Journal of Public Health
https://doi.org/10.1007/s10389-023-01891-8

ORIGINAL ARTICLE

Factors affecting policy implementation for childhood obesity prevention in New South Wales, Australia: policy mapping and interviews with senior officials

Emma K. Esdaile[1,2,3] · **Suzanna B. Henderson**[1] · **Li Ming Wen**[1,2,3] · **Louise A. Baur**[1,2,3,4] · **Chris Rissel**[1,2,3]

Received: 14 November 2022 / Accepted: 14 March 2023

Abstract

Aim To explore the implementation of a whole-of-government strategy as a policy tool for the early prevention of childhood obesity in New South Wales (NSW), Australia.

Subject and methods This paper presents a case study of childhood obesity prevention in the context of implementing the NSW *Healthy Eating and Active Living (HEAL) Strategy*. We undertook reflexive thematic analysis of interviews with senior officials (n = 25) and content analysis of policy mapping across the NSW Government.

Results *HEAL* was dominated by approaches focused on health services and settings and few environmental actions were undertaken. Four themes were identified: (1) making good citizens, (2) narrowing the scope of prevention, (3) competing government interests and (4) limited collaborative mechanisms. We additionally identified a cross-cutting theme around the expressed need for more evidence.

Conclusion Ultimately the *HEAL Strategy* provided a comprehensive framework with the potential to prevent obesity in early childhood, but it lacked commitment from leadership and willingness across agencies to ensure collaboration on its most contentious areas, notably food environments.

Keywords Obesity prevention · Policy · Early childhood · Intersectoral collaboration · Deliverology

Acronyms

ACF	Advocacy Coalition Framework
ECEC	Early Childhood Education and Care
HEAL	Healthy Eating and Active Living
HEALSOG	HEAL Senior Officers Group
LHD	Local Health Districts
NPAPH	National Partnership Agreement on Preventive Health
NSW	New South Wales
PCAL	Premier's Council on Active Living
PHIMS	Public Health Information Management System
SD	Strategic Directions
SIF	Supportive Information Files

✉ Emma K. Esdaile
emma.esdaile@sydney.edu.au

1 Sydney School of Public Health, Faculty of Medicine and Health, The University of Sydney, Camperdown, NSW, Australia

2 Prevention Research Collaboration, Faculty of Health and Medicine, Charles Perkins Centre, School of Public Health, The University of Sydney, Camperdown, NSW, Australia

3 The NHMRC Centre for Research Excellence in the Early Prevention of Obesity in Childhood, Camperdown, NSW, Australia

4 Specialty of Child and Adolescent Health, The University of Sydney, Sydney, NSW, Australia

Introduction

In Australia there were approximately one in four children (24.6%) aged 2–4 years with overweight or obesity in 2017–18 (Australian Bureau of Statistics 2018). There is a socioeconomic gradient of obesity in Australian children, most notably in middle childhood (defined as 4–11 years), although also in early childhood (<4 years) (Killedar et al. 2022). Rapid weight gain under 2 years is linked to long term adiposity status (Zheng et al. 2018) and obesity prevention in the first 2000 days (pregnancy to 5 years) has been identified as a key life stage to intervene.

Published online: 15 April 2023

The 2017 WHO Commission on Ending Childhood Obesity implementation plan called for comprehensive interventions to promote healthy diet and physical activity, including the first 2000 days (World Health Organisation 2017). Obesity is a complex, global, social phenomenon. Responsibility to address it sits with families and communities but also the private sector and governments (World Health Organisation 2016; Mihrshahi et al. 2018). While acknowledging this complexity, this study focused on the policy levers for the New South Wales (NSW) Government.

History of childhood obesity policy in NSW

The NSW Government has held a long interest in childhood obesity prevention starting with the multi-sector *Childhood Obesity Summit* in 2002 (Innes-Hughes et al. 2019). While some criticised the summit resolutions as diluted by negotiations among competing stakeholders (including food industry representatives) (King et al. 2007; Nathan et al. 2005), it informed the development of the *Prevention of Obesity in Children and Young People: Government Action Plan 2003–2007* (NSW Government 2003).

The National Partnership Agreement on Preventive Health 2008–2014 (NPAPH) was the largest pool of chronic disease funding in Australia to date and provided a national mandate to act. The commencement of the NPAPH was an external event according to the Advocacy Coalition Framework (ACF), a theory of policy processes (Clarke et al. 2018; Sabatier and Weible 2007). Each state and territory designed their own set of initiatives to meet the NPAPH aims in line with their own policies and health system contexts, of which obesity reduction was a central pillar. The NSW *Healthy Children Initiative* was developed in 2010 by the NSW Ministry of Health (the Ministry), drawing on learnings from the regional *Good-4Kids* initiative which had resulted in reductions in child weight status among primary school aged children (Wiggers et al. 2013). It received half of NSW's $79 million NPAPH funding in 2011 (Innes-Hughes et al. 2019) and focused on schools and the Early Childhood Education and Care (ECEC) sector as key settings.

Within the NPAPH context the Ministry developed and adopted the *Healthy Eating and Active Living (HEAL) Strategy 2013–2018* (NSW Ministry of Health 2013). The *HEAL Strategy* was identified as the key 'framework for action' to retain childhood obesity reduction as a NSW Government priority despite the loss of NPAPH funding in 2014 (Innes-Hughes et al. 2019), another external event (Esdaile et al. 2022a) (see supportive information file (SIF) 2.5, *HEAL Strategy* timeline). It was approved by the NSW Cabinet as a whole-of-government obesity prevention strategy and aimed to improve healthy lifestyle behaviours (eating and movement) in the short to medium term, with the ultimate long-term goal of preventing overweight and obesity across the population via four strategic directions (SD) outlined in Fig. 1 (see SIF2.1) (NSW Ministry of Health 2013). Within the Ministry, the Centre for Population Health took carriage of the policy and strategy relating to *HEAL* and the Office of Preventive Health managed and monitored statewide programs (SD2).

Recommitment to the reduction of obesity in childhood was made in 2015 with the *Premier's Priority to reduce childhood obesity by 10% by 2025* (*Premier's Priority*). In total there were 12 Premier's Priorities (SIF2.4) each overseen by a team in a unit within the Department of Premier and Cabinet (Premier & Cabinet). The Premier's Implementation Unit was driven by deliverology, a governance methodology, focused on achieving targets, performance, the use of performance data and 'routines' to drive outcomes (Barber et al. 2010).

The aim of this study was to explore the implementation of the *HEAL Strategy* and its governance as a policy tool for collaboration across the NSW Government to prevent obesity in the first 2000 days.

Methods

Study design

We conducted a case study of early childhood obesity prevention policy in NSW using policy mapping and semi-structured interviews with senior public officials. Case studies are a useful method to analyse complexity and provide insights for other contexts (Gerring 2004; Meinen et al. 2016). We

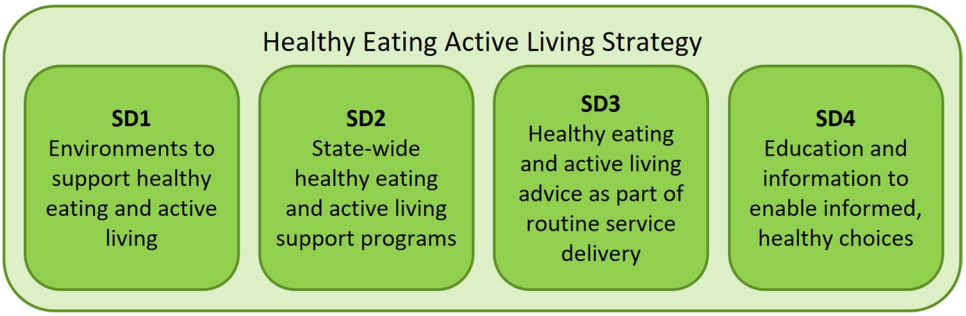

Fig. 1 *HEAL Strategy* strategic directions (NSW Ministry of Health 2013)

focused on policies intersecting with the *HEAL Strategy* and the *Premier's Priority* (2013 to mid-2019). We have used the Standards for Reporting Qualitative Research to report study methods (O'Brien et al. 2014), with additional detail provided in SIF1.1.

We assessed two distinct data types in this case study. We used content analysis to systematically explore the stated intent of the NSW Government in official policy documents (Hsieh and Shannon 2005; Vaismoradi et al. 2013), and reflexive thematic analysis of interviews with senior officials to explore their experiences of developing and implementing policy in this space (Braun and Clarke 2006, 2019).

Theoretical framework

The ACF is based on the premise that public policy decisionmakers are 'boundedly rational' and policies are fundamentally driven by beliefs (Jenkins-Smith et al. 2014). A policy subsystem, such as the NSW obesity prevention policy subsystem being studied here, includes policy actors (any people who regularly attempt to influence the policy subsystem) (Jenkins-Smith et al. 2014). Coalitions are made up of individual actors who share a set of beliefs around the policy subsystem and drive public policy change (Jenkins-Smith et al. 2014). Subsystem policy is mostly controlled by a dominant coalition, an aggregated group of policy actors with shared beliefs who tend to hold resource superiority (Jenkins-Smith et al. 2014). The ACF offers four conceptual pathways to policy change, each insufficient to create change on their own. The first is external subsystem changes (beyond policy subsystem territory, e.g. national funding), which are short term events that can be exploited for policy change. The second is internal subsystem events (within subsystem territorial boundaries) directly caused by subsystem actors. The third is policy orientated learning, which tends to lead to incremental, minor policy change. The fourth is negotiated agreement between coalitions, facilitated by policy brokers or collaborative forums (Jenkins-Smith et al. 2014).

The ACF accounts for the agency (political behaviour) dimensions of the policy process (Jenkins-Smith et al. 2018; Weible et al. 2009; Leach and Sabatier 2005; Leach et al. 2013), but has been criticised for not taking institutional (organisational) aspects of the policy process into account (Weible et al. 2009; Wood and Tenbensel 2018; Salignac et al. 2019; Jenkins-Smith et al. 2014). To account for these two aspects, this study's framework also included dynamic institutionalism as described by Schmidt (Schmidt 2010). Traditional institutionalism posits that institutions themselves are crucial to the formation of public policy (Howlett et al. 2009; Immergut 1998). Their cultural norms shape the 'appropriateness' and utility of policy levers in addressing any given policy area (Hassenteufel et al. 2010; March and Olsen 2006; Smith 2013). Schmidt (2010) describes a form of institutionalism that acknowledges the corrupting role institutions have on decision making (Smith 2013) and highlights the dynamic relationship institutions have with their officials, who shape institutional cultural norms.

Interviews with senior officials

A semi-structured interview guide was developed based on the study's theoretical framework. The interview guide (SIF1.1) was additionally tailored for each participant based on findings from the initial policy mapping. Mixed sampling methods were used to recruit study participants – purposive and snowball sampling. Prospective participants from the HEAL Strategy Senior Officers Group (HEALSOG) were invited to participate via email, with up to three contact attempts. All but one agency replied and accepted to participate. There were several instances where a participant initially accepted the invitation but handed over to a colleague within their agency. The reasons given for these changes related to internal organisational considerations, e.g. they felt a more senior person (n = 1) or subordinate (n = 1) was appropriate to comment on the study questions, or there was a change in representation at HEALSOG (n = 1). Additional participants were recruited using snowball sampling, recommended by participants, from NSW Health, Heart Foundation, a Local Health District, Early Childhood Directorate, and Treasury. In total 25 people participated in the study. Interviews averaged 57 minutes (35–79 min). Study participants held senior positions within their organisations, see Table 1.

