The Appetite and Obesity Research Group seeks to increase understanding of eating behaviour and appetite regulation, and use this knowledge to challenge the global obesity epidemic and the negative effects it has on individuals and society (including, but not limited to, health). We have expertise spanning social, biological and biomedical sciences and our research covers a breadth of factors related to the biological, behavioural and situational drivers of consumption.

We are delighted that the Health Select Committee is following up on its previous inquiries into childhood obesity. Thank you for giving us the opportunity to respond to this inquiry. For more information, please contact: Dr Emma Boyland, Appetite and Obesity Research Group Lead.

In this submission, we seek to provide updated evidence and assessment of progress for the following priority areas for policy action: food marketing, food insecurity, the out of home sector, behaviour change and infant nutrition.

Executive Summary

- Levels of child obesity remain unacceptably high, and this is affecting the current and future health of our nation.
- One in every three children leaving primary school has overweight or obesity, and there is a marked socioeconomic gradient such that those from the most deprived backgrounds are disproportionately affected.
- Government has the power to change this situation but comprehensive, bold and sustained action is needed quickly.
- The Government has already committed to halving childhood obesity and significantly reduce the gap in obesity between children from the most and least deprived areas by 2030.
- The Government also ratified the United Nations Convention on the Rights of the Child in 1992, which means a commitment to working together to ensure that children can enjoy all their rights, including their right to the enjoyment of the highest attainable standard of health.
- The policies outlined in the Government's childhood obesity plans reflect the recommendations of the Health Select Committee's own childhood obesity reports (based on input from expert witnesses across the body of stakeholders), and have a robust evidence base.
- We are extremely concerned and disappointed by the lack of progress in implementing the measures in these plans, but also that they appear under threat of being diluted or removed from the table before they have even started.
- The Government has a duty to protect child health, and the lack of progress suggests it is not prioritising action in this space in accordance with that duty.
- We call for the Government to promptly and fully implement the planned measures and commit to a brave and bold schedule of further measures to address all the factors that are known to influence child body weight and health.
**Childhood Obesity**

1. The latest figures from the National Childhood Measurement Programme (2017/18) show that more than one in three (34.3%) children aged 10 to 11 have a weight status classified as overweight or obese. In reception aged children it is 22.4%. Obesity prevalence for children living in the most deprived areas is more than double that of those living in the least deprived areas for both reception and year 6.¹

2. Children with obesity are over five times more likely to have obesity as adults.² This increases their risk of developing serious disease including Type 2 diabetes, cancer, heart and liver disease plus associated mental health problems, putting an enormous and unsustainable strain on the NHS and society.

The Government has so far published three chapters of its childhood obesity plan (2016, 2018 and 2019). The robust evidence base for the measures proposed is clearly laid out in these plans, so we have not replicated it in full here, rather we focus on recent additional evidence to further support swift, comprehensive action and assess progress made towards implementation.

**Food marketing to children**

**A summary of additional recent evidence to support further restriction of food marketing to children**

Our recent modelling data indicate that if all HFSS advertising between 5.30am and 9pm was withdrawn, we would reduce the number of children with obesity by around 5% and the number with overweight (including obesity) by almost 4%. This is equivalent to 40,000 fewer UK children with obesity, and 120,000 fewer with overweight, and would add 240,000 quality-adjusted life years across the lifetime of current UK children³.

We have recently published a study showing that when brands use marketing techniques on food packaging, specifically depicting large portion sizes for cereal on the front of boxes, this prompts children to eat more⁴. We have continued to demonstrate that children are exposed to extensive digital marketing in the online spaces they enjoy the most⁵ and that this exposure affects choice⁶ and increases immediate caloric intake⁷ even when advertising disclosures are included⁸. Further recent

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² Simmonds M et al. (2016) Predicting adult obesity from childhood obesity: a systematic review and metaanalysis. *Obesity Reviews*.
³ Mytton et al. Quantifying the potential health impact of restricting less-healthy food and beverage advertising on UK television between 0530 and 2100: a modelling study. *Manuscript under review at the BMJ*.
⁸ Coates AE, Hardman CA, Halford JCG, Christiansen P, Boyland EJ (2019). The effect of influencer marketing of
studies providing additional support for the need for comprehensive and effective food marketing regulations include studies demonstrating the power of marketing to create psychological\(^9\) and physiological\(^10\) brand attachments in children, as well as an updated evidence review to confirm once more that food marketing influences children’s attitudes, preferences and consumption\(^11\).

