

Oral health waits another seven UN years

D. Croser¹

Key points

Non-communicable diseases (NCDs) create a huge strain on the healthcare budget.

Oral diseases share common risk factors and biological pathways with other NCDs. A bi-directional relationship has been demonstrated.

Measurable improvement in oral health has the potential to reduce the budgetary impact of NCDs and create scope for remuneration of the dental healthcare workers involved.

An opportunity for oral health to be placed on the agendas of world leaders and policy makers arose and was then omitted at a recent meeting of the General Assembly of the United Nations (UN). The opening arose during a high-level meeting (27 Sept 2018) that was convened to discuss the global impact of non-communicable diseases. However, in the event, oral health was never singled out during the presentations nor was it included in the final political declaration committing signatories to take action on its 34 clauses. Sadly, the next opportunity is not until 2025.

Background to this unusual event

In September 2011 a rare medical debate was tabled at the UN which had been convened to discuss the global impact and the economic implications of non-communicable diseases (NCDs). The World Health Organisation (WHO) might usually be regarded as the natural forum for this and indeed, 2011 was only the second time in the UN's history that health had been discussed by the member states; the first time being 2001, when the topic was HIV/aids.

The 2011 meeting recognised NCDs as the leading cause of death and morbidity globally and noted their role in 'driving a downward push towards worsening poverty everywhere.' One hundred and ninety-three member states signed the Political Declaration on Prevention and Control of NCDs, which included Article 19: 'renal, oral and eye diseases pose a major health burden for many countries and that these diseases share common risk factors and can benefit from common responses to non-communicable diseases.'¹

Correspondence to: David Croser
Email: davidcroser@me.com

Refereed Paper. Accepted 9 October 2018
DOI: 10.1038/sj.bdj.2018.1021

The cost of NCDs

A report prepared by the World Economic Forum and the Harvard School of Public Health,² in advance of the 2011 UN Summit, identified five key points around the financial burden of the major NCDs:

- Cardiovascular disease
- Chronic respiratory disease
- Cancer
- Diabetes
- Mental illness.

1. These five NCDs could contribute a cumulative output loss of US\$ 47 trillion in the two decades from 2011, representing a loss of 75% of global GDP in 2010 (US\$ 63 trillion)
2. As economies, ages and populations in low and middle income countries grow, they are likely to overtake high income countries in terms of growth in the burden of NCDs
3. Cardiovascular disease and mental health conditions contribute the greatest economic burden of NCDs
4. Business leaders throughout the world are concerned about the impact of NCDs, more-so than concerns about communicable diseases
5. There are options available to prevent and control NCDs, such as WHO's 'Best Buys',

behaviour change interventions, and more cost-effective models of care which also alleviate the burden on family-carers.

The international dental community was alert to the discussion about NCDs at the 2011 UN Summit – seeing an opportunity to move dentistry out of its silo and reframing it within the wider healthcare picture.^{3,4} There would be budgetary implications associated with tackling the oral disease, but as the main risk factors were the same as for other NCDs, it could be beneficial if more than one branch of healthcare worked together, sharing the national budget between medical and dental healthcare workers.

What would it cost?

The investment required to reduce and prevent NCDs has been estimated to be around US\$ 11.2 billion per year, or on a per-capita basis, in the much lower range of US\$0.40 to US\$3 in upper middle-income countries.

WHO is currently developing a comprehensive global monitoring framework with voluntary global targets and indicators for NCDs. In support of these, the World Dental Federation (FDI) published its 2020 strategic plan.⁵

Oral health as a fundamental human right

According to the FDI: 'Oral diseases affect 3.9 billion people globally and have a significant impact on individuals, communities, health systems, economies and society at large. Consequences of oral disease on individuals are both physical and psychosocial. Yet despite their magnitude, awareness of oral diseases among politicians, health planners and even members of the public health community remains low. This often leads to oral public health interventions to be regarded as a luxury rather than a fundamental human right.'

