Local government policies on healthy food promotion and obesity prevention: results from a national Australian survey

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Abstract

Objective: Local governments (LGs) often own or manage sport and recreation facilities and can promote health in these settings by implementing healthy food policies. The primary aim of this study was to assess the policies, attitudes and practices of Australian LGs relating to obesity prevention and the provision of healthy food in this setting.

Methods: In July 2020, all 539 Australian LGs were invited to complete a survey. We assessed LG priorities to obesity prevention, promoting healthy eating and public health as well as the presence of healthy food policies in sporting facilities.

Results: 203 (38%) LGs completed the survey. Improving public health was a high priority, while obesity prevention and promoting healthy eating were a medium priority. 22% of LGs reported that the priority given to promoting healthy food had increased over the previous year and stayed the same at 65%. Ten per cent of LGs had a healthy food and drink policy in sporting facilities, with 32% reporting having made changes without a policy. LGs located in major cities, with larger populations and with more facilities reported having made more healthy changes at their facilities.

Conclusion: Promoting health is a priority for LGs across Australia, but very few have policies relating to the food environments in their sporting facilities.

Implications for public health: Ongoing monitoring is important to assess changes over time and identify LGs where greater support is required.

Key words: local government, sport and recreation, food, nutrition, policy

The food we eat is strongly influenced by our environment.[1] Sport and recreation facilities are a key setting for children and adults seeking to improve their health through physical activity, but their food environments often work against this.[2] Not only are the foods offered in these sporting facilities unhealthy (high in added sugars, salt and saturated fat),[3] healthy foods are rarely actively promoted.[4] The disconnect between a health-promoting purpose and an unhealthy food environment in sport and recreation facilities has been reported in Australia, New Zealand, Canada and the United States.[2]

The World Health Organisation[5] and public health experts[6] suggest that policy action is an effective and necessary way of improving the food environment and promoting health and wellbeing.[7] Local governments (LGs) are uniquely placed to implement health-promoting policies, due to their familiarity with their community and their ability to identify local needs.[8] LGs typically have less bureaucracy than higher levels of government and are able to act as a testing ground for innovative policy changes that may not be possible for state or national governments.[9] In many countries, LGs can use their legislative powers to influence the food environment within government-owned buildings, including LG owned or managed sport and recreation facilities.[10]

Change toward healthier food retail outlets in sport and recreation facilities appears to be a popular trend in high-income countries, including Australia, Canada, Belgium, the Netherlands, New Zealand and the United States.[2] A 2020 scoping review that examined interventions promoting healthy food and drinks in sporting settings found 26 articles reporting on both the nutritional outcomes of interventions and barriers and enablers to implementing healthy changes.[2] Nine of the 26 studies were from Australia, eight from Canada and one from each Belgium, the Netherlands, New Zealand and the United States.[2] This review identified three main ways to improve food offerings in sport and recreation facilities including: changing nutritional guidelines and policies, organisational capacity building interventions and increasing the availability of healthy options. An increased availability of healthier food and drink in these settings has been shown to result in increased sales of healthier options.[2]

We are aware of only a small number of studies exploring LG policy focusing on healthy food promotion to support obesity prevention[11-16] Policy documents from six LG websites in one Australian state (New South Wales (NSW)) were found to promote healthy eating, cooking and food production skills.[13] However, these policies did not specifically

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relate to sport and recreation facility food environments. We previously published an analysis of LG policies related to obesity prevention and the provision of healthy food in sport and recreation facilities in another Australian state (Victoria) in 2018. Obesity prevention and promotion of healthy food and drink were found to be a higher priority in those areas with a higher socioeconomic position and a larger population.[12] Those findings were consistent with a 2012 survey of LGs in two US states, demonstrating that larger communities had more policies supporting healthy behaviours than smaller communities.[14] A 2016 US study surveyed Community Health Improvement Plans in local health districts with populations of less than 500,000 residents and found that 32% of surveyed local health districts reported one or more healthy eating policies in their plan.[15] Knowledge of policies for supporting healthy retail food environments is important to establish which action areas are in need of policy development and prioritising resources to support specific LGs, benchmarking of policy best practice, and for ongoing monitoring to assess change over time. Although we have previously examined the nutrition-related and obesity prevention policies, practices and attitudes of LGs in the state of Victoria in a survey in 2018,[12] to date, no national studies on this topic have been undertaken in Australia. Furthermore, LG policy environments differ across Australia, with (for example) the legislative requirement for LG public health plans in Western Australia, Victoria and South Australia,[13] the Health Impact Assessment approach in NSW[17] and a Health in All Policies (HiAP) approach in South Australia.[17] Evaluating differences in LG food policies across states may help to understand where opportunities exist for the development of strong LG food polices throughout the country.

