

School of Public Health
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International Evidence and Experiences
in Regulatory Approaches Targeting Nutritional
Aspects of Population-Level Obesity Prevention

*Thesis submitted in fulfillment of the requirements for the
degree of Doctor of Philosophy*

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Abstract

High prevalence of overweight and obesity remains a pressing health concern for most industrialised nations. As preventive approaches based on individuals' capacity for behaviour change have largely failed to impact population weight, governments have begun to implement policies to regulate food environments with a view to improving nutrition and health outcomes. This thesis comprises four studies, presented as two peer-reviewed journal articles and two manuscripts, examining the evidence and experiences generated by Organisation for Economic Cooperation and Development jurisdictions' regulatory targeting of the nutritional aspects of obesity prevention.

Article 1 provides an overview of regulatory approaches addressing dietary risk factors for obesity enacted in the United States and the European Union since 2004. The findings from a systematic search of primary and secondary legislation databases demonstrate that such approaches are currently limited in reach and scope. No jurisdiction has enacted a comprehensive suite of complementary actions addressing different components of the food environment; however, the existence of discrete interventions indicates some political will for innovation.

Article 2 employs a realist review perspective to systematically investigate the effect of "real-world" policies addressing population nutrition. The review examines: (1) the effect of interventions on average BMI/weight and calorie intake or proxy measures and (2) indicators measuring parameters on assumed causal pathways to changed consumption patterns. Results drawn from peer-reviewed articles and grey literature reports demonstrate that isolated regulatory interventions reliably improve intermediate outcomes, but fail to affect consumption at levels of clinical significance.

Article 3 is a case study of obesity prevention in New York City. Combining a documentary review and key informant interviews, the analysis demonstrates that there is scope to redefine municipal responsibilities for public health. In particular, results indicate that policy change in the emerging and contested field of regulatory obesity prevention needs strong political leadership. Executive-driven nutrition policy is shown to offer an expedient mechanism to protect expert-designed measures from the influence of competing interests. The analysis also demonstrates

the importance of building community support, the value of incremental change, and the impact of contentious public discussion on social norms around nutrition.

Article 4 considers how local governments can prepare for systematic engagement in population-level obesity prevention, using the 2011 South Australian Public Health Act as an example. Analysis shows that South Australia can potentially employ a range of levers to address food environments and nutrition under this legislation; particularly through the Health Minister's authority to issue Codes of Practice relating to specified industries or activities based on health concerns. The operationalization of this and other legal instruments for nutritional obesity prevention should be supported by a greater focus on whole-of-government responsibility for public health in general purpose legislation.

Together, these studies give a nuanced picture of the current state of regulatory obesity prevention as it relates to nutrition policy and food environments. As well as indicating directions for future research, particularly regarding the long-term effects of existing interventions and the assessment of new policy approaches, this body of work provides insights and clear recommendations for future food and obesity prevention policy.

Thesis declaration

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name, in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future, be used in a submission in my name, for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint-award of this degree.

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Adelaide, 3 February 2016

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Publications and presentations

1. Peer-reviewed journal articles

Sisnowski J, Handsley E, Street JM. Regulatory approaches to obesity prevention: A systematic overview of current laws addressing diet-related risk factors in the European Union and the United States. *Health Policy*. 2015;119(6):720-731. doi:10.1016/j.healthpol.2015.04.013.

Sisnowski J, Street JM, Braunack-Mayer A. Targeting population nutrition through municipal health and food policy: implications of New York City's experiences in regulatory obesity prevention. *Food Policy*. 2016;58:24-34. doi:10.1016/j.foodpol.2015.10.007.

2. Manuscripts

Sisnowski J, Merlin T, Street JM. Improving food environments and tackling obesity: a realist systematic review of the policy success of regulatory interventions targeting population nutrition.

Sisnowski J, Handsley E, Reynolds C, Broderick D. Translating innovative public health legislation into policy action: does the new South Australian Public Health Act offer a blueprint for systematic regional government engagement in obesity prevention?

3. Presentations based on peer-reviewed abstracts

Sisnowski J, Street J, Merlin T. Regulating population nutrition to tackle obesity: preliminary results from a systematic review of real-life policy interventions. South Australian State Population Health Conference 2015, Adelaide, 31 October 2015.

Sisnowski J, Braunack-Mayer A, Street J. Taking a bite out of the Big Apple: NYC policy approaches to nutritional obesity prevention. Population Health Congress, Hobart, 7-9 September 2015.

Sisnowski J, Handsley E, Tooher R, Street J. Targeting dietary risk factors- current overseas policy approaches to obesity prevention. Public Health Association of Australia 43rd Annual Conference, Perth, 15-17 September 2014.

4. Other presentations

Street J, Sisnowski J. HealthyLaws, HealthyViews: Community views on the use of regulation and law for obesity prevention in children. Rudd Center for Food Policy and Obesity at Yale University (now University of Connecticut), New Haven, CT, 22 September 2014.

Abbreviations and acronyms

The following is a list of frequently used abbreviated terms. All terms are written in full the first time they appear in both narrative text and manuscripts.

ABS	Australian Bureau of Statistics
ANPHA	Australian National Preventive Health Agency (defunct as of June 30 th , 2014)
BMI	Body Mass Index
CDC	Centers for Disease Control and Prevention (United States)
DOHMH	New York City Department of Health and Mental Hygiene
EEA	European Economic Area
EU	European Union
INFORMAS	International Network for Food and Obesity/non-communicable diseases Research, Monitoring and Action Support
IOTF	International Obesity Taskforce
NCD	Noncommunicable Disease
NHANES	National Health and Nutrition Examination Survey (United States)
NOPA	WHO Regional Office for Europe Nutrition, Obesity, and Physical Activity database
NYC	New York City
OECD	Organisation for Economic Co-operation and Development
SA	South Australia
UK	United Kingdom of Great Britain and Northern Ireland
US/USA	United States of America
WHO	World Health Organization