

This is an Open Access document downloaded from ORCA, Cardiff University's institutional repository: <https://orca.cardiff.ac.uk/id/eprint/154821/>

This is the author's version of a work that was submitted to / accepted for publication.

Citation for final published version:

Cope, Anwen Louise and Chestnutt, Ivor Gordon 2023. The implications of a cost-of-living crisis for oral health and dental care. *British Dental Journal* 234 , pp. 501-504. 10.1038/s41415-023-5685-0

Publishers page: <https://doi.org/10.1038/s41415-023-5685-0>

Please note:

Changes made as a result of publishing processes such as copy-editing, formatting and page numbers may not be reflected in this version. For the definitive version of this publication, please refer to the published source. You are advised to consult the publisher's version if you wish to cite this paper.

This version is being made available in accordance with publisher policies. See <http://orca.cf.ac.uk/policies.html> for usage policies. Copyright and moral rights for publications made available in ORCA are retained by the copyright holders.



The implications of a cost-of-living crisis for oral health and dental care.

Anwen Louise Cope, Senior Clinical Lecturer and Hon Consultant in Dental Public Health.

Ivor Gordon Chestnutt, Professor and Hon Consultant in Dental Public Health.

Cardiff University Dental School

Heath Park

Cardiff

CF14 4XY

Corresponding author:

Prof I.G. Chestnutt

Cardiff University Dental School

Heath Park

Cardiff

CF14 4XY

Tel 029 2074 6680

E-mail chestnuttig@cardiff.ac.uk

Key words: Public Health Dentistry, poverty, health status disparities, social class, dental caries.

Abstract

A cost-of-living crisis is currently affecting the United Kingdom. While this has been explored in terms of the effect on dental practice, the dental implications for patients and for population oral health have not received sufficient attention. This opinion piece discusses how: (i) financial pressures leading to hygiene poverty may limit ability to afford the basic products necessary to maintain oral hygiene; (ii) food insecurity is associated with a diet high in sugar and lacking in appropriate nutrition; and (iii) reduced disposable income may limit ability to attend and successfully engage with dental care. The impact of the cost-of-living crisis on the lowest paid members of the dental team is also considered.

The most common dental diseases are closely correlated with social and economic deprivation and the points discussed here act as a reminder of how the present financial circumstances have significant potential to widen oral health inequalities.

Key points

- The cost-of-living crisis currently affecting the United Kingdom has the potential to impact significantly on oral health and to widen oral health inequalities.
- Adhering to the simple messages of twice daily toothbrushing with a fluoride toothpaste, reduction in sugar consumption and dental attendance are adversely impacted by hygiene poverty, food insecurity and a reduction in disposable income.
- Discussions about the cost-of-living in dentistry should also consider the impact of the crisis on the lowest paid members of the dental team.

The problem

“Please sir, my brother went to stay with my dad last night and he took the toothbrush.” This explanation was offered by a twelve year old girl to an author of this paper (IGC) as an explanation as to why her oral hygiene was less than ideal, in spite of a long discussion on the topic at a previous dental visit. The child was being totally honest. It says everything about her family and personal circumstances. This incident occurred more than 30 years ago but its impact was such that it has been used when teaching successive cohorts of dental students in the time since. It is a stark reminder that many who we care for do not live in the same circumstances as us. To think that there might only be one, or no, toothbrushes in a home comes as a shock to many dental students.

Dental caries is a disease of poverty and poor oral health is significantly related to social and economic disadvantage. Much has been written in the pages of this journal^{1,2,3} and its sister publications^{4,5,6} in recent months about the impact of the current economy on the dental profession and dentistry but have we thought sufficiently about how the current cost-of-living crisis is impacting society and the patients that we are here to care for?

The basics of securing oral health are:

- Brush your teeth twice a day with a fluoride-containing toothpaste
- Reduce both the amount and frequency of free-sugar consumption
- Visit your dentist regularly.

These simple actions are currently in peril for many people. This article discusses the cost-of-living crisis from the perspective of poor people and the impact that it is likely to have on their access to dental care and their oral health.

Hygiene poverty

The term “hygiene poverty” has received attention in relation to menstrual health^{7,8} but what about those who cannot afford the personal products needed to maintain their oral health? What if your personal circumstances and disposable income is such that you cannot afford to buy toothbrushes and toothpaste for your children, or that the toothbrush has to be shared?