Aim

The primary aim of this study was to assess the policies, attitudes and practices of Australian LGs relating to obesity prevention and the provision of healthy food in sports and recreation facilities.

Methods

Participants

The study was a national, cross-sectional survey. A link to an online survey (via Qualtrics survey platform[18]) was emailed to all 539 Australian LGs in two territories and six states (Australian Capital Territory=1, NSW=128, Northern Territory=17, Queensland=77, South Australia=69, Tasmania=29, Victoria=79, Western Australia=139) from July to October 2020. Contact details of LG representatives who were either a health and wellbeing manager or a sport and recreation manager or similar were obtained either publicly online, by contacting the LG directly via email or phone number, or from representatives of state/territory governments who were asked to comment on a draft survey. Non-responders were followed up once via email and a phone call. The survey was closed in December 2020. Respondents were not required to have a specific role within their LG in order to be eligible to complete the survey, but were instead required to have content knowledge in the area of the questions asked. Respondents were asked to record their role.

Survey design

The survey involved closed and open-ended questions assessing LG healthy food and drink provision policies relating to sport and recreation facilities and the priority given by LGs to obesity prevention and promoting health more broadly. Questions explored: 1) the role of the LG representative completing the survey; 2) the number of and type of facilities owned and/or managed by LGs that sold food and/or drink; 3) any previous LG efforts to improve the healthiness of food and drink provision within these facilities, and whether this was with or without the presence of a policy; 4) the priority given by LGs to obesity prevention, healthy eating and health and wellbeing more broadly and 5) barriers and enablers to healthy change (See Supplementary File 1 for full survey). A number of sport and recreation facility or club specific questions were only asked to LG representatives that reported owning or managing one or more sport and recreation or club facility. A representative from each state and territory government was sent a draft of the survey which was based on one used in a previous Victorian study from 2018[12] and asked to provide feedback on included questions via email. We modified the survey based on this feedback to add additional questions that were of interest to state governments to help identify and support LG needs. The questions asked were identical for all states. Some questions used in this survey were informed by a previous Canadian survey of policy implementation and adoption designed for the local sport and recreation setting.[19]

Questions related to LG positions on health related topics, and their priority given to implementing healthy changes, and any progress made, were answered using an 11-point scale. Responses to each question are presented in the full survey available in Supplementary File 1.

Analysis

For a) all Australian LGs, b) those that responded to the survey, and c) those that did not respond, we assessed socioeconomic position (measured using the Socio-Economic Indexes for Areas (SEIFA)),[20] population size[21] and remoteness (measured using the Australian Bureau of Statistics classifications of major cities of Australia, inner regional Australia, outer regional Australia and remote/very remote Australia).[22] Data was not available for three non-responding LGs for socioeconomic position and rurality[22] and for two non-responding LGs for population size. Wilcoxon rank-sum tests (used when comparing characteristics between two groups) or Kruskal-Wallis tests (used when comparing characteristics across more than two groups) were used where relevant to compare LG subgroups according to socioeconomic position, LG remoteness, population size, and number of LG-owned and/or managed sports and recreation facilities. Deciles for socioeconomic position were based on overall Australian deciles for national results and based on state-based deciles where analysis was conducted for individual states (≤5th SEIFA decile (high level of disadvantage) vs. ≥6th SEFIA decile (low level of disadvantage)). For continuous variables (population size, number of LG-owned and/or managed sport and recreation facilities), groups were established based on cut points representing the median value. A p value of ≤ 0.05 was considered statistically significant. All analyses were conducted in Stata 15.

For one state, state-level results are not reported as fewer than five LGs responded. For one territory, territory-level results are reported without a stratified analysis by LG characteristics as fewer than 10 LGs responded. As the Australian Capital Territory only has one LG, it was combined with LGs from NSW, the state it is completely surrounded by.

