Creating Theories of Change

Examples are drawn from the Healthy Kids, Healthy Communities (HKHC) national program, funded by the Robert Wood Johnson Foundation (RWJF). With the goal of preventing childhood obesity, HKHC provided grants to 49 community partnerships across the United States to create healthy eating and active living policy, system, and environmental changes to support healthier communities for children and families. The program placed special emphasis on reaching children at highest risk for obesity on the basis of race, ethnicity, income, or geographic location.

Project Officers from the HKHC National Program Office assisted community partnerships in creating and implementing annual workplans organized by goals, tactics, activities, and benchmarks. Through site visits and monthly conference calls, community partnerships also received guidance on developing and maintaining local partnerships, conducting assessments, implementing strategies, and disseminating and sustaining their local initiatives. For more about the national program and grantees, visit www.healthykidshealthycommunities.org.

Transtria LLC and Washington University Institute for Public Health received funding from the Robert Wood Johnson Foundation to evaluate the HKHC national program. They tracked plans, processes, strategies, and results related to active living and healthy eating policy, system, and environmental changes as well as influences associated with partnership and community capacity and broader social determinants of health. Visit http://transtria.com/hkhc.php for more on the evaluation.

The Central California Regional Obesity Prevention Program (CCROPP), a program developed by the Central California Public Health Partnership, was the lead agency for the HKHC Central Valley Project. CCROPP is facilitated by California State University, Fresno and brought together eight public health departments, community-based organizations, and community councils to build the capacity of community residents as advocates for change in improving local food and physical activity environments. The 240-mile long San Joaquin Valley is a major agricultural region encompassing eight counties in Central California (Kern, Kings, Tulare, Fresno, Madera, Merced, Stanislaus, and San Joaquin). Residents, many of them migrant workers, are often unable to enjoy the abundance of food grown all around them, as Central Valley grows the bulk of the nation’s fruits and vegetables. There are over 70 ethnicities represented in the Central Valley and over 100 languages spoken. Outside of the City of Los Angeles, the region has the largest concentration of Latinos in the United States. The North Valley, close to Oakland and San Francisco, adopts African American culture and leadership, whereas, the South Valley culture and leadership is mostly Hispanic. People living here have among the lowest per capita income, highest rates of poverty, and lowest educational attainment in the state; all are factors contributing to pronounced rates of overweight and obesity, particularly among youth. The coalition strengthens the capacity of county public health departments to collaborate with communities to improve local environments for healthy eating and physical activity. It also has built a regional infrastructure to leverage resources, skills, communication, and policy efforts for other health improvement activities. Visit http://www.cultivalasalud.org/ for more on this partnership.

The following sections provide two examples of approaches to map out the partnership’s theory of change, including:

1. Logic Model: The logic model was designed in the first year of the program to increase common understanding of how the partnership’s structure and function increased readiness and capacity to implement the intervention strategies. Partners’ anticipated that the leadership training and support from partnership members were likely to have positive impacts on individual-level outcomes, such as knowledge and attitudes. Likewise, the policy, system, and environmental changes were likely to have positive influences on community-level outcomes, such as social norms and use of new facilities and resources. Individual- and community-level outcomes were also likely to be mutually reinforcing.

2. Causal Loop Diagram: The causal loop diagram was designed in the third year of the program to introduce systems thinking at the community level to identify factors in the system and how the system influences policy and environmental changes to promote healthy eating and active living as well as to prevent childhood obesity. “Systems thinking” represents a range of methods, tools, and approaches for observing the behaviors of a system (e.g., family, community, organization) and how these behaviors change over time. Community partners and residents participated in group model building sessions to create the diagrams (see the Healthy Kids, Healthy Communities Group Model Building Facilitation Handbook, www.transtria.com/hkhc).
This logic model identified short-term, intermediate, and long-term community and system changes for a comprehensive evaluation to demonstrate the impact of the strategies to be implemented in the community. Partnership, capacity building, healthy eating, and active living strategies of California’s Central Valley Site included:

- **Powerful People: Building Leadership for Healthy Communities**: Partners and residents collaborated to design a leadership development training program and curriculum with the goal of enabling those who have traditionally been marginalized to speak for themselves. Training focused on basic skills needed to help residents become change agents, including cultural-, linguistic-, and literacy-appropriate content for lower-income communities of color.

- **Active Transportation**: Leaders advocated for Safe Routes To School in Stockton, Ceres, and Merced, resulting in improved pedestrian and bicycling access around two schools. The partnership also implemented a Walking School Bus and secured additional funding to improve pedestrian and bicycling environments.

- **Parks and Play Spaces**: HKHC partners improved safety and park amenities (e.g., installed lighting, planted trees, repaired swings) in Bakersfield and secured joint use agreements in Fresno, Fairmead, and Stockton between neighborhood schools and the community.

- **Healthy Eating**: Graduates of the Powerful People program established school farm stands in Fresno and Ceres, solidified Electronic Benefit Transfer (EBT) acceptance at a flea market in Merced, increased access to fruits and vegetables at a corner store in Stockton, and started community gardens in Pixley and Bakersfield.
This causal loop diagram (CLD) illustrates a system of policies, environments, local collaborations, and social determinants in South Central Valley, California that influence healthy eating, active living, and, ultimately, childhood obesity. This system and the dynamics within the system are complicated with many different elements interacting. The CLD provides a way to visualize all the elements of the system and their interactions, with a focus on causal relationships as opposed to associations. In order to digest the depth and complexity of the diagram, it is helpful to examine the subsystems of influence, including: healthy eating policies and environments (red), active living policies and environments (blue), health and health behaviors (orange), partnership and community capacity (purple), and social determinants (green).

Participants worked together and with facilitators to develop this causal loop diagram. The words represent variables of quantities that can increase and decrease over time; these variables are influenced by other variables as indicated by the lines with arrows. The arrows represent causal relationships – this is what is known about the system and how it behaves – and notations (i.e., “+” signs, “-” signs) characterize the causal influence as moving in the same direction (+) or opposing directions (-). Through these notations, specific types of causal relationships, or feedback loops, underlying the behavior of the dynamic system, can be identified to provide insights into what is working or not working in the system to support the intended outcomes. In system dynamics, the goal is to identify and understand the system feedback loops, or the cause-effect relationships that form a circuit where the effects “feed back” to influence the causes.

One feedback loop is: community leadership → crime/ violence → poverty → hopelessness → community awareness, engagement, and involvement → community leadership. This loop can be translated in two ways: 1) a “virtuous cycle”, in which increasing community leadership leads to decreasing crime/ violence, and, in turn, decreases in poverty followed by decreases in hopelessness, then reduced hopelessness leads to more community awareness, engagement, and involvement circling back to increase community leadership; and 2) a “vicious cycle”, in which less community leadership results in more crime/ violence causing more poverty, and, in turn, more hopelessness, then greater hopelessness leads to less community awareness, engagement, and involvement circling back to further reduce community leadership. There are many other feedback loops interacting simultaneously to influence or to be influenced by community leadership as well. Some variables may increase community leadership while other variables limit it.
Determining the feedback loop or loops that dominate the system’s behavior at any given time is a more challenging problem to figure out, and ultimately, requires the use of computer simulations.

The causal loop diagram helps to understand the behavior of the system affecting health in South Central Valley, California and to stimulate greater conversation related to their theory of change, including places to intervene in the system and opportunities to reinforce what is working.