

SYSTEMS CHANGE THEORY AND PRACTICE: A BRIEF REVIEW AND PRACTICAL INSIGHTS

A discussion paper
about finding better
ways to improve child
and family wellbeing

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We acknowledge the Traditional Owners of Country throughout Australia and recognise the continuing connection to lands, waters and communities. We pay our respects to their elders – past, present and emerging – and thank them for their wisdom, forbearance and spirit of sharing. We celebrate that the lands on which we study and work have always been places of teaching, research and learning, and acknowledge the important role Aboriginal and Torres Strait Islander people play within the community.

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The Paul Ramsay Foundation's mission is to break cycles of disadvantage in Australia. We focus on the most stubborn barriers to change, where multiple cycles of disadvantage collide and experiences of disadvantage persist across generations.

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Introduction

For people and organisations interested in child and family wellbeing, the study of systems is increasingly relevant. Researchers and practitioners are gaining interest in systems theory as they seek to learn more about how systems operate, interconnect and function – particularly in ways that enable children, families and communities to thrive. Where children and families are not thriving, are disadvantaged or have experienced trauma, the evidence suggests that systems thinking can develop a shared understanding of how to create a more supportive and effective system of care. Systems thinking is also helping to find solutions that address the root causes of challenging conditions that prevent life-long health and wellbeing.

Inherently, systems change is not easy, so this discussion paper was prompted by the need to better understand what principles and combination of actions can create systems change when a system is not operating optimally. Reviewing different theories and perspectives can help researchers and practitioners to think about how to improve outcomes for children, families and communities.

This discussion paper does not set out to be prescriptive or exhaustive. Perspectives and theories about systems change are extensive, and decades of work has informed modern systems change approaches. Therefore, this paper offers a brief summary of recently published literature and key theories. It includes several case studies of programs and organisations to illustrate how they have applied theory. For those seeking a deeper dive into systems thinking and change, we have included links to references and other relevant resources, including guiding questions.

This discussion paper is divided into three sections to answer core questions that can be informed by the literature:

1. What is systems change theory?
2. What are systems change approaches?
3. How are systems change approaches being evaluated?

What is systems theory?

Key points

- Systems are individuals, groups, organisations and institutions that influence and coordinate the actions of the system and the environment in which the system operates.
- Systems are typically complex and dynamic.
- Understanding what systems are, and who is in a system, supports researchers and practitioners to understand how to create positive systems change.
- Systems change involves critically examining and reframing ways of thinking about a problem and what desirable changes or solutions mean.
- Systems change initiatives require complex, long-term approaches, with partnerships and intermediaries leading and facilitating the change.
- Change occurs when organisations take responsibility for forming collaborative relationships with others in ways that drive transformation.
- Shared learning and reflexivity are important outcomes of the systems change process.
- Systems change leaders, stewards and intermediaries play vital roles.

Systems have always been part of the ways people live, work, play and learn. A simple definition of a system is ‘a group of components or subsystems that integrate and function together in order to achieve a specific goal’.¹ The components may be simple or complex, and how they function as a whole may be positive (making the system work well) or negative (making the system inefficient and ineffective). Systems theory helps to explain what is happening in the system. It draws from various fields – biology, psychology, sociology, economics and more – and is applied in a wide range of disciplines – including social work, management and engineering. In short, this interdisciplinary theory provides a framework for thinking about how individual parts of a system interact, including their inputs, outputs, boundaries, and the means and mechanisms by which they tend to maintain their integrity.² Systems theory assumes there are multiple systems, or subsystems, and it is the interactions between these systems that create a larger, more complex system. Subsystems are made up of structures, processes, policies and partnerships. The effectiveness of these systems often creates robust discussion, as conditions and relationships are always changing and are difficult to evaluate.

Exploring systems requires a ‘bird’s eye view’ of how people work, how they connect and how the influences around them impact on equity, equality and other

social, economic, environmental and cultural determinants of wellbeing. With this view, society can be described as a ‘superorganism’ made up of individuals, groups, organisations, and institutions who influence and coordinate behaviours and actions.³ How these parts of the organism interact and work together forms the basis and architecture of the system’s functioning.

As mentioned, systems theory relates to many disciplines and theories that have increased researchers’ knowledge of how systems operate. For example, Dynamic Systems Theory developed from perspectives within physics, biology and cognitive sciences to help explore the often-changing internal dynamics of systems. Dynamic Systems Theory helps clinicians to ask questions such as, ‘Does the intervention work?’, ‘For whom?’, ‘Under which conditions?’.⁴ Cantor and colleagues⁵ explain how this theory is used by educators, researchers and policy makers to promote ‘whole-child development’. They note it is a:

... collaborative approach to integrating health services and programs more deeply into the day-to-day life of schools to ensure that all students are healthy, safe, engaged, supported, and challenged. It also means acknowledging that physical conditions, emotional states, and social experiences (i.e., relationships) have a direct impact on learning and that student success and wellbeing must be conceptualised and measured to include more than academic skills and knowledge acquisition (p. 2).

This more systemic perspective is a significant shift in thinking and practice in child development, as it means policies, funding, programs and curricula must accept the complexities and systems required to support a child to develop, learn and thrive. This shift requires the ability to apply systems thinking in our daily work.

Systems thinking provides an approach to determine roles, relationships, patterns of communication and authority amongst members of a system. Systems thinking is not new with some researchers arguing the theory stems from complexity theory, or cybernetics which is a study of control systems and information flow.^{6, 7}

During the 1990s many theorists and practitioners became more interested in how complexity and systems thinking relate to organisations and strategy. There are currently many supporters of systems thinking as both a theory and a practice, as it is considered essential to a more deliberate and designed method of creating multistakeholder partnerships to address cultural, societal and environmental problems. As this section emphasises, systems thinking places priority on understanding the ‘whole’ system, rather than focusing exclusively on individual components.⁸ As a result, systems thinking can improve the policies, systems interventions, and partnerships between organisations working to improve community outcomes and enhance community capacity.⁹

Osher and colleagues¹⁰ believe that a lack of systems thinking leads to failure to consider the context in which children grow and learn, and their relationships with adults and peers in their lives. Increasing evidence shows that social, emotional, cognitive, linguistic and academic development are deeply interconnected, suggesting that more effective creative approaches could be found to reduce learning and social problems. A child's cultural background and the importance of cultural identity should also be considered. For example, in an Australian context, this means that meaningful engagement with Aboriginal and Torres Strait Islander families and communities includes considering the role of language and culture. Affirming the experiences and distinctive cultural values of the communities in which organisations work is an important part of systems thinking and change.¹¹

The importance of culture is also critical when examining the strength and failure of systems. Aboriginal and Torres Strait Islander people and Indigenous communities have strong connections to family, kinship and community supports wellbeing, but "when the harmony of these interrelations is disrupted, Aboriginal and Torres Strait Islander ill health persists" ¹² (p. xxiv). For this reason, a holistic approach that recognises the importance of connection to country, culture, and spirit is more likely to result in culturally appropriate and safe, health and community care systems.¹³

The literature shows how systems thinking can be exciting yet challenging, as judgements need to be made about the boundaries of a system. Decisions to be made include what is inside and important to the system, what is outside or less important to how the system functions, and what emergent properties the system creates. Emergent properties are behaviours that occur when the components of the system interact and work together.¹⁴ For example, Whyle and Oliver¹⁵ suggest that understanding the emergent properties or characteristics of health systems involves thinking about "hardware" elements (structures, organisations, and technologies) and software elements (people, relationships, cultures and values)' (p. 422). They state that social, political and economic contexts can influence a system, while health systems can influence social values. If the system needs to be more effective, then Meadows and Wright¹⁶ suggest that systems thinking can help organisations discover key leverage points – where a small amount of change can cause a large change.

Applied systems thinking literature shows that using systems theory and systems thinking to address inequality and poor outcomes for children and families is vital. In particular, systems thinking means organisations, funders and policy makers avoid fragmented funding or discrete and short-term solutions. Instead, they are more likely to foster long-term collaboration and strengthen partnerships that build the capacities of the system as a whole. They can use systems thinking to more effectively and appropriately evaluate interventions and community programs.¹⁷

Ultimately, the system works more efficiently and effectively, with policies, interventions and evaluations avoiding a hit-and-miss approach.

As an example, Durham and colleagues¹⁸ used a systems thinking approach in a study designed to understand ways to address middle ear disease (otitis media) in Aboriginal and Torres Strait Islander children in Queensland, Australia. The process involved surveys and interviews within the community to elicit a diverse range of views about the problem and the biological, environmental and community factors that contribute to otitis media in Aboriginal and Torres Strait Islander children. They also conducted a document review to identify current activities, policies, strategies and evaluations. Their goal was to pinpoint strengths and barriers within the system so that actions could be taken to improve both the system and outcomes for children. The authors used the Interventions Level Framework (ILF),¹⁹ which draws on 12 leverage points or places to intervene in a system described by Donella Meadows.²⁰ These leverage points are ‘where a small shift in one thing, can produce big changes in everything’. The ILF has five mutually exclusive levels of intervention: 1) paradigm, 2) goals, 3) system structure, 4) feedback and delays, and 5) structural elements. The ILF framework helped the researchers to identify which combination of activities, at which level, held the potential to contribute to wider system change. A key discovery was that the strategic goal needed to be truly multi-sectoral and relevant to the entire system, ensuring that everyone felt willing and able to engage collaboratively and analyse which activities were most likely to have a direct impact on individuals and the system as a whole.

Another example of how using systems thinking is changing policy and practice is the Rippel Foundation, a US health philanthropy organisation. In 2007, the foundation moved away from giving grants for individual projects to become a foundation devoted to channelling nearly all its philanthropy into ReThink Health. This initiative was founded with input from systems thinkers and scholars, and seeks to produce better health and wellbeing for all through systems change. In 2018, Rippel teamed up with 17 philanthropic partners to create a second system change initiative, called FORESIGHT.²¹ The Rippel Foundation explains that its Theory of Change focusses on four change levers: 1) be an incubator for ideas at the frontiers of health innovation, 2) team with pioneering stewards to generate and model new norms and practices, 3) bring stewards together to provoke new thinking and action, and 4) share our ideas to build critical momentum for lasting change.²²

In summary, Angheloiu and Tennant²³ provide a useful explanation of why systems thinking is important: ‘The field of systems thinking provides approaches towards a holistic understanding of natural and social systems behaviour and the emerging properties arising from their interrelations over time’ (p. 4).

Systems change theory

A range of theoretical perspectives consider when systems change occurs best, who should lead systems change and what processes can create long-lasting, effective systems change. This section explains key theories that have the potential to support systems change, particularly within the child and family sector.

Hodges and colleagues²⁴ provide a definition of systems theory for those working with children and families:

... (a) system of care is an adaptive network of structures, processes, and relationships grounded in system of care values and principles that provides children and youth with serious emotional disturbance and their families with access to and availability of necessary services and supports across administrative and funding jurisdictions.

This definition has been widely cited in the literature and was expanded by Levinson-Johnson and Wenz-Gross²⁵ to amplify its purpose as being:

... to provide insight into stages of system of care development that communities experience as they work toward system reform (p. 56).

Knowing the systems that impact child and family health and wellbeing is crucial to understanding *how* practitioners can transform systems; overcome hurdles, barriers and blockages; and create systems change. Birney²⁶ notes that if systems change is ‘the (continual) emergence of new patterns of organising or system structure,’ then knowing what these new patterns or structures are might help us know the kind of transformation we are seeking (p. 752).

Evidence for how system change and transformation are achieved continues to develop in the literature, so it is useful to consider a wide variety of approaches and applications that have contributed towards systems change theory. For example, in climate change systems work, Kosmikai²⁷ has defined five leverage points needed for change in climate systems:

1. *Societal goals* to lead and motivate transformation
2. *Structural goals* to address the underlying causes of the problem
3. *Key parameters* to redirect the whole system with critical changes
4. *Information flows and feedback loops* to facilitate change and help overcome obstacles
5. *Flows, constants and other parameters* to optimise a transformed system.

Systems change in the education sector has received a lot of attention in recent years, as the sector increasingly recognises there are better ways to support students’ learning and development. Fullan²⁸ suggests that, to achieve better

outcomes, the education system needs to review the way people working within the system:

- View young people as potentially competent co-creators, capable of amazing learning, inquiry and co-development
- Incorporate neuroscience to improve the quality of learning and student wellbeing
- Become an individual good as well as a social good
- Engage families and communities
- Help students define and pursue their own learning in the context of crucial individual and societal issues.

Fullan argues that the education system is so dysfunctional that change is needed at every level:

It is time for education to go out on a limb and become a change maker for the individual and the social good (p. 661).

In their book *Opportunity for All: A Framework for Quality and Equality in Education*, O'Day and Smith²⁹ explain that systems change in the education sector must embrace continuous improvement and collaborative inquiry to create a culture of growth. In a paper on the same topic, O'Day and Smith³⁰ suggest that systems change must explore and understand what conditions are constraining or preventing change, such as working conditions and students' basic needs (for food, shelter, mental and physical health), which must be met if educators want students to take full advantage of the learning opportunities in even the best of schools. This means that educators need to collaborate with organisations such as social services, health, early childhood and tertiary institutions to help create the systemic change required.

The research shows that understanding how systems operate is crucial to uncovering potential actions and solutions. Underlying complex or wicked problems – such as homelessness, child safety, disease prevention and poverty – are what Bassuk and colleagues³¹ refer to as social tragedies, caused by a series of structural or systemic failings. To address these 'failings', it is important to first identify what change might look like and where to look for change opportunities. This can be discovered by critically examining and reframing ways of thinking about what is problematic and what desirable changes or solutions mean. It involves challenging assumptions and looking for levers that will create transformation, not just improvement (even though incremental change may be required to achieve transformation).³²

Leading change

Leadership and management theories vary and there is no consensus in the literature about the best approach for leading systems change. This discussion, therefore, highlights some important principles to consider – particularly principles concerning who leads or facilitates change (that is, the change agent) and the process taken to catalyse systems change.

