

House of Lords Committee on Food, Poverty, Health and the Environment

Written evidence submitted by the Centre for Diet and Activity Research

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*The **Centre for Diet and Activity Research (CEDAR)** is studying the population-level influences on what we eat and how much physical activity we do. We are developing and evaluating public health interventions, and helping shape public health practice and policy. We are part of the MRC Epidemiology Unit at the University of Cambridge.*

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Executive summary

- In the UK, differences in dietary quality across the socioeconomic spectrum contribute towards inequalities in health outcomes.
- Food insecurity has been attributed to the rising cost of living alongside low and unstable incomes.
- Food insecurity is rising in the UK, and national surveillance is required to monitor the prevalence.
- Studies suggest that the higher cost of a healthy and varied diet, food and drink marketing, and access to hot food takeaway outlets exacerbate dietary inequalities.
- Local authorities may be able to promote healthier eating in local populations by restricting takeaway food outlet access and regulating outdoor food advertising.
- Using education programmes for retailers, different salt shakers, and reduced portion sizes may help takeaway outlets serve healthier food.
- Our research into supermarket policies shows that changing supermarket environments can help people eat better, but are unlikely to address problems of dietary inequality.
- There is no magic bullet to eradicate food insecurity; equitable improvements will demand a combination of varied, simultaneous interventions and substantial political will.

Which interventions will lead to the most equitable improvements in diet?

- 1 The contribution of poor diet to negative health outcomes is unequivocal.[1] In developed countries like the UK, it is also clear that differences in dietary quality along the socioeconomic spectrum contribute to overall inequalities in health.[2]
- 2 There are two broad approaches to prevention – targeting interventions at people with the highest risk of disease, or alternatively, delivering interventions to everyone in the population. Population interventions are more powerful than high risk approaches as they have greater reach and, therefore, greater potential impact.[3] Furthermore, within population interventions, there are those that require substantial engagement from recipients for them to benefit. These so called ‘high-agency’ interventions include education and information campaigns. High-agency population approaches may be most effective in more affluent groups, and so may exacerbate

existing inequalities. In contrast, 'lower-agency' population approaches such as reformulation, price changes and advertising restrictions are likely to be the most effective and equitable solutions.[4] Overall, it is likely that successfully addressing food insecurity will demand a range of concurrent interventions including population and high-risk approaches and high and low agency strategies.

Question 1: What are the key causes of food insecurity in the UK? Can you outline any significant trends in food insecurity in the UK? To what extent (and why) have these challenges persisted over a number of years?

- 3 **Food insecurity is associated with low income and the high cost of living.** With rises in the cost of housing, fuel, food and other expenses, alongside stagnant wages and benefits caps, there is growing pressure on household budgets, especially for those on the lowest incomes.[5] It is estimated that the 20% of lowest income households would need to spend 42% of their disposable income on food to consume a diet in line with UK government recommendations.[6] Low income, unemployment, benefit payment delays and changes to the benefit system are the most commonly cited reasons for using a food bank.[7] These are issues of poverty and inadequate welfare support.
- 4 **In the UK, the price of healthier foods (such as fruits and vegetables) is higher than less healthy foods.**[8] Our analysis found that the price gap between healthier and less healthy foods increased between 2002 and 2012. In 2012, the average cost of healthier foods was three times that of less-healthy foods (£7.49 per 1000 kcal compared to £2.50 per 1000 kcal).[8] Our research also indicates that diets meeting individual UK dietary recommendations were 3-17% more expensive than diets that did not; diets simultaneously meeting six or more recommendations were 29% more costly than diets that met none.[9] Higher expenditures on food by consumers were associated with the purchase of healthier food groups, and level of food expenditure explained a substantial fraction of the observed socioeconomic inequality in nutrition.[10]
- 5 **The number of UK households suffering from food insecurity has risen recently.** The Trussell Trust (the largest network of food banks in the UK), estimates food bank use to have risen by 73% in the past 5 years.[11] In the financial year 2018/19, 1.6 million three-day emergency food parcels were supplied, of which half a million were to children.[11] The total scale of UK food insecurity is likely higher: The Trussell Trust is only one food bank provider, food banks are only one form of emergency food aid, and the stigma surrounding food insecurity may mean that those affected are loath to disclose their situation. In a recent analysis that is currently under peer review, we estimated that the prevalence of food insecurity among UK adults was 24% in 2017 and 25% in 2018.[12], [13] Child food insecurity was estimated to be 28% in 2018.[13] Ongoing, nationwide surveillance is needed to understand the prevalence of UK food insecurity.

