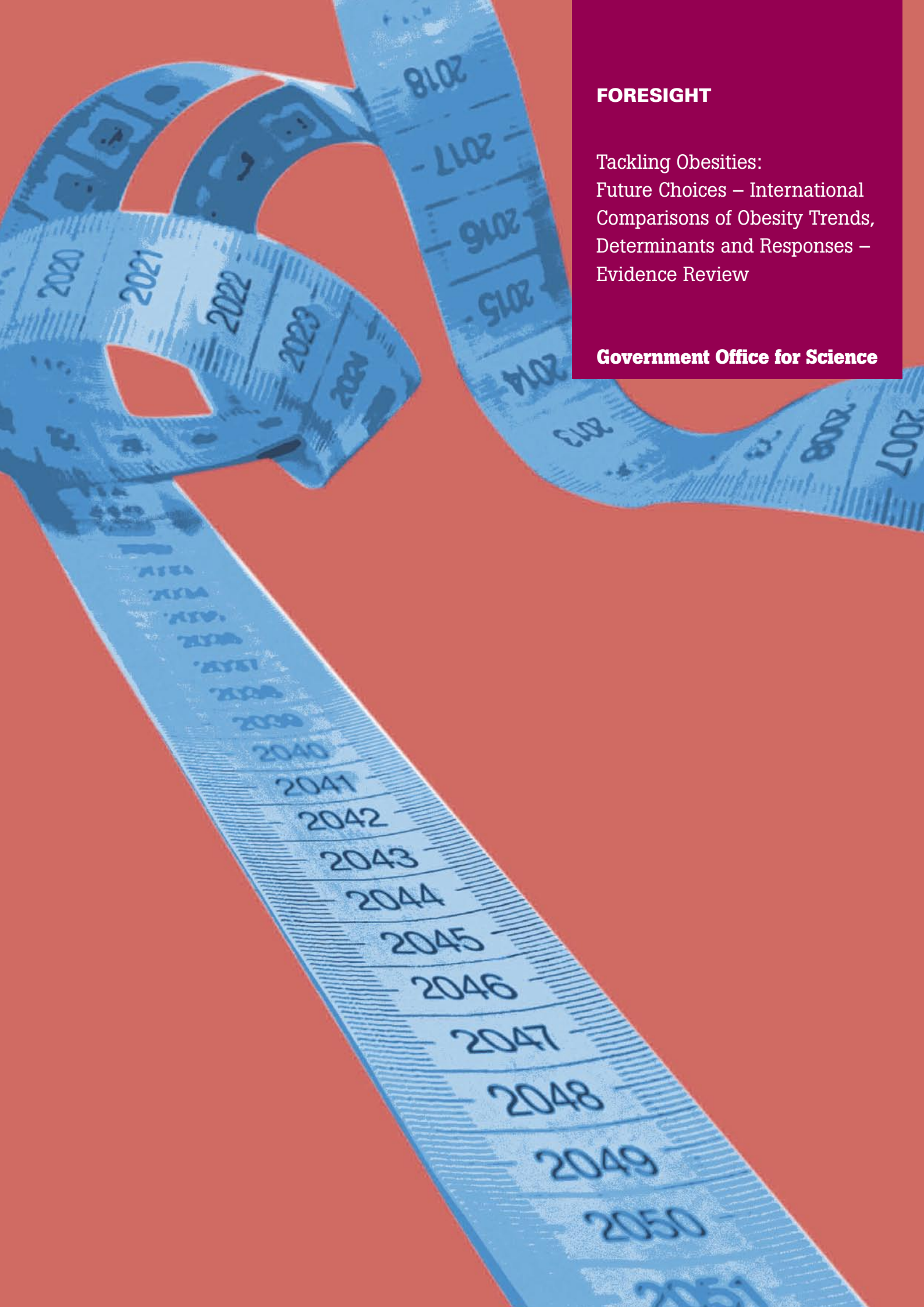

FORESIGHT

Tackling Obesities: Future Choices – International Comparisons of Obesity Trends, Determinants and Responses – Evidence Review

Government Office for Science

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Tackling Obesities: Future Choices – International Comparisons of Obesity Trends, Determinants and Responses – Evidence Review

Summary

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This report has been produced by the UK Government's Foresight Programme. Foresight is run by the Government Office for Science under the direction of the Chief Scientific Adviser to HM Government. Foresight creates challenging visions of the future to ensure effective strategies now.