The Hygiene Bank defines hygiene poverty as, “not being able to afford many of the everyday hygiene and personal grooming products most of us take for granted.”⁹ Hygiene poverty occurs when people’s household income is such that they face a choice between paying the rent, heating their home, eating or keeping themselves clean.

Charities are reporting families asking for toiletries such as toothbrushes.¹⁰ A recent survey conducted by YouGov estimated that 3,150,000 adults in the UK – 6.5% of the population, are currently experiencing hygiene poverty.¹¹ Of a sample of 2,006 people experiencing hygiene poverty, 28% said that they had gone without toothpaste, toothbrushes or essential dental products. Hygiene essentials were reported as being bottom of the list when budgets were tight.¹¹ As is often the case, vulnerable groups are disproportionately affected by hygiene poverty – individuals from ethnic minority groups and those with a disability or long-term health condition are more likely to report hygiene poverty.¹¹

There is some evidence that providing families of young children with toothbrushes and fluoride toothpaste (within a multicomponent programme) result in overall cost savings to a healthcare service.^{12,13} Oral health improvement programmes such as Designed to Smile (Wales)¹⁴ and Childsmile (Scotland)¹⁵ recognise that implementing supervised toothbrushing in schools will not achieve their full potential if children do not have access to the wherewithal to brush their teeth at home. For this reason packs containing toothbrushes and toothpaste for home use are delivered as part of these schemes.

We know that the improvements that have been seen in oral health in the United Kingdom over the past four decades are in large part due to twice daily use of fluoridated toothpaste. If those who are most susceptible to dental caries can no longer afford a toothbrush and toothpaste then inequalities in oral health can only widen.

Food Insecurity

The Food and Agriculture Organization (FAO) of the United Nations defines food insecurity as a “lack of regular access to enough safe and nutritious food for normal growth and development and an active and healthy life.”¹⁶ Whilst food insecurity is mostly associated with the developing world, moderate or severe food insecurity also exists in high-income

countries. Approximately 8% of the population in North America and northern Europe, around 88 million people, were food insecure in 2017-19.¹⁷ Unsurprisingly, higher rates of food insecurity are more prevalent in households of lower socio-economic position, in disadvantaged communities, and among lower income households.¹⁸ However, poverty (defined as 60% of the median equivalised net household income) and food insecurity are not synonymous. A fifth of individuals in poverty are food insecure, compared to 4% of individuals not in poverty.¹⁹ Children in poverty are the most likely to be suffering from food insecurity and families consisting of single adults with children in poverty are particularly vulnerable. Comparatively, pensioners in poverty are the least likely to be food insecure.¹⁹

Lower income households spend a higher percentage of their budget on food. The average UK household spends 11% of their weekly budget on food, while for the lowest 20 per cent of households by equivalised income, this is closer to 15%.²⁰ Being poor is expensive. Examples of the 'poverty premium' include the use of pre-paid utility meters, dearer insurance policies and more expensive credit. Food is also typically more affordable when bought in bulk, but what happens if you don't have the facilities to refrigerate or freeze food or can't afford to turn on your oven? The inability of low income households to access the best deals for food and services exacerbates pre-existing inequalities in society.

Food insecurity is not only about being able to afford enough food but also being able to afford food that is nutritious. The dietary quality of food purchased by food insecure households is lower than that of food secure households. There is a consistent inverse association between food insecurity and intake of nutrient-rich foods such as fruit and vegetables.²¹ Similarly, consumption of energy dense foods such as high-fat dairy products, salty snacks, and sugar-sweetened beverages is higher among food insecure households.^{22,23} There is also evidence of a strong, consistent and dose-response relationship of food insecurity with lower vegetable intake among children aged 1-5 years and strong and consistent evidence of higher added sugar intake among food-insecure children aged 6-11 years compared with food-secure children.²⁴ Of specific relevance at the present time, analysis of food bank parcels distributed in Oxfordshire found that they exceeded energy requirements and provided disproportionately high sugar and carbohydrate compared to UK guidelines.²⁵

Foodbanks which act to alleviate food insecurity are now a feature of most communities in the United Kingdom and while they play an important role in preventing people going hungry, evidence suggests that they will not make reducing dietary sugar intake and compliance with nutritional guidelines any easier. The increasing prevalence of food insecurity leading to poorer health outcomes becomes a stubborn cycle leading to chronic disease and adverse quality of life.

