Addressing oral health inequalities

Maggie Nash* says that health care professionals need to deliver consistent healthy eating messages if oral health strategies are to be effective.

Editor's note: This article and the figures used are adapted for Vital *from a poster created by Maggie Nash.*

My poster

I designed a poster titled 'Healthy eating advice to address oral health inequalities' to inform an audience of dental care professionals (DCPs). The poster targets those suffering health inequalities as a result of poor dietary choices[1] and is fully referenced and evidence-based. Dental terminology has been kept to a minimum to make the information accessible to health care professionals (HCPs)[2] and anyone else with an interest in healthy eating.

Risk factors

The poster aims to highlight the common risk factor links between social inequalities, dietary choices and both general and oral health inequalities, and thus the importance of collaboration between disciplines and agencies.[3] It illustrates some of the inconsistencies and conflict apparent in healthy eating information, and by implication, the low status of oral health.[4] It suggests ways in which DCPs can address the issues around health inequalities and healthy eating advice and the collaborative partners that could support the integration of oral health issues into mainstream health promotion via the Common Risk Factor Approach (CRFA).[3] The ultimate goal of the poster is to support the inclusive and proportionate public health approach required to reduce the social gradient in health.[5]

Social gradient

The Marmot Review[5] links health inequalities with social inequalities and describes the social gradient in health whereby health experience is linked to social status. This suggests that health inequalities are not just the preserve of the poorest members of society, but are *proportionate* according to social status.[5] Action to overcome health inequalities must therefore encompass all sections of society to avoid widening the gap between rich and poor.[3] To place healthy eating advice within this social context, it is necessary to examine dietary choices according to social status.

Lower socio-economic groups are widely acknowledged as having lower dietary status, with poor diet or poor consumption habits linked to education, culture, skills, income or access.[6] The World Cancer Research Fund (WCRF) suggests simply that the higher cost of healthy foods makes their purchase prohibitive for poorer families.[7] However, Figure 1 shows that the proportion of adults eating five or more portions of fruit and vegetables per day by household income is proportionate, mirroring the social gradient in health.[8]

With poor diet linked to conditions such as coronary heart disease, diabetes, cardiovascular disease, obesity, cancer and stroke,[1] this more complex view appears to confirm the notion that the incidence of such conditions will be proportionate according to social status.

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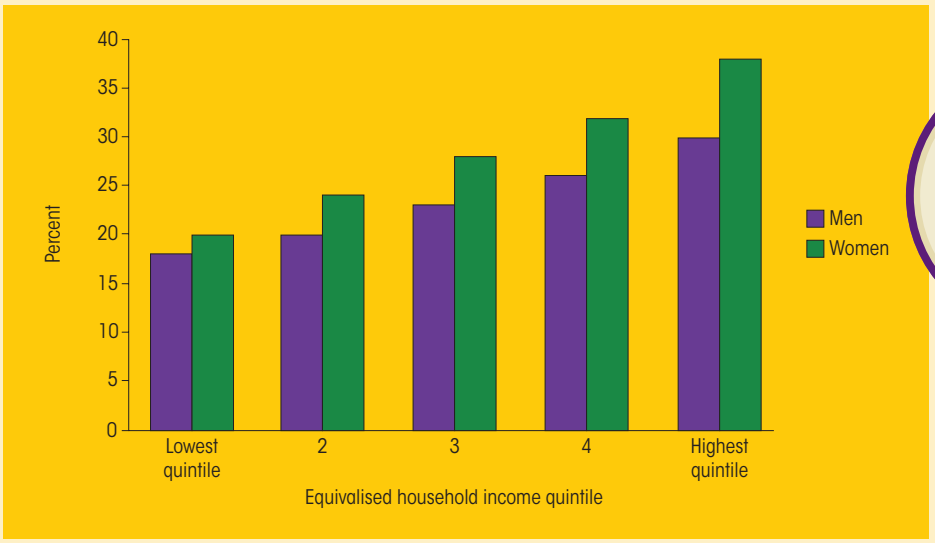


