Follow-up to the political declaration of the third high-level meeting of the General Assembly on the prevention and control of non-communicable disease
ANNEX 3

DRAFT GLOBAL STRATEGY ON ORAL HEALTH

BACKGROUND

1. Recognizing the global public health importance of major oral diseases and conditions, in May 2021 the World Health Assembly adopted resolution WHA74.5 on oral health and requested the Director-General to develop, in consultation with Member States, a draft global strategy on tackling oral diseases. The strategy will inform the development of a global action plan on oral health, including a framework for tracking progress with clear measurable targets to be achieved by 2030.

2. The resolution on oral health and the resulting draft global strategy are grounded in the 2030 Agenda, in particular SDG Goal 3 (Ensure healthy lives and promote well-being for all at all ages) and SDG target 3.8 on achieving UHC. They are aligned with the WHO’s Thirteenth General Programme of Work, 2019–2023; the political declaration of high-level meeting on universal health coverage adopted by the United Nations General Assembly in 2019; the Operational Framework for Primary Health Care of 2020; the Global Strategy on Human Resources for Health: Workforce 2030 of 2016; the NCD-GAP; the WHO Framework Convention on Tobacco Control adopted in 2003; resolution WHA74.16 (2021) on social determinants of health; decision WHA73(12) (2020) on the Decade of Healthy Ageing 2020–2030; and resolution WHA67.11 (2014) on public health impacts of exposure to mercury and mercury compounds: the role of WHO and ministries of public health in the implementation of the Minamata Convention.

GLOBAL OVERVIEW OF ORAL HEALTH

3. Oral health is the state of the mouth, teeth and orofacial structures that enables individuals to perform essential functions, such as eating, breathing and speaking, and encompasses psychosocial dimensions, such as self-confidence, well-being and the ability to socialize and work without pain, discomfort and embarrassment. Oral health varies over the life course from early life to old age, is integral to general health and supports individuals in participating in society and achieving their potential.

Oral disease burden

4. Globally, there were estimated to be more than 3.5 billion cases of oral diseases and other oral conditions in 2017, most of which are preventable.\(^1\) For the last three decades, the combined global prevalence of dental caries (tooth decay), periodontal (gum) disease and tooth loss has remained unchanged at 45%, which is higher than the prevalence of any other NCD.

5. Cancers of the lip and oral cavity together represent the sixteenth most common cancer worldwide, with over 375 000 new cases and nearly 180 000 deaths in 2020.\(^2\) Noma is a

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noncommunicable necrotizing disease that typically occurs in young children living in extreme poverty. Noma starts as a lesion of the gums inside the mouth and destroys the soft and hard tissues of the mouth and face; it is fatal for as many as 90% of affected children.\(^1\) Orofacial clefts, the most common craniofacial birth defect, have a global prevalence of approximately 1 in 1000–1500 births with wide variation in different studies and populations.\(^2,3\) Traumatic dental injury is estimated to have a global prevalence of 23% for primary teeth and 15% for permanent teeth, affecting more than 1 billion people.\(^4\)

6. Oral diseases often have comorbidity with other NCDs. Evidence has shown an association between oral diseases, particularly periodontal disease, and a range of other NCDs, such as diabetes and cardiovascular disease.

**Social, economic and environmental costs of poor oral health**

7. The personal consequences of untreated oral diseases and conditions – including physical symptoms, functional limitations, stigmatization and detrimental impacts on emotional, economic and social well-being – are severe and can affect families, communities and the wider health care system. For those who obtain treatment for oral diseases and conditions, the costs can be high and can lead to significant economic burdens.

8. High out-of-pocket payments and catastrophic health expenditure associated with oral health care often lead people not to seek care when needed. Worldwide, in 2015 oral diseases and conditions accounted for an estimated US$ 357 billion in direct costs (such as treatment expenditures) and US$ 188 billion in indirect costs (such as productivity losses due to absence from work or school), with large differences between high-, middle- and low-income countries.\(^5\)

9. There is a strong and consistent association between socioeconomic status (income, occupation and educational level) and the prevalence and severity of oral diseases and conditions.\(^6,7\) Across the life course, oral diseases and conditions disproportionately affect the poor and vulnerable members of societies, often including those who are on low incomes; people living with disability; older people living alone or in care homes; people who are refugees, in prison or living in remote and rural communities; and people from minority and/or other socially marginalized groups.

