

New report from FDI World Dental Federation tackles oral health inequalities and outlines strategies to improve oral healthcare over the next ten years

- Oral conditions such as tooth decay, gum disease, tooth loss and oral cancer are the most widespread noncommunicable diseases worldwide – impacting 3.5 billion people – and have severe and significant health, societal, and economic impacts.
- Oral health professionals must be actively included in all efforts to improve health for all, so that population-level prevention efforts are effective and those in need receive quality care.

Geneva, 18 January 2021—Coinciding with the 148th session of the World Health Organization Executive Board, where an oral health resolution is on the agenda for adoption

by governments, FDI releases [*Vision 2030: Delivering Optimal Oral Health for All*](#), a timely report that offers a comprehensive, inter-disciplinary roadmap on how to impact health policies and tackle challenges to improve oral health and reduce oral health inequalities over the next decade.

Vision 2030 recommends strategies to address the oral disease burden that communities can adapt to their own needs and circumstances, enabling them to implement relevant solutions. The report also considers how broad societal shifts, such as ageing populations, will require the oral health workforce to adapt and remain equipped to deliver consistent care.

“*Vision 2030* outlines the ways in which we can integrate our profession within global development agendas, including the UN Sustainable Development goals and the implementation of universal health coverage, that determine important health priorities,” says Prof. David Williams, FDI *Vision 2030* Working Group co-chair.

Prof. Michael Glick, FDI *Vision 2030* Working Group co-chair, adds: “How can we, as members of the oral health community, anticipate transformational changes and trends in the global healthcare environment? How do we seize opportunities to become productive members of healthcare teams delivering person-centered care? These are some of the broad questions we strive to answer through *Vision 2030*.”

Achieving optimal oral health for all requires strong advocates who are ready to tackle this major public health challenge. Through the steps laid out in *Vision 2030*, the oral health profession will be well-equipped to argue for the better integration of oral health within overall health, united behind a set of shared aims.

The authors of the *Vision 2030* report, an expert team of professionals hailing from diverse sectors within the healthcare community, have emphasized the need to engage with the public, as well as a range of other stakeholders. *Vision 2030* calls for patients themselves to be well-informed advocates for their own oral health and be able to take an active role in their treatment decisions. From the patient to the profession, *Vision 2030* drives the message home that there is no health without oral health.

About FDI World Dental Federation

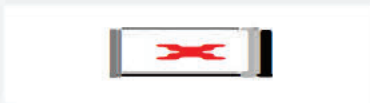
Founded in 1900, FDI World Dental Federation is an international, membership-based organization that serves as the main representative body for more than one million dentists worldwide, active in some 200 national dental associations and specialist groups in close to 130 countries. Based in Geneva, Switzerland, FDI’s mission is to lead the world to optimal oral health.

Vision 2030 Working Group: Michael Glick (Co-Chair), David M. Williams (Co-Chair), Ihsane Ben Yahya, William W. M. Cheung, Enzo Bondioni, Pam Clark, Stefan Listl, Manu Raj Mathur, Peter Mossey, Hiroshi Ogawa, Gerhard K. Seeberger, Michael Sereny.

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[Read the Vision 2030 Report](#)



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Oral health

Achieving better oral health as part of the universal health coverage and noncommunicable disease agendas towards 2030

Report by the Director-General

1. Following a request from a Member State and the recommendation of the Officers of the Board and the Director-General in September 2020 to include an item on oral health in the provisional agenda of its 148th session, this report outlines the enduring global health challenges posed by oral diseases and details WHO's recent activities and regional and international initiatives to renew the political commitment to oral health. A set of actions is proposed, aimed at achieving better oral health as part of WHO's noncommunicable diseases and universal health coverage agendas, thus contributing to the achievement of the United Nations 2030 Agenda for Sustainable Development and its Sustainable Development Goals.

BURDEN AND IMPACT OF ORAL DISEASES

2. The most prevalent oral diseases include dental caries (tooth decay), periodontal (gum) disease, tooth loss, and cancers of the lips and oral cavity. Despite being largely preventable, these diseases are among the most prevalent noncommunicable diseases globally, with significant health, social and economic impacts. People are affected over their life course, from early childhood to adolescence, adulthood and later life.

3. More than 3.5 billion people suffer from oral diseases, without any notable improvement of the situation between 1990 and 2017. Untreated dental caries in permanent teeth is the single most prevalent condition globally, affecting 2.3 billion people. Severe periodontal disease, a major cause of total tooth loss, is estimated to affect 267 million people, particularly older people.

4. Cancers of the lip and oral cavity are among the top 15 most common cancers worldwide, with over 500 000 cases and nearly 180 000 deaths each year. In parts of the South-East Asia and Western Pacific regions, they are the leading cause of cancer-related deaths among males. Noma, a necrotizing disease starting in the mouth and fatal for 90% of the children affected, is a marker of extreme poverty. It leads to lifelong disability, affects learning opportunities and often results in social exclusion.

5. The burden of oral diseases shows significant inequalities, disproportionately affecting marginalized populations and those of lower economic status. Inequalities are found, as in other noncommunicable diseases, throughout the life course and across populations in low-, middle- and high-income countries. With limited resources for prevention and control, low- and middle-income countries face the highest burden of oral diseases.

6. Oral diseases are caused by a range of modifiable risk factors, including sugar consumption, tobacco use, alcohol use and poor hygiene, and their underlying social and commercial determinants. These determinants, together with common risk factors shared by noncommunicable diseases, provide the basis for integrated strategies for prevention and control.
7. Oral health is essential to good health and well-being. However, many people have untreated oral diseases, resulting in preventable pain, infection and reduced quality of life, in addition to missed school and productivity losses. Good oral health is also vital for healthy ageing, playing a crucial role with regard to nutrition, employment, self-esteem and continued social interaction.
8. Worldwide, oral diseases accounted in 2015 for US\$ 357 billion in direct costs and US\$ 188 billion in indirect costs. The same year, €90 billion was spent on treatment of oral diseases across the European Union, the third-highest total among noncommunicable diseases, behind diabetes and cardiovascular diseases. Oral health care is often not covered in primary health care, leading to considerable expense for individuals and society. High out-of-pocket expenditures particularly affect disadvantaged populations.

CHALLENGES TO MEETING THE ORAL HEALTH NEEDS OF POPULATIONS

9. Lack of political commitment and resources limit action on oral health. Opportunities to advocate for making essential oral health needs a higher priority, for example through integration with noncommunicable disease, maternal, child and adolescent health, and ageing and life course programmes, are often not utilized. Overall, the largely unchanging global burden of untreated oral diseases, the enduring lack of coverage of essential oral health care for large segments of the world's population, and increasing inequalities, are some of the symptoms of the continued low priority accorded to oral health.
10. Availability of technical capacity within ministries of health to develop, implement and evaluate cost-effective and integrated oral health action plans is often limited. Vertical disease-focused programming inhibits crosssectoral collaboration and financing so that potential synergies are not leveraged.
11. Prevention of oral diseases is frequently not prioritized. Opportunities for oral health promotion in key settings – such as schools, communities and workplaces – are not systematically used. The use of fluorides for prevention of dental caries is limited, and essential prevention methods, such as use of fluoridated toothpaste, are often not affordable for many people. Moreover, oral health promotion is rarely integrated into other noncommunicable disease programmes that share major common risk factors and social determinants.
12. Current oral health systems have largely failed to reduce the burden and inequalities of oral diseases. Most countries rely on dentist-centred models with high technology and do not sufficiently encourage prevention. Low workforce numbers, especially in low- and middle-income countries, limit coverage and availability of essential oral health services that are usually not part of universal health coverage benefit packages. However, some countries have adopted workforce models that include primary health care and mid-level providers, such as dental therapists and hygienists, to improve access.
13. Adequate and up-to-date information about the burden of oral diseases is scarce, with indicators rarely included in national health information systems. Available oral health modules within existing WHO surveillance tools are not systematically used, and integration within national noncommunicable disease and risk factors surveillance is limited.

14. Monitoring and evaluation of existing programmes is generally weak, existing tools underutilized and results poorly documented. Oral health research output does not prioritize public health.

15. Awareness of the environmental impact of oral health care on planetary health, and of the challenges related to chemicals and management of waste (including mercury) need strengthening, in line with resolution WHA67.11 (2014) on implementation of the Minamata Convention on Mercury.

16. In the context of the COVID-19 pandemic, oral health services are among the most disrupted essential health services, with 60% of countries reporting partial and 17% severe/complete disruption of such services.¹ Oral health inequalities have been worsening as the COVID-19 pandemic evolves.

REGIONAL AND INTERNATIONAL COMMITMENT TO IMPROVING ORAL HEALTH

17. In 2007, resolution WHA60.17 set out effective oral disease prevention and control measures that need to be renewed and intensified as part of both the noncommunicable disease and universal health coverage agendas.

18. In 2011, the Political Declaration of the first High-level Meeting of the General Assembly on the Prevention and Control of Non-communicable Diseases recognized that oral diseases pose a major challenge and could benefit from a common response.² This provided a strong policy basis for the integrated approach to the prevention and control of oral diseases.

19. The Minamata Convention on Mercury, which entered into force in 2017, obliges Parties to take selected measures to phase down the use of dental amalgam, a common mercury-containing dental filling material. Measures include the setting of national objectives aimed at dental caries prevention and oral health promotion, and encouraging insurance policies and programmes that favour the use of high-quality alternatives to dental amalgam for dental restoration.

20. The Political Declaration of the first High-level Meeting of the General Assembly on Universal Health Coverage (2019) included commitments to step up efforts to strengthen universal health coverage with the inclusion of oral health, providing a policy basis for accelerated action by Member States, the United Nations system and oral health stakeholders.³

21. The Lancet Commission on Oral Health, established in 2019 with WHO participation, aims to develop a new policy framework for ending the neglect of oral health in the global and national health agendas.

¹ Pulse survey on continuity of essential health services during the COVID-19 pandemic: interim report, 27 August 2020. Geneva: World Health Organization; 2020 (<https://apps.who.int/iris/rest/bitstreams/1297631/retrieve>, accessed 29 October 2020).

² United Nations General Assembly resolution 66/2.

³ United Nations General Assembly resolution 74/2.

PRIORITIES OF THE WHO GLOBAL ORAL HEALTH PROGRAMME

22. The priorities of the Global Oral Health Programme are as follows:

- implementing, in collaboration with WHO collaborating centres, academic partners and non-State actors, normative work and practical support to countries, with a focus on poor and marginalized populations, through a set of priority activities aligned with WHO's Thirteenth General Programme of Work;
- launching, in 2021, a global oral health report as a global public health good. Targeting policy- and decision-makers, the report will describe the burden, challenges and priority actions for renewing global commitment to improving oral health within the noncommunicable disease and universal health coverage agendas;
- ensuring the integration of oral health into other cross-cutting initiatives from different WHO programmes, including the Global Competency Framework for Universal Health Coverage and the UHC Intervention Compendium, as well as developing technical guidance, on topics such as ending childhood dental caries, tobacco cessation and oral health, and the provision of essential oral health services in the context of COVID-19;
- supporting implementation by Member States of the Minamata Convention as part of a broader environmental agenda, including through the road map for enhancing health sector engagement in the Strategic Approach to International Chemicals Management approved in decision WHA70(23) (2017), thus becoming a catalyst for reorienting dentistry and tackling the health, social and economic burden of oral diseases;
- developing, as part of the joint WHO-ITU BeHe@lthy, BeMobile initiative, an mOralHealth programme to improve oral health worldwide. Digital technologies can be used for health literacy, oral health behaviour change messaging, e-training, provider-to-provider telehealth and early detection and surveillance;
- strengthening oral health information systems and surveillance activities under integrated public health programmes through the development of standardized oral health indicators for population health surveys and facilitating their inclusion into national routine health information systems.

OPPORTUNITIES TO ADDRESS ORAL DISEASES IN NATIONAL AND INTERNATIONAL POLICY AGENDAS

23. Despite the efforts outlined above, access to prevention, early diagnosis and treatment of oral diseases is far from universal and remains unattainable for millions of people. Member States' commitment to strengthening and accelerating action on oral health, in their statement during the 146th session of the Executive Board, offers a firm basis for further action to boost national and international oral health policy agendas. Such action may include, but not be limited to:

- reducing common risk factors and promoting healthy environments by:
 - addressing the common risk factors of oral diseases and other noncommunicable diseases through an integrated approach, focusing on key risks, such as tobacco and harmful alcohol use, unhealthy diets and poor hygiene;

- advocating for health taxes or bans on the sale and advertisement of unhealthy products, such as alcohol, tobacco and unhealthy food and sugary drinks, and counteracting the underlying commercial interests that drive key risks;
- strengthening health-promoting environments in key settings, such as schools, workplaces and communities, through multisectoral action and a Health in All Policies approach;
- promoting legislation to increase the affordability and accessibility of high-quality fluoride toothpaste and advocating for its recognition as an essential health product;
- strengthening health system capacities by:
 - focusing on integrated, population-wide prevention measures and access to primary oral health care as part of universal health coverage benefit packages;
 - accelerating the development of essential oral health care packages with evidence-based, cost-effective interventions to address population needs;
 - ensuring the affordability of essential medical consumables, generic drugs and other equipment or supplies for the management of oral diseases and other noncommunicable diseases;
 - supporting the development of digital health policy, legislation and infrastructure to expand the use of mobile technologies within (oral) health service provision;
 - reorienting the oral health workforce to foster integrated, people-centred health services by enabling interprofessional education and a wider team approach that involves mid-level and community health providers;
 - including communities in the planning, implementation and monitoring of programmes related to promotion, prevention and oral health care;
 - strengthening noma prevention and control within broader regional and global efforts, as part of neglected tropical diseases programmes;
- improving surveillance, data collection and monitoring by:
 - strengthening integrated disease surveillance, collection and analysis of health system and policy data to inform monitoring frameworks, evaluation of programmes and operational research;
 - promoting routine collection of oral disease data using digital technology and existing national health information systems to inform decision-making and advocacy;
- accelerating advocacy, leadership and partnership by:
 - facilitating collaboration among stakeholders, including non-State actors from different sectors, based on clear roles and responsibilities;

- fostering political leadership in relation to universal health coverage, with essential interventions for oral diseases and noncommunicable diseases as key components;
- establishing or enlarging oral health budgets based on intervention costing and investment cases, to increase population coverage.

ACTION BY THE EXECUTIVE BOARD

24. The Executive Board is invited to note the report and provide further guidance on action that could be taken by the Organization in response to the oral disease burden.

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FDI World Dental Federation

Meeting:

148th session of the Executive Board

Agenda Item:

Oral health

Statement:

On behalf of FDI World Dental Federation (FDI), the official representative body of over one million dentists, and supported by NCD Alliance. We welcome the DGs report and thank Member States for the resolution on oral health. Achieving better oral health through integration with NCD and UHC agendas is critical to the successful delivery of the SDGs.

