

Impact case study (REF3)

Institution: University of Liverpool		
Unit of Assessment: UoA4		
Title of case study: Unhealthy food advertising to children: Impacting on a watershed policy		
Period when the underpinning research was undertaken: 2015 - present		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s): Dr Emma Boyland	Role(s) (e.g. job title): Senior Lecturer	Period(s) employed by submitting HEI: 2012 – present
Period when the claimed impact occurred: 2015 - current		
Is this case study continued from a case study submitted in 2014? No		
1. Summary of the impact <p>Obesity affects a third of UK children and is a major determinant of health inequality and outcomes with substantial cost implications. University of Liverpool research exposed the inadequacy of existing public health policy and showed that a 9pm watershed on unhealthy food advertising would reduce childhood obesity, improve health outcomes, and deliver substantial health cost benefits. These findings were used to engage, and inform, public and stakeholder audiences and directly influenced the policy position of public health agencies, charities and advocacy groups. This has led to the adoption of a major new and unique UK-wide health policy with the UK Government's decision in July 2020 to introduce a watershed on advertising as part of their obesity strategy.</p>		
2. Underpinning research <p>Effective restriction of children's exposure to high fat, sugar, and salt (HFSS) food and beverage (hereafter, food) is a key recommendation of the World Health Organization (WHO) for tackling childhood obesity. Since 2009, the UK Government have banned such advertising around television programming 'of particular appeal' to children under 16 years (based on the proportion of children in the viewing audience) and on dedicated children's channels. The implementation of stronger restrictions was impeded by a lack of clarity over i) the strength of evidence that advertising impacts on eating, ii) the potential causal relationship between HFSS advertising and increased body weight, iii) the efficacy of existing regulations, and iv) an effective policy option to meaningfully reduce child exposure to HFSS advertising.</p> <p>Boyland and colleagues provided crucial evidence of advertising harms, being the first group to demonstrate through meta-analysis (including several of their own published studies) in 2016 that television food advertising exposure leads to significantly greater food intake in children [3.1], a result since corroborated by others. Boyland also showed that children do not compensate for this increased intake at subsequent eating occasions [3.2] and that existing research satisfies all key criteria commonly used to establish causal relationships in epidemiology [3.3], providing critical evidence for a causal pathway linking unhealthy advertising exposure with greater body weight.</p> <p>Our research also exposed the fundamental shortcomings of the current policy of regulating programming directed at children specifically. We conducted the largest TV advertising monitoring study in the world to date, and this demonstrated that the 2009 policy had not meaningfully reduced children's exposure to unhealthy food advertising [3.4]. Further monitoring conducted in collaboration with the Obesity Health Alliance (OHA, a coalition of over 45 health charities, medical royal colleges and campaign groups) showed that a majority (59%) of food advertisements shown</p>		

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during family viewing time (6-9pm when the number of children watching TV is at its highest) would be banned from children's TV under the existing rules [3.5]. This illustrated that the policy was insufficient because the restrictions did not cover the content watched by the greatest numbers of children (namely family entertainment shows, soap operas etc, programming not specifically directed at children).

We then proposed an alternative policy, in which a 9pm 'watershed' could be applied to prevent unhealthy food advertising being broadcast during family viewing time [3.5] and therefore better ensuring that such advertising was not seen by children. Boyland and colleagues quantified the potential health impact and wider benefits of the proposed policy. The research found that the watershed policy would result in a health-related net monetary benefit of GBP7,400,000,000 to society, by effectively reducing children's exposure to HFSS advertising on television, decreasing daily caloric intake, and thus reducing childhood overweight and obesity [3.6].

3. References to the research

University of Liverpool authors in bold, case study author underlined.

- [3.1] **Boyland EJ, Nolan S, Kelly B, Tudur-Smith C, Jones A, Halford J.C.G., Robinson E** (2016). Advertising as a cue to consume: a systematic review and meta-analysis of the effects of acute exposure to unhealthy food or non-alcoholic beverage advertising on intake in children and adults. *American Journal of Clinical Nutrition*, 103: 519-533
<https://doi.org/10.3945/ajcn.115.120022>
- [3.2] Norman J, Kelly B, McMahon A, **Boyland E**, Baur L, Bauman A, Chapman K, King L, Hughes C (2018). Sustained impact of energy-dense food advertising on children's dietary intake: a within-subject, randomised, crossover, counter-balanced trial. *International Journal of Behavioral Nutrition and Physical Activity*, 15(1): 37
<https://doi.org/10.1186/s12966-018-0672-6>
- [3.3] Norman J, Kelly B, **Boyland E**, McMahon AT (2016). Marketing and Advertising on Food Behaviours: Evaluating the Evidence for a Causal Relationship. *Current Nutrition Reports*, 5(3): 139-149 <https://doi.org/10.1007/s13668-016-0166-6>
- [3.4] **Whalen R, Harrold JA, Child SFJ, Halford JCG, Boyland E** (2017). Children's exposure to food advertising on television: The impact of statutory restrictions. *Health Promotion International*, 1-9 <https://doi.org/10.1093/heapro/dax044>
- [3.5] A 'Watershed' Moment: Why it's prime time to protect children from junk food adverts. **Boyland E** on behalf of the Obesity Health Alliance (2017). Available from: <http://obesityhealthalliance.org.uk/wp-content/uploads/2017/11/A-Watershed-Moment-report.pdf>
- [3.6] Mytton OT, **Boyland E**, Adams J, Collins B, O'Connell M, Russell SJ, Smith K, Stroud R, Viner RM, Cobiac LJ (2020) The potential health impact of restricting less-healthy food and beverage advertising on UK television between 05.30 and 21.00 hours: A modelling study. *PLoS Med* 17(10): e1003212. <https://doi.org/10.1371/journal.pmed.1003212>