Details of all the reports and papers produced within this Foresight project can be obtained from the Foresight website (www.foresight.gov.uk). Any queries may also be directed through this website.

This report was commissioned by the Foresight programme of the Government Office for Science to support its project on Tackling Obesities: Future Choices. The views are not the official point of view of any organisation or individual, are independent of Government and do not constitute Government policy.

URN 07/926A4

Summary

Epidemiology

The prevalence of overweight and obesity is increasing in virtually every country in the world and among virtually all age groups, including pre-school and primary school-age children. Among European primary school-age children (as an indicator of trends among older children and, eventually, adults in the decades to come), the prevalence rates of overweight are not only rising, but appear to be accelerating.

- These trends need to be considered according to age group, gender, socioeconomic status and ethnicity, as these cross-cutting influences not only affect the risk of overweight/obesity but also the concurrent level of risk of associated diseases: cardiovascular disease, diabetes, certain cancers, and a wide range of other disorders.
- The link between obesity and socioeconomic status is more apparent in women than in men. Comparisons of national populations suggest that the level of social inequality, rather than socioeconomic status per se, is linked to risk of obesity and of diabetes.

Analysis of drivers

A variety of biological factors determine body weight and weight gain. These include, diet, physical activity, genetic influence, thermogenic effects and demographic changes within a population.

Diet

- Across the World Health Organisation (WHO) European Region, national per capita gross domestic product (GDP) is linked to food consumption up to the $15,000–20,000 per annum level and is weakly linked to obesity levels up to a similar per capita income.
- At higher levels of economic development, the relationship between national GDP and food consumption becomes insignificant, whereas the degree of inequality in the distribution of income, rather than the average income, appears to have an impact on dietary patterns and obesity.
- As income available to purchase food decreases, the energy density of the food purchased increases. Where available, it is lower-income families that make the greatest use of fatty, sugary, mass-produced foods.
- Over time, the costs of fruit and vegetables have increased relative to the cost of fats, oils, starches and sugars. Mass-produced processed foods are designed to have a longer shelf life and a consistent and reliable formulation, and are marketed strongly (including packaging, colourings, flavourings, promotional

pricing etc.), giving a significant advantage over fresh foods, which are more perishable and subject to wastage.

- The relationship between food prices and obesity can be shown in terms of the cost of a Big Mac (the most popular McDonald's burger) priced in terms of average wages: countries with the lowest-cost Big Macs have the highest male obesity levels. This association is not so strong for female obesity levels for reasons that are not clear.
- Aggressive promotional marketing provides consumers with messages about what they should be eating, and frequently they may not support the recommended diets for health. Some 70% of the food advertising on children's TV are for food containing high levels of fat and/or sugars. A ten-country survey found the extent of such advertising is associated with levels of overweight among children.
- Foreign direct investment (FDI) stimulates economic growth in developing countries. In terms of food, these are generally foods of low nutritional quality: an example of FDI in eastern Europe in the 1990s shows $10 invested in soft drinks and confectionery for every $1 in fruit and vegetable production.

Physical activity

- The number of individuals engaged in physically active occupations (especially agriculture) in European economies has declined considerably.
- Non-occupational physical activity is hard to measure. Using adults' self-reported activity, no clear link with population prevalence of overweight is found in cross-country analyses.

Current policy developments

Hundreds of initiatives are being introduced worldwide, but many of these have not been properly evaluated.

Systematic reviews of interventions have found few scientifically conducted trials that have shown a direct effect on body mass index (BMI) or obesity prevalence.

The trials that are available for systematic review suffer from ‘settings bias’ i.e. they are limited to easily controlled settings such as schools and workplaces, where individuals and small groups are observed.

More attention needs to be paid to settings that are harder to control scientifically e.g. changes in marketing or food pricing, or changes in access to enjoyable activity resources and to population-level intervention.

As a rule, reviews of school settings suggest that a ‘whole school’ approach (meal services, vending machines, class teaching, physical education, out-of-school

activities etc.) is more likely to be successful. In principle, the greater the environmental change, the better the chance of a sustainable change in health behaviour.