Ethical Approval

This study was conducted according to the guidelines laid down in the Declaration of Helsinki and all procedures involving research study participants were approved by the Deakin University Human Ethics Advisory Group, HEAG-H 35_2018. Informed implied consent was obtained from all participants involved in the study.

Results

Respondent characteristics

Of the 539 invited LGs, 203 (38%) completed the online survey [Australian Capital Territory=1 (100% of ACT LGs), NSW=33 (26%), Northern Territory=7(41%), Queensland=25 (32%), South Australia=27 (39%), Tasmania=3 (10%), Victoria=45 (57%) and Western Australia=62 (45%)]. Of all Australian respondents, individuals completing the survey on behalf of LGs included members of the sport and recreation team (42%), community development or planning team (25%), environmental health officers (11%), those in a health promotion role (9%) or another role (13%) (including a combination of the above, CEO or executive assistant). The median SEIFA and population size and the percent of LGs located in major cities, inner-regional areas, outer-regional areas and remote or very remote areas are reported in Table 1 for responding and non-responding LGs separately as well as for all Australian LGs. See Supplementary File 2 for individual state characteristic results.

Health-related priorities

Ninety-eight per cent of responding LGs owned sport and recreation facilities. Twenty-two percent of LGs reported that their priority given to promoting healthy eating and/or drinking had increased compared to one year ago, 65% reported their priority

Table 1: Characteristics of all Australian LGs (n=537) and those participating in the survey (n=203).

Characteristic	All Australian LGs[a] (n=537)	Participating LGs (n=203)	Non-participating LGs (n=334)
Median [Interquartile Range]			
SEIFA decile[b]	5 [3,8]	**6 [4,8]**	**5 [3,8]**
Population size[c]	13,261 [3,047, 46,926]	**18,704 [4,190 ,92,888]**	**11,082 [2,871, 38,288]**
n (%)			
Location[d]			
Major cites	132 (24)	**67 (33)**	**65 (19)**
Inner-regional areas	134 (25)	**51 (25)**	**84 (25)**
Outer-regional areas	145 (27)	**48 (24)**	**97 (29)**
Remote/very remote	126 (24)	**37 (19)**	**89 (27)**

Notes:

LG, Local Government; SEIFA, Socio-Economic Indexes for Areas

Significant differences ($p \leq 0.05$) between participating and non-participating LGs are indicated in bold.

a: Three non- responding LGs did not have SEIFA or location available. Two non- responding LGS did not have population data available.

b: LGs are ranked from most disadvantaged (1) to least disadvantaged (10) using the decile rank within Australia. Australian Bureau of Statistics. Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA) 2016. [Internet]. Canberra, Australia. 2021. [cited 2021 July]. Available from: http://stat.data.abs.gov.au/Index.aspx?DataSetCode=ABS_SEIFA2016_LGA

c: Australian Bureau of Statistics. Regional population. [Internet]. Canberra, Australia. 2019. [cited 2021 July]. Available from: https://www.abs.gov.au/statistics/people/population/regional-population/2018-19.

d: LG remoteness, measured using the Australian Bureau of Statistics classifications (major cities of Australia, inner regional Australia, outer regional Australia, remote Australia, and very remote Australia). Australian Government. Australian Statistical Geography Standard Correspondences (2016) - 2011 Population Weighted. [Internet]. Canberra, Australia. 2016 [cited 2021 Mar]. Available from: https://data.gov.au/dataset/ds-dga-23fe168c-09a7-42d2-a2f9-fd08fbd0a4ce/details?q=

Table 2. Priority given to obesity prevention and food and drink changes in local government-owned sport and recreation facilities, examined by local government characteristics, in 203 Australian local governments, July to December 2020