Sports sponsorship by HFSS brands is also an area for concern. Since the last Health Select Committee inquiry, a number of partnerships have been announced between HFSS brands and sports federations including Coca Cola sponsorship of Euros2020 (including the final at Wembley), Monster Energy signing deals with 8 Premier League football teams, and the new England and Wales Cricket Board format The Hundred being sponsored by 8 different brands of KP Snacks. This clearly demonstrates that current informal arrangements between DCMS, DHSC and sporting federations are failing to transform the associations between junk food and snacking culture and participation in sport. Our recent analysis demonstrates that marketing for “risky products” (inclusive of HFSS food and beverages, alcohol and gambling) was hugely prevalent during UK broadcasting of the FIFA Men’s World Cup 2018, with 1.2 marketing references per broadcast minute\(^12\). A person watching the quarter finals, semi finals and final would have been exposed to over 6.5 hours of marketing for these products, of which HFSS food and beverages accounted for 74.8%. These events are massively popular with young people in the UK, and such marketing undermines existing and planned policy actions on HFSS food marketing in broadcast media. We urge the Government to take action to address this loophole.

**An assessment of the Government’s progress on HFSS food marketing restrictions**

3. We believe the Government has made insufficient progress in introducing the HFSS food and beverage marketing restrictions that form an essential part of any effort to tackle childhood obesity. We are particularly concerned about the following elements which have already been delayed and appear under threat:

a. **A 9pm watershed on junk food adverts on TV and online:**

   This consultation was delayed significantly from the original commitment to publish it before the end of 2018. Eventually published in March 2019, the consultation presented several options, all of which are considerably weaker than the comprehensive 9pm watershed that the public health community have called for and for which there is evidence of efficacy.

   The options for TV restrictions included a proposed exemption for programmes and/ or channels with fewer than 97,000 children viewers. An analysis of March 2019 BARB TV food and a “protective” advertising disclosure on children’s food intake. *Pediatric Obesity*, 14(10): e12540.


viewing data by Cancer Research UK found that over 400 of 480 TV channels would be exempt on this basis. Around 128 of these of these channels have over 1,000 child viewers (which is the lowest audience number counted by BARB). The number of child viewers across these 128 channels ranges from 4,000 to 93,000 with over a third of the channels having more than 50,000 child viewers a week. The total number of child viewers to these channels across one week is over five million children (5,260,000). This is an unacceptably high level of children to expose to unhealthy food advertising.

A second option presented in the consultation involved a ‘ladder’ of restrictions, where products classified as ‘less healthy’ via the Nutrient Profile Model, could have unspecified ‘advertising freedoms’ depending on their score. We consider this approach to be highly confusing to parents and will create a loophole meaning products with more sugar than children’s recommended daily limit in one serving, could continue to be advertised.

The next steps that the Government should take on HFSS food marketing

4. We call on the Government to prioritise the prompt and full implementation of the food marketing policies announced in chapter 2 of the childhood obesity plan, ensuring they are not weakened or watered down. The Government has considerable public support to do so, with 72% of people supporting a 9pm watershed on junk food adverts on TV and 70% supporting it online.

5. The ambition to halve childhood obesity and reduce the inequality by 2030 is the right thing to do and reduced obesity levels will benefit child health enormously. To achieve this ambition, the Government will need to continue to bring in comprehensive food marketing policies. We would like further chapters of the childhood obesity plan to cover the following:

- Extend the 9pm watershed on junk food adverts to other forms of advertising including cinemas, radio and digital OOH and limit other types of advertising outside schools, nurseries, playgrounds and children centres.
- Strengthen digital marketing regulations (in light of ASA, 2019) further to reduce children’s exposure to HFSS advertising online (beyond traditional ‘spot’ advertising, to cover the more embedded forms of brand marketing), reduce the power of that marketing to persuade (e.g. the use of competitions and enticements to share) and truly tackle the detrimental impact digital marketing is having on young people’s eating behaviour.
- This necessitates working towards an industry wide standard for calculating digital audience share/age verification/content tagging technical solutions.
- Ban the use of child friendly brand and licensed characters on HFSS food and drink products.