Author EE conducted all interviews between April and September 2018. These were held face-to-face at a location suitable to the participants (n = 24) or via telephone (n = 1). They were recorded following written consent, and transcribed verbatim. After initial familiarisation, authors EE and SH used NVivo 11 software to code the transcripts. In line with the principles of reflexive thematic analysis, rather than an a priori coding frame, the themes emerged from the data (Braun et al. 2018; Braun and Clarke 2013). Richer interpretations of the data were sought through a collaborative analytical process (Braun and Clarke 2019; Byrne 2022). Our approach was embedded in social constructionism. We recognised that the attitudes and experiences of senior officials in different agencies, with respect to obesity, would be idiosyncratic. In turn, we acknowledge that our own experiences of working in health influenced our interpretation and understanding of the data and contributed to knowledge creation through the exchange.

Policy mapping and analysis

A policy mapping tool was developed using Bronfenbrenner's ecological systems theory (Bronfenbrenner 2004), interpreted

Table 1 Study participants and their agencies, grouped by 2018 departmental cluster

Government Cluster	Government institutions (agencies)	Participant #
Premier & Cabinet	Department of Premier and Cabinet (Premier & Cabinet) • Health, Education, Intergovernmental Relations Branch • Health Policy team • Premier's Implementation Unit	1, 2, 3, 6
Health	NSW Ministry of Health (Ministry) • Centre for Population Health, Population Health Strategic Program, State Programs, Food Policy Office of Preventive Health Local Health District, Greater Sydney area Heart Foundation (not-for profit organisation and external provider)	4, 5, 7, 9, 10, 11, 14, 19, 20, 22
Family and Community Services	Department of Family and Community Services • Inclusion and Early Intervention, Family and Child Services (Community) The Advocate for Children and Young People (Advocate)	15, 18
Industry	NSW Food Authority (Food Authority) Office of Sport (Sport)	17, 21
Planning and Environment	Department of Planning & Environment • Strategic Planning Team (Planning) • Office of Environment & Heritage: National & International Partnerships (Environment) • Office of Government Architect (Government Architect)	8, 12, 16
Transport	Transport for NSW: Infrastructure & Services (Transport)	13
Education	Department of Education: Early Childhood Directorate	23
Treasury	Treasury NSW (Treasury) • Economic Strategy Division • Health Budget & Policy Group	24, 25

Shortened names of agencies used throughout the text are presented here in parenthesis

for the NSW policy context (SIF1.2). It included the wider determinants of health, health supportive environments, settings, and services, represented by the three white circles in Fig. 2. The elements of the policy mapping tool were developed using the best available evidence and international consensus, drawing heavily from the WHO Ending Childhood Obesity Report (World Health Organisation 2016). Settings that did not apply to the first 2000 days, such as schools, were excluded.

We identified NSW Government agencies relevant for inclusion, based on their participation in the *HEAL Strategy* and their contribution to policy areas identified in the policy mapping tool. We developed a search strategy for policies and extracted data. Policy searches were iterative, commencing in March 2018 prior to interviews, revised during interviews, and finalised in June 2019 when the *Premier's Priority* ceased. Government agency websites were searched using embedded search engines and keywords relating to each area in the policy mapping tool. Additional searches were carried out using the advanced search tool function in Google search engine to ensure comprehensiveness of included data, as described in previous studies (Esdaile et al. 2019, 2022a). Bias was minimised by localising results to Australia, use of the incognito function and clearing user browser history, cookies and cache.

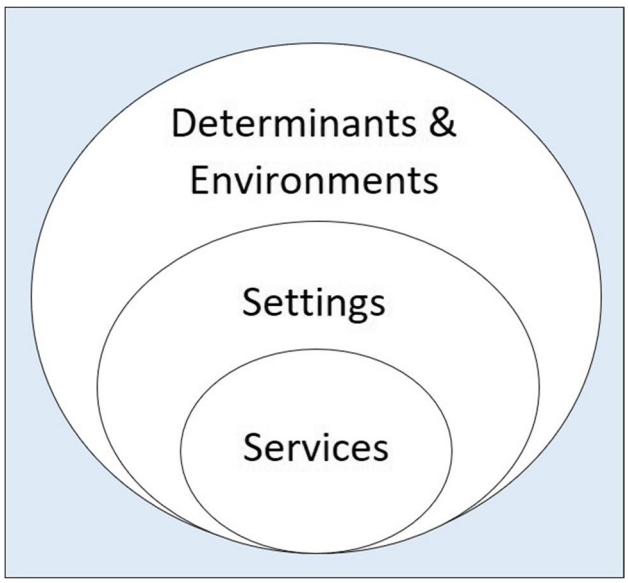

Fig. 2 Policy mapping areas

A directed content analysis approach (Hsieh and Shannon 2005) was used to guide analysis relating to the evidence-informed policy mapping tool, the interrelationship between existing policies and the *HEAL Strategy*, and the identification of potential opportunities to fill policy gaps in NSW. Data were extracted by EE into a word document and the

extent to which policies were enacted was ranked for each area, as described in Fig. 3 (reviewed by CR).

Additional consideration was given to the interrelationship of these elements in the implementation of *HEAL*. This interrelationship, indicated by the shaded background in Fig. 2, was a key focus on Bronfenbrenner's theory (Darling 2007). We organised this information into the partnership principles of leadership, governance, and resource allocation (Indig et al. 2019). It was not ranked as its primary purpose was to provide additional context to the policy mapping tool data and the interviews with study participants (SIF3).

Results

The policy mapping areas and their links to elements of the *HEAL Strategy* and the *Premier's Priority* actions are summarised in Table 2 (SIF2.1, 2.3) and descriptions of the SIFs are provided in Table 3. Briefly, the *HEAL Strategy* acknowledges the wider determinants of health, and a central role of food and physical activity in obesity prevention. However, there were stark differences in policy activity between these areas. Policy enactment and infrastructure was concentrated around health services and settings and focused on individuals rather than determinants or environments (SIF4). Policy mapping findings are incorporated into the manuscript themes.

Five study themes were identified. These were: (1) making good citizens, (2) narrowing the scope of prevention, (3) competing government interests, and (4) limited collaborative mechanisms. Additionally, there was a cross-cutting theme around a perceived need for more evidence.

Making good citizens

The theme of 'making good citizens' explores the roles for action on obesity prevention attributed to citizens, as it contributed to public spending there was a moral imperative to act. It was a central narrative of the dominant policy subsystem coalition. Obesity was framed as a burden on the state, consistently recognised as both a social and financial problem:

> *Anything that we can do to manage demand within the health system is going to be critical to the sustainability of the budget over the longer term. We know that chronic disease is one of the most significant drivers of demand. (Treasury, P24)*

Key policies such as the *HEAL Strategy* and the *Premier's Priority* were presented as responses to 'public concern' (Health, P7). The early prevention of obesity was framed through the lens of parents and carers, their proxy for a child's 'personal responsibility', and a moral imperative for parents to act:

> *I just can't emphasise enough this issue for us is about parents and adults, how they perceive and understand the issue. (Health, P7)*

Causes (and solutions) for discretionary choices focused on parents as decision makers for young children, rather than contesting food provision decisions made by food retail, foodservice outlets, and advertisers. Perceptions of parental drivers of 'treating' and wanting their children 'to be happy' (Health, P11) were identified:

> *…parents saying, 'We want crap food on the menu because it's a reward for our kids'. (Treasury, P24)*

Blame was assigned to parents (mothers) through intergenerational changes in social and cultural expectations, which:

> *…changed the way that mothers of young children operate… [using unhealthy food in a café] to keep the kids quiet because they want to have a chat. (Health, P11)*

It was common for participants to mention the limits to their field of influence. Agencies who saw themselves as 'part of the solution' (Treasury, P24) felt their role was primarily to help parents 'make the right decision' (Industry, P17, emphasis added). Solutions were framed

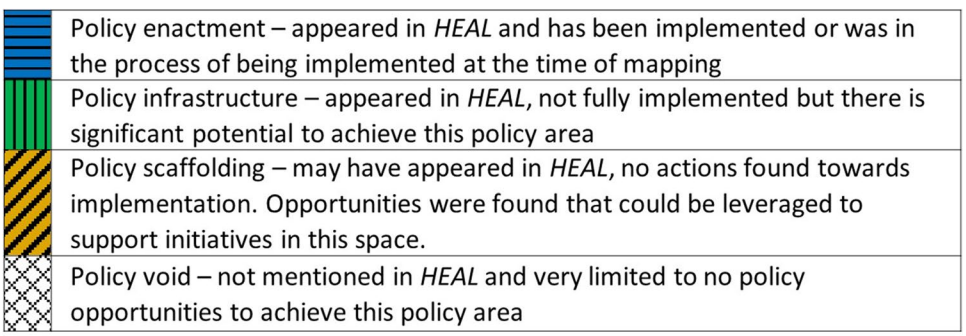

Fig. 3 Description of policy status

HEAL, Healthy Eating and Active Living

Table 2 Policy mapping at a glance

Policy mapping tool area*	Status	*HEAL Strategy* and *Premier's Priority* actions†
1 Wider Determinants		
1a) Cost of living		
1b) Early childhood adversity		*HEAL* 3.2.1
2 Physical activity environments		
2a) Built environment and planning		*HEAL* 1.8(1.8.1); PP 4.3
2b) Physical activity in open spaces		*HEAL* 2.1.3, 2.3(2.3.1-2), 1.7(1.7.1-3), 1.8(1.8.1-3), 1.9(1.9.1); PP 1.2, 1.3, 1.4, 4.4, 4.5, 4.6, 4.11
3 Food Environments		
3a) Out of home advertising		*HEAL* 1.3(1.3.2) (national only)
3b) Foodservice outlets		*HEAL* 1.1(1.1.1-3), 1.2, 1.5(1.5.3); PP 4.2
3c) Food retail		
3d) Local food considerations		*HEAL* 1.4, 1.5.4, 3.1.2, 3.3; PP 4.8
4 Settings		
4a) Government settings		*HEAL* 1.3 (1.3.1-2), 1.5 (1.5.1-2), 2.4(2.4.1), 3.4, 4.14-5; PP 4.1, 4.7
4b) Early childhood education and care		*HEAL* 2.1(2.1.3), 4.1.4-5; PP 1.1
5 Services		
5a) Preconception, pregnancy and birth		*HEAL* 2.2(2.2.1-3), 4.14-5; PP 2.1
5b) Family-orientated services		*HEAL* 2.1(2.1.1-3), 3.1(3.1.1,3.1.3), 3.2(3.2.1-4), 3.4, 3.5, 4.14-5; PP 2.2, 2.3
5c) Health promoting workforce		*HEAL* 3.3, 4.1(4.1.1-3)
5d) Provision of public health information		*HEAL* 4.1(4.1.1-5); PP 3.1, 3.2, 3.3

*References to SIF4 throughout the text align with Table 2, e.g. SIF4.4a aligns to Table 2, 4a) Government settings.
†See SIF2.1 and SIF2.3.

