

Policy change to create supportive environments for physical activity and healthy eating: which options are the most realistic for local government?

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SUMMARY

The objective is to identify and test regulatory options for creating supportive environments for physical activity and healthy eating among local governments in Victoria, Australia. A literature review identified nine potential areas for policy intervention at local government level, including the walking environment and food policy. Discussion documents were drafted which summarized the public health evidence and legal framework for change in each area. Levels of support for particular interventions were identified through semi-structured interviews conducted with key informants from local government. We conducted 11 key informant interviews and found support for policy

intervention to create environments supportive of physical activity but little support for policy changes to promote healthy eating. Participants reported lack of relevance and competing priorities as reasons for not supporting particular interventions. Promoting healthy eating environments was not considered a priority for local government above food safety. There is a real opportunity for action to prevent obesity at local government level (e.g. mandate the promotion of healthy eating environments). For local government to have a role in the promotion of healthy food environments, regulatory change and suitable funding are required.

Key words: obesity; physical activity; nutrition; regulatory environment

INTRODUCTION

Obesity is a major risk factor in the development of chronic diseases such as type II diabetes, coronary heart disease and many cancers (World Health Organization, 2004). It is not only increasing in prevalence but also disproportionately affects people from socially and economically disadvantaged backgrounds (Flegal *et al.*, 1988; Sobal and Stunkard, 1989; Molarius *et al.*, 2000; Cameron *et al.*, 2003; AIHW, 2004; Ball

and Crawford, 2005). The behavioural patterns contributing to this rise in obesity prevalence include increased consumption of high energy density foods, low consumption of fruit and vegetables and a shift to less active transport and more sedentary leisure time activities (Department for Transport, 2005; Office for National Statistics, 2006; Allender *et al.*, 2009a).

These behaviours occur in an environmental context which, currently, is very obesogenic (Swinburn and Egger, 2002). Areas of low

walkability (Craig *et al.*, 2002), a high density of fast food outlets (Reidpath *et al.*, 2002) and the cheap price and heavy promotion of energy dense foods (Drewnowski and Darmon, 2005) have been identified as some of the environmental factors contributing to the obesity epidemic. Thus, it is likely that education and treatment approaches will not be sufficient to reverse the obesity epidemic or its socio-economic gradient and that policy and regulatory actions will also be needed to drive improvements in the physical, economic and socio-cultural environments for food and physical activity (Swinburn *et al.*, 1999).

Many regulatory measures have been identified as potential contributors to reducing obesity (Nestle and Jacobson, 2000; WHO, 2002; Lawrence, 2005), and some of these have been enacted such as bans on television advertisements for unhealthy food targeting children (OFCOM, 2007), nutrition information on food and traffic speed restrictions in neighbourhoods which reduce the risk for pedestrians and cyclists. In Australia, specific examples of state-level policies include the New South Wales Healthy Canteen Strategy (New South Wales Department of Education and Training, 2005) and the Queensland Healthy Food and Drink Supply for Schools (Department of Education and the Arts QG, 2005). It can be argued, however, that until a programme of complementary, society-wide law reform is implemented, there is little chance of reversing the obesity epidemic and its socio-economic disparities. As has occurred for smoking, road injuries and many infectious disease epidemics, a strong regulatory environment can provide the foundation for a multi-faceted intervention to achieve long-term cultural and attitudinal changes towards health-promoting behaviours. Such actions have been reported to be particularly relevant at the local government level as they affect people directly in the area in which they live and undertake substantial discretionary physical activity and dietary behaviours (Swinburn, 2008).

The enactment of good practice based on evidence is at best 'less than optimal' (Nutbeam, 1996) and at worst completely overlooked. Lang *et al.* (Lang *et al.*, 2007) identify many potential barriers between evidence and enactment of policy, including the volume and time it would take practitioners to summarize, understand and implement best practice and the dissonance between community expectations and the

evidence base. Bowen and Zwi (Bowen and Zwi, 2005) suggest that policy-making based on evidence is filtered through considerations of usefulness (i.e. is the change better than the current approach), complexity and compatibility with values, costs and whether there may be opportunities for trial and change in a relatively low-risk way.

While there are a number of theoretical papers about the problems in translating research evidence to healthy public policy (Nutbeam, 1996), there is only very recent work which has examined these with the practitioners who would be tasked with making such changes (Campbell *et al.*, 2009). There is little published work which examines the key intermediary step of identifying, describing and testing the possible changes within the existing legal architecture necessary to implement healthy policy change.