'There is clear evidence that oral disease is not inevitable, but can be reduced or prevented through simple and effective measures at all stages of the life course, both at the individual and population levels. Urgent action is needed to avoid escalating costs to governments and individuals as well to control the growing disease burden.'⁶

The FDI also commissioned a think tank to define oral health and adopted the following definition in December 2016.

Revised definition of oral health: 'Oral health is multi-faceted and includes the ability to speak, smile, smell, taste, touch, chew, swallow and convey a range of emotions through facial expressions with confidence and without pain, discomfort and disease of the craniofacial complex.'⁷

Further attributes related to the definition state that oral health:

- Is a fundamental component of health and physical and mental well-being. It exists along a continuum influenced by the values and attitudes of individuals and communities
- Reflects the physiological, social and psychological attributes that are essential to the quality of life
- Is influenced by the individual's changing experiences, perceptions, expectations and ability to adapt to circumstances.

Co-morbidity

Oral diseases share common risk factors and biological pathways with other NCDs and there is now strong evidence demonstrating the relationship between oral disease and a number of other NCDs, such as diabetes, cardiovascular disease, respiratory disease, and gastrointestinal and pancreatic cancers. Some of these relationships appear to be

bi-directional: for example people with diabetes have an increased risk of periodontal disease, and treatment of periodontal disease improves blood glucose levels.

Effective regional and national strategies to promote oral health and prevent oral diseases show that a population-wide improvement of oral health can contribute to the prevention of some of the most significant NCDs.^{8,9}

Getting things moving

There is an evolving debate on the best way to measure oral health and to link the data to patient medical records. By analysing 'big data' in this way, future trends can be followed and effective patient interventions identified.

At the International Association of Dental Research (IADR) 2018 Conference in London, Professor Michael Glick (The University at Buffalo) announced that some American insurance companies would be prepared to pay for any measurable improvements to the oral health of policy holders. Perhaps a similar model could be adopted in the UK, thereby allowing some of the recently announced NHS funding increase to be allocated to the existing NHS dental budget, particularly as an improvement in oral health has been shown to have a positive impact on a variety of NCDs.

At the same IADR meeting, Professor David Williams (Queen Mary University of London) emphasised the need to 'integrate oral health into the NCD agenda and to ensure that oral health was not overlooked. Dentistry sometimes seems to exist in a different silo to healthcare in general.' Here was an opportunity to align the dental profession with the rest of healthcare at a time when funding could become available for an enhanced initiative to manage NCDs.

Healthcare professionals that happen to be dentists

There is a role for all healthcare providers to familiarise themselves with the evidence of the co-morbidity of poor oral health in patients with a second chronic NCD. Healthcare providers are trusted members of the community and have a pivotal role in educating and supporting patients to adopt lifestyle changes in order to reduce the prevalence of NCDs. Remember how long it took to persuade people to stop smoking – yet an integrated approach in the UK involving a variety of channels, eventually changed the way

a nation thought about tobacco products. By repeatedly educating their patients, the dental profession did a lot to bring about that gradual change in behaviour.

The corridors of power

Engaging with governments can also be a slow process, but the voice of dentistry needs to be heard. Fortunately there are always advocates who will speak up for profession and the contribution towards prevention that it has already made, and continues to make. There are also patient-focused organisations such as public health bodies, the NCD Alliance¹⁰ and the Oral Health Foundation¹¹ that actively engage with UK policy makers. The British Dental Association (BDA) and other national dental organisations within the FDI lobby their own governments whenever oral health is on the agenda.

'The BDA fully supports the efforts and activities of the World Dental Federation to ensure that oral health is integrated in the final declaration of the 2018 United Nations High-Level Meeting on NCDs. Oral diseases such as tooth decay (dental caries), gum disease and oral cancer are largely preventable, and yet they are some of the most common diseases across the world. Oral diseases share the same risk factors as the main NCDs such as cancer, diabetes and heart disease, and thus the final UN recommendations must include support for the improvement of oral health. The specific inclusion of oral health in the document also serves to strengthen the argumentation for investment into prevention strategies for the four main NCDs.'