HEAL, Healthy Eating Active Living; PP, *Premier's Priority*; SIF, supportive information file

Legend: Policy enactment; Policy infrastructure; Policy scaffolding; Policy void

through the lens of raising awareness of the problem of 'obesogenic elements' in environments and empowering parents to 'question things around them' (Health, P9). Families/communities were positioned as having the power to change these environments through their role as consumers:

> *…because it's the consumer demand that will change what's actually there. (Health, P5)*

A broader narrative about 'citizen as consumer' was reflected in the way public officials referred to citizens as customers of services provided by government. These narratives downplayed the role of government and framed the rights of citizens as consumers as a core value of the NSW Government, driving the latter's resistance to act in ways that could be interpreted as restricting choice:

> *The reluctance of government to be intruding on an individual's right to choose… we have to decide what's more our 'consumer values'? (Industry, P17)*

Study participants felt that obesity prevention as a construct was viewed by most people as 'that mode of telling people what to do' (Health, P7). Citizens were collectively framed as having the power to change environments through 'consumer demand' if only they engaged – another moral imperative to act. It was noted that extensive evidence reviews were not enough to overcome this core government value, and many viewed 'community engagement' as a driver for more controversial policy areas:

Table 3 Index of supportive information files

File name	Description
SIF1	Methods: SIF1.1 Additional methods reporting SIF1.2 Policy mapping tool
SIF2	*HEAL Strategy* context: SIF2.1 *HEAL Strategy* actions SIF2.2 HEAL Senior Officers Group implementation plan SIF2.3 *Premier's Priority* Implementation Plan actions SIF2.4 The 12 Premier's Priorities SIF2.5 *HEAL Strategy* timeline
SIF3	Results, partnership principles: SIF3A Leadership SIF3B Governance SIF3C Resource allocation
SIF4	Results, policy mapping: SIF4.1 Wider determinants SIF4.2 Physical activity environments SIF4.3 Food environments SIF4.4 Settings SIF4.5 Services

SIF, supportive information file

> *It's not just the evidence. It's also about willingness of community engagement, that's an important driver. (Health, P7)*

The moral imperative for citizens to act did not extend to industry or governments:

> *Government can't do things… it's community responsibility, parental responsibility, individual child responsibility. (Treasury, P24)*

Health participants recognised their focus on public awareness, getting 'the messages out there,' was insufficient to create change (Health, P14). This one-way communication strategy left a gap around citizen engagement. Several participants recognised they were yet to 'work out' how to do this (Health, P7) (SIF4.5d). There were no mechanisms to support the public – to empower them – to collectively take up these issues and overcome those broader environmental barriers to healthy living.

Narrowing the scope of prevention

The Ministry led the *HEAL Strategy* and co-led HEALSOG with Premier & Cabinet, overseen by three successive NSW Premiers from the same party (SIF2.5). Initially, *HEAL* 'was focused on the whole population' (Premier, P2). A preceding 2011 target to reduce childhood obesity (5–16 years) was made in the context of the external subsystem event, the NPAPH. The end of the NPAPH and its nationally enabling policy environment was another external subsystem event (Sabatier and Weible 2007) that shifted the NSW policy space. The 2015 *Premier's Priority* on reducing childhood obesity (5–12 years) was the result of the shift in the 'political landscape' (Health, P14). It was an internal subsystem event that lent an 'imprimatur' to obesity prevention, allowing conversations that otherwise could not have happened. However, policy actors failed to harness the potential of it or the preceding NPAPH to challenge the dominant policy subsystem coalition. Instead, the *Premier's Priority* 'cut across the *HEAL Strategy*' (Health, P7) re-directing focus onto children and narrowing the intervention areas 'allowed':

> *It's easier to think about intervening in children's wellbeing than it is in trying to shift behaviours than what's allowed for adults (Premier, P2, emphasis added)*

The recommendations of the NSW *Inquiry into Childhood Overweight and Obesity* focused on school settings, reflecting the Government's view on the scope of obesity prevention (SIF3A). The *Premier's Priority Implementation Plan* (NSW Government 2016) used the same strategic directions as the *HEAL Strategy* but moved supportive environments to the end (SIF2.3).

As policy brokers for the Premier's Priorities, the Premier's Implementation Unit had authority to act in specific areas, to encourage partnerships between agencies, and drive implementation. Modelling indicated that interventions already in place were likely to result in a 3% reduction in childhood obesity, so the Premier's Implementation Unit (and Health) were focused on chasing the target:

> *…we've got a 2% gap to target. Then the Premier said, 'How are you going to close that gap?'. (Premier, P6)*

A focus on BMI change as the outcome measure of policy success was frequently noted as a barrier to obesity prevention policy. Several participants spoke of the lack of intermediate indicators for policy success, unlike other priorities:

> *It is really hard, there's nothing in between… It goes straight from what you guess is effective – or what your evidence might say slash you guess what's an effective program, and you're just doing implementation milestones – straight to 'kids weigh less now'. (Premier, P2)*

To 'chase' the target of reducing obesity in children aged 5–12 years, measured in 2025, the focus shifted again to children born between 2013 to 2020. Children under five years were 'the key' to meeting their target (Health, P7). This shift in policy focus happened with the second leadership change (SIF2.5) and the first 2000 days were identified as the 'next frontier' (Premier, P1):

The Premier really focused on pregnancy and the early years. (Premier, P6)

For the second time, the focus of obesity prevention narrowed the scope of action to parents and carers for a younger cohort, further limiting authority to act on broader social, environmental and commercial drivers of obesity.

State-wide programs (settings and services)

Place-based approaches – engaging and partnering with a community to address their specific and diverse needs – were frequently mentioned in NSW policy documents. However, enacted initiatives focused on (state-wide) programs in closed settings: schools, ECEC settings, hospital and healthcare settings, etc. (with exceptions such as *Brighter Futures*, SIF4.1b). Substantial investments were made into a suite of state-wide programs as visible settings-based policy outputs:

Government needs to offer up something and say, 'This is what we're doing'. (Health, P19)

PHIMS (Public Health Information Management System) is an IT system to monitor these settings-based state-wide health promotion programs, with granular data populated at the Local Health District (LHD) level (see (Innes-Hughes et al. 2019)). There are 15 LHDs in NSW, the decentralised arms of NSW Health responsible for health services delivery and answerable to the Ministry. Collated data allowed for local- and program-level quality improvement. It was also a powerful lever to ensure ongoing funding of programs, by showing impacts across sectors (e.g. the ECEC sector). It held great value for state-wide program implementers, as it redirected health promotion:

We can create confidence in being able to achieve targets and deliver, and it's very consistent with the deliverology ethos of the Premier's Implementation Unit… It's an extremely good way to inspire faith. (Health, P19)

Within the suite of state-wide programs *Munch & Move* was aimed at obesity prevention via ECEC settings – the only policy mapping area enacted (Table 2, 4b). In the context of national ECEC regulatory changes and the *Premier's Priority* the program strengthened and enhanced its practices. Using data from *PHIMS*, participants noted internal reviews found the program had 'good reach and impacts' (Health, P5) among vulnerable groups and regional and remote areas across the state.

The *First 2000 Days Framework* (NSW Ministry of Health 2019) was released in mid-2019, at the end of this study period (with an implementation plan to follow). It acknowledged ECEC services as key settings and focused on health services. The *Parliamentary Inquiry into support for new parents and babies* reported the fragmented nature of antenatal and postnatal care and gaps in universal and targeted health services for early childhood (SIF4.5a-b). These services had received less state-wide focus because they sat within LHD authority.

The value attributed to the first 2000 days authorised Health to focus on research (generating evidence) and to develop policy specific to this area. Research investment focused on the scaling up of a suite of state-wide healthy lifestyle programs for families (SIF4.5b):

Investment is going into the research of that age group because we think there's more benefit to the Premier outcome. (Health, P10)

Health orientated their resources to politically acceptable arenas. Their research agenda was driven by a 'pressure to act quickly' (p.12) (Centre for Epidemiology and Evidence 2018) and focused on visible policy. Some participants noted the lack of investment in action in environments was 'because of the evidence base' (Treasury, P25). However, Health was not leading projects to fill the evidence gaps in determinants or environments (SIF3C), suggesting high participation within the dominant policy subsystem coalition among Health officials.

Health views their scope as behaviour change

Participants noted that the process by which the Government and its respective agencies decided where to invest their efforts was:

…very exposed to people's ideologies, how much we invest in prevention and whose responsibility you believe it really is. (Premier, P1)

The Ministry saw their role in prevention as the provision of a health lens to those agencies responsible for food and built environments and to support behaviour change (via programs or media campaigns), emphasising 'we don't hold the levers' to make structural changes (Health, P14). This separation of responsibility and a focus on behaviour change indicates an organisational culture in line with the 'making good citizens' theme and the dominant coalition. Participants noted there was 'almost no resourcing' for *HEAL's* environments strategic direction (Health, P19).

Multiple Health participants framed food security as '… more of a FACS [Family and Community Services] thing' (Health, P14). Family and Community Services funded not-for-profit organisations that responded to 'families not having enough to eat' (Community, P15), but neither agency took ownership of policy to address food insecurity at a structural level (SIF4.3d). Likewise, Health participants were resistant to concerns about 'food deserts'

(absence of healthy food locally) and 'food swamps' (excessive unhealthy food locally) in key geographical areas of concern for obesity:

People talk about a Western Sydney food desert hotspot. I don't think I believe that. (Health, P5)

While some LHDs had self-funded food and nutrition security projects (SIF4.3d), their approaches were viewed by the Ministry as 'bitsy' and 'not scalable' (Health, P11). This was one example of how decentralisation has been prohibitive of central coordination and structural support. Decentralisation also limited structural support for local healthy built environment action. The Ministry funded LHDs to deliver a 'core package' (Health, P7) of state-wide programs under the *Healthy Children Initiative*. Additionally, LHDs were expected to internally fund additional initiatives based on their community's needs:

They're the ones who have the best knowledge of their population needs. (Health, P7)

The Ministry did not fund LHDs to 'deliver healthy built environments' but thought it 'makes sense' for LHDs to partner with local governments in their health promotion efforts (Health, P4). In practice, the experiences of LHDs and local governments in food environments were fragmented at best:

I have to be frank and say not much is happening… [LHDs have] limited capacity to influence environmental change. The experience of working with local councils is very much based on your relationship and whether they see our health promotion as part of their role. (Local Health District, P20)

The absence of structural support for local activities focused on determinants highlight these areas were less of a priority for the Ministry than behaviour change.

Food environments and informed choice

Under the *HEAL Strategy*, the Ministry explored a range of food environment approaches called 'bold initiatives' (Health, P7). However, no new food environment policies were enacted within or beyond the *HEAL Strategy* or *Premier's Priority* mechanisms (SIF4.3). A participant noted one of the reasons the 'bold initiatives' had not been enacted was due to limited evidence and that they needed to be tested 'before they can be scaled' up (Health, P7). However, they also noted the 'contentious' nature of food policy because of the 'personal nature… of obesity' (Health, P7). The combination of the Premier's Implementation Unit 'not working on anything' in the food environment (Premier, P6) and limited resourcing within Health indicated there was limited authority for actions in the food environment:

It's a big task, and there's no commitment from government. (Health, P19)

Instead, the Ministry focused on food policies aimed at 'informed choice' – *Menu Kilojoule Labelling* and the *Health Star Rating*. *Menu Kilojoule Labelling* required some fast-food chains to display the energy content of each menu item (and later some items in supermarkets). Many participants noted it became legislation due to 'political timing' of a Labor Government on its way out (Industry, P17). While it appeared in *HEAL* (SIF4.3b), it was established prior to the strategy (SIF2.5). The *Health Star Rating* was a national, voluntary, front-of-pack food labelling system. Within NSW, the Ministry used the *Health Star Rating* to 'change some internal policies' (Industry, P17) such as *Healthy food and drink in NSW health facilities for staff and visitors: Healthy Choices in Health Facilities* (SIF4.4a). We refer to this body of work as *Healthy Food Provision* throughout.

