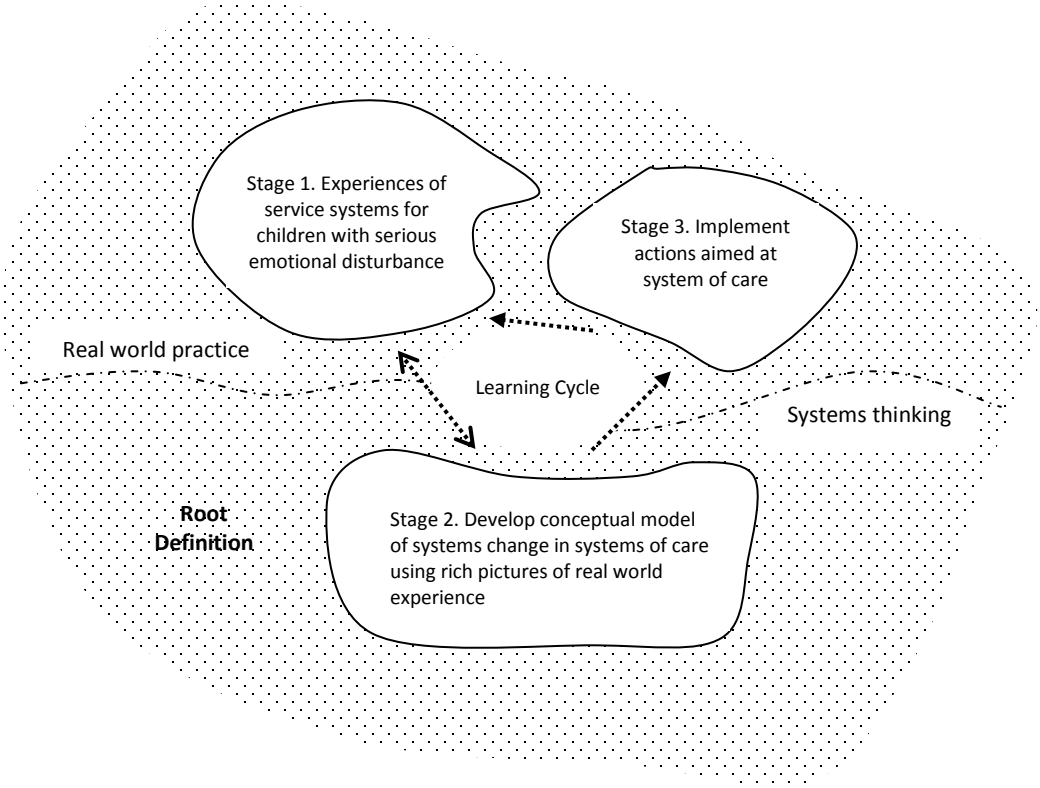


*Figure 1.* Soft Systems Methodology process applied to systems of care.

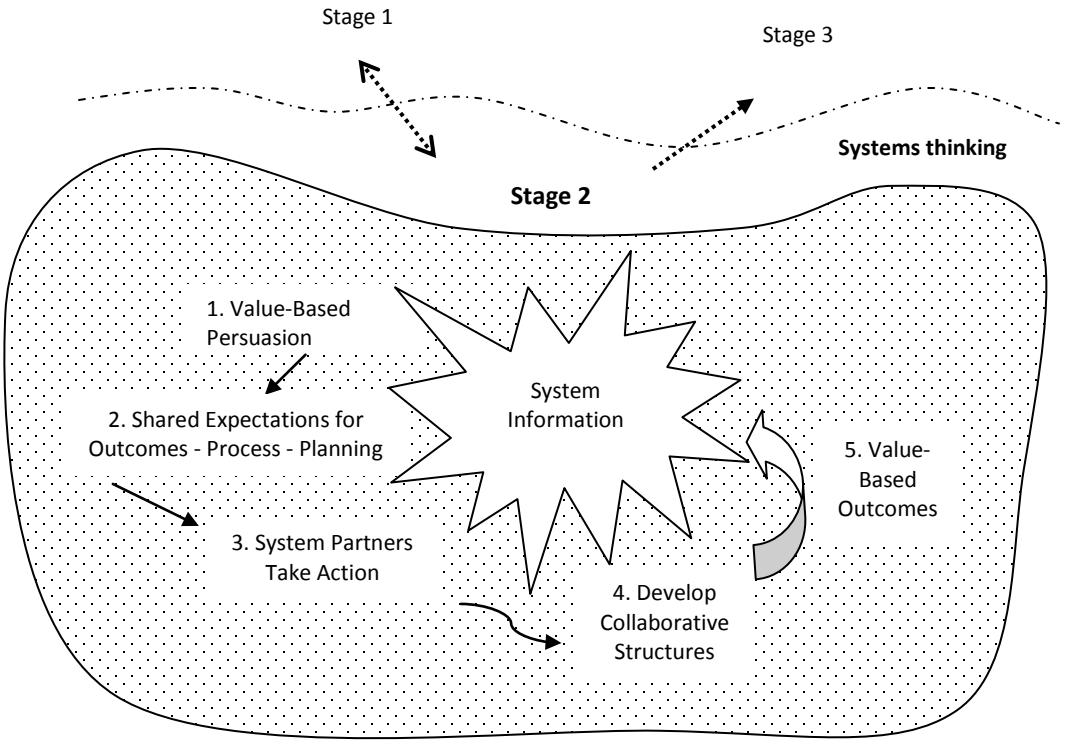


*Figure 2.* Conceptual model of systems change in systems of care.