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13 BARB channel-level data for 25 March 2019 to 31 March 2019, using a similar methodology as outlined in the Impact Assessment. Dataset held on file by Cancer Research UK and submitted to DHSC as an Appendix to their response. The March 2019 BARB child universe means the 1% threshold would be 94k rounded to nearest 1k.

14 Apple Crumble (scores 4), but with 23.9g sugar per one crumble, this product contains over the limit of a child’s aged 4-6 daily intake of sugar, and 99.58% of a child’s aged 7-10 daily intake of sugar.

15 Polling figures from YouGov Plc. Total sample size was 2078 adults. Fieldwork was undertaken between 12th - 13th February 2019. The survey was carried out online. The figures have been weighted and are representative of all UK adults (aged 18+).
- Ban HFSS sponsorship from schools and sports events.

**Household Food Insecurity**

In this submission we seek to highlight the following data we have recently collected on food insecurity in children.

**Project 1: Towards understanding the relationship between food insecurity, socioeconomic status and obesity in families in Northern England (manuscript in preparation, for now should be referenced as Boyland et al., unpublished data).**

- In this 2017 pilot study conducted by the University of Liverpool, an association was found between decile of deprivation and food insecurity, in that the more deprived families were significantly more likely to report greater food insecurity.
- Although food insecurity was not associated with greater weight in children (in this limited sample in which not all children could be weighed due to school time constraints), it was associated with parental weight status. Those parents in the most insecure group were 200% more likely to be in a higher weight category than those in the most secure group.
- Results suggest people who experience food insecurity are consuming energy dense, nutrient poor foods which contribute to/sustain greater body weight, and this has clear health implications.

**Project 2: How do socio-economic disadvantage and food insecurity influence food choice and body weight?: The mediating roles of psychological distress and maladaptive coping strategies**


- In an ongoing programme of research, the University of Liverpool are exploring the psychological impacts of poverty and food insecurity on eating behaviour and obesity in families.
- Initial findings from a questionnaire study with adult participants (Spinosa et al., 2019) indicate that lower socio-economic status (SES) is associated with higher body weight through increasing psychological distress and subsequent emotional eating (i.e., eating as a coping mechanism).
- We also conducted face-to-face semi-structured interviews with adults who use food banks in Liverpool in order to understand the key drivers of food choice and intake in food-insecure populations (Puddephatt et al., 2019). Results revealed that:
  o Income exerted the strongest influence on participants’ food choices, with cost of food, accessibility of shops, the need to food ration, and health issues (current and worsening) also playing a role.
  o Participants with dependent children reported an inability to afford healthy foods. Instead their purchasing of food was based on what they knew their children would eat as they could not afford to waste food. E.g. “I’ll choose something that I know they’re gonna like because I can’t afford to do something and for them not to eat it. I just can’t afford it, yeah.”
Participants prioritised their children’s food consumption over their own and reported having a smaller portion or skipping meals altogether so their children could eat. E.g. “And if the food’s very low, I tend to go without food so that the kids can eat”.

The majority of participants reported experiencing worsened mental or physical health due to their lack of access to food. Feelings of depression, stress and hopelessness were salient throughout the interviews. E.g. “Yes, I was very stressed and then panicking that- panic, like panic attacks, things like that. Because I’m thinking too much. I’m thinking ’what are my kids going to eat tomorrow and after tomorrow?’. I was thinking ’well, I don’t know what I have to do.”


- In this recent study, we examined how obesity and symptoms of depression and anxiety (internalising symptoms) are associated from early childhood to mid-adolescence in the Millennium Cohort Study (N=17215).
- Results revealed that associations between BMI and internalising symptoms are weak in early childhood. However reciprocal relationships between these two domains emerge between mid-childhood and adolescence (i.e. obesity increases the risk of depression, and depression increases the risk of obesity).
- Critically, most of the associations between obesity and internalizing symptoms were explained by shared socio-economic risk (from previous research it is known that children from lower SES backgrounds are at greater of both obesity and mental health problems)
- Key point: Obesity and mental health problems go increasingly hand-in hand from mid childhood into adolescence and these associations are partially explained by socio-economic factors.