10. The environmental impact of the oral health care system is a great concern, as shown in the Minamata Convention on Mercury, a global treaty that obliges parties to implement measures to phase

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down the use of dental amalgam, which contains 50% mercury. Other environmental challenges related to oral health care include the use of natural resources, such as energy and water; the use of safe and environmentally sound dental material and oral care products; and sustainable waste management.

**Social and commercial determinants and risk factors of oral health**

11. Oral diseases and conditions and oral health inequalities are directly influenced by social and commercial determinants. The social determinants of oral health are the structural, social, economic and political drivers of oral diseases and conditions in society. The commercial determinants of oral health are the strategies used by some actors in the private sector to promote products and choices that are detrimental to health.

12. Oral diseases and conditions share risk factors common to the leading NCDs, that is, cardiovascular disease, cancer, chronic respiratory disease, diabetes and mental health conditions. These risk factors include both smoking and smokeless tobacco, harmful alcohol use, high sugars intake and lack of breastfeeding, as well as the human papillomavirus for oropharyngeal cancers.

13. Modifiable risk factors for cleft lip and palate include maternal active or passive tobacco smoking, while those for traumatic dental injury include alcohol use, traffic accidents and sports injuries. The aetiology of noma is unknown but its risk factors include malnutrition; coinfections; vaccine-preventable diseases; poor oral hygiene; and poor living conditions, such as deficiencies in water, sanitation and hygiene.

**Oral health promotion and oral disease prevention**

14. Only rarely have oral health promotion and oral disease prevention efforts targeted the social and commercial determinants of oral health at the population level. Moreover, oral health promotion and oral disease prevention are not typically integrated in other NCD programmes that share major common risk factors and social determinants. In 2015, the WHO guideline on sugars intake for adults and children made the strong recommendation to reduce the intake of free sugars throughout the life course based on the evidence of direct associations between the intake of free sugars and body weight and dental caries. Nonetheless, public health initiatives to reduce sugar consumption are rare.

15. Initiatives that address upstream determinants can be cost-effective and have a high population reach and impact. Upstream strategies to reduce the intake of free sugars and the use of tobacco and alcohol include policies, taxes and/or regulation of the price, sale and advertisement of unhealthy products. Midstream policy interventions include creating more supportive conditions in key settings, such as educational settings, schools, workplaces and care homes.

16. Millions of people do not have access to oral health promotion and oral disease prevention programmes. The use of fluorides for the prevention of dental caries is limited. Frequently, essential prevention methods, such as fluoridation of the water supply and other community-based methods, topical fluoride applications or the use of quality, fluoride toothpaste, are not available or affordable.

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Oral health care systems

17. Political commitment and resources for oral health care systems often are limited at the ministry of health level. Typically, the oral health care system is inadequately funded, delivered by independent private providers, highly specialized and isolated from the broader health care system. In most countries, UHC benefit packages and NCD interventions do not include essential oral health care.

18. Essential oral health care covers a defined set of safe, cost-effective interventions at the individual and community levels to promote oral health, as well as to prevent and treat the most prevalent and/or severe oral diseases and conditions, including appropriate rehabilitative services and referral. Oral health care is not usually covered in primary care facilities and the private and/or public insurance scheme coverage of oral health is highly variable within and between countries.

19. In many countries, insufficient attention is given to planning the health workforce to address the population’s oral health needs. Oral health training is rarely integrated in general health education systems. Typically, training focuses on educating highly specialized dentists rather than mid-level and community oral health workers or optimizing the roles of the wider health team.

20. The COVID-19 pandemic has had a negative impact on public health programmes and the provision of essential oral health care in most countries, leading to delays in oral health care treatment, increased use of antibiotic prescriptions and greater oral health inequalities. The pandemic should be seen as an opportunity to strengthen the integration of oral health care into general health care systems as part of UHC efforts.

VISION, GOAL AND GUIDING PRINCIPLES

Vision

21. The vision of this strategy is UHC for oral health for all individuals and communities by 2030, enabling them to enjoy the highest attainable state of oral health and contributing to healthy and productive lives.

