

Title

Tackling Obesities: 10 years on

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Ten years ago, the report “Tackling obesity: future choices” [1] was published. Commissioned under the then Labour government and prepared by the Foresight group within the Government Office for Science, it framed obesity as an emergent outcome of a complex system. This approach makes clear that there are multiple complex interacting influences on weight status, many of which lie outside the direct control of individuals or the health sector, that both drive and are driven by socioeconomic and other inequalities.

The Foresight report has had a far-reaching impact on both obesity science and policy since its publication, and remains highly influential, with 60 per cent of its citations occurring in the last four years¹. The report has yet to be superseded in its scope of examining the underlying causes of obesity, encompassing a broad range of influences including individual, social, psychological, economic, commercial and environmental factors. A complex systems approach accounts for the ways in which different elements of a given ‘system’ are intertwined, and how system phenomena are emergent and dynamic: changes as a result of interventions implemented within the system may be unpredictable and non-linear. Interventions in complex systems with the greatest impact on population health are likely to take place ‘upstream’.

[2]–[4] It is therefore a compelling framework for dealing with multi-factorial problem such as obesity.

There has, however, been slow progress in reducing the prevalence of obesity and associated public health problems in the decade since the report was published. [5] Foresight acknowledged that: “forces that drive obesity are, for many people, overwhelming”. [1, p. 5] Yet there has been little progress on changing these ‘forces’ such as access to cheap, unhealthy foods, or the role of commercial marketing practices in driving unhealthy choices. Despite some important exceptions policy responses still largely demonstrate “lifestyle drift” – the phenomenon whereby

actions tend to focus on individual level behavior rather than upstream, structural changes that reshape the environments within which people make their behavioural decisions. [6]

Foresight's legacy lies in its articulation of a complex systems framework. This approach represents a radical shift in the way public health problems have been conceptualised and the way interventions can be designed and evaluated. Despite such approaches long being commonplace in other scientific areas such as organizational management [7] the Foresight report was the first major use of complex systems thinking to frame a public health problem. In what has been termed the 'complexity turn', [8] these ideas are now starting to become influential in public health research and policy: the recent publication of the Academy of Medical Sciences report on the Health of the Public in 2040, [9] and the establishment of the UK Prevention Research Partnership² both call for complex systems thinking in public health research and practice.

These and other calls for a complex systems approach to public health, [3] offer opportunities to develop work in this area, particularly ensuring that theoretical arguments in favour of complex systems approaches are translated into empirical research to inform practical actions. Complex systems thinking has primarily been used as a conceptual framework for public health problems; it has not yet been implemented consistently or robustly in research, interventions or evaluation, despite discussion of how this might actually be done using methods such as agent-based modelling or causal loop diagrams. [10]–[12]

We are potentially entering a second phase in the development of the sub-field, focusing on the operationalisation of its potential in public health. But challenges remain in putting complex systems thinking to work – asking the right questions in research to account for the unpredictability of human behaviour and the multiple interacting factors that contribute to human health. It is also important to add a critical dimension to systems work on public health, especially as we already have considerable knowledge that has not been implemented. [8]

The evidence generated by researchers also needs to convey the contribution that complex systems thinking can make to policy development and implementation. A whole-system perspective on obesity and other public health issues needs to take meaningful account of the realities of influencing complex systems. The Foresight report made a strong and clear case for adopting a novel conceptual approach to advance public health action; ten years later it is even more pressing that we turn this aspiration into reality.

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¹ according to google scholar

² <https://www.mrc.ac.uk/documents/pdf/ukprp-background-and-rationale/>

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