Priority given to:	Median score [Interquartile range]										
	Overall results	Socio-economic position[a]		Remoteness[b]				Population size[c]		Number of sport and recreation facilities	
		High disadvantage (≤5th decile)	Low disadvantage (≥6th decile)	Very remote/ Remote	Outer regional	Inner regional	Major cities	Less than 18,704 residents	At least 18,704 residents	Less than 12	At least 12
	(n=203)	(n=81)	(n=122)	(n=37)	(n=48)	(n=51)	(n=67)	(n=101)	(n=102)	(n=94)	(n=96)
Promoting healthy eating/drinking[d]	5 [2, 6]	5 [2,6]	5 [3,6]	**4 [2,6]**	**3 [1,5.5]**	**5 [3,6]**	**5 [3,7]**	**4 [2,6]**	**5 [3,7]**	5 [2,7]	5 [3,6]
Reducing the prevalence of obesity[e]	5 [2, 8]	6 [2,8]	5 [3,8]	**5 [2,7]**	**4.5 [2,6]**	**6 [3,8]**	**7 [4,8]**	**5 [2,7]**	**6 [4,8]**	**5 [2,8]**	**6 [4,8]**
Improving public health and wellbeing[e]	8 [5,9]	8 [5,9]	8 [5,9]	**7 [5,8]**	**7 [5,8]**	**7 [5,8]**	**8 [7,10]**	**7 [5,8]**	**8 [6,9]**	7 [5,8]	8 [6,9]
Increasing the availability of healthy food/drink in LG owned sport and recreation facilities[f]	3 [1,5]	3 [1,5]	3 [1,5]	**1.5 [1,4]**	**1 [1,5]**	**3.5 [1,5]**	**5 [2,6]**	**2 [1,5]**	**4 [2,6]**	**2 [1,5]**	**4 [2,5]**
Reducing the availability of sugary drinks for sale in LG owned sport and recreation facilities[f]	2 [1,5]	2 [1,5]	2 [1,5]	**1 [1,3.5]**	**1 [1,3]**	**3 [1,5]**	**5 [2,6]**	**1 [1,4]**	**4 [2,6]**	**2 [1,5]**	**3 [1,5]**
Reducing the availability of unhealthy food for sale in LG owned sport and recreation facilities[f]	2 [1,5]	2.5 [1,5]	[1,5]	**2 [1,4]**	**1 [1,3]**	**3 [1,5]**	**4 [2,6]**	**2 [1,5]**	**4 [1,5]**	**2 [1,5]**	**3 [1,5]**

Notes:

LG, Local Government

Significant differences ($p \leq 0.05$) between subgroups are indicated in bold.

For 'population size' and 'number of sport and recreation facilities' median values were used as cut points.

a: LGs are ranked from most disadvantaged (1) to least disadvantaged (10) using the decile rank within Australia. Australian Bureau of Statistics. Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA) 2016. [Internet]. Canberra, Australia. 2021. [cited 2021 July]. Available from: http://stat.data.abs.gov.au/Index.aspx?DataSetCode=ABS_SEIFA2016_LGA

b: Remoteness classified according to the Australian Bureau of Statistics classifications, which makes use of Accessibility and Remoteness Index of Australia (ARIA+). Australian Government. Australian Statistical Geography Standard Correspondences (2016) - 2011 Population Weighted. [Internet]. Canberra. 2016 [cited 2021 Mar]. Available from: https://data.gov.au/dataset/ds-dga-23fe168c-09a7-42d2-a2f9-fd08fbd0a4ce/details?q=

c: Australian Bureau of Statistics. Regional population. [Internet]. Canberra, Australia. 2019. [cited 2021 July]. Available from: https://www.abs.gov.au/statistics/people/population/regional-population/2018-19

d: Within your LG would you say promoting healthy eating/drinking is a: (rank priority) (11-point priority scale: 0= low priority, 10= high priority)?

e: What is your LG's position on taking action….? (11-point priority scale: 0= "we have not thought about it", 10= "it is a major focus")

f: What is your LG's position on….? (11-point priority scale: 0= "we have not thought about it", 10= "We have made all necessary changes"). These questions were only asked in LGs with one or more sport and recreation or club facility.

had remained the same, 4% reported their priority had decreased and 10% were unsure. LGs reported that improving the health and wellbeing of their municipality was a high priority (median=8 [IQR 5,9] using an 11-point scale, where 0='low priority' and 10='high priority'). LGs reported that promoting healthy food and drink consumption (5 [2,6]) and obesity prevention (5 [2,8]) were a moderate priority. Fifteen per cent of LGs selected the maximum score of 10 regarding improving health and wellbeing, and 5% and 7% of LGs selected a score of 10 regarding their priority given to promoting healthy food and drinks and their priority given to obesity prevention, respectively. Priority given to improving health and wellbeing and promoting healthy food and drink was a higher priority in major cities and those LGs with larger populations. Obesity prevention was rated as a higher priority by LGs located in major cities with larger populations, as well as those with more facilities (see Table 2).