As established in the first section of this review, systems change aims to address complex social challenges and the ways in which parts of a system work together. Research suggests that because relationships, funding, policies and practice are often entrenched and normalised, changing the system can require advocacy and reimagining how things could work differently. Systems advocacy is a concept that has been described by Fenech and Lotz³³ as seeking to meet the rights and interests of children and the profession by influencing government policies and provisions, including funding and programs, legislation, and industrial awards and agreements (p. 20). Fenech and Lotz discuss the sense of justice and duty that people and organisations feel often motivates them to engage in system change work. This suggests leaders and intermediary organisations may need to empower people and communities to be courageous when pursuing justice and systems change.

Dreier and colleagues³⁴ emphasise that systems change is a monumental task and not short term. Systems change implies a redesign of how people think and act in the system – with new shared goals and processes and, in some cases, changed narratives and attitudes towards problems and normal ways of working. This means that leading systems change requires catalysing, enabling and supporting the change process, combined with coalition building and systems insight to mobilise innovation and action. The key elements of systems leadership described by Dreier and colleagues are shown in Figure 1.

THE KEY ELEMENTS OF SYSTEMS LEADERSHIP

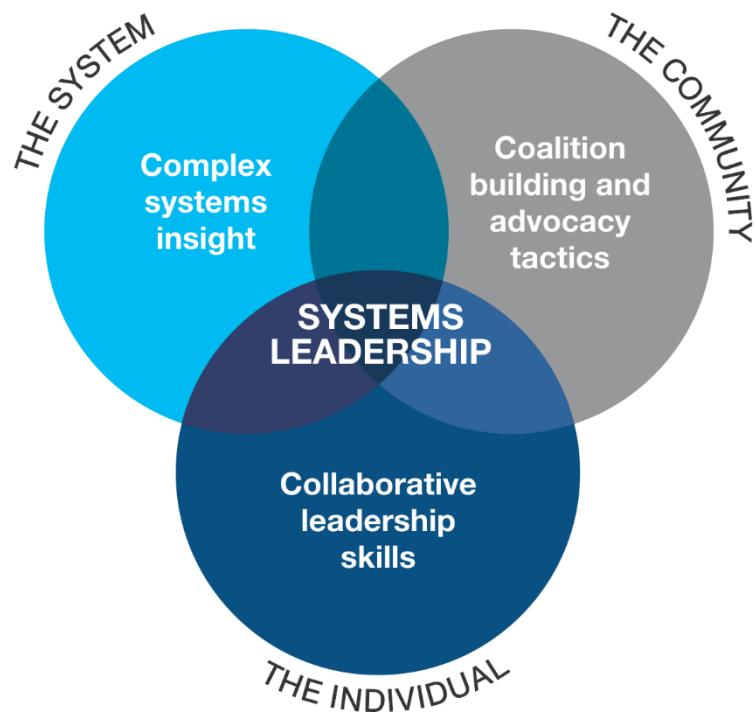


Figure 1: Key elements of systems leadership, as outlined by Dreier and colleagues.³⁵

The literature highlights the role of stewards or intermediary organisations as entities willing to forge partnerships to purposefully create a shared vision, develop a strategy, monitor progress and report back (including reporting about whether, how and why changes do or do not come about).³⁶ Importantly, intermediaries can support actors within the system to reposition themselves as change agents, where change is already occurring and the desire for change is high, or where multiple forces are converging, amplifying, or resisting change and this provides an entry point for change.³⁷

Studies show what transformational leadership behaviours look like. They encourage a consultative and participative culture where knowledge, shared learning experiences and reflexivity are exchanged within the system or social network where the change is required or taking place. These work best to engage people and improve their openness to change.³⁸ Effective leaders stimulate enthusiasm around the vision for the change. They understand system interdependencies and the importance of collaboration, accountability and

adaptability.³⁹ They build and increase the capacity for learning and collective reflexivity.

In summary, theories suggest that if change leaders encourage reflective and learning approaches, people within the system are more likely to see opportunities for change and be committed to using systems thinking to positively influence systems change.

What are systems change approaches?

Key points

- Many different approaches are being taken to shift and transform systems.
- Systems change work is collaborative and complex, and therefore difficult and unpredictable.
- Appreciative Inquiry is a theory and process that enables systems change leaders to investigate a system's strengths and opportunities for change.
- The ABLE theory provides a structured approach to enable mapping of parts of the system, its users, policies, influencing organisations and other key factors.
- The Prevention Systems Change Framework provides a tool to explore a complex system and the types of action needed to generate change.
- The Empower Action Model highlights the multilevel approach needed to improve child protection and health systems to address child adversity.
- Systemic design integrates systems thinking and human-centred design to provide systems change leaders with a suite of tools and principles to understand systems and co-create solutions to complex problems.

A review of the literature by Carey and colleagues⁴⁰ identified that systems change approaches include 'hard' systems methodologies, which refer to quantitative dynamic model building (that is, system dynamics) and 'soft' systems methodologies, which refer to qualitative, action-based research methodologies (that is, critical systems heuristics). They argue that hard, data-driven approaches can provide decision-makers with concrete evidence about where and how to act but are considered more transactional than transformational. Soft systems methodologies, in contrast, are seen as useful for exploring complex phenomena. Checkland's book *Systems Thinking, Systems Practice*⁴¹ describes these soft systems change approaches as a process and set of principles and tools to help gain knowledge about a problem and understand the interactions between different parts of the problem.

Appreciative Inquiry

The systematic discovery process of listening to key stakeholders and focussing on strengths to find ways to improve performance, conditions and systems is described by some researchers as Appreciative Inquiry (AI). Inspired by the soft systems methodology, AI was developed in the early 1990s as a way for researchers and practitioners use to understand and theorize about a complex problem or system, then plan to enact and sustain transformation.⁴² It is also used

by evaluators who want to ask questions about the positive and negative characteristics of a system.

Stabros and colleagues⁴³ describe AI:

At its heart, AI is about the search for the best in people, their organizations, and the strengths-filled, opportunity-rich world around them. AI is not so much a shift in the methods and models of organizational change, but AI is a fundamental shift in the overall perspective taken throughout the entire change process to 'see' the wholeness of the human system and to 'inquire' into that system's strengths, possibilities, and successes (p. 97).

AI is continually evolving to provide researchers and practitioners with guiding principles about the inquiry process and how it can be used to facilitate change and evaluate outcomes at an individual, team, organisational or community level.

An example is a study that was conducted to identify refugee children's health/wellbeing strengths and needs, and the barriers and enablers to accessing services while preparing for primary and secondary school in a low socioeconomic multicultural community in Australia.⁴⁴ The study by Baker and colleagues used qualitative approaches, such as conversations and active listening, to understand the experiences of refugee parents and the service providers working with them. These experiences were then analysed to explore the challenges the families and services faced, and the strengths families utilised to help them optimise their children's wellbeing. The study demonstrates the importance of deep listening and empathy to uncover the wide range of challenges families face within a system. Only then can system failures be understood better, and levers (ways of improving the system) be identified.

Another example of this approach in practice is when Greenwood and Kelly⁴⁵ used AI to examine young people's experience transitioning to a new school. The study engaged a group of young people in state care and a group of adults from a small multidisciplinary team working with schools to raise educational attainment of children in care. Using an AI approach, the researchers were able to build rapport with the young people, instil in them a sense of control and ownership within the research process, and give them confidence that their views would be considered and taken seriously. As a result of this approach, the researchers were able to identify strengths and opportunities for systems change, including changes to practice that would improve outcomes for young people in care. In addition, the research concluded that school staff found AI to be a useful tool for evaluation, helping them to appreciate what they already do and identify areas for development.