'The BDA has written to Steve Brine, Parliamentary Under-Secretary of State for Public Health and Primary Care, to highlight the importance of the integration of oral health in the final declaration and to support the FDI's and IADR's suggestions for changes to the draft text during the discussions.'

BDA Statement issued August 2018

What happened?

Although some developments were encouraging, oral health was never singled out during the General Assembly presentations¹² nor was it included in the final Political Declaration which only mentioned the other four NCDs (cardiovascular diseases, cancer, chronic respiratory diseases and diabetes). Dental caries, periodontal disease and oral cancer are the

most common and preventable NCDs affecting mankind, but the subject is not up for discussion again by the UN until 2025. The final wording of the Political Declaration¹³ missed a critical opportunity to take targeted action on oral health. Oral diseases already pose a significant healthcare challenge and no country can end an NCD epidemic unless it also makes a commitment to address oral health.

It will take further effort from the national dental associations if the benefits of tackling NCDs can be coupled with recognition of the significant role that dentistry can play alongside other healthcare workers to educate patients as well as offering a clinical intervention to prevent co-morbidity. The FDI has offered to assist countries to 'go beyond the commitments made in the Declaration and pledges to work with its National Dental Associations to uphold countries' commitments and hold

them accountable for their inaction. The time to act on oral health is now.¹⁴

Acknowledgement

Grateful acknowledgement to the inspiring IADR 2018 session chaired by Professors Michael Glick and David Williams and their subsequent advice on the preparation of this text.

1. British Dental Journal. UN Member States recognise oral disease burden. *Br Dent J* 2012; **212**: 400.
2. Harvard School of Public Health and World Economic Forum. The Global Economic Burden of Non-communicable Diseases. 2011. Available at http://www3.weforum.org/docs/WEF_Harvard_HE_GlobalEconomicBurdenNonCommunicableDiseases_2011.pdf (accessed October 2018).
3. Watt R G, Williams D M, Sheiham A. The role of the dental team in promoting health equity. *Br Dent J* 2014 **216**: 11–14.
4. Sheiham A, Williams D M, Weyant R J *et al*. Billions with Oral Disease. *J Am Dent Assoc* 2015; **146**: 861–864.
5. Glick M, Monteiro da Silva O, Seeberger G K *et al*. FDI Vision 2020: Shaping the future of oral health. *Int Dent J* 2012; **62**: 278–291.
6. World Dental Federation. FDI Advocacy Strategy 2018–2020: At a glance. Available at <https://www.fdiworlddental.org/fdi-at-work/advocacy/fdi-advocacy-strategy-2018-2020-at-a-glance> (accessed October 2018).
7. FDI. FDI's definition of oral health. World Dental Federation. Available at <https://www.fdiworlddental.org/oral-health/fdi-definition-of-oral-health> (accessed September 2018).
8. Chapple I, Wilson N. Chronic non-communicable diseases. *Br Dent J* 2014; **216**: 487.
9. Chapple I L, Wilson N H. Manifesto for a paradigm shift: periodontal health for a better life. *Br Dent J* 2014 **216**: 159–162.
10. NCD Alliance. Homepage. Available at www.ncdalliance.org (accessed October 2018).
11. Oral health Foundation. Homepage. Available at www.dentalhealth.org (accessed October 2018).
12. United Nations. Prevention and control of non-communicable diseases. Available at <https://www.un.org/pga/72/event-latest/prevention-of-non-communicable-diseases/> (accessed September 2018).
13. NCD Alliance. Time to deliver: Accelerating our response to address NCDs for the health and well-being of present and future generations. Available at https://ncdalliance.org/sites/default/files/Political_Declaration_final_text_0.pdf (accessed October 2018).
14. World Dental Federation. UN Political Declaration on NCDs lacks bold action and explicit commitments. Available at <https://www.fdiworlddental.org/un-political-declaration-on-ncds-lacks-bold-action-and-explicit-commitments> (accessed September 2018).