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The 'Practice Entrepreneur' – An Australian case study of a systems thinking inspired health promotion initiative

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Summary

The potential of systems science concepts to inform approaches for addressing complex public health problems, such as obesity prevention, has been attracting significant attention over the last decade. Despite its recent popularity, there are very few studies examining the application of systems science concepts, termed systems thinking, in practice and whether (if at all) it influences the implementation of health promotion in real world settings and in what ways. Healthy Together Victoria (HTV) was based on a systems thinking approach to address obesity prevention alongside other chronic health problems and was implemented across 14 local government areas. This paper examines the experience of practitioners from one of those intervention sites. In-depth interviews with eight practitioners revealed that there was a rigidity with which they had experienced previous health promotion jobs relative to the flexibility and fluidity of HTV. While the health promotion literature does not indicate that health promotion should be overly prescriptive, the experience of these practitioners suggests it is being applied as such in real world settings. Within HTV, asking people to work with 'systems thinking', without giving a prescription about what systems thinking is, enabled practitioners to be 'practice entrepreneurs' by choosing from a variety of systems thinking methods (mapping, reflection) to engage actively in their positions. This highlights the importance of understanding how key concepts, both traditional planning approaches and systems science concepts, are interpreted and then implemented in real world settings.

Key words: Systems thinking, health promotion implementation, practice entrepreneur

INTRODUCTION

In the last 10 years there has been an increase in interest in the applicability of 'systems science' to public health including areas such as tobacco control, obesity reduction and intervention research more broadly (Alliance for Health Policy and Systems Research, 2010). Systems science is a broad class of analytical approaches that aim to uncover the behaviour of complex systems (Lich *et al.*, 2013). As a whole, systems methodologies are thought to enable decision-makers to examine system components, and the dynamic relationships between them, at multiple levels from cell to society (Lich *et al.*, 2013). 'Systems thinking' denotes the application of these concepts and encourages an examination of the

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'whole', along with the interrelationship between 'system parts', drawing upon theoretical approaches such as systems theory, complexity science, chaos theory, and actor network theory (Meadows, 1999).

Systems thinking, and systems-based approaches, have been gaining traction in public health, however despite its recent popularity, there is very little research examining systems based practice in public health (Carey *et al.*, 2015). A recent systematic search discovered only two papers that examined *how* public health practitioners were using system based concepts (Carey *et al.*, 2015). This is opposed to research that identifies *if* practitioners are using system concepts (but not how this might reshape their practice, or fail to). BeLue *et al.* (2012) described how staff benefited from applying a community-based participatory research (CBPR) approach in conjunction with causal loop diagrams to understand factors influencing underage drinking in their area. A more critical study by Sautkina *et al.* (2014) discovered that despite the intention to introduce systems thinking to practitioners as a means of addressing obesity prevention in the Healthy Towns initiative, there was little evidence of an understanding of specific systems science approaches and very little evidence of its application amongst practitioners and policymakers. Rather, a number of risk factors were identified and multiple interventions implemented to address these risk factors (more akin to traditional health promotion practice). It was concluded that the policy narrative was not very clear about what a system-based approach meant and thus there was no clear direction in how this could be implemented. In the absence of clear guidance, local teams reverted to past experience.

An important opportunity to examine systems based practice was provided by an initiative developed in Victoria, Australia. Healthy Together Victoria (HTV) was developed under the former State Government of Victoria in 2012. HTV was based on a systems thinking approach to address the former National Partnership Agreement on Preventive Health priority areas: physical activity, intake of fruit and vegetables, smoking, and harmful levels of alcohol consumption; with obesity prevention becoming the dominant focus over time (State Government of Victoria, 2016). HTV included a number of policy and program initiatives which were to be used in combination. This included settings based initiatives, community based programs, social marketing strategies, and research/policy initiatives.

Each of these strategy elements were non-prescriptive relative to traditional content-based programs and practitioners were encouraged to think about how to use these elements in combination to achieve the best possible outcomes in their local area. The resources to support settings based change in schools, workplaces, and early childhood services were designed around a continuous quality improvement model (termed the Achievement Program) whereby the settings themselves could choose both which topics to address and the strategies they felt would achieve their self-selected goals of whole of setting change (Department of Health, 2015). One of the key roles of HTV staff was support to the Achievement Program. However, as much as possible they were encouraged to connect the different strategies together. For example, while a staff member might have workplaces as their dominant focus, they were always encouraged to consider how the strategies they were implementing for workplaces could link together with other settings, such as schools, and elements of the initiative such as local government policy reform.