Similar results were seen across all states, however, Victorian LGs reported a higher priority for improving health and wellbeing, promoting healthy food and drink and obesity prevention compared to other states (see for Table 3 state results; see Supplementary File 3 for individual state results with subgroup analysis by LG characteristic).

Healthy policies

Ten per cent (20/203) of LGs had written policies that related to the healthiness of food and drinks at sport and reaction facilities at the time of the survey. Of these, 65% reported a healthy drink policy and 90% reported a healthy food policy. Of those that reported a healthy drink policy, 77% reported a policy to reduce the display of sugary drinks, 77% reported a policy to reduce the range of sugary drinks, 70% reported policy to increase the availability of drinking water (both free and available for purchase) and 46% reported a policy related to using a traffic light system to label the healthiness of drinks available. Of those that reported a healthy food policy, 88% reported a policy to increase the number of healthy food options, 59% reported a policy to decrease the number of unhealthy food options, 59% reported a policy to increase the prominence or display of healthy food, 41% reported a policy decreasing the prominence of display of unhealthy food and 47% reported a policy related to using a traffic light system to label the healthiness of foods available.

Thirty-two per cent of LGs reported making changes to improve the healthiness of food and drink at sport and recreation facilities without the presence of a policy.

Healthy changes made to food environments

Three per cent of LGs identified that reducing unhealthy food sales was a major focus and selected the maximum score of 10 (11-point scale where 0= "not thought about" and 10= "it is a major focus"). Two per cent of LGs identified that increasing the availability of healthy foods and removing sugary drinks was a major focus and selected the maximum score of 10 (11-point scale where 0='not thought about' and 10='it is a major focus'). Few LGs reported: having made all desired changes to increase healthy options (median=3 [1, 5] on an 11-point scale where 0='not thought about' and 10='completely changed'), removed sugary drinks (2 [1,5]), or reduced the availability of unhealthy food in LG owned sport and recreation facilities (2 [1, 5]). LGs who reported being closer to completing all desired changes (increasing healthy options, reducing sugary drinks and reducing unhealthy food options) were those located in major cities, with larger population and with more facilities (see Table 2 for Australian results and Supplementary File 3 for individual state results with subgroup analyses). Similar results were seen among all states, however, Victorian LGs reported being closer to completely improving the healthiness of the food and drinks offered in their sport and recreation facilities (see Table 3).

External support to make healthy changes

Twenty-eight per cent of LGs reported engaging with external organisations or individuals to assist with making healthy changes. Of these, 88% of LGs had engaged support for changes to both food and drinks (three LGs for food only and four for drinks only). Examples of support included dietitians, health promotion officers provided by state funded programs, or university students. Twelve per cent of LGs received funding and/or in-kind support to assist with making healthy changes. Of these, 83% of LGs received funding and/or in-kind support for both food and drinks (one LG for food only and three for drinks only).

Barries and enablers to healthy change

LGs identified a range of enablers as important to implementing healthy changes including funding and support from stakeholders as well as control over facilities. The most commonly identified enabler was adequate support from external stakeholders such as customers, whereas the most commonly identified barrier was inadequate control over sport and recreation facilities to implement a healthy change (see Table 4). More than half of all LGs identified each of the barriers and enablers assessed as being important to facilitate or inhibit healthier facilities, with the exception of negotiating with suppliers, which was seen by 45% as a barrier and 45% as a facilitator. Similar barriers and enablers were seen regardless of the SEIFA, location, population size and number of facilities in each LG, and if the LG had made any healthy changes (see Supplementary File 4).

Discussion

This is the first national Australian study to identify policies, attitudes and practices of LGs relating to health and wellbeing, obesity prevention and healthy food and drink provision in LG-owned and/or managed sport and recreation facilities. We found that LGs reported improving the health and wellbeing of their municipality as a high priority, and obesity prevention and promoting healthy eating and drinking within their municipality as a medium priority. Twenty-two per cent of LGs revealed that healthy food and drink promotion had increased over the past year. LGs are making healthy changes to the offerings in the food outlets at their sport and recreation facilities, however, few have made all the changes they would like to see implemented. Of all Australian LGs responding, only 10% reported having a written policy related to the presence of healthy food and drink in sport and recreation facilities, however, 32% reported making changes without the presence of a policy. Those LGs located in major cities, with a larger population and more facilities were closer to fully implementing healthy options in their facilities. Similar results were seen across all states; however, Victorian LGs were closer to having fully implemented desired healthy changes compared to other states.