ABLE Change Framework

Foster-Fishman and Watson's⁴⁶ ABLE Change Framework is another useful approach. The framework applies systems thinking, organisational change, implementation theory and comprehensive community change to enable projects to map the system and where change needs to occur. It is a participatory approach and proposes that to shift the status quo, projects should aim for small manageable wins that lead to more comprehensive and systemic changes over time. Using this approach supports action learning teams who gather and share ongoing feedback on the effectiveness of strategies and any resistance to change. The framework as illustrated in Figure 2, shows what must be considered above and below the line. Foster-Fishman and Watson argue that effective systems change projects must simultaneously pursue above and below the line work and attention to these two dimensions should be balanced.

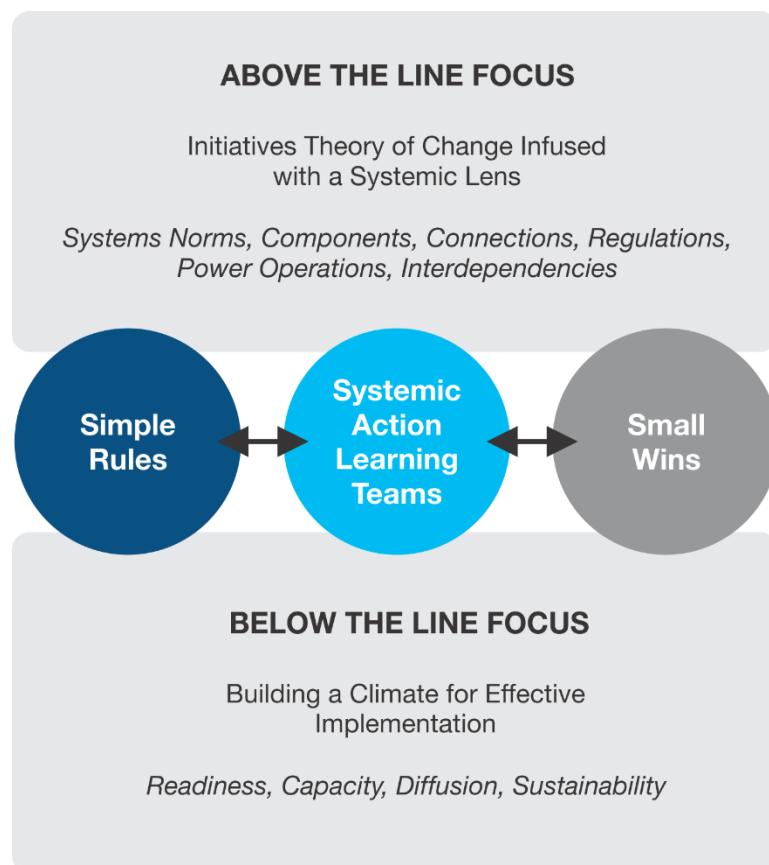


Figure 2: The ABLE change framework described by Foster-Fishman and Watson.⁴⁷

Foster-Fishman and Watson's paper offers a good case study about a project that used the framework over 3 years to address a fragmented and under resourced system. Service providers worked together to understand their community "through a systemic lens, to infuse systems thinking into their theory of change, and to build a climate for system transformation by addressing system readiness, capacity, diffusion, and sustainability." (p. 504). The case study suggests that action learning teams were necessary to identify key leverage points and gain system-wide commitment to strategies aimed at disrupting the status quo. A qualitative methodology was used to evaluate the systems change project, and some of the outcomes identified were improved relationships, trust and communication amongst leaders and service providers who were working more collaboratively and understanding issues from multiple perspectives.

The Prevention Systems Change Framework

ABLE theory was further developed by Pescud and colleagues⁴⁸ who explored how developing a theory of systems change could guide chronic disease prevention research. Their study developed the Prevention Systems Change Framework (PSCF). While the framework focuses on chronic disease, the learnings and approaches are translatable across different systems change fields.

Pescud and colleagues describe key rules that resulted from their study, including:

- Engaging diverse perspectives
- Thinking systemically
- Incubating change
- Effectively implementing change
- Adapting quickly
- Pursuing social justice.

The PSCF argues for using systemic action learning and ensuring local leaders are committed to the change by clearly communicating the need for change, how change is feasible and what is required to provide ongoing feedback.

An example of where these principles have been applied in child and family support work is described by Malone and Canavan.⁴⁹ They explain that systems thinking informed the design and evaluation of Ireland's Programme for Prevention Partnership and Family Support (PPPFS) undertaken by the organisation Tusla. Their EPIS Framework (exploration, preparation, implementation and sustainability) is an evidence-based systems approach that includes systems thinking, culture, climate, leadership and implementation science. They used an overarching research question to help them evaluate the program: 'Is the organisational culture and practice of Tusla and its partners changing such that services are more integrated, preventative, evidence informed and inclusive of

children and parents? If so, is this contributing to improved outcomes for children and their families?' (p. 7).

The PPPFS incorporated a focus on parents and children; the overall service delivery system; structures, policies, procedures, roles and budgets; culture and climate; and the capacity of Tusla and its stakeholders in relation to prevention, early intervention and family support (p. 7). A comprehensive evaluation design collected and analysed data from many different beneficiaries. This provided evidence about what levers worked to improve the system. The authors identify the key levers as system capacity building, enhancing the competence of practitioners, continuous training and a child-centred approach (which was embedded across structures, procedures and practices).

Empower Action Model

Srivastav and colleagues⁵⁰ developed the Empower Action Model. This theory suggests childhood adversity can be addressed by taking a social determinants of health perspective, by understanding that adult health and social outcomes are the product of the complex interplay of experiences in early childhood and inequities. The theory argues that toxic stress, traumatic experiences and childhood adversity require a multilevel approach that alters a child's socioenvironmental context to promote healthy development.⁵¹ The Empower Action Model is a social ecological model that acknowledges the multiple levels of influence on a child's health. It focuses on the importance of positive inclusive environments, resilience, cultural identity, brain growth and socio-emotional competencies. It identifies these as protective factors that play a role in buffering the effects of childhood adversity. The Empower Action Model is summarised in Figure 3.