This case study is drawn from one of the 14 local governments to receive funding to implement this initiative. The bulk of the funding was allocated to staff salaries and each of the appointed health promotion teams were encouraged to adopt a systems thinking approach and think more holistically about how different issues and potential strategies are related: 'HTV is taking a unique 'complex systems approach' to reducing population level chronic disease risk. This approach aims for large-scale reach across the Victorian population, initiating action on the systems that influence the health and wellbeing of individuals, families and communities' (State Government of Victoria, 2015, p.1). The intent was to achieve population level gains in health through the application of systems concepts in public health practice led by the HTV teams. These teams were encouraged to partner with local agencies and community groups to achieve these aims. HTV as such provided an important opportunity to examine how systems based concepts were applied in practice.

This study focused on one HTV implementation team to investigate if and how the use of systems concepts changed practitioners' approaches to health promotion. In particular, whether this practice differed from past health promotion practice, as well as barriers and enablers to altering practice in accordance with systems approaches. The research found that possibly, traditional health promotion practice is being implemented in prescriptive ways, which frustrates practitioners and limits its efficacy. Systems thinking allowed practitioners to act as 'practice entrepreneurs', a concept we develop in this paper to describe the more reactive and flexible approach that was taken in the case study described.

Theoretical orientations to practice

Each of the 14 local government areas engaged in HTV received funding to support teams of size 5 to 10 staff depending on the size of the local government. The directive was to appoint staff with previous experience in health promotion rather than new graduates. Thus team members had particular orientations to health promotion depending on their previous experience. Many were appointed from Community Health which was mandated to provide a certain level of health promotion provision. Staff also came from various community roles and in some cases, had a previous policy experience most commonly at a state or local government level. This meant that there was a high likelihood that theories from health promotion planning and community development that informed past practice continued to influence practitioners' perceptions of best practice.

The most common theoretical orientation of staff appointed to HTV was with the Integrated Health Promotion (IHP) model; the policy framework used to guide health promotion practice in Community Health in Victoria (Department of Human Services, 2008). The IHP model is based on a program logic approach to planning which builds logical links between each element of goals, objectives, strategies, and evaluation indicators (Keleher, 2007). A range of strategies spanning education, community development, and policy development were to be implemented consistent with the Ottawa Charter domains (1986). The approach to ascertaining the needs of the community and then selecting strategies under the IHP model is similar to popular planning models such as the Precede/Proceed model (Green and Kreuter, 1999). Some staff also had experience in community development roles, which has a central theme of working with people to understand their current situation and bring about meaningful change to improve the lives of those involved (Baum, 2008).

Thus there were some specific approaches that practitioners may have brought to their work. On commencement with HTV, as will be described in the results section, there was little specific training and guidance other than to 'adopt a systems thinking approach'. Thus there was considerable scope, whether intentional or not, for individual and team interpretation of how to operate. The previous experience of the practitioners, the organization they were working, the broader policy context, and the characteristics of the implementation process are all key areas that could have influenced the implementation of HTV (Nilsen, 2015). Understanding how these factors influenced implementation is critical in understanding whether such an approach is likely to yield long-term health gains. It is also of value to understand how this was implemented to guide future systems inspired initiatives.

METHODS

A qualitative case study was undertaken with one of the HTV teams. Using an Interpretivist approach, semi-structured interviews took place with past and present staff of this team to understand how they interpreted and applied systems thinking concepts (Blaikie, 2009). This formed part of a larger evaluation the council was conducting in relation to their involvement in HTV. To be included in the study practitioners had to have at least two years continuous involvement as part of the health promotion team. For three participants this also included time spent with a partner organisation that was involved in the delivery of HTV. Twelve people met the criteria, nine could be contacted and eight agreed to participate. Of those eight participants, one held a manager role, one person a team leader position and the remaining six staff had operational roles. The interview participants had between 2 and 20 years experience in health promotion related roles prior to commencing with HTV. The most common places of work prior to commencing were Community Health, local government, and non-government organisations. There were also some participants with corporate health and wellbeing experience.

There is much discussion about the extent to which case studies can be used to generalise results and develop theories (Gerring, 2004; Stake, 2005; Flyvbjerg, 2006; Ruddin, 2006; Yin, 2013). While case studies provide a detailed examination of a particular phenomenon, there have been arguments for how findings might be generalisable. Lincoln and Guba (1985) contend that transferability between contexts is appropriate if these contexts are similar. They used the term fittingness to describe the degree of similarity between the context in which the research was conducted and the context of where the findings are to be applied (Lincoln and Guba, 1985). This requires researchers to provide a satisfactory amount of information on the context of the research to allow others to judge whether the findings may be applicable in other settings. In order to facilitate the opportunity to judge whether these findings are replicable considerable attention was devoted to describing the context and examples of practice in the results section.

Questions focused on how participants understood systems thinking practice, examples of where it had been applied, whether this was different to past health promotion roles, and whether they would utilise this

approach again. The study also aimed to capture examples of practice through the semi-structured interviews. This enabled an analysis of what other theoretical approaches could explain this practice besides those offered by interview participants. Written informed consent was obtained from all participants prior to the interviews. The interviews were digitally recorded and transcribed verbatim. A thematic analysis was undertaken manually by one researcher (AJ) and discussed with the research team throughout the interview process (Reis and Judd, 2000; Blaikie, 2009). After all interviews were completed, a refined set of themes was developed and presented back to the participants as a further verification check. The intention was to interview as many of those eligible to participate rather than base the participant numbers on data saturation although it became apparent after interview seven that there were no new themes or ideas were emerging (Minichiello *et al.*, 1990). The study was approved by the Human Research Ethics Committee of Swinburne University of Technology.

RESULTS

The following sections describe the results from the interviews according to the thematic analysis that was conducted. The analysis begins with an examination of how practitioners understood the term ‘systems thinking’ before moving onto describe how they applied this in practice. The final section of the results includes an analysis of the perceived barriers and facilitators for this style of practice.

Understanding and applying systems thinking practice

There was consensus among the current and former staff on what ‘systems thinking practice’ meant and how it was implemented. A common response to this question was understanding how different elements of the ‘system’ connected. This meant understanding what connected different organisations (such as schools, workplaces, early childhood services, and local health and welfare organisations) and influential people within and between those organisations. This included understanding the common issues that organisations identified and the values underpinning their work, such as values guiding schools and what they prioritised. It meant understanding the key policies and programs operating at a State level and which of these would most connect and engage with local services. The participants consistently mentioned the term ‘leverage point’ and that through this understanding of the values and connections between organisations, people, policies and programs, they were able to develop strategies that had the most potential for success:

> *Identifying where there are leverage opportunities . . . that could be about identifying key partners or it could be about identifying something that’s happening on a state level or it could be about where there are links within the community.*
> *It’s about looking at how the system works and where you’re best to intervene rather than just overlaying something over the top of the whole thing.*

The last quote refers to the difference between implementing a program in a setting, perhaps allowing for some modification, compared to being completely open about which topics to address and in what way, which was the experience that practitioners commented upon. What constitutes success will be covered in more detail later in the results, but in respect of how staff understood systems thinking practice it did relate to the concepts already mentioned. Engaging key organisations and people and linking them together was a key indicator of success. Further, systems thinking practice was defined in part by a flexible and adaptable style of working. Adapting programs to suit local contexts and then constant refining and adaptation based on how local implementation was proceeding:

> *Recognise that you can’t just transfer a project from one place to the other because it might not work in that time or that community has to be responsive to what’s happening and you have to be prepared that everything you do might create a response in the community and then adapt.*

Systems mapping

All participants mentioned taking part in what was termed ‘mapping activities’ which they understood as a system mapping process. The approach for mapping varied slightly at different times and for different issues but there were some common elements. Firstly, the team spent considerable time meeting staff from other organisations, staff from other departments at Council, and community members whom they wanted to engage in a particular initiative. They would spend time understanding their current practices, concerns and values, and whether there were particular health issues and programs that interested them. For some issues the information was captured formally such as in the Healthy Food Connect Process which involved collecting detailed information related to the food environment, at other

times it was a more unstructured process and involved less formal conversations. Once this information was gathered the team would meet either in small groups or as a large team and look for common connections and interests that would engage influential people, drawing links between people and organisations to exemplify connections:

> *We sat down in a room with a bit of butcher's paper and wrote down all the existing partners and different links council had already in the space of physical activity so that included things like leisure centres that were council owned facilities. It included things like who contacts the council. It included state wide contacts we have with the Department of Health. Then we went out and checked with those people to see whether there were any more links that we could create.*
> *We had arrows where they all related and crossed over.*

Collaboration and alignment

Once the team had an understanding of some of the common concerns and interests of potential partner organisations and the settings and communities intended to benefit from the initiative, they planned particular strategies. Foremost in choosing which issues to focus upon and which strategies to implement was considering which had the strongest potential to align as many organisations and community groups as possible while still meeting the overall goals of HTV. The example that follows illustrates how oral health strategies were used to align together local interests with the agenda of the HTV team:

> *Basically they* [teachers] *came to us and said we're having lots of dental health issues . . . We were able to respond, okay not exactly what we're thinking but we have the capacity to do something here, we have links in council, we have links in* [name of health service]. . . . *This isn't exactly what we intended to do but our community's telling us we need it and it helped create the extra partners.*

Having established the relationships with schools, early year services and partner organisations, the team was then able to build on those strategies and start introducing other components of the Achievement Program (the HTV settings initiative) and also connect in with other HTV strategies:

> *It was a really easy way to start talking to people about soft drinks and healthy eating and juices and all those sorts of things, and oral practices, because they could see an issue in a lot of kids that hadn't had any care in that area or didn't have background. Then it just opened the door to offer them something that they liked, could run, was a positive outcome and then they continued on to any of the other things we were trying to get them to do.*

The team discussed how this was the starting point for staff from early childhood services and schools to understand the whole of setting approach. They would start with one or two strategies provided by a partner organisation related to oral health (e.g. education session for children on brushing teeth) and then incorporate further policy and program changes. On a broader level, the oral health initiatives helped to establish legitimacy and strong connection with partner organisations and embedded the team within the local network infrastructure:

> *We realised the importance of the partnerships with the platform for not just oral health but for any health priorities.*

Reflection and adaptation

The ability to change topic focus and revise messages and activities to link in with the dominant interests and values of the organisations was seen as distinct from past practice. This was also how the team understood the term 'leverage point'. Understanding through which values and priorities they could weave their agenda of obesity prevention but not necessarily leading with this topic. If strategies were seen to be successful then they were replicated and scaled up as in the example of the oral health initiatives previously described.

The team described undertaking 'safe to fail' experiments (Snowden and Boone, 2007). All Healthy Together staff had some exposure to the concept of 'safe to fail' and scaling up based on the Cyenfin Framework (see Snowden and Boone, 2007 for an extended description of this model). According to this model, when addressing complex problems there is not a defined way to execute strategies and leadership, so local adaptation and strong reflective processes will be required (Snowden and Boone, 2007). Having the means to trial things at small scale without too much risk and then replicating if successful became one of the central approaches of the team:

> *We were encouraged to just start things as a trial without much investment, so we wouldn't spend much money on an event in the first instance or something, for example. Or we wouldn't invite a huge amount of people or something. So we'd start it on a small scale and then build it if we saw that it was working. But I think*

in other jobs you're just encouraged to just do it and hope it works.

This was the key difference according to the participants between experiences in HTV and previous health promotion roles. They were able to start with small strategies that were quickly planned and implemented and if successful they could extend from this platform. This process of constant action and reflection was seen as distinct from the traditional planning and implementation process of health promotion:

It was just such a refreshing change [HTV]. *I think we were so bogged down in planning and trying to implement what we'd planned and there was no factoring in of time and changing systems, changing environments* [describing previous job].
We just worked to the strategies that were outlined in that plan [describing previous job]. *We didn't really stray from it. . . . the fluid nature of it in the Healthy Together team, was very, very different to almost designing everything four years in advance and just going through with that even if it wasn't working, we would just continue it . . . so refreshing.*

Once the team was at the point of implementing strategies it was similar to previous health promotion roles of delivering workshops, organising programs, social marketing (albeit this was delivered differently to previous experience for some), and policy development. It was the planning process to get to those strategies that was considered different:

We're still working to the same outcomes, it was just a different way of doing it. What we actually did on the ground wasn't that different, it was just how we went about planning it . . . It really wasn't that foreign once we then started implementing.

The more flexible and adaptable approach meant that staff considered they had more ability to innovate and increased opportunity to collaborate as they could adapt to meet the needs of partner organisations. Standing agenda items at meetings were devoted to reflecting on how strategies were progressing. A common theme for reflection was on the level of engagement of various settings and stakeholders and where required, how this could be improved. Team members would constantly reflect on the language they were using to explain programs and how this could be adapted to suit different setting types such as schools, workplaces, early year services and community groups. And also how to adapt the resources and language used for differences among the settings themselves such as the type of industry or size of the school.

As an example of adaptation, they instituted clusters and working groups to support setting-based change and the structure of these working groups changed each year. Based on attendance at network meetings and feedback received from those attending they constantly revised how this support was provided. Firstly, it was based on the geographical location of the setting, then it was based on setting type and then lastly, on which issues were of greatest interest to the setting. In regards to reach, from July 2012 to the end of 2015 according to figures produced by the team for Achievement Program registrations, they engaged with 80% of early childhood services with an HTV initiative, 86% of primary schools and 83% of secondary schools (Department of Health, 2015). This represents approximately 44,350 young people and students (Department of Health, 2015). In addition, they engaged 113 workplaces employing approximately 42,000 employees (Department of Health, 2015).

Agenda setting

Having established a sense of legitimacy and connection with partner organisations and community groups, the health promotion team was then able to pursue other priority areas. Having a large team and being able to work across early childhood services, schools, workplaces and community groups enabled opportunities to coordinate efforts across common topics. An example of this was in promoting physical activity. The team implemented a number of small strategies such as walking challenges simultaneously across multiple settings. This created a certain sense of urgency and interest in the topic which they were able to capitalise upon in placing physical activity as an important policy area within Council. From these they were able to engage other teams in Council involved in urban planning:

Then we did lots of activities linking workplaces to different days that were happening around Active April and walking challenges and different things like that as well. In the meantime we also were doing things on a more strategic level . . . . because we were able to create this bit of a buzz it was good to work with different departments in Council and talk about things that were more about infrastructure base and places and the environment. So it was good to just get that on the agenda.

This demonstrates the strategic nature in which strategies were being planned and that activities, such as walking challenges, were not always being planned primarily for the intended goal of influencing change amongst those participating individuals. There were occasions as described where a coordinated attempt was made, through traditional health promotion strategies,

to influence organisational and policy change as the primary goal.

FACILITATORS AND BARRIERS OF SYSTEMS THINKING PRACTICE

The key facilitator for systems thinking practice of being agile in planning and implementation has already been mentioned in the previous section. In regards to other factors, being located within local government was considered by some as helpful in regards to access to multiple departments within the one organisation but it was also considered a barrier by others in respect of processes related to planning and getting approval to implement identified opportunities. Having four year plans and a process of needing multiple approvals before being able to action some of the key strategies were considered serious impediments to successful practice. The lack of understanding of systems approaches and rigid approaches to planning and implementation were also observed in partner organisations:

> *The key barrier I see is that you have a program that's working in a very flexible way and working with other partners who don't. So for example, council is very prescriptive in its planning .... They're not as open to the opportunities and the changing environment as we would ideally like, to be able to fully leverage the opportunities if you like ... Also people's understanding of systems outside of Healthy Together or even inside it can be a real barrier. I think that the jargon and the sort of abstract technical theory can push people away.*

Assessing the readiness of an organisation to adopt a systems thinking approach was a recommendation for future initiatives of this style:

> *Local government needs to be open to it ... I think there could be some indicators. You'd have to look at the municipal public health and wellbeing plan and the structure around that, the staff they have around that and the achievements they've got around it. I think there could be ways you could do it. Definitely. Some criteria.*

Providing more training opportunities was another recommendation for future systems based initiatives. Related to the challenge of the approach to planning was being able to demonstrate success in the style and time-frame that council and other partner organisations were accustomed:

> *Also in terms of how to evaluate the work that we did was a bit of a barrier, and I guess in a way lack of short-term outcomes, so we were looking at more longer-term outcomes and how to gain the interest from a higher level in the organisation ... usually they run an event, they do a pre-evaluation, they do a post-evaluation, and that's it. So it's different - it's difficult to prove outcomes because there aren't any yet ... So that probably made our work a bit more difficult. I mean that's the [constant] issue of funding, but if it was given at least six or seven years to actually be able to demonstrate some real changes within each of those settings, that would have been useful.*