Few studies have been conducted examining LG priorities and policies related to healthy eating and obesity prevention. A US study used data from the 2014 National Survey of Community-Based Policy and Environmental Supports for Healthy Eating and Active Living with surveys completed by local officials. That study analysed the community planning documents from the survey to determine how many of these included objectives related to supporting healthy eating and active living,[16] finding that 64% of municipalities had a comprehensive or general plan which incorporated both healthy eating and active living. Those municipalities with larger populations and located in urban areas were found to be more likely to have a plan. This is consistent with another US study from 2012 which involved an online survey in two states capturing local level healthy eating and active living policies.[14] Among 210 LGs five per cent had healthy eating policies including nutrition standards in government buildings or worksites and 62% had incentives for food retailers to encourage the availability of healthier foods. This study reported that LGs with larger populations more frequently reported having healthy eating and active living policies and standards compared with LGs with smaller populations.[14] Our study focused on policies present in sport and recreation facilities with only 10% reporting having a healthy food and/or drink policy for their facilities. This number may be lower than US studies as it focuses on a specific setting. However, similar to the US studies, our study also found that LGs located in major cities and with larger populations had reported improving public health and wellbeing, healthy eating and obesity prevention as a higher priority

Table 3: State-specific results of the priority given to obesity prevention and food and drink changes in local government-owned sport and recreation facilities, in 203 Australian local governments, July to December 2020.

Priority given to:	Median score [Interquartile range]						
	Australia	New South Wales and Australian Capital Territory	Victoria	Queensland	Western Australia	South Australia	Northern Territory
	(n=203)	(n=34)	(n=45)	(n=25)	(n=62)	(n=27)	(n=7)
Promoting healthy eating/drinking[a]	5 [2, 6]	**4 [2, 6]**	**6 [5, 8]**	**5 [3, 5]**	**4 [2, 6]**	**4 [2, 5]**	**4 [1, 6]**
Reducing the prevalence of obesity[b]	5 [2, 8]	**6 [2, 7]**	**7 [6, 9]**	**5 [2, 7]**	**5 [2, 7]**	**4 [2, 6]**	**4 [2, 7]**
Improving public health and wellbeing[b]	8 [5, 9]	**7 [5,8]**	**9 [8,10]**	**7 [4,8]**	**7 [5,8]**	**7 [6,8]**	**8 [5,9]**
Increasing the availability of healthy food/drink in LG owned sport and recreation facilities[c]	3 [1, 5]	**2 [1,5]**	**6 [4,8]**	**3 [1,4]**	**2 [1,5]**	**1.5 [1,3]**	**2 [1,5]**
Reducing the availability of sugary drinks for sale in LG owned sport and recreation facilities[c]	2 [1,5]	**2 [1,5]**	**6 [4,8]**	**2 [1,4]**	**1 [1,4]**	**1 [1,2.5]**	**1 [1,4]**
Reducing the availability of unhealthy food for sale in LG owned sport and recreation facilities[c]	2 [1,5]	**2 [1,4]**	**5 [4,7]**	**2 [1,4]**	**2 [1,5]**	**1 [1,2.5]**	**1 [1,4]**

Notes:
LG, Local Government
Results with significant differences ($p \leq 0.05$) between states are indicated in bold.
Number of responses varied between questions, as certain questions were only asked in LGs with one or more sport and recreation or club facilities.
Tasmanian results are not reported due to small sample size (n=3 LGs); Australia Capital Territory results were combined with New South Wales results due to small sample (n=1)
a: Within your LG would you say promoting healthy eating/drinking is a: (rank priority) (11-point priority scale: 0= low priority, 10= high priority)?
b: What is your LG's position on taking action….? (11-point priority scale: 0= "we have not thought about it", 10= "it is a major focus")
c: What is your LG's position on….? (11-point priority scale: 0= "we have not thought about it", 10= "We have made all necessary changes"). These questions were only asked in LGs with one or more sport and recreation or club facility.

Table 4: Barriers and enablers to making the food and/or drink environment healthier in sports and recreation facilities for surveyed Australian local governments, in 203 Australian local governments, July to December 2020.

