Chapter

Accessing Oral Healthcare within a Context of Economic Transition

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Abstract

In many low-mid income settings, accessibility of health services remains inadequate and inequitable. These observed disparities in accessibility are particularly evident for oral healthcare services. The access to oral healthcare is influenced by the responsiveness of the health system, including availability of human resources for health, oral health facilities' infrastructure, geographical distribution, equipment and materials as well as community's awareness and affordability of the provided services. The evolution of oral healthcare access in Tanzania; from the early post-colonial phases of independence to current transition that the country is undergoing from low to a low-mid income economy is presented. The major health policies' transition from "Free Healthcare" services to "Cost-sharing" and ultimately to "Health Insurance" are presented within the context of their influence towards oral healthcare access.

Keywords: Access, Oral Health Services, Economic, Utilization

1. Introduction

Being healthy is a prerequisite for enjoyable and productive life of any human being. It is an invaluable resource for all human activities and is considered one of the fundamental basic rights. Attaining and maintaining health is a complex endeavor. At its most basic level, it requires an individual to have access to health information which is necessary to prevent diseases and demand care when needed. A bit more complicated is the ability to obtain timely, responsive, adequate, appropriate, and accessible health services whenever in need. Despite the importance of oral health to general well-being, many countries have not managed to avail equitable healthcare services to all their citizens. The factors responsible for this regrettable situation vary greatly across and even within countries. Generally, the prevailing health situation of a specific setting is an outcome of the historical background, policies, and sociocultural issues. This brief chapter presents the various stages of provision of healthcare access in Tanzania within the context of major health policy implementations and unique historical perspectives underpinning the evolution of oral healthcare services within the country.

2. Accessibility of Oral health services in Tanzania

The United Republic of Tanzania was formed in 1964 following a union between Tanganyika and Zanzibar. It is one of the East Africa countries of the African Great

Lakes region. It borders to the north by Uganda; the northeast by Kenya; to the east by Comoro Islands and the Indian Ocean; to the south by Mozambique and Malawi; to the southwest by Zambia; and to the west by Rwanda, Burundi, and the Democratic Republic of the Congo. It is 945,087 km^2 in size inhabited by more than 60,000,000 people (2021 United Nations estimates). The country consists of about 125 ethnic groups with a wide range of traditions and customs.

From the year 2020, Tanzania started to be classified as a lower middle-income country. This highlights tremendous development strides that the country has made in its 59 years of existence as an independent state. Nevertheless, like many other countries found in sub-Saharan Africa, Tanzania experiences a high proportion of the global disease burden, but also have an insufficient number of human resources for health. Furthermore, the health system is burdened due to the high prevalence of communicable and rapidly increasing rates of non-communicable diseases. Despite the marked improvements in increasing access to healthcare services, they remain inadequate and inequitably distributed. These impediments become amplified several folds with respect to oral care services. Oral healthcare facilities are disproportionately distributed geographically, have exceedingly limited human resources and few facilities that provide the services.

Healthcare accessibility is a broad concept and does not simply imply ability to visit a health facility as need arises. Affordability of health services, Availability of health facilities and services, Appropriateness of provided health services according to need, Adequacy of the provided services as well as Accessibility in terms of reachability and geographical considerations are all pertinent factors which determine health service accessibility. Oral health service provision in many areas within the country is limited to predominantly emergency care. There is insufficient provision of restorative care, and lack of sustained preventive care which is the cornerstone of controlling all the major oral diseases.

Currently, Tanzania does not have a mandatory health insurance policy. Therefore, accessing oral health services and overall financing of the health system relies mostly on out-of-pocket payments (cash payments at the point of health service). It immediately becomes noticeable that in settings such as this, with high poverty levels, requiring cash at the point of health service provision prohibits many from accessing it. Overtly, where large proportions of the population are poor, a requirement of cash in lieu of access to healthcare may lead to considerable accessibility issues.