Member States should adopt the proposed resolution to secure the health and well-being of populations. Recognizing that oral health conditions affect over 3.5 billion people worldwide – disproportionately impacting those from low and middle income countries and marginalized groups – we ask that Member States:

1. Engage oral health professionals and leverage the expertise and best practices of dental associations when developing national plans.
2. Integrate essential oral health services into UHC benefit packages, including community-based fluoridation programmes and secure equitable access to affordable fluoridated toothpaste.
3. Reorient health systems to promote prevention not intervention and improve oral health literacy.
4. Prioritize research to find a 'viable material' to replace dental amalgam that is also affordable and accessible globally, and environmentally sound.
5. Address cleft lip and palate, affecting 1 in 500 births – ensuring that all children receive necessary reconstructive surgery – as an effective strategy to prevent long-term oral health issues.
6. Orient oral health workforces to ensure integrated, people-centred health services.
7. Allocate sufficient oral health budgets and improve oral health surveillance, data collection and monitoring.

We support the resolution's call to develop: a global oral health strategy by 2022, an action plan by 2023, and oral health 'best buys'. To help in your efforts, we draw Member States' attention to a new resource that provides comprehensive guidance on devising strategies to improve oral health and reduce inequalities <https://www.fdiworlddental.org/vision2030>

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International Association for Dental Research

Meeting:

148th session of the Executive Board

Agenda Item:

Oral health

Statement:

This statement is delivered by the International Association for Dental Research (IADR) representing over ten thousand researchers around the world.

The Mission of the IADR is to drive dental, oral, and craniofacial research for health and well-being worldwide. IADR welcomes the Director-General's report and thanks the Member States for the resolution on oral health. The IADR is strongly supportive of the report and the resolution and has the following comments for emphasis/clarification:

- In order to significantly improve oral health, research must be prioritized as an action item including basic, translational, and population-level oral health research, research into associations between oral diseases and other diseases, research into dental amalgam alternatives, and oral health surveillance and monitoring. Research will strengthen the evidence-base for oral disease prevention and oral health promotion. As noted in the Lancet Oral Health Series, oral health research is often given low priority by funding agencies and there is an urgent need for more funding in this area.
- Cleft lip with and without cleft palate (CL/P) is the second most common birth defect amongst live births and can occur in isolation or associated with genetic conditions or syndrome. A comprehensive research agenda to reduce risk factors for CL/P should be an action item included to improve oral health.
- In preventing dental caries, "promoting legislation to increase the affordability and accessibility of high-quality fluoride toothpaste" is commendable but should be expanded. As stated in Resolution WHA 60.17, countries should "consider the development and implementation of fluoridation programmes, giving priority to equitable strategies such as the automatic administration of fluoride, for example, in drinking water, salt or milk, and to the provision of affordable fluoride toothpaste."

IADR supports the resolution's call to develop a global oral health strategy by 2022 and an action plan by 2023.

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International Society of Nephrology

Meeting:

148th session of the Executive Board

Agenda Item:

Oral health

Statement:

Honorable chair, distinguished delegates,

The International Society of Nephrology (ISN) welcomes the Director General's report and supports its recommendations on how to achieve better oral health as part of the universal health coverage and noncommunicable disease agendas.

Globally, more than 3.5 billion people suffer from oral diseases which disproportionately affect marginalized populations and those from a lower economic background, who often experience catastrophic health care costs and out-of-pocket expenditure to secure oral care.

People suffering from Chronic Kidney Disease (CKD) experience several complications that may contribute to poor oral health. CKD is associated with clinical and radiographic changes in the mouth, affecting teeth, oral mucosa, periodontium, salivary glands and the tongue; all of which are detrimental to the oral health of people suffering from CKD. Untreated oral lesions in kidney transplant patients can also lead to high graft rejection rates¹.

Poor oral health may contribute to increased morbidity and mortality in patients suffering from CKD because it may lead to inflammation, infections, protein-energy wasting, and atherosclerotic complications, severely undermining patients' quality of life.

The inclusion of oral health care within universal health care packages is thus vital to ensuring equitable access to health promotion, disease prevention, diagnosis, care and medical treatment for patients with noncommunicable diseases, particularly those with kidney disease who are often at greater risk of multi morbidity and mortality.

Hence, we call upon Member States and the WHO to:

- Adopt the report and take the recommended actions to tackle the global burden of oral diseases and increase access to primary oral health care as part of universal health coverage packages.

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Médecins Sans Frontières International

Meeting:

148th session of the Executive Board

Agenda Item:

Oral health

Statement:

Médecins Sans Frontières (MSF) welcomes the progress report on oral health. It shows that the burden of oral diseases disproportionately affects the most marginalized communities. We are particularly glad to read that efforts will be intensified to control noma disease.

Noma is a necrotizing disease affecting mainly children from the poorest communities. It starts in the mouth and quickly leads to disfigurement and stigmatization. Data suggest that up to 90% of people with noma die, with one model estimating 140,000 deaths annually.

However, noma is actually preventable and treatable and should not exist anymore. It can be treated easily with a short course of antibiotics and wound dressing, if cases are detected early. Noma can also be easily prevented when communities have better access to a balanced diet, good oral hygiene, healthcare and vaccination against childhood diseases.

In 2014, MSF began supporting a noma hospital in Sokoto, Nigeria – one of only a few in the world. This hospital treats the acute stages of noma and provides a holistic approach including surgery, physiotherapy, mental health support, health education and nutrition to help heal the scars of this debilitating disease.

Efforts at the community level to scale up preventive activities and detect people with active noma as well as noma survivors are crucial. However, noma is very neglected. It is unknown by many health care workers and stakeholders, even in countries with a high burden of the disease. MSF recommends that the World Health Organization recognise noma as a neglected tropical disease (NTD) of highest importance. This would put a spotlight on the disease and facilitate the integration of activities against noma with other public health programmes. Additional resources are required to end the neglect of noma. Raising awareness by recognising noma as an NTD is critical to make change happen.

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World Federation of Public Health Associations

Meeting:

148th session of the Executive Board

Agenda Item:

Oral health

Statement:

WFPHA is concerned about the recently published WHO Report "Oral health: Achieving better oral health as part of the universal health coverage and noncommunicable disease agendas towards 2030".

In this report it mentions fluoride toothpaste as a means of preventing dental caries but fails to mention fluoride varnish, water fluoridation, fluoridated salt or dental (fluoridated) milk. This is disappointing and a missed opportunity as WHO has in the past been very supportive of the use of fluoride in a number of forms in improving dental health. Different countries have chosen which of these various vehicles to use for delivering fluoride to their communities depending on local political, financial, technical and geographical circumstances. United Kingdom of Great Britain and Northern Ireland, Spain, USA, Canada and Australia for example use water fluoridation, Switzerland, France, Romania, Colombia and Mexico are among the countries with fluoridated salt, whilst Bulgaria, Chile, China, Peru and Thailand have fluoridated milk schemes. Many countries, including a number of those with these systemic fluoride schemes, have topical fluoride varnish programmes especially aimed at vulnerable children.

It may be an oversight to fail to make some mention of the varied fluoride programmes used by different countries, but the lack of endorsement by WHO could easily be used by fluoride deniers as indicating a substantial change of WHO policy. This could therefore cause problems both in relation to any extension of fluoride use and also the continuation of existing programmes in those countries with established schemes.

We recommend that the document be altered to underline the WHO support the continuation of fluoride use in these various forms and encourage countries to consider which of the various options are most appropriate for their population. To fail to do so would be to the detriment of oral health especially of some of the most vulnerable communities in the world.

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From: Christopher H. Fox
Sent: Mon, 18 Jan 2021 14:13:10 +0000
To: D'Souza, Rena (NIH/NIDCR) [E]; Horsford, Jonathan (NIH/NIDCR) [E]; lafolla, Timothy (NIH/NIDCR) [E]; Ricks, Tim DMD (IHS/HQ); Hannan, Casey J. (CDC/DDNID/NCCDPPH/DOH); Joskow, Renee (HRSA); Chalmers, Natalia (FDA/CDER)
Cc: Cohen, Lois (NIH/NIDCR) [C]
Subject: WHO 148th Executive Board
Attachments: 2021 - NCD Alliance Advocacy Briefing EB148_FINAL.pdf

Dear Federal Colleagues:

For those interested in global health, the World Health Organization 148th Executive Board is now in session. As many of you know, oral health is on the agenda for the first time in many years.

You can access all documents here:

https://apps.who.int/gb/e/e_eb148.html

You can follow the proceedings live here:

<https://www.who.int/about/governance/executive-board/executive-board-148th-session>

Oral Health is on the agenda and should come up sometime on Wednesday, January 20 between 10:00 – 13:00 or 14:00-17:00 Geneva Time (CET, UTC +1).

We are expecting a Member State Resolution on Oral Health to be posted soon in addition to the Director General's Report on Oral Health already posted.

You can find statements from other non-state actors here:

<https://extranet.who.int/nonstateactorsstatements/meetingoutline/7>

On the oral health agenda item, in addition to IADR's statement, you will see statements from the FDI, International Society of Nephrology, Médecins Sans Frontières International, and World Federation of Public Health Associations. (So far, check back to see if additional statements are posted)

Finally, please see the NCD Alliance Briefing document which also supports the DG oral health report and incorporates IADR's key messages, along with FDI's and others (page 9).

It's all very good news that oral health is on the agenda and is getting attention at the highest policy level!

Cheers,

Chris

Christopher H. Fox, DMD, DMSc, Chief Executive Officer

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Upcoming Meetings:

NEW DATES in 2021 and 2022:

IADR/AADR/CADR General Session & Exhibition	July 21-24, 2021	Boston, Mass., USA
AAADR/CADR Annual Meeting & Exhibition	March 23-26 2022	Atlanta, Ga., USA
IADR/APR General Session & Exhibition	June 22-25, 2022	Chengdu, CHINA

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NCD Alliance Advocacy Briefing

148th Session of WHO Executive Board, 18-26 January 2021

This briefing note provides background and key advocacy messages on the NCD Alliance's key priorities for the 148th session of the WHO Executive Board (EB148) in January 2021. The EB will take place in a virtual format due to the COVID-19 pandemic. A full list of documents, together with updated timetables for each day, can be found [here](#). This note deals with key NCD-relevant items in the order of the provisional agenda of EB148.

Pillar 1: One billion more people benefiting from Universal Health Coverage (UHC)

Agenda item 6: Political declaration of the third high-level meeting of the General Assembly on the prevention and control of non-communicable diseases (Documents [EB148/7](#), [EB148/7 Add.1](#) and [EB148/7 Add.2](#).)

The report is the first annual consolidated report from the Director-General on progress achieved in the prevention and control of NCDs and the promotion of mental health. The report notes that "Over the last 20 years, NCDs have changed the world". Indeed, 7 of the top 10 causes of premature death worldwide are now NCDs. Shows wholly inadequate progress worldwide on prevention and control of NCDs. The vast majority of countries are not on track to meet the 2025 targets for NCDs, [nor the 2030 target SDG3.4](#). It is particularly noteworthy that the risk of premature mortality from diabetes has *increased* by 5% since 2000, with a staggering 70% increase in premature diabetes mortality worldwide over the last 20 years. Increased diabetes prevalence and deaths is closely related to skyrocketing rates of obesity worldwide for both adults and children. Alarming, global consumption of alcohol is projected to increase. Air pollution is recognised as a major global cause of NCDs, and 90% of the global population live in areas with unsafe levels of air pollution. There has been almost no progress on inclusion of NCDs in UHC since 2000.

The report outlines the impacts of the pandemic on people living with NCDs (PLWNCDs) and mental health, which do not yet appear in the figures presented in the report. However, the impacts are likely to set progress back significantly, due to disproportionate impacts on PLWNCDs who are at significantly higher risk (e.g. diabetes, hypertension, kidney disease, obesity, people who are immunosuppressed due to health conditions or treatment, and people living in residential care); due to significantly delayed and disrupted NCD services; and due to increased exposure to major risk factors during the pandemic (e.g. alcohol, unhealthy food, lack of physical activity, tobacco, mental health stressors.) WHO is currently working on a forecast of the impact of disrupted NCD care on premature deaths of PLWNCDs - we appreciate their vital work in this area.

The report notes that "NCDs remain the largest, most internationally-underfunded public health issue globally, where most lives could be saved or improved."

The DG's consolidated report includes ten annexes and 2 appendices reporting on implementation of NCD-relevant resolutions, action plans and strategies:

Annex 1: Reporting on implementation of cancer resolution. To note.

NCD Alliance welcomes the progress WHO has made to date in fulfilling its obligations as laid out in WHA70.12(2017) and its close working relationships with key partners including IARC, IAEA and civil society. We highlight that

7.3 million lives could be saved by 2030 if Member States appropriately develop and invest in cancer prevention and care services and that every US\$1 invested in cancer control yields a full social return of US\$9.50 (based on direct productivity and societal gains).

For the resolution WHA70.12(2017) to be a success, we urge Member States to:

- Use the resources developed by WHO and partners, particularly as they look to build back better after COVID-19 as there have been significant disruptions to cancer services which have threatened the lives of cancer patients worldwide.*
- Capitalise on the guidance and support offered as part of the cancer resolution, cervical cancer elimination and childhood cancer initiatives to build momentum nationally. These programmes are relevant across the income spectrum, and the capacity to deliver core services at scale are key indicators of the strength, effectiveness and equity of health systems.*
- Ensure the integration of cancer services into health systems as part of the COVID-19 recovery and the progressive realisation of UHC.*
- Call on WHO secretariat to more meaningfully include people living with cancer in efforts to prevent, identify and address cancer prevention and control and support Member States to do the same.*

Annex 2: Physical activity. To note

Note WHO's commendable activities to strengthen technical support and guidance on promotion of physical activity for all populations. Yet we also note still insufficient levels of physical activity to protect and promote health across all age groups in most countries. We commend member states who have increasingly taken steps to support more active societies, however particularly note the impact of COVID-19 responses on physical activity and sedentary behaviour.

We urge Member States to

- prioritise and invest in physical activity monitoring, research and promotion across the lifecourse.
- ensure that COVID-19 response policies and 'build back better' strategies optimise opportunities for safe physical activity, else risk further dire chronic health consequences the longer term.
- take an integrated approach to supporting physical activity in communities, with many multiplewins possible when joined up and coherent measures are embraced such as through urban design and active transport policies.

Annex 3: Nutrition: Biennial report on the implementation of the commitments made in the Rome Declaration on Nutrition, adopted at the Second International Conference on Nutrition (2014)

The report again highlights that despite traction in some areas, progress to end, halt or reverse the rise in all forms of malnutrition including diet related NCDs, obesity and diabetes, is off track and targets are unlikely to be met.

We commend WHO's leadership through the UN Decade of Action on Nutrition & related initiatives. However Member State policy responses to obesity & diet-related NCDs, such as with evidence based & effective Best Buys, are inadequately prioritised, implemented & resourced.

