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THE ROLE OF THE ORAL HEALTH PROFESSIONALS IN THE MANAGEMENT OF HIV IN GHANA

Introduction

In 1981, the Centers for Disease Control and Prevention (CDC) of the United States reported that between October 1980 and May 1981, five young men (all homosexuals) were treated for biopsy-confirmed pneumocystis carinii pneumonia in Los Angeles. The five patients all had laboratory-confirmed previous or current cytomegalovirus (CMV) infection and oral candidiasis (thrush). On July 4, 1981, the CDC reported that during the previous 30 months, 26 cases of Kaposi Sarcoma had been diagnosed in gay men and eight died within 24 months of diagnosis. Thus began the history of the virus that causes Acquired Immune Deficiency Syndrome (AIDS), the Human Immunodeficiency Virus (HIV), which was not discovered until 1983.[1] The infection has since developed into a global epidemic, being transmitted by a multiple range of routes and several countries, particularly those with relatively high burden, have had to spend a sizable percentage of their health budget to prevent infection and care for people living with HIV.

Epidemiology of HIV in Ghana

According to UNAIDS, data collected from 1990 showed an increase in the HIV prevalence in adults 15-49 years in Ghana from 1.3% in 1990 to a peak of 2.5% in 2001. The estimated HIV in 2024 was 1.5% and as of late 2025, Ghana has over 334,000 people living with HIV, with approximately 50 new infections recorded each day according to the Ghana AIDS Commission data.

Management

Management of HIV begins with primordial and primary prevention of infection, early detection and prompt treatment for reduction of disease, complications and sequelae. This is achieved by chronic disease management and rehabilitation and also prevention of unnecessary medical interventions

Remarkable advances have been made in the detection and medical management of HIV infection and disease over the course of the past 30 years. Introduction of testing methodologies and therapies to prevent opportunistic infections occurring in association with HIV/AIDS and new medications to better manage HIV viral burden, have greatly improved the health outcomes. As a result, HIV infection is no longer a death sentence and globally several individuals are living with HIV infection.[2] Therefore, the current question that the oral healthcare profession faces is what is its role in the management of the HIV/AIDS patient, from prevention, through detection and chronic disease management. The role of oral care providers can be classified into (i) early detection and care of clients and (ii) prevention of transmission (infection prevention and control in the oral health environment).

A very important role that the oral health team can continue to play is the early recognition and management of oral disease seen in association with HIV disease, such as candidiasis, oral hairy leukoplakia, and periodontal diseases, including necrotizing ulcerative periodontitis and linear gingival erythema. This can be achieved by offering HIV testing services to oral health clients. On several occasions, oral healthcare workers at the University of Ghana Dental School were the first health professionals to diagnose HIV in patients with oral lesions. Therefore, it is important for the oral healthcare provider to be aware of these HIV associated oral conditions. In the developed countries, oral health screening is done using a rapid oral fluid HIV antibody test (OraQuick Advance). However, in Ghana, the current HIV testing algorithm, regulated by the **National AIDS/STI Control Programme (NACP)** and the **Ghana Health Service (GHS)**, follows the WHO-recommended **three-test serial strategy**.[3] It uses highly sensitive rapid diagnostic tests (RDTs) for screening, and specific confirmatory tests to ensure accurate diagnosis.

HIV testing services are a comprehensive package of services that should be provided together with HIV testing, including counseling, (pre-test information and post-test counseling) quality assured testing and linkage to appropriate HIV prevention, treatment and care services. Differentiated testing services are provided by tailoring testing approaches to the needs of different populations and settings, and the oral healthcare setting is critical to consider. The aim is to increase case detection while making testing more accessible, acceptable and efficient. The role of oral health care professionals can include the offer of (i) facility-based HIV testing services and (ii) provider-initiated testing and counseling as important approaches for early detection. In addition, index client testing of partners, biological children and household contacts can be offered HTS with the clients` consent and the maintaining of confidentiality.[3]

Care of diagnosed clients has been decentralized from specialty care in tertiary hospitals to trained doctor and nurse-led initiation of treatment, down to the health center level institutions in the community. People living with HIV have a choice of differentiated testing

and care models which suit their physical/geographical and social situation. As a result, clients diagnosed within oral health care now have access to quality testing, treatment and care close to their residence and uptake is improving with reductions in stigma and discrimination in the health system. The oral health care provider's role is to provide, or at least have information on where testing and treatment services are available and accessible and point/refer the diagnosed patient to care.

Dental treatments for patients with HIV require specific considerations to ensure optimal care. Dentists should be aware of the patient's medical history, current antiretroviral therapy, and any potential drug interactions. Proper infection control protocols, including universal precautions, should be followed to minimize the risk of cross-infection. Thus collaboration with the patient's healthcare team is crucial to maintain a holistic approach to their care. By communicating with the patient's primary care physician, care provider or infectious disease specialist, we can ensure coordinated and safe dental treatments.[4]

Addressing oral manifestations associated with HIV/AIDS is an integral part of dental care. Oral thrush, for instance, can be managed using antifungal medications prescribed by the dentist. Regular professional cleanings and periodontal treatments help control gum disease and prevent its progression. Additionally, saliva substitutes and oral moisturizers should be prescribed to alleviate the discomfort caused by dry mouth, a common side effect of some antiretroviral medications.[5]

Health education and communication play an important role and oral healthcare professionals must have the capacity to provide reliable information on prevention, care and management of HIV infection and disease to clients. It is important to educate patients not only about prevention, but also on the potential oral side effects of their antiretroviral therapy and encourage them to report any changes or concerns promptly. Early interventions can prevent complications and maintain oral health.

Prevention of transmission in the health system.

Infection prevention and control in the health system are of a particular importance. The basis of infection prevention and control in the health sector is the application of evidence-based measures to prevent the transmission of infections among patients, healthcare workers and visitors during the delivery of healthcare.

The need for cross-infection control in dental practice has received increasing attention in recent years because of greater awareness of epidemiology of HIV and other communicable diseases such as Hepatitis B. The oral healthcare professional, auxiliary personnel, and dental laboratory technicians may be exposed to a wide variety of harmful microorganisms daily. The importance of infection prevention and control (IPC) policies and practices which guide the reduction of iatrogenic transmission cannot be overemphasized. Ghana has a national infection prevention and control strategy which supports the country`s IPC policy and guidelines. These guide prevention of healthcare associated infections and the Ministry of Health is responsible for a comprehensive IPC system at all levels of healthcare including for oral health provision. The policies and practice should protect patients, healthcare workers and communities and dental health professionals must be familiar with and also apply these in their work.

The oral healthcare and other practitioners, