Data synthesis

What it is

Data synthesis is a process of working through diverse data sets to integrate and understand a range of elements within a local **system**. It offers an opportunity to examine both qualitative and quantitative data about the same system and to foreground what is locally meaningful and relevant.
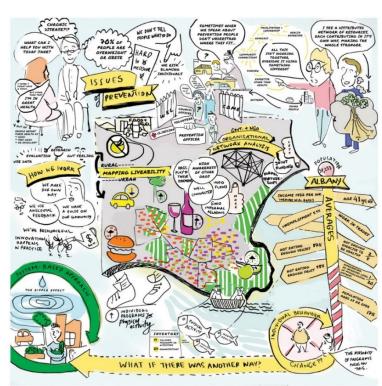
How we applied it

In Prevention Tracker, data synthesis was a two-step process. Each step was facilitated by a **systems thinking** expert. Initially, members of the research team met as a group to review and synthesise all the existing data sets. Each team member guided one source, for example the **social network analysis** or key informant interview data. The data was synthesised based on the key parts of the system[1] such as its leadership and governance and workforce. The research team used these parts of the system as lenses through which to make sense of the data. Through a day long process, we were able to draw out an agreed set of key findings about the prevention system in each community. We summarised these data into a document which was used by a professional graphic artist to create a visual summary of the various data sources and findings representing each community. See example below:

We then undertook a second round of synthesis in each community, involving the research team, members of the Local Advisory Group, and other local stakeholders. We used the visual representation to guide discussion and probe for insights.

In addition, the workshop facilitator led participants through an intense series of exercises to uncover specific issues in the local chronic disease prevention system which were perceived as problematic. By the end of the workshop in each community, the group had identified and agreed on a particular local problem in the chronic disease prevention system.

This systemic problem was recognised as having an effect on the way prevention work was carried out across the community and was keeping the system functioning in a certain way. If the problem were addressed, there would be the potential to improve the way prevention activities were undertaken across the board rather than just in specific areas like physical activity programs or healthy eating initiatives.

Acknowledgement: Graphic artist, Kirsty Moegerlein, www.kirstymoegerlein.com

What we learnt about how to use this method

The two data synthesis workshops (with the research team and then in the community) enabled us to move from a disconnected set of disparate research data sets to the identification of a higher-level systemic problem. They required a skilled and experienced facilitator to enable a systems focus to be maintained. Using a graphic representation of research data was an extremely effective way of building engagement with the process, and allowed participants (both researchers and community members) to see the information in new and interconnected ways. Critical elements of the facilitated workshops included:

- Periods of working in silence, writing comments and adding them to the wall, which allowed all opinions to be expressed rather than just those with the loudest voices or the most power in the room

- Guided questions which led participants towards new and different ways of understanding the system.

What we learnt about the system from using this method

In each of the communities, the result of the data synthesis process was the identification of a systemic problem that was inhibiting improvements in the prevention of chronic disease. Even though the communities existed in quite different contexts from each other, each one identified a bigger picture problem at the systems level. The four problems related to:

- Engagement with prevention

- Collaborative practice between agencies

- Ways of working together with each other and the community

- Leadership in the prevention space.

Where to go if you need more information

Visit our website to access a series of factsheets on the Prevention Tracker project covering topics such as group model building, key informant interviews, social network analysis, system action learning. Click on the Resources tab at: https://preventioncentre.org.au/our-work/research-projects/learning-from-local-communities-prevention-tracker-expands/

Reference

1. World Health Organisation (2007) Everybody's business: strengthening health systems to improve health outcomes: WHO's framework for action. http://www.who.int/healthsystems/strategy/everybodys_business.pdf

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Systems and solutions for better health

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