4. Details of the impact

Boyland's research has had a unique and material impact on UK food advertising policy. This work has definitively demonstrated the impact of high fat, sugar, salt (HFSS) food advertising on children's consumption and clarified the causal relationship between food advertising exposure and body weight outcomes. The research also highlighted the shortcomings of existing food advertising policy, identified an alternative policy, demonstrated the potential effectiveness of the alternative policy, engaged public and stakeholder audiences and directly influenced the policy position of public health agencies, charities and advocacy groups. This led to the UK Government,

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in July 2020, being the first in the world to announce the alternative policy (a 9pm watershed for unhealthy food advertising on television) as part of its UK wide obesity strategy.

Prior to this, and since 2009, UK Government policy was limited only to banning advertising of foods and non-alcoholic beverages high in fat, sugar and/or salt (HFSS) around television programming 'of particular appeal' to children under 16 years, and on dedicated children's channels. Boyland's research identified and addressed key roadblocks preventing progress towards greater restrictions on HFSS advertising, namely a lack of clarity over i) the strength of evidence that advertising impacts on eating, ii) the potential causal relationship between HFSS advertising and increased body weight, iii) the efficacy of existing regulations, and iv) an effective policy option to meaningfully reduce child exposure to HFSS advertising.

Evidence of advertising impact

Boyland, with UoL colleagues, has conducted over 30 studies showing the impact of unhealthy food advertising on eating behaviour in children. Boyland and the UoL team were the first to demonstrate through meta-analysis of 40 years of experimental evidence, including several of their own studies, that television food advertising exposure leads to significantly greater food intake in children. Thus, their work has substantially strengthened and clarified the evidence base and demonstrated the need for effective policy action.

Evidence of shortcomings of existing policy and proposing an alternative

Boyland's research demonstrated that the 2009 policy had not achieved its aim of reducing children's exposure to HFSS food advertising on television, and that this was largely due to its scope being limited to programming made for children rather than programming watched by children in greatest numbers (i.e., primetime family shows). Boyland and colleagues proposed a 9pm watershed policy as a more appropriate way of ensuring the rules captured the broadcasting (and therefore the unhealthy advertising) seen by children, and showed that it would reduce childhood obesity, improve health outcomes, and deliver substantial health cost benefits.

Engaging media discourse and building public opinion

Boyland's studies have informed and enhanced broader public and stakeholder engagement with the issue of food advertising to children. The substantial media attention across local, national and international media outlets (including newspapers, radio and TV) [5.1], as well as significant engagement in social media, has extended the impact of academic research into increasing public awareness of the health implications of unhealthy food marketing exposure, contributing to putting (and keeping) this issue on the Government agenda. The media and public pressure generated has contributed to the new watershed policy being adopted.

Informing and influencing the position of public health agencies, charities, and advocacy groups

Boyland's public engagement and knowledge exchange activities have ensured that her research has had influence beyond academia. Furthermore, reports by University of Liverpool have been commissioned by major UK and international public health agencies, charities and advocacy groups [5.2]. Boyland's research was cited extensively in written submissions from leading NGOs, including the Obesity Health Alliance and Cancer Research UK (CRUK) to the UK Government's Health and Social Care Committee's Childhood Obesity Inquiry in spring 2018 (67% of inquiry submissions on food advertising cited Boyland's research to support their position) and the

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subsequent advertising policy consultation [5.3]. A report authored by Boyland [3.5] was shared with 154 contacts at 45 organisations via the OHA mailing list, and it has been referenced in 6 MP briefings over the last three years (each sent to 650 UK MPs). It also has at least 5 references in Hansard (the official report of the proceedings of the Houses of Commons and Lords) demonstrating that it formed a core part of policymaker discussion on this issue. A recent industry report labelled OHA and Boyland's research "often influential". Key national executive public health agencies (Public Health England) and NGOs (Obesity Health Alliance) have corroborated the impact of Boyland's research evidence on their policy-related positions and activities, and the unique and critical role that Boyland and her research played in securing the commitment from the Government to toughen its policy on food advertising to children [5.4].

