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Executive Summary

Planning and implementation of oral health care services and interventions relies on availability of benchmark information which prior to this survey was lacking in Kenya. Information available prior to this survey report was based on ad hoc surveys. The national oral health survey was carried out to provide an estimate of the burden of selected oral diseases, oral health seeking behavior, determinants of oral health, risk factors, as well as implication on oral health related quality of life.

This was a national cross-sectional pathfinder health survey conducted across various age segments in Kenya’s population; 5, 12, 15, 35-44 and 60+ year olds. A total of 2,298 children and 1,462 adults participated in the study. The study areas included Nairobi (capital city), Kisumu and Mombasa (main urban centers), small towns and rural areas. Data was collected using modified World Health Organization (2013) questionnaires and clinical assessment forms. The tools were pre-tested and data enumerators trained and calibrated before the actual data collection.

Results: The prevalence of dental caries among children (5, 12, and 15 year olds) was 23.9% and an overall DMFT/dmft of 0.73. The children aged 5 years had a dental caries prevalence of 46.3% and a dmft of 1.87. Bleeding from the gums occurred in about three out of four children (75.7%) in the three age groups, while in 5 year olds it was 99.6%. The overall prevalence of dental fluorosis among children was 41.7%.

Gums and teeth were described as good by more than half of children, 61.9% and 55.6% respectively. However 53.8% of the children had experienced toothache and discomfort in the previous one year. Oral health problems affected children’s quality of life in the year before with 31% being unable to chew hard food, 27.8% avoided smiling due to their teeth, while 18.9% missed school due to a tooth related problem. The proportion of children who had never been to a dentist was 46.7% and 18.3% having had visited a dentist in the year before. The major reason for visiting a dentist amongst the children was pain or discomfort at 70.2%.

Oral mucosal lesions were reported in 3.2% of the children. Conditions that were detected included mucosal ulceration (1.5%), abscesses (0.9%) and acute necrotizing gingivitis (0.8%). Miraa was the most abused substance with 4.2% of the children reporting to have used it. Smoking of tobacco was at 0.4% amongst the children.

The prevalence of dental caries among the adult was 34.3%. This adult population had a DMFT of 0.72 and prevalence of gingival bleeding stood at 98.1%. Among the adults 72.3% had visited a dentist before. Of the 72.3%, 83% of them had a dental related problem while 3.3% had gone for routine dental checkup. Almost all (99.9%) reported having one form of dental related problem in the previous one year. Among the adults 45.7% reported to have abused at least one form of a substance. Tobacco was used by 17.4%, alcohol by 19.8% and Miraa by 18% of the adults.

Conclusion: The study concluded that the burden of oral diseases and conditions varied from low to high. Both children and the adult populations had unmet dental caries and gum related treatment needs. A significant population in Kenya was still exposed to fluoride levels above normal in their drinking water. The oral health seeking behaviour was found to be poor while the quality of life was adversely affected by oral diseases/conditions that existed. The oral hygiene practices of the population were poor.

Recommendations: The government of Kenya through the Ministry of Health needs to address the grossly underfunded oral health care services. Oral health care is capital intensive by its very nature and therefore adequate financing is critical for its success. The Ministry of Health should give oral health more visibility in its health priority profile. This is because poor oral health greatly affects the quality of life of the general population. The Ministry of Health and other stakeholders should put in place both preventive and promotive health care programs at strategic entry points of health care delivery systems both in public and private sectors such as maternal and child health clinics, Primary schools among others. The Ministry of Health will now use the information available in this report to lead the other stakeholders in oral health to draft a comprehensive national oral health policy to guide the delivery of oral health care services.
Oral health is described as the absence of disease and optimal functioning of the mouth and its tissues in such a manner that preserves the highest level of self-esteem. It describes a standard of oral and related tissues, which enable an individual to eat, speak and socialise without active disease, discomfort or discouragement which then contributes to the general well-being. Good oral health is an important and essential component of the general body health and is a birth right of every person in the world.

Oral health was given prominence by the Kenyan government and as such included as the ninth element of primary health care in Kenya. Oral health care services are capital intensive and the success in the provision of oral health care services is highly dependent on a number of factors such as qualified personnel, appropriate facilities including building, equipment and commodities. Over the years the demand for oral health care services has outstripped the financial provision from the exchequer: preventative and promotive oral health services require a special emphasis. These services lead to a reduction in the demand for curative services, which are labour intensive and expensive.
The enactment of the Kenya constitution 2010 established two levels of government, the national and county government. Schedule four, part two (2) of the constitution devolved most health functions to the county governments among these are the Oral health care services. It is against these constitutional provisions that this document was written. Oral health care services have existed in this country for decades, however there has not been any survey to determine the situation of oral health in Kenya though the priorities in the delivery of oral health care has been adequately articulated3. As the country continues with the pursuance of the vision 2030, oral health should be packaged as an essential part of the population’s lives.

**Aim Of The Survey**

The aim of this survey was to establish the burden of oral diseases, their determinants and oral health related quality of life.

**Specific Objectives**

To determine knowledge, attitude and practices of oral health issues among the study population.