One can expect that poor people especially, may face financial difficulties because of required out-of-pocket payments for oral healthcare services. Many people in sub-Saharan countries only go to oral health facilities after a prolonged period of wait-and-see. Their first points when seeking oral healthcare may be folk remedies, traditional healers or over the counter drugs from drug stores. Reluctance in usage of formal oral healthcare services is usually due to several accessibility challenges including lack of, and uncertainty regarding the financial resources that would be required to obtain treatment for their health problem, low levels of knowledge regarding their ailment (and the corresponding care), as well as poor attitudes towards available oral healthcare.

Even in situations whereby the patients overcome these formidable financial and structural hurdles and manage to attend oral health facilities, they are not guaranteed of the best available care. Low-level oral health facilities within Tanzania, which are the first (and for some, the only) points of contact with the health system, may experience frequent medication and equipment stock-outs, are understaffed, and lack the necessary investigative tools. Generally, the most prevalent dental conditions (dental caries and periodontal diseases) are not associated with mortality. Thus, in many cases, and because of need of maximization of limited

resources, policymakers frequently overlook oral health; despite its strong linkages to general health and significant contribution to an individuals' quality of life.

The latest statistics from the Ministry of Health (2021) reveal that there are less than 1,000 oral health personnel working at public health facilities in the country. This figure encompasses several cadres, including dental surgeons and specialists, assistant dental officers, dental therapists, and dental laboratory technicians. Furthermore, oral healthcare services are offered in only about 5% of all available public health facilities countrywide.

2.1 Chronology of oral health services formation in Tanzania

2.1.1 Traditional healthcare in Tanzania (1800s and beyond)

"Traditional medicine" is defined by WHO as sum of the knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health, as well as in the prevention, diagnosis, improvement, or treatment of illnesses (WHO Executive Board EB134/24).

In Tanzania, historically traditional medicines are provided by traditional healers who are usually trusted and respected by communities. These healers are purported to have gaine insight about the medicines from their parents or grandparents. Therefore, the practice usually runs within a clan.

The various ethnic groups employ diverse traditional medicines in managing oral ailments. They include a wide assortment of tree barks, leaves or roots. Depending on the nature of the ailment, fresh traditional products may be squeezed or boiled to make solutions for drinking, ground into poultices used for topical application or boiled for medicinal steam inhalation. The products are sun dried for preservation purpose; either in their original form or ground into a powder. Treatment of oral diseases is usually done by applying a freshly ground product or powder on the area of complaint or on the oral mucosa, tooth or in the tooth cavity. Occasionally it may be in form of liquid for drinking.

Indeed, traditional medicines and remedies have persisted and continue to be utilized in high rates even with the advent of modern oral healthcare services in Tanzania. It is common to have street vendors and self-appointed healers offering various wares purported to treat all manner of oral conditions. For many people in the Tanzanian community, these traditional remedies serve as their first foray towards their quest of addressing oral health complaints.

2.1.2 Modern healthcare services during colonial times (1884–1961)

Tanganyika was a colony of Germany (1884–1919) and later a British Protectorate (1919–1961). Modern healthcare was introduced in Tanganyika during colonial time. This healthcare arrangement was primarily envisioned to suit economic, social, and political requirements of colonial rulers rather than the health needs of the native Tanganyika population [1]. Auspiciously, in the 19th century Christian missionaries brought hospitals with them among other services. The missionaries desired to give services to native communities as well [2]. Moreover, only facets of indigenous people enjoyed these health services because the missionary hospitals were few, health professionals scarce and transportation infrastructures extremely poor.

However, as missionary health services increased within the country, and partly driven by the altruistic nature of the establishments, some facilities started to offer oral care services to the local population. Due to the very real limitations during that period, the only treatment that the local population could realistically receive

was emergency care in the form of tooth extractions. Thus, for the very first time that the population is being introduced to institutionalized oral healthcare services, tooth extractions were the one and only service available. No concerted efforts were made to establish basic oral healthcare services with restorative or routine preventive components. Thus, it remains until this day to a large swathe of the Tanzanian population the belief and sentiment borne out of community-acquired historical experience that "the only cure for a tooth ache is extraction".

