Citizen Science in Prevention Community of Practice

Using Citizen Science to Address Prevention Challenges

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Presenter

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Session overview

This session focused on findings from the Citizen Science in Prevention project, a 3-year program of work which sought to support the use of citizen science approaches in research, policy and practice for chronic disease prevention.

- Citizen science is an umbrella term for a range of activities that actively involve members of the public citizen scientists) in the research process, including in developing research questions, contributing to research design, collecting, analysing and/or interpreting data, and contributing to publication and dissemination of findings.
- There is growing interest in citizen science approaches among policy and practice stakeholders in health promotion and chronic disease prevention as a means of involving community members in identifying and resolving issues that impact health and wellbeing. However, there is a lack of information, resources and support for stakeholders looking to use these approaches within their work.
- The Citizen Science in Prevention project was co-produced with partners from four health promotion agencies (VicHealth, South Western Sydney Local Health District, the Tasmanian Department of Health and Wellbeing SA), and sought to generate practice-based insights about the feasibility, utility and sustainability of embedding citizen science within policy and practice in prevention.
- The project had three objectives: 1) to produce **new knowledge on the feasibility and impacts** of citizen science in policy and practice; 2) **build capacity** in the use of citizen science approaches amongst policy and practice stakeholders, and; 3) **establish a network** of stakeholders with an interest in citizen science.
- To address these objectives, the project comprised three key components which are summarised below:
    1. **Stakeholder-led citizen science projects:** To build capacity in the use of citizen science approaches in policy and practice, the project provided targeted support to our four partner agencies to develop and implement citizen science projects within their own contexts. A case study detailing the aims and approach taken within each project can be viewed here:
    2. **Research and evaluation to support and evaluate citizen science projects:** A developmental approach to evaluation was used to enable the continual collection and use of data to support ongoing decision making within the four projects, collected via regular meetings with individual project teams and as a whole group. Semi-structured interviews were also conducted with project partners, implementation teams, and citizen scientists to allow us to explore stakeholder

perspectives of citizen science and evaluate the feasibility and impacts of the four stakeholder-led citizen science projects. A brief summary of key findings is provided below:

- Findings across the three completed projects demonstrated that, while there were challenges to overcome, citizen science approaches had been valuable and worthwhile in providing opportunities to engage meaningfully with communities to generate rich and novel data, including data that would be otherwise inaccessible to research teams.
- Engagement in citizen science projects was seen to have helped to reinforce organisations' interest in and commitment to citizen science.
- Partners highlighted the challenges of developing sustainable citizen science projects within the constraints of funding for one off projects but that longer-term or larger scale projects are more likely to be cost-effective.
- Partnerships and collaboration between agencies and research or local government implementation teams were seen to have supported many aspects of project implementation including recruitment of citizen scientists.

3. **Capacity building activities:** We developed a suite of citizen science resources, established a community of practice (CoP) for citizen science in prevention and provided tailored support for other stakeholders considering applying citizen science approaches in order to increase familiarity and acceptance of citizen science and develop knowledge, confidence and skills in the use of citizen science approaches amongst a broader network of policy and practice stakeholders.
   - The CoP generated considerable interest with 104 members and 25-88 people attending each of the 7 seminar sessions.
   - A suite of resources have been produced including a citizen science fact sheet, an explainer video, evidence brief, and the citizen science case study series, which have received positive feedback from various stakeholders who have used these resources in their work or shared them with colleagues.
   - Capacity building activities were evaluated via interviews with project teams and a survey to our wider network, and findings are currently being prepared for publication. Overall, findings showed these activities have increased stakeholders' familiarity, interest and confidence in citizen science approaches, as well as their understanding of the benefits, impacts and challenges of these approaches. Many said the CoP sessions and project resources had assisted them in designing, implementing, or evaluating their own projects.

- In a brief panel discussion, three project partners Katherine Pontifex (Wellbeing SA), Karen Wardle (South Western Sydney Local Health District) and Dr Kim Jose (University of Tasmania) and Prof Ben Smith (project co-investigator, University of Sydney) shared their insights from involvement with the project and reflections on the broad opportunities and challenges of citizen science in prevention:
  - Katherine Pontifex, Manager of Evaluation Services at Wellbeing SA, offered reflections on their community gardens evaluation project including the importance of considering sensitivities in the topic of interest that citizen scientists are asked to collect data about; the value of conducting citizen science projects as part of a team as they can be resource-intensive and require a diverse range of skills, and; the potential for using citizen science to mobilise community advocacy.
  - Katherine also addressed a question from the audience regarding how the citizen science approach they adopted differs from comprehensive community consultation, reflecting on the fact that there is a lot of overlap between the intent and methods used in citizen science and formative research with end users, however the emphasis in their approach was placed on involving citizen scientists in data collection and sensemaking, with strong focus on enacting true and genuine community engagement which she believes added a slightly different lens to a community consultation process.
  - Karen Wardle, Health Promotion Director at South Western Sydney Local Health District, reflected on how citizen science lends itself well to health promotion practice, particularly as a way to support their

council partners to engage with their communities in different ways. Despite their project not going ahead due to COVID-19 their team learnt a lot about how they could support council partners to build capacity to use citizen science, and the challenges involved in this including, ethics approval and the time and costs required.

- Dr Kim Jose, Senior Research Fellow at the Menzies Institute for Medical Research, University of Tasmania reflected on the value of learning from and with other partners through this project, and how she see's citizen science approaches as another important tool in the toolkit of participatory action research as a means to support community involvement in research and policy development. Kim emphasised that from their experience citizen science should not be considered an easy and cheap way to support data collection and interpretation but rather uses resources in a different way to other approaches.
- Prof Ben Smith, Professor of Public Health at the University of Sydney, and Deputy Director of the Prevention Research Collaboration, reflected on how rewarding it has been to see the growing level of interest in this project and how reflective that is of the fact that we're still looking for ways to engage with consumers and community members to understand their experiences of the things that affect their health and the potential citizen science offers to better understand this diverse range of issues.

For further information about this work please see our project website and the following publications:

- Rowbotham et al., (2023). Building capacity for citizen science in health promotion: a collaborative knowledge mobilisation approach. DOI: https://doi.org/10.1186/s40900-023-00451-4
- Rowbotham et al., (2023). Building capacity for citizen science in health promotion: a collaborative knowledge mobilisation approach. DOI: https://doi.org/10.1186/s40900-023-00451-4
- Marks et al., (2022). A scoping review of citizen science approaches in chronic disease prevention. DOI: https://doi.org/10.3389/fpubh.2022.743348