

Appendix 1: The HOPE project: a review of the policy implications

Introduction

HOPE is Europe's largest project to study the role of behavioural and environmental drivers causing the rapid rise in obesity prevalence in European populations at different stages of the life cycle.

The HOPE project (full title: *Health promotion through obesity prevention across Europe: an integrated analysis to support European health policy*) has spent nearly three years examining the evidence base and creating a set of scenarios to evaluate strategies and potential interventions directed at the key determinants of obesity in the European Union.

The HOPE project has also brought together a network of experts who are themselves involved in research and policy networks around Europe to create an obesity 'network-of-networks' involving both western and eastern European organisations.

The results of this work can be found on the HOPE website www.hopeproject.eu and in the detailed reports of the project being submitted to the main funding agency, the European Commission's DG Research.

The present document summarises the policy implications of the project's findings and the collective views obtained from the work packages and the network-of-networks and their members.

Policy relevance adds value to research

The HOPE work packages reviewed the main behavioural and environmental drivers, but then what should be done with the results? The HOPE project was aware at the outset that the collation, analysis and presentation of the evidence base is only one part of a project such as this. In order to add value to this project, it necessary to assess the policy implications.

In the present document we have started from the policy-making viewpoint. We have categorised the information according to the policy area – in terms of broad

areas of government responsibility – and identified the issues and the actions that need consideration. We have also indicated the sources of evidence which can support the action.

Limits of evidence

Although the summary presented here uses the best available information, largely derived from European experience, it is necessarily limited. Evidence in the public health arena is always inadequate, because it is not possible to run controlled trials to prove conclusively the effects of an intervention.

The evidence available is also strongly distorted by a 'small settings bias' because it is easier to generate evidence about the impact of an intervention in a small, community environment (e.g. in a school setting or a workplace setting) than an intervention taken across the whole population (e.g. food marketing controls, food formulation changes).

Lastly, the policy issues listed here include some which are considered relevant on the basis of expert opinion, but the evidence is weak or absent. These policy issues are included in order to identify evidence gaps, where further research might be targeted.

Note especially that a *lack of evidence of an effect* does not mean *evidence of a lack of an effect*. It may simply mean that the investigation has not been sufficient.

Policy implications arising from the HOPE project: a summary matrix

* Sources: HOPE work-packages (WPs), expert members of the HOPE Network-of-Networks (NoN) and the results of other European Commission-funded research programmes including PorGrow (NEST-FP6), Euro-Prevob (FP6), PolMark (EAHC), Pro-Children (FP5) and Earnest (FP6) as well as national programmes (e.g. UK Foresight) and international agencies and organisations (e.g. WHO, UNICEF, IBFAN, IASO, IOTF).

Cross-departmental			
Policy issue	Key findings and recommendations	Further comments	Evidence base*
Is there a national strategy? Is it being implemented?	Different member states show different levels of documentation, different range of issues addressed, sometimes a poor relationship between policies and implementations.	Member states with independent councils able to review and evaluate policy implementation are more likely to have effective policies.	HOPE NoN and WP6, Euro-Prevob, WHO-Euro.
Does the strategy involve many government sectors?	Health behaviour is influenced by social, financial and physical environments. Multisectoral approaches are more likely to change these environments. Multisectoral approaches are needed at local and national level.	'Health-in-all-policies' evaluation is difficult and guidelines are needed (EC could show leadership, following the Finland presidency initiative) . Multisectoral influences are shown in e.g. the UK Foresight model, the IOTF causal web, and the Egger and Swinburn ANGELO model.	HOPE NoN and WP6, Euro-Prevob, PorGrow, WHO-Euro.
Is the strategy balanced and proportionate?	The balance between individual responsibility and environmental contextual pressures need to be considered. National and local government actions, commercial activity, culture and community have a strong influence	Guidelines are needed on changing the environmental context of health behaviour, removing barriers, so that 'healthy choices are easy choices'.	HOPE NoN, WP6 and all WPs, Euro-Prevob, PorGrow