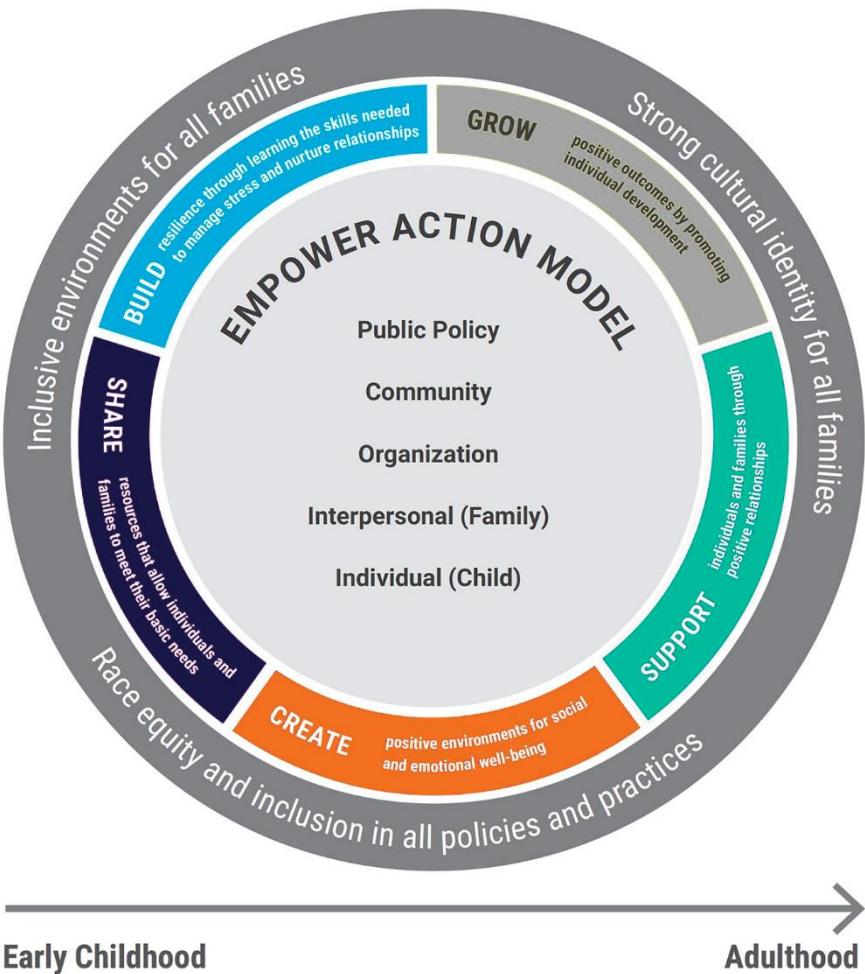


Figure 3: Empower Action Model as described by Srivastav and colleagues.⁵²

This theory and model have been applied in circumstances where organisations across a system want better outcomes and wellbeing for children. For example, The Children's Trust of South Carolina⁵³ used the theory to engage coalitions across the state who are all invested in improving child wellbeing. They used Adverse Childhood Experiences (ACE) trainers to increase knowledge and understanding of the model, with a goal to build resilience and relationships at the family, organisational, community and public policy levels.

Using the model, the Children's Trust of South Carolina empowered the coalitions to:

- Build inclusive environments for all families
- Grow strong cultural identities of all families
- Support race equity and inclusion in all policies and practices.

The researchers plan to measure the process and outcomes associated with implementing the model to develop best practices for promoting health and wellbeing through coalitions.⁵⁴

Systemic Design

Approaches that support collective reflexivity are systemic design methods. This is a human-centred and design-oriented action research process that helps researchers and systems change leaders to co-create solutions to complex problems. Jones⁵⁵ writes that ‘systemic design is inherently suited to design and plan interventions that shift systems and practices to the future outcomes preferred by stakeholders’ (p. 39). The 10 principles of systemic design include appreciating complexity, agreeing with stakeholders the reasons why change is needed, identifying critical relationships and feedback methods, and continuously adapting based on what is being discovered and learnt.⁵⁶

For child and family services interested in how systems can help children thrive, Jones’s systemic design principles can help systems change leaders design a system where people experience ‘flourishment’ – that is, living their best life. As health, education and community services become more social and interdependent, an inclusive, human-centred approach can help organisations to carefully consider whether the system is supporting a child or family primed for flourishing.⁵⁷

As an example, Vink and colleagues⁵⁸ use the systems design approach to provide a list of ways to cultivate awareness of taken-for-granted social structures and uncover unspoken, shared beliefs and norms about the ways people and systems work. The tools the authors recommend include:

- The Iceberg Framework, which helps people explore patterns of behaviour, supporting structures, and mental models (values, beliefs and assumptions) that underlie problems
- Staging Aesthetic Disruption, which explores unsettling or disruptive experiences to prompt people to reflect on the social structures they are enacting
- Story Unwriting, which uses a story to help people identify the unwritten rules, norms, roles, and beliefs illuminated within the story.

These activities, and other activities that can be used by groups within the system, can make the invisible aspects of the system more visible and conscious. The activities make it easier to reflect on systems, critique them as a group and create a shared vision for action and change.

Vink and colleagues⁵⁹ suggest that people:

... must see themselves as embedded and entangled in the systems they are trying to change. Although reflexivity of the systemic self emphasizes individual awareness, people often need support from others with diverse perspectives to recognise their own role in reproducing and reshaping the social structures they usually take for granted (p. 255).

How are systems change approaches being evaluated?

Key points

- Appreciative Inquiry is a highly relational approach to systemic and structural change and evaluation. It is participative and collaborative, and the process helps stakeholders discover solutions to complex problems by interacting in appreciative, affirming ways.
- Systems Evaluation Theory offers a set of principles that guide evaluators through a set of interdependent and purposively sequenced steps. These steps use systems thinking to help explore many aspects of the system being investigated and evaluated, including how it functions and where the system can be improved.
- Intermediary organisations play an important role when leading and facilitating systems change. They use a variety of evaluation methods to monitor and track their work, which should be about using the levers that create systems change.
- Design Driven Evaluation uses a variety of Design Thinking tools and strategies to empathise with those in a system, then ideate and prototype possible solutions to system problems. It is creative and innovative, with all stakeholders considered part of the design and evaluation process.

Typically, evaluation theory and methods have been developed for evaluating individual programs and policies, not for initiatives that intend to change systems.⁶⁰ However, several authors offer theories and frameworks for systems change evaluation, and these can require different perspectives or methods that engage multiple stakeholders and provide progressive feedback and learnings on systems change approaches. When combined as part of overall project management, evaluation can report on short-term, medium-term and long-term outcomes, which can then be integrated into planning and implementation cycles.

In this section, we provide a brief overview of some relevant approaches that are particularly suitable for those working in the child and family sector.

Appreciative Inquiry

MacCoy⁶¹ explains that Appreciative Inquiry (AI) is an evaluation methodology that can involve a cooperative search for the best in people, their organisations and the world around them. AI has been applied in a wide variety of settings, including evaluating systems change work. AI uses storytelling as a means for learning the

perceptions of stakeholders using a four-stage process of discovery, envisioning, co-constructing and sustaining. MacCoy describes it as ‘a highly relational approach to systemic and structural change that is about asking questions and engaging people in learning about and co-constructing the change they want’ (p. 105). This four-stage process, called the 4-D model, is illustrated in Figure 4.