Since the 1950s, many theories of the policy-making process have been derived from Laswell's rational-linear ('stages') approach to explaining the policy process (Lasswell, 1951). Progressively, political science theories have challenged the idealized notion of rationality implicit in the stages approach to explaining policy-making. For instance, policy scientists have proposed: agenda setting theories to explain how policy issues come to have their time (Kingdon, 1984); how the interplay between the differing resources and capacities of various coalitions with competing interests is influential in explaining whose interests prevail (Sabatier and Jenkins-Smith, 1993); and how policy implementation is shaped by a diversity of political, material, structural and contextual variables (Mazmanian and Sabatier, 1983; Hill and Hupe, 2002). Key learnings from these theories that underpin this research are that the impetus, intention and objectives for policy-making can be rational, but, invariably, the development and implementation of policy is subject to political and social influences. These theoretical foundations have helped contextualize the concepts central to this research; in particular, what is meant by 'most promising' and 'most realistic' policy options.

The making of public health policy involves competing interests and competing demands being placed upon policy-makers and is therefore an inherently political process, based on competing human values, interests and beliefs (Walt, 1994). Therefore, in relation to our analysis of policy change in local government,

we did not assume rationality as the norm in policy-making, instead, and following the theory, we defined the 'most realistic' policy options by examining the critical roles of stakeholders (policy coalitions) and political circumstances (existing regulations) as determinants of policy-making (Sabatier and Jenkins-Smith 1993; Gagnon *et al.*, 2007; Hoeijmakers *et al.*, 2007; Sabatier 2007; De Leeuw *et al.*, 2008).

The aim of this study was to develop a set of potential policy interventions at the local government level and to test their value (relevance and applicability) with key local government informants. This study was informed by the following questions:

What are the most promising policy changes to improve environments for healthy eating and physical activity that could be enacted at local government level, especially for disadvantaged populations?

Why do different policy changes to improve environments for healthy eating and physical activity that could be enacted at local government level gain support while others do not?

METHODS

This study used local government in Victoria, Australia, as a case study. Victoria has 79 local government municipalities—31 in metropolitan Melbourne, 10 regional cities and 38 rural shires. Local government populations vary from 4000 to more than 200 000 and this variance in population (and subsequent taxation) base can affect the resources available to different councils. We identified policy areas relevant to obesity prevention at this level from the literature, workshops with professionals and interviews with people from local government (Allender *et al.*, 2009b). A panel of public health researchers and practitioners refined an initial list of 14 policy areas to those nine which appeared the most promising areas for local government to act. The panel comprised academics with expertise in obesity prevention, environmental influences on disease, Australian and international legal and regulatory frameworks, qualitative research and behavioural epidemiology. The panel constituted the list of potential regulatory options from those which seemed most feasible from the perspectives of obesity prevention and legal and regulatory reform.

An initial discussion document was drafted which detailed the public health evidence for, and the practical/possible changes to, the regulatory environment to create supportive environments for healthy eating and physical activity. A summary of the document is shown in Table 1. These interventions were used as the basis for a discussion of which types of policy change might be supported within local government and the reasons why. (Responsibility for public transport is controlled at a state level in Victoria and so was not considered within this study.) The discussion document was informed by a review of the public health literature which was conducted in PubMed and used the following steps:

- (i) The MESH dictionary was used to identify the keywords most closely related to the policy discussion area.
- (ii) A full search was conducted to identify all relevant papers.
- (iii) Where more than 500 papers were returned, further limits were applied to reduce the number of papers (e.g. limit to English, last 10 years, etc.).
- (iv) Abstracts of the papers identified were reviewed and full papers were obtained if the paper related to a policy intervention.

Papers were excluded from the review if they did not: deal specifically with one or more of the nine policy areas; report quantitative evidence of the relationship between one of the nine policy areas and nutrition, physical activity or obesity; and report primary data from an empirical study.