We are disturbed by the impact of COVID-19 on healthy diets & health outcomes for those living with NCDs & obesity, especially in low income & vulnerable populations. Long-neglected effective evidence based measures can reduce diet-related NCDs and obesity, which have been contributing to more severe outcomes for some contracting coronavirus. Meanwhile, we the responses of unhealthy food and beverage industries seeking to

leverage the pandemic has been alarming, and has affirmed the need for a mechanism similar to FCTC Article 5.3 preventing tobacco industry interference, for application to other commodity dietary risk factors of NCDs.

We urge Member States to:

- Accelerate efforts to develop & implement diet-related NCD policies particularly the NCD Best Buys, with a particular focus on efficient double duty actions which integrate evidence based measures to tackle multiple forms of malnutrition synergistically, such as food procurement standards, healthy school food programmes, healthy food procurement policies per WHO's new framework, fiscal policies combining taxes and healthy food subsidies, front of pack labelling, and promotion and protection of breastfeeding.
- Raise & allocate adequate resources to develop & implement policies to promote healthy diets & address overweight & obesity through domestic & donor funding sources.
- Include diet-related NCD policy in COVID-19 pandemic responses.
- Recognise and address actions by the food and beverage industry that undermine health. WHO should strengthen guidance on protecting health promoting policies, (especially those benefiting children) from conflict of interest in order to support implementation & enforcement.
- Engage civil society to help strengthen action networks & monitor progress towards NCD & malnutrition targets.

The UN Food Systems & Nutrition for Growth Summits provide vital opportunities to accelerate efforts to secure healthy diets for all. We urge all stakeholders to urgently scale up SMART actions & ensure no one is left behind with any form of malnutrition.

Annex 4: Air pollution. To note.

Air pollution has been recognised as a major NCD risk factor, as of the 3rd High Level Meeting of the UNGA on NCDs in 2018. The annex summarises progress in addressing health impacts of air pollution. WHO is preparing an update of the Air Quality Guidelines and has been working to update tools to assess health and economic impacts of air pollution and policy responses. Development of recommended policy interventions has however been repeatedly delayed.

- *We call on member states to increase resources to WHO to increase capacity to respond to air pollution, noting that 90% of people worldwide live in areas with unsafe levels of air pollution, putting them at risk of multiple NCDs, and a strong socio-economic gradient in exposure to air pollution both within and between countries exacerbating health inequalities.*
- *We call on WHO and member states to move ahead rapidly with recommendations for effective policy interventions to reduce exposure to both indoor and outdoor air pollution.*
- *We call on WHO and partners in the Interagency Taskforce on NCDs to step up technical support to countries to meet demand, including investment cases to support urgent policy action to tackle air pollution.*

Annex 5: Mental health

WHA74 will be invited to consider and adopt the updates proposed in Annex 5 to the appendices of WHO's comprehensive mental health action plan 2013–2030.

We encourage EB members to support the proposed objectives as a minimum and strongly support the clear focus on human rights and law. NCDCA calls on Member States to meaningfully involve people with lived experience of mental health conditions in development and monitoring of mental health services. We encourage Member States to monitor and submit WHO data on the proposed updated Appendix 1 (voluntary)

indicators. Reiterate that mental health and social care, as with other NCD prevention and care services, should be fully integrated into UHC packages.

Annex 6: Health literacy. Process to provide guidance. To note.

Annex 7: Analysis of successful approaches to multisectoral action for prevention and control of NCDs. Process to review international experiences. To note.

This annex outlines the process for a (delayed) WHO review of international experiences and analyse successful approaches to multisectoral action. Approaches that address social, economic and environmental drivers of NCDs would also be covered:

In 2022, WHO will launch a publicly-accessible NCD multisectoral action repository. It will support governments to draw attention to national or local multi sectoral projects and especially best practices. WHO will also launch a first stocktaking report, including examples submitted by governments, to be updated annually based on submissions to the repository. Governments will be able update submissions on a continuous basis and those who seek to extend their networks or replicate best practices would be able to do so by contacting project owners directly in other countries. In 2023, WHO will submit an analysis of successful approaches to EB150.

- *NCDAC welcomes the proposed call for examples of successful approaches to multisectoral action on NCDs, recognizing multisectoral approaches as a key strategy "to implement health-in-all-policies and whole-of government and whole-of-society approaches, and to monitor and act on the determinants of NCDs, including social, and environmental determinants". [Resolution A/RES68/300](#).*
- *We ask that examples of best practices submitted by governments incorporate the views and voices of civil society and people living with NCDs, and that provision should be made for them to be included as project owners to be contacted for further discussions.*
- *We urge that reporting on multisectoral action for the prevention and control of NCDs be retained as an agenda item at the EB and WHA until 2025, and a major part of the commemoration of the 10th anniversary of the SDGs.*

Annex 8: School food best practices and guidance. To note.

Annex 9: People living with NCDs in emergencies. Process to provide guidance. To note.

We ask Member States to reiterate that NCDs are a growing issue in humanitarian settings. In 2017, NCDs accounted for between 24% - 68% of mortality in the top five source countries for refugees and people living with NCDs have an excess in morbidity and mortality related to their NCDs during emergencies and disasters.

Annex 10: Update on work of the UN Inter-Agency Taskforce on NCDs

The Taskforce coordinates action across the UN to support countries to achieve the SDGs related to NCDs via high-quality technical support for multisectoral action in countries. 12 UN organizations have published briefs on NCDs. The [report of the DG on the Task Force](#), submitted to the United Nations Economic and Social Council (ECOSOC) in March 2020 included updates on achievements.

In line with [ECOSOC resolution](#) which encouraged establishment of an NCD and mental health multi-partner trust fund, the Task Force Secretariat has drafted terms of reference with the UN Multi-Partner Trust Fund

Office as the administrative agent. The trust fund will support low- and middle-income countries accessing catalytic resources to tackle NCDs, as part of their national COVID-19 response and recovery plans.

Members of the Task Force continue to deliver joint programmes to support countries in advancing action on NCDs and are aligning activities with the United Nations' comprehensive response to COVID-19.

- *NCD Alliance commends the efforts in ensuring coordinated action to support governments to take action on NCDs. The work of the Taskforce has become even more relevant in the light of the COVID-19 pandemic and its impact on people living with NCDs.*
- *We urge governments to prioritize the prevention and control of NCDs and mobilize resources for NCDs and mental health, including through the new multi-partner trust fund for NCDs and mental health.*
- *Call for an increased role for civil society and people living with NCDs in joint programming missions, joint programmes and initiatives of the Task Force, for which we offer our continued support.*

Appendix 1: Mid-term evaluation of WHO Global Action Plan for the prevention and control of NCDs 2013–2020 [extended to 2030] (Document - Executive summary of mid-term evaluation)

The heavily delayed mid-term evaluation of the Global Action Plan was undertaken during 2020 - due to be the expiry date of the original plan. However, as the duration of the plan has now been extended to 2030 by WHA72, conclusions of the evaluation can still be instructive for the coming years. The NCD Alliance CEO was included in the evaluation advisory group.

- *As the NCD-GAP centres on achievement of the nine voluntary global targets (including a 25% relative reduction in premature mortality from cardiovascular diseases, cancer, diabetes or chronic respiratory diseases by 2025), it is particularly disappointing that the evaluation does not focus sufficiently strongly on the lack of progress towards the targets and the 25 health outcome indicators within the global monitoring framework. This concern was raised by independent stakeholders in the advisory process.*
- *It is particularly important, at the end of the original timeframe of the action plan, to check progress against intended outcomes and impact. WHO reporting and the NCD Countdown 2030 collaboration makes painfully clear that the 2025 targets will be missed, with only a very small number of countries currently on track to meet the subsequent SDG3.4 target on NCDs for 2030. This evaluation is a missed opportunity. It should be a pivotal moment to recognise where the action plan is not delivering sufficient progress and to change course, ahead of 2025.*
- *The [NCD Countdown 2030 report](#) of September 2020 demonstrates that all countries can still feasibly meet the 2030 SDG3.4 target to reduce premature mortality from the 4 major NCDs by one-third, if they rapidly deploy tailored packages of policy measures to prevent and treat NCDs. Governments and WHO must not delay any further in recognising the lack of progress asking tough questions as to why the NCD action plan will fail to deliver the 2025 targets.*
- *The evaluation did not seek to cover strategic issues. It would be important for Member States to call on WHO to reflect on strategic issues as a matter of utmost urgency.*
- *The evaluation was not asked to consider the shift from '4x4' to '5x5' so does not address how to include mental health and air pollution as major considerations in the future NCD response. Member States should request WHO to redress this and consider how best to align and ensure synergies with recent WHA decisions, strategies and action plans on NCDs: Cervical Cancer, Epilepsy and Neurology, Eye Health, Oral Health, Childhood Cancer, etc. into the strategic framework for 2030.*

- *The evaluation correctly notes that lack of resources globally is a major barrier to progress on NCD prevention and care. Whilst NCDs are the major cause of premature death and disability worldwide, this is in stark contrast to NCDs being the focus of less than 2% of development assistance for health, equating to far less than US\$1 per DALY, and a tiny fraction of the funding devoted to other global health priorities (HIV, TB, RMNCH). It is insufficiently recognised that people and health conditions do not exist in these programmatic funding siloes and that risk factors cut across communicable and NCDs: e.g. HIV commonly co-occurs with cardiovascular conditions as well as HPV/cervical cancer, there is a bi-directional relationship between diabetes and TB. It is estimated that up to 95% of people living with NCDs also have at least one other chronic health condition. We urge Member States to raise this fundamental mismatch and limitations of the siloed approach in whole-of-government discussions and with global health funding bodies, agencies, and philanthropies.*
- *It is useful to note (lack of) progress on policy implementation to achieve health-promoting environments, to explain the lack of progress towards the 2025/2030 targets. We ask Member States to call for a follow-up study to draw these important strategic conclusions to guide the next phase of the action plan implementation.*
- *With the exception of the lack of resources available at international level, the evaluation does not identify the key barriers to NCD progress over the course of the NCD-GAP 2013-2020. We agree that the potential of civil society and expertise of people living with NCDs has not been sufficiently engaged to date. We call on Member States to identify these barriers, make proposals for stronger, formal engagement of civil society and PLWNCDs, and call on WHO to develop clearer guidance on identifying, managing and mitigating conflicts of interest in multisectoral engagements.*
- *The evaluation implies that progress in tobacco control is sufficient - this is by far not the case and is a dangerously misleading message. Member States must not let up on action on tobacco as a killer of over 7 million people every year. More action and investment is also needed on tobacco control, implementation of proven cost-effective policies and support for the Framework Convention on Tobacco Control, its Secretariat and the Conference of Parties.*
- *NCDCA looks forward to working with Member States on how the recommendations of the evaluation can be strengthened and taken forward, with the required urgency to achieve progress ahead of 2025 and to meet the 2030 target SDG3.4.*

Appendix 2: Final evaluation of the global coordination mechanism on the prevention and control of noncommunicable diseases

The final evaluation of the GCM built on the preliminary evaluation conducted in 2017 and was based on responses to 4 questions on the relevance of the work of the GCM/NCD, its effectiveness, the most important factors for the successful or failed delivery of the GCM/NCD work plan and the role of WHO in the implementation of the work plans of the GCM/NCD.

The 5 functions/objectives of the mechanism are as follows:

- advocating for and raising awareness of the urgency of implementing the NCD-GAP;
- disseminating knowledge and sharing information based on scientific evidence and/or best practices regarding the implementation of the NCD-GAP;

- encouraging innovation and identifying barriers by providing a forum to identify barriers and share innovative solutions and actions for the implementation of the NCD-GAP;
- advancing multisectoral action by identifying and promoting sustained actions across sectors that can contribute to and support the implementation of the NCD-GAP;
- advocating for the mobilization of resources by identifying and sharing information on existing and potential sources of finance and cooperation mechanisms at the local, national, regional and global levels for the implementation of the NCD-GAP.

The process: The evaluation of the GCM/NCD was conducted concurrently the mid-point evaluation of the NCD-GAP. 16 Member States and 18 organizations in official relations with WHO responded to the questions on the GCM/NCD. Key informant interviews were also organized with 46 key stakeholders such as Member State representatives who had leading roles in GCM processes, United Nations agencies, academia, civil society organizations, private sector associations, other development partners and WHO staff.

Overview of results: The survey results showed a clear agreement that the overall purpose and functions of the GCM/NCD continue to be relevant, and noted that the specification of the functions could be improved by tailoring them to the different needs and gaps identified at the global, regional and country levels.

Key recommendations from the GCM evaluation:

- *The functions originally envisaged for the GCM/NCD remain valid and relevant to the NCD-GAP, the Thirteenth General Programme of Work, 2019–2023 and the Sustainable Development Goal targets to 2030. However, going forward, it is clear that the status quo is not an option. The GCM/NCD must ensure:*
- *A strengthened, more focused approach to delivery of the vital functions currently assigned to the GCM/NCD;*
- *To discontinue the mechanism, and establish a new operating model within WHO to ensure the functions are effectively carried forward. This could involve the functions of the GCM/NCD and its external engagement/linkage dimensions being undertaken either by the Global NCD Platform, one of the NCD technical departments or the Health and Multilateral Partnerships Department.*

Additional recommendations: WHO should

- *Develop a medium-term strategic plan with clear allocation of responsibility for the delivery of the five functions in synergy with the broader WHO strategy for implementing the NCD-GAP*
- *Enhance the country reach of WHO's work in delivering the five functions, with a particular focus on reaching national NCD focal points and country stakeholders.*
- *Formulate a clear engagement strategy with all stakeholders, We ask Member States to request that this includes guidance on how to identify, manage and mitigate conflict of interest from health-harming commodity industries including alcohol and ultra-processed food.*
- *Take steps to rationalize approaches to resource mobilization for NCD-related efforts within WHO and among Member States.*

The Russian Federation has proposed the following decisions:

Following up on the mid-point evaluation of the WHO Global Action Plan for the Prevention and Control of NCDs 2013-2030 [extended from 2020] and in consultation with Member States, the decision would invite

WHO to make recommendations to reorient parts of the WHO Global NCD Action Plan 2013-2020, and submit an updated draft plan to the Seventy-fifth World Health Assembly in 2022. In addition, develop an options paper for the future of the WHO Global Coordination Mechanism, in response to the recommendations of the final evaluation of the GCM, in consultation with Member States. Submit a report to the Seventy-fourth World Health Assembly in 2021.

A separate Decision under item 6 is proposed to invite Member States to develop a Resolution for WHA74 (May 2021) to address diabetes as a public health problem as part of UHC. Noting: that diabetes is now in global Top 10 leading causes of death worldwide; deaths from diabetes have increased by 70% (80% for men) worldwide since 2000; the probability of dying from diabetes between the ages of 30 and 70 increased by 5% between 2000 and 2016 and that people living with diabetes are at higher risk from COVID-19. Globally, all regions are off track against the Global NCD target to halt the rise of diabetes by 2025, as adopted in 2013.

