

# Discretionary food advertising on television in 2017: a descriptive study

Lisa G. Smithers,<sup>1,2</sup> Xinyue Wang,<sup>1,2</sup> Dandara Haag,<sup>1,2</sup> Benjamin Agnew,<sup>3</sup> John Lynch,<sup>1,2,4</sup> Matthew Sorell<sup>3</sup>

Advertising has come under scrutiny as contributing to an environment that encourages children to consume unhealthy foods,<sup>1</sup> and television has been one of the major sources of food advertising to Australian children. Data from 2012 and 2015 suggest that most children (97%) watch television, averaging 8.5 hours per week.<sup>2,3</sup> The advertising of discretionary foods has been previously described for one commercial network (comprising four distinct channels) during 2016.<sup>4</sup> It was reported that 11% of all advertising was for food and beverages (henceforth combined to 'food') and that discretionary foods were advertised twice as frequently as healthy foods.

In 2009, the Australian Food and Grocery Council (AFGC) introduced a code to address food marketing to children. Broadly, the goals of the code were to reduce the advertising of discretionary foods to children. Companies signed up to the code on a voluntary basis. However, from June 2019 the Australian Association of National Advertisers (AANA) introduced their own code, and now all advertising is subject to one of these industry codes.

Given our previous work<sup>5</sup> showing wide monthly variations in discretionary food advertising<sup>4</sup> and the revised interest by government in advertising to children,<sup>6</sup> we aimed to use contemporary data to describe the patterns of food advertising. This work will become baseline data for future examination of the performance of the AANA's code in reducing children's exposure to food advertising. In supplementary analyses, we explored advertising, including whether

## Abstract

**Objective:** To describe advertising of discretionary foods on television at times when children watch television.

**Methods:** We randomly sampled 84 days (one of each weekday for every month of the year) for 2017, viewed all food advertisements and categorised them according to type (healthy, discretionary or other). The frequency of advertisements per hour was calculated for times when most children watch television (peak viewing time PVT1) and when C-rated programs can be broadcast (PVT2).

**Results:** The rate of advertising of discretionary foods during PVT1 was 1.5/hour (95%CI 1.4-1.5), and during PVT2 was 1.7/hour (1.6-1.8).

**Conclusions:** Children continue to be exposed to food advertising.

**Implications for public health:** Voluntary food and grocery industry codes have not prevented children from being exposed to discretionary food advertising on television. From June 2019, all food and beverage advertising is subject to either food industry or advertising industry codes. The data presented here will form the baseline for future evaluation of whether the new arrangements reduce children's exposure to food advertising.

**Key words:** food and beverage, television, advertising, children

a company was a signatory (or not) to the AFGC code, which applied at the time when these data were collected. These exploratory analyses may be useful for settings that have voluntary food industry codes in place and for strengthening regulations on food marketing.

## Methods

Briefly, a digital tuner attached to a computer and purpose-built software was used to detect advertisements on television.<sup>4</sup> Each advertisement was logged, viewed and coded as being 'food/not food', then further categorised as per the method of Smithers et al.<sup>4</sup> Foods were further categorised as 'healthy', 'discretionary' or 'other' (e.g. tea, coffee) according to the *Australian Guide to*

*Healthy Eating*.<sup>7</sup> All food advertisements were coded by two separate members of the team with any discrepancies resolved through discussion. We coded all food advertisements shown on the four channels of the Nine Network from Adelaide during 2017. The Nine Network was used as previous work showed it had the highest discretionary food advertising rates of the free-to-air networks in Adelaide.<sup>8</sup> We randomly sampled 84 days from the 2017 year, which included one of each day of the week for each month. For each food advertisement we obtained information available at the AFGC website to determine whether the company was a signatory to the industry code.

1. School of Public Health, University of Adelaide, South Australia

2. Robinson Research Institute, South Australia

3. School of Electrical and Electronic Engineering, University of Adelaide, South Australia

4. Population Health Sciences, University of Bristol, United Kingdom

**Correspondence to:** A/Prof Lisa Smithers, Mail drop 650550, School of Public Health, University of Adelaide, South Australia, 5005; e-mail: lisa.smithers@adelaide.edu.au  
Submitted: June 2019; Revision requested: August 2019; Accepted: August 2019

The authors have stated they have no conflict of interest.