The public health review for each area was combined with a written summary of the legal and regulatory architecture within Victoria. Potential for change was based on the strength of the counter-influences (the extent to which corporate or public interests would oppose the potential change thereby making it infeasible) and the entrenchment of the relevant legal principles (whether or not the change would conflict with important areas of the law). Thus any interventions to place outright bans on certain foods were given low priority as a result of the perceived unpopularity—and thus infeasibility—of such a change. Similarly, options to reduce the ability of the public to challenge government decisions (by, for

Table 1: Policy area discussion document

Policy area	Definition	Examples of potential regulatory change
The walking environment	The walking environment includes walking for leisure, walking as exercise and walking with a purpose (e.g. to visit a local shop). It also includes running and the use of outdoor park facilities	Modify section 6 of the Planning and Environment Act to require that local planning schemes include provisions regarding the importance of health in planning Alter standards/specifications for footpaths and walking tracks to improve the walking environment. Ensure that the quality of the walking environment, such as aesthetics (e.g. cleaning graffiti), are central to any urban planning
The cycling environment	The cycling environment encompasses bicycle paths, footpaths and bicycle-only road lanes which allow the cyclist an easy option for using cycling as an alternate form of transport	Creation of bike lanes by painting lines on existing roads For the Road Management Act 2007 to require that all thoroughfares include bicycle lanes Alter the funding formula for transport infrastructure to favour bike paths and other bike friendly facilities
Land-use (zoning) management	The level of integration, within a given area, of different types of uses for physical space, including residential, office, retail/commercial, and public space. Land use is controlled by zoning ordinances that reflect political decisions most often made at the local level. Zoning is a term used in urban planning for a system of land-use regulation	Encourage implementation of mixed-use developments, particularly around public transport centres Use zoning rules to reduce concentration of fast food outlets
Public liability	Public institutions (government and corporate bodies) being held liable by people to whom they owe a duty. This duty may arise because the institution owns land on which a person is injured (occupier liability) or if the institution's personnel cause someone to be injured (vicarious liability). Relevant where councils are unwilling to provide facilities for fear of legal action	Exempting an arm of government/schools from public liability Implementation of a no-fault system of liability for local councils
Built environment for physical activity	Incorporates leisure facilities, swimming pools, gyms, tennis courts, and basketball/netball courts	Mandating the creation of a specific number of facilities in new developments Requirement that local government spend a certain percentage of income on the building and maintenance of facilities Mandating a 'facility mix' requirement for retrofitting of existing built environments that favours physical activity

Continued

Table 1: *Continued*

Policy area	Definition	Examples of potential regulatory change
Open spaces for physical activity	Open spaces for physical activity includes parks and reserves, sporting ovals, playgrounds and walking and bike tracks. This is separate to the walking environment and means parks, sports ovals and playgrounds	Mandate open space requirements within the Victoria Planning Provisions for new developments (current requirements apply primarily to nature strips) Modify clause 56 (which includes livable and sustainable community requirements) so that it applies to smaller subdivisions
Food policy requirements for government-funded or regulated settings	Food policies cover food safety issues and the providing healthy eating environments. Government-funded settings include kindergartens, schools, community centres, hospitals, etc.	Mandate the development and implementation of food policies which include the provision and promotion of healthy foods as well as food handling requirements
Billboards and signage	Billboards are large outdoor advertising structures which are typically found in high traffic areas and particularly alongside busy roads. Signage refers to any graphic display of information for an intended audience, most often to give direction. Both commonly used to advertise particularly unhealthy and energy dense foods and for health promotion	Limit the advertising of fast food outlets and unhealthy foods and beverages around schools and early childhood settings

NB: The information in this table is a condensed version of the policy discussion documents used in interviews. Contact authors for full details.

example, limiting the right to make objections to planning applications) were rejected for being inconsistent with basic rules of natural justice. Those interventions with the greatest chance of implementation and success were marked as priority areas.

Our second step was to test the relevance and applicability of these policy interventions based on the lived experience of people working within the policy and regulatory framework for nutrition and physical activity at a local government level. To this end, a qualitative approach was deemed the most appropriate, in which more in-depth data were collected and analysed, allowing for the development of deeper understanding of the particular phenomena under study.

Recruitment

A key informant snowball sampling technique was used to identify potential participants in this study. Following initial discussions with an expert in urban planning and local government, a number of key people with experience working within and on behalf of more than one

local government council were identified. These key informants were approached to participate in the study and during the course of an interview, they were asked to identify others they felt may be able to provide insight into the research questions. These people were subsequently approached to participate, and so on until subsequent interviews generated no new data.

