Background

- Community partner: Butler County Community Resource Center (CRC), a non-profit organization in Poplar Bluff, Missouri, in the rural Midwest of the United States
- Among many initiatives, the CRC leads the Butler County Wellness Council, which promotes physical activity, nutrition, and healthy habits, e.g., community gardens
- Wellness Council members represent many sectors and actors, e.g., parks and recreation, the local health department, University of Missouri Extension, individual community gardeners, etc.
- All are invested in the community garden, but there is a diversity of opinion about garden priorities, policies, goals, and visions according to Council members’ sectors
- The system of community gardens recently underwent changes, i.e., relocating a garden and acquiring new funding, which was an opportunity to develop a shared vision for the future of community gardening in Poplar Bluff
- Project Goal: Use a Group Model Building (GMB) approach to facilitate a shared understanding of the diversity of visions and priorities for the gardens, and how those goals are interrelated.

Co-design Process for Workshop Development

- Conducted preliminary online mini-workshop with CRC leadership to introduce partners to the GMB method, deepen our relationship, assess feasibility of GMB, learn about the garden, and begin to identify key themes
- Worked with CRC leadership to identify key design features to ensure GMB workshop success & account for needed COVID-19 adaptations
- Key stakeholder interviews were conducted to get to know Wellness Council participants, identify current mental models, build trust & investment in the success of the workshops, gather input on workshop design, and identify any potential risks.
- Interviews revealed important missing context and a realization that part of the problem was a lack of shared understanding of the past and present of community gardening. This indicated a coordination problem (Hovmand 2014, Figure 1)

Figure 1. Different Types of Systems Problems

| Learning problems: Problem persists because stakeholders need to better understand both the problem & how complex systems work |
| Transformation problems: Problem persists because there is no solution within the current structure of the system |
| Coordination problems: Problem persists because of conflict among actors, e.g., no consensus or shared vision |
| Analysis problems: Problem persists because we haven’t found the right combination of interventions yet |
| There are Multiple Solutions |
| Change the Current System |
| There is a Right/Fixed Solution |
| Keep the Current System |

Using Group Model Building to Develop a Shared Mental Model of Community Gardening in Rural Missouri

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Figure 2. Adapting GMB Workshop Based on Input from Stakeholders

Key Insights from Stakeholder Interviews

- There are actually one community garden, not two as initially described
- Unawareness of each other’s garden sites
- No hypotheses about each other’s goals/visions
- Conflicting mental models of community gardening
- Lack of awareness of multiple approaches to community gardening
- These differences and blind spots contributed to tension within the group

Workshop Adaptations

- Switched focus from success of new garden to success of community gardening in Poplar Bluff, MO
- Created an “Oral History & Education” script to get participants on the same page about the history and context of community gardening in their town
- Education on community gardening frameworks
- Timeline activity to build an oral history
- Goals of Oral History & Education script:
  - Inform council of the total number of gardens
  - Raise awareness of different approaches to community gardening
  - Normalize difference in gardening approaches - right or wrong way?

Observations & Outcomes

- Participants identified numerous motivations for garden participation which they hadn’t mentioned in the pre-workshop interviews, indicating increased understanding of others’ goals and perspectives
- Action ideas generated by participants indicated increased understanding and acceptance that different gardens have different priorities and ways of operating, increased ability to distinguish the different roles played by the Wellness Council vs. individual community gardens, and the growth of shared priorities and vision for success at the Council-level while supporting diversity at the garden-level
- Adjusting the workshop agenda to address knowledge gaps and sources of tension among Wellness Council members allowed participants to articulate their own beliefs and work together to create a shared qualitative model that depicts the system of factors that influence the success of community gardening in Poplar Bluff
- The GMB process and qualitative modeling supported Wellness Council members in developing operational insights that they could use in monitoring & implementation planning

Figure 3. Oral History Timeline

Figure 4. Final Qualitative Model

Oral History Script and Workshop Design

- We created an Oral History & Education GMB script based on the interviews to increase the Wellness Council’s collective understanding of the network of community gardens in their community and its history (Figure 2)
- The added script resulted in a timeline that showed the history of the multiple community gardens in Poplar Bluff and their goals (Figure 3), and filled knowledge gaps that the Wellness Council members had about the existing system
- After this activity, participants created connection circles and CLDs, from which we produced a synthesized model that was edited by participants on Day Two. Participants then generated action ideas & implementation strategies.

Land Acknowledgement

- This work was conducted on the stolen lands of the Osage Nation, Quapaw Nation, Oglala Lakota Nation, Illini Confederacy, Otoe-Missouria Tribe, Kickapoo Tribe, Kaskaskia, and Miami Nation.
- The Indigenous people of these nations were removed unjustly by the United States government and by white settlers, and the Washington University community benefits from their removal.
- Colonization is ongoing but Indigenous people are still here, still thriving, and are leaders in systems change and public health.
- Please join us in honoring the Indigenous people and nations who have stewarded these lands.