22. UHC means that all individuals and communities have access to essential, quality health services that respond to their needs and that they can use without suffering financial hardship. These services include oral health promotion and prevention, treatment and rehabilitation interventions related to oral diseases and conditions across the life course. In addition, upstream interventions are needed to strengthen the prevention of oral diseases and reduce oral health inequalities. Achieving the highest attainable standard of oral health is a fundamental right of every human being.

Goal

23. The goal of the strategy is to guide Member States to: (a) develop ambitious national responses to promote oral health; (b) reduce oral diseases, other oral conditions and oral health inequalities; (c) strengthen efforts to address oral diseases and conditions as part of UHC; and (d) consider the development of targets and indicators, based on national and subnational contexts, building on the guidance to be provided by WHO’s global action plan on oral health, in order to prioritize efforts and assess the progress made by 2030.
Guiding principles

Principle 1: A public health approach to oral health

24. A public health approach to oral health strives to provide the maximum oral health benefit for the largest number of people by targeting the most prevalent and/or severe oral diseases and conditions. To achieve this, oral health programmes should be integrated in broader and coordinated public health efforts. A public health approach to oral health requires intensified and expanded upstream actions on the social and commercial determinants of oral health, involving a broad range of stakeholders from social, economic, education, environment and other relevant sectors.

Principle 2: Integration of oral health in PHC

25. PHC is the cornerstone of strengthening health systems because it improves the performance of health systems, resulting in better health outcomes. The integration of essential oral health care in other NCD services in PHC is an essential component of UHC. Such integration has many potential benefits, including increased chance of prevention, early detection and control of related conditions and comorbidities, as well as more equitable access to comprehensive, quality health care.

Principle 3: Innovative workforce models to respond to population needs for oral health

26. Resource and workforce planning models need to better align the education and training of health workers with public health goals and population oral health needs, particularly for underserved populations. UHC can only be achieved by reforming health, education and resource planning systems to ensure the health workforce has the needed competencies to provide essential oral health care services across the continuum of care. This may require reassessing the roles and responsibilities of mid-level and community-based health workers and other relevant health professionals that include the oral health sector. The new WHO Global Competency Framework for Universal Health Coverage should guide the development of health workforce models for oral health.

Principle 4: People-centred oral health care

27. People-centred care for oral health consciously seeks and engages the perspectives of individuals, families and communities, including people affected by poor oral health. In this approach, people are seen as participants as well as beneficiaries of trusted health systems that respond to their needs and preferences in humane and holistic ways. People-centred care actively fosters a more holistic approach to needs assessment, shared decision-making, oral health literacy and self-management. Through this process, people develop the opportunity, skills and resources to be articulate, engaged and empowered users and stakeholders of oral health services.

Principle 5: Tailored oral health interventions across the life course

28. People are affected by oral diseases and conditions – and their risk factors and social and commercial determinants – from early life to old age. The effects may vary and accumulate over time and have complex consequences in later life, particularly in relation to other NCDs. Tailored, age-appropriate oral health strategies that include essential oral health care need to be integrated in relevant health programmes across the life course, including prenatal, infant, child, adolescent, working
adult and older adult programmes. These may include age-appropriate, evidence-based interventions that are focused on promoting healthier eating, tobacco cessation, alcohol reduction and self-care.

**Principle 6: Optimizing digital technologies for oral health**

29. Artificial intelligence (AI), mobile devices and other digital technologies can be used strategically for oral health at different levels, including for improving oral health literacy, implementing oral health e-training and provider-to-provider telehealth, as well as for increasing early detection, surveillance and referral for oral diseases and conditions within primary care. In parallel, it is critical to establish and/or reinforce governance for digital health and to define norms and standards for digital oral health based on best practice and scientific evidence.

**STRATEGIC OBJECTIVES**

**Strategic objective 1: Oral health governance – Improve political and resource commitment to oral health, strengthen leadership and create win-win partnerships within and outside the health sector**

30. Strategic objective 1 seeks the recognition and integration of oral health in all relevant policies and public health programmes as part of the broader national NCD and UHC agendas. Increased political and resource commitment to oral health are vital at the national and subnational levels, as is the reform of health and education systems. Ideally, this would include a guaranteed minimum share of public health expenditure that is directed exclusively to national oral health programmes.