Key Messages:

We encourage Member States to emphasise the disproportionate impact of the COVID-19 pandemic on people living with NCDs (PLWNCDS) and the need to urgently step up policy action and investment in NCD prevention and care, for both recovery and future preparedness and health security.

COVID-19 has been recognised as a [‘syndemic’ with NCDs and inequality](#), with PLWNCDS at higher risk of worse outcomes of COVID-19, and major disruption of NCD care in almost all countries worldwide, which will multiply the toll of the virus itself. Please see [NCDA briefing note](#) on impact of COVID-19 on people living with NCDs and [WHO assessment of NCD care](#) and [mental health care disruptions](#). Please also refer to [UNGA omnibus resolution](#), with particular reference to NCDs and inclusion of people with lived experience in COVID-19 recovery and response plans.

- **Support the proposed decisions**, with addition of consultation of civil society and people living with NCDs. Call on WHO and Member States to include NCD prevention and control in security, preparedness and response.
- **Request Member States to work together to develop WHA74 Resolution on diabetes** including screening, diagnosis, care and type 2 diabetes prevention, including access to insulin and necessary devices and diagnostics. Include clear provisions on inclusion of PLWNCDS in decision-making at all levels. A forthcoming Cochrane review from WHO confirms obesity, a key risk factor for type 2 diabetes, is an independent prognostic factor in COVID-19 and patients are at increased risk of all adverse outcomes. Member States have an opportunity in a diabetes resolution to request global action on obesity, in both the context of COVID-19 and the Global Diabetes Compact.¹
- **Mid-point evaluation of the Global NCD Action Plan: Strongly support the need to update the toolbox of policy options for Member States and to develop recommendations for cost-effective interventions. Emphasise the increased urgency of implementing policy responses at national level, to recover from COVID-19 and increase future health security and preparedness**, including to promote mental health and wellbeing and to reduce the burden of premature death and a range of NCDs caused and exacerbated by air pollution.
- **Recognise multimorbidity and co-morbidity with communicable diseases - including COVID-19 - and between NCDs, including mental health conditions** as a challenge to be considered in designing policy responses and UHC, and as an opportunity in addressing common risk factors and investing in affordable diagnostics, screening and early diagnosis of NCDs.

¹ NCDA member World Obesity Federation is working with WHO and interested Member States to advance action on obesity in the wake of COVID-19. A consultation to discuss a potential resolution on obesity is planned for Feb 2021.

• **Oral health (Document [EB148/8](#) and proposed resolution)**

Additional point under item 6, proposed for inclusion by Sri Lanka. At the recommendation of the Executive Board, the report outlines the challenges to global public health posed by oral diseases, recent oral health activities of the Secretariat, and proposes actions towards better oral health by 2030 as part of the work on NCDs, UHC and the SDG agenda. The Board is invited to note the report, consider a draft resolution and provide guidance on the way forward.

The draft resolution, proposed by Sri Lanka, calls for a global strategy, action plan including 2030 targets, development of technical guidance on dental services and 'best buys' on oral health.

Key messages:

- NCDs and members strongly welcome the DG's report and the proposed resolution to increase political focus on oral health, noting shared risk factors (inter alia sugar, alcohol, tobacco consumption), a strong socio-economic gradient reflecting health inequalities from an early age, and comorbidities with other NCD conditions, such as head and neck cancers, type 2 diabetes, obesity and other diet-related NCDs, and major inequalities in access to oral health care. We particularly welcome the emphasis on prevention measures in the report and reiterate the untapped potential to prevent both oral health conditions and other NCDs with shared risk factors.
- Member States are encouraged to adopt the proposed resolution and to step up political commitment and action on oral health, recognising the widespread impact of oral diseases and high out-of-pocket expenditures, globally and in particular in low- and middle-income countries and amongst marginalized populations.
- Member States are urged to take action on common risk factors, shared by other NCDs, including sugar, tobacco and alcohol consumption and underlying social and commercial determinants. These can be a basis for integrated strategies for prevention and control, noting that current WHO NCD 'Best Buys' in relation to tobacco, alcohol and diet are beneficial to oral health.
- With regard to the draft resolution, Member States are requested to emphasise the importance of dental research to strengthen the evidence-base for oral disease prevention and oral health promotion, including research into associations between oral diseases and other diseases. Member States are also asked to consider inclusion of cleft lip and palate as the second most common birth defect worldwide, and to consider recommending community-based methods for improved delivery of fluoride, i.e. community water fluoridation (as per resolution WHA60.17).
- Member States are urged to act on resolution WHA60.17, the 2011 Political Declaration of the first UN HLM on the Prevention and Control of Non-communicable Diseases, 2017 Minamata Convention on Mercury and Political Declaration of the 2019 UN HLM on UHC. In particular, Member States should:
 - Meaningfully engage people living with oral disease, oral health professionals and civil society organisations in planning, development, monitoring and evaluation of oral health care services.
 - Recognise that oral health conditions are estimated to affect 3.5 billion people worldwide, and integrate oral health into country level NCD strategies and legislation, focusing on shared risk factors such as tobacco and harmful alcohol use, unhealthy diets and poor hygiene through

measures to limit on availability, affordability and accessibility of unhealthy commodities, including taxation, and strengthening of health-promoting environments.

- Integrate NCDs, including oral health, into UHC programmes and primary health care to provide populations equitable access to oral health care including essential medical consumables, medication and equipment/supplies, financial protection against out-of-pocket health expenditure and orientation of the oral health workforce to ensure integrated, people-centered health services. This must include sufficient oral health budgets and improved oral health surveillance, data collection and monitoring.
- Integrate oral health, as well as other NCDs, into health and development priorities and programmes, including maternal, child and adolescent health, nutrition, education programmes, and healthy aging, to maximise potential for preventive action and equitable access to care for both oral health conditions and related NCDs / comorbidities.

Agenda item 7: Expanding access to effective treatments for cancer and rare and orphan diseases, including medicines, vaccines, medical devices, diagnostics, assistive products, cell- and gene-based therapies and other health technologies; and improving the transparency of markets for medicines, vaccines and other health products (Document [EB148/9](#))

At the recommendation of the EB in 2019 and following resolutions WHA70.12 (2017) and WHA72.8 (2019), the progress report includes access to health products for rare and orphan diseases. The Board will be invited to note the progress made and to provide further guidance on optimizing access to cell- and gene-based therapeutics and other health products for rare and orphan diseases.

The report includes regional updates undertaken by the WHO to increase transparency (such as information exchange platforms in EURO and EMRO, and work to explore legislative barriers to transparency in EURO and PAHO) and renewed support for the continuation of the fair pricing forum as a platform to continue discussions and collaborative work on the topic.

Key Messages:

- Welcome the report as a next step in improving access to essential treatments for people living with cancer and other NCDs.
- Welcome recognition of the Fair Pricing Forum and encourage its further promotion and political commitment to carry forward discussions. Member States are strongly encouraged to call for inclusion of people living with NCDs in the 2021 Fair Pricing Forum as well as any regional or country level discussions on pricing transparency.
- Member States are strongly encouraged to use the MedsPaL database and engage in pricing transparency discussions as a method to reduce out-of-pocket payments for people living with NCDs.
- Welcome the increased awareness and use of patent databases in order to build capacity for the proper implementation of intellectual property laws in line with TRIPS and that make sure of its flexibilities to improve access. We encourage WHO and Member States to engage with organisations including Medicines Patent Pool to disseminate information on the status of patents and licenses.
- Encourage WHO to expand pre-qualification lists to support Member States in improving access and affordability of medicines.
- Recognise that work to improve access to essential treatments should be holistic and Member States should also consider the rational selection and procurement of essential diagnostics and assistive

products based on national needs. To support this we encourage WHO to harmonise the essential medicines and essential diagnostics lists.

- Support the principle of transparency as part of good governance and the sharing of information. We recognise that we still need more data on which specific actions lead to better access and would encourage Member States to utilise the policy options contained in [WHO's 2018 Technical report pricing of cancer medicines and its impacts](#).
- While price transparency is one aspect of improving access, focus also needs to stay on other important aspects of improving health infrastructure and optimal use of health expenditure, policies to increase the uptake of quality assured generics and biosimilars, capacity building for local manufacturers and support to facilitate the transfer of technologies.
- Encourage Member States to engage non-government organisations as a key partner in taking these actions forwards, recognising the additional skills, expertise and resources which many NGOs are keen to contribute to national efforts to improve access to essential medicines, technologies and vaccines to prevent and treat cancer and other NCDs.

A draft resolution, “Strengthening Local Production of Medicines and Other Health Technologies to Improve Access”, is proposed by Ethiopia. This resolution notes the challenges Member States face in promoting sustainable local production of quality, safe, effective and affordable medicines and other health technologies to benefit public health and health security. It urges Member States and WHO to strengthen local, regional and global policies and mechanisms to promote quality and sustainable local production of medicines and health technologies.

Key Messages:

- Welcome the proposed resolution to support local production of medicines and health technologies, where appropriate based on the national context, and call upon Member States to support the resolution. People living with NCDs require access to quality essential medicines and health technologies. However marginalised populations and those living in low- and middle- income countries currently experience difficulties in accessing safe, appropriate essential medicines and health technologies. Those that do source such products often experience large out-of-pocket payments.²
- Endorse the call to use holistic approaches to strengthening local production including South-South and North-South development cooperation, partnerships and networks, establishment of national/regional pooled funds and incentives as well as call for enhanced inter-ministerial policy coherence.
- The text needs to be strengthened related to Member States’ technical ability and regulatory (legal) standards as the foundation for these efforts. Member States are requested to more strongly emphasise the pivotal role of regulatory frameworks alongside the development of evidence-based holistic national policies, strategies and plans of action to ensure safe, quality and sustainable local production. Support for development and monitoring of national regulatory frameworks could also be provided by subregional, regional and global networks.
 - WHO has developed [guidance](#) and also a [global benchmarking tool](#).
- Member states should include text to
 - Ensure that medicines are quality-assured and follow GMP (Good Manufacturing Practices (GMP), which is a system for ensuring that products are consistently produced and controlled according to quality standards.)

²<https://ncdalliance.org/resources/protecting-everyone-integration-of-noncommunicable-diseases-into-universal-health-coverage-in-the-era-of-covid-195>

- Address the problem of substandard medicines
- Address problems related to supply chains. Local production will be susceptible to supply chain constraints which are not yet considered in the zero draft.
- Address the need to strengthen national research as part of the holistic approach to strengthening local production.
- Advise Member States to remove reference to promotion of the local production of traditional medicines due to the limited available research on their efficacy or safety, and there is a lack of regulatory oversight. In many countries around the world, unproven traditional medicines are taken in place of proven treatments for conditions such as cancer, wasting valuable time in treatment pathways with the patient moving from curative to non-curative disease. Member States are instead advised to focus efforts on promotion of local production of allopathic medicines. If the reference to traditional medicines is included in the resolution, urge member states to include strict regulatory oversight.
- Request Member States include local production of assistive technologies alongside medicines and other health technologies within this resolution. Rehabilitation is an essential component of the continuum of care and assistive technologies, which Member States have resolved to improve access to through the resolution “Improving access to assistive technology” ([WHA71.8](#)), are vital for many people living with NCDs and disabilities. We remind Member States of the United Nations Convention on the Rights of Persons with Disabilities and that one billion people need assistive technology but that 90% of those do not have access to it. Local production of assistive technologies can be part of the solution to this problem.

Agenda item 9: Antimicrobial resistance (Document [EB148/11](#))

Pursuant to resolution WHA72.5 (2019), the DG’s report outlines progress in implementing the global action plan on antimicrobial resistance; provides an update on activities towards achieving the five strategic objectives of the global action plan, on progress in global coordination and tripartite partnership efforts; and highlights the main country-level and global challenges in programme implementation.

The EB is invited to note the report and provide guidance on accelerating Member States’ implementation of national action plans on antimicrobial resistance and on enhancing feedback from health ministries on the process to review the Codex Code of Practice to Minimize and Contain Foodborne Antimicrobial Resistance.

Key Messages:

- Member States are urged to recognise the strong bilateral relationship between infectious diseases and noncommunicable diseases. 8.4% of global NCD disability adjusted life years (DALYs) are attributable to infection.³ Many people living with NCDs are at increased risk of developing infectious disease due to disease or medication affecting their immune system e.g. people living with cancer. The growing threat from antimicrobial resistance further jeopardizes the health of people living with NCDs.
- Member States are strongly advised to increase provision of data through the Global Antimicrobial Resistance and Use Surveillance System (GLASS), adhere to the Minimum Requirements for infection prevention and control programmes and establish Antimicrobial stewardship programmes at national level. Partners such as WHO are encouraged to support countries’ antimicrobial susceptibility testing.
- NCD, UICC and partners, welcome the One Health approach and acknowledgement of the need for multi sectoral collaboration. We also welcome inclusion of indicator 3.d.2 on antimicrobial resistance

³ [https://www.thelancet.com/journals/langlo/article/PIIS2214-109X\(20\)30358-2/fulltext](https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(20)30358-2/fulltext)

globally into the Sustainable Development Goals. Member States are called to meaningfully include people living with NCDs in multisectoral antimicrobial resistance working groups.

- Welcome the report and congratulate WHO on the development of valuable normative tools identified in the report.
- AMR has significant potential to undermine key advances made in the effectiveness of cancer and NCD care, undermining or eliminating the effective use of certain key treatment modalities (including surgery and certain chemotherapies).
- Encourage WHO and Member states to think beyond the usual partners in the national responses to AMR. In particular, to equip and engage with the cancer and NCD community in the development and implementation of AMR responses e.g. inclusion of oncology teams in national stewardship training programmes and guidance on AMR as a key group to support the roll-out of these measures.
- Encourage both WHO and Member States to collect and disaggregate data to better understand the impact of AMR on the successful treatment of cancer and other NCDs to better inform and refine national AMR strategies.

Agenda item 13: Integrated people-centred eye care, including preventable vision impairment and blindness (Document [EB148/15](#))

In response to resolution WHA73.4 (2020) requesting the WHO DG to prepare recommendations on feasible global targets for 2030 on integrated people-centred eye care, focusing on effective coverage of refractive error and effective coverage of cataract surgery, the WHO Secretariat consulted Member States, experts and stakeholders from July to November 2020.

The Secretariat published a discussion paper in October with preliminary recommendations for targets, and received comments through a web-based consultation. The report includes recommendations for global targets for 2030 for effective coverage of both treatment of refractive error and cataract surgery, for consideration by WHA74.

The proposed global target for effective coverage of refractive error is a 40% increase by 2030: Countries with a baseline effective coverage rate of 60% or higher should strive for universal coverage. Countries should aim to achieve an equal increase in effective coverage of near and distance refractive error in all relevant population subgroups.

The recommended global target for effective coverage of cataract surgery is a 30% increase by 2030: Countries with a baseline effective coverage rate of 70% or higher should strive for universal coverage. Countries should aim to achieve an equal increase in effective coverage of cataract surgery in all relevant population subgroups.