Access to and paying for dental care

Access to NHS dental care and the difficulties therein have in recent months received endless attention in the broadcast, print, social and specialist dental media. In the latter the attention has most commonly focused on the difficulties facing dental providers as they struggle with the aftermath of the pandemic and the shortcomings of NHS funding and contracting arrangements. Less attention has been paid to how the cost-of-living crisis has impacted on patients.

Dentistry can offer more than the State can afford to pay for – dental implants and tooth whitening being just two examples. As a result, a two tier system in the provision of dental care has existed for a long time. It is simply a fact of life that not everyone can be provided with, or afford, “high-end” treatments. Not being able to afford what they would ideally like from dental care, or anxiety about finding out how much dental care would cost in advance of attending, has long been an issue.

However, the current cost-of-living crisis means we are now experiencing an era where more patients may not be able to afford even basic NHS dental care. Whilst there is no patient charge for those who are in receipt of certain state benefits and an NHS low income scheme that will assist some low earners, as always in any means tested system, it is those who just fail to qualify that are likely to be worst affected.

In recent months the press has been rife with stories of those who have resorted to Do-It-Yourself dentistry.^{26,27} Sometimes attributed to the inability to find a dentist,²⁸ or inability to pay for care. A case headlined by the British Broadcasting Corporation, “I had to choose between heating or my teeth”, reported on a patient opting to pay £50 to have her tooth

extracted rather than paying £1,000 for a root-filling and crown to save the tooth due to the energy crisis.²⁹

The Money and Pensions Service, an arm's length body sponsored by the Department of Work and Pensions, recently commissioned a survey which claimed that one in six adults in the United Kingdom, nine million people, have no savings. Another five million have less than £100 in savings.³⁰ Consider these findings in light of the cost of dental care. Even if provided via the National Health Service, it is easy to see the dilemma that those most likely to experience a dental emergency are likely to find themselves in.

The establishment of urgent treatment centres may go some way to alleviating access issues but if these are a distance from people's homes can they afford the costs to travel there, whether reliant on public transport or needing to buy fuel to travel by car? "Visiting your dentist regularly" is an unaffordable expense for many of those in our society who would most benefit from such a visit.

The cost-of-living crisis for dental staff

A charity has the tag line, *The opposite of poverty is not wealth, the opposite of poverty is enough.*³¹ This leads to one final consideration in relation to the present cost-of-living crisis, not this time concern for patients, but for staff. Dental nurses are essential to the success of a dental practice,³² yet Sellars,³³ commenting on the largest sector of the dental workforce, said dental nurses feel "overworked, undervalued and underpaid". Perhaps it is not only the person in your dental chair that is struggling to heat their home or feed their children. It may also be true of the person sitting on the other side of the chair.

Being in work is no longer a defence against poverty. In a recent publication, the highly regarded Joseph Rowntree Foundation stated that around two-thirds (68%) of working-age adults in poverty live in a household where at least one adult is in work.¹⁹ Since 2011/12 the employment sector which has seen the greatest increase in poverty for those in work is the human health and social care sector.¹⁹

As of November 2022 UK National Living Wage (for those aged 23 and over) is £9.50 per hour. This equates to an annual full-time salary of between £17,290 and £23,712, depending

on the exact hours worked. However, it is argued that the National Living Wage provides insufficient resource to facilitate the opportunities and choices necessary to participate in society.¹⁹ Instead, the Joseph Rowntree Foundation propose a Minimum Income Standard, a public consensus on the financial resource that households need in order not just to survive, but to live with dignity. For a single person in 2022 this is £25,500 and for a single parent with two young children would be £38,400.¹⁹ In contrast, the most recent Salary Review by the British Association for Dental Nurses reported that 73% of dental nurses earned under £20,000 per annum. Two thirds of dental nurses responding worked full time. The majority live with partners/spouses and their children and 31% claimed to be the primary earner in the household. Further, 16% of dental nurses said that they had a second job, just under half of these reporting that their second job was necessary to meet basic needs.³⁴

One response to disparity between dental nurses' salaries and cost-of-living may be the trend towards agency nursing or self-employment.³⁵ Of the 65% of dental nurses responding to a 2020 survey who reported considering leaving the profession, pay was the most commonly cited factor.³⁶ When training, registration, indemnity and CPD costs are also considered, its perhaps not surprising why alternative employment opportunities outside dentistry are a rational financial decision for some dental nurses and their families.