**Recommendations**

- Legislation to prevent the proliferation of unhealthy food outlets in low income areas.
- Increase access to and address cost issues around fruit and vegetables.
- Widened fruit and veg voucher schemes to more families living in poverty (ensuring F&V is available locally) and promote alternative models such as community food hubs (alternative to food banks).
- School breakfast and holiday food clubs need to be funded (widen free school meal eligibility).
- Need to acknowledge that maternal stress and mental health associated with obesity and food insecurity which undermine healthy choices (and by implication address it).

**The Out of Home Food Sector**

We support the calorie labelling policy, but it needs to be far-reaching
We broadly support the government’s intention to introduce mandatory calorie labelling of food and drink products sold outside of the home. However, we note that the success of this policy will depend on its coverage: a very large proportion of restaurants and food outlets in England are small businesses (not chains) and if the policy only applies to larger chains then these important aspects of
the food environment will be missed. If the government intends initially to mandate calorie labelling in larger businesses, then we believe it is very important that there is a longer-term plan to extend this approach to smaller businesses.

**We are concerned about implementation of the calorie labelling policy**

We have conducted research on current calorie labelling standards in the out of home food sector [1]. The small number of businesses that do provide voluntary calorie labelling (some were motivated to by the Responsibility Deal) do so very inadequately [1]. The way that calorie labelling is currently provided under this voluntary basis does not help customers to make healthier choices. If the mandatory calorie labelling policy is not closely regulated we are concerned it will be largely ineffective in achieving its aims.

**Next steps needed**

The UK, like many other countries, has a serious problem with the nutritional quality of food and beverage options served outside of the home. Our research [2,3] on the UK restaurant and fast-food industries has shown that only a tiny proportion of main meals are in line with public health recommendations for calorie content (less than one in ten main meals) and a large number of sides, starters and desserts exceed the total number of calories we should be eating in a whole meal. Children’s food in the out of home food sector is similarly high in calories [4]. Because food is eaten outside of the home very regularly, the out of home food sector is likely to be a key contributor to overweight and obesity in the UK.

The mandatory calorie labelling policy may have two small beneficial effects: it may encourage some people to choose slightly healthier options and it may encourage some businesses to reduce the number of calories in their products. However, the best available evidence tells us that these beneficial effects will be small [5, 6] and it is also unclear if they will occur, because the evidence behind them is relatively weak [5, 6].

Following on from the calorie labelling policy, at the very least we need to see:

- Government action and pressure on the out of home sector to reduce the calorie content of products being sold in the out of home food sector (e.g. target setting in order to reduce the proportion of products being sold that are too high in calories)

The reality is that the out of home food sector is very unlikely to act in any meaningful way without being made to do so. The government’s previous attempt to introduce voluntary calorie labelling in the out of home food sector is a good example. The Food Responsibility Deal attempted to pressure the out of home food sector to produce calorie labelling on a voluntary basis, but nearly 10 years later it is very clear that approach did not work (hence the mandatory policy on calorie labelling now being proposed). It is therefore clear that the government should consider a range of bolder measures in the out of home food sector, including:

a) Taxation of high calorie products
b) Limits on the proportion of products sold by a retailer that exceed product-specific calorie recommendations
c) Banning of products that have an unnecessarily excessive amount of calories for a single person (e.g. more than 100% of daily calorie needs).

References


Equipping health and education professionals to support behaviour change

What should be the priorities for further action by the Government?

Schools have increasing roles in tackling childhood obesity and planned and unplanned conversations involving child weight are now likely to occur at multiple stages throughout school attendance (e.g. routine NCMP measurements¹). Increasing awareness of health concerns related to childhood obesity, plus national initiatives such as Making Every Contact Count² make it more likely that related health professionals (e.g. school nurses, GPs) also encounter discussions about child weight. These day-to-day conversations are likely to include discussion about behavioural change where childhood obesity is present or at risk, however professionals consistently report finding these conversations difficult to initiate and lack confidence in the skills needed to motivate and support individuals for change³,⁴. It is recommended that all professionals encountering such conversations can access training that enables them to discuss child obesity with children and their families that is in line with current evidence about behaviour change support, that is non-stigmatising, and allows education and health professionals to maximise potentially ‘teachable moments’ during opportunistic routine practice⁵. These recommendations also align with key priorities for obesity outlined by the British Psychological Society’s recent report highlighting that all efforts to reduce obesity take into account the multiple complex causes of obesity, minimise stigma, and be designed in line with current evidence on behaviour change.⁶
Infant Nutrition

It was welcome to see commitment to Early Years and particularly the first 1001 days (from conception to age 2) of a child’s life in ‘Childhood Obesity: Time for action’.