Qualitative research can be limited by the smaller study populations involved when compared with larger quantitative studies. One way we attempted to reduce this limitation was by continuing to collect data until we felt no new information was being collected. In addition, we interviewed a variety of local government experts, including employees of local councils. We purposively sampled to recruit participants who had worked at representative level both for and within local government. In this way, we have collected data which are more likely to reflect the views across all 79 local councils within Victoria. Qualitative research is intended to be hypothesis generating and it should be explicitly stated that these results cannot be generalized across all local councils. Rather,

these results should generate further questions and raise the possibility of testing these findings using more quantitative methods across all 79 local councils.

Participants

There were 11 participants who completed in-depth semi-structured interviews with three interviewers. Participants were drawn from rural and municipal councils and from representative bodies. Categorized by role, the participants included: a manager of a representative body, a policy and strategy expert within a representative body and, from within local government, a programme coordinator, a strategic manager, a strategic planner, a Chief Executive Officer (CEO) of a local council, two healthy programme coordinators, a social planner, a strategic manager and an urban planner.

Data collection

We asked each of the participants to identify which interventions from the list of nine possible policy areas were likely to be supported within local government. We also asked participants for any other policy areas not included on our list that they felt might be relevant. Participants were asked to provide their view of the policy situation throughout the state of Victoria and not simply their own local council. We also asked why policy might or might not be implemented. Interviews were recorded using a digital voice recorder and later transcribed. Interview participants were given the opportunity to review and edit their transcripts for accuracy.

Analysis

Data were analysed using the constant comparative method (Glaser and Strauss, 1967). It begins with open inductive coding involving line-by-line reading of interview transcripts. Immediately following each interview and during the analysis process, each reviewer made notes of new understandings. Emerging findings were constantly compared with the existing data to check and confirm intermediate conclusions while simultaneously informing the subsequent interview schedule.

Data collection and initial stages of analysis were undertaken simultaneously and subsequent

interviews reflected the understanding developed from preliminary analysis of previous interviews. Transcripts were checked against the initial recording of each interview and key topics were noted. Transcripts were entered into NVIVO 7 for data management to support analysis. Clean transcripts were independently reviewed and coded by three researchers (S.A., E.G. and B.C.). The researchers conferred where there was disagreement over coding of texts, and codes were agreed upon.

Ethics

Ethical approval was granted for this study by the committees of Deakin University (EC 232-2007) and Monash University (2007-00-2150).

RESULTS

The proposed interventions for local governments to create supportive environments for healthy nutrition and physical activity are outlined in Table 1. These policy areas comprised the walking environment, the cycling environment, land-use zoning and management, providing built facilities for physical activity, providing open recreational spaces for physical activity, public liability, council food policy and billboards and signage. Interviewees did not identify any other initiatives outside those proposed in our document that might create supportive environments for healthy nutrition or increased physical activity.

Table 2 provides a summary of the responses given by participants as to whether, judging from their own experience of local government, a proposed intervention would be supported or not. There was general support for changes to the walking and cycling environments, land-use zoning and land use mix and open spaces to encourage physical activity. In the case of walking and cycling, participants reported that a number of councils were already making the specific changes suggested. Conversely, respondents could not see a role for local government in food policy beyond meeting their statutory obligations under the Victorian Health Act of 1958 (Victorian Government, 1958) to regulate food hygiene and safety. The physical environment and space for physical activity had received more recent attention from local governments as part of the Municipal Public

Table 2: Participant response to various policy options

Interviewee	Cycling environment	Walking environment	Land use	Open spaces for PA	Built environment PA	Billboards and signage	Food policy	Public liability
Manager, representative body	Yes	No	Yes	Yes	No	Yes	No	No
Policy and strategy expert, representative body	Yes	Yes	No	Yes	Yes	No	No	Yes
Programme coordinator	Yes	Yes	No	Yes	No	No	Yes	No
Strategic manager	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Strategic planner	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
CEO of local council	Yes	Yes	Yes	Yes	No	No	No	No
Programme coordinator	No	No	Yes	No	No	No	No	No
Programme coordinator	Yes	Yes	Yes	No	No	No	No	No
Social planner	Yes	Yes	Yes	No	No	No	No	No
Strategic manager	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Urban planner	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Support for intervention n/11	10	9	9	8	5	4	3	2

Yes: Considered a worthwhile policy option for local government.

No: Not considered by participant to be a feasible policy option for local government.

Health Plans (MPHP) that each local government is required to produce.

Our results show that there may be a number of reasons why local governments would not support particular interventions. These reasons included a perceived lack of relevance to local government and competing priorities demanding more attention and resources. Participants noted that the motivation for councils was largely to serve current community needs and to provide better facilities for future communities. The participants also identified that there was a role for the private sector in policy change to help create supportive environments for healthy eating and physical activity.

Vignettes are provided which summarize the main themes of the discussion with participants.

What are the most promising policy changes to improve environments for healthy eating and physical activity?

There was consistent support from participants for changes to the walking and cycling environment. For instance, one strategic manager reflected the broad enthusiasm for changing the walking and cycling environment when commenting:

Walking environment, absolutely, we can change that; absolutely, we change the cycling environment.

Another strategic manager showed a clear understanding that improving the walking and cycling environment was very conducive to increased physical activity. In this case, the pre-existence of excellent road facilities has led the council to begin considering less traditional cycling and walking environments:

The bike trails here are fantastic, so that's quite safe. So our group tries to ensure that we have more off-road, rather than on-road bike provisions, so we try to encourage that more.

Also, there was strong support within local government for using land-use zoning to create more supportive environments. In contrast to walking and cycling, which appeared to happen on a council-by-council basis, a number of participants, including a strategic manager, acknowledged the role of 'Melbourne 2030' as providing this guidance already:

I strongly agree with this idea of mixed use developments around public transport centres and we're really

trying to focus on that. That's one of our strong principles around our residential strategy and a lot of 'Melbourne 2030' principles.

An early years coordinator (council employee with responsibility for maternal and child health care) provided further support to the idea of land use mix/zoning as a method for creating supportive environments. This respondent's comments were specifically in the context of new developments:

...so in new developments we really want that around the transport hub, ... whatever it might be, having a lot of your retail, your commercial, a little bit of doctor surgeries ... small shopping centres.

This director showed how these good intentions are shaped and constrained by the planning legislation:

...our priorities in town planning are around considering developments that actually add to the community life of [municipality], that clearly comply with the planning scheme ... support to communities and, in particular, your mums and dads.

There was also strong support for open spaces which support physical activity. Typically, open spaces were conceived as spaces for sport and relatively well-structured play. The following quote from a health project team leader demonstrates both the current work and support for open spaces for physical activity:

Yeah we usually have set walking paths through our open space, set aside about where we're going to develop our open space developments ... there is a requirement which is above the state requirement with new developments. Because we have quite a good open space network and particularly with our facilities and we're doing a lot of planning around sporting facilities, so we sort of know what facilities for organised sport, what facilities we want and what open space requirements that we want.

Participants suggested that changes to create supportive environments were possible within the current regulatory framework and that there were few laws or regulations obstructing the ideas identified in our discussion document. Rather than obstructive regulations, the main barriers to change were competing priorities and limited funding to support new ideas. Prioritization is subjective and work with Canadian civil servants suggests that personal biographies also influence prioritization of, and

receptiveness to, healthy policy change (Lavis et al., 2003).

Policy action areas that were not generally supported

The remainder of the policy interventions identified by our initial review were not widely supported by practitioners with experience in policy change at a local government level.

There was little support for reducing the burden for public liability to ensure that councils had no-fault clauses. As one early years manager shows, councils see public liability insurance as an important responsibility:

[for] public liability ... I think the council would see that they have a responsibility in terms of that to the community.

These local government participants felt that there was little responsibility for improving the food environment beyond food safety at the local government level. The proactive development of policies which require the provision of healthy foods within local government and the settings they are involved with, such as recreation centers and early child care, were seen to be outside the strict purview for food safety set out for local governments by the Health Act. This programme director described the importance of the existing Act:

Well I think the Food Act is mainly around food safety, probably rather than providing healthy eating environments.

The strength of such legislation is in the systems which councils put in place for checking and compliance. This CEO describes the structures within their council:

We have environmental health officers who go around and check food safety right through the city so anyone that's got a corner shop or a food outlet, restaurant, any of those sorts of things, even your street stalls, whatever it is, CWA [Country Women's Association] want to have a thing where they sell stuff on the street, their cakes and things they all have to comply with the Food Safety Act.

The legislation leads the councils thinking around food policy directly to food safety. This programme director shows how their role in compliance is filtered through the legislation and how food environments are understood as a result of this legislation:

The priorities for my directorate...we are the rules and regulations, the policemen of the Council if you like...this is about rules that actually make this a better place, so that's our test...In environmental health we have a key priority around...food safety and making sure that the food people are buying and eating is safe.