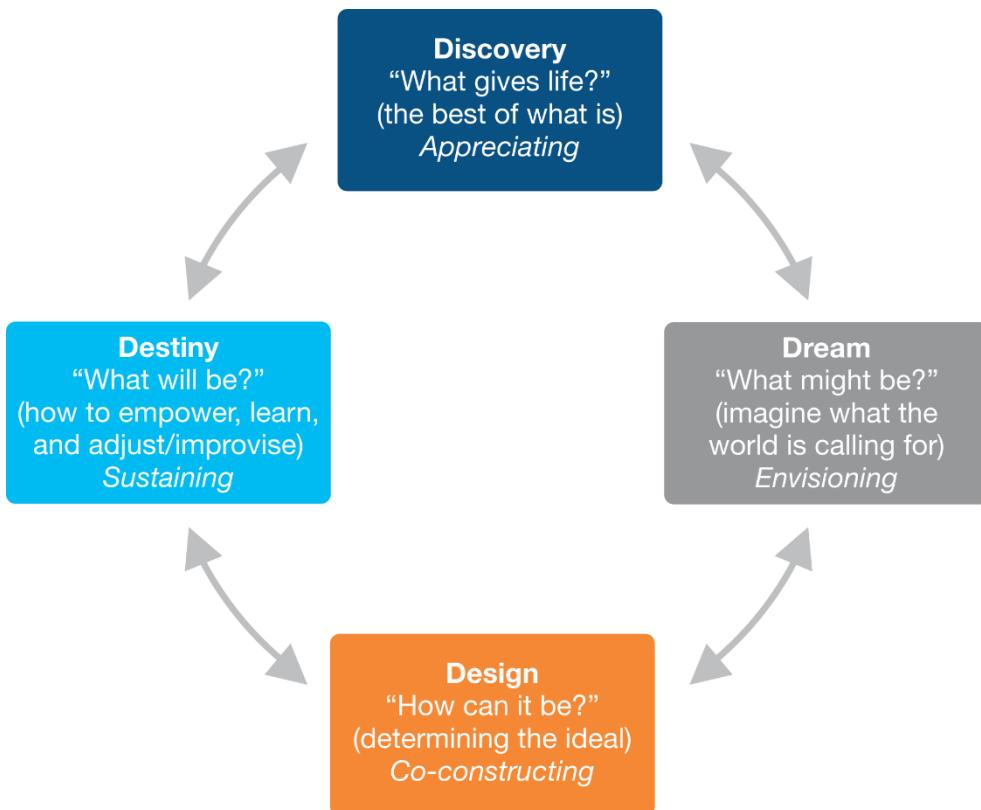


Figure 4: The 4-D Model of Appreciative Inquiry, originally described by Cooperrider and colleagues, as discussed by MacCoy.⁶²

A good example of AI in practice comes from the work of Leeson and colleagues,⁶³ who used AI to help them understand the experiences of Aboriginal and Torres Strait Islander women in the criminal justice and prison system. The study used AI to complement the Aboriginal and Torres Strait Islander tradition of ‘yarning’. Evidence suggests the criminal justice system is harming rather than helping incarcerated Aboriginal and Torres Strait Islander people, so elevating the voice of those who have experienced the system is important if the system wants to find ways to reform and achieve better outcomes for Indigenous people and communities.

Leeson and colleagues describe how the study used yarnning as a form of data collection, allowing knowledge to be shared between the participant and researcher. AI enabled the researchers to collect insights about participants' positive and negative experiences and consider why these occurred. The approach was culturally appropriate and safe, and helped to elevate the voice of key stakeholders while implementing and evaluating systems change work.

Systems Evaluation Theory

Ralph Renger has more than two decades of experience in evaluation and solving evaluation problems. He is known for advancing evaluation methods, such as logic modelling, and for designing evaluation tools and adapting methods in ways that make program improvements. His System Evaluation Theory (SET) represents a breakthrough in developing evaluation methods that better capture the reality in which organisations work.⁶⁴

SET is designed as a practical framework for evaluators to meet the challenges of system evaluation. Three guiding principles support evaluators in developing interdependent and purposively sequenced steps:

1. It is necessary to define the system before evaluating efficiency and effectiveness. This includes defining the system boundaries, subsystems, processes, relationships, feedback mechanisms, attributes, inputs and common goal(s)
2. System efficiency is a necessary prerequisite for optimal system effectiveness
3. System effectiveness is evaluated after system efficiency.

Renger argues that the guiding principles are essential: evaluators must first determine the system boundaries, system components, and roles and relationships of system stakeholders. Once that is complete, evaluation must explore the within and between subsystem processes to understand system efficiencies and failures. Renger notes the importance of information technology in impacting modern day system efficiency.

In a 2017 paper, Renger⁶⁵ provides an example of the theory applied in practice, in the evaluation of cardiac care systems. Systems thinking provided a theoretical rationale for defining the system boundaries, components and relationships, with SET providing practical guidance to undertaking this evaluation.

Partnerships-based transformational change

The partnerships-based approach has been used extensively, and is clearly described in a paper by Williams and Smurthwaite.⁶⁶ The authors explain that the Climate Investment Funds (CIF) were established in 2008 to scale up finance for climate change mitigation and resilience, filling urgent financing gaps and demonstrating the viability of emerging solutions. In 2017, CIF established the Transformational Change Learning Partnership (TCLP) to facilitate an evidence-based learning collaboration on transformational change in climate action. The overarching goal is low-carbon, climate-resilient development.

Williams and Smurthwaite describe four dimensions of transformational change, which are informed by existing literature and developed through research and consultation. The four dimensions include:

1. Relevance: The strategic focus, design and nimbleness of initiatives to enable transformation
2. Systemic change: Fundamental shifts in system structures and functions
3. Scale: Contextually large-scale transformational processes and impacts
4. Sustainability: The robustness and resilience of changes.

This work offers useful insights for the child and family sector. The paper suggests that system change leaders should monitor meaningful progress on activities to overcome barriers. For example, monitoring should address new institutions/capacity, enhanced governance structures, new policies/regulations, new planning processes and new financing structures. Furthermore, evidence should be collected about initiatives that influence decisions and behaviours, such as changes in budgetary allocations, increased awareness, changes in consumption or access patterns, improved affordability and increased technology availability.

In addition, Williams and Smurthwaite argue that, if evaluation is going to play a meaningful role, organisations and individuals must:

- Act with audacity and accept risk, disappointment and failure
- Shed the notion of evaluator independence
- Hold the terms ‘evaluator’ and ‘evaluation’ lightly
- Embrace the messiness and nonlinearity of reality and transformational change
- Accept that the ideal information is not available
- Utilise all tools in the evaluation and learning toolbox
- Bring in more voices and perspectives, beyond traditional stakeholders.

Evaluation for Intermediaries

Mark Cabaj has played a major role promoting the emerging practice of developmental evaluation in Canada, and is an experienced policy maker, philanthropist, and activist who focuses on community and complexity, social innovation, strategic learning and evaluation.

In early 2021, he was asked by the Paul Ramsay Foundation to explore how Australian intermediary organisations could evaluate their activities and results. Intermediaries are organisations that support, influence and complement the efforts of 'social innovators' (such as service delivery groups, grassroots activists, social enterprises, post-secondary institutions and policy makers) already working to reduce disadvantage. There are generally four types of field-building intermediaries: capability specialists, evidence-action labs, place-based backbones and field catalysts.⁶⁷

Leaders from these organisations worked together to explore the role and impact of 'intermediaries' in impacting social change and a paper was written called 'Evaluating the Results of Intermediary Organisations'⁶⁸ about the findings, and to provide guidance on evaluating the role of intermediaries.