	on individual behaviour. Market distortions and failures may need addressing..		
Are differences in obesity risk being addressed?	<p>There is a strong association between low socio-economic status (SES) and a higher risk of obesity in women in most countries, and in men and older children in some countries. Some ethnic groups at lower risk, some higher. Some ethnic groups at particularly high risk of obesity-related diseases for a given level of BMI.</p> <p>Modelling indicates that up to 7% of national health burden can be attributed to SES inequalities. The current trends show that inequalities in health are increasing.</p> <p>Tackling inequalities requires <i>both</i> targeted actions <i>and</i> addressing underlying problems through all-of-population measures.</p>	<p>There is a need for national and EU guidelines on reducing health inequalities.</p> <p>Consider innovative partnerships (e.g. with churches, with trade unions).</p> <p>Health equity issues raise questions of community empowerment (Ottawa Charter and subsequent declarations)</p> <p>Reducing inequalities needs to be considered within a framework for maximising total population health.</p> <p>More evidence is needed to assess how different groups (SES, ethnic etc) respond to different forms of intervention.</p>	HOPE NoN, WP6, WP7 and WP10, Euro-Prevob, WHO-Euro
Are the national policies being fully funded, monitored and evaluated	Evidence that some policies are not adequately funded, or funding is diverted to other health budgets. The review process for obesity strategies is often short term or non-existent – only very few countries have dedicated evaluation and review processes.	<p>Need policy evaluation tools – some WHO guidance is available, but further EU guidance may help.</p> <p>Attractive policies are ‘no regret’ policies – i.e. worth promoting even if no effect on obesity (e.g. physical activity promotion, breastfeeding promotion).</p>	HOPE WP6, Euro-Prevob, WHO-Euro
Does the strategy have adequate	Overall, several member states have strategies that suffer from:	Obesity needs a higher political priority (see next issue).	HOPE WP6, Euro-Prevob, WHO-Euro

implementation measures?	<ul style="list-style-type: none"> - Poor political support and leadership - No dedicated resources - Lack of quantified goals - Lack of clear timescales - Poor coordination - Poor accountability - Poor stakeholder delivery (e.g. nutrition policies not delivered by commercial food suppliers) - Poor basis in evidence (e.g. competitive sports / Olympics do not increase population PA) 		
Is obesity a high priority?	Not all member states are aware of the costs of obesity to health services and to their economy. Other policies may take higher priority. Scenario modelling can show the cost impacts of obesity and cost-effectiveness of interventions.	Inter-linking policies can gain support: e.g. linking dietary gains to food security and global warming, linking physical activity to reduced carbon footprints and reduced mental stress.	HOPE NoN, WP6 and WP10, PorGrow, UK Foresight
National surveillance			
Policy issue	Key findings	Notes	Evidence base*
Dietary intake – what are people eating?	Member states have different levels of surveillance, and generally there is very little evidence available on trends in dietary patterns.	National policies may include food-based dietary guidelines but do not monitor if these are being followed, who is not following them, and whether this is changing overtime.	HOPE NoN, WP6 and WP9, WHO-Euro
Food supply – what is	Uneven surveillance (or data not in public	Are people buying less soft drinks, fewer	HOPE NoN and WP9,

being sold and how (sales, prices, promotions, availability)?	domain). Some generic price information and supply information. Lack of available information on commercial activity: e.g. marketing methods and trends.	salty snacks, more fruit? Commercial information is expensive to purchase but is needed to assess policy impact. Lack of benchmarks for assessing marketing, e.g. could use nutrient profiling to evaluate sales, promotional marketing and food distribution.	Euro-Prevob, PolMark, OECD, FAO
Physical activity – are people active enough?	Uneven surveillance, and little available evidence on trends in activity levels in populations and population sub-groups.	Need for improved research tools to aid data collection, need for greater surveillance	HOPE NoN and WP8, Euro-Prevob, WHO-Euro, Euromonitor
Maternal weight gain in pregnancy – what is healthy?	Lack of national and EU surveillance. Lack of surveillance of gestational diabetes trends.	Some member states have guidelines. No EU-wide guidance on appropriate weight gain.	HOPE WP3 and WP6, WHO-Euro.
Infant nutrition – what information is available?	Some national surveillance of infant growth. Some surveillance of breast-feeding rates. Low level of monitoring of aids to breast-feeding (e.g. maternity leave, workplace facilities, public facilities). Some evidence of trends.	Guidelines from WHO-Euro. Many national/subnational guidelines, but no EU standard. Poor implementation of existing guidelines.	HOPE NoN, WP3 and WP6, IBFAN
Pre-school weight gain – what do we know?	Uneven and generally poor level of national and EU surveillance, with few exceptions.	Lost opportunities in health services (well-baby clinics), nurseries and kindergartens for data collection and health promotion.	HOPE NoN and WP3
School-age weight gain – what do we know?	Uneven national and EU surveillance for children and adolescents. Mixed use of objective and self-reported information on weights and heights of children.	New WHO-Euro surveillance of school-children (measured data) is welcome but covers only some EU member states and only younger age groups. Health	HOPE WP4, WHO-Euro, IASO