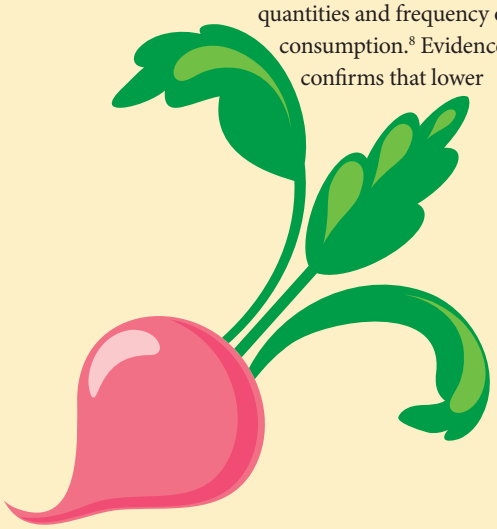
Fig. 1 Proportion of adults eating five or more portions of fruit and vegetables per day, by equivalised household income quintile

Diet choices

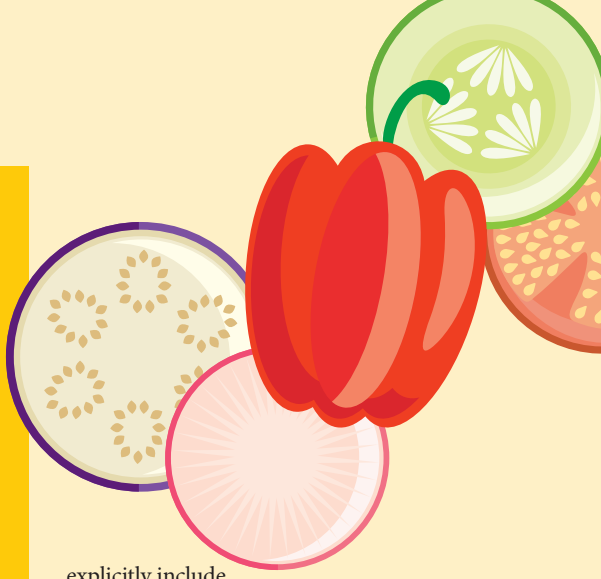
Healthy eating advice therefore aims to promote good health by encouraging all sections of society to make diet choices which are healthier, both nutritionally and in terms of calories consumed versus calories expended.[9] Furthermore, healthy eating advice forms the basis for many health improvement interventions proposed by government, government organisations, local authorities, health promotion charities and even supermarket chains.[3,10-12]

Evidence suggests that the public are bored by healthy eating advice and confused by nutritional labelling on food items.[13] This may explain why many of the agencies involved with promoting accessible healthy eating advice use colourful and/or cartoon style logos to create interest.[4] Examples were included on my poster to highlight the variety and wealth of information available.

In terms of oral health, healthy diet is paramount for prevention of oral diseases such as caries, acid erosion and oral cancers.[14] The relationship between diet and oral diseases is dependent on what is consumed and the quantities and frequency of consumption.[8] Evidence confirms that lower socio-economic groups are consuming a poorer quality diet, but are further subject to poor dental health for a variety of other reasons, such as pollution, smoking, education, access, ethnicity and cost. They are also less likely to be accessing dental services on a regular basis.[15] Figure 2 from the poster provides evidence of caries experience in relation to social class in children.[16]



The poster provides a brief evaluation of some of the healthy eating research and advice available in relation to oral health, much of which is problematic. For example, there is a wealth of research available relating to the issue of healthy eating in the UK. Using the Google search engine returns almost 1.5 million hits for 'healthy eating'. However, adding 'for oral health' to the search string reduces the number of hits to under 72,000. Moreover, oral health does not always appear to be explicit in the accessible non-dental research available. Furthermore, the term 'healthy eating' does not explicitly include drinks, a major source of dietary sugars responsible for both caries and acid erosion.[14,17]