The complexity of the food environment and broader determinants of health and the role of local government is demonstrated by this quote from a programme director:

...lack of understanding about a holistic approach to health. People say a healthy breakfast is a muesli bar with chocolate on it...I can't think of a lobby group that would specifically interfere with a health outcome, except the carparking lobby. Like some of our passionate cultural attachments to things like cars and our country town expectation that you can park right out the front, so that lobby group would certainly get in the way of what we're trying to do.

Hoeijmakers *et al.* (Hoeijmakers *et al.*, 2007) suggest that the complexity of modern health problems (and particularly of obesity and its multiple determinants) makes it difficult if not impossible for local government to conduct a detailed analysis of the problem or to estimate correctly the effects of a proposed solution from within local government. Any such activity would require the services of specialists from public health and economics, take time and externalize the rationality for decision-making in policy. For a number of reasons, this may be challenging to local governments.

Reasons for supporting policy action for improved environments

Respondents identified a number of reasons why local councils would support policy changes to create healthy environments. At a council level, strong leadership, a sense of responsibility for future generations and community needs were strong reasons for supporting policy change. Influences from outside the council, including market forces, also had some impact on the degree of support for policy change at the local government level.

A strategic manager described the importance of the CEO in leading council policy:

...our CEO is a really strong bike riding person and just really highlighted it and we've got a really strong cycling fraternity going.

Community benefits were mentioned in response to reasons for policy change by some respondents. This strategic manager supported this general perception:

...there's commitment from the council to start to do things that actually make the public amenity if you like, a little bit better for them, which then starts to make them feel better about their area, which then starts to make them feel, well, let's stop worrying about these sorts of things, let's try and take a more positive attitude about improvements in the area.

A stronger drive for change appeared to be the perception of councils as stewards for the area with a responsibility to provide for future generations. This base planning stage appears to lead to forward planning as this CEO describes:

...in [Name of Council] for instance, there was a real need to look at what we were leaving for the communities and what sort of infrastructure were they going to need into the future...council developed up a 10–15 year capital works program which sort of gives you some direction about where the shortfalls were and you're then able with other councils to go and lobby state government and federal government for funds and that sort of thing.

A factor extrinsic to council was the influence of the private sector on policy change. This was particularly evident with planning provision and in the change of land-use zoning regulations. A number of participants, including this CEO, commented on the role of developers in changing land use patterns:

...council has...to negotiate how it gets that land into its control or at least get the infrastructure built by the developers. So you've got to be very proactive and work with your developers to have them fund a lot of it and hand the land over and build pathways and build all the infrastructure that's needed. But in a way that they can still get a return because people want to live in their estates because they're actually better to live in because they feel better about themselves.

DISCUSSION

This paper aimed to understand which of a pre-defined set of regulatory changes to improve environments for healthy eating and physical activity were preferred within local government in Victoria, Australia. A secondary aim was to understand the reasons why these policy interventions may or may not gain support at a local

government level. We found that there was general support for interventions to improve environments for walking, cycling and active recreation and for the use of zoning provisions to maximize public transport use and destinations within walking distance.

Participants favoured, and could identify, existing policy frameworks which promoted supportive environments for PA. For example, 'Melbourne 2030' provides planning guidance for altering land, public transport and car usage patterns towards active transport (Victorian Department of Planning and Community Development, 2008). Previous work in Victoria has shown that the creation of supportive environments for PA is possible within the existing legislation but needs support from external funding, leadership from within local councils, clear indications of the effectiveness from the evidence base and sensitivity to community and market forces (Allender *et al.*, 2009b).

We found little support for policies which actively promoted healthy eating. We were surprised by this because local governments have jurisdiction or significant leverage over many food environments. These environments would include the council premises as a workplace but also local recreation centres, kindergartens, day-care facilities and other cultural facilities. Our finding was supported by two surveys conducted by Yeatman and colleagues (Yeatman, 1997, 2003) who found most food and nutrition activities in Australian local governments were related to monitoring hygiene standards as mandated by the relevant state law.