Steps towards winning 'hearts and minds'

Leveraging established settings-based approaches and the *Health Star Rating*, the Ministry developed the *Healthy Food Provision* framework to improve food offerings across NSW Government settings (SIF4.4a). Despite the low likelihood of this framework influencing childhood obesity, it sought to serve as a 'leadership piece' for improving food provision in general. Initially, *Healthy Food Provision* was going to apply to all government settings, however, 'that didn't actually go anywhere' (Premier, P6). Around the time of the end of the NPAPH, there was effective pushback around:

…personal choice, and particularly in agencies where adults are impacted. (Health, P11)

Health continued with the framework in settings where they had authority to do so (healthcare and schools). The roll out of *Healthy Food Provision* sought to win the 'hearts and minds' of government agencies beyond health by first testing the concept within health settings:

In Health, the 'hearts and minds' are all there. In other government settings… their priorities are different. (Health, P7)

Health had contractual levers at their disposal, circumventing regulation and its associated political ramifications. However, they preferred to undertake a partnership approach to change management in implementing the framework:

We've got contractual levers… but we wouldn't really want to use those unless we had to... Our preferred model is to engage, get the 'hearts and minds' of the people, get their support, and take them on that journey. (Health, P11)

In developing *Healthy Food Provision* Health engaged stakeholders along the food supply chain, including manufacturers who undertook a 'coordinated approach' such as presenting 'joint positions' and influenced the framework (Health, P11). Health reported taking a 'pragmatic approach' to industry:

> *…basically, we want to shift the dial from where it is now, which is pretty unhealthy, to healthier. (Health, P11, original emphasis)*

In anticipation of scaling up *Healthy Food Provision* the Ministry sought to leverage the prior utility of their public health IT monitoring system, *PHIMS*, to collect data to 'inspire faith' in the framework. Their approach was to provide a proof of concept:

> *What we've come to understand through working with the Premier's Implementation Unit and deliverology… it's really good to focus on something and get it done, and then build on that success (Health, P7)*

Some agencies reported keeping a watching brief on *Healthy Food Provision* and were open to reengagement 'once all of the numbers are in' (Environment, P12). Likewise, the Ministry felt more confident of cross-agency uptake once they had more information about how the policy would work in practice:

> *Then we're in a position to ask other government agencies to do the same… to explain how it works and the impacts, for example, on loss of revenue, which is a big deal breaker for other government agencies. (Health, P11)*

Approaches aimed at winning the 'hearts and minds' of non-health agencies to undertake similar partnership approaches were not enough in the absence of a mandate from leadership. When the initiative was originally going to be applied across government, agencies were provided with cover from potential pushback. Without this imprimatur the barriers to negotiating contractual relationships were too high for non-health agencies:

> *If there is a whole-of-government mandate or policy then we say, 'It's not us, it's the government… we are aligning with government policy'. (Environment, P12)*

However, institutional barriers relating to managing contractual relationships and the perception of loss of revenue made voluntary action from non-health agencies unlikely.

Competing government interests

The political landscape constrained the type of policies under consideration and framed the narratives for institutional competition. The third study theme explores these competing government interests and how they uniquely interplay with food environment versus physical activity environment policy. The 'ubiquitous' nature of unhealthy food and physical activity environments was widely noted by study participants, but higher-level policy tools (e.g. legislative) were largely unavailable. The 'conservative forces of politics' drove 'nanny state' narratives about regulation by government and industry policy actors alike (Heart Foundation, P22). Although state governments have 'a lot more powers than they necessarily use' (Treasury, P24), for political reasons, direct and public challenges to industry were not an option:

> *You wouldn't be likely to see anything where there's a vocal pushback. (Treasury, P24)*

There was an implicit understanding that any challenge to industry around environments, would have economic consequences for industry – which shut down all discussion on the topic:

> *If we want people to drink less sugary drinks, that's not going to help people who want to sell a lot of sugary drinks. (Health, P9)*

Health promotion campaigns and other (public) activities of the NSW Government asked nothing from these industries (SIF4.5d).

Food policy

Food policy was characterised by resistance and inaction bound up in neoliberal ideology, powerful industries, a multitude of stakeholders and (perceived) impacts on revenue for government agencies. A recurring narrative was that there was 'little appetite' for food environment policy in NSW (Industry, P21). It was deeply affected by the interrelationship between NSW and the national food system. Jurisdictions face difficulties when they have different goals for the food system, impacting their willingness to 'sponsor' a paper (Health, P5), i.e. take carriage of an issue through the intergovernmental process.

NSW houses the largest share of Australia's food industry and held a unique position in the national food policy space where food retail and manufacturers' 'business interests are really high' (Health, P5) (SIF4.3). Food industry representatives were welcome partners in policy formation. For example, the Ministry hosted the *Food Forum 2014* and invited food industry representatives to speak. Their 'overwhelming message' was to have a 'level playing field' (Health, P9) or NSW risked being 'at a disadvantage' (Industry, P17). This signposted a preference for national policy, and even distribution across multiple players within the food system (manufacturing, food retail, advertisers, etc.).

At national forums, the Ministry and the Food Authority co-lead the NSW position on food policy. They were 'heavily involved in the [national] *Health Star Rating* work' (Health, P5), and its use in the *Healthy Food Provision* framework indicates the central role industry played in the development of both policies. Institutionally, the position of the Food Authority (within the NSW Government Industry cluster) conflicts with chronic disease prevention aims. The Ministry and the Food Authority were joint policy brokers for food policy in NSW; however, these agencies had different visions for the food system. When it comes to food policy, competing institutional interests – between the food industry 'flourishing' and population health – favour industry.

> *They [the Food Authority] want to make industry flourish and we want to make industry healthy. They don't have to be mutually exclusive, but they can be, so what happens in practice is we have to have a very pragmatic approach to industry, and it may not pan out so well for that young age group. (Health, P11)*

The NSW Government holds policy levers to influence out-of-home advertising of discretionary choices (energy densse, nutrient poor foods and beverages) (SIF4.3a). Out-of-home advertising includes billboards, transport vehicles, street furniture (e.g. bus shelters), and train stations, and more broadly public places with high traffic, such as stadia. It was broadly acknowledged that built environments are full of advertising that influences food choices and impressions of the normal diet:

> *There's just so many unconscious things going on as well as conscious things in the choices that we make, and marketing is so ubiquitous. (Heart Foundation, P22)*

In NSW these assets were owned by Transport and Sport, who were seen as unlikely to pursue advertising restrictions and risk losing revenue:

> *The money is big… the big advertisers are transport and stadia… it's definitely a growth area. (Health, P11)*

When presented with information that other Australian jurisdictions have policies on the removal of discretionary choices from out-of-home locations, and saw no net loss in revenue, the response was:

> *We don't really have sufficient information to know what the true impact could be of trialing an approach like that in <u>our</u> location. (Health, P7, original emphasis)*

The cross-cutting theme around evidence arose here, in this instance as a way of justifying delayed action, indicating that challenges to both industry and (potential) impacts of government revenue were highly protected. By default, Health falls back to choices made by families as the sphere of influence available to them, noting that advertising companies were:

> *…very skilled at being able to identify how to market to children and families and we can't counter that. It's really about helping families with their own decisions. (Health, P7)*

Healthy built environments

Population food and nutrition security focuses on the proximity of sufficient quality food, that is stable over time. Issues with food 'supply into regional areas' were observed (Health, P11) and the preservation of productive agricultural land for local food supply was identified in the *HEAL Strategy* (SIF2.1, SD1.4/1.6). Participants noted collaboration between Health and Planning to include 'high level standards' for agricultural land preservation in NSW's *Regional Plans* (Health, P4) (SIF4.2a). However, Planning noted this was only one of a 'number of considerations' that needed to be 'balanced' locally and details to achieve this standard were 'not precisely quantified' (Planning, P8). Another of the Premier's Priorities was to improve housing across the state (SIF2.4, SIF4.1a), with Planning as the lead agency. This influences their position between these competing interests, including the benefits of developing land 'adjacent to an existing settlement' (Planning, P8). Affordable housing and access to services were key community drivers for the planning system. The NSW Government was heavily focused on 'infrastructure investment and planning reforms' (Health, P7) and the Planning cluster aligned with three Premier's Priorities – creating jobs, making housing more affordable and delivering infrastructure (SIF2.4). The housing affordability Premier's Priority was primarily focused on reducing 'red tape' to make it easier for housing developers to increase the housing supply and less to do with social housing (SIF4.1a). Zoning considerations for councils to increase housing were strengthened and it was a Planning priority to 'facilitate development in an efficient and speedy way' (Planning, P8). Participants from Planning noted that the focus on supply to meet housing demand did not have its intended outcome of improving housing affordability:

> *There doesn't seem to be perfect correlation in Sydney between increasing housing supply and prices falling. (Planning, P8)*

Increased density drove demand for key infrastructure, 'quality of open space' (Planning, P6) and the need for 'liveable neighbourhoods' (Premier, P6). Constructs such as social connectivity (a passive aspect of healthy built environments in the *HEAL Strategy*) served as a bridge between

housing, community and safe public spaces. For example, *Safe Active Streets* was about 'reclaiming community space' (Transport, P13) through creating bike boulevards on local roads as part of an integrated transport system. In response to increased housing density and the 'ever diminishing backyard' (Transport, P13), investing in quality community spaces gained momentum, because it would:

> *…get popular support because everybody's concerned about the private development that is going on… and at some point in time, there's going to be community backlash if we can't also be demonstrating we're doing infrastructure for good. (Heart Foundation P22)*

The construct of 'infrastructure for good' aligned with Transport's organisational shift towards integrated transport and the view of transport as a lever for 'place-making' (Transport, P13). In contrast to the contentious nature of food policy, community places for being active were framed as 'giving' the public something, rather than a direct attack on industry or constraining choice:

> *Physical activity is something you can make fun with. (Heart Foundation, P22)*

Planning, however, were 'confronted' with balancing a 'broad range of priorities and interests' in the planning system (Planning, P8). While design guides included open space, affordability, and other elements of liveability (SIF4.2a), these were weighed up by developers/builders, and ultimately must:

> *…compete for attention with other priorities about keeping costs down and doing things efficiently. (Planning, P8).*

The 2016 NSW *Inquiry into Childhood Overweight and Obesity* recommended Planning consider health objectives in one of the few recommendations not focused on schools (SIF4.3d). Significant efforts to recognise health and wellbeing explicitly in planning legislation updates from 2011 did not occur (SIF4.2a). Instead, the *Planning Legislation Amendment Bill 2019* implied health is a consideration of 'principles of good design'. Healthy built environment advocates noted an explicit declaration would have driven follow-on impacts throughout the planning system and the absence of mandatory levers remains the 'biggest challenge' (Heart Foundation, P22). Strategic design documents such as *Better Placed* (SIF4.2a) identified health as a priority for the planning system and recognised that a well-designed place is 'healthy for people' (Planning, P8). However, these were guidelines with no mechanisms to support or enforce them. Interviewees commented that Government builds very limited infrastructure themselves and their reluctance to legislate or mandate has left Planning with limited control on the outcome. Industry is left to interpret and implement guidelines and Planning had limited confidence of unmandated requirements being met:

> *It's ultimately only when something is made a requirement that it can be a fair degree of confidence that there will be an effect. (Planning, P8)*

Similarly, when Transport responds to infrastructure proposals or tenders by developers, they are limited by how far they can direct their contractors to meet their own guidelines:

> *'These are the mandatory things you have to do; these are the things we want you to do', and then there's a long process of trying from developers in bringing that list down… because if it was 'had to do' we'd have it. (Transport, P13)*

NSW's ten *Regional Plans* (SIF4.2a) have placed a greater emphasis on consideration for the design and shape of urban environments (Heart Foundation, P22), and were contributing to a healthier built environment more explicitly than they had before (Planning, P8). The corresponding *Urban Design Guides* were an action under the *Premier's Priority* (SF2.3, PP4.3) and support healthy built environments alongside the *Better Placed* suite of documents. While these policy instruments were identified as a response to community preferences for access to services in a paradigm of high housing costs and urban sprawl (Planning, P8), they were insufficient to cause institutional change.