In addition, there is confusion within areas of health promotion over what is healthy for the body but of risk to oral health and vice versa. For example, dried fruit is considered a low-fat snack, ideal for tackling obesity, but it presents a high caries risk. Conversely, cheese reduces acidity levels in the mouth, contributing to remineralisation and therefore oral health, but it has a high fat content so is not considered good for general health.[9] This conflict and the implied lower status of oral health are apparent in the government's Change 4 Life campaign. The website recommends cariogenic snacks such as dried fruit and fizzy drinks made with fruit juice and lemonade. Furthermore, none of the advice, health toolkits or 'Links and Resources' take account of, or have links with oral health.[4] Moreover, the Change4Life website is in conflict with the government's Scientific Advisory Committee on Nutrition (SACN) and the FSA. The FSA *Manual of nutrition* establishes the links between sugar intake and dental caries.[18] However, the information within the FSA website is also contradictory, recommending dried fruit for snacking on the

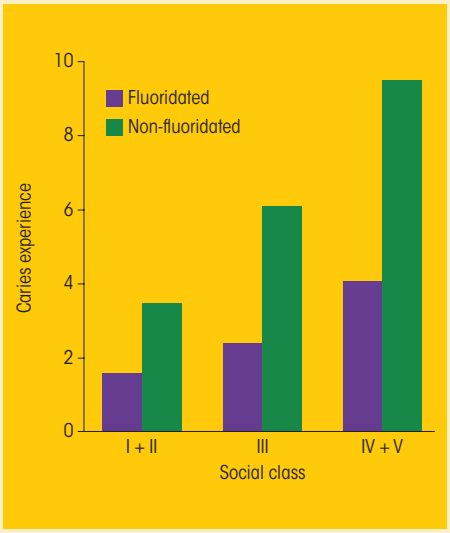


Fig. 2 Caries experience of 5-year-old children in fluoridated Newcastle and non-fluoridated Northumberland in three social class groupings[16]

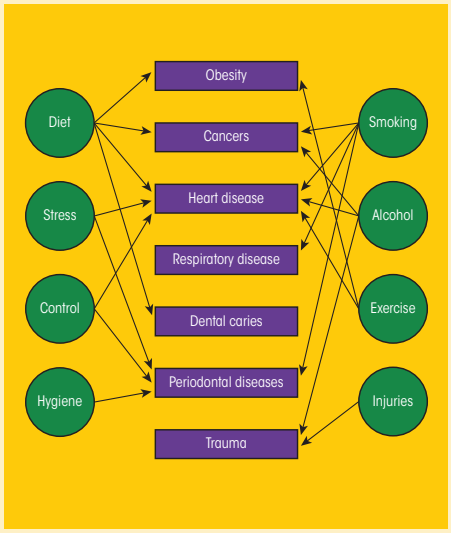


Fig. 3 The common risk factor approach highlighting the links between diet, general health and oral health conditions[26]

'Incorporating trained and knowledgeable DCPs into all aspects of health promotion would ensure that dental risk elements become subsumed.'

one hand,[19] but stating that dried fruit is high in sugar and presents a caries risk on the other.[20,21]

Tobacco

Significantly, chewing tobacco is not addressed in healthy eating advice, in spite of evidence that it is used as a dietary treat.[9] Betel Nut Quid, Paan or Gutkha are chewing tobaccos which can be combined with vegetable matter and flavoured with spices, citrus fruits and even chocolate. These products are often used by whole families as a snack or to refresh the mouth after a meal, since chewing tobacco is socially acceptable within the Indian culture. As a result, pre-teenage children are presenting with pre-cancerous lesions.[22] However, chewing tobacco is referred to only in terms of smoking cessation advice.[9] This would suggest that children at risk of developing oral cancers may be missed because they are not representative of traditional tobacco users.

Each of these examples appears to be indicative of the apparently low status of oral health considerations in the area of healthy eating advice. The evaluation highlights the omissions and inconsistencies that surround healthy eating advice to address oral health inequalities. The poster suggests that there are many and varied ways in which DCPs can be involved in addressing these issues.