In the paper, Cabaj highlights the important role of intermediary organisations play supporting organisations to have the human and technical capacity to design and implement useful evaluations which helps them learn, adapt and continuously improve. This means that intermediaries need to strengthen their own evaluation processes and capacity. Cabaj's work offers valuable insights and recommendations for intermediary organisations working in the child and family sector. Cabaj suggests intermediaries should:

- Employ a 'wide angle lens in order to understand all the effects, from intended to unintended results of the intermediary'
- Use mixed methods approaches to data collection
- Identify their contribution not attribution to any changes.

Cabaj also suggests that evaluating the results of an intermediary should be based on the degree of change expected, ranging from incremental to transformative. Intermediaries should group their activities and results as a portfolio, rather than as a list of scattered projects, and allow multiple stakeholders to assess the significance and/or merit of the results.

In summary, the recommendations from Cabaj's work include encouraging intermediaries to develop ambitious goals and have several different types of evaluation and reporting loops. Intermediaries need to develop a robust evaluation capacity that uses mixed methods (quantitative and qualitative) reporting. At the

same time, organisations funding intermediaries should avoid placing unnecessary evaluating and reporting demands on these organisations.

Design-driven Evaluation

Cameron Norman⁶⁹ developed an approach to design-driven evaluation, proposing that 'we owe it to our future professionals, health system administrators, patients and the public that the next generation of health leaders are familiar with systems thinking if we have any hope of seeing the systems change that is being demanded from us all' (p. 1088). Norman argued that if systems thinking is to make an impact on health practice, research and policy, it should be part of health professionals' formal education. Systems thinking helps to create better evidence for action, apply new lenses to the evidence already available in health and medicine, and has a natural fit within health promotion.

Norman's later work addresses systems thinking and ethics in public health,⁷⁰ improving conservation practice with principles and tools from systems thinking and evaluation,⁷¹ and supporting systems transformation through design-driven evaluation.⁷²

In recent work, Norman⁷³ explains that systems change is an approach to wicked problems, and evaluations help programs learn from complexity and make adaptive strategic decisions. He argues that a design-driven approach to evaluation supports the process of creating and implementing new knowledge or actions into a setting to produce value (innovation). Norman writes:

A design-driven approach to evaluation (DDE) is one that views a product, service, or policy (which we might consider together as 'the program' for the purposes of simplicity) as a holistic, intentional set of interactions that take place within a system context (p. 151).

Norman proposes an approach that reframes program evaluation as both a service and product to aid system change. It recognises the critical role of learning adaptive strategies, as it sees program evaluation as both an enabler and an outcome. Consequently, evaluation is embedded into a program's development throughout its life cycle, suggesting that staff need capabilities and resources to integrate feedback and data collection into their ongoing program design work.

Design-driven evaluation can play a number of roles when designing and evaluating systems change. Design-driven evaluation:

- Supports the demarcation and establishment of boundaries and identification of perspectives
- Helps identify areas within a system that are causes and consequences of systemic change

- Supports change in dynamic systems and shapes strategy
- Provides evidence and support for the shaping and enactment of a vision of a world that program developers want, rather than playing the traditional role of focusing on what is before them.

Norman provides a case study that describes the evaluation of an arts-based intervention in Canada that aimed to reduce social stigma and ethno-cultural, racial or religious prejudice and promote inclusion, understanding and cultural diversity. The design thinking process involved identifying stakeholders and relevant measurement tools. Different prototypes were then developed using visual sketching and digital mock-ups of potential scenarios that ‘storyboarded’ the evaluation. The final prototype was created into a full-scale design and implemented to gather feedback about both the program and the evaluation process.

Organisations working in the child and family sector could use this design approach. It can be embedded into programs by staff once they learn design thinking and the process of empathising, prototyping and testing potential solutions as a more sustainable means to innovating. Norman suggests that this approach ensures that “learning is an outcome, regardless of what kind of other impact the program generates” (p. 156).

Case studies

These case studies provide examples of organisations and initiatives that are putting theory into practice.

Systems change leadership approaches

Catalyst 2030

Catalyst 2030⁷⁴ is a global movement with a vision of a world where social change innovators achieve the UN's Sustainable Development Goals by 2030 through an unprecedented mobilisation of social entrepreneurs, partners and resources. It is based around three objectives:

1. Develop an enabling environment for social entrepreneurs to flourish
2. Catalyse collaborative action
3. Facilitate a systems change learning ecosystem.

The Catalyst 2030 systems change approaches refers to the Scaling Solutions Toward Shifting Systems Initiative, which suggests that systems change is a combination of two factors: 1) shifting, reconfiguring and transforming, and 2) intentional process and design, purposeful interventions, and conscious, deliberate approaches such as growing the number of people who think and act systemically. The Catalyst 2030 framework recommends that outcomes of systems should include addressing the root causes of system failure to achieve just, sustainable, and compassionate societies.

Housing First Canada

Housing First Canada⁷⁵ is a useful example of a theory-based approach to systems change. The initiative spans 18 Canadian communities and is underpinned by the ABLE theory. The initiative has adopted broad principles to support systems change, which include setting boundaries for systems, defining the problem that needs to be changed, identifying relevant stakeholders and organisations, training and supporting strategies to change stakeholders' attitudes and practices, and understanding the interaction of different elements of the homeless service delivery system.

Evaluation included focus groups, interviews and analysis of the field notes from meetings and conversations between staff, regional stakeholders and researchers. Major themes identified through the evaluation included changes in system capacity, changes in the coordination of system elements, and collaboration

among system stakeholders at the individual and organisational levels. Policy influences on local systems change were noted at both the federal and provincial levels, and were perceived as contributing to the rapid implementation of Housing First programs across Canada.

Partnerships in Employment

Partnerships in Employment⁷⁶ was instigated to address the disparity of employment amongst American young adults. System barriers were identified as:

- Lack of collaboration between key players
- Inadequate emphasis on community employment
- Family factors
- Education system factors.

The project focussed on policy change, resolving systemic barriers and enhancing collaboration. Six American states participated, based on a partnership model. The drivers for change were identified through internal research as leadership, interagency collaboration, strategic goals and operating policies, financing and contracting, performance measurement, training and technical assistance, and service innovation. An independent evaluation of the model identified the most effective approaches to employment systems change included monthly network meetings, communities of practice, regular webinars, a centralised website, and sharing big picture learnings and key issues with an action focus.

The key lessons learnt from the model included:

- The importance of a backbone organisation
- A long-term view (5-year projects)
- The need for capacity building policy
- Integration of initiatives
- Linking local implementation and state policy
- Communication requires investment
- The creation of a state policy framework.

W.K. Kellogg Foundation

As part of a multi-system change initiative for chronic disease prevention, the W.K. Kellogg Foundation⁷⁷ funded a series of capacity building and systems thinking initiatives. One example was the Food and Fitness Initiative, which asked diverse people to use collective thinking and applied systems thinking to design the overall initiative. Successful implementation depended on transforming systems in

communities and applying systems thinking at every level. Training sessions, workshops and consultations were used to introduce a variety of systems thinking frameworks in an effort to infuse systems thinking into grantee sites, as well as the overall initiative.