Question 2: What are some of the key ways in which diet (including food insecurity) impacts on public health? Has sufficient progress been made on tackling childhood obesity and if not, why not?

- 6 **Poor diet is a leading cause of ill-health and death.**[14] Poor diet is associated with chronic diseases, including cardiovascular disease, type 2 diabetes and some cancers. The dietary

approaches to stop hypertension (DASH) diet is characterised as a heart-healthy and varied diet. Research from the MRC Epidemiology Unit found that those most in accordance with the DASH diet to have 20% lower risk of stroke, and 13% lower risk of cardiovascular disease compared with those least in accordance.[15] It is estimated that 33,000 UK deaths could be prevented each year if the population met the current UK dietary guidelines on fruits and vegetables, fibre, salt and dietary fats.[16] The cost of diet-related ill-health to the NHS has been estimated at £5.8 billion annually.[17] We found that the UK population is not meeting current UK diet recommendations, with about 80% not eating enough fruits and vegetables and oily fish, about 60% eating too much red and processed meat and about 40% eating too much salt.[18]

- 7 **Food insecurity is associated with poor diet and health outcomes.** As has been found in other countries, our (currently unpublished) research links food insecurity with poorer dietary quality, lower consumption of fruits and vegetables, higher consumption of sugar-sweetened beverages, poorer physical and mental health, and higher stress, in adults and children.[12], [13] Food insecurity in children can have long-lasting effects on physical and mental wellbeing, as well as on social interactions and future opportunities.[19] The problem of ‘holiday hunger’ has also been highlighted, where families face additional costs during the school holidays when children do not receive free school meals.[19]
- 8 **Poor diet is not evenly distributed within the population.** Some groups in society are much more likely to consume an unhealthy diet than others, including those on low incomes or from lower occupational class backgrounds. We found that those from more affluent households were around twice as likely to meet dietary recommendations for fruit and vegetables and oily fish compared to those from less affluent households.[18] This creates inequalities in dietary quality and contributes to overall inequalities in health.[20].

Question 3: How accessible is healthy food? What factors or barriers affect people’s ability to consume a healthy diet? Do these factors affect populations living in rural and urban areas differently?

- 9 People’s ability to consume a healthy diet is affected by factors including economic, physical, and knowledge and skills, as reported in a recent POSTnote “Barriers to Healthy Food”. [21] CEDAR’s contributions to understanding some of these factors is discussed below.
- 10 **The high cost of food is a barrier to purchasing a varied and healthy diet.** Consuming a varied diet was found to be associated with a 30% lower risk of developing type 2 diabetes, but costs more. A diet that covers five food groups was found to be 18% more expensive (£4.15 versus £3.53 per day) than a diet consisting of three or fewer food groups.[22] Other CEDAR research found a heart-healthy, varied diet (DASH) associated with lower risk of stroke and CVD mortality was also significantly more costly than less-healthy diets.[23]
- 11 **Agricultural policies influence the food system and food pricing.** [24] To this end, we are also engaging with the evolving National Food Strategy.
- 12 **Food and drink marketing promotes a less healthy diet.**[25] Our research estimates that, on average, UK residents are exposed to 11 minutes of TV food advertising per week, and that 7 minutes of this is for less healthy foods.[26] Television viewers from the least affluent homes see twice as much food advertising than those from the most affluent homes.[26] Food marketing –

which includes promotions, label based branding and in-store placement as well as advertising - influences children's food knowledge, preferences, purchasing and consumption.[27], [28] The majority of foods marketed in the UK are less healthy.[23],[24]