Implementing a system-based approach was also considered more challenging in a diverse community compared to a community that may be smaller and more homogenous:

> *Healthy Together might even work better in regional areas because it's such a finite community, and there's more of a community feel where you can make those connections between the teacher at the primary schools who's also the netball coach, whose husband works for this big workplace, all those connections can be made. But the population is a bit more fluid in metro areas.*

This was noted as not something that necessarily inhibited practice in the same way as planning processes of the council, but it was noted as potentially limiting the effectiveness of the systems approach within an urban area. This has potential implications for the evaluation of HTV within a metropolitan area and how the value of the initiative is assessed.

DISCUSSION

Contrary to expectations, given the potential diversity of organisations and sectors in which staff had previously worked, all participants commented that the systems based approach in HTV was vastly different from previous roles. Where this was most stark was in the flexible approach to planning and implementation. All participants reflected that in previous roles they had to follow the plan as intended with room for only minor modifications. There is nothing to suggest a program logic approach nor other means of planning should be implemented with such rigidity and indeed the assumption of a logic model is that strategies should be changed if the logic no longer holds (Keleher, 2007). However, it is the experience of these practitioners that planning and implementation were a rigid process and further research needs to determine whether this a common phenomenon.

In some respects their practice could be considered 'traditional health promotion' in addressing risk factors using multiple interventions similar to the findings of Sautkina *et al.* (2014). Certainly the strategies used of communication, advocacy, research, social marketing, and health education are common public health

strategies (Jorm *et al.*, 2009). However, according to participants the process to arrive at these strategies was a departure from previous experience. From a health promotion settings perspective, they were working at a level beyond a change agent perspective which has been mainly used to describe work with individual organizations in the health promotion literature (Senior *et al.*, 2014). In regards to their practice, there were elements consistent with soft systems methodologies used in identifying interrelationships between key attributes of the system such as programs, practitioners, networks and organisations, and trying to identify leverage points that could produce action across these multiple actors (Foster-Fishman *et al.* 2007; National Cancer Institute April, 2007). There were also examples of where programs and strategies were used to galvanize support for organizational and policy change more so than targeting individual behaviour change (Hawe *et al.*, 2009). There was no evidence of systems modelling, although this was not to be expected given research to date on its application (Carey *et al.*, 2015). Moreover, there were no data available for modelling of this nature.

Trying to make sense of this style of practice may require considerations of theories from different but interrelated perspectives. Raymaker (2016) discussed how the combination of critical systems thinking and community based participatory research (CBPR) were used to inform the management and conduct of research projects with the autistic community. There were some elements of a community development/participatory approach undertaken by this health promotion team but given the health behaviour focus of the HTV and this fixed agenda, it could not be considered true empowerment practice (Baum, 2008). In this initiative, practice probably more resembled theoretical approaches from soft systems and political science, which are of course related sociologically based approaches.

The staff from this case study could be construed as 'practice entrepreneurs' analogous to the way policy entrepreneurs have been defined in the literature. Policy entrepreneurs have been discussed in relation to the multiple streams approach (MSA) put forward by Kingdon (1995) which is a framework that examines how the policy process operates under conditions of ambiguity (Zahariadis, 2014). Political systems are conceptualised by the three streams of problems, policies and politics which operate in a largely independent manner with their own rules and dynamic forces. At certain critical points in time the amalgamation of all three streams into a single package significantly increases the chance that an issue will garner the attention of policymakers. The choice is not determined by the effects of only one stream in isolation, but by the impact of one stream contingent on critical values of the others (Travis and Zahariadis, 2002). Policy entrepreneurs can be individuals or groups who endeavour to couple the three streams and are prepared to invest 'time, energy, reputation, money – to promote a position for anticipated future gain in the form of material, purposive or solidary benefits' (Kingdon, 1995, p.179).

Policy entrepreneurs must be skilled at assigning problems to their solutions and be able to locate politicians who are open to their ideas. The chances of a policy being implemented are greatly increased when all three streams – problems, policies and politics – can be coupled into a single package (Zahariadis, 2014). There are similarities with the practice described in this case study. The practitioners were articulating the problem and framing their strategies in such a way that it aligned with the values and priorities of key individuals and organisations. They were attempting to utilize and coordinate strategies that engendered the local political environment within and between organisations for local government policy traction. Having the flexibility under HTV to time certain strategies and react to situations as they presented themselves meant that, albeit at a smaller scale, practitioners were able to align problems, programs/policies and politics to advance their agenda.