Interviews were used to evaluate whether the approach created any change, and an analysis of feedback was used to inform communities undertaking systems change work and provide feedback to evaluators and funders about what was most effective. Some of the lessons identified include:

- Relationships are primary
- Community ownership is essential
- Shared vision drives change
- Systemic collective thinking results in more robust planning
- Systems thinking changes evaluation
- Slower is faster
- Invest in relationships
- Convene the community to shape a shared vision
- Engage the community at every stage
- Invest in systems thinking capacity for all
- Choose meaningful and useful indicators
- Think long term and conduct pilot projects.

Overall, the evaluation provided evidence that a systems thinking approach shifted the focus of Food and Fitness Initiative sites – away from reductionist problem-solving toward transforming systems in service of equitable access to healthy local food and safe places for physical activity for all children and families. Health indicators, food system data, sharing stories, continuous feedback and reflection all helped to change practices and inform policies.

Systems change evaluations

Alberta Family Wellness Initiative

The Alberta Family Wellness Initiative⁷⁸ has three principles behind its work: to be a knowledge entrepreneur, a catalytic convenor, and a partner to public and community systems in a learning journey. They joined a coalition with the Alliance for Strong Families and Communities, a cohort of 15 organisations from the USA and Canada, to implement and evaluate the Change in Mind Initiative, which aims to intentionally infuse brain science research findings into programs and organisations. The initiative found that, by embedding brain science principles

throughout their organisations, social sector organisations of all types and sizes can contribute to systems and policy change.

The evaluation used a developmental evaluation approach, rapid testing of program and practice innovations, and rigorous application of cohort-level and site-level theories of change. Using these approaches, it differentiated aspects of the initiative in accelerating understanding of where policies and practices need to shift for true alignment with advances in neuroscience. A mix of qualitative and quantitative data were collected, and the lessons learnt were shared to inform and support the partners to review and, if necessary, change their theory of change.

The initiative reported multiple lessons, and it is worth reviewing the report and resources. One noteworthy finding was that the change varied between the sites involved in the evaluation. Cohort convenings were identified as the best feature of the initiative, but other highly rated features included webinars, evaluation, technical assistance and learning briefs. Constraining factors that prevented more policy and systems change require more inquiry.

The Maine community-based health initiative

Communities in Maine⁷⁹ were funded to improve access to quality care, thriving in place and healthy communities, and to facilitate systems change. The evaluation design process was systems focused, developmental, adaptive and participatory. Collectively, the teams developed a series of indicators to guide the evaluation. Evaluation questions included 'How were people most affected by the health issue involved in the process?', 'What mechanisms were used to lower barriers to participation?', 'What was the perceived contribution of community engagement to observed systems changes?', and 'Which project components sustained, how and by whom?'.

A mixed methods approach was used for the evaluation, including document review, grantee meeting observations, project director surveys and interviews, case studies, and technical assistance site visits. Some of the key learnings included that pilot programs are good for testing strategies, cross-sectoral partnerships are crucial; networks matured over time with many leading to distributed leadership models, there were many different ways to engage community participation, and strong partnerships played a key role once funding ended.

Conclusion

This discussion paper offers a brief review of the current literature guiding researchers, practitioners, policy makers and funders who are interested in the power and effectiveness of using systems theory and practice. The paper highlights different theories and frameworks, which all offer valuable insights to organisations that are frustrated by a hit-and-miss, siloed approach to improving outcomes for children, families and communities.

Thus far, organisations, funders and evaluators involved in applying the theories are reporting that taking a systems approach offers insights and hope. The evidence appears to be positive for those willing to commit the time, thinking, collaboration and resources required to approach complex issues differently. A systems approach can support those looking for ways to improve a system that is slow to respond and not meeting the needs of all children. By focussing on the core principles of a systems approach – such as boundaries, relationships and how the system functions – practitioners and researchers can learn more about why systems are fragmented and unable to efficiently and effectively support all children to thrive.

This review does not recommend one particular theory or approach as the best way forward. One size does not fit all. The literature is still growing, and each year an increasing number of organisations share examples of good practice. Therefore, those working to achieve systems change must work collaboratively, in coalitions and partnerships. They must establish shared goals and values, agree on the levers they believe will create systems change in their unique situations or ‘place’, and then evaluate their work and leadership approach. In this way, they will contribute to establishing more evidence about how to foster system-wide effectiveness.

The final question is about where to start. Authors such as David Stroh⁸⁰ and William Torbert⁸¹ suggest that useful starting points include self-reflection and being vulnerable to personal transformation. This very personal approach is valuable because good intentions to improve systems are often undermined by individuals. Stroh writes that, ‘for any complex problem to be solved, the individual players all need to recognise how they unwittingly contribute to it’ (p. 23). This is a personal challenge, yet one that is important if we want to see real change.

Guiding questions

These questions are intended to help readers reflect on the theory and practice of systems change within the context of child and family wellbeing.

1. Thinking about the community in which you live and work, what supports a child to grow up healthy and thriving there? Draw a child in the centre of your page and brainstorm all the people, places and organisations involved in the child's life that support them to thrive.
2. As an example of a system, think about the child safety system. If the common goal of everyone working in the system was to keep children safe and able to reach their potential, what collaboration needs to occur and between whom? What communication needs to occur to support the system to work effectively and efficiently?
3. What are your roles and responsibilities in the system that you work within? How might systems thinking help you understand how to work more effectively?
4. Think about your own life and something you have been able to change. What were the levers for change that created the willingness, agency and power for change? What new mindset or routines do you now use to sustain the change?
5. Meadows and Wright⁸² give an example of a football team as a system with elements such as players, coach, field and ball. Its interconnections are the rules of the game, the coach's strategy, the players' communications and the laws of physics that govern the motions of ball and players. Discuss how you could use systems thinking to identify leverage points – places in the system where a small change could lead to the team winning more games.
6. Discuss your organisation's vision and goals with your team. Then discuss what external relationships and partners your organisation needs to achieve those goals. How might your organisation work more effectively within this system, so it can achieve the desired goals?
7. Imagine in a meeting someone exclaims to you 'The system is broken!'. Using an Appreciative Inquiry approach, identify questions (at least three) you could ask the person in order to explore with them their experiences and perspectives about the system they believe is broken and why.
8. You are planning to evaluate your systems change work. Review the different approaches outlined in this discussion paper and decide what the advantages and disadvantages of each approach might be.

Resources

The resources listed in this section can help you take a deeper dive into the topics and questions raised in this discussion paper. These suggestions will help you to get started. If you find other really useful resources, please let us know about them. Email your suggestions and recommendations to Ruth Knight at the Australian Centre for Philanthropy and Nonprofit Studies – acpns@qut.edu.au.

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- Wujec, T. (June, 2013). Got a wicked problem? First, tell me how you make toast [Video] TED Conferences. www.ted.com/talks/tom_wujec_got_a_wicked_problem_first_tell_me_how_you_make_toast

Courses

- Enterprise Leadership: Systems Thinking for Leaders: <https://www.qut.edu.au/>
- The Open University has courses on systems thinking: <https://www.open.ac.uk/>
- Systems Thinking In Public Health: <https://www.coursera.org/learn/systems-thinking>
- Developing a Systems Mindset: <https://www.coursera.org/learn/systems-mindset>
- Systems Thinking: Essential Concepts: www.udemy.com
- Systems Innovation: www.udemy.com
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