It is beyond the experience the authors of this article to discuss the complexities of practice ownership and employee pay, particularly within the fixed financial envelope of NHS practice. This is however, an opportunity to call for wider recognition of our lowest-paid colleagues and to highlight the moral responsibility we have to ensure that those employed in dentistry have the means by which to live in dignity and fully participate in society.

Conclusions

As everyday costs continue to rise, many of our patients and the communities which we serve are likely to experience difficulties securing the basics to achieve good oral health. This impact will not be felt equally. Targeted support is needed for those most at risk of experiencing food insecurity, hygiene poverty and financial barriers to dental care. However, in an already over-stretched health and social care system and fragmented state-benefits structure, it seems more likely than ever that these individuals will fall through the gaps.

Short-term Government assistance and the services of third-sector organisations can only go so far in off-setting rising prices for some of the most vulnerable households and does nothing to improve the forecast for those currently struggling to get by day to day.

Conflict of interest statement. The authors declare that they have no conflict of interest.

Ethical Approval: Not required as no primary research involving humans involved.

References

- 1 Barnfather P. Managing your finances in a cost of living crisis. *Br Dent J* 2022; **233**: 433.
- 2 Ahmed K. How to save during a cost of living crisis. *Br Dent J* 2022; **233**: 236.
- 3 British Dental Association. 'NHS dentistry is light years away from where it needs to be'. *Br Dent J* 2022a; **233**; 374.
- 4 Westgarth, D. How much longer does NHS dentistry have left? *BDJ In Pract* 2020; **33**: 12–15.
- 5 Davis A. (2021) 'We as a profession have been put to the test over the last 12 months'. *BDJ Team* 2021; **8**: 16–18.
- 6 British Dental Association. NHS dentistry: Little evidence Ministers are ready to honour pledges on reform. *BDJ In Pract* 2022b; **35**: 9.
- 7 Rimmer A. BMA calls for end to period poverty. *Brit Med J* 2018; **361**: k2811
- 8 Boyers M, Garikipati S, Biggane A, Douglas E, Hawkes N, Kiely C, et al. Period poverty: The perceptions and experiences of impoverished women living in an inner-city area of Northwest England. *PLoS ONE* 2022; **17**: e0269341.
- 9 The Hygiene Bank. 2022 What is hygiene poverty?
<https://thehygienebank.com/who-we-are/what-is-hygiene-poverty/> (Accessed November 2022)

- 10 Salvation Army 2022 The children in poverty wishing for a new toothbrush this year. <https://www.salvationarmy.org.uk/news/children-poverty-wishing-new-toothbrush-year> (Accessed November 2022)
- 11 YouGov (2022) The Hygiene Bank: Hygiene Poverty 2022. <https://thehygienebank.com/wp-content/uploads/2022/11/Hygiene-Bank-2022-Hygiene-Poverty-report-v9.0.pdf> (Accessed November 2022)
- 12 Atkins C Y, Thomas T K, Lenaker D, Day G M, Hennessy T W, Meltzer M I. Cost-effectiveness of preventing dental caries and full mouth dental reconstructions among Alaska Native children in the Yukon-Kuskokwim delta region of Alaska. *J Public Health Dent*. 2016; **76**: 228-240.
- 13 Edelstein B L, Hirsch G, Frosh M, Kumar J. Reducing early childhood caries in a Medicaid population: a systems model analysis. *J Am Dent Assoc* 2015; **146**: 224-32.
- 14 Designed to Smile (2022) Designed to Smile <https://phw.nhs.wales/services-and-teams/designed-to-smile/> (Accessed November 2022)
- 15 Childsmile 2022 Childsmile – improving the oral health of children in Scotland <https://www.child-smile.org.uk/> (Accessed November 2022)
- 16 Food and Agriculture Organisation of the United Nations. (2022), Hunger and food insecurity. <http://www.fao.org/hunger/en/> (Accessed November 2022).
- 17 FAO (Food and Agriculture Organisation), IFAD (International Fund for Agricultural Development), UNICEF (United Nations International Children’s Emergency Fund), WFP (World Food Programme) & WHO (World Health Organization). 2020. The State of Food Security and Nutrition in the World 2020. Transforming food systems for affordable healthy diets. Rome, FAO. <https://doi.org/10.4060/ca9692en> (Accessed November 2022)
- 18 Van der Velde L A, Schuilenburg L A, Thriwikraman J K, Nuumans M E, Kiefte-de Jong J C. Needs and perceptions regarding healthy eating among people at risk of food insecurity: a qualitative analysis. *Int J Equity Health* 2019; **18**: 184.