Predisposition to childhood overweight and obesity is modifiable during this critical first 1001 days. A number of mechanisms to achieve this have been identified, but unsurprisingly a focus on breastfeeding support and promotion was highlighted. Whilst this is not disputed, it is becoming increasingly clear that, in the interest of both maternal and infant health and welfare, specific consideration should be given to the manner in which the support is given.

How can we do more to support mothers to breast feed?

Based on a recent systematic review of the evidence which explored the experiences and views of women receiving Baby Friendly Initiative infant feeding care in the UK, and a body of supporting evidence from wider academic networks, we believe there are a number of key priority areas which would help to support mothers to breastfeed and have a positive infant feeding experience. At the heart of these recommendations is an overarching vision of providing mother-centred infant feeding support to enable optimal maternal and infant health and wellbeing

1. Infant feeding support should provide realistic expectations of breastfeeding and its associated challenges in pregnancy and the postpartum and provide appropriate, timely information and support on formula feeding

A number of studies have highlighted that there is a mismatch between idealism and realism in antenatal care, suggesting that policy makers are encouraging idealistic expectations of breastfeeding in pregnancy but failing to support women to achieve these goals after birth (Hoddinott et al., 2013; Lee, 2007; Lagan et al., 2014). Our recent review of the Baby Friendly Initiative (BFI) supports these criticisms, finding that BFI-accredited settings may not achieve aspects of care that are important to
women with unbalanced feeding education, unaddressed breastfeeding challenges, and insufficient formula feeding information (Fallon, Chisholm, & Harrold, 2019). This suggests that a different approach to antenatal care is necessary to better prepare mothers for the realities of breastfeeding. This can be achieved by normalising early infant feeding behaviour (e.g. frequent waking, cluster feeding), discussing common breastfeeding problems in pregnancy and the postpartum (e.g. poor latch, pain, tongue tie), and providing balanced infant feeding information which encompasses all feeding options.

2. Infant feeding support provided should be regular in quantity, consistent in quality, personal, and practical

Our review and other work has highlighted how insufficient resources in maternity services are leading to a lack of regular support and delivery of inconsistent infant feeding information. Investment needs to be made in maternity services to enable appropriate and regular breastfeeding support. Current WHO guidance recommends exclusive breastfeeding for 6 months. This guidance is intended to inform international government policies, but is instead widely disseminated in health promotion activities as a prescriptive feeding goal for women. Research has suggested that this is an unachievable “one size fits all” approach that disregards individual women’s circumstances (Schmied, Sheehan, & Barclay, 2001; Lagan et al., 2014) and sets women up for failure (Hoddinott et al., 2013). Breastfeeding support should focus on developing tailored feeding plans in conjunction with women based on their specific circumstances. In situations where exclusive breastfeeding for the recommended six months is not feasible or desired, support should be focused on personal and practical solutions such as supporting shorter term exclusive breastfeeding, sustained combination feeding, and providing sufficient formula feeding support to enable the safe and appropriate use of alternative options.

3. Emotions associated with breastfeeding difficulties or cessation (i.e., guilt, shame, pressure) should be considered an important component of infant feeding support and not perpetuated by the promotion of breastfeeding

Evidence has found that women who experience breastfeeding difficulties, supplement with formula, or do not meet their breastfeeding intentions are at a higher risk of negative emotional experiences (Fallon, Komninou, Halford, Bennett, & Harrold, 2016). Our recent review found that women who delivered in a BFI setting commonly experienced feelings of guilt, which often arose as a result of the pro-breastfeeding discourse. Verbal and physical pressure around breastfeeding were also experienced by both breastfeeding and non-breastfeeding women (Fallon, Chisholm & Harrold, 2019). Providing sensitive care which takes into consideration the emotional salience of infant feeding decisions should be a key component of providing breastfeeding support. In our review, women described breastfeeding promotion as militant, which came across as pressurising rather than encouraging. Women wanted breastfeeding support to be more balanced and sensitive in approach. Maternal wellbeing is not only key to successful breastfeeding but is important in the healthy development of early relationships and responsive parenting and should be considered of paramount importance in the development of breastfeeding support interventions.
Yours faithfully,

E Boyland

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On behalf of the Appetite and Obesity Research Group

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