At the time of the study, opportunities to influence high level planning instruments as they were being revised had concluded for the foreseeable future. Efforts by minor policy coalitions were made at each stage of the revisions to the planning systems legislative and strategic frameworks, long-term planning documents and regional plans, down to policy instruments at the local level (SIF4.2a). New requirements for local governments included the development of Community Plans with a more consultative approach. Some participants viewed this as an opportunity to address some of the community drivers discussed above and engage the community in local decision making:

> *…this new emphasis of people wanting to see Community Plans that are much more respectful and reflective of community views and ideas. (Heart Foundation, P22)*

The *Inquiry into Childhood Overweight and Obesity* noted walking and cycling infrastructure funding ($284 million), indicating government endorsement of planning system policies for physical activity. However, it was unclear how local councils – responsible for the bulk of that infrastructure – could leverage these funds in what one participant identified as an example of a '"non-controversial", highly controversial opportunity' (Treasury, P24). Similarly,

several recommendations in the 2018 *Inquiry into Fresh Food Pricing* noted structural levers from state agencies to support local agencies had not been enacted (SIF4.3c). Multiple participants noted the 'problematic' nature of working across levels of government (Treasury, P24). Local councils and LHDs were framed as though they had real power in changing local food environments. Language about healthy built environments or liveability increasingly appeared in Planning and Health strategic policies over the past 10 years. Despite the cascade of planning tools and the working relationship between Planning and local councils, state level participants noted they did not have the authority (through legislation) to 'make councils do anything' (Premier, P6), only provide guidelines. Likewise, the ultimate lever for action at the council level was to ensure its appearance in their Council Delivery Program. If the desired action was not there 'it doesn't get done by the council' (Health, P4). *Active Living New South Wales* provided some 'soft infrastructure' to councils who had expressed interest and had funds to participate, potentially exacerbating inequalities between councils. Due to the costly nature of infrastructure and its maintenance, considerations for healthy built environments were 'really overwhelming' for some councils (Heart Foundation, P22). Soft infrastructure was heavily dependent on whether the 128 local councils in NSW saw health promotion as integral to their town planning goals, and making it 'financially viable' (Premier, P6).

Limited collaborative infrastructure

The final theme explores the limited collaborative infrastructure for obesity prevention across NSW Government agencies. HEALSOG was the primary policy venue for the *HEAL Strategy* and the *Premier's Priority*. Meetings took carriage of the *Premier's Priority* displacing some *HEAL Strategy* activities (see 2018 projects, SIF2.2), with a stronger focus on state-wide programs (SIF2.3, SD1). The *Premier's Priority* also pushed the focus towards new parent-focused healthy lifestyle programs for children under 5 years of age (SIF2.3, SD2). As a policy lever, the *Premier's Priority* managed to get all the cross-agency partners 'to the table' but it was not enough to commit them to act (Health, P19). Some participants reasoned this was due to HEALSOG meetings being dominated by 'everyone just listening to Health' which 'perpetuated' obesity as a Health priority (Premier, P2). This suggests that although the policy venue of HEALSOG had the prestige to bring representatives of relevant government agencies 'to the table', its institutional mechanisms were insufficient for policy orientated learning or negotiated agreement.

HEALSOG meetings had established a good network that 'practised in good faith' around built environments, with many interested in 'connecting the dots' (Planning, P16). Some participants noted that 'intangible ties', the soft infrastructure such as connections to drive work across agencies, deserved more recognition. Despite this, the 'tangible ties' between specific interventions in built environments and obesity prevention were still identified as a gap. A Government Architect participant voiced interest in developing partnerships between the planning system and research. They suggested to 'flip' the focus from how built environments cause chronic disease (observational) to study the impacts of 'improvements to the built environment in its relationship to health' (intervention) (Planning, P16). They felt the change in focus would incentivise earlier active engagement in the design of buildings and surrounding places.

There was no organisational ownership of physical activity policy. Although strategic documents noted Sport would develop a physical activity plan, it was not embraced institutionally, remaining an ongoing internal 'debate' (Industry, P21). The Ministry did not 'lead on built environments' (Health, P7) because the levers for infrastructure – its funding, planning, design and guidance – were so dependent on other clusters. They saw their role as supportive, rather than 'being brokers' of cross-agency physical activity environments policy (Premier, P6). Both the Ministry and Sport preferred an interagency approach. The *Premier's Priority* enabled a 'shift' to explore cross-sectoral collaboration on physical activity, as the 'flip side of [food] consumption' (Premier, P2), which had substantively stalled:

> *There's probably more political appetite for the 'Active Travel and Play' over really substantially changing our food environment, at the moment. (Premier, P6)*

This established a HEALSOG sub-committee, the *Physical Activity Working Group*. It was led by Sport which to some was an indication they had:

> *…shifted away from thinking of themselves as sport infrastructure… [towards being] responsible for people's behaviour or use of that space. (Premier, P2)*

Many participants noted a policy window for both programs and infrastructure to support physical activity in NSW had opened 'in the last 18 months' (Health, P7). Participants noted the potential for alignment between physical activity policies and other priorities for the government, such as infrastructure and planning reform. During this time, there were several policy venues for physical activity and healthy built environments, including *Healthy Living New South Wales* and the *Premier's Council on Active Living* (PCAL) and the *Healthy Planning Expert Working Group*. PCAL was established in 2004 and initially operated under Premier & Cabinet. Its membership included health experts, planners, local and state government representatives and had created substantial momentum across sectors. PCAL moved to Health with support provided by the Heart Foundation.

It focused on physical activity but took on food environments and obesity under the *Premier's Priority*. It was overstretched with these additional narratives, lost focus with their partners and was eventually disbanded (Heart Foundation 2017). One of three proposals developed by the Premier's Implementation Unit to chase the Premier's Priority target was Active Travel, Active Play (SIF4.2b).

Active travel, active play

The Premier's Implementation Unit identified opportunities to repurpose already distributed funds and align approaches across agencies, specifically Health, Government Architect, Sport, Transport, Community, Planning, Environment, and other agencies that manage open spaces and parklands. The Premier's Implementation Unit received feedback from these agencies about what information they needed to agree upon, and 'presented it back to them' in a call to action (Premier, P6). Participants noted 'good conversations' around the project (Health, P7), although there was no explicit agreement from agencies to realign their existing funding. For example, Sport was 'well resourced' having successfully leveraged off the momentum around physical activity (Heart Foundation, P22), receiving $100 million for sports infrastructure from the $290 million *Open Spaces Commission* funding (SIF4.2b). When Sport was approached by the Premier's Implementation Unit to leverage some of these funds for *Active Travel, Active Play*, their response was:

> *We're kind of going 'Well, actually neither of those are what we do in the Office of Sport' …Our constituents would just go crazy if we did that. (Industry, P21)*

Sport's participation in the *Physical Activity Working Group* through HEALSOG was a temporary alignment rather than institutional change. The position of Sport within the Industry cluster in NSW Government aligned their focus to the sport industry and sporting organisations, their 'constituents'. Their response to the policy proposal reflected a perceived risk of backlash from industry if they were to organisationally 'shift' towards ownership for physical activity policy in NSW:

> *We shouldn't be stretching so far as also to be driving people to get active… our relationship's really been with organised sports. (Industry, P21)*

On the other hand, Transport funded a dedicated position for a 'cultural piece' to embed active transport into their infrastructure projects (Transport, P13). Transport had internal drivers to reduce traffic congestion and were shifting towards an integrated (multi-modal) transport system (SIF4.2b). They were active at HEALSOG meetings and sought to leverage the *Premier's Priority* by demonstrating the utility of infrastructure to normalise active transport from a young age:

> *We've now got this whole piece around how you can set travel behaviour at a very young age by providing safe walking and cycling environments for kids. (Transport, P13)*

Changing organisational cultural norms was necessary for the sustainability of active transport being embedded into Transport practice as their role in public transport and infrastructure required them to think 'about the customers' (Transport, P13). However, *Active Travel, Active Play* did not eventuate, and the Premier's Implementation Unit noted that any future submissions for additional funding would 'have to be submitted by Health' (Premier, P6).

Structural levers for collaboration

The Premier's Implementation Unit provided temporary structural support for, and between, agencies. They positioned themselves as policy brokers rather than 'owning projects and implementation' because they did not have the resources to 'remain the lead' (Premier, P6). The Premier's Implementation Unit aimed for project sustainability without the need for their continued support and sought to smooth out issues when there was joint business between agencies and 'difficulty in agency culture' (Health, P7).

Although many participants mentioned the presence of inter-agency collaboration, this was mostly ad hoc and were not aimed at ensuring sustainability. Premier & Cabinet had multiple mechanisms to communicate centrally and regionally across agencies (SIF3B). For example, under the *Premier's Priority* an action to coordinate enhanced efforts in the South West Sydney region was led by Premier & Cabinet (SIF2.3, SD4.8). There were three additional local 'whole-of-systems' community projects to collaborate for obesity prevention under the *Premier's Priority* (SIF3B). They had 'value-add from the central agency' through the coordination of efforts centrally with Premier & Cabinet but not the Ministry (Premier, P2):

> *…but without the Premier's Priority, no I'm not sure they would have had a real sharp focus on this issue. (Premier, P6)*

These projects focused on families rather than on communities or environments – integrating health services and increasing local capacity for state-wide programs. Despite these projects, there were limited communication channels for obesity prevention *between* agencies at both strategic (decision-making) and operational (functional) levels:

> *The signals to collaborate come from the top down… you have to then have the channels of communication between agencies open, at all levels, really. (Health, P7)*

Some participants suggested more formal structures to encourage relationship building between agencies as a starting point towards ongoing collaborative mechanisms. One suggestion was an 'innovation hub' where multiple agencies work through an implementation plan jointly over a 'short, sharp intensive time' (Transport, P13). The tension between the recognised benefits of collaboration and independent organisational identity (i.e. siloed organisational structure) remained an ongoing problem, where agency identity is fixed such as 'I'm a transport agency and I deliver trains' (Premier, P2). Tensions were identified with funding across clusters where budget allocations and spending happen separately, and some agencies do not receive attribution when they pay the upfront costs that benefit another agency. Additionally, administrative challenges were identified where 'the incentive isn't necessarily correct' for an agency's bid for operational management (Treasury, P25). In consideration of this, alternative funding mechanisms were in early stages in NSW at the time of this study. Outcome budgeting – first mentioned in the 2017–18 Budget Estimates (NSW Government 2017) – would aim to facilitate funding that had 'cross-cluster impacts' (Treasury, P24). Clusters could be jointly funded and held 'jointly accountable' (Treasury, P24) for outcomes, such as obesity prevention (SIF3C). At the time of data collection, there was no organisational ownership of a policy broker role for outcome budgeting, although Premier & Cabinet saw Treasury as best suited for that role:

> *Hopefully the next wave is Treasury being the broker in the middle of that and saying, 'Well, if it's Transport that needs to invest but it's a Health outcome, we can deal with that business case there so our heads don't explode'… And it will support a lot more innovative ideas and more collaboration from non-traditional Health areas. (Premier, P2)*

However, Treasury felt any submissions under outcome budgeting ought to be 'agency-led' (Treasury, P24), which seemed to undermine the spirit of collaboration.

Discussion

We undertook a case study of the *HEAL Strategy* and investigated the governance mechanisms which inhibited and facilitated actions for obesity prevention in the early years. We found that while *HEAL* was positioned as a strategic whole-of-government response, policy outputs were limited in addressing the fundamental causes of obesity, the scope of which was narrowed with the introduction of the *Premier's Priority*. This was similar to findings about a previous NSW strategy, *Prevention of Obesity in Children and Young People: NSW Government Action Plan 2003–2007*, which 'staked out' the childhood obesity prevention policy agenda using existing infrastructure but was also limited in scope (King et al. 2007).