2.2 "Free" health for all

2.2.1 Health services post-independence (1961–1995)

When Tanganyika became independent in 1961, the government expanded accessibility to modern health services aiming to improve the health and wellbeing of all her citizens. The health system was intended to be more responsive to the needs of the people focusing on those most at risk. The general goal was to facilitate provision of equitable, quality, and affordable basic health services.

Over the years, since independence in 1961 and soon afterwards, the government of Tanganyika and later the United Republic of Tanzania placed emphasis on the health sector and especially the key targets of eliminating diseases, eradicating poverty and illiteracy with the objective of achieving a universal health to all Tanzanians. In 1967, the country adopted a party declaration "Arusha declaration of 1967" which marked the start of a series of health sector reforms with the intention of increasing universal access to social services to the poor and those living in marginalized rural areas.

The implementation of the Arusha declaration entailed countrywide banning of private-for-profit medical practice in 1977 upon which the government took on the ambitious task of providing health services to all citizens free of charge. Further deliberate restructuring of the health sector included making health services more effective, accessible, and affordable with specific attention to most underprivileged groups of population including women, children under five-year age group and those living in abject poverty. Naturally, this policy necessitated prioritization of healthcare services due to the reality of limited resources. Considerable, deliberate, and focused efforts were directed towards combating communicable diseases which were seen to have high mortality rates.

Additionally, the country established and adopted an extensive network of health facilities throughout the country, which follows a pyramidal structure, from village dispensaries and community-based activities at the base followed by health centers, district hospitals, regional level hospitals, zonal hospitals and referral and national hospitals at the summit. This pyramidal structure of health services persists up to this very day and forms the backbone of healthcare facilities' distribution countrywide.

2.2.2 Financing system for "Free health services"

Free health services were enjoyed by Tanzanians until early 1990s. At this time, it became apparent that provision of free healthcare for all was neither tenable nor possible. The main explanation to this situation was the rising healthcare costs along with low economic growth. This sobering situation led to the government's adoption of health sector reforms in early 1990s. The reforms changed the financing system from free services to cost sharing policies in the form of user fees which was introduced in four phases from July 1993 to January 1995. The cost sharing policy put in place exemption and waiver for special groups.

2.2.3 Intended and unintended effects of "free health policy"

Provision of free medical services in Tanzania recorded several achievements. Among the major successes of the free services and the policy implemented during that period was significant progress in reducing infant and child mortality through declines in morbidity and mortality from malaria and other childhood diseases. Other achievements include progress in aspects of child malnutrition, expansion of vaccine coverage, decline in HIV prevalence as well as Neonatal and Maternal Mortality [3, 4].

Despite the recorded accomplishments, there were unintended outcomes of the free health services regime. They include occurrence of healthcare service disparities due to intensification of social and economic inequalities, limited availability of equipment, medicines and supplies, equipment breakdown and lack of accountability in service provision or reduced performance [3].

2.2.4 Implications of "Health for all" on accessibility to oral healthcare services

All Tanzanians enjoyed free oral healthcare services at all government facilities under free healthcare regime. Nevertheless, the bulk of care being offered was emergency care in form of tooth extractions, perpetuating the set precedence of the colonial era. Establishment of restorative and regular preventive oral services for maintenance of oral health was never attempted. There were simply not enough oral health professionals to feasibly implement this and the medical-model of health was prevalent at that time, where health facilities were perceived as placed where you go only to "regain" your health.

Nonetheless, oral healthcare services are not uniformly available in the country. After independence, the government strived to avail dental services at regional hospitals. Gradually (starting in 1980s) the services were expanded to district hospitals although up to the year 2020; 30 out of 184 district councils had no oral healthcare services. Additionally, in large cities and towns, few health centers provide oral healthcare services. Along with the government's health sector reforms, permitting private healthcare services gave room to inauguration of private dental clinics which augment the government efforts in provision of oral healthcare. Illustrating the disproportionate distribution and the inability of the public health facilities to meet oral healthcare demand, the number of private oral health facilities outnumbers those of the public (Health Facility Registration System, 2021).

