driving the complex problem. While the construction of CLDs is well documented in the literature, it is less clear how a community can use a CLD to measure changes in a system and evaluate obesity prevention interventions after initial GMB sessions. The aim of this paper is to present how a community used a CLD to track the underlying system changes resulting from implementing a healthy eating curriculum in a school.

Method: In a regional community in Victoria, subsequent to initial GMB sessions where a community-led CLD of the determinants of obesity was developed, a one-hour GMB session ($n = 7$) was conducted to track implementation strategies. Participants brainstormed the steps to implement a healthy eating curriculum in a school and named variables impacted by each step (e.g. leaders attending a workshop impacts leaders' engagement), thereby transforming transient actions into variables. Participants then drew a CLD representing the connections between their identified variables and the resulting feedback loops. Finally, this intervention CLD was then mapped onto the initial CLD.

Results: The CLD summarising changes in the system contained eight new variables, 19 new connections, and two feedback loops. Participants expressed that this exercise helped them consider how feedback loops might inform addressing any future issues that arise related to the intervention. They also noted that identifying the underlying structure helped them to consider more deeply why implementing the healthy curriculum was successful and how they might replicate that success.

Conclusion: This study presents a promising new technique to capture interventions as feedback structure, allowing practitioners to document systems change, share their findings and strengthen their systems thinking skills to build more effective interventions.

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System dynamics modelling to increase water consumption in a community

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Introduction: The use of qualitative system diagrams to understand obesity as a complex problem is well documented in the literature, but the use of simulation modelling to support community-based obesity prevention work is less developed. Simulation modelling can be time and resource intensive; requiring expertise in modelling, extensive data collection, and ongoing input and engagement from key stakeholders who understand the problem. Despite these drawbacks, simulation offers benefits beyond what can be achieved in qualitative models, such as what if analysis for trial interventions, deeper insight into causality, and quantification of relationships. The aim of this paper is to present a system dynamics simulation model built with the input of a community in order to understand key drivers of water consumption.

Methods: Water consumption was identified as an important leverage point in an obesity prevention initiative in regional Victoria. A qualitative map of the drivers underlying water consumption was developed over a two-hour group model building session including a community working group, community members, and a representative from the local water company. A simulation model based on the qualitative map was developed with supplementary data taken from previously published obesity models and ongoing input from the working group.

Results: The model has sectors that account for marketing of sugar sweetened beverages, access to public water, habitual sugar sweetened beverage consumption, and taste of tap water in the community. The participants of the GMB expressed that the modelling was useful for clarifying the multiple contributing factors to water consumption. It also successfully engaged a representative of the local water company who expressed interest in ongoing collaboration to promote water consumption.

Conclusion: The creation of this simulation model demonstrated a novel approach to quantifying the relative importance and feasibility of leverage points in a community-based setting for a public health problem.

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