The settings-based programs managed by the Office of Preventive Health (since disbanded) have likely contributed to a reduction of some risk factors for childhood obesity (Innes-Hughes et al. 2019). However, dynamic systems modelling predicted those measures would not be enough to meet the *Premier's Priority* target by 2025 (had it continued beyond 2019) (Roberts et al. 2019). More than 200 health promotion practitioners across 15 LHDs implemented the settings-based programs of the *HEAL Strategy*. LHDs were accountable to state-wide targets but were given discretion over the use of funds in a 'tight–lose–tight' model (Grøn et al. 2020). Studies found additional work undertaken by LHDs created tension to 'balance a moral imperative to attend to equity issues, with a practical need to meet implementation targets' (p.1415–6) (Grøn et al. 2020). While the use of *PHIMS* to monitor and report on these activities contributed greatly to dialogue around efficacy and ongoing funding (Innes-Hughes et al. 2019), it did not capture the additional work such as 'soft infrastructure' (Kavanagh et al. 2022) undertaken by health promotion practitioners (Conte et al. 2020). Local partnerships were found to have limited mechanisms for collaboration and knowledge sharing (Kovai et al. 2022; Farrell et al. 2014). Including process evaluation and local experiences to demonstrate progress within different contexts is a pressing need for public health policy makers (Conte et al. 2020).

HEALSOG was the key forum or policy venue for obesity prevention in NSW (Jenkins-Smith et al. 2018). HEALSOG meetings and the *Premier's Priority* brought key stakeholders to the table which was beneficial for policy-orientated learning. However, other key conditions needed for negotiation and implementation were lacking including commitment by member agencies, funding diversity, and consensus-based rules driven by trust for decision making (Weible et al. 2009).

The *Premier's Priority* generated a perception of urgency for childhood obesity (Head 2008), linked to the political power it brought (including resources and authority) and the potential to cut through 'bureaucratic roadblocks' (Birch and Jacob 2019). The Premier's Implementation Unit were key policy brokers for the *Premier's Priority*. Their actions were a combination of self-interest, to meet the target of the Priority, and understanding the potential benefits and losses of reaching policy compromise versus maintaining the status quo (Ingold and Varone 2011). They used deliverology methods in their approach which involved the use of data, targeted actions and routines. While older versions of deliverology were heavily top-down (Birch and Jacob 2019), the Premier's Implementation Unit undertook fieldwork that emphasised the experiences of local implementers (Needs 2019). Deliverology posits that within a strategy each intervention should be proven (evidence-based) or promising (evidence-informed) to impact directly on the target (Barber et al. 2010).

Critics of deliverology rebuke claims that it is both an art and a science, pointing to the absence of quality peer-reviewed literature of its efficacy (Birch and Jacob 2019; Behn 2017). Others scholars have noted issues when there are too many priorities (such as NSW's 12 Premier's Priorities and 18 State Priorities), then 'nothing is a priority' (May 2019). Ideologically, deliverology is rooted in neoliberal accountability and 'private-sector inspired' performance management, leading to a focus on 'costs rather than values and on gaming targets rather than achieving higher outcomes, which leads to increased costs to support gaming strategies, with perverse effects on outcomes especially in the health-care and education sectors' (p.312) (Birch and Jacob 2019). For *HEAL* and the *Premier's Priority*, the focus was on a BMI target and strategies to meet the 2025 target without thinking beyond that target. Limited authority to act in social policy and built/food environments, lack of intermediary goals to reflect these elements, and the need to be seen 'doing something', diverted attention to short term strategies like healthy lifestyle programs whose impacts 'fade out' (Seidler et al. 2020; Rudolf et al. 2019). These elements point to a stable dominant policy subsystem coalition that is reinforced by institutional cultural norms.

Social, political and economic considerations

The policies and practices of the NSW obesity prevention policy subsystem indicated dominant beliefs about parental responsibility and citizen morality (Weible et al. 2009). Overlapping this were political beliefs about the role of government, acceptable policy areas and the roles of specific government agencies. Narrowing the scope of the *HEAL Strategy* and a focus on discrete age groups reaffirmed path dependency and embedded norms. Policies aimed at adults and environments were not 'allowed' and the upstream elements of *HEAL* dissolved as the strategy progressed. An Australian study found the *HEAL* health promotion campaign (*Make Healthy Normal*) focused on individual and family behaviours and did not address what made it hard to change those behaviours (Kite et al. 2020). Food policy was recognised as contentious and attributed to the 'personal nature' of obesity among Health participants reflecting an institutionally entrenched personal responsibility narrative. Young children were considered within the context of the family home or ECEC settings and were not viewed as citizens in their own right who engaged with the environments around them. Policy solutions sat at the feet of personal (parental/carer) responsibility.

From a service delivery perspective, the decentralisation of programs and a model that included for- and not-for-profit partners has led to fragmented governance with limited mechanisms for central coordination (Sumah et al. 2016). While public sector employees are concerned with *effective* implementation and account for program design, outsourced program implementation is focused on *efficient* implementation driven by 'contractual relations and accountabilities for service delivery' (Head 2008). The exacerbation/perversion of policy intention via outsourcing implementation has been documented elsewhere (Riboldi et al. 2021). Care must be taken in a model that relies so heavily on outsourcing of services and the dramatic impacts of cost-cutting at arm's length. The threat of funding removal is an ongoing burden faced by local practitioners (both within government and community organisations that are funded by government), in one study a participant referred to this as 'community bullying' (Kavanagh et al. 2022). In the paradigm shift towards decentralisation, ministers have become increasingly involved in the process of policy implementation (May 2019) which coincided with changes in the political landscape around the public service and their role as experts in implementation (Liverani et al. 2013; Head 2008). Changes in the political landscape in Australia have amplified issues surrounding how ministers use the advice of bureaucrats (Liverani et al. 2013), decreasing the likelihood of 'bottom drawer' policies to rise to the top as institutional path-dependencies become rigid within ministerial cycles. The fear of 'pushback' cited by study participants was driven by ministerial anticipation of these social and political considerations.

In a study by Baker et al., the 'selecting out' of policy options perceived to be 'politically dangerous territory' (especially surrounding important economic and political players) was an institutional cultural practice cultivated by policy elites within the Commonwealth Health Department (Baker et al. 2017). This practice established institutional norms to filter out policy options beyond personal responsibility. Our study found similar institutional norms among NSW Health participants who emphasised a focus on behaviour change and making healthy choices. When pressed about environmental actions, Health participants noted they did not hold environmental levers, or they must take a pragmatic approach to the food industry.

'Nanny state' dismissals of policy opportunities imply that the public do not accept policy actions that encroach on individual choice. Countries that culturally attribute a high value to individualism value individual choice (Akaliyski et al. 2022), yet many studies show majority support for many upstream policies to prevent in individualist countries (Harray et al. 2018; Esdaile et al. 2021; Allender et al. 2015; Butler et al. 2022). Almost all expert-recommended food policies aimed at chronic disease prevention require change at the environmental level, not on personal behaviour. Thus, 'Nanny state' and 'slippery slope' arguments may be explained politically, rather than socially, in Australia. Not only does a significant proportion of the food industry sit within NSW, more than half of Australia's food

manufacturing is in (electorally powerful) rural areas (Baker et al. 2017). The influence of the food industry on obesity prevention policy formation in NSW has been documented for some time (King et al. 2007).

There were also key economic considerations. Study participants referred to 'powerful interests' that prevented policies to remove out-of-home advertising of unhealthy food/drinks, including concerns about loss of revenue for the two major sellers of advertising space on NSW Government assets – Sport and Transport. A single media company held the primary out-of-home advertising contract with NSW during the study period and had recently increased their stake in 'commuter' platforms (oOh! Media 2018). Within this context, there is growing evidence of out-of-home unhealthy food advertising targeting children on their way to school (Richmond et al. 2020) and a higher concentration of unhealthy food/drink advertising (up to 40%) on transport assets in less advantaged areas in Sydney, NSW (Sainsbury et al. 2017). Transport assets, including train stations and bus stops, are key settings for reducing advertising exposure to children, as they have been shown to have the highest concentration of discretionary food/drinks in NSW (Kelly et al. 2008).

Efforts to develop food policy were met with food industry demands for a 'level playing field', i.e. a nationally consistent approach. This approach has political and institutional contextual restraints. Firstly, the Commonwealth Government during the study period had no plans to address food policies solely within their jurisdiction, such as restrictions on advertising on television (Esdaile et al. 2022b). Secondly, the regulation of food in Australia is developed through an intergovernmental forum with veto rights. NSW may actively block regulation through this forum given the paradigm where Health takes a 'pragmatic approach' and the Food Authority wants to support the food industry to 'flourish'. Organisationally within the NSW Government, the Food Authority (like the Office of Sport) sat within the industry cluster and was orientated towards supporting industry. A potential solution to this stalemate could be to move the Food Authority out of the Industry cluster and into the Health cluster. Given its primary function in upholding the NSW Food Act, it makes sense to be in the same cluster as those responsible for food policy in NSW (i.e. the Ministry). It also has the potential benefit of bringing Health institutionally closer to local governments whose responsibility it is to monitor food regulation at the food outlet level. Such a move would likely come with institutional resistance.

In the context of these factors, *HEAL* narratives about food and physical activity became polarised instead of being a holistic focus on healthy built environments. Community places for being active were framed as 'giving' the public something rather than confronting industry or constraining choice. Even in the absence of regulation, food systems actions were viewed as highly contentious, e.g. the preference for use of a partnership model under *Healthy Food Provision*. This was reflected in the directional political appetite to pursue policies such as *Active Travel, Active Play* over food policy collaboration. However, despite positive built environment narratives the policy tools implemented were only guidelines. In a decentralisation of policy, focus shifted to local governments to deliver on healthy built environments, who have less power and authority to confront business interests. Given the disparity between local councils (in terms of resources, budgets, workforces and geographical size) interventions at this level of government are likely to exacerbate existing inequalities between communities.

Towards collaboration

There are calls to progress action on complex problems using systems science, ensuring that the 'whole system is in the room' so that problems and potential solutions can be considered from multiple points of view, unintended consequences can be avoided (Leach et al. 2013), and political issues and philosophical tensions can be overcome (Pescud et al. 2019). Policy visibility is an approach to policy design and communication that involves the public (Onyango 2019).

The importance of taking an equity lens (Friel et al. 2017) and being led by communities (Allender et al. 2015; Butler et al. 2022) cannot be overstated – two areas not embraced in the governance of *HEAL*. Study participants noted the public can challenge businesses and industry in a way that governments cannot (for fear of 'pushback'). Community and parent voices are an opportunity to 'accelerate policy action' in contentious areas such as reducing exposure to out-of-home marketing of unhealthy food/drinks (Driessen et al. 2022). The ACF suggests that public opinion is a resource for policy orientated learning (Jenkins-Smith et al. 2014). Previous community-driven obesity prevention trials in Australia documented a 'viral-like spread' of public health policy activity between communities (Swinburn et al. 2014), indicating the central role of community in policy success.

Leadership in this context centres on enabling an authorising environment for collaboration and providing structural support to do so. Collaborative implementation partners need tools to navigate uncertainty (Leach et al. 2013; Salignac et al. 2019), four key areas were identified in the literature. The first is designing processes aimed at long-term sustainability (Leach et al. 2013) and the second is the cultivation of procedural fairness and interpersonal trust (see (Leach 2011)). The third is ensuring respect for a diverse range of collaborators who can perceive their own agency in the goals being sought (Leach and Sabatier 2005). Agencies need to commit to supporting the same people (or at least, their role) to participate in the process in an ongoing manner. The fourth is to ensure scientific certainty and engage in joint fact finding (Leach et al. 2013).