Inform Government's policy position

Boyland has actively engaged in knowledge translation and consultancy with policymakers to drive evidence-based policy action, including giving several invited presentations on evidence for food advertising impact to Public Health England, the Department for Health and Social Care and the Department for Culture, Media and Sport. Boyland drew on the findings of her research on advertising impact and policy evaluation [3.1]-[3.5] in her written submission to the Childhood Obesity Inquiry in 2018 [5.5]. Boyland was subsequently invited as an expert witness to give oral evidence to the committee in May 2018 [5.6]. The subsequent Inquiry report [5.7] cited Boyland's research and oral evidence 5 times, using it to underpin its call for the Government to include further restrictions on junk food marketing in its childhood obesity strategy.

The UK Government Childhood Obesity Plan (June, 2018) [5.8] acknowledged that food marketing influences children's eating, citing two of Boyland's papers to support this (including [3.1]), and committed to consulting on a 9pm watershed. As part of the consultation, the Government published an impact assessment [5.9] that cited three of Boyland's papers (including [3.1] and [3.3]). Boyland again drew on the findings of her research in her written response to the consultation, as did numerous NGOs, particularly highlighting the findings of [3.6] that a watershed would reduce childhood obesity by approximately 5% and result in a health-related net monetary benefit of GBP7,400,000,000 to society. During June and July 2020, Boyland was directly consulted on the evidence for a 9pm watershed policy by telephone and e-mail by Public Health England and the Department of Health and Social Care. In July 2020, the UK Government announced a new obesity strategy including a 9pm watershed for HFSS food advertising on television [5.10]. The Department of Health and Social Care have corroborated the key role of Boyland's research and knowledge translation in the decision-making underpinning the introduction of the health policy, further advertising restrictions in the UK [5.4].

5. Sources to corroborate the impact

[5.1] Examples of international, national and local media coverage of Boyland's research.

Coverage of Boyland *et al.* (2016) [3.1]

[CTV News \(Canada\), 30th January 2016](#)

[npr \(National Public Radio, based in Washington DC, USA\), 29th January 2016](#)

[Daily Mail, 25th January 2016](#)

Coverage of Obesity Health Alliance report (2017) [3.5]

[BBC News, 28th November 2017](#)

[About Manchester, 28th November 2017](#)

Coverage of Mytton *et al.* (2020) [3.6]

[About Manchester, 28th November 2017](#)

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[The Sun, 13th October 2020](#)

[Boyland's contribution to general media debate on influence of advertising on childhood obesity](#)

[Bay TV Liverpool News, 9th July 2015](#)

[ITV News, 27th February 2019](#)

[The Guardian, 21st March 2014](#)

[Lancashire Post, 28th February 2019](#)

- [5.2] Reports on behalf of major UK and international public health organisations

'See it, Want it, Buy it, Eat it' report, commissioned by Cancer Research UK

'Evaluating implementation of the WHO Set of Recommendations on the marketing of foods and non-alcoholic beverages to children' report, commissioned by the WHO.

'A Watershed Moment: Why it's Prime Time to Protect Children from Junk Food Adverts' report by Obesity Health Alliance.

- [5.3] For written submissions to the UK Government's Childhood Obesity Inquiry from other stakeholders including OHA and Cancer Research UK

<https://old.parliament.uk/business/committees/committees-a-z/commons-select/health-and-social-care-committee/inquiries/parliament-2017/childhood-obesity-inquiry-17-19/publications/>

- [5.4] Factual statements of support have been provided by Public Health England, the Obesity Health Alliance and the Department of Health and Social Care.

- [5.5] For Boyland's written submission to the UK Government's Childhood Obesity Inquiry

<http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/health-and-social-care-committee/childhood-obesity/written/81090.pdf>

- [5.6] For evidence of Boyland operating as an expert witness for the UK Government's Childhood Obesity Inquiry

<http://data.parliament.uk/writtenevidence/committeeevidence.svc/evidencedocument/health-and-social-care-committee/childhood-obesity/oral/82774.pdf>

- [5.7] For the UK Government's Health and Social Care Committee's report with five citations of Boyland's research

<https://publications.parliament.uk/pa/cm201719/cmselect/cmhealth/882/882.pdf>

- [5.8] For UK Government's "Childhood Obesity, a plan for action, Chapter 2" with two citations of Boyland's research, including [3.1]

<https://www.gov.uk/government/publications/childhood-obesity-a-plan-for-action-chapter-2>

- [5.9] For UK Government's impact assessment of 9pm watershed policy with three citations of Boyland's research, including [3.1] and [3.3]

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/786554/advertising-consultation-impact-assessment.pdf

- [5.10] For Government obesity strategy including 9pm HFSS food advertising watershed,

<https://www.gov.uk/government/publications/tackling-obesity-government-strategy>