2.3 Cost-sharing

2.3.1 Moving away from "free" health in oral health

Cost-sharing is the term used to describe a co-payment scheme in which a user of a particular service contributes a certain amount towards its utilization. In the Tanzania health system context, users were expected to "top-up" on government-subsidized health services [5]. Cost-sharing was the first instance of introduction of user fees within the history of the United Republic of Tanzania. The rationale for its introduction was to increase the awareness of treatment costs and limit injudicious use of health services by the consumers. It also allows the healthcare users to function as contributors towards financing of their health system. Considering the slow economic growth and narrow taxable base for raising of required revenues, the idea appeared to have a lot of merit in context. Indeed, through cost-sharing and increasing government expenditure and investment in health generally, and oral health specifically- significant improvements have been made in recruitment and training

of oral health personnel within the last fifteen years. Furthermore, many oral health facilities countrywide have been refurbished and equipped to modern standards.

However, as is usually the case, the actual reality of user-fees has now been shown to be more complicated than the fiction initially envisioned. Objective, multi-country assessments have shown that the introduction of user fees had increased health system revenues only modestly, but significantly reduced the access of low-income and underprivileged people to basic social and health services [6]. Furthermore, when assessing the impact of health expenditures of individuals, it was revealed that smaller proportions used dental services compared to medicines and outpatient care. A possible interpretation of this observation is that dental costs per visit may be too high that the households actively avoid them [7].

Removal or reduction of user fees has been found to increase the utilization of treatment and preventive services; however, it has also been shown to negatively impact service quality, especially in situations where the supplementing sources of health finances are to be derived from the government. On the other hand, introduction or removal of user fees was associated with rapid and immediate changes to the service utilization patterns [8]. Matee and Simon conducted a study in Tanzania to compare dental attendance and service utilization a year before and after introduction of user fees. There was a noted 33% reduction in dental attendance immediately after the introduction of user fees. The reasons for such a finding are potentially numerous, and it is difficult to ascertain the change in dental attendance solely due to the policy change regarding user-fees. Nevertheless, this study does highlight the rapidity with which utilization rates may change upon manipulation of financial barriers to healthcare use [9].

Poor countries and poor people that most need protection from financial difficulties are the least protected by cost-sharing policy and may prevent them from accessing needed care. To address this, provisions have been made and waivers placed for those identified as destitute or unable to pay for the services. However, difficulties remain on how to accurately and timely identify these individuals. At low incomes, out-of-pocket spending for healthcare is high on average and varies from 20 to 80% of the total cost of health service utilization [10]. Out-of-pocket payments place the burden of healthcare funding on an individual and translate into health service use, and hence benefits, being distributed according to ability-to-pay rather than need for healthcare [11].

One of the prominent effects of the cost-sharing policy can be vividly illustrated by the dental visit and service utilization patterns of the Tanzanian populations. A significant proportion of Tanzanians have oral symptoms but have never attended oral health facilities. More than 90% of all dental visits in Tanzania are due to symptoms, and frequently these symptoms have been present for a long duration prior to attendance. It is only when the symptoms become excessively severe or interfere with daily functions is attendance made. Upon attendance, most of the treatment utilized for dental caries is tooth extractions- even in situations where restorative care was amenable. In all these scenarios depicted, one factor can be drawn linking them together- a need of payment of health services prior to receiving health services. Therefore, although cost-sharing may have some positive consequences towards oral healthcare utilization, careful consideration needs to be made to tailor an optimum out-of-pocket payment structure [12]. What is undeniable too, is that in order to protect the most vulnerable and needy of the population, cost-sharing policy remains inadequate and inappropriate in the long term.

2.4 Health insurance

2.4.1 Moving towards "prepayment" model

Health insurance is defined as insurance against the risk of incurring medical expenses among individuals. Tanzania established the National Health Insurance

Fund (NHIF) through the Act of Parliament No. 8 of 1999 and officially began functioning in June 2001. The program was initially intended to cover public servants, although currently there are provisions and service packages which allow for self- enrolment of any individual/groups of individuals. The public formal employee pays a mandatory contribution as a percentage of their monthly salary with a government-matched percentage.