- 13 **Access to takeaway food outlets contributes to dietary inequalities.** Around 20% of UK adults and children eat takeaway food at home at least once a week. This is more common in children living in more deprived areas.[30] The distribution of takeaway food outlets also has health consequences with greater daily exposure to takeaway food outlets being associated with higher consumption and body weight.[31], [32] Furthermore, this exposure appears to amplify existing inequalities in diet and obesity.[33] Using low educational attainment as a marker of social disadvantage, we found that the effect of daily exposure to takeaway outlets on diet and obesity was greater in those with the least education.[33]
- 14 **Supermarket access is associated with healthier diets and lower weight.** Greater access to supermarkets, as a source of varied and healthy produce at multiple price points, was associated with consumption of a heart-healthy diet,[34] and lower likelihood of overweight and obesity.[35] Greater access to supermarkets can also support provision of fruits and vegetables within early years childcare settings. [36]
- 15 **Lack of cooking skill is unlikely to be major a barrier to healthy eating.** We found little evidence of a major deficit in cooking skills in the UK, with high reported confidence with using most cooking techniques and preparing most foods regardless of social status.[37] Evidence regarding the association between socioeconomic position and the consumption of home prepared food is mixed. One study found that more affluent participants did eat home cooked meals more frequently.[38] Another analysis found no variation in the energy consumed from home prepared food according to socioeconomic position,[39] and indicates that it is perfectly possible to eat a high quality diet with little reliance on home prepared food.[40] This suggests that home food preparation is not a prerequisite for high dietary quality and may have been previously overemphasised. It is unlikely that cooking skills interventions will lead to substantial improvements in the UK diet or substantial reductions in dietary inequalities.

Question 4: What role can local authorities play in promoting healthy eating in their local populations, especially among children and young people, and those on lower incomes? How effectively are local authorities able to fulfil their responsibilities to improve the health of people living in their areas? Are you aware of any existing local authority or education initiatives that have been particularly successful (for example, schemes around holiday hunger, providing information on healthy eating, or supporting access to sport and exercise)?

- 16 **Controlling takeaway food outlet access could equitably improve diet.** In paragraph 13, we outlined the contribution of takeaway food outlet access to inequalities in diet [33]. We recently reported that around 50% of English local authorities have planning restrictions on takeaways.[41] We are not aware of any UK research exploring the impacts of these approaches.
- 17 **Regulation of outdoor food advertising.** As described in paragraph 12, marketed foods tend to be less healthy.[42] Outdoor space devoted to food advertising is largest in the least affluent neighbourhoods.[42] Local authorities could control outdoor food advertising further. We are currently contributing to research exploring the impacts of the recent ban on 'junk food' advertising across the Transport for London estate. No results are currently available.

Question 5: What can be learnt from food banks and other charitable responses to hunger? What role should they play?

- 18 **Food banks are an opportunity for dietary interventions.** Targeted interventions could benefit high-risk individuals like food bank clients.[4] We recently found that a combination of personal and psychological factors (e.g. poor mental health), and challenging social contexts (e.g. familial behaviours and food access issues), contributed to high sugar consumption amongst food bank clients.[43] Information-based interventions could help overcome this but only if material is physically accessible in settings where food bank clients visit (e.g. food banks, health and childcare settings) and provides achievable targets (e.g. small changes to sugar in hot drinks, easy-to-follow recipes).

Question 6: What impact do food production processes (including product formulation, portion size, packaging and labelling) have on consumer dietary choices and does this differ across income groups?