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

*Aust NZ J Public Health*. 2019; Online; doi: 10.1111/1753-6405.12942

## Analysis

We calculated the frequency of food advertising (number of food advertisements per hour) in three ways: 1) the full 24 hours of data; 2) times when most children watch television (07:00–09:00 plus 16:00–22:00), which corresponds with child audiences of >200,000; and 3) times when C-rated (children's) programs may be shown (weekdays 07:00–08:30 plus 16:00–20:30 and weekends 07:00–20:30).<sup>4</sup> The time periods in points two and three are referred to as children's peak viewing times PVT1 and PVT2, respectively.

Ethical approval was not required for this study as it involved publicly broadcast information.

## Results

A total of 304,241 advertisements were broadcast over the 84 days, and 25,980 of these were for foods (8.5%). Of the food advertisements, 16,712 were discretionary foods (64%), 7,101 were healthy (27%) and 2,167 were other foods (8%). Figure 1 shows the advertising rates of healthy, discretionary and other foods. Discretionary foods were advertised at an overall rate of 2.1 times/hour (95%CI 2.0-2.1). The advertising rate for discretionary foods was 0.7 times/hour (0.7-0.8) during PVT1 and 0.9 times/hour (0.8-1.0) during PVT2.

Comparisons of signatories and non-signatories are available in Supplementary Table S1 and Supplementary Figure S1, where across all times signatories advertised discretionary foods more frequently than non-signatories, but advertising during PVT1 and PVT2 was similar (PVT1: signatories 0.7 [0.7-0.8], non-signatories 0.7 [0.7-0.8]). Moreover, non-signatories advertised healthy foods far more frequently than signatories.

## Discussion

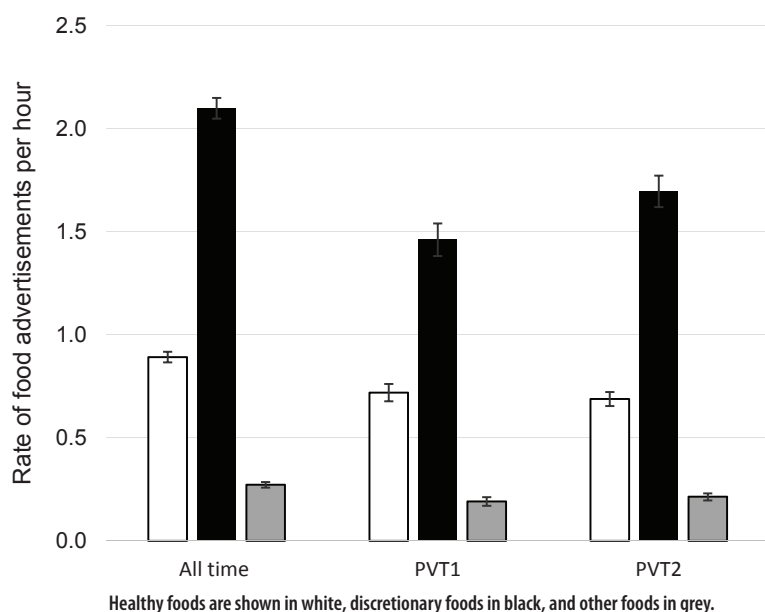
The present study shows that the average rate of discretionary food advertising at times when children watch television is around 1.5 to 1.7 times/hour (from PVT1 and PVT2, respectively). This is around double the rate of advertising of healthy foods, which was estimated to be 0.7 times/hour for both PVTs.