In regards to practice entrepreneurs, one of the other interesting themes to emerge was how to judge success. Program level evaluation with a typical pre and post design was deemed unsuitable due to the flexible approach taken with planning and implementation and this is a commonly experienced challenge in community level work (Baum, 2008). The team was generating the kind of engagement and reach that suggests that population change over time would be possible (albeit the data on reach was limited to registering for the Achievement Program rather than any measure of progress). Though since there is no current health monitoring system in schools for obesity related indicators the degree of change over time would be difficult to measure (Kremer *et al.*, 2010). While there is population data on health indicators of relevance to HTV for adults at a local government level, it may not be a suitable intervention indicator. In this case study, only 20% of people employed in the municipality also lived in this same local government area. Thus while they were potentially reaching large numbers (with the caveat that there was no measure of the depth of engagement), they may not have been reaching those within the municipality.

A review of community based physical activity interventions (Baker *et al.*, 2011; Baker *et al.*, 2015) highlights some of the challenges in the use of population

indicators against which to measure success. Only three out of 29 studies demonstrated improvement in physical activity levels. One successful study was located in an urban area and this was a primary care model. The other two studies were located in rural areas and as mentioned in the results, they potentially can reach their resident population through multiple connections in ways not possible in urban areas. Achieving high levels of population reach through community-based interventions is notoriously difficult and the problem of defining community based on geographical factors alone has been previously commented upon (Merzel and D'Afflitti, 2003).

In respect of indicators for success at an LGA level, it may be sensible at this time to continue with the use of process indicators. As an example, it is recommended that local government undertake integrated planning around physical activity, given the strong links between environmental factors and physical activity (Thomas *et al.*, 2009). Policy options to local government are more focused on designing new communities as retrofitting existing communities is seen as too expensive (Legislative Council Environment and Planning References Committee, 2012). Capacity building indicators around physical activity policies being integrated within other organizational plans may be appropriate targets at this point. There are increasingly sophisticated methods for tracking changes to environmental factors relevant to physical activity which could be used (Pomerleau *et al.*, 2013, Giles-Corti *et al.*, 2014). The potential limitation of developing key performance indicators around policy and legislative change, though, is that change of this nature is notoriously uneven (Baumgartner and Jones, 1993; Baumgartner *et al.*, 2014). Social network analysis (Hawe and Ghali, 2008) and in-depth case studies such as this paper are other possible ways that performance can be evaluated.

As with any case study, this research is limited in its sample selection and thus ability to generalise that the experience of practice from this case study would be commonly experienced elsewhere. As mentioned, all participants provided very similar accounts and reflections of their time with HTV. While each of the participants had a different work experience prior to their involvement in HTV it also might be the case that those responsible for recruiting staff to this team were looking for certain traits and thus they represent a selective and homogenous group relative to other health promotion professionals. Given the small sample size it was not possible to analyse responses according to participant characteristics such as years of experience and role within HTV. Extending this research to other implementation sites could enable analysis of how position role and experienced together with other characteristics influenced both understanding and application of systems concepts. Further the study was limited to the individual practitioners and perspectives of partner organisations and policy makers were not captured in this study. Research with these groups would enable an organizational and policy perspective of systems based practice which was a limitation of this study. Hopefully, this study can encourage further research on the application of systems concepts in practice and hence examine whether the findings of this study are replicable (Yin, 2013).

What this study does provide is the value of understanding how concepts are interpreted and applied in practice which may be different to what is expected (Lobb and Colditz, 2013; Hawe, 2015). What was surprising was the common experience of the rigidity with which traditional planning models had been applied in practice. This provided a stark contrast to the systems thinking approach that they experienced in HTV. According to participants, the systems thinking approach offered a freedom and flexibility to which they were previously unaccustomed and enabled what we have termed a practice entrepreneur approach. This illustrates the importance of understanding how concepts are interpreted and applied in practice. Further research could replicate this study with other health promotion practitioners and extend the analysis to an organizational and policy perspective.

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