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Perspective

Obesity prevention in children and young people: what policy actions are needed?

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Key points

- Overweight and obesity in childhood and adolescence are associated with adverse health consequences throughout life
- Population estimates for body mass index (BMI) among children and adolescents have begun to plateau at very high levels in many high-income countries, while still accelerating in parts of Asia
- Evidence based, cost-effective strategies are known but as yet not implemented fully in any country
- The most cost-effective strategies are those most vigorously opposed by industry
- Comprehensive policy actions must integrate transparent governance and accountability mechanisms for success

Abstract

Overweight and obesity in childhood and adolescence are associated with adverse health consequences throughout the lifecourse. Rates of childhood overweight and obesity have reached alarming proportions in many countries and pose an urgent and serious challenge. Policy responses across the world have been piecemeal. Evidence based policy actions and interventions are available to build a comprehensive approach to overweight and obesity but, in most countries, a narrow selection of interventions are chosen, often implemented over short time periods and typically with small-scale investment. The most cost-effective policy actions are rarely selected, or only partially adopted. Genuinely comprehensive, long-term population-wide approaches are scant. Leading-edge fiscal and regulatory strategies face aggressive, often effective, opposition from lobby groups. We outline the policy actions, governance and accountability mechanisms needed to tackle this global epidemic.

Introduction

Overweight and obesity carry profound health and economic burdens; as body mass index (BMI) increases throughout the life course, so does the prevalence of comorbid conditions, including diabetes, cardiovascular disease and some cancers.[1] More immediate adverse health outcomes of childhood obesity include social and mental health concerns during adolescence.[2]

Children and adolescents who are obese are five times more likely to be obese in adulthood than those who were not obese, representing a lifelong personal burden and long-term societal impacts. Around 55% of children who are obese will be obese in adolescence, around 80% of adolescents who are obese will still be obese in young adulthood, and around 70% will be obese over age 30.[3] In 2016, among 5–19-year-olds, 50 million girls and 74 million boys worldwide were estimated to be obese, with an additional 213 million children and adolescents in the overweight category.[4]

Conversely, the majority of adults who are obese were not obese in childhood or adolescence, so early prevention will only partially reduce the prevalence of adult obesity. Adulthood is where much of the associated

morbidity and healthcare cost burden occurs[3]; indeed, a lifelong approach was recommended in the Foresight report[5] – a UK Government analysis which brought together system-mapping and scenario-development methodologies to generate policy response options to obesity. Expert commentary has also revisited this life-course theme.[6]

