

Submission to the Inquiry into Obesity in Australia of the House Standing Committee on Health and Ageing

Current work includes making estimates of the impact of television food advertising on the prevalence of childhood obesity in Australia (and the US, UK, Sweden, Italy and The Netherlands). A conference abstract we recently submitted reads as follows:

Title: The contribution of food advertising on television to childhood obesity: a multi-country comparison

Background: Childhood obesity is increasing in prevalence worldwide, which does not augur well for future population health. Advertising for calorie-dense food has been identified as one of the causes, but the size of its contribution to childhood obesity is not known. This may vary by country as a function of advertising exposure and obesity prevalence due to other factors. We explored what proportion of obesity among children aged 6 to 12 is attributable to food advertising on television (TV) in Australia, Italy, The Netherlands, Sweden, United Kingdom and United States.

Methods: We created a mathematical model to compare the current situation with a counterfactual scenario in which children are not exposed to TV food advertising. Obesity was defined using the IOTF cut-offs and modelled as a function of an underlying lognormal BMI distribution for age and sex, the spread of which depends on mean BMI. In the counterfactual scenario, mean BMI for each age, sex and country was reduced based on estimates of the average recent exposure to TV food advertising in minutes per week and data on measured weight and height. Published literature linked exposure time via total consumption to changes in body mass. In an additional analysis we use a Delphi study to obtain experts' estimates of the effect of advertising on consumption.

Results: The proportion of obesity prevalence among children aged 6 to 12 that is attributable to TV advertising is estimated at 14% to 19% for the US. The corresponding percentages for the other countries are: Australia 11-15%; Italy 9-13%; The Netherlands 5-7%; Sweden 5-7%; United Kingdom 4-6%. Use of experts' estimates of the dose-response relationship between advertising and consumption yields 1.5 to 3 times higher results.

Conclusions: Our study attributes a sizeable proportion of the current childhood obesity prevalence to TV food advertising, with large variations by country. Data limitations cause considerable uncertainty. To reduce this, future research should focus on the dose-response relationship between advertising and consumption and on the collection of reliable data on exposure of children to food advertising. Reducing children's exposure to food advertising has the potential to make children's diets and body mass healthier.

The next step will be to estimate how this translates to the life expectancy Australian children lose because of TV food advertising, in collaboration with investigators of the *ACE Obesity project* (Anne Magnus, anne.magnus@deakin.edu.au; Michelle Haby, Michelle.Haby@dhs.vic.gov.au). Planned finalisation: end 2008.

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