This study found examples of efforts by some agencies to generate evidence within the existing dominant coalition paradigm. Health participants expressed this was because they did not 'hold the levers' to enact other changes. However, collaborative efforts could be made to ensure scientific certainty by jointly generating evidence about NSW-specific components of built environments. These partnerships could focus on the use of data already being collected across multiple agencies to minimise operational costs.

Limitations

This study had several limitations. Our study methods permitted knowledge creation through exchange between the researchers and participants, as such the results are not generalisable. However, given that obesity is a global issue and similar ideological narratives are prevalent in high income countries, the learnings from this paper provide insights for researchers and policy makers. Study participants were public sector officials and there are some things that cannot be shared publicly, even with anonymity. Participants indicated there were other examples of collaboration underway that could not be shared until they were finalised or were just too sensitive to discuss. Further, due to our study design we primarily focused on agencies directly involved in the *HEAL Strategy* and additional agencies as recommended by study participants, therefore external perspectives about the strategy were omitted.

While some argue for the exclusivity of reflexive thematic analysis (Braun and Clarke 2021a, b), we felt its combination with content analysis were appropriate methods for our study aims. The policy mapping and content analysis provided an opportunity to examine what policies were enacted alongside the *HEAL Strategy* and identify policy opportunities for the early prevention of obesity in childhood. The reflexive thematic analysis with senior public officials allowed us to explore the machinations of government in a much deeper and more meaningful way than content analysis of documents alone would allow (Vaismoradi et al. 2013).

Conclusions

Ultimately the *HEAL Strategy* provided a comprehensive framework with the potential to support reductions in obesity in early childhood. However, it lacked commitment from leadership and partners across government to ensure collaboration on its most contentious areas. Strong cross-institutional leadership and structural support is required to ensure engagement across sectors and achieve outcomes, changing institutional norms and subsystem beliefs along the way. Understanding the challenges of implementing these kinds of long term, high impact interventions can help to shape future work.

The areas where the studies themes were most salient had less attention, investment and action. The avoidance of controversial political actions minimises efforts to respond to policy challenges and holding out for a 'softening up process' only delays action further (King et al. 2007). Negative impacts on equity are likely in the absence of structural and environmental interventions (Bauman et al. 2016).

The complexity of obesity prevention is such that it is not a singular problem to solve. Trying to pull out component parts as discrete solutions is a reductionist approach (Sturmberg and Martin 2009). Addressing the complex social, economic and political causes of increased obesity prevalence requires a shift in thinking – one that is grounded in collaboration (Sturmberg and Martin 2009). Our focus should be on policies that value wellbeing over a focus on never ending economic growth.

Supplementary Information The online version contains supplementary material available at https://doi.org/10.1007/s10389-023-01891-8.

Acknowledgements The authors would like to thank the public officials who participated in this study.

Author contributions EE undertook this research as part of a PhD thesis, submitting the study protocol for ethics approval, conceptualising the research, undertaking data collection, analysis and manuscript preparation. CR reviewed the policy mapping analysis, and SH participated in collaborative thematic analysis and interpretation of the interviews with senior officials. CR and LMW were active supervisors of this work and all authors provided review of the manuscript.

Funding Open Access funding enabled and organized by CAUL and its Member Institutions. This research was supported by the Early Prevention of Obesity in Childhood Centre for Research Excellence (EPOCH CRE) through a National Health and Medical Research Council grant (number 1101675). EE was a recipient of a Commonwealth Government Research Training Program scholarship and received a scholarship top up from EPOCH CRE.

Availability of data and material Provided in the supportive information files.

Code availability Not applicable.

Declarations

Ethics approval and consent to participate The University of Sydney Human Research Ethics Committee granted ethics approval for this study (2017/507). Written informed consent was obtained prior to participation.

Consent for publication Not applicable.

Conflicts of interest Authors EE and SH have no conflicts of interest to declare. The NSW Ministry of Health authored the *HEAL Strategy*, the subject of this case study. CR, LB and LMW were employees of NSW Health at the time of this project. CR and LMW were both participants in this study. While they made suggestions for study recruitment, they were not involved in recruitment, data collection, or its analysis. They

had no access to raw data (audio recordings or transcripts) or information identifying participants.

References

Akaliyski P, Minkov M, Li J, Bond MH, Gehrig S (2022) The weight of culture: societal individualism and flexibility explain large global variations in obesity. Soc Sci Med 307:115167. https://doi.org/10.1016/j.socscimed.2022.115167

Allender S, Owen B, Kuhlberg J, Lowe J, Nagorcka-Smith P, Whelan J, Bell C (2015) A community based systems diagram of obesity causes. PLOS ONE 10:e0129683. https://doi.org/10.1371/journal.pone.0129683

Australian Bureau of Statistics (2018) National Health Survey: first results 2017-18 (Table 16). https://www.abs.gov.au/statistics/health/health-conditions-and-risks/national-health-survey-first-results/latest-release#data-download. Accessed 2 Dec 2011

Baker P, Gill T, Friel S, Carey G, Kay A (2017) Generating political priority for regulatory interventions targeting obesity prevention: an Australian case study. Soc Sci Med 177:141–149. https://doi.org/10.1016/j.socscimed.2017.01.047

Barber M, Kihn P, Moffit A (2010) Deliverology 101: A field guide for educational leaders. Corwin Press, Thousand Oaks

Bauman A, Bellew B, Boylan S, Crane M, Foley B, Gill T, King L, Kite J, Mihrshahi S (2016) Obesity prevention in children and young people aged 0-18 years: a rapid evidence review brokered by the Sax Institute. Physical Activity Nutrition Obesity Research Group. The University of Sydney, Sydney

Behn RD (2017) How scientific is "the science of delivery"? Can Public Adm 60:89–110. https://doi.org/10.1111/capa.12207

Birch L, Jacob S (2019) "Deliverology" and evaluation: a tale of two worlds. Can J Program Eval 34:303–328. https://doi.org/10.3138/CJPE.53365

Braun V, Clarke V (2006) Using thematic analysis in psychology. Qual Res Psychol 3:77–101. https://doi.org/10.1191/1478088706qp063oa

Braun V, Clarke V (2013) Successful qualitative research: a practical guide for beginners. Sage, Thousand Oaks

Braun V, Clarke V (2019) Reflecting on reflexive thematic analysis. Qual Res Sport Exerc Health 11:589–597. https://doi.org/10.1080/2159676X.2019.1628806

Braun V, Clarke V (2021a) Can I use TA? Should I use TA? Should I not use TA? Comparing reflexive thematic analysis and other pattern-based qualitative analytic approaches. Couns Psychother Res 21:37–47. https://doi.org/10.1002/capr.12360

Braun V, Clarke V (2021b) One size fits all? What counts as quality practice in (reflexive) thematic analysis? Qual Res Psychol 18:328–352. https://doi.org/10.1080/14780887.2020.1769238

Braun V, Clarke V, Terry G, Hayfield N (2018) Thematic analysis. In: Liamputtong P (ed) Handbook of research methods in health and social sciences. Springer, Singapore

Bronfenbrenner U (2004) Ecological systems theory. In: Bronfenbrenner U (ed) Making Human Beings Human: Bioecological perspectives on human development. Sage, New York

Butler AR, Astbury NM, Goddard L, Hajizadeh A, Seeber P, Crawley B, Aveyard P, Jebb SA (2022) Setting the top 10 priorities for obesity and weight-related research (POWeR): a stakeholder priority setting process. BMJ Open 12:e058177. https://doi.org/10.1136/bmjopen-2021-058177

Byrne D (2022) A worked example of Braun and Clarke's approach to reflexive thematic analysis. Qual Quant 56:1391–1412. https://doi.org/10.1007/s11135-021-01182-y

Centre for Epidemiology and Evidence (2018) Population Health Research Strategy 2018-2022.NSW Ministry of Health, North Sydney

Clarke B, Swinburn B, Sacks G (2018) Understanding health promotion policy processes: A study of the government adoption of the Achievement Program in Victoria, Australia. IJERPH 15:2393. https://doi.org/10.3390/ijerph15112393

Conte K, Marks L, Loblay V, Grøn S, Green A, Innes-Hughes C, Milat A, Persson L, Williams M, Thackway S, Mitchell J, Hawe P (2020) Can an electronic monitoring system capture implementation of health promotion programs? A focussed ethnographic exploration of the story behind program monitoring data. BMC Public Health 20:917. https://doi.org/10.1186/s12889-020-08644-2

Darling N (2007) Ecological Systems Theory: The Person in the Center of the Circles. Res Hum Dev 4:203–217. https://doi.org/10.1080/15427600701663023

Driessen C, Kelly B, Sing F, Backholer K (2022) Parents' perceptions of children's exposure to unhealthy food marketing: a narrative review of the literature. Curr Nutr Rep 11:9–18. https://doi.org/10.1007/s13668-021-00390-0

Esdaile E, Thow AM, Gill T, Sacks G, Golley R, Love P, Wen LM, Rissel C (2019) National policies to prevent obesity in early childhood: using policy mapping to compare policy lessons for Australia with six developed countries. Obes Rev 20:1542–1556. https://doi.org/10.1111/obr.12925

Esdaile E, Owen KB, Xu H, Baur LA, Rissel C, Wen LM (2021) Strong support for broad policies to prevent childhood obesity among mothers in New South Wales, Australia. Health Promot J Austr 32:197–207. https://doi.org/10.1002/hpja.351

Esdaile EK, Gillespie J, Baur LA, Wen LM, Rissel C (2022a) Australian state and territory eclectic approaches to obesity prevention in the early years: policy mapping and perspectives of senior health officials. Front Public Health 10:781801. https://doi.org/10.3389/fpubh.2022.781801

Esdaile EK, Rissel C, Baur LA, Wen LM, Gillespie J (2022b) Intergovernmental policy opportunities for childhood obesity prevention in Australia: perspectives from senior officials. PLOS ONE 17:e0267701. https://doi.org/10.1371/journal.pone.0267701

Farrell L, Lloyd B, Matthews R, Bravo A, Wiggers J, Rissel C (2014) Applying a performance monitoring framework to increase reach and adoption of children's healthy eating and physical activity programs. Public Health Res Pract 25:e2511408. https://doi.org/10.17061/phrp2511408

Friel S, Pescud M, Malbon E, Lee A, Carter R, Greenfield J, Cobcroft M, Potter J, Rychetnik L, Meertens B (2017) Using systems science to understand the determinants of inequities in healthy eating. PLOS ONE 12:e0188872. https://doi.org/10.1371/journal.pone.0188872

Gerring J (2004) What Is a Case Study and What Is It Good for? Am Polit Sci Rev 98:341–354. https://doi.org/10.1017/S0003055404001182

Grøn S, Loblay V, Conte KP, Green A, Innes-Hughes C, Milat A, Mitchell J, Persson L, Thackway S, Williams M, Hawe P (2020) Key performance indicators for program scale-up and divergent practice styles: a study from NSW, Australia. Health Promot Int 35:1415–1426. https://doi.org/10.1093/heapro/daaa001

Harray AJ, Meng X, Kerr DA, Pollard CM (2018) Healthy and sustainable diets: Community concern about the effect of the future food environments and support for government regulating sustainable food supplies in Western Australia. Appetite 125:225–232. https://doi.org/10.1016/j.appet.2018.01.009