		Behaviour of School Children survey gives only self-reported information.	
Maternal health			
Policy issue	Key findings	Notes	Evidence base*
Obesity in pregnancy and gestational diabetes – is it an issue?	Gestational diabetes is more common among obese pregnant women, and it is a high risk factor for child obesity. Obesity in pregnancy raises risk of birth complications. Obesity in pregnancy is more common in lower SES women.	National and EU guidelines are needed.	HOPE WP3, IASO
Low birth-weight babies – are they an issue?	Low birth-weight followed by rapid weight gain in infancy is a risk factor for child obesity.	National and EU guidelines are needed.	HOPE WP3, IASO, WHO-Euro
Is parental weight status important?	Obesity in parents strongly raises the risk of obesity in children. Some evidence that obese mothers raise risk for daughters, fathers for sons.	Needs targeted interventions throughout life course, including grandparents	HOPE WP3, WHO-Euro, IASO
Pre-school and family settings			
Policy issue	Key findings	Notes	Evidence base*
Weight gain in first 5 years – is this an issue?	More rapid weight gain, and weight gain at an earlier stage, raise the risk of child obesity	Need national and EU guidelines on appropriate interventions to protect, promote and support best feeding practices through health and social services to new parents	HOPE WP3, WHO-Euro
Breastfeeding – does it help?	Breastfeeding, especially if exclusive in the first 6 months, is protective against subsequent	WHO guidelines and some good national guidelines. Guidance on restrictions to	HOPE WP3, Earnest, IBFAN, UNICEF, WHO-

	child obesity. Early weaning and weaning onto processed baby foods may increase risk. Breastfeeding incidence and duration is poorer in lower SES groups.	marketing breastmilk substitutes and on protection and support for mothers in the workforce needs strengthening. Baby Friendly initiatives in hospitals and community services need wider support.	Euro
What role can child care facilities have?	Kindergartens etc can offer wider range of foods and activities and encourage healthy growth. Lack of evidence of impact on obesity.	Guidance is needed on nutrition and physical activity standards for child care facilities. Good standards are a worthwhile 'no regret' policy.	HOPE WP3 and WP8, WHO-Euro.
Are there issues regarding larger families?	Larger families tend to have lower incomes. Lower income families tend to be less responsive to health promotion interventions.	Interventions for overweight should note the multiple other daily problems which low income families face.	HOPE NoN, WP3, WP4, WP6 and WP7, Euro-Prevob,
Do meal patterns matter?	Limited evidence that eating a breakfast is linked to better diets generally. Families that eat together tend to have better diets. TV-watching while eating increases amount eaten.	Interventions for overweight should note that meal patterns are determined by many factors: social classes, ethnic cultures, and different work, family and childcare practices in member states.	HOPE NoN, WP3 and WP4, WHO-Euro, IASO.
Does TV/screen-watching matter?	Limited evidence that screen watching is associated with higher risk of obesity in younger children. Evidence that TV watching increases exposure to advertising, increases snack consumption, extends sedentary behaviour.	Need more European data on TV/screen exposure and trends in TV/screen exposure.	HOPE NoN, WP3 and WP4, WHO-Euro, IASO.
Do sleep patterns matter?	Evidence that shortage of sleep is linked to greater obesity risk. Direction of causality not clear.	Less sleep may be linked to a lack of physical activity or greater TV/screen-watching.	HOPE NoN, WHO-Euro, IASO.