EB148 is invited to consider the proposed draft global targets for 2030 and provide further guidance.

Key message:

- NCDA and partners commend the attention given to the global burden of refractive errors and cataract - the leading causes of blindness and vision impairment. This is an important step as global eye care needs, especially those for refractive errors and cataract, are expected to increase substantially in the coming decades, with the number of people living with blindness and severe vision impairment projected to double by 2050.
- NCDA and partners welcome the open and collaborative process which led to the development of the proposed global targets for 2030. Engaging communities, civil society and people with eye care needs

in policy discussions is a major pillar of Integrated People-centred Eye Care (IPCEC), and a sure way to ensure that services are planned to address unmet needs and marginalized populations.

- We urge Member States to adopt the targets and rapidly increase effective coverage of refractive error and cataract surgery to address as a strategy chronic inequalities in access to eye-care services, which further exacerbate socio-economic inequalities by impairing access to employment and learning. These indicators also reflect broader eye care and should focus on the strength of the overall eye care system which will address other eye health conditions and can also reflect broader health coverage such as health services for older persons.
- We call on governments to integrate eye care strategies into wider country-level NCD strategies, which in turn are integrated into UHC frameworks to ensure sustainable, person-centered responses. We urge Member States to meaningfully involve people living with eye conditions in all decision making and policy development processes.
- NCDA and partners urge the WHO Secretariat to facilitate effective, timely and transparent monitoring and evaluation of progress on these targets to promote accountability and learning opportunities amongst member States. We call for the disaggregation of data across groups such as women and girls, people with disabilities, Indigenous peoples and other disadvantaged groups; to ensure increases in coverage do not focus only on those easiest to reach, leaving marginalised people behind.

Pillar 2: One billion more people better protected from health emergencies

14. Public health emergencies: preparedness and response

COVID-19 has been recognised as a 'syndemic' with NCDs and inequality, with PLWNCs at higher risk of worse outcomes of COVID-19, and major disruption of NCD care in almost all countries worldwide, which will multiply the toll of the virus itself. Please see [NCDA briefing note](#) on impact of COVID-19 on people living with NCDs and [WHO assessment of NCD care](#) and [mental health care disruptions](#). Please also refer to [UNGA omnibus resolution](#), with particular reference to NCDs and inclusion of people with lived experience in COVID-19 recovery and response plans.

14.1 COVID-19 response ([Document EB148/16](#))

Further to the document submitted to the Executive Board at its fifth special session (on the COVID-19 response), the report updates the Board on the Secretariat's activities to combat the pandemic of coronavirus (COVID-19). An online COVID-19 Strategic Preparedness and Response [monitoring framework](#) is now online, which provides a global overview of resources made available by WHO and UN entities. The report notes that WHO is currently undertaking a second pulse survey to monitor the impact on essential health services - the [first pulse survey](#) in August 2020 demonstrated severe disruption of NCD services in almost all countries, including screening, diagnosis, rehabilitation, surgery and palliative care.

14.2 WHO's work in health emergencies ([Document EB148/17](#) - scheduled 13 January)

Pursuant to requests in resolution EBSS3.R1 (2015), decision WHA68(10) (2015) and resolution WHA73.8 (2020), the Director-General will submit a report which will: provide updates on all public health emergencies of international concern, Grade 3 and United Nations Inter-Agency Standing Committee Level 3 emergencies in which WHO took action in 2020 (up to August) and on the progress made to improve research and development for potentially epidemic diseases; and describe the work WHO is undertaking at global, regional and country levels in order to prepare for, prevent, detect and respond to health emergencies, including its role as health cluster lead. The Board will be invited to note the report.

- **Strengthening WHO's global emergency preparedness and response (Document EB148/18 - to be scheduled)**

Proposed by the USA for inclusion under agenda item 14.2. At the recommendation of the Officers of the Executive Board, the Director-General will submit a report on strengthening WHO's global emergency preparedness and response. It is intended that the report will support a discussion on the opportunities for making progress on strengthening the capacity of the WHO Secretariat and Member States to fulfil their respective roles in preventing, detecting and responding to health emergencies, 1 Document EB145/2019/REC/1, summary record of the first meeting, section 5. 2 Document EBSS/5/2. EB148/1 (annotated) 4 including outbreaks, in order to protect and improve global public health by full implementation of the International Health Regulations (2005).

- **Strengthening preparedness for health emergencies: Implementation of the International Health Regulations (2005) (Document EB148/19 - to be scheduled)**

Pursuant to requests made by the Health Assembly in resolutions WHA73.1 (2020) and WHA73.8, on September 2020 the Director-General convened the Review Committee on the functioning of the International Health Regulations (2005) during the COVID-19 response. The Director-General will transmit the Review Committee's interim progress report to the Executive Board for its consideration.

14.3 Mental health [and neurology] preparedness and response for the COVID-19 pandemic ([Document EB148/20](#))

A resolution on mental health preparedness and response has been proposed by Thailand. The DG's report emphasises the mental health dimension of the COVID-19 pandemic, noting that before the pandemic almost 1 billion people were living with a mental health condition, a further 50 million people have dementia and 250 million people live with alcohol or substance abuse disorders. The report notes that mental health conditions often occur alongside other chronic health conditions. It has been estimated that over 75% of people with mental health conditions in some LMICs cannot access mental health care. Furthermore, mental health services have been disrupted in 93% of countries during the pandemic.

The report highlights that mental health considerations are essential in all preparedness actions and responses to COVID-19, and that mental health must be included in universal health coverage as countries recover from the pandemic. Importantly, the report also observes the long-term neurological impacts of COVID-19, which will need to be reflected in health systems' capacity to provide care for people living with 'long COVID'. The Board is invited to note the report and consider the proposed resolution.

Key Messages

- **We ask Member States to request an NCD-specific subitem to this agenda item at WHA74 to examine the disproportionate impact of the COVID-19 pandemic on people living with NCDs (PLWNCDS).**
- **Recognise the need to urgently step up policy action and investment in NCD prevention and care, for both recovery and future preparedness and health security.**
- **Recognise multimorbidity and co-morbidity with communicable diseases - including COVID-19 - and between NCDs, including mental health conditions as a challenge to be considered in designing policy responses and UHC, and as an opportunity in addressing common risk factors and investing in affordable diagnostics, screening and early diagnosis of NCDs.**
- **Request technical guidance on how to mitigate increased population exposure to NCD risk factors during and beyond the pandemic, particularly alcohol, tobacco and barriers to healthy diets and**

physical activity, as well as mental health stressors. Policy action is needed to address prevention and treatment in the short- and long-term, including ensuring access to safe, nutritious and sustainable diets, stronger food systems and increased access to physical activity and improved mental health, to support a sustainable recovery and future resilience.

- **Strongly support the need to update the toolbox of policy options for Member States and to develop recommendations for cost-effective interventions. Emphasise the increased urgency of implementing policy responses at national level, to recover from COVID-19 and increase future health security and preparedness**, including to promote mental health and wellbeing and to reduce the burden of premature death and a range of NCDs caused and exacerbated by air pollution. These interventions should be implemented to reach SDG3.4 and contribute across Agenda 2030 more broadly, including poverty reduction, (gender) equity and environmental goals.

Pillar 3: One billion more people enjoying better health and wellbeing

Agenda item 16. Social determinants of health (Document [EB148/24](#))

At the recommendation of the Officers of the Executive Board, the Director-General has submitted a report on addressing social determinants of health (SDoH), namely, the conditions in which people grow, learn, live, work and age. Negative consequences on many health outcomes and on health equity, are being further emphasised by the toll of COVID-19. The Board is invited to note the report and provide further guidance.

A **resolution** has been proposed by Peru, which aims to recognise the need to establish, strengthen and maintain monitoring systems, including observatories, to provide data to assess health inequalities and the impact of policies on SDoH at national, regional and global levels. Data on SDoH would serve to guide national decision-making processes for strategies, policies and plans to improve wellbeing for all and health equity.

Key Messages

- Strongly support a stronger focus on social, as well as *economic, environmental and commercial determinants* of health across all WHO activities and request increased technical support to member states to integrate into national and regional policies and responses.
- A stronger focus on SDoH and reducing health inequalities, explicitly including NCD prevention and treatment, is essential for recovery from the pandemic and to increase population resilience to future health threats.
- Broader SDoH are relevant across NCDs and mental health conditions. Member States are requested to highlight that COVID-19 has further revealed the uneven burden of NCDs, as people living with NCDs are at significantly higher risk of serious illness. Both NCD and COVID-19 impacts are inequitable across different communities and are further widening health inequalities (socio-economic gradient, people of colour, Indigenous communities, women, older people, youth, marginalised groups, etc.)
- As well as the examples provided in the report, Member States are asked to specifically consider the impact of unhealthy environments, in terms of barriers to access to health services and in relation to availability, affordability and attractiveness (via marketing, promotion) of health harming products, including tobacco, alcohol and ultra-processed, high fat sugar and salt foods. Whilst the report mentions food insecurity, unhealthy, obesogenic food environments merit more specific consideration.

- The COVID-19 pandemic doubly risks further widening health inequalities, because of inequitable access to health services as well as unequal exposure to major NCD risk factors: tobacco, alcohol, unhealthy food, physical inactivity and pollution, overlapping with poorer living and working conditions. The tobacco, alcohol and junk food industries in particular have been shown to be exploiting the pandemic to promote unhealthy products and promote weaker regulation, see for example, NCD and Spectrum (2020) [Signalling Virtue, Promoting Harm](#).
- Encourage Member States to reflect on SDoH within their own national contexts and to take an explicit focus within health planning, particularly for NCDs, in order to ensure policy coherence and that the unintended consequences of previous national health, trade, urban development, and energy strategies do not continue to undermine the health of populations in the future and stretch limited health resources even thinner.

Pillar 4: More effective and efficient WHO providing better support to countries

Agenda item 19.2: WHO reform: involvement of non-State actors in WHO's governing bodies (Document [EB148/35](#))

In February 2020, EB146 noted the proposals for improving involvement of non-State actors in WHO governing bodies, and requested a revised report to the Board. The report provides further information and proposals for informal meetings between non-State actors, WHO technical units and Member States. The Board is invited to decide if the proposed new approach to non-State actor involvement and the informal meeting should be tested at WHA74. There is general consensus that current ways of operating are not satisfactory for Member States, nor for non-State Actors. Ways forward must better ensure that engagement is meaningful, relevant and efficient, and respects diversity of NSA perspectives. Recognition that NSA participation in WHA73 was 'less satisfactory than normal'. Dr Tedros has noted the benefits of engaging with civil society e.g. through the WHO Civil Society Working Group on NCDs.

Proposed changes: *in addition to NSA participation in governing body meetings*

- Informal virtual technical coordination meetings (3x 3hrs) for NSAs in WHO official relations with WHO technical units, 2-4 weeks ahead of WHA
- Additional (3x 3hr) meetings of Member States and NSAs regarding WHA agenda points, to allow exchange of views
- Opportunity to organise side events alongside the coordination meetings, in advance of WHA – implied this would be instead of side events during WHA itself.
- Online consultations
- Development of constituency statements and limit individual statements to 3 per organisation
- Potential limits to size of NSA delegation

Key messages

- Welcome opportunity for further collaboration and communication with Member States and WHO technical teams. We however reiterate our request that consultations should also take place early in the preparation of technical documents, in relation to Zero drafts, as well as in advance of WHA.
- In order to maximise participation and exchange, particularly from member states, these meetings must be timed not to clash with formal preparatory meetings, e.g. PBAC. We are concerned by the implication that side events would no longer take place during WHA itself, noting potential impacts on participation.

- Applaud WHO's thinking to use new technologies to broaden out participation, recognising that the voices of NSAs representing smaller constituencies and from low- and middle-income countries face multiple barriers to participating in the meetings of Governing Bodies. This could set an important precedent as well for civil society consultation in preparation of Regional Committee meetings.
- Would welcome greater clarity on the modalities of the actions confirmed in order to better understand their implications for the global NCD community including how agenda items for these discussions will be selected, representation by non-state actors, capacity to submit questions and additional resources in a timely manner, etc.
- Urge WHO to recognise that informal discussions are an excellent complement to, but *not a replacement for*, comprehensive consultations on key documents as the latter will facilitate the more effective consolidation of resources (including data) to support the work of WHO technical teams
- We also strongly encourage the WHO to invite constituency statements on a *voluntary basis*, with clearer information on the incentives provided to support this. Mandatory constituency statements run the risk of marginalising minority voices from discussions, while voluntary constituency statements enable the ad-hoc and agile development of groups around consensus messages without the risk of marginalising minority groups. Clear guidelines should be provided on additional time for constituency statement and the minimum number of organisations required to qualify as a constituency.

Agenda item 19.3: Global strategies and plans of action that are scheduled to expire within 1 year
The global health sector strategies on, respectively, HIV, viral hepatitis and sexually transmitted infections, for the period 2016–2021 (Document [EB148/37](#))

The report describes progress made in tackling HIV, viral hepatitis and sexually transmitted infections, the challenges faced in achieving the 2030 goals, the lessons learned to date and makes a case for strategies from 2022-2030.

Key message: The report notes synergies between the strategies and HPV vaccination strategies for cervical cancer elimination. This is one important area of overlap between communicable disease communities and NCDs, but there are many other common comorbidities. The potential for synergies between communicable and NCDs should be more fully explored in a future consultation process on updating the strategies and aligning with strategic reviews of the Global Fund, UNAIDS and the Global Financing Facility. Please see NCDA (2020) briefing [Improving quality of life for communities living with HIV, TB and malaria](#).

In case of questions or feedback, please contact info@ncdalliance.org.

From: Horsford, Jonathan (NIH/NIDCR) [E]
Sent: Tue, 12 Jan 2021 18:41:02 +0000
To: Fox, Christopher (IADR); Ricks, Tim DMD (IHS/HQ); Hannan, Casey J. (CDC/DDNID/NCCDPHP/DOH)
Cc: Iafolla, Timothy (NIH/NIDCR) [E]; Meister, Alissa (NIH/NIDCR) [E]
Subject: CWF Benefits
Attachments: CWF Benefits for Stakeholders.docx

Chris, Tim, and Casey,

As we prepare for the release of the NASEM NTP report Rena asked NIDCR staff to come up with the latest evidence to support the benefits of CWF. Tim Iafolla compiled this abbreviated document. We focused less on the history of CWF, but rather recent published evidence to serve as a counter point.

Action: Rena requested you give the document a look and let us know if anything is missing or you have any edits or concerns.

Due: Since we don't know the expected release of the report, we probably have a bit of time. How about COB next Friday January 22nd.

Thanks,

Jonathan

D. Jonathan Horsford, Ph.D.
Acting Deputy Director
National Institute of Dental and Craniofacial Research
National Institutes of Health
Cell: (b) (6)

Benefits of Community Water Fluoridation

Definition: Community water fluoridation (CWF) is the controlled adjustment of fluoride to a level that prevents tooth decay and minimizes dental fluorosis currently set at 0.7mg/liter (or ppm) in the U.S.