31. Central to this process is establishing or strengthening the capacity of a national oral health unit with professionals trained in public health. A dedicated, qualified, functional, well-resourced and accountable oral health unit should be established or reinforced within NCD structures and other relevant public health and education services.

32. Sustainable partnerships within and outside the health sector, as well as engagement with communities, civil society and the private sector, are essential to mobilize resources, target the social and commercial determinants of oral health and implement reforms. For example, collaboration between the ministry of health and the ministry of environment is critical to address environmental sustainability within oral health care, such as the implementation of the Minamata Convention on Mercury and challenges related to the management of chemicals and waste (including mercury).

**Strategic objective 2: Oral health promotion and oral disease prevention – Enable all people to achieve the best possible oral health and address the social and commercial determinants and risk factors of oral diseases and conditions**

33. Strategic objective 2 calls for evidence-based, cost-effective and sustainable interventions to promote oral health and prevent oral diseases and conditions. At the downstream level, oral health education supports the development of personal, social and political skills that enable all people to achieve their full potential for oral health self-care. At the upstream level, oral health promotion includes creating public policies and fostering community action to improve people’s control over their oral health and to promote oral health equity.

34. Prevention efforts target key risk factors and the social and commercial determinants of oral diseases and other oral conditions. These initiatives should be fully integrated and mutually reinforcing
with other relevant NCD prevention strategies and regulatory policies related to tobacco use, harmful alcohol use and limiting free sugars intake to less than 10% of total energy and ideally to less than 5%. Prevention efforts should also include safe and cost-effective community-based methods to prevent dental caries, such as fluoridation of the water supply where appropriate, topical fluoride application and the use of quality, fluoride toothpaste.

**Strategic objective 3: Health workforce: Develop innovative workforce models and revise and expand competency-based education to respond to population oral health needs**

35. Strategic objective 3 aims to ensure that there is an adequate number, availability and distribution of skilled health workers to deliver an essential package of oral health services to meet population needs. This requires that the planning and prioritization of oral health services be explicitly included in all costed health workforce strategies and investment plans.

36. More effective workforce models will likely involve a new mix of dentists, mid-level oral health care providers (such as dental assistants, dental nurses, dental prosthodontists, dental therapists and dental hygienists), community-based health workers and other relevant health professionals who have not traditionally been involved in oral health care, such as primary care physicians and nurses. Implementing such models may require reassessing and updating national legislative and regulatory policies for the licensing and accreditation of the health workforce. Health educators will be key stakeholders in establishing competency and professionalism standards for oral health to guide and assess the education, training and practice of an innovative health workforce.

37. Curricula and training programmes need to adequately prepare health workers to manage and respond to the public health aspects of oral health and address the environmental impact of oral health services on planetary health. Professional oral health education must go beyond development of a clinical skill set to include robust training in health promotion and disease prevention and key competencies, such as evidence-informed decision-making, reflective learning about the quality of oral health care, inter-professional communication and the provision of people-centred health care. Intra- and inter-professional education and collaborative practice will also be important to allow the full integration of oral health services in health systems and at the primary care level.

**Strategic objective 4: Oral health care – Integrate essential oral health care and ensure related financial protection and essential supplies in PHC**

38. Strategic objective 4 seeks to increase access by the entire population to safe, effective and affordable essential oral health care as part of the UHC benefit package. Health workers who provide oral health services should be active members of the PHC team and work collaboratively, including across other levels of care, to tackle oral diseases and conditions as well as other NCDs, with a focus on addressing common risk factors and supporting general health consultations.

39. Financial protection through expanded private and public insurance policies and programmes, including coverage of oral health services, is one of the cornerstones of UHC. Ensuring the reliable availability and distribution of essential medical consumables, generic medicines and other dental supplies is also important for the management of oral diseases and conditions in PHC and referral services.

40. Digital health technology should be examined for its potential role in the delivery of accessible and effective essential oral health care. This might include the development of policy, legislation and infrastructure to expand the use of digital health technologies, such as mobile phones, intra-oral cameras
and other digital technologies, to support remote access and consultation for early detection and referral to services for the management of oral diseases and conditions.