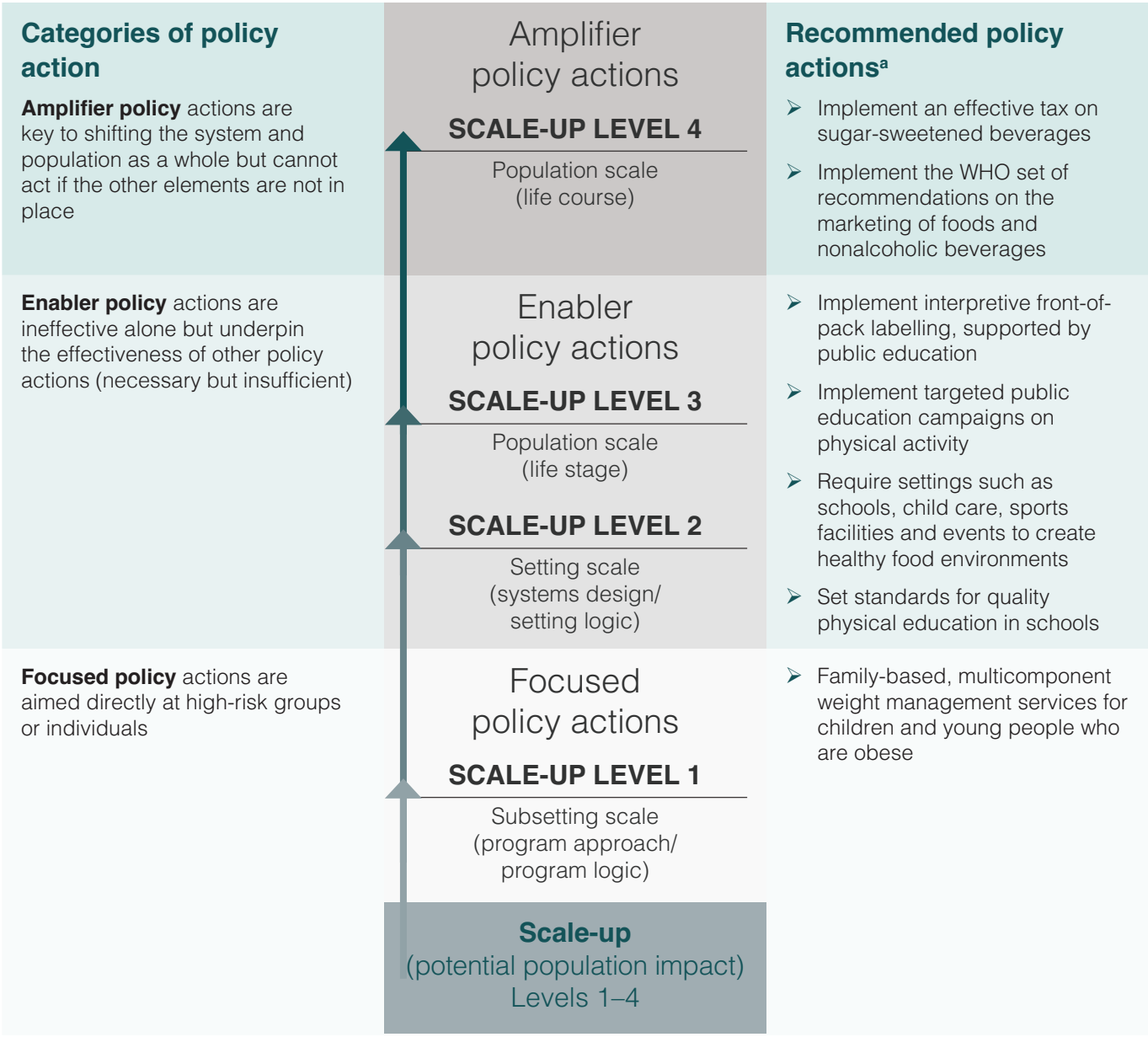
Nonetheless, action to prevent and reduce overweight and obesity in childhood and adolescence, to reduce both societal and personal burdens, is undoubtedly needed, and likely has more immediate public and political appeal than dealing with adult obesity.

Policy makers can also consider the universal policy actions that are relevant for children but which would also confer benefits later in the life course, such as fiscal strategies and limitations on unhealthy product marketing.

Policy actions to address obesity

Evidence reviews from reputable independent organisations, represented selectively in Figure 1, are consistent in their recommendations on policy actions and interventions to address overweight and obesity among children and adolescents.[7,8] The reviews are

Figure 1. Categories of policy action, scale-up level and selected evidence based recommendations for policy actions to address overweight and obesity in children and adolescents



WHO = World Health Organization

a A selection of recommended policy actions are shown to illustrate the categories of policy action and varying levels of scale (potential population impact). The full set of recommendations appears in work by Bauman et al.[7] and WHO.[12]

Note: Adapted from the Foresight report[5], and work by Bauman et al[7] and WHO.[12]

clear that no single action alone will suffice; scaled-up, comprehensive, multisectoral strategies are needed. The necessary suite of policies is described in the NOURISHING framework and food policy package for healthy diets and the prevention of obesity and diet-related noncommunicable diseases[9], and in the INFORMAS framework.[10] The NOURISHING framework comprises three broad categories of policies designed for: 1) food environments; 2) food systems; and 3) behaviour change communication.[9] Although the noted policy actions are important and necessary to address obesity, policy action (especially fiscal policy) to reduce consumption of sugar-sweetened beverages has been suggested as the single most cost-effective intervention with respect to childhood obesity.[11] Reducing marketing of energy-dense nutrient-poor foods to children has also been deemed highly cost-effective.[7,11] We focus on these policy areas in particular in this paper. Fiscal strategies to reduce consumption of sugar-sweetened beverages and regulation of the marketing of unhealthy food and beverages feature prominently in the NOURISHING and INFORMAS policy frameworks, as well as in recent World Health Organization (WHO) recommendations.[12]