Education/school settings			
Policy issue	Key findings	Notes	Evidence base*
Which school programmes work best?	There is some evidence that multi-component (involving teaching and practice, diet and physical activity) and 'whole-of-school' policies (including staff, children and parents, and covering food services, teaching, physical education, after-school activities and parental involvement) can improve health behaviour, but a lack of evidence of sustained effects on obesity. Lack of evidence on whether they work equally well across SES groups.	Guidance on 'Nutrition -Friendly Schools' and 'Health-Promoting Schools' available from WHO. Health promotion in schools are 'no regret' policies which have worthwhile health benefits even if obesity is not reduced.	HOPE NoN and WP4, WP8, WP9, Euro-Prevob, PorGrow, WHO-Euro, IASO
Are school programmes that target overweight children effective?	Some evidence they can improve obesity prevention (mostly non-European). Questions arise over the sustainability of interventions. Targeted interventions are less effective for low SES children.	Targeting may stigmatise the targeted child. Also, targeting may reduced a child's self-esteem if the intervention is not effective.	HOPE NoN, Euro-Prevob, IASO
Should soft drinks be allowed in schools?	Evidence that soft drink consumption is associated with weight status and weight gain. Evidence in one UK study that interventions to cut soft drinks can reduce obesity prevalence levels.	Replacing soft drinks with fresh water is worthwhile for other health reasons. A 'no regret' policy.	HOPE WP4 and WP9, IASO
Does more school physical activity (PA) help?	Limited evidence that increased levels of PA can help tackle obesity, at least among girls. Interventions need to be sustained to see any	Increasing activity levels for all children can have other health benefits.	HOPE WP4 and WP8, WHO, IASO

	effect on obesity. Increased PA in schools may be compensated by reduced PA out of school.		
How can school children be encouraged to eat healthy diets?	Education alone has only weak effects, but in combination with improved food services can lead to sustained better diets. No significant evidence of direct impact on obesity levels. Free fruit given to young children, especially if combined with educational input, moderately improves diet for the children and influences their families.	Use of marketing techniques which also demonise 'junk' food and inactivity may be effective: e.g. <i>Sportacus</i> and <i>Food Dudes</i> . These programmes need further evaluation.	HOPE NoN, WP4 and WP9, FVMM and Pro-Children projects
Do teaching staff have an influence?	Meal patterns and healthy eating are influenced by staff participation. Teaching staff need training in recognising obesity and consequences (bullying, low self-esteem, reluctance to participate in activities, low achievement).	Ideally, staff should eat with children, from the same menus, and show model behaviour. Staff may need training in obesity-awareness.	HOPE WP4, WP8 and WP9, WHO.
Are the links between schools, families and communities important?	Schools with good practices (e.g. free fruit, no confectionery) can influence home environment. Schools can be used for community activities (e.g. sports facilities). No direct evidence of impact on obesity.	School-community links are a worthwhile 'no regret' policy. Guidance from WHO Health-Promoting Schools initiative.	HOPE NoN and WP4, WHO-Euro.
Is there a link between academic progress and obesity?	Child obesity is linked to lower educational achievement. Adults who were low-achievers are more likely to have children that become obese.	Questions of cause and effect: does obesity lead to lower educational achievement, or does lower education raise the risk of obesity?	HOPE WP4 and WP7, IASO.
Work and care			

environments			
Policy issue	Key findings	Notes	Evidence base*
Does canteen menu labelling help?	Some evidence it influences the choices made by motivated individuals. More likely to have an effect if combined with health education. Less likely to have an effect on low SES individuals. Unknown gender differences.	Canteens are not available in smaller companies or outside working hours, and not available for non-employed people.	HOPE WP5 and WP9, WHO-Euro
Do sports facilities at work help?	Also, some evidence it can influence motivated workers. Likely to be less impact on low SES workers. Unknown gender differences.	Facilities not offered in smaller companies, or to non-employed people.	HOPE WP5 and WP8, WHO-Euro
Can work environments influence child obesity?	Workplace child care facilities can influence their client's health through good nutrition and PA practices. Breastfeeding-friendly facilities encourage better health of newborns. Maternity and paternity leave policies can influence breastfeeding, child feeding and physical activity in early stages of growth.	Benefits apply to working parents. Guidance is needed on standards for workplace child care and breastfeeding-friendly facilities.	HOPE WP3 and WP5, WHO-Euro, IASO.
What about other protected environments for adults?	Food and physical activity are provided by state agencies and private contractors in many settings, including hospitals, care homes, prisons and military units. Evidence of effective interventions in these settings is lacking.	These settings provide opportunities for controlled interventions. Standards for nutrition and exercise may be available but not designed to target obesity. Further research is needed.	HOPE WP6, IASO
Neighbourhood environment, transport			
Policy issue	Key findings	Notes	Evidence base*