**Strategic objective 5: Oral health information systems – Enhance surveillance and health information systems to provide timely and relevant feedback on oral health to decision-makers for evidence-based policy-making**

41. Strategic objective 5 involves developing more efficient, effective and inclusive integrated health information systems that include oral health to inform planning, management and policy-making. At the national and subnational levels, strengthening information systems should include the systematic collection of data on oral health status, social and commercial determinants, risk factors, workforce, oral health services readiness and resource spending.

42. These improved systems can use routine health information systems, demographic and health surveys and promising digital technologies and should ensure protection of patient data. They should also be established to monitor patterns and trends in oral health inequalities and track the implementation and impact of existing policies and programmes related to oral health.

43. New oral health epidemiological methods, including high-resolution video, multispectral imaging and mobile technologies, have the potential to improve the quality of population-based oral health data while reducing costs and complexity. WHO’s new mobile technologies for oral health implementation guide, for example, provides guidance on using mobile technologies for population-based and health service delivery surveillance.

**Strategic objective 6: Oral health research agendas – Create and continuously update context and needs-specific research that is focused on the public health aspects of oral health**

44. Strategic objective 6 strives to create and implement new oral health research agendas that are oriented towards public health programmes and population-based interventions. These should include research on learning health systems, implementation sciences, workforce models, digital technologies and the public health aspects of oral diseases and conditions.

45. Other research priorities include upstream interventions; PHC interventions; mercury-free dental restorative materials; barriers to access to oral health care; oral health inequalities; oral health promotion in key settings such as schools; environmentally sustainable practices; and economic analyses to identify cost-effective interventions.

46. The translation of research findings into practice is equally important and should include the development of regionally specific, evidence-informed clinical practice guidelines. Researchers have an important role in supporting the development and evaluation of population oral health policies and evaluating and applying the evidence generated by new public health interventions.

**ROLE OF WHO, MEMBER STATES AND PARTNERS**

**WHO**

47. WHO will provide a leadership and coordination role in promoting and monitoring global action on oral health, including in relation to the work of other relevant United Nations agencies, development
banks and other regional and international organizations. It will set the general direction and priorities for global oral health advocacy, partnerships and networking; articulate evidence-based policy options; and provide Member States with technical and strategic support.

48. WHO will continue its work with global public health partners, including WHO collaborating centres, to establish networks for building capacity in oral health care, research and training; mobilize contributions from nongovernmental organizations and civil society; and facilitate the collaborative implementation of the strategy, particularly with respect to the needs of low- and middle-income countries. WHO will also collaborate with Member States to ensure that there is uptake and accountability for the strategy at the national level, particularly in national health policies and strategic plans.

49. By 2023, WHO will translate this strategy into an action plan for public oral health, including a monitoring framework for tracking progress with clear measurable targets to be achieved by 2030. By 2024, WHO will recommend cost-effective, evidence-based oral health interventions as part of the updated Appendix 3 to the NCD-GAP and the WHO UHC Compendium.

50. WHO will continue to update technical guidance to ensure safe and uninterrupted dental care, including during and after the COVID-19 pandemic and other health emergencies. In collaboration with the United Nations Environment Programme (UNEP), WHO will develop technical guidance on environmentally sustainable oral health care, including mercury-free products and less invasive procedures. WHO will also consider the classification of noma within the road map for neglected tropical diseases 2021–2030.

51. WHO will help scale up and sustain innovations for oral health impact in accordance with the WHO innovation scaling framework, including social, service delivery, health product, business model, digital and financial innovations.

52. WHO will create an oral health data platform as part of its data repository for health-related statistics. WHO will strengthen integrated oral health information systems and surveillance activities through the development of new standardized data-gathering technologies and methods, as well as oral health indicators for population health surveys. WHO will promote and support research in priority areas in order to improve oral health programme implementation, monitoring and evaluation.

**Member States**

53. Member States have the primary role in responding to the challenge of oral diseases and conditions in their populations. Governments are responsible for engaging all sectors of society to generate effective responses for the prevention and control of oral diseases and conditions, the promotion of oral health and the reduction of oral health inequalities. They should secure appropriate oral health budgets based on intervention costing and investment cases to achieve universal health coverage for oral health.

54. Member States should ensure that oral health is a solid, robust and integral part of national and subnational health policies and that national oral health units have sufficient capacity and resources to provide strong leadership, coordination and accountability on oral health.