Despite consistent recommendations, the prominence of evidence based taxes and regulatory policy at the WHO and supranational level is reduced at country level to focus more on individual responsibility for childhood obesity prevention.[2,4] The NOURISHING framework database shows that some progress has been made in the fiscal domain with 34 countries having some form of tax on sugar-sweetened beverages by October 2018[13]; however, researchers have also noted the challenges faced in several countries such as the US, Denmark, South Africa and Fiji.[14] By contrast, mandatory regulation of broadcast food advertising to children is in place in only 10 countries.[13]

Reluctance to embrace fiscal and regulatory policy may be partly attributable to extensive corporate political activity by the food and beverage industries. Certain industry tactics have been shown to potentially influence national or regional public health–related policies and programs to favour business interests at the expense of public health.[15] The reluctance to implement policy may occur even in the presence of a groundswell of community advocacy, indicating the power of industry influence.[16] Internal contradictions are evident when policy makers' language of 'crisis' is used to describe the epidemic of childhood obesity, but not accompanied by commensurate policy action to address it.[2] Our discussion of the limitations in fiscal and regulatory policy should not be taken to mean that other strategies are being well implemented; the verdict of 'patchy progress on obesity prevention' has been recorded by researchers[17] and can now be verified in close to real time by examining the NOURISHING database.[13]

Strategic governance and accountability

The apparent ease with which industry lobby groups manage to advance their causes at the expense of public health[18] highlights the need for policy to encompass not only the actions and interventions directed at the population but also the broader governance, coordination and accountability mechanisms needed to protect the public interest. These mechanisms were clearly elucidated in the Foresight report, which sets out two instructive checklists: 1) 14 criteria for an effective obesity strategy (pp 133–5); and 2) 10 criteria for successful management and coordination of the strategy by government (pp 138–9), which we have summarised in Figure 2.[5] These criteria for effective policy actions and for effective policy governance, coordination and accountability were arguably embedded in the approach used for England's (£372 million over 3 years) cross-government strategy to tackle obesity – Healthy Weight, Healthy Lives (HWHL), except that a senior bureaucrat committee replaced the Cabinet-level committee stipulated in Foresight.[19] Subsequent analysis of the development and implementation of HWHL stressed the importance of adequate funding and of the clear governance structure. In our view, the analysis serves to validate the Foresight criteria, at least in the English context.[20] The need for these mechanisms is reinforced by recent research, yet they appear to be neglected by most national governments.[21]

Discussion

Notwithstanding the progress noted by others in this issue of the journal[22,23], our assessment is that the requisite comprehensive policy actions and accountability mechanisms have yet to be implemented fully in any single country.[17] We suggest four categories to examine such strategic error or failure: 1) shortcomings in strategy design; 2) investment failures; 3) inconsistent governance and accountability; and 4) underestimating the need for government intervention to address market failures.

Shortcomings in strategy design

Strategy design failure may arise through overreliance on too narrow a selection of actions or through implementation of less impactful, small-scale actions. An example of this is implementing popular educational and informational approaches – designed to target the knowledge and attitudes of individuals and thereby help them make 'informed choices' – but, critically, neglecting the powerful environmental and commercial determinants of obesity.[17,24] Expecting secondary school–based physical activity programs to shift BMI and solve the obesity epidemic,

Figure 2. Criteria for effective policy actions targeting obesity, and for effective policy governance, coordination and accountability

Criteria for effective policy actions targeting obesity
Investment for effectiveness of scaled-up policy actions
Linkage with other policies for synergistic impacts
Whole-of-life-course approach to policy implementation
Monitoring and mitigation of unintended effects
Government leadership and coordination across sectors
Broad set of system levers
Policy action at multiple levels
Enabling (indirect) as well as focused policy actions
Systematic, ongoing surveillance and risk analysis
Mix of universal and targeted policy actions
Both short- and long-term performance measures
Independent evaluation, continuous improvement
Broad engagement of strategy stakeholders
Balance of cost-effective and sustainable policy actions