- 19 Joseph Rowntree Foundation. (2022) UK Poverty 2022: The essential guide to understanding poverty in the UK. [UK Poverty 2022: The essential guide to understanding poverty in the UK | JRF](#) (Accessed November 2022).
- 20 DEFRA (2022) Family Food 2019/20. <https://www.gov.uk/government/statistics/family-food-201920/family-food-201920> (Accessed November 2022)
- 21 Hanson K L, Connor L M. Food insecurity and dietary quality in US adults and children: a systematic review. *Am J Clin Nutr* 2014; **100**: 684–692.
- 22 Leung C W, Epel E S, Ritchie L D, Crawford P B, Laraia B A. Food insecurity is inversely associated with diet quality of lower-income adults. *J Acad Nutr Diet*. 2014; **114**: 1943–53.e2.
- 23 Asfour L, Natale R, Uhlhorn S, Arheart K L, Haney K, Messiah S E. Ethnicity, household food security, and nutrition and activity patterns in families with preschool children. *J Nutr Educ Behav* 2015; **47**: 498–505.
- 24 Eicher-Miller H A, Zhao Y. Evidence for the age-specific relationship of food insecurity and key dietary outcomes among US children and adolescents. *Nutr Res Rev* 2018; **31**: 98-113. Epub 2018 Jan 10. PMID: 29318982.
- 25 Fallaize R, Newlove J, White A, Lovegrove J A (2020) Nutritional adequacy and content of food bank parcels in Oxfordshire, UK: a comparative analysis of independent and organisational provision. *J Hum Nutr Diet* 2020; **33**: 477– 486.
- 26 Duffield C. (2022) “I pulled out five of my teeth”: the rise of DIY dentistry. <https://metro.co.uk/2022/08/12/in-focus-i-pulled-out-five-of-my-teeth-the-rise-of-diy-dentistry-2-17172619/> (Accessed November 2022)
- 27 Plckover E, Luckhurst J. (2022) UK adults admit to conducting “DIY dentistry” amid access crisis according to poll. <https://www.mirror.co.uk/news/uk-news/uk-adults-admit-conducting-diy-28042173> (Accessed November 2022)

- 28 Ferguson S. (2022) Patient “glued own teeth” as dentists drop NHS work. British Broadcasting Corporation. <https://www.bbc.co.uk/news/uk-59874320> (Accessed November 2022).
- 29 Martin P (2022) Cost of living: “I had to choose between heating or my teeth”. British Broadcasting Corporation. <https://www.bbc.co.uk/news/uk-wales-61381471> Accessed 07/11/2022 (Accessed November 2022)
- 30 The Money and Pensions Service 2022
<https://moneyandpensionservice.org.uk/2022/11/07/one-in-six-uk-adults-have-no-savings/> (Accessed November 2022)
- 31 Compassion 2022 Releasing children from poverty
<https://www.compassion.com/poverty/opposite-of-poverty.htm> (Accessed November 2022).
- 32 FMC. 2022. Dentistry Census. <https://dentistry.co.uk/2022/02/03/dentistry-census-launches-taking-a-deeper-looking-at-dentistry-in-the-uk/> (Accessed November 2022)
- 33 Sellars S. Workforce. *Br Dent J* 2021; **231**: 321.
- 34 British Association of Dental Nurses 2020 BADN Salary Survey 2020
<https://www.badn.org.uk/common/Uploaded%20files/2020%20Salary%20Survey%20-%20FULL%20REPORT.pdf> (Accessed November 2022)
- 35 Bissett G. 2022. Dentistry Census – what does the cost of living crisis mean for dental nurses? Available at : <https://dentistry.co.uk/2022/08/10/dentistry-census-what-does-the-cost-of-living-crisis-mean-for-dental-nurses/> (Accessed November 2022)
- 36 Dingle M, Balmer C. The impact of COVID-19 on dental nursing - The forgotten profession. *BDJ Team* 2021; **8**: 14–19.