55. Member States can strengthen oral health care system capacities by integrating oral health in PHC as a part of UHC benefit packages; ensuring the affordability of essential oral health medicines and
consumables, as well as other equipment or supplies for the prevention and management of oral diseases and conditions; and prioritizing environmentally sustainable and less invasive oral health care.

56. Member States should also assess and reorient the health workforce as required to meet population oral health needs by reorienting the outcomes of the education programmes to the oral health services to be provided. This requires enabling inter-professional education and collaborative practice that involves mid-level and community-based health workers. They should critically review and continuously update their oral health education content across health worker training programmes and training curricula, prioritizing a public health approach to oral health that enables health workers to develop essential competencies such as reflective problem-solving and leadership skills.

57. Member States can address the determinants of oral health and the risk factors of oral diseases and conditions by advocating for evidence-based regulatory measures that address the underlying determinants that increase or reduce risks and working with commercial entities to encourage them to reformulate products to reduce sugar levels, reduce portion sizes or shift consumer purchasing towards products with lower sugar content. Member States can also target determinants by strengthening health-promoting conditions in key settings; implementing community-based methods to prevent dental caries; supporting legislation to increase the affordability of quality, fluoride toothpaste; and advocating for its recognition as an essential health product within the national list of essential medicines.

58. Member States should improve oral health surveillance, data collection and monitoring to inform decision-making and advocacy. This includes developing and standardizing updated methods and technologies for gathering oral health epidemiological data, integrating electronic dental and medical records and strengthening the integrated surveillance of oral diseases and conditions. It also includes the analysis of oral health system and policy data, operational research and the evaluation of oral health interventions and programmes.

International partners

59. UNICEF, UNEP, the International Telecommunication Union and other United Nations agencies, as well as development banks and other international partners, have valuable roles to play in achieving the goals and objectives of the strategy at global, regional and national levels. This includes taking initiative in advocacy, resource mobilization, exchange of information, sharing of lessons learned, capacity-building, research and developing targets and indicators for streamlined global collaboration.

60. Coordination is needed among international partners, including the organizations of the United Nations system, intergovernmental bodies, non-State actors, nongovernmental organizations, professional associations, youth and student organizations, patients’ groups, academia and research institutions. Establishing and working efficiently as an international coalition on oral health will better support countries in their implementation of the strategy.

Civil society

61. Civil society is a key stakeholder in setting priorities for oral health care services and public health. It has a role to play in encouraging governments to develop ambitious national and subnational oral health responses and contributing to their implementation. Civil society can forge multistakeholder partnerships and alliances that mobilize and share knowledge, assess progress, provide services and amplify the voices of people living with and affected by oral diseases and conditions. Actively engaging in meaningful partnership with civil and community organizations, as well as
co-designing/co-producing innovative approaches to oral health care, provide an opportunity to develop more responsive and sustainable models of care.

62. Civil society can support consumers and lead grass-roots mobilization and advocacy for increased focus in the public agenda on oral health promotion and the prevention and control of oral diseases and conditions. Civil society and consumers can advocate with governments and industries to demand that the food and beverage industry provide healthy products; support governments in implementing their tobacco control programmes; and form networks and action groups to promote the availability of food and beverages that are low in free sugars and of quality, fluoride toothpaste, including through subsidization or reduced taxes.

63. National dental associations and other oral health professionals organizations have a responsibility to support the oral health of their communities. They can collaborate with and support national and subnational governments in implementing the strategy through the provision of essential oral health care, including by helping to plan and implement population-wide prevention measures and by participating in oral health data collection and surveillance.

**Private sector**

64. The private sector can strengthen its commitment and contribution to national and subnational oral health responses by implementing occupational oral health measures, including through good corporate practices, workplace wellness programmes and health insurance plans.

65. The private sector should take concrete steps towards reducing the marketing, advertising and sale of products that cause oral diseases and conditions, such as tobacco products and food and beverages that are high in free sugars. Increased private sector transparency and accountability is a key component of such actions.

66. The private sector should strive to improve the access to and affordability of safe, effective and quality dental equipment and devices and oral hygiene products. It should accelerate research on affordable, safe and environmentally sound equipment and materials for oral health care.