Domain	Enablers			Barriers		
	Enabler	Proportion of local governments identifying enabler (n (%))	Importance ranking[a] (median, [interquartile range])	Barrier	Proportion of local governments identifying barrier (n (%))	Importance ranking[a] (median, [interquartile range])
Funding	Adequate funding	120 (59)	3 [1,6]	Inadequate funding	113 (56)	4 [2,6]
Stakeholder support	Adequate support from internal stakeholders	127 (63)	3 [2,5]	Inadequate support from internal stakeholders	105 (52)	5 [3,8]
	Adequate support from external stakeholders	148 (73)	3 [2,5]	Inadequate support from external stakeholders	133 (66)	4 [2,5]
Time	Adequate staff time	129 (64)	3 [2,5]	Inadequate staff time	129 (64)	4 [2,6]
Control over facilities	Adequate control over facilities	138 (68)	3 [1,6]	Inadequate control over facilities	148 (73)	2 [1,4]
Financial	Financial viability of food outlet not a concern	119 (59)	4 [2,7]	Concerns relating to impact on financial viability of food outlet(s)	134 (66)	3 [2,5]
Policy	Presence of healthy food and drink policy	126 (62)	4 [2,6]	Lack of healthy food and drink policy	131 (65)	4 [2,5]
Sourcing appropriate healthy alternatives	Ability to source appropriate healthy alternatives (e.g. healthier drink options)	117 (58)	5 [3,7]	Inability to source appropriate healthy alternatives (e.g. healthier drink options)	106 (52)	6 [3,7]
Suppliers	Suppliers who are easy to negotiate with	91 (45)	7 [4,9]	Problems negotiating with suppliers	91 (45)	7 [5,9]

Note:
a: Ranked from 1 to 10 where 1=most important and 10= least important (note that options also included "other"). When an option was not considered a barrier/enabler it was left blank or marked as "0"

compared with smaller and more regional LGs. These LGs may lack the financial capacity to support policy development in this area, or may have different priorities to larger LGs and those in urban areas. LG income in Australia is largely inflexible because of a reliance on property taxes,[23] meaning that advocacy for funding and support for smaller LGs (by population size) and those in less wealthy areas may be required to advance a healthy eating agenda.

LGs can and should promote the provision of healthier food within their community environment.[24] Our study found that for 22% of LGs, the priority given to promoting healthy food and drinks had increased within the last year. A recent study analysing policies in six LGs in NSW, Australia found all six LGs had developed at least one policy document related to promoting healthy food. These policies included action to support markets that sell healthy food (n=5), promoting healthy eating/cooking/food preparation through education, information and demonstrations (n=6), encouraging food retailers to improve availability and affordability of healthy food (n=2) and healthy food sold/provided in council facilities/services or by contractors (n=1).[13] No policies were found that highlighted LGs partnering with sporting clubs to provide healthy options, with no other reference to sport and recreation facilities reported in the study. Despite almost a quarter of LGs in our study reporting that the promotion of healthy eating and drinking had increased in the past year, only 10% of LGs have policies in this space. Notably, 32% of LGs reported making changes without the presence of a policy. Neither the study mentioned above[13] or our study identified if the policies reported were voluntary or mandatory. Voluntary guidelines alone have been found to be insufficient to support sustained improvement,[25] highlighting the need for the development of structural changes such as mandatory LG healthy food and drink policies. Healthy food and drink policies have been found to improve unhealthy food environments[26] and are crucial for maintenance of any healthy changes made.[27] In addition to actual policies within these settings, incorporating requirements for retailers to meet policy objectives in their lease agreements and linking performance to financial consequences such as fee exemptions or ability to apply for LG funding may also be helpful.[28]

Comparing Victorian results from a survey we conducted in 2018 to those from the current survey using almost identical questions (and with a similar number and socioeconomic profile of LGs in both) demonstrated little change in LG priorities and practices over the two years between surveys (see Supplementary File 5). Obesity prevention and promoting healthy eating remained a moderate to high priority while the level of progress occurring to implement healthy 18 years between the Victorian surveys, given the already high priority given to healthy eating and drinking by Victorian LGs at the first time point, the lack of change could be due to a 'ceiling effect', where little change was realistically possible. Mandated policies within sport and recreation facilities may nevertheless be one option that could see this increase even further.