The rates of discretionary food advertising reported here are similar to the most recently published studies, which suggest that advertising has not changed over the past few years.<sup>8,9</sup> For example, Smithers et al. used data from four channels of the Nine Network data for the whole 2016 year and showed that discretionary food advertising was 2.3 times/hour (95%CI 2.2-2.3) during PVT1 and 1.8 times/hour during PVT2 (1.8-1.9).<sup>4</sup> Similarly, Watson et al. obtained data from three free-to-air primary channels and one child-oriented subsidiary channel over four consecutive days of 2015 and reported

discretionary foods advertising was 3.0 times/hour.<sup>9</sup> The findings reported here are most similar to Smithers et al.'s 2016 study as we replicated their methods.<sup>4</sup> Direct comparisons with other studies are difficult because PVT has previously been defined by having >35% audience share. Studies (such as Watson et al.<sup>9</sup>) that involve data from only a few consecutive days (e.g. 4–7 consecutive days) will be more variable than data sampled throughout the year due to the seasonal pattern of discretionary food advertising, and will be less precise (although most studies have not reported measures of variance).<sup>8,9</sup> A limitation of the current study is that the data is from one network in one city. While most studies have reported advertising rates from primary free-to-air channels, the subsidiary channels should not be overlooked.<sup>8,9</sup> Of the three subsidiary channels included in the current study, one channel was for young people and broadcasts programs such as *The Powerpuff Girls* and *Hi-5*, and another channel is marketed to women aged ≥35 years and grocery buyers. Therefore, the subsidiary channels may be important sources of food advertising to children and to household food purchasers.

We report that discretionary advertising by signatories and non-signatories were similar, indicating that being a signatory to a food industry code does little to prevent children from being exposed to unhealthy food advertising. Interestingly, healthy foods were advertised more frequently by non-signatories than signatories, and we speculate that one reason might be because having 'signatory status' is of little appeal to companies who promote healthy foods.

Figure 1: Rate of food advertising (advertisements per hour) by (1) total, (2) at times when many children are watching (PVT1) and (3) at times when C-rated programs are broadcast (PVT2).



## Implications for public health

Children continue to be exposed to discretionary food advertising on television by signatories and non-signatories alike. Future studies are needed to establish whether the introduction of the AANA code reduces discretionary food advertising at times when children watch television.

## References

1. Hawkes C. *Marketing Food to Children: Changes in the Global Regulatory Environment 2004-2006*. Geneva (CHE): World Health Organization; 2007.
2. Australian Bureau of Statistics. *4901.0 - Children's Participation in Cultural and Leisure Activities*. Canberra (AUST): Government of Australia; 2012.
3. Australian Communications and Media Authority. *Children's Television Viewing: Research Overview*. Canberra (AUST): Government of Australia; 2015.

4. Smithers LG, Haag DG, Agnew B, Lynch J, Sorell M. Food advertising on Australian television: Frequency, duration and monthly pattern of advertising from a commercial network (four channels) for the entire 2016. *J Paediatr Child Health*. 2018;54(9):962-7.
5. Smithers LG, Lynch JW, Merlin T. Industry self-regulation and TV advertising of foods to Australian children. *J Paediatr Child Health*. 2014;50(5):386-92.
6. The Senate. *Select Committee into the Obesity Epidemic in Australia*. Canberra (AUST): Government of Australia; 2018.
7. Australian Department of Health. *Australian Guide to Healthy Eating*. Canberra (AUST): Government of Australia; 2013.
8. Brindal E, Corsini N, Hendrie G. *Television Food Advertising to Children in South Australia*. Adelaide (AUST): CSIRO; 2011.
9. Watson WL, Lau V, Wellard L, Hughes C, Chapman K. Advertising to children initiatives have not reduced unhealthy food advertising on Australian television. *J Public Health (Oxf)*. 2017;39(4):787-92.

## Supporting Information

Additional supporting information may be found in the online version of this article:

**Supplementary Table 1:** Mean (95%CI) rate of food advertising according to signatories versus non-signatories status and by time when advertising is broadcast.

**Supplementary Figure 1:** Rate of food advertising (advertisements per hour) by signatories and non-signatories into (1) total time (all available data from 24 hours/day), (2) at times when many children are watching (PVT1) and (3) at times when C-rated programs are broadcast.