Cross-European stakeholder interviews show that a set of policies is needed, covering both local and national actions, to deal with education, information, pricing, availability, environmental planning etc., and that these will be accepted if they can show wider health and social advantages.

Policy ideas from elsewhere

A trawl of policy proposals in strategy documents from national bodies worldwide shows that there are examples of other policies that could be appropriate in a UK setting.

Community environments

- Improved planning guidelines could be introduced for open spaces, including security issues.
- Building regulations could be used to increase activity (e.g. more stairs than lifts).
- Retail planning, to include food availability indices, could be used to encourage access to healthier foods.
- Local leisure facilities could to be audited to ensure the facilities are being used by all sections of the population.

School and pre-school environments

- School playing fields could be retained and made accessible to communities.
- Education authorities and schools could adopt a commercial sponsorship policy that restricts the promotion of branded products, including foods and beverages.
- Guidelines on physical activity and food for under-5s provided by childcarers, nurseries and pre-schools could be developed, disseminated and evaluated.
- Community and voluntary organisations offering children opportunities for physical activity (appropriate for culture and gender) could be supported with public funds.
- There could be better surveillance for policy evaluation. Pupil height and weight could be routinely recorded.

Workplaces

- Awards could be offered to workplaces for their health promotion efforts, including having policies on food and physical activity.
- Tax-deductible health promotion activities could be provided in the workplace or for workers outside working hours.
- Incentives for encouraging active transport to and from work could be supported.

Institutional framework

- A cross-departmental agency at Cabinet level could be introduced.
- Scrutiny through Parliament could take place.
- Monitoring and evaluation could be through an 'obesity observatory' (possibly in the Chief Medical Officer's office), which could also guide the development of health impact assessments of all policies (matching environmental and economic impact assessments).
- All public authorities could use their role as employers to promote activity and provide healthier diets.
- Public authorities could use purchasing contracts to promote fresh and perishable food supplies.
- Authorities could be responsible for the inspection of care facilities, and schools and institutions could include criteria for food provision and activity.
- Health authorities could lead the way in the provision of healthy environments, including catering, vending, stairs/lifts etc.

Regulatory interventions

- Food labelling policies, including nutrition labelling, could prioritise clear and simple information for consumers, and labelling rules could be extended to catering outlets.
- Food formulation regulations could be reviewed e.g. to discourage the use of non-nutritive additives (e.g. colours, flavouring agents, emulsifiers) as a means of making energy-dense foods more attractive.
- A code of marketing of energy-dense foods to children could be adopted as a statutory regulation and monitored by an agency independent of the commercial sector, with sufficient sanctions available to ensure code compliance.

Monitoring and research

- A national database for monitoring children's height and weight and feeding practices, including breast-feeding, could be introduced.
- Data on food supply, prices and marketing of certain food groups (fruit, vegetables, sweets, snacks, soft drinks etc.) could be compiled and published annually.

Capacity building

- Training could be provided in motivational interviewing techniques for health workers, including cultural competence.
- Non-industry non-governmental organisations could be encouraged to provide health promotion and monitor resources and marketing activities.

Fiscal measures

- VAT reform to allow taxation of obesogenic foods could be considered.
- Tax exemption could be removed from the promotional marketing costs of obesogenic foods.
- Grants could be offered for environmental improvement that encourages physical activity.
- CAP payments could be redirected to promote fruit and vegetable distribution, especially to low-income, rural areas.

Suggested lessons and identified gaps

- To be effective, strategies and interventions need to be monitored, and modelling is needed to predict the future demand for health services (including paediatric services) and the costs of obesity to economic output.
- Suitable tools to undertake analysis of social impacts on health would be needed – for example, the effects of food marketing on dietary patterns, food cross-price elasticities, the impact of traffic controls on physical activity etc. – and to develop cost-effectiveness modelling (e.g. the Melbourne ACE–Obesity model).

First published in October 2007. Department of Innovation Universities and Skills. www.dius.gov.uk
DIUS/PUB/2K/10/07/NP

SUMMARY URN 07/926A1.
ADULTS URN 07/926A2.
CHILDREN URN 07/926A3.
APPENDICES URN 07/926A4.