In the current survey, Victorian LGs reported a higher priority for promoting healthy eating and drinking and obesity prevention and having made more progress to improving the food offerings at their sport and recreation facilities compared to LGs from other states and territories. A repeated cross-sectional Australian study between 1995 (n=742; response rate=61% of LGs) and 2007 (n=665; response rate=37% of LGs) reported on LG involvement in 29 food and nutrition action areas.[29] At both timepoints, Victorian LGs reported higher level of involvement in food and nutrition activities compared to other states. In Victoria, the Public Health and Wellbeing Act 2008 and The Public Health and Wellbeing Regulations 2019 gives states and LGs specific legislative responsibilities related to improving health and wellbeing of their community.[30] This piece of legislation requires LGs to create a municipal public health and wellbeing plan every four years and identify goals and strategies to support their community to achieve maximum health and wellbeing.[31] In 2018, 92% of Victorian LGs had prioritised healthy eating in their municipal public health and wellbeing plan.[32] South Australia and Western Australia are the only other states that require LGs to create a public health plan.[13] At the state government level, a Food Policy Index was developed to assess food and diet related policies and identify areas for possible improvement. Assessments of Australian state nutrition and obesity prevention policies in 2017 and 2019 noted that there has been 'accelerating uptake of the Victorian Government's Healthy Choices guidelines (which use a traffic light system to identify healthier and less healthy options) within sport and recreation facilities'.[32,33] These guidelines may have accelerated the implementation in Victoria in comparison to other states. Only one other state (Queensland) was identified as having nutrition guidelines for promoting health in sporting settings.[34] Victorian sports and recreation facilities are also supported via funding mechanisms including the Healthy Together Victoria program which supported community-level systems changes from 2011–2016[35]; the Better Indoor Stadium fund, which ties funding for stadia improvements to Healthy Choices guidelines implementation[36]; and the availability of technical expertise to guide implementation of changes via the state-funded Healthy Eating Advisory Service.[37]

Our study identified no one clear barrier or enabler required to support a healthy food and drink initiative in sport and recreation facilities. A number of important enablers were identified however, including adequate funding, support from stakeholders and control over facilities. The role of both internal stakeholders (such as local government staff) as well as external stakeholders (including customers) has been previously highlighted as a key facilitator to implementing healthy changes.[27] Semi-structured interviews with key stakeholders involved in the design and implementation of a healthy food retail policy in Victorian sport and recreation facilities revealed the personal views of stakeholders were an important influence on their engagement in the intervention. Those with higher inherit beliefs in the intervention (i.e. they believed in the change) were more likely to actively support and engage in the project, and thus encourage project progress.[27] Customer support for an intervention has also been reported as important for the success of interventions in sports and recreation settings.[27,38] The wide range of barriers and enablers identified as important demonstrates that each LG will have unique concerns that need to be identified and addressed to support healthy sport and recreation food environments.

Strength and limitations

This is the only national study of its type to date, with all Australian LGs invited to participate. Although a large number of LGs completed the survey, responding and non-responding LGs were found to be demographically different (non-responders being smaller, more remote and from lower socioeconomic position), meaning that the results cannot be seen to be nationally representative and are likely to over-estimate the priority given to healthy eating by Australian LGs. Responses were also based on the knowledge of the person or persons completing the survey. Although multiple individuals within a single LG could contribute to survey completion to obtain an accurate and comprehensive response across different policy and action areas, the number of people contributing to the completion of the survey in each LG was not reported.

Conclusion and implications for public health

Across Australia, LGs are recognising promoting healthy eating and drinking and obesity prevention as a priority area for action. Compared to other states and territories, Victorian LGs gave a greater priority to obesity prevention and healthy eating and drinking, and reported more action toward healthy food retail environments. Policy settings and support in Victoria may explain why health related priorities are higher compared to other states. This study helps to identify priority areas for action, and the results can be used to advocate for policy development and implementation at the local and state government levels. This type of monitoring is important to identify examples of best practice and areas where further support for LGs is required, as well as for tracking change over time.

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Supporting Information

Additional supporting information may be found in the online version of this article:

Supplementary File 1: Local government national survey.

Supplementary File 2: Respondent characteristic for individual state and territory results.

Supplementary File 3: Subgroup analysis for induvial state and territory results.

Supplementary File 4: Barriers and enablers stratified by local government characterises.

Supplementary File 5: Comparison of Victorian baseline and follow-up responses to local government survey.