Previous findings from studies in local government settings demonstrate that when considering the most realistic policy options for change, it is essential to look to the role of: dominant political circumstances, e.g. the interests and priorities of local councils dictating the preferencing of physical activity interventions relative to food policy interventions; stakeholders, e.g. the differential power relationship between the competing interests of local councils and developers in shaping local physical environments; and, that first and foremost policy change was dictated by responding to serve community needs (real or perceived).

Political circumstances

A number of hypotheses should be considered to explain why informants did not support

policies that could contribute to healthy eating. One hypothesis may be that this reluctance is historical; that is, that current public health initiatives are rooted in the public hygiene models of the late nineteenth century and the disease agent models prevalent in biomedical discourse (Baum, 2007). A second hypothesis is that the current policy environment actively diverts attention from creating environments supportive of healthy eating. The 1958 Victorian Health Act (Victorian Government 1958), a key document in Victoria since its inception, maintains a focus on protecting health and avoiding outbreaks of food-borne disease in Victoria. The need for food inspection and protection programme is self-evident, but its dominance in food policy may overshadow the space to mandate the creation of health-promoting food environments.

There is disagreement within the literature on the place in which regulating for creating healthy environments may take. Some authors (Hogwood and Gunn, 1984) suggest that compelling those responsible for policy change to make health enhancing policy decisions must be done through regulation. Our findings support this notion as clearly 'health for all' thinking is tempered within the constraints of the current regulations. There is a caution here about over-complicating and over-legislating. Hoeijmakers *et al.* (Hoeijmakers *et al.*, 2007) found that some Dutch municipalities failed to develop healthy policy because they struggled to set legislative parameters around such a comprehensive idea as the 'broader' determinants of health. Within our data, clear boundaries and guidelines are followed and participants appear unwilling to step beyond these prescribed limits. Participants in this study could easily identify and engage with specific unitary interventions around physical activity facilities and food safety but had more difficulty in understanding the more complex environmental interventions related to food supply and advertising.

Stakeholders and policy coalitions

The limited resources and divergent interests of those involved in the policy-making process inevitably results in bargaining, adaptation and compromise across participants (Hoeijmakers *et al.*, 2007). Creating supportive food environments could be shared between multiple portfolios such as community health, environment and

waste, business and sustainable development. Competing priorities within a portfolio will also have an effect, for example, maternal and child health has the potential to contribute to increased breast feeding and healthy cooking in the home but is typically directed towards other issues such as maintaining screening programmes for infant health and weight, etc. Conversely, most councils have posts with direct responsibility for physical activity, recreation and leisure environments.

For this reason, lobbyists have a clear target (single portfolio) for creating action around physical activity and developing leisure and recreation facilities but for the lobbyist with an interest in healthy food environments, the entry point is not clear (maternal and child health or across many portfolios) and indeed the responsibility within council is not easily defined.

The influence of politics was clear in our research and particularly well described by the influence of interest groups such as property developers and small business. For Gagnon *et al.* (Gagnon *et al.*, 2007) each lobby group acts within a coalition of networks influencing each sector of public policy (such as agriculture or finance). Networks might also include policy-makers, lobbyists, journalists and others acting at differing levels of government. Each of these network actors provide influence and sanction to the policy sector which can subvert interests of central government such as healthy public policy and provide barriers to policy change.

Meaning of the study: the regulatory environment

One avenue to overcome the disparity between healthy eating and PA promoting policy may be to specifically mandate the promotion of healthy food environments within MPHP. Each local government within Victoria is required to produce an MPHP under section 29B of the 1958 *Victorian Health Act* (Victorian Government, 1958). These plans are updated every three years and, among other things, the plan must 'enable people living in the municipal district to achieve maximum well-being'. At present, the 'Environments for Health' (E4H) document, released in 2001 (Department of Human Services, 2008), provides local councils with framework guidelines for the inclusion of healthy environmental planning in MPHPs; however, the suggested actions for local

government are only general in nature, and local governments are not compelled to follow its recommendations. The inclusion of more tightly defined recommended actions, such as the potential interventions discussed in this paper, may serve to increase the uptake of the E4H recommendations by local councils.

A mandated requirement to create and evaluate supportive food environments for each local government could change the perceptions of the role of the local government. However, this is likely to require more clarity than is present in E4H regarding the mechanisms to carry out such activities. An additional means of improving healthy environments could be to incorporate these principles into each government's Municipal Strategic Statements (MSSs) which lay out the strategic direction of the council in terms of planning and development. Unlike the MPHP, the MSS is relied upon heavily by review bodies like the Victorian Civil and Administrative Tribunal when making decisions to allow or refuse planning approval. Accordingly, the inclusion of healthy environment principles in the MSS may prove more effective in practice.