1. To establish the burden of oral diseases and conditions.
2. To determine oral health seeking behavior.
3. To establish the oral health related quality of life.
The proportion of children who had never been to a dentist was 46.7% and 18.3% having visited a dentist in the year before. The major reason for visiting a dentist amongst the children was pain or discomfort at 70.2%.

Oral health seeking behavior

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Oral health seeking behavior

Oral health problems affected children’s quality of life in the last one year with 31% being unable to bite hard food, 27.8% avoiding smiling due to their teeth while 18.9% missed school due to teeth related problem.

Oral Hygiene Practices

Tooth brushing was a common practice among the respondents, although the frequency per day was low. From the findings, 3.5% of the respondents had never brushed their teeth, while 32.4% of the respondents said they brushed their teeth two or more times a day. The survey revealed that 47.6% of the respondents brushed their teeth once a day while 9.7% brushed several times a week, 3.1% once a week and 3.8% several times a month.

A larger proportion (7.9%) of younger children had never brushed their teeth compared to older children (2.6%), and 45.5% of urban children brushed their teeth at least twice a day.

Although 96.5% brushed their teeth, only 32.4% brushed at least twice a day. Majority (95.5%) brushed their teeth by themselves including 86.3% of the 5 year olds. This could explain the fact that 75.7% had gingival bleeding which was at 99.6% for the 5 year olds.

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Majority used toothbrush to clean their teeth with more rural dwellers using a chewing stick when compared to urban dwellers. Most children (82.7%) used toothpaste.
Oral Health Status

1. The prevalence of dental caries among all children was 23.9%. More children (46.3%) of the 5 year old category are affected by dental caries. The mean Decayed Missing and Filled (DMFT/dmft) was 0.79, children aged 5 years had the highest mean dmft of 1.87. Females had a DMFT/dmft of 1.38 compared to 0.82 for the males. The major component was decay indicating a high level of unmet dental treatment needs. This was followed by missing due to caries indicating that the major treatment was tooth extraction.

2. Oral mucosal lesions were reported in 3.2% of the children. Conditions that were detected included mucosal ulceration (1.5%), abscesses (0.9%), and acute necrotizing gingivitis (0.8%).

3. The prevalence of dental fluorosis was 41.7% with 52.4% of the males having dental fluorosis.
Conclusions
Based on the findings of the survey, the following conclusions were made.

**The Burden of Oral Diseases**
The burden of oral diseases and conditions varied from low to high.

**Dental Caries**
The overall prevalence of dental caries among children (5, 12, and 15 year olds) was 23.9%. The dmft for 5 year old children was 1.87 while the prevalence of dental caries in this population was 46.3%. The main contributor to this dmft was tooth decay. This meant that half of the children had unmet dental caries related treatment needs.

The prevalence of dental caries among the adult population was 34.3%. On average, every adult had one decayed tooth with a DMFT of 0.72. This meant that the adult population also had unmet dental caries related treatment needs.

**Gum Disease(s)**
Three out of every four children had signs of gum disease (s) with nearly all children aged 5 years being affected. Among adult population, almost all of them (98.1%) had signs of gum disease(s). This implied that there was a very high unmet treatment needs for gum disease(s).

**Fluorosis**
The adult population had a 23.7% prevalence of fluorosis while 41.4% of the children had fluorosis. This meant that this population had been exposed to water which had fluoride levels beyond the recommended level.
Oral Mucosal Lesion
The prevalence of oral mucosal lesions amongst the children was 3.2% while among the adults it was 20.8%. This meant that there were underlying or other unmet treatment needs associated with oral mucosal lesions.

Tooth Wear
The prevalence of tooth wear among the adult population was 14.6%. This implied that this population practiced injurious habits or took diets that predisposed them to tooth wear as well as inherent predisposing factors.

Oral Health Seeking Behavior
Inspite of the high unmet treatment needs among the adult and children population, only a small proportion had sought dental treatment and the majority did so only when there was pain or discomfort.

Oral Health-Related Quality of Life
The quality of life for both adults and children was not optimal. Over 99% of children said they had at least one dental problem. All adults indicated they had at least one current dental problem which needed attention.

Oral Hygiene Practices and Harmful Habits
The high prevalence of gum related diseases and dental caries among both adult and children populations was an indication of poor oral hygiene practices.
There was an unacceptable high level of harmful drug and substance abuse in this population. Miraa, tobacco and alcohol were among those substances/drugs.
Based on the findings of this study the following recommendations were made; thus,

1. The government of Kenya through the ministry of health needs to address the grossly underfunded oral health care services. Oral health care is capital intensive by its very nature and therefore adequate financing is critical for its success.

2. The ministry of health as the health caring authority in the country should give oral health more visibility in its priority health profile. This is because poor oral health greatly affects the quality of life of the general population.

3. To address the oral health diseases at early stages of life it is recommended that the ministry of health and other stakeholders put in place both preventive and promotive health care programs at strategic entry points of health care delivery systems both in public and private sectors. Such entry points include maternal and child health clinics, primary schools among others.

4. It is recommended that the ministry of health will now use the information available in this report to lead the other stakeholders in oral health to draft a comprehensive national oral health policy to guide the delivery of oral health care services.