Rationale: Caries is the most common chronic disease of childhood and is associated with a range of adverse outcomes including pain, sleep disturbances, decreased ability to eat some foods, social embarrassment, missed school, and lowered self-esteem. Fluoridation of community water supplies is the single most effective public health measure to prevent dental caries. Individual treatment for dental caries is effective but is expensive compared to preventive measures such as CWF.

CWF Effectiveness:

- Epidemiological studies of CWF began in 1945 and showed 50% to 75% caries reduction for the fluoridated cities compared to control cities over 5 years¹.
- Since then, there has been a steady decrease in the apparent measured effectiveness of CWF over the decades, because it has become increasingly difficult to find control groups that are unexposed to systemic or topical fluorides. This “halo effect” of fluoride exposure in control groups has caused a systematic bias toward the null.
- Recent studies show that CWF continues to be effective at reducing tooth decay by approximately 25% in children and adults, even in non-fluoridated communities receiving some level of fluoride from other sources.² Caries-reduction benefits are consistent whether measured in terms of prevalence or severity, and in primary or permanent teeth.
- Recent publications: A study of 275,843 New Zealand children with a median age of 4.3 years showed that those living in areas without CWF had 21% higher odds of severe caries compared with children living in areas with CWF, after adjustment for age, sex, ethnicity, and economic situation (Schluter 2020). A before-and-after study compared caries and fluorosis in random samples of 8-y-olds in Dublin ($n = 707$) and Cork-Kerry ($n = 1148$) in 2017 with 8-y-olds in the same cities ($n = 679$ and $n = 565$, respectively) in 2002. Caries experience in the CWF vs. non-CWF groups was 47% lower in 2002, and was 26% lower in 2017, an illustration of the halo effect in non-CWF populations (James 2020).

Cost Effectiveness

- 73% of the U.S. population is served by public water systems that are optimally fluoridated ([CDC](#)).
- Water fluoridation provides benefits beyond what is gained from using other fluoride-containing products, regardless of age, educational attainment, or income level.
- The return on investment for CWF varies with size of the community, increasing as community size increases, but CWF is cost-saving even for small communities ([US CPSTF 2016](#)). The savings associated in communities of 1,000 or more people exceeded estimated program costs, resulting in an average savings of \$24 per dollar invested. Other recent studies support or exceed this finding.³
- CWF benefits everyone, especially those without access to regular dental care. Fluoridation is a powerful tool in the fight for social justice and health equity. People can benefit from fluoridation’s benefits whether they are at home, work, or school. In addition, people who live in non-fluoridated areas receive 'halo' benefits when they consume food and beverages processed in fluoridated areas.

¹ Four matched city pairs were chosen for prospective cohort studies of five years’ duration. Baseline caries prevalence and severity were measured for approximately 5,000 school children in all paired cities. One city of each pair received fluoridated water at a concentration of 1ppm, followed by the caries measurements at the end of the study.

² Primarily food and drink processed with fluoridated water, naturally-fluoridated well water, or fluoride toothpaste.

³ A 2018 study of 172 public water systems in Colorado found that annual exposure to fluoridated water produced an average savings of \$60 per person ([CDC 2005](#)). Analyses of Medicaid claims data in 3 other states (Louisiana, New York, and Texas), have also found that children living in fluoridated communities have an average reduction in caries related treatment costs of \$39 ([CDC 2018](#)).

From: Horsford, Jonathan (NIH/NIDCR) [E]
Sent: Mon, 19 Oct 2020 12:57:21 +0000
To: Burns, Robert J.; D'Souza, Rena (NIH/NIDCR) [E]; Stredrick, Denise (NIH/NIDCR) [E]
Cc: Araujo, Marcelo; Meister, Alissa (NIH/NIDCR) [E]; lafolla, Timothy (NIH/NIDCR) [E]
Subject: RE: ADA Comments on NTP Fluoride Monograph
Attachments: 201016_ntp_fluoride_monograph_sig.pdf

Thanks Bob.

D. Jonathan Horsford, Ph.D.
Acting Deputy Director
NIDCR, NIH
Cell: (b) (6)

From: Burns, Robert J. <(b) (6)>
Sent: Friday, October 16, 2020 6:53 PM
To: D'Souza, Rena (NIH/NIDCR) [E] (b) (6); Horsford, Jonathan (NIH/NIDCR) [E] <(b) (6)> Stredrick, Denise (NIH/NIDCR) [E] <(b) (6)>
Cc: Araujo, Marcelo <(b) (6)>
Subject: ADA Comments on NTP Fluoride Monograph

Hi, Rena, Jonathan, and Denise. Attached is a courtesy copy of comments we submitted to the NASEM panel that is peer reviewing the NTP monograph about the potential neurotoxicity of fluoride. As you well know, the current draft includes a blanket statement that fluoride is a "presumed neurotoxin" at any exposure level.

The ADA is questioning the integrity of studies NTP is using to justify its claim, as well as the universal applicability of the claim itself. We are asking NTP to either (1) change its neurotoxin classification from "presumed" to "unknown", (2) add a prominent statement clarifying that its neurotoxin claim applies only to abnormally high levels of fluoride exposure, or (3) discard its monograph and start over.

Happy reading!

-Bob

Robert J. Burns
Manager, Legislative and Regulatory Policy
Government and Public Affairs
(b) (6) | (b) (6)

American Dental Association | 1111 14th Street NW, Suite 1100 | Washington, DC 20005 | www.ada.org

October 16, 2020

National Academies of Engineering, Sciences and Medicine
Board on Environmental Studies and Toxicology
500 Fifth Street NW
Keck WS625
Washington, DC 20001

Re: Revised NTP Monograph on Fluoride Exposure and Neurodevelopmental and
Cognitive Health

To Whom It May Concern:

On behalf of our 163,000 dentist members, we are pleased to comment on the Revised National Toxicology Program Monograph on Fluoride Exposure and Neurodevelopmental and Cognitive Health. We would like to reiterate the concerns expressed in our letter of November 19, 2019, for consideration at your peer review meeting of October 19, 2020.

First, NTP should either discard its monograph and start over, or change its classification of fluoride from a “presumed” neurotoxin to an “unknown” neurotoxin. There is not a wide body of literature examining fluoride as a potential neurotoxin. The literature that *is* available, and which NTP used, is either lacking, unreliable, inconclusive, conflicting, or subject to widespread interpretation. Even NTP acknowledged that its claim of “presumed” neurotoxin are based on a “low-to-moderate level of evidence.”

Second, if NTP *does* decide to move forward with its claim that fluoride is a “presumed” neurotoxin, it is critical to clearly and consistently qualify—throughout the document—that its claim applies only to abnormally high levels of fluoride exposure (≥ 1.5 mg/L). Failing to do so will endanger the public’s health and leave the agency vulnerable to charges of risk bias. We suggest some version of the following:

The findings and conclusions in this monograph are based on fluoride concentrations that are higher (≥ 1.5 mg/L) than those typically found in fluoridated drinking water in the United States (0.7 mg/L). The preponderance of scientific literature has not demonstrated a relationship between exposure to fluoride at levels recommended by the Centers for Disease Control and Prevention and the U.S. Public Health Service (0.7 mg/L) and neurocognitive development.

There are perhaps two or three places in the background, findings, and conclusions where NTP acknowledges that studies of fluoride exposure at levels recommended for community water fluoridation (0.7 mg/L) have not consistently or reliably demonstrated effect on cognitive neurodevelopment. It is a key finding that is overshadowed by the frequently repeated blanket statement that fluoride is presumed to be a neurotoxin—without any context or qualification.

We recognize that the oral health benefits of fluoride are not addressed in this monograph. However, failing to clearly and prominently acknowledge that NTP's findings apply only to abnormally high concentrations of fluoride (≥ 1.5 mg/L) will generate confusion about the safety of community water fluoridation at levels recommended by the Centers for Disease Control and Prevention and the U.S. Public Health Service (0.7 mg/L). This lack of clarity will add to the many myths and misperceptions about community water fluoridation, and likely undermine state and local efforts to expand the practice.

For your consideration, we are enclosing our comments of November 19, 2019, a critique of the literature used for the monograph, and a copy of the ADA's premier resource on community water fluoridation—[*Fluoridation Facts*](#).

The 2018 edition of *Fluoridation Facts* contains evidence-based answers to the question of whether there is a relationship between consumption of optimally fluoridated water and lowered intelligence quotients or behavioral disorders in children. The evidence from individual studies and systematic reviews does not support claims of a causal relationship.

The CDC hailed community water fluoridation as one of ten great public health achievements of the 20th century.¹⁻² It is an inexpensive way to reduce tooth decay by at least 25 percent in the population.³ It would be a shame to distract from 75 years of public health success over a simple matter of communicating the science, which is often more nuanced than a sound bite can convey.

Whatever final form the monograph takes, we appreciate the opportunity to comment. If you have any questions, please contact Mr. Robert J. Burns at (b) (6) or (b) (6)

Sincerely,

(b) (6)

Chad P. Gehani, D.D.S.
President

(b) (6)

Kathleen T. O'Loughlin, D.M.D., M.P.H.
Executive Director

CPG:KTO:rjb
Enclosures (3)

¹ Centers for Disease Control and Prevention. Ten Great Public Health Achievements United States, 1900-1999. *MMWR* 1999; 48 (12): 241-243.

² Vivek H. Murthy, Surgeon General's Perspectives: Community Water Fluoridation—One of CDC's 10 Great Public Health Achievements of the 20th Century, *Public Health Rep* 2015; 130(4): 296-298.

³ American Dental Association, *Fluoridation Facts*, 2018.

National Fluoridation Advisory Committee Analysis and Comments

REVISED DRAFT NTP MONOGRAPH ON FLUORIDE EXPOSURE AND NEURODEVELOPMENTAL AND COGNITIVE HEALTH EFFECTS

October 16, 2020

The American Dental Association's National Fluoridation Advisory Committee is pleased to offer the following scientific/technical comments on the National Toxicology Program's Draft Monograph on the Systematic Review of Fluoride Exposure and Neurodevelopmental and Cognitive Health Effects.

The hazard rating of fluoride as "*presumed to be a cognitive neurodevelopmental hazard to humans*" is not supported by the systematic review of fluoride exposure.

Our team has two asks for the National Toxicology Program:

- 1. A clear statement of no effect below 1.5 mg/L F in water is needed.**

The revised *Draft NTP Monograph on the Systematic Review of Fluoride Exposure and Neurodevelopmental and Cognitive Health Effects*ⁱ acknowledges that it lacks the dose-response assessment data to conclude a neurotoxic effect from the fluoride exposure that is present in fluoridated tap water in the US. The report correctly states that "the highest quality experimental animal study [NTP study] reviewed for this monograph (McPherson et al. 2018)ⁱⁱ did not find effects of fluoride on learning, memory or motor activity in the critical <20 ppm in drinking water concentration range (page 58)". It is also worth noting that the magnitude of effect changed from a "relatively large magnitude of effect" observed in the NTP 2019 Draft Monograph to one "where the overall pooled effect estimate from the meta-analysis of studies with individual-level measures does not demonstrate a large magnitude of effect" (Page 65). For epidemiological studies the "dose response assessment" Table A5-3 does not present the relationship between degree of exposure and magnitude of neurodevelopmental health effects at or below 0.7 mg/L (i.e., 0-0.7 mg/L, 0.8-1.5 mg/L, >1.6 mg/L etc.) (page 254). **The analysis below 1.5 mg/L F in water shows the absence of an effect [SMD 0.32 (-0.57, 1.20)].** Therefore, the statement that "When focusing on findings from studies with exposures in ranges typically found in drinking water in the United States (0.7 mg/L for optimally fluoridated community water systems) that can be evaluated for dose response effects on cognitive neurodevelopment are inconsistent and, therefore, unclear" is not supported by the analysis. **A clear statement of no effect below 1.5 mg/L F in water is needed.** This is consistent with the recent review from the Leibniz Research Centre, Germanyⁱⁱⁱ that reported that "based on the totality of evidence the present review does not support the presumption that fluoride should be considered as a human developmental neurotoxicant at current exposure levels in European countries."

2. Include how Standardized Mean Difference calculations were completed

The meta-analysis was difficult to understand because the details are not described in the protocol. For example, it is not clear how the authors calculated standardized mean difference (SMD) when the means are not presented in the publications or how they handled multiple regression coefficients in generating pooled estimates. Another example is that Table A5-2 and Figure A5-16 list 6 studies that contributed to the analysis of Full-scale IQ, Verbal IQ, and Performance IQ. But the Verbal and Performance IQ data analysis are found only in the Green 2019 paper. How did NTP get the Verbal and Performance IQ data for the other 5 studies?

ⁱ NTP. Draft NTP Monograph on the Systematic Review of Fluoride Exposure and Neurodevelopmental and Cognitive Health Effects. Revised September 16, 2020.

ⁱⁱ McPherson CA, Zhang G, Gilliam R, Brar SS, Wilson R, Brix A, Picut C, Harry GJ. 2018. An evaluation of neurotoxicity following fluoride exposure from gestational through adult ages in Long-Evans hooded rats. *Neurotoxicol Res*: 1-18.

ⁱⁱⁱ Guth S, Hüser S, Roth A. et al. Toxicity of fluoride: critical evaluation of evidence for human developmental neurotoxicity in epidemiological studies, animal experiments and in vitro analyses. *Archives of Toxicology*. Published online 08 May 2020. <https://doi.org/10.1007/s00204-020-02725-2>

November 19, 2019

National Toxicology Program
c/o National Academy of Sciences
500 Fifth Street NW
Keck WS625
Washington, DC 20001

Re: Draft Monograph on the Systematic Review of Fluoride Exposure and
Neurodevelopmental and Cognitive Health Effects

To Whom It May Concern:

On behalf of our 163,000 dentist members, we are pleased to comment on the National Toxicology Program's Draft Monograph on the Systematic Review of Fluoride Exposure and Neurodevelopmental and Cognitive Health Effects.

At appropriate concentrations, doses and frequency of use in drinking water and dental products, fluoride has proven to reduce the prevalence and severity of tooth decay, a disease with potentially serious consequences. Tooth decay is the most common chronic disease of childhood which also affects the majority of adults. The Centers for Disease Control and Prevention (CDC) hailed community water fluoridation as one of ten great public health achievements of the 20th century.¹⁻²

For the last 75 years, people have raised well-meaning questions about the safety and effectiveness of fluoride exposure, including whether fluoride is somehow associated with neurological development. So, in 1977, the ADA established its National Fluoridation Advisory Committee (NFAC), a standing panel of experts who are able to provide ongoing advice about the safety and effectiveness of fluoride.

Enclosed you will find NFAC's observations and comments about the draft monograph and a roster of current members. Our panel of experts concluded that the available literature is insufficient to establish causation between fluoride exposure as experienced in the United States and neurocognitive development. It found that the literature generally is either lacking, unreliable, inconclusive, conflicting or subject to widespread interpretation.