This program covers the principal member, spouse and up to four children below 21 years who are legal dependents. Unlike other health insurance models which may require a separate dental insurance; NHIF also provides oral healthcare services as part of the benefit coverage for its members. Initially, NHIF only offered very rudimentary oral health services, predominantly emergency care and some surgical procedures- however, it has steadily improved over time- and currently offers a wide range of services including complex restorative, prosthodontics and even orthodontic care. The usual caveats with accessibility remain, despite elimination of cost as a barrier. Utilization of oral services covered by NHIF will still largely depend on whether the oral health facility nearest the benefactor has the requisite skilled oral personnel and equipment to provide them.

Nevertheless, formally employed workers constitute about one-quarter of the total workforce in Tanzania. In recognition of this, in 2001, the Community Health Fund (CHF) Act mandated CHF implementation in all districts of mainland Tanzania. The aim of this fund was to provide health insurance to communities which were largely informally employed and thus not captured by the NHIF Act. The CHF is a district-based micro-health insurance scheme whereby members of the respective communities prepay for health services and the scheme receives a "matching grant" from the central government, which is equivalent to the premiums paid by the enrolled households [13]. Unlike NHIF which is mandatory, CHF is a form of voluntary community-based health insurance. CHF usually exist within localized communities, most often in rural areas: members make small payments to the scheme, often annually and after harvest time, and the scheme covers the fees charged by local health services [14]. CHF covers a slightly wider range of people and has been the predominant form of health insurance, although it is considered to have the least favorable benefit packages. The scheme generally only covers outpatient care at primary health-care level- although efforts are underway to improve the overall package offered to benefactors. Generally, this scheme continues to be plagued by low enrolment and dismal retention rates.

When people are enrolled into a health insurance scheme, they gain several rights regarding their healthcare. "The expectations of patients are that membership of the insurance scheme gives them rights and makes them customers of the healthcare providers" [14]. Therefore, it becomes exceedingly demoralizing when their health service expectations are not met. Generally, health insurance, particularly through NHIF, has significantly increased accessibility to oral healthcare services in Tanzania. The assurance of purchasing power has allowed a flourishing of private dental practices and increased motivation in training of oral health personnel within the country. However, careful consideration is needed to ensure that this democratization of access does not lead to greater oral healthcare inequities especially among the informally (majority) employed population.

2.5 Future perspectives

2.5.1 Universal healthcare

Universal health coverage (UHC) is the availability of quality, affordable health services for all when needed without financial impoverishment. Tanzania's aim of achieving universal health coverage is provided in the nation's 4th Health Sector

Strategic Plan (2015–2020). The plan provides for a new health financing strategy aimed at helping the country attain the goal by addressing the existing segregate health insurance market through providing health insurance to all citizens. The goal is underpinned in the nation's 5th Health Sector Strategic Plan (2020–2025). Expected outcome and impact of Universal Health Coverage is improved access, coverage, and quality of health services.

Developing effective mechanisms for identifying and protecting people with very low incomes is critical in Tanzania. Even if user fees were completely abolished, as is happening in a growing number of African countries, it would still be necessary to identify people with the lowest incomes to protect them in relation to other financing mechanisms (e.g. to partly or fully subsidize their health insurance contributions). In addition, if universal coverage is to be achieved, it is necessary to explore ways of achieving funding pools that are as large and integrated as possible, to maximize income and risk cross-subsidies and to allocate pooled resources in an equitable way [11].

2.5.2 Probable implications on oral health outcomes

According to the World Health Organization there are three main goals for a healthcare system: good health, responsiveness to the expectations of the population, and fairness of financial contribution [15]. While the first objective, overall improvement of health, is self-explanatory the other two require more clarification. Responsiveness addresses the question of how far the healthcare system responds to people's expectations of it. The concept of fairness can be defined as "the highest possible degree of separation between contribution and utilization". It demands financial responsibility to vary according to ability to pay, and access to the healthcare system to vary according to healthcare needs irrespective of ability to pay [16].