- 19 **Takeaway food and salt intake.** Takeaway food can be high in salt.[44] We found that reducing the number of holes in standard takeaway salt shakers from 17 to five reduced the salt delivered by two thirds.[45] Reduced hole salt shakers are acceptable to takeaway owners are an example of a low-agency intervention that has the potential to deliver more equitable outcomes.[4]
- 20 **Reducing takeaway food portion size.** An extensive body of research illustrates the contribution of increasing portion sizes to the prevalence of obesity and overweight.[46] We explored options for reducing portion sizes in takeaway food outlets. An engagement event encouraging owners to use smaller package sizes, marketed as 'lite bites', was found to be both feasible and acceptable, with some indication that it led to a shift in purchasing towards smaller portions.[47]
- 21 **Providing education to takeaway staff.** It may also be useful to provide further training on healthy food provision to takeaway staff. For example, the Takeaway Masterclass is a three-hour training course encouraging healthier cooking practices and menu options. We found this to be both feasible and acceptable among 18 takeaways.[48] Further research is required to understand how to maintain participation and retention.

Question 7: What impact do food outlets (including supermarkets, delivery services, or fast food outlets) have on the average UK diet? How important are factors such as advertising, packaging, or product placement in influencing consumer choice, particularly for those in lower income groups?

- 22 In paragraph 12 we described how marketing tends to encourage the consumption of less healthy foods and drinks. We have also conducted other research to explore how food outlets can be altered to help consumers make healthier choices.
- 23 **Mandatory menu labelling may encourage restaurants to serve healthier foods.** In work currently awaiting publication,[49] we found that around a third of popular UK chain restaurants voluntarily provide menu labelling in-store. Items from restaurants with menu labelling had 45% less fat and 60% less salt. Meanwhile in an earlier study, we found that menu redesign, alongside a levy on sugary drinks, was associated with fewer purchases of sugary drinks in one restaurant chain.[50] Mandatory menu labelling may encourage reformulation of items served by restaurants.[51] We are working with the Department of Health and Social Care to provide further evidence post-implementation of mandatory labelling.

- 24 **Changing supermarket environments can help people eat better.** We have demonstrated that UK supermarkets with clear and consistent policies on what foods can be displayed at checkouts have fewer foods at checkouts and these are more likely to be healthier than in other supermarkets. We recently found that about 17% fewer common checkout foods (small packages of confectionary, chocolate, and crisps) were bought and taken home from supermarkets with policies restricting the display of less healthy foods at checkouts. However, we found little evidence that checkout food policies contribute to dietary equity.[52] Less healthy foods are also common at the checkouts of non-food stores.[53] Thus, mandatory restrictions on food at all checkouts could improve diets, but may not reduce inequalities.
- 25 **Online takeaway food delivery services are becoming increasingly popular.**[54] Using data from a representative panel of UK consumers, we found that 15% of those surveyed used an online food delivery service to purchase takeaway food at least once a week (unpublished data). This accounted for 15% of all meals purchased out-of-home. Young adults, men, and those living with children under the age of 18, were most likely to use online food delivery services. At present, it is unclear how meals purchased through online food delivery services are contributing to UK food purchasing, consumption or overall dietary patterns and further research in this area is warranted.

Question 12: A Public Health England report has concluded that “considerable and largely unprecedented” dietary shifts are required to meet Government guidance on healthy diets. What policy approaches, for example, fiscal or regulatory measures, voluntary guidelines, or attempts to change individual or population behaviour through information and education) would most effectively enable this? What role could public procurement play in improving dietary behaviours?

- 26 We have described research on a number of individual policies here. However, there is no magic bullet to improve diet, reduce dietary inequalities and address food insecurity. A multi-component strategy including high-risk and population approaches as well as high and low agency strategies, simultaneously addressing multiple aspects of the food system is likely to be required to achieve substantial improvements in diet, noticeable reductions in dietary inequalities and eradication of food insecurity.

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