

# Dental public health breakthrough

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Imagine your morning and evening routine without brushing your teeth with fluoride toothpaste – an important element of cavity prevention would be missing. This is exactly why the World Health Organisation (WHO), through its Expert Committee on Selection and Use of Essential Medicines, recently amended its Model List of Essential Medicines to include fluoride toothpaste, together with two other oral health-related products: silver diamine fluoride (SDF) and glass ionomer cement (GIC).

What might seem like a technical detail of interest only to pharmaceutical experts is, in fact, a long-awaited breakthrough for public health. The WHO Expert Committee 'noted that the burden of oral diseases, particularly untreated dental caries, represents a significant public health problem globally'.<sup>1</sup> On the two lists for adults and children, a new category for dental preparations was created, and sodium fluoride, which has been on the list under the essential micronutrients category since 1973, was moved into this new section. The truly exciting additions, however, are fluoride toothpaste, SDF and GIC.

The inclusion of these products as essential medicines aligns well with the current international policy landscape for oral health, which is, finally, changing for the better. In May 2021, a momentous resolution on oral health was adopted by the WHO World Health Assembly, requesting the organisation and its Member States to develop a global oral health strategy that should be translated into a global action plan on oral health, including a monitoring framework for oral health covering the coming ten years.<sup>2,3</sup>

According to the WHO, essential medicines should be universally available, accessible and affordable. These medications are the most effective and safe way to address the most important health needs. National lists of essential medicines are following the WHO's global guidance and provide mandates for national health systems to ensure that essential medicines are procured and available.

Moreover, the quality of these medicines should also be regulated so that health benefits are maximised, and harm avoided.

Why do these changes matter for oral health? One may think that fluoride toothpaste is a ubiquitous commodity, yet for many it is unavailable, unaffordable or of dubious quality. A recent WHO study revealed dramatic differences in affordability. The annual supply of fluoride toothpaste costs a UK low-paid unskilled worker the equivalent of about 0.7 working hours; the cost in Benin would be 93 working hours. The problem affects many individuals and families



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in low- and middle-income countries. Other studies showed that standards of labelling and fluoride content for toothpastes need better government regulation and quality control.<sup>4</sup>

SDF has gained renewed attention as a highly cost-effective fluoride agent for non-restorative caries treatment. Its caries-arresting properties and the simplicity of application make it particularly suitable for use by trained non-dental personnel. GIC will gain more importance as an affordable and easy-to-use filling material, especially in view of the clear timeline to phase-down dental amalgam in the context of the United Nations Minamata Convention to Eliminate Mercury.

Having these substances on the WHO Model List of Essential Medicines will help in promoting their widespread use for prevention and oral healthcare, particularly in low- and middle-income countries. A recent study published in the *BDJ* showed increasing usage of non-fluoridated toothpaste, which should be cause for public health concern.<sup>5</sup> Listing fluoride toothpaste as

an essential medicine will give governments new opportunities to tighten regulation or to provide incentives for consumers through subsidies or VAT removal. Various governments worldwide, the UK included, have reduced or abolished VAT on other health-related consumer products such as condoms, menstrual hygiene products, as well as essential medicines. Fiji, for example, has banned the importation and sale of non-fluoridated oral hygiene products as part of public health measures to address caries.

The visionary ambition of the new WHO Global Oral Health Strategy will be 'universal

oral health coverage for all individuals and communities by 2030'. Turning this into reality will require political will, innovative thinking and a strong civil society, all pushing for reform and change.

## References

1. World Health Organisation. Executive summary: the selection and use of essential medicines 2021: report of the 23rd WHO Expert Committee on the selection and use of essential medicines. 2021. Available at <https://www.who.int/publications/i/item/WHO-MHP-HPS-EML-2021.01> (accessed March 2022).
2. World Health Organisation. Oral Health – World Health Assembly Resolution WHA74/A74.R5. 2021. Available at [https://apps.who.int/gb/ebwha/pdf\\_files/WHA74/A74\\_R5-en.pdf](https://apps.who.int/gb/ebwha/pdf_files/WHA74/A74_R5-en.pdf) (accessed March 2022).
3. Benzian H, Guarizo-Herreno C, Kearns C, Muriithi M, Watt R G. The WHO global strategy for oral health: an opportunity for bold action. *Lancet* 2021; **398**: 192–194.
4. Benzian H, Holmgren C, Buijs M, van Loveren C, van der Weijden F, van Palenstein Helderman W. Total and free available fluoride in toothpastes in Brunei, Cambodia, Laos, the Netherlands and Suriname. *Int Dent J* 2012; **62**: 213–221.
5. Gupta A, Gallagher J E, Chestnutt I G, Godson J. Formulation and fluoride content of dentifrices: a review of current patterns. *Br Dent J* 2021; DOI: 10.1038/s41415-021-3424-y. <https://doi.org/10.1038/s41415-022-4150-9>