Health insurance for all Tanzanians is foreseen to facilitate access to healthcare services. Expectantly people will no longer have to endure health problems or to wait until the situation is beyond bearable before consulting a health facility. Generally, Tanzanian population's oral health is predicted to improve in diverse aspects.

Availing Health insurance for all Tanzanians is expected to ease accessibility of oral healthcare. Easy access will optimistically facilitate a shift of the reason for visiting a dental clinic from pain or potentially pain situation driven to regular dental visits for check-ups and observance to follow up schedules. In a long run plausible positive outcome will be early diagnosis of oral diseases, efficacious management and ultimately better prognosis and generally improved oral health of all citizens.

3. Conclusions

Tanzania has made significant strides in improving and expanding oral healthcare accessibility of her people. This progress has been achieved through implementation of various policies embedded within the evolution of the social-political context in the country. The current trajectory of oral healthcare delivery system clearly highlights the unsustainability of the status quo. Adoption of universal health coverage and health insurance for all in the near future seems promising in easing access to oral healthcare.

Acknowledgements

We are grateful to the support offered by Muhimbili University of Health and Allied Sciences. (MUHAS).

Conflict of interest

The authors declare no conflict of interest.

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References

[1] M. Turshen, " The impact of colonialism on health and health services in Tanzania," *Int. J. Heal. Serv.*, vol. 7, no. 1, pp. 7-35, 1977.

[2] T. Y.-H. organization and undefined 1986, "Socialist development and primary health care: the case of Tanzania," *JSTOR*.

[3] H. Wang, M. A. Juma, N. Rosemberg, and M. M. Ulisubisya, "Progressive Pathway to Universal Health Coverage in Tanzania: A Call for Preferential Resource Allocation Targeting the Poor," *Heal. Syst. Reform*, vol. 4, no. 4, pp. 279-283, 2018.

[4] M. of H. and S. W. Tanzania, "Health Sector Strategic Plan: July 2015 – June 2020," 2015.

[5] L. Gilson, "The lessons of user fee experience in Africa.," *Health policy and planning*, vol. 12, no. 4. pp. 273-85, 1997.

[6] M. Whitehead, G. Dahlgren, and T. Evans, "Equity and heath sector reforms: can lo-income countries escape the medical poverty trap?," *Lancet*, vol. 358, pp. 833-836, 2001.

[7] E. Bernabé, M. Masood, and M. Vujicic, "The impact of out-of-pocket payments for dental care on household finances in low and middle income countries," *BMC Public Health*, vol. 17, no. 1, pp. 1-8, 2017.

[8] M. Lagarde and N. Palmer, "The impact of user fees on health service utilization in low- And middle-income countries: How strong is the evidence?," *Bull. World Health Organ.*, vol. 86, no. 11, pp. 839-848, 2008.

[9] M. Matee and E. Simon, "Utilisation of dental services in Tanzania before and after the introduction of cost-sharing.," *Int. Dent. J.*, vol. 50, no. 2, pp. 69-72, 2000.

[10] G. Carrin, "Basic patterns in national health expenditure," vol. 80, no. 01, 2001.

[11] D. McIntyre *et al.*, "Beyond fragmentation and towards universal coverage: Insights from Ghana, South Africa and the United Republic of Tanzania," *Bull. World Health Organ.*, vol. 86, no. 11, pp. 871-876, Nov. 2008.

[12] K. Kolasa and M. Kowalczyk, "Does cost sharing do more harm or more good ? - a systematic literature review," *BMC Public Health*, pp. 1-14, 2016.

[13] A. Kalolo *et al.*, "Implementation of the redesigned Community Health Fund in the Dodoma region of Tanzania: A qualitative study of views from rural communities," *Int J Heal. Plann Mgmt*, vol. 33, pp. 121-135, 2018.

[14] D. McIntyre, "Learning from experience – Health care financing in Low and mid-income countries," 2001.

[15] A. Wagstaff *et al.*, "Progress on catastrophic health spending in 133 countries: A retrospective observational study," *Lancet Glob. Heal.*, pp. 169-179, 2017.

[16] Word Health Organization. "Everybody's business--strengthening health systems to improve health outcomes: WHO's framework for action," 2007.