



GUEST EDITORIAL

## Tackling the Wicked Health Problem of Early Childhood Caries

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Despite much evidence for a fall in permanent dentition caries experience among children, Early Childhood Caries (ECC) continues to be a problem in both developed and developing countries. In fact, the prevalence of ECC has increased markedly in the last decade or so, and this has occurred even in areas with community water fluoridation (although the severity of the disease in those areas is less marked) [1]. A consequence of that deterioration has been an increase in numbers of preschool children having to undergo dental treatment under general anaesthetic. In New Zealand, those numbers increased by 65% between 2002 and 2014, and similar trends have been observed in England and Australia. The cost of providing that treatment in New Zealand has been estimated to be more than \$17 million per year [2].

It's not just a matter of "holes in teeth", though: there are personal, social and emotional costs of ECC too, not just for the child but also for his/her family, and treating sufferers in hospital under general anaesthetic has been shown to improve oral health-related quality of life for both children and their families [3]. Nonetheless, having to divert scarce health resources to treating a disease which is preventable (in theory, at least) imposes an important opportunity cost upon health services. So, why are we faced with this problem?

As with other chronic noncommunicable diseases, dental caries can be considered to be a "wicked" health promotion problem. Such problems are difficult to solve because they are complex, have causes at a number of levels, are continually developing and changing, and there is no easy, universal answer [4]. As modern societies, we have little control over the cariogenic (and obesogenic) environment: the emergence and consolidation of neoliberalism has seen to that. Neoliberalism uses instruments such as changes to fiscal policy, reductions in public spending, tax "reforms" (favouring flat taxes and a reduction of corporate taxation), trade liberalisation, the privatisation of State enterprises and institutions, and deregulation [5]. None of these are good for public health and welfare. ECC is a superbly responsive marker for economic and other stresses on



households. We were able to show that three key neoliberal social policy changes in New Zealand in the early 1990s led to a rapid widening of ethnic inequalities in child oral health in the subsequent five years [6].

Consider processed food, which makes up the bulk of the modern diet, especially among those on low and/or insecure incomes (the urban poor or “precariat”, whose numbers are steadily rising in most countries). Termed the “neoliberal diet” [5], it is energy-dense and nutritionally compromised “junk” food. It is high in sugar (much of which consists of high-fructose corn syrup), salt and fat, and it has low nutritional value. Its emergence was favoured by US agricultural subsidy policies. From a dental perspective, it is particularly worrisome to see the marketing of sugar-laden food and drink continuing unabated, with the true sugar content unapparent to most consumers. Consider too, that the bulk of the world’s food brands are owned and controlled by 10 multinational companies, corporate interests whose purpose is the global accumulation of capital in the absence of any legal obligation to ensure the health and welfare of the citizens of the countries involved. Those 10 companies are Pepsico, General Mills, Kellogg’s, Associated British Foods, Mondeléz, Mars, Danone, Unilever, Coca Cola and Nestlé. Data on their 2016 revenue and profits are freely available (with the exception of Mars) and show that the overall sector made a total profit of more than USD 36 billion on revenue of USD 393 billion in 2016. In the meantime, obesity and ECC rates continue to climb.

A recently published innovative research project used wearable cameras on 12-year-old Wellington (New Zealand) children to record their exposures to food marketing over four consecutive days, including a weekend [7]. It found that their daily number of exposures to marketing for non-core foods (energy-dense, nutrient-poor foods and beverages such as fast food and soft drinks) was more than twice that of their exposures to marketing for core foods (a mean 27 and 12 times per day, respectively). Those exposures occurred in multiple settings, such as on the way to school, at school, and in the home.

These data indicate that “voluntary industry guidelines” for limiting such marketing are failing to work, and that more restrictive State intervention is required. Dental researchers and practising dentists will need to step up and show leadership in advocating for such a change. Effecting change will be difficult, not least because of the well-funded and multifaceted lobbying efforts of multinational food marketers, but the public health deserves nothing less.

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