Criteria for effective policy governance, coordination and accountability
Incorporation of strategic advice from expert advisors
Partnership with multiple stakeholders inside and outside government
Robust surveillance and evaluation mechanisms
Comprehensive, high-level, long-term strategy
Cabinet-level support for government leadership
Allocation of sufficient resources
Long-term vision and goals as well as interim measures
Coordination within and outside government to synergise cross-cutting policies and link with local government
Utilisation of evidence and building on best practice
Transparency and accountability for use of public funds; stewardship to protect health from conflicts of interest

Note: Adapted from the Foresight report[5] and work by Swinburn et al.[21]

and declaring them a failure when they inevitably achieve neither of these unrealistic goals, also falls into this category, doing a disservice both to obesity prevention and to the many other health and educational benefits of such physical activity programs. Education settings do have a potentially important strategic role in obesity prevention, given correct program specification and as part of a comprehensive portfolio.[7]

Investment failures

Investment failure arises when the necessary 'dose' (intensity and duration of actions) and comprehensiveness of the policy mix ('upstream' as well as 'downstream', universal as well as targeted, multisectoral and multisetting) are not achieved. Investment failure can occur if policies are:

- Unbalanced: overemphasis on less effective strategies, and/or
- Lightweight: omission of the most effective strategies, and/or
- Short term/spread thinly: insufficient resourcing for the necessary intensity and duration across the chosen policy mix.

Current understanding of the investment thresholds for strategies to attain population impact is imperfect, but this is often challenging in multistrategy complex interventions. Policy makers can make use of evidence to guide investment, where it exists[25], while ensuring evaluation mechanisms are in place to improve knowledge where evidentiary guidance is weak.

Inconsistent governance and accountability

Inconsistency in governance and accountability can arise in a variety of ways[5,21], including:

- Lack of transparency
- Noninclusion of civil society
- Naïveté about industry lobbying and failure to address conflict of interest with the public good
- Not having Office of Prime Minister/Cabinet-level support and coordination for cross-government policy
- Under-involvement of independent technical experts
- Not committing to a culture of continuous improvement
- Lack of coordination and organisation to ensure: 1) continuous monitoring of implementation; 2) regular strategic review of the scope and duration of components within an overall plan; and 3) synthesis of implementation monitoring data, strategic review status, new evidence and modelling to inform and guide policy decisions within an iterative systems-based approach.

Underestimation of the need for governments to address market failures

Market failures have three main causes – market power, asymmetric information and externalities; the latter two are most relevant here.[26,27] The current market heavily favours short-term behavioural preferences (overconsumption/underactivity) over long-term preferences (healthy consumption/active living). In an environment where unhealthy marketing is a ubiquitous backdrop to daily life (asymmetric information), expecting adults, let alone children, to make food and activity choices in their own best long-term interests is likely to be ineffective. Externalities (additional impacts) involve the social costs and benefits of certain forms of consumption not being fully reflected in their private costs and benefits to individual consumers[26] – the cost of sugar-sweetened beverages may not fully reflect adverse societal impacts from their excessive consumption. Significant government reappraisal is required to correct such market failure.[27] Government intervention to establish accessible physical activity infrastructure for walking, cycling and play, and especially to curtail unhealthy marketing that affects children, is vital. Without it, remaining obesity policy actions are diminished[7,21,27,28], fail to tackle commercial determinants of health[24], and are unlikely to reduce childhood obesity.

Conclusions

Despite progress, recommended policy actions have not been substantially implemented to tackle an epidemic that needs comprehensive, intensive and sustained efforts. It is necessary but insufficient for governments to select from the menu of obesity policy actions recommended by WHO and independent scientific syntheses. Success requires not only a comprehensive suite of policy actions but also the integration of mechanisms to prevent four types of strategic failure: 1) shortcomings in strategy design; 2) investment failure; 3) inconsistent governance and accountability; and 4) underestimating the robust government intervention needed to address market failure.

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Competing interests

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Author contributions

WB, AB and LK were responsible overall for the design, drafting and editing of the manuscript. JK, BF, MT and SM provided specialist advice, and reviewed and edited the manuscript. LR made additional edits. All co-authors commented on the edits and approved the final manuscript.

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