Meaning of the study: stakeholders, policy coalitions and the role of evidence

An additional strategy would be to act upon the existing policy networks (De Leeuw *et al.*, 2008) using the weight of evidence about the potential health effects of health policy. Our study suggests that 'evidence' (however defined) could play an important role in the policy decision-making process within local government. Clearly, the notion of evidence differs between the different actors and is affected by the political and institutional contexts within which the evidence is interpreted. The active manipulation of networks could centre on transferring knowledge about the evidence of the benefits of healthy public policy (Hoeijmakers *et al.*, 2007). Identification of the least resistant parts of the policy nexus within a local government and targeting evidence towards this entry point would represent a strategic approach to successful policy change.

The calls for regulatory intervention should be tempered by understanding the practical realities for policy actors, particularly when developing responses to complex problems like obesity. Public health often begins with the

assumption that the most effective policy intervention will be the first deployed but regulatory intervention is more problematic for policy-makers than communicative or facilitative interventions (De Leeuw 2007). Communicative strategies such as social marketing are low risk and a typical first response by governments to problems like obesity. Social marketing provides broad coverage, places responsibility on the individual to act, paints the sponsor (e.g. government) in a benevolent light and is minimally intrusive. Facilitative strategies provide opportunities for action, often in concert with communicative intervention. A social marketing campaign aligned with projects facilitating a desired response (e.g. such as providing healthy options in food environments) represents a second, complimentary strategy for intervention. At a regulatory level legislating for the provision of healthier food at low cost and taxation of unhealthy food represent a far more intrusive (or coercive) policy response. Action at each of these three levels: communicative, facilitative and regulative, is subject to the 'least coercion rule' (Bemelmans-Videc *et al.*, 1998; De Leeuw, 2007). The rule suggests that policy-makers should always choose the intervention which is the least intrusive (coercive) and thereby least likely to cause disquiet among target populations.

Future research

Further theoretical work is needed to understand existing models of policy change as they apply to healthy environments within the local government setting in Australia. A future research priority must be to understand why local governments consider certain activities which could reduce obesity (and which are within their competence) to be outside their remit.

Strengths and weaknesses of the study

One strength of this study is that it combined proposed evidence-based suggestions for regulatory changes from a systematic search of peer-reviewed literature with qualitative information from practitioners about the practicalities of moving recommendations into practice. In attempting to apply a systematic review process to identify potential interventions, it is conceivable that we may have missed some

interventions mentioned in other disciplines (e.g. planning). Additionally, the application of importance/utility criteria led to the omission of public transport and community gardens which may have provided meaningful policy options but were deemed too difficult to implement at local level (Gustafson *et al.*, 2007). We were surprised that participants did not identify other possible interventions outside the discussion documents, suggesting that this list contained the most relevant interventions to the Victorian policy context. An alternative hypothesis may be that the paucity of initiatives for the promotion of supportive eating environments is due to the low evidence base examining these initiatives.

Within the Australian Federal system, each State has separate responsibilities for health and each State enacts this responsibility differently. For this reason, caution should be taken in making inferences from this work to other states in Australia. In other countries, the structure and priorities of government will also differ significantly. While the application of lessons learnt in this study should be considered carefully in different contexts, the methodology presents a useful way of developing context-specific regulatory intervention both inside and outside Australia.

CONCLUSION

The stakeholders interviewed in this study consider improving environments for physical activity is core business for local governments while promoting healthy eating is outside their remit. We contend that the creation of healthy food environments should be a central priority for local government. The provision of healthy food in council offices, at local government events, and advice through maternal and child health programmes are immediate changes local governments could make. MPHP (or their local equivalent) present one way that the perceived role of local governments could be broadened to include the food environment.

The availability of evidence of an intervention's effectiveness is of little relevance to the promotion of physical activity and healthy eating if it cannot be translated into action. Ultimately, the most realistic policy options are those that account for the vagaries of politics and power. Making healthier choices, easier

choices will require making healthier policy changes easier for policy-makers. Possible mechanisms for this include lifting the awareness of the local government role in promoting healthy eating environments, supporting champions and targeting external resources towards creating supportive environments and building on the public health role of local governments.

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