An evidence-based approach

The first suggestion is that DCPs must employ an evidence-based approach using reliable guidance.[23] Many of the poster recommendations are based on activity in practice, for example, incorporating evidence from the *Delivering better oral health* toolkit into all dealings with patients in general, community or hospital practice.[9] Similarly, training DCPs as formal oral health educators, providing a level of expertise and communication skills to encourage health eating behaviour change in patients.[24] Dietary supplements of fluoride, while not considered an effective measure for the majority, may be appropriate for some 'at-risk' groups, such as those with pre-disposing medical conditions or other special needs and could be further promoted.[14]

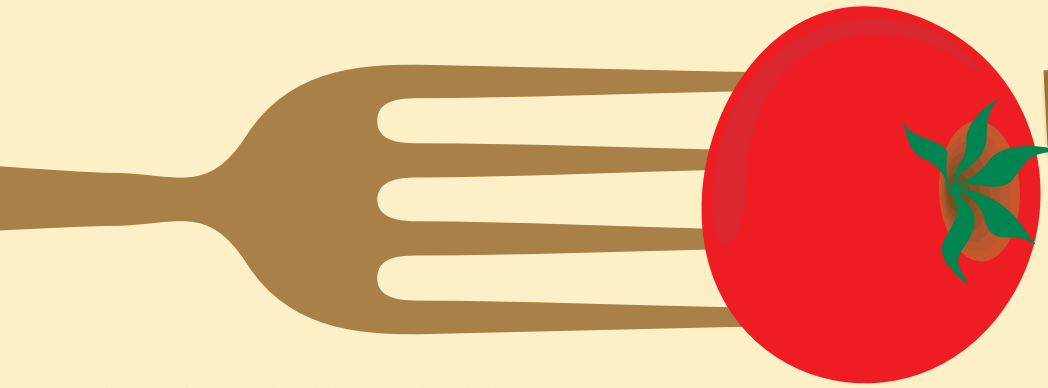
However, oral health shares common risk factors with other diseases and as such should be recognised as part of the wider public health agenda.[3] Therefore, incorporating trained and knowledgeable DCPs into all aspects of health promotion would ensure that dental risk elements become subsumed. Consequently, further suggestions for DCPs involve the wider community and 'Communities of Practice' (CoP), where CoP are defined as, 'Groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly'.[25]

Maggie (back row, far right) with fellow students studying for the BSc in Primary Dental Care at the University of Kent

Whitehead similarly suggests that interventions should be interconnected across sectors and adopt far wider approaches, to include communities, environment and policy.[6] Outreach programmes promoting healthy eating advice for prevention of oral diseases are necessary for capturing those not accessing primary dental care services.[15] Furthermore, the oral health agenda would benefit from improved links between Public Health (PH) and Dental Public Health (DPH) practitioners and widespread adoption of a CRFA.[3] The poster reinforces the idea of the CRFA by incorporating Sheiham and Watt's visual representation (Fig. 3).[3]

Furthermore, CoP are implicit in the suggestions for integrating oral health into general health promotion through collaborative partnerships. The partnership recommendations mirror those proposed by government.[3] The list includes both HCPs and non-HCPs, such as educators, commercial organisations and community groups. With PH and DPH moving to local authority control, and health inequalities clearly linked to social inequalities, it is imperative that healthy eating advice is not seen as the preserve of HCPs and the NHS, but a joint responsibility.[5]

Finally, the poster provides further recommendations for addressing the issue of healthy eating advice to tackle oral health inequalities. Marmot[5] recommends action against *all* of the social determinants of health to improve health and well-being for all, while



‘Programmes promoting healthy eating advice are necessary for capturing those not accessing primary dental care services.’

Choosing better oral health: an oral health plan for England recommends the integration of oral health into general health promotion. It further recommends a range of complementary PH strategies.[26] For strategies to be complementary and effective, calibration and consistency of message from all partners is imperative.[9]

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