

# Nairobi Declaration on Fluorosis

## 01 August 2023

The Nairobi Declaration on fluorosis was drafted during a key stakeholder roundtable and workshop hosted jointly by the Kenya Dental Association (KDA) and FDI World Dental Federation (FDI).

The purpose of the Declaration is to recognize the emerging oral disease that is dental fluorosis. The optimal concentration of fluoride in drinking-water is normally within the range of 0.5–1.0 mg/Litre. However, in the Rift Valley of Africa, fluoride levels range between 2.15mg/Litre to as high as 6.5 mg/Litre resulting in dental and skeletal fluorosis.

Dental fluorosis is endemic in certain parts of the world. The impact on the systemic and psychosocial well-being of high fluoride intake on the affected groups is significant. This leads to low self-esteem, increased dental visits, and expensive treatment solutions that raise an economic burden. High fluoride levels in water are the number one cause of fluorosis in these affected areas. The Sustainable Development Goal (No. 6) of Clean Water and Sanitation expresses the need for safe and affordable drinking water. Additionally, The World Health Organization Oral Health Action Plan Global Target 2.2 calls for Optimal fluoride for population oral health. Furthermore, Action 27 calls for Optimal use of fluorides for oral health: Develop or update national guidance related to optimal fluorides for population oral health. Depending on the context and feasibility, consider adjusting water fluoride to safe, optimal levels for protection against dental caries, which may require adding or removing fluoride from drinking water as recommended by national and international guidance.

East Africa region is one of the most affected regions with high levels of fluoride in drinking water. Following a stakeholder workshop organized by KDA and FDI in Nairobi from 31st July to 1st August, involving countries from the East Africa Region, the following recommendations were made:

**The Nairobi Declaration calls for action in four key areas:**

### 1. Mapping Efforts

This involves all efforts that lead to determining the extent and severity. Research should involve testing water sources and determining fluoride levels. This should start with the most affected areas encouraging local institutions through the provision of research grants and other incentives. Encourage the availability and accessibility of cost-effective fluoride testing meters among members of the public. Gather existing data on areas with fluorosis cases, including reports from health agencies, hospitals, and research studies, in addition to accessing dental records and surveys.

### 2. Sensitization Efforts

This involves creating awareness and capacity building at all levels– the community, health workers and policymakers. The involvement of governmental and non-governmental entities will play a major role. Integration of an oral health curriculum into broader health programmes such as maternal and child health, and vaccination clinics will be crucial. In addition, it will be important to leverage both traditional and new media in the creation of community awareness.

### 3. Policy Efforts

Enforce existing policies on water testing for centralized and decentralized water production facilities. This is to cut excess fluoride in water above the recommended 1.5 ppm. This will involve periodic testing. Creation of



policies to safeguard excessive fluoride in water where none exists. Encouraging or enforcing rules that ensure real estate developers place defluoridation equipment after sinking boreholes will be beneficial.

#### **4. Defluoridation Capacity Building Efforts**

Promotion of preventive measures that reduce excessive fluoride in water. This could be both small-scale and large-scale measures. Government efforts such as a tax exemption for defluoridation equipment could improve affordability and accessibility. The encouragement and evolution of locally manufactured defluoridation technology would also go a long way in ensuring sustainability.

#### **The Nairobi Declaration is supported by:**

Prof Manu Raj Mathur – FDI Vision 2030 Implementation and Monitoring Task Team

Dr Shiamaa Shihab Al Mashhadani - Dubai Health Authority, FDI Partially Dentate Patient Task Team

Dr Rachael England – Education and Public Health Manager, FDI World Dental Federation

#### **Kenya Dental Association**

Dr. Tim Theuri                      KDA President

Dr. Douglas Oramis                KDA Secretary General

Dr. Andrew Wetende                FDI/KDA National Liaison Officer

Dr. Linus Ndegwa                    KDA Immediate Former President and KEMRI Reseracher

Dr. Bernard Mua                    Dean, UON Dental School

Dr Silas Kinyua                    KNH, Periodontal Department

Dr. George Mwai                    Director, Dental Services, MTRH

Dr. Penny Muange                    Ministry of Health (MoH) - Head Directorate Clinical Services Oral Health Division

Dr. Miriam Muriithi                    MoH-Former Head Directorate Clinical Services Oral Health Division

Hon. Duncan Mathenge                MP, Nyeri Township

Mr Michael Onyango                Quality Control Manager, Nairobi Water Company

Mrs Josephine Osoro                CEC, County Govt, Nakuru

Dr. Rose Wangechi                    Founding Director Riverside Water Defluoridation Consultants Ltd

Dr. Regina Mutave                    Lecturer UoN Division, Community and Preventive Dentistry

Dr. Jane Wamai                    Dentist and Public Health Officer, Nairobi County

Dr. Arnold Malit                    KDA Assistant Secretary General

Dr. Teddie Matundura                KDA Council Member

Dr. Kituku Mumo                    KDA Vice President

Dr Muriuki Peter Jackson            Director Dental Services, Nairobi City County Government



### **Uganda Dental Association**

Dr Biren Yajnik                      President Uganda Dental Association

Dr. Juliet Nabbanja                Chief Dental Officer

Dr Margaret Wandera              FDI Vision 2023 Implementation and Monitoring Working Group

### **Somalia Dental Association**

Dr Osama Adam                    President Somalia Dental Association

### **Tanzania Dental Association**

Dr Deogratias Kilsara             President Tanzania Dental Association

Dr Fadhili Kibaya                 Senior Dental Surgeon, representing the Assistant Director of Oral Health Services, Tanzania Ministry of Health

Dr Germana Lyimo

### **Rwanda Dental Association**

Dr Kamanzi Immaculée          Committee member of RDSA