We are also enclosing copy of *Fluoridation Facts* the ADA's premier informational resource on community water fluoridation. *Fluoridation Facts* provides answers to frequently asked questions about fluoride and community water fluoridation. Our goal is to provide clear answers—supported by numerous of credible scientific articles—to help policy makers and the public navigate through the many myths and misperceptions about fluoride.

The 2018 edition of *Fluoridation Facts* contains evidence based answers to the question of whether there is a relationship between consumption of optimally fluoridated water and lowered intelligence quotients or behavioral disorders in children. The evidence from systematic reviews and individual studies does not support claims of a causal relationship.

Given the state of the literature, we ask that you revisit the monograph's draft hazard rating that fluoride is "presumed to be a cognitive neurodevelopmental hazard to humans." It is also critical to the public's health that you include some type of modifier to distinguish the health benefits of optimally fluoridated drinking water, currently recommended at 0.7 parts per million (ppm), from the higher level exposures the monograph addresses (above 1.5 ppm).

Whatever final form the monograph takes, we appreciate the opportunity to comment. If you have any questions, please contact Mr. Robert J. Burns at (b) (6) or (b) (6)

Sincerely,

(b) (6)

Chad P. Gehani, D.D.S.
President

(b) (6)

Kathleen T. O'Loughlin, D.M.D., M.P.H.
Executive Director

CPG:KTO:rjb
Enclosures (3)

¹ Centers for Disease Control and Prevention. Ten Great Public Health Achievements United States, 1900-1999. *MMWR* 1999; 48 (12): 241-243.

² Vivek H. Murthy, Surgeon General's Perspectives: Community Water Fluoridation—One of CDC's 10 Great Public Health Achievements of the 20th Century, *Public Health Rep* 2015; 130(4): 296-298.

National Fluoridation Advisory Committee Scientific/Technical Comments

on the

National Toxicology Program Draft Monograph on the Systematic Review of Fluoride Exposure and Neurodevelopmental and Cognitive Health Effects

November 19, 2019

The American Dental Association's National Fluoridation Advisory Committee is pleased to offer the following scientific/technical comments on the National Toxicology Program's Draft Monograph on the Systematic Review of Fluoride Exposure and Neurodevelopmental and Cognitive Health Effects.

On November 6, 2019, the Overview of the Systematic Review shared that the NTP found a "moderate level of evidence that high fluoride exposure is associated with decreased IQ and other cognitive effects in children".

However, we believe that the hazard rating of fluoride as "*presumed to be a cognitive neurodevelopmental hazard to humans*" is not supported by the systematic review of fluoride exposure.

We offer these comments and summarize our concerns in the following paragraphs:

1. The literature review did not take into account the lack of support for a neurobehavioral effect of fluoride from animal studies conducted in the U.S.

The NTP animal study concluded that "At these exposure levels, we observed no exposure-related differences in motor, sensory, or learning and memory performance on running wheel, open-field activity, light/dark place preference, elevated plus maze, prepulse startle inhibition, passive avoidance, hot-plate latency, Morris water maze acquisition, probe test, reversal learning, and Y-maze... No evidence of neuronal death or glial activation was observed in the hippocampus at 20 ppm F⁻." (McPherson et al., 2018, p. 781)¹. Whitford et al. also concluded that "Chronic ingestion of fluoride at levels up to 230 times more than that experienced by humans whose main source of fluoride is fluoridated water had no significant effect on appetitive-based learning (Whitford, et al, 2009)."² It is worth noting these two US studies are not in agreement

¹ McPherson CA, Zhang G, Gilliam R, et al. An Evaluation of Neurotoxicity Following Fluoride Exposure from Gestational Through Adult Ages in Long-Evans Hooded Rats. *Neurotox Res.* 2018;34(4):781-798. doi:10.1007/s12640-018-9870-x

² Whitford, G, Whitford, J, Hobbs, S. Appetitive-based learning in rats: Lack of effect of chronic exposure to fluoride. *Neurotoxicology and Teratology.* 2009; 31(4):210-215. <https://doi.org/10.1016/j.ntt.2009.02.003>

with many of the animal studies conducted in China and India, thus raising questions about the validity of those other studies.

- 2. No meta-analysis was conducted to determine a summary effect size. It appears that the determination that the IQ effect size was large is based on subjective assessment and does not take into account measurement error.**

Figure D 7 in the review shows 53 beta estimates. Of these 23 are listed as significant (red) and the remaining 30 are not. None of these estimates accounted for the cluster sample design used (the samples were drawn from cities, schools or prenatal clinics). Accounting for cluster design effect may result in larger standard errors, thus reducing the p-value (statistical significance) associated with the results.

- 3. The characterization that effect sizes observed were of relatively large magnitude is not consistent with the data that show small effect sizes.**

IQ assessment in young children is subjective and influenced by multiple factors. Thus, small IQ score differences such as 1.5 points or even 4.5 points are not likely to be readily detectable due to measurement challenges between noise and signal nor have implications for normal children's activities. The review states that the IQ effect is relatively large and thus classifies fluoride as a "presumed" neurotoxin. There are differing views whether the IQ differences are large, and the Canadian Agency for Drugs and Technologies in Health (CADTH) have called the reported IQ effects as small³. Therefore, the panel should re-assess the clinical significance of the IQ studies.

- 4. The NTP report's assertion that "There is a low expectation that new studies would change the hazard conclusion" is not adequately justified considering that there are no prospective epidemiological studies that were designed to assess the neurobehavioral effects of fluoride.**

A reanalysis of the Canadian and Mexican studies that takes into account the cluster sampling design may not show an effect. Furthermore, a recent study conducted by Santa-Marina, et al., 2019, in Spain showed, "At the age of 4-5 years, an increase of 1 mg/l in the level of fluoride in urine during pregnancy (mean level of 1st and 3rd trimesters) was related to a higher score on the perceptual-manipulative scale of 4.44

³ Canadian Agency for Drugs and Technology in Health. Community Water Fluoridation: A Review of Neurological and Cognitive Effects. Ottawa: CADTH; 2019 Oct. (CADTH rapid response report: summary with critical appraisal). ISSN: 1922-8147 (online)
Available at
<https://cadth.ca/sites/default/files/pdf/htis/2019/RC1198%20Community%20Water%20Fluoridation%20Exposure%20Final.pdf>

(0.13, 0.75) points.⁴ If additional consideration and peer review of this study's results are forthcoming, this certainly would contradict this assertion from the NTP draft report.

With the concerns about the validity, reliability, and generalizability of the research used, we ask the team to reconsider how they classify Fluoride's Hazard Conclusion. With the research community of experts raising questions about the evidence used, the correlation between fluoride exposure in drinking water as publicly available in the United States and neurocognitive development is still unknown.

Also, very importantly, even if the NTP report's classification does not change, an extremely important element that is missing from the conclusion is a modifier to distinguish the difference between a high level of fluoride exposure and any exposure. Without replicated study findings showing strong correlations between fluoride exposures near 0.7 ppm (which is much less than 1.5 ppm, and a relatively rare level in the US) and neurodevelopment, the results are misleading to the public.

The ADA is truly gratified when, in the interest of the public's health and welfare, communities provide optimally fluoridated water to their residents. The current classification is misleading to the public, could scare them unnecessarily, and could ultimately decrease the oral health status of individuals and communities.

⁴ Santa-Marina, L, Jimenez-Zabala, A, Molinuevo, A, et al. Fluorinated water consumption in pregnancy and neuropsychological development of children at 14 months and 4 years of age. *Environmental Epidemiology*. October 2019 Volume 3 Supplement 1 p 386-387
doi: 10.1097/01.EE9.0000610304.33479.18

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Fluoridation Facts



Dedication

This 2018 edition of *Fluoridation Facts* is dedicated to Dr. Ernest Newbrun, respected researcher, esteemed educator, inspiring mentor and tireless advocate for community water fluoridation.

About Fluoridation Facts

Fluoridation Facts contains answers to frequently asked questions regarding community water fluoridation. A number of these questions are responses to myths and misconceptions advanced by a small faction opposed to water fluoridation. The answers to the questions that appear in *Fluoridation Facts* are based on generally accepted, peer-reviewed, scientific evidence. They are offered to assist policy makers and the general public in making informed decisions. The answers are supported by over 400 credible scientific articles, as referenced within the document. It is hoped that decision makers will make sound choices based on this body of generally accepted, peer-reviewed science.

Acknowledgments

This publication was developed by the National Fluoridation Advisory Committee (NFAC) of the American Dental Association (ADA) Council on Advocacy for Access and Prevention (CAAP). NFAC members participating in the development of the publication included Valerie Peckosh, DMD, chair; Robert Crawford, DDS; Jay Kumar, DDS, MPH; Steven Levy, DDS, MPH; E. Angeles Martinez Mier, DDS, MSD, PhD; Howard Pollick, BDS, MPH; Brittany Seymour, DDS, MPH and Leon Stanislav, DDS.

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Disclaimer

This publication is designed to answer frequently asked questions about community water fluoridation, based on a summary of relevant published articles. It is not intended to be a comprehensive review of the extensive literature on fluoridation and fluorides or to promote professional advice. Readers must also rely on their own review of the literature, including the sources cited herein and any subsequently published, for a complete understanding of these issues.

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Executive Summary

- Fluoridation of community water supplies is the single most effective public health measure to prevent tooth decay.
- Throughout more than 70 years of research and practical experience, the overwhelming weight of credible scientific evidence has consistently indicated that fluoridation of community water supplies is safe.
- Studies prove water fluoridation continues to be effective in reducing tooth decay by more than 25% in children and adults, even in an era with widespread availability of fluoride from other sources, such as fluoride toothpaste.
- Because of the important role it has played in the reduction of tooth decay, the Centers for Disease Control and Prevention has proclaimed community water fluoridation (along with vaccinations and infectious disease control) one of ten great public health achievements of the 20th century.
- Community water fluoridation is the controlled adjustment of fluoride that occurs naturally in all water to optimal levels to prevent tooth decay.
- Community water fluoridation benefits everyone, especially those without access to regular dental care. Fluoridation is a powerful tool in the fight for social justice and health equity.
- Simply by drinking water, people can benefit from fluoridation's cavity protection whether they are at home, work or school.
- Water that has been fortified with fluoride is similar to fortifying salt with iodine, milk with vitamin D and orange juice with vitamin C — none of which are medications.
- When compared to the cost of other prevention programs, water fluoridation is the most cost-effective means of preventing tooth decay for both children and adults in the United States. The cost of a lifetime of water fluoridation for one person is less than the cost of one filling.
- For community water systems that serve more than 1,000 people, the economic benefit of fluoridation exceeds the cost. And the benefit-cost ratio increases as the size of the population served increases (largely due to economies of scale). Fluoridation is a cost-saving method to prevent tooth decay.
- According to data from 2014, nearly 75% of the population (3 out of 4 people) in the United States are served by public water systems that are optimally fluoridated.
- Fluoridation has been thoroughly tested in the United States' court system, and found to be a proper means of furthering public health and welfare. No court of last resort has ever determined fluoridation to be unlawful.
- The ADA supports community water fluoridation as a safe, effective, cost-saving and socially equitable way to prevent tooth decay.
- One of the most widely respected sources for information regarding fluoridation and fluorides is the American Dental Association. The ADA maintains Fluoride and Fluoridation web pages at <http://www.ADA.org/fluoride>.

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Introduction

Fluoridation Facts has been published by the American Dental Association (ADA) since 1956. Revised periodically, *Fluoridation Facts* answers frequently asked questions about community water fluoridation. In this 2018 edition, the ADA Council on Advocacy for Access and Prevention provides updated information for individuals and groups interested in the facts about fluoridation. The United States now has more than 70 years of extensive experience with community water fluoridation. Its remarkable longevity and success is testimony to fluoridation's significance as a public health measure. In recognition of the impact that water fluoridation has had on the oral and general health of the public, in 1999, the Centers for Disease Control and Prevention (CDC) named fluoridation of drinking water as one of ten great public health achievements of the 20th century.^{1,2}

Many organizations in the United States and around the world recognize the benefits of community water fluoridation.

Support for Water Fluoridation

Since 1950, the American Dental Association (ADA) has continuously and unreservedly endorsed the optimal fluoridation of community water supplies as a safe and effective public health measure for the prevention of tooth decay. The ADA's policy is based on the best available scientific evidence on the safety and effectiveness of fluoridation. Since the ADA first adopted policy recommending community water fluoridation in 1950, the ADA has continued to reaffirm its position of support for water fluoridation and has strongly urged that its benefits be extended to communities served by public water systems.³

Over the years, additional support has come from numerous U.S. Surgeons General who are the leading spokespersons on matters of public health in the federal government. In 2016, Surgeon General Dr. Vivek H. Murthy in his "Statement on Community Water Fluoridation,"⁴ noted:

Water fluoridation is the best method for delivering fluoride to all members of the community, regardless of age, education, income level or access to routine dental care. Fluoride's effectiveness in preventing tooth decay extends throughout one's life, resulting in fewer — and less severe — cavities. In fact, each generation born over the past 70 years has enjoyed better dental health than the one before it. That's the very essence of the American promise.⁴

In addition to the American Dental Association, the American Medical Association,⁵ the American Academy of Pediatrics⁶ and the World Health Organization⁷ also support community water fluoridation.

Many organizations in the United States and around the world recognize the benefits of community water fluoridation. The ADA has developed a list of "National and International Organizations that Recognize the Public Health Benefits of Community Water Fluoridation for Preventing Dental Decay." Please see the ADA website at www.ADA.org/fluoride for the most current listing as well as information on reproduction and distribution of the list.

Scientific Information on Fluoridation

The ADA's policies regarding community water fluoridation are based on the best available scientific knowledge. This body of knowledge results from the efforts of nationally recognized scientists who have conducted research using the scientific method, have drawn appropriate balanced conclusions based on their research findings and published their results in refereed (peer-reviewed) professional journals that are widely held or circulated. Studies showing the safety and effectiveness of water fluoridation have been confirmed by independent scientific studies conducted by a number of nationally and internationally recognized scientific investigators. While opponents of fluoridation have questioned its safety and effectiveness, none of their charges has ever been substantiated by scientific evidence.

With the advent of the Information Age, a new type of "pseudo-scientific literature" has developed. The public often sees scientific and technical information quoted in the press, printed in a letter to the editor or distributed via an internet web page. Often the public accepts such information as true simply because it is in print. Yet the information is not always based on research conducted according to the scientific method and the conclusions drawn from research are not always scientifically justifiable. In the case of water fluoridation, an abundance of misinformation has been circulated. Therefore, scientific information from all print and electronic sources must be critically reviewed before conclusions can be drawn. (See Figure 1.) Everyone is entitled to his or her own opinion but not his or her own facts. Pseudo-scientific literature can pique a reader's interest but when read as science, it can be misleading. The scientific validity and relevance of claims made by opponents of fluoridation might be

Figure 1. A Guide to Identifying and Using Trustworthy Information

Question The Author

Actively search for study authors' intellectual and financial conflicts of interest that may have affected the conduct of the study or results interpretation.

Correlation Does Not Imply Causation

The fact that two things happen together does not mean that one necessarily causes the other.

Mice vs. Humans

Wait for studies with human subjects to confirm animal studies' results before considering applying the research findings in practice.

Consider The Big Picture

Identify systematic reviews that comprehensively summarize the evidence instead of using single studies that present only a small part of the big picture.

High Impact Journals

Impact factor and reputation of a journal do not necessarily relate to the quality of the published study in question, so always remain skeptical.

The Right Study Design

Some clinical questions cannot be studied using the classic randomized control (RCT) study design and non-RCT designs may be a suitable alternative

best viewed when measured against criteria set forth by the U.S. Supreme Court.⁸

➤ *Additional information about this topic can be found in the Public Policy Section, Question 61.*

History of Water Fluoridation

Research into the effects of fluoride began in the early 1900s. Dr. Frederick McKay, a young dentist, opened a dental practice in Colorado Springs, Colorado, and was surprised to discover that many local residents exhibited brown stains on their permanent teeth. Dr. McKay could find no documentation of the condition in the dental literature and eventually convinced Dr. G.V. Black, dean of the Northwestern University Dental School in Chicago, to join him in studying the condition. Through their research, Drs. Black and McKay determined that mottled enamel, as Dr. Black termed the condition, resulted from developmental imperfections in teeth. Drs. Black and McKay wrote detailed descriptions of mottled enamel.^{9,10} (Mottled enamel is a historical term. Today, this condition is called dental or enamel fluorosis.)

In the 1920s, Dr. McKay, along with others, suspected that something either in or missing from the drinking water was causing the mottled enamel. Dr. McKay wrote to the Surgeon General in 1926 indicating that he had identified a number of regions in Colorado, New Mexico, Arizona, California, Idaho, South Dakota, Texas and Virginia where mottled enamel existed. Also in the late 1920s, Dr. McKay made another significant discovery — these stained teeth were surprisingly resistant to decay.¹⁰

Following additional studies completed in the early 1930s in St. David, Arizona¹¹ and Bauxite, Arkansas,¹² it was determined that high levels of naturally occurring fluoride in the drinking water were causing the mottled enamel. In Arizona, researchers studied in great detail 250 residents in 39 local families and were able to rule out hereditary factors and environmental factors, except for one — fluoride in the water which occurred naturally at levels of 3.8 mg/L to 7.15 mg/L.¹¹ In Bauxite, H. V. Churchill, chief chemist with the Aluminum Company of America (later changed to ALCOA), was using a new method of spectrographic analysis in his laboratory to look at the possibility that the water from an abandoned deep well in the area might have high levels of aluminum-containing bauxite that was causing mottled teeth. What he found was that the water contained a high level of

naturally occurring fluoride (13.7 mg/L). When McKay learned of this new form of analysis and Churchill's findings, he forwarded samples of water from areas where mottled enamel was commonplace to Churchill. All of the samples were found to have high levels of fluoride when compared to waters tested from areas with no mottled enamel.¹⁰

During the 1930s, Dr. H. Trendley Dean, a dental officer of the U.S. Public Health Service, and his associates conducted classic epidemiological studies on the geographic distribution and severity of fluorosis in the United States.¹³ These early studies quantified the severity of tooth decay and dental fluorosis, called mottled enamel at that time, according to fluoride levels in the water. In so doing, it was observed that "at Aurora, IL where the domestic water contained 1.2 ppm of fluoride (F) and where a relatively low tooth decay prevalence was recorded, mottled enamel as an esthetic problem was not encountered."¹⁴ Dean and his staff had made a critical discovery. Namely, fluoride levels of up to 1.0 ppm in drinking water did not cause enamel fluorosis in most people and only mild dental fluorosis in a small percentage of people.^{14, 16}

In 1939, Dr. Gerald J. Cox and his associates at the Mellon Institute evaluated the epidemiological evidence and conducted independent laboratory studies. While the issue was being discussed in the dental research community at the time, they were the first to publish a paper that proposed adding fluoride to drinking water to prevent tooth decay.¹⁷ In the 1940s, four classic, community-wide studies were carried out to evaluate the controlled addition of sodium fluoride to fluoride-deficient water supplies. The first community water fluoridation program, under the direction of Dr. Dean, began in Grand Rapids, Michigan, in January 1945 with Muskegon, Michigan as the nonfluoridated control community. The other three studies were conducted in the following three pairs of cities with the fluoridated city listed first: Newburgh and Kingston, New York (May 1945); Brantford and Sarnia, Ontario, Canada (June 1945) and Evanston and Oak Park, Illinois (February 1947).¹⁸⁻²⁰

In the 1940s, four classic, community wide studies were carried out to evaluate the controlled addition of sodium fluoride to fluoride deficient water supplies.

The astounding success of these comparison studies firmly established the practice of water fluoridation as a practical, safe and effective public health measure to prevent tooth decay that would quickly be embraced by other communities.

The history of water fluoridation is a classic example of a curious professional making exacting clinical observations which led to epidemiologic investigation and eventually to a safe and effective community-based public health intervention which even today remains the cornerstone of communities' efforts to prevent tooth decay.

In addition to the studies noted above, a number of reviews on fluoride in drinking water have been issued over the years. For example, in 1951 the National Research Council (NRC), of the National Academies, issued its first report stating fluoridation was safe and effective. The NRC has continued to issue reports on fluoride in drinking water (1977²¹ and 1993²²) with the most recent review published in 2006.²³ Additional reviews completed over the ten year period from 2007–2017 include:

- 2017 Australian Government. National Health and Medical Research Council (NHMRC). *Information Paper — Water Fluoridation: Dental and Other Human Health Outcomes.*²⁴
- 2016 O'Mullane DM, Baez RJ, Jones S, Lennon MA, Petersen PE, Rugg-Gunn AJ, Whelton H, Whitford GM. *Fluoride and Oral Health.*²⁵
- 2016 American Water Works Association. *Water Fluoridation Principles and Practices.* AWWA Manual M4. Sixth edition.²⁶
- 2015 Water Research Foundation. *State of the Science: Community Water Fluoridation.*²⁷
- 2015 The Network for Public Health Law. *Issue Brief. Community Water Fluoridation.*²⁸
- 2015 Ireland Health Research Board. *Health Effects of Water Fluoridation: An Evidence Review.*²⁹
- 2015 U.S. Department of Health and Human Services Federal Panel on Community Water Fluoridation. *U.S. Public Health Service Recommendation for Fluoride Concentration in Drinking Water for the Prevention of Dental Caries.*³⁰

- 2014 Public Health England. *Water Fluoridation: Health Monitoring Report for England.*³¹
- 2014 Royal Society of New Zealand and the Office of the Prime Minister's Chief Science Advisor. *Health Effects of Water Fluoridation: a Review of the Scientific Evidence.*³²
- 2013 U.S. Community Preventive Services Task Force. *The Guide to Community Preventive Services. Preventing Dental Caries: Community Water Fluoridation.*³³
- 2011 European Commission of the European Union Scientific Committee on Health and Environmental Risks (SCHER). *Fluoridation.*³⁴
- 2008 Health Canada. *Findings and Recommendations of the Fluoride Expert Panel.*³⁵
- 2007 Australian Government. National Health and Medical Research Council. *A Systematic Review of the Efficacy and Safety of Fluoridation; Part A: Review Methodology and Results.*³⁶

Water Fluoridation as a Public Health Measure

Throughout decades of research and more than 70 years of practical experience, fluoridation of public water supplies has been responsible for dramatically improving the public's oral health. In 1994, the U.S. Department of Health and Human Services (HHS) issued a report which reviewed public health achievements.³⁷ Along with other successful public health measures such as the virtual eradication of polio and reductions in childhood blood lead levels, fluoridation was lauded as one of the most economical preventive interventions in the nation.³⁷

Because of the important role fluoridation has played in the reduction of tooth decay, the Centers for Disease Control and Prevention proclaimed community water fluoridation one of ten great public health achievements of the 20th century.^{1, 2} Other public health achievements included in the 1999 announcement were vaccinations (which have been responsible for the elimination of polio in the Americas), recognition of tobacco use as a health hazard and the decline in deaths from coronary heart disease and stroke. In 2000, U.S. Surgeon General Dr. David Satcher issued the first ever Surgeon General

report on oral health, *Oral Health in America: a Report of the Surgeon General*.³⁸ In the report, Dr. Satcher stated that community water fluoridation continues to be the most cost-effective, practical and safe means for reducing and controlling the occurrence of tooth decay in a community. Additionally, Dr. Satcher noted that water fluoridation is a powerful strategy in efforts to eliminate health disparities among populations. Studies have shown that fluoridation is the most significant strategy employed to reduce disparities in tooth decay.³⁸⁻⁴²

➤ *Additional information about this topic can be found in the Public Policy Section, Question 59.*

Because of the important role fluoridation has played in the reduction of tooth decay, the Centers for Disease Control and Prevention proclaimed community water fluoridation one of ten great public health achievements of the 20th century.^{1, 2}

In the 2003 *National Call to Action to Promote Oral Health*,⁴³ U.S. Surgeon General Dr. Richard Carmona called on policymakers, community leaders, private industry, health professionals, the media and the public to affirm that oral health is essential to general health and well-being. Additionally, Dr. Carmona urged these groups to apply strategies to enhance the adoption and maintenance of proven community-based interventions such as community water fluoridation.

Writing in *Public Health Reports* in 2010, Surgeon General Dr. Rebecca Benjamin noted that, "Community water fluoridation continues to be a vital, cost-effective method of preventing dental caries."⁴⁴

In a 2015 Surgeon's General Perspective⁴⁵ issued to coincide with the release of the updated USPHS recommendation on fluoride levels in drinking water to prevent tooth decay, Surgeon General Dr. Vivek H. Murthy stated, "As Surgeon General, I encourage all Americans to make choices that enable them to prevent illness and promote well-being. Community water fluoridation is one of the most practical, cost-effective, equitable, and safe measures communities can take to prevent tooth decay and improve oral health."⁴⁵

Established by the U.S. Department of Health and Human Services (DHHS), Healthy People 2020⁴⁶ provides a science-based, comprehensive set of ambitious, yet achievable, ten-year national objectives for improving the health of the public. Included under oral health is an objective to expand the fluoridation of public water supplies. Objective 13 states that at least 79.6% of the U.S. population served by community water systems should be receiving the benefits of optimally fluoridated water by the year 2020.⁴⁷ In 2014, the CDC indicated that 74.4% of the U.S. population on public water systems, or a total of 211.4 million people, had access to fluoridated water.⁴⁸

After more than four years of additional research and review following the initial notice of intent, in 2015 the DHHS announced that the U.S. Public Health Service had made a final recommendation on the fluoride level in drinking water³⁰ that updated and replaced the 1962 Drinking Water Standards related to community water fluoridation. In this guidance, the optimal concentration of fluoride in drinking water of 0.7 mg/L (milligrams per liter) was defined as "the concentration that provides the best balance of protection from dental caries while limiting the risk of dental fluorosis."³⁰

➤ *Additional information about this topic can be found in the Safety Section, Question 19.*

Water Fluoridation's Role in Reducing Tooth Decay

Water fluoridation has played a significant role in improving oral health. Numerous studies and reviews have been published making fluoridation one of the most widely studied public health measures in history. Fluoridation of community water supplies is the single most effective public health measure to prevent tooth decay. Studies show that community water fluoridation prevents at least 25 percent of tooth decay in children⁴⁹ and adults,⁵⁰ even in an era with widespread availability of fluoride from other sources, such as fluoride toothpaste. Fluoridation helps to prevent, and in some cases, reverse tooth decay across the life span. Increasing numbers of adults are retaining their teeth throughout their lifetimes due in part to the benefits they receive from water fluoridation. Dental costs for these individuals are likely to have been reduced and many

hours of needless pain and suffering due to untreated tooth decay have been avoided. By preventing tooth decay, community water fluoridation has been shown to save money, both for families and the health care system. The return on investment for community water fluoridation varies with size of the community, and in general, increases as the community size increases. Community water fluoridation is cost saving, even for small communities.

➤ *Additional information about this topic can be found in the Cost Section, Question 68.*

Fluoridation of community water supplies is the single most effective public health measure to prevent tooth decay. Studies show that community water fluoridation prevents at least 25 percent of tooth decay in children and adults, even in an era with widespread availability of fluoride from other sources, such as fluoride toothpaste.

Community water fluoridation is a most valuable public health measure because:

- Optimally fluoridated water is accessible to the entire community regardless of socioeconomic status, educational attainment or other social variables.⁵¹
- Individuals do not need to change their behavior to obtain the benefits of fluoridation.
- Frequent exposure to small amounts of fluoride over time makes fluoridation effective through the life span in helping to prevent tooth decay.⁵²
- Community water fluoridation is more cost-effective and cost-saving than other forms of fluoride treatments or applications.^{53,54}

Tooth decay is caused by sugars in snacks, food and beverages being converted into acid by the bacteria in dental plaque, a thin, sticky, colorless deposit on teeth. The acid attacks the tooth enamel (the hard surface of the tooth) or root surface. After repeated attacks, the enamel or root surface loses minerals (demineralization) and the acids and bacteria penetrate the dentin and finally the pulp. The soft

tissue of the pulp contains nerves and blood vessels. Once the decay enters the pulp, it becomes infected and without treatment, the infection progresses and travels into the surrounding tissues. It can enter the bloodstream and potentially spread the infection to other parts of the body which can be life-threatening.

➤ *Additional information about this topic can be found in the Benefits Section, Question 2.*

There are a number of factors that increase an individual's risk for tooth decay:⁵⁴⁻⁵⁹

- Recent history of tooth decay
- Elevated oral bacteria count
- Inadequate exposures to fluorides
- Exposed roots
- Frequent intake of sugar/sugary foods and sugar-sweetened beverages
- Poor or inadequate oral hygiene
- Decreased flow of saliva
- Deep pits and fissures on the chewing surfaces of teeth

Exposure to fluoride is a key component in any recommended decay prevention strategy; however, the use of fluoride alone will not prevent all tooth decay. In formulating a decay prevention program, in addition to consuming fluoridated tap water, a number of intervention strategies may be considered such as improved daily home care, reducing sugar in the diet, placement of dental sealants and prescription strength fluoride toothpaste for home use and professionally applied topical treatments.

Ongoing Need for Water Fluoridation

Because of the risk factors for tooth decay noted previously, many individuals and communities still experience high levels of tooth decay. Although water fluoridation demonstrates an impressive record of effectiveness and safety, only 74.4% of the United States population on public water supplies in 2014 received fluoridated water containing protective levels of fluoride.⁴⁸ Unfortunately, some people continue to be confused about this effective public health measure. If the number of individuals drinking fluoridated water is to increase, the public must be accurately informed about its benefits and safety.

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