Hassenteufel P, Smyrl M, Genieys W, Moreno-Fuentes FJ (2010) Programmatic actors and the transformation of European health care states. J Health Polit Policy Law 35:517–538. https://doi.org/10.1215/03616878-2010-015

Head BW (2008) Three lenses of evidence-based policy. Aust J Public Adm 67:1–11. https://doi.org/10.1111/j.1467-8500.2007.00564.x

Heart Foundation (2017) Achievements of the NSW Premier's Council for Active Living 2004-2016. Heart Foundation, Sydney

Howlett M, Ramesh M, Perl A (2009) Studying Public Policy: Policy cycles and policy subsystems. Oxford University Press, New York

Hsieh H-F, Shannon SE (2005) Three approaches to qualitative content analysis. Qual Health Res 15:1277–1288. https://doi.org/10.1177/1049732305276687

Immergut E (1998) The theoretical core of the New Institutionalism. Polit Soc 26:5–34. https://doi.org/10.1177/0032329298026001002

Indig D, Grunseit A, Greig A, Lilley H, Bauman A (2019) Development of a tool for the evaluation of obesity prevention partnerships. Health Promot J Austr 30:18–27. https://doi.org/10.1002/hpja.10

Ingold K, Varone F (2011) Treating policy brokers seriously: evidence from the climate policy. J Public Adm Res Theory 22:319–346. https://doi.org/10.1093/jopart/mur035

Innes-Hughes C, Rissel C, Thomas M, Wolfenden L (2019) Reflections on the NSW Healthy Children Initiative: a comprehensive state-delivered childhood obesity prevention initiative. Public Health Res Pract 29:e2911908. https://doi.org/10.17061/phrp2911908

Jenkins-Smith H, Nohrstedt D, Weible C, Sabatier P (2014) The advocacy coalition framework: foundations, evolution, and ongoing research. In: Weible C, Sabatier P (eds) Theories of the policy process, 3rd. Westview Press, New York

Jenkins-Smith H, Nohrstedt D, Weible C, Ingold K (2018) The advocacy coalition framework: an overview of the research program. In: Weible C, Sabatier P (eds) Theories of the policy process, 4th. Westview Press, New York

Kavanagh SA, Hawe P, Shiell A, Mallman M, Garvey K (2022) Soft infrastructure: the critical community-level resources reportedly needed for program success. BMC Public Health 22:420. https://doi.org/10.1186/s12889-022-12788-8

Kelly B, Cretikos M, Rogers K, King L (2008) The commercial food landscape: outdoor food advertising around primary schools in Australia. ANZJPH 32:522–528. https://doi.org/10.1111/j.1753-6405.2008.00303.x

Killedar A, Lung T, Hayes A (2022) Investigating socioeconomic inequalities in BMI growth rates during childhood and adolescence. Obes Sci Pract 8:101–111. https://doi.org/10.1002/osp4.549

King L, Turnour C, Wise M (2007) Analysing NSW state policy for child obesity prevention: strategic policy versus practical action. Aust New Zealand Health Policy 4:22. https://doi.org/10.1186/1743-8462-4-22

Kite J, Thomas M, Grunseit A, Li V, Bellew W, Bauman A (2020) Results of a mixed methods evaluation of the Make Healthy Normal campaign. Health Educ Res 35:418–436. https://doi.org/10.1093/her/cyaa022

Kovai V, Mahjabeen Z, Jalaludin B, Fox F (2022) Towards an effective collaboration between the South Western Sydney Local Health District and local councils: insights from a qualitative study. Health Res Policy Syst 20:47. https://doi.org/10.1186/s12961-022-00850-1

Leach W (2011) Building a theory of collaboration. In: Franklin E, Firehock K, Birkhoff J (eds) Community-based collaboration: bridging socio-ecological research and practice. University of Virginia Press, Charlottesville

Leach WD, Sabatier PA (2005) To trust an adversary: integrating rational and psychological models of collaborative policymaking. Am Polit Sci Rev 99:491–503. https://doi.org/10.1017/S000305540505183X

Leach W, Weible C, Vince S, Siddiki S, Calanni J (2013) Fostering learning through collaboration: knowledge acquisition and belief change in marine aquaculture partnerships. J Public Adm Res Theory 24:591–622. https://doi.org/10.1093/jopart/mut011

Liverani M, Hawkins B, Parkhurst JO (2013) Political and institutional influences on the use of evidence in public health policy. A systematic review. PLOS ONE 8:e77404. https://doi.org/10.1371/journal.pone.0077404

March J, Olsen J (2006) Elaborating the "New Institutionalism".' In: Rhodes R, Binder S and Rockman B (eds.) The Oxford handbook of political institutions. Oxford University Press, Oxford, 3-20

May K (2019) 'What ever happended to deliverology?', Policy Options Politiques, May 15

Meinen A, Hilgendorf A, Korth A, Christens B, Breuer C, Joyner H, Polzin M, Adams A, Wolfe D, Braun A, Hoiting J, Paulson J, Cullen B, Stader K (2016) The Wisconsin early childhood obesity prevention initiative: an example of statewide collective impact. WMJ 115:269–274

Mihrshahi S, Gow ML, Baur LA (2018) Contemporary approaches to the prevention and management of paediatric obesity: an Australian focus. MJA 209:267–274. https://doi.org/10.5694/mja18.00140

Nathan S, Develin E, Grove N, Zwi A (2005) An Australian childhood obesity summit: the role of data and evidence in 'public' policy making. Aust New Zealand Health Policy 2:17. https://doi.org/10.1186/1743-8462-2-17

Needs A (2019) Deliverology in NSW. Presented at the 'Deliverology: The science of delivering results for citizens' conference, 10 April. Institute of Public Administration (Western Australia), Perth

NSW Government (2003) Prevention of obesity in children and young people: NSW Government action plan. NSW Health, Sydney

NSW Government (2016) Premier's Priority: reduce overweight and obesity rates of children by 5% over 10 years. NSW Government, Sydney

NSW Government (2017) NSW Budget 2017-18: Budget Paper No. 3 Budget Estimates. NSW Government, Sydney

NSW Ministry of Health (2013) Healthy eating and active living strategy: preventing overweight and obesity in New South Wales 2013-2018.NSW. Ministry of Health, North Sydney

NSW Ministry of Health (2019) The first 2000 days framework. NSW Government, North Sydney

O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA (2014) Standards for reporting qualitative research: a synthesis of recommendations. Acad Med 89:1245–1251. https://doi.org/10.1097/acm.0000000000000388

Onyango G (2019) Policy-visibility and implementation in public administration. In: Farazmand A (ed) Global encyclopedia of public administration, public policy, and governance. Springer, Cham, pp 1–8

oOh! Media (2018) Annual report 2018. oOh! Media, Sydney

Pescud M, Sargent G, Kelly P, Friel S (2019) How does whole of government action address inequities in obesity? A case study from Australia. Int J Equity Health 18:8. https://doi.org/10.1186/s12939-019-0913-6

Riboldi M, Fennis L, Fishwick E, Goodwin S, Stears M (2021) Making commissioning work: the relational gap between intent and

implementation in the transition to 'commissioning' community services in New South Wales. Aust J Public Adm 80:565–576. https://doi.org/10.1111/1467-8500.12510

Richmond K, Watson W, Hughes C, Kelly B (2020) Children's trips to school dominated by unhealthy food advertising in Sydney. Australia. Public Health Res Pract 30:e3012005

Roberts N, Li V, Atkinson J-A, Heffernan M, McDonnell G, Prodan A, Freebairn L, Lloyd B, Nieuwenhuizen S, Mitchell J, Lung T, Wiggers J (2019) Can the target set for reducing childhood overweight and obesity be met? A system dynamics modelling study in New South Wales, Australia. Syst Res Behav Sci 36:36–52. https://doi.org/10.1002/sres.2555

Rudolf M, Perera R, Swanston D, Burberry J, Roberts K, Jebb S (2019) Observational analysis of disparities in obesity in children in the UK: Has Leeds bucked the trend? Pediatr Obes 14:e12529. https://doi.org/10.1111/ijpo.12529

Sabatier P, Weible CM (2007) The advocacy coalition framework: innovations and clarifications. In: Sabatier P (ed) Theories of the policy process. Westview Press, Boulder

Sainsbury E, Colagiuri S, Magnusson R (2017) An audit of food and beverage advertising on the Sydney metropolitan train network: regulation and policy implications. BMC Public Health 17:490. https://doi.org/10.1186/s12889-017-4433-2

Salignac F, Marjolin A, Noone J, Carey G (2019) Measuring dynamic collaborations: collaborative health assessment tool. Aust J Public Adm 8:227–249. https://doi.org/10.1111/1467-8500.12386

Schmidt VA (2010) Taking ideas and discourse seriously: explaining change through discursive institutionalism as the fourth 'new institutionalism'. EPSR 2:1–25. https://doi.org/10.1017/S1755773909990021X

Seidler AL, Hunter KE, Johnson BJ, Ekambareshwar M, Taki S, Mauch CE, Mihrshahi S, Askie L, Campbell KJ, Daniels L, Taylor RW, Wen LM, Byrne R, Lawrence J, Perlstein R, Wardle K, Golley RK (2020) Understanding, comparing and learning from the four EPOCH early childhood obesity prevention interventions: a multi-methods study. Pediatr Obes 15:e12679. https://doi.org/10.1111/ijpo.12679

Smith K (2013) Beyond evidence based policy in public health: The interplay of ideas. Palgrave Macmillan, Melbourne

Sturmberg JP, Martin CM (2009) Complexity and health – yesterday's traditions, tomorrow's future. J Eval Clin Pract 15:543–548. https://doi.org/10.1111/j.1365-2753.2009.01163.x

Sumah AM, Baatiema L, Abimbola S (2016) The impacts of decentralisation on health-related equity: a systematic review of the evidence. Health Policy 120:1183–1192. https://doi.org/10.1016/j.healthpol.2016.09.003

Swinburn B, Malakellis M, Moodie M, Waters E, Gibbs L, Millar L, Herbert J, Virgo-Milton M, Mavoa H, Kremer P, de Silva-Sanigorski A (2014) Large reductions in child overweight and obesity in intervention and comparison communities 3 years after a community project. Pediatric Obesity 9:455–462. https://doi.org/10.1111/j.2047-6310.2013.00201.x

Vaismoradi M, Turunen H, Bondas T (2013) Content analysis and thematic analysis: implications for conducting a qualitative descriptive study. Nurs Health Sci 15:398–405. https://doi.org/10.1111/nhs.12048

Weible CM, Sabatier PA, McQueen K (2009) Themes and variations: taking stock of the advocacy coalition framework. Policy Stud J 37:121–140. https://doi.org/10.1111/j.1541-0072.2008.00299.x

Wiggers J, Wolfenden L, Campbell E, Gilham K, Bell C, Sutherland R, Hardy L, King L, Grunseit A, Milat A, Orr N (2013) Good for kids, good for life 2006-2010: evaluation report. NSW Health, Sydney

Wood A, Tenbensel T (2018) A comparative analysis of drivers of collaborative governance in front-of-pack food labelling policy processes. J Comp Policy Anal: Res Pract 20:404–419. https://doi.org/10.1080/13876988.2017.1391462

World Health Organisation (2016) Report of the Commission on ending childhood obesity. WHO, Geneva

World Health Organisation (2017) Report of the Commission on ending childhood obesity: implementation plan. WHO, Geneva

Zheng M, Lamb KE, Grimes C, Laws R, Bolton K, Ong KK, Campbell K (2018) Rapid weight gain during infancy and subsequent adiposity: a systematic review and meta-analysis of evidence. Obes Rev 19:321–332. https://doi.org/10.1111/obr.12632