Can local planning laws help tackle obesity?	Lack of evidence on the impact on obesity, but planning regulations are relevant to healthy food supply and distribution; transport facilities to encourage walking and cycling; building regulations to encourage walking and use of stairways; safe parks, play areas and residential streets.	Facilities need to be spread across all parts of community. Training of planning regulators may be needed. The development of 'Health-in-all-policies' methodology is needed. Extremely difficult to prove health benefits of environmental interventions.	HOPE NoN, WP5, WP6, WP8 and WP9, Euro-Prevob, WHO-Euro.
Should fast food outlets be allowed near schools?	There is some ecological evidence showing the numbers of outlets near schools is linked to children's dietary patterns. Lack of consistent evidence of link to obesity.	Better evidence needed. Controls on outlets may be resisted by traders and by children.	HOPE NoN and WP4, Euro-Prevob
Do low income areas have worse food availability?	Evidence collected in the 1990s showed 'food deserts' where fruits and vegetables were hard to obtain but fast food soft drinks etc (and alcohol) relatively easy to obtain. Pattern not necessarily still existing, and may vary by degree of urbanisation, by market development history and by member state. Some initial evidence that food insecurity for the family may be associated with higher risk of obesity in young children.	Potentially important influence on dietary behaviour, but there is a need for good evidence of current state of food supplies at local levels, and for monitoring trends.	HOPE NoN, WP3, WP5, WP6 and WP9, Euro-Prevob,
Do cycle lanes and traffic calming measures change behaviour?	Some evidence that they encourage more cycling and walking.	Other infrastructure needs attention: e.g. workplace facilities for cycles, secure cycle stands at shops, city provision of hire cycles.	HOPE WP6 and WP8, Euro-Prevob
What other local	No hard evidence for other interventions.	Examples of local initiatives collated by	HOPE NoN and WP6,

measures might be useful?	Possible interventions include: low-cost access to sports and activity centres; subsidies for active transport, penalties for use of car, workplace incentives for active commuting, removal of tax breaks for car use. Provision of vegetable allotments in cities, encouragement of fruit and vegetable street markets.	WHO, IASO and others.	WHO, PorGrow, IASO
Trade and industry			
Policy issue	Key findings	Notes	Evidence base*
Can people afford to eat healthily?	Cheapest 'filling' foods are high in fats and sugars, low in fruit and vegetables and wholegrain ingredients. Pricing interventions can change consumption patterns. Improving price and availability (e.g. subsidised fruit and vegetable distribution) can raise intake.	Tax and subsidy schemes should not penalise people on low incomes, for whom food is a large component of their daily expenditure.	HOPE NoN and WP5 and WP9, Euro-Prevob, IASO.
Can food labelling make a difference?	No direct evidence on obesity, but front-of-pack labelling can influence choice of products, and can also help manufacturers to improve the nutrient profile of their products.	Nutrition labelling with traffic light or keyhole interpretation is likely to be easier for non-numerate and lower SES consumers. Health messages may be distorted by commercially-motivated health claims and nutrition claims. The effects on health are hard to demonstrate. Controls on labelling of infant formulas help protect breastfeeding. Warnings on tobacco products deter some smokers	Euro-Prevob, PorGrow, WHO-Euro, IBFAN, IASO

		and potential smokers.	
Do food and drink vending machines make a difference?	Some evidence that vending machines make fatty and sugary food and drinks more available in locations where they may not be appropriate e.g. in schools, hospitals and sports centres. No evidence on health impact.	Guidelines needed on content and suitability of vending machines in health-sensitive locations.	Euro-Prevob, IASO
Does food promotional marketing influence intake?	Marketing of breastmilk substitutes affects initiation, exclusivity and duration of breastfeeding, as well as purchase and consumption of industrial complementary foods as opposed to healthier home-made foods. Marketing restrictions have positive effects. For older children, advertising affects food choices and diets. Controls on TV marketing can partially reduce younger children's exposure. Too few studies on older children and adults. Some ethnic groups and lower educational groups may be more vulnerable to commercial persuasion. Display marketing (packaging, special offers, checkout positioning etc) is assumed to influence purchasing decisions, but no evidence available on diet or health.	Controls on marketing are resisted by industry and commerce. Evidence of impact on health and obesity very hard to demonstrate because of complexity of issue. Controls on tobacco advertising can reduce purchases and deter potential smokers.	HOPE NoN and WP3, WP4 and WP6, WHO-Euro, Euro-Prevob, IASO
Can market interventions reduce sedentary behaviour and encourage PA?	Higher numbers of TVs in a home is linked to raised obesity risk. Promotion of international sports events is not linked to sustained increases in PA.	An important area needing research.	HOPE NoN and WP3, WP4 and WP8, IASO

Media and culture			
Policy issue	Key findings	Notes	Evidence base*
Does advertising influence health?	Evidence that advertising breastmilk substitutes affects infant dietary patterns, and advertising sweet and fatty foods influences younger children and affects diets and obesity risk. (See earlier) Commercial 'health' messages that are inconsistent with health policy can undermine confidence in health education generally.	Commercial self-regulation has been criticised as inadequate. Some member states have introduced legislation. Controls on formula milk promotion and tobacco promotion have reduced demand.	HOPE NoN and WP3, WP4 and WP6, Euro-Prevob, PorGrow, WHO-Euro, IBFAN, IASO
Are social marketing campaigns useful?	Well-targeted social marketing campaigns can change behaviour, especially if combined with other changes (e.g. price and availability of products). Greatest impact among motivated and higher SES groups.	Impact depends on sustained and consistent messages, and absence of significant barriers to implementing desired behaviour. Social marketing serves other purposes: e.g. encouraging food reformulation, generating public support for legislation.	Pro-Children, Euro-Prevob, PorGrow, WHO-Euro
Do media portrayals of thin models influence health behaviour?	No consistent evidence of link to obesity or social discrimination and no significant evidence that it leads to eating disorders.	Further evidence needed.	HOPE WP6
Agriculture and food security			
Policy issue	Key findings	Notes	Evidence base*
Do agricultural policies affect diets and health?	Theoretical modelling indicates that supply policies may influence consumption through price and availability. Specific EU interventions	Food supply support and trade barriers affect local supply and consumer prices. Research on their effect on health is just	HOPE NoN and WP6, Euro-Prevob, PorGrow, WHO-Euro,

	are assumed to have health effects (e.g. subsidised fruit for schools).	emerging.	IASO
Will policies to improve global food security increase obesity risk?	From theoretical modelling, policies which reduce meat consumption and increase fruit and vegetable consumption will improve dietary health. Policies which switch from meat to plant oils and sugar may worsen dietary health.	There are no clear agricultural policies to tackle food supplies as global temperatures rise, apart from proposals to reduce animal production and to use some agricultural land for bio-fuels.	WHO-Euro, IASO
Research			
Policy issue	Key findings	Notes	Evidence base*
How can public health interventions be evaluated?	Public health interventions are not easily tested with controlled trials. Alternative methods of evaluation are required.	Guidance for public health evaluation is needed. Evaluation of interventions needs to be set in a context of extensive continuing surveillance of health and nutrition status.	HOPE NoN and all WPs, WHO-Euro and others.
How do commercial practices influence dietary health?	There is only limited evidence available in the public domain to show how food producers use ingredient formulations, colours and flavourings, packaging, portion sizing etc to influence consumption patterns.	Scientific reviews of food processing and its impact on dietary choices are needed.	PorGrow, Euro-Prevob, WHO-Euro, IASO
Can public sector purchasing be used to influence market supplies and prices?	There is only limited evidence on the ability of purchasing contracts to aid in the development of new products, change formulations or alter prices of foods.	Evaluation of school, hospital, military and other social-sector purchasing contracts and their influence on production is needed.	WHO-Euro, IASO
Can fiscal measures (taxes, tax-incentives,	Price affects purchasing behaviour and consumption. Fiscal measures are already	Evidence is needed on how interventions can be modelled to ensure	WHO-Euro, PorGrow, IASO

subsidies) play a role in tackling obesity?	applied to foods (e.g. sales taxes, VAT) and production subsidies given through agricultural policies, research support, export support.	optimum dietary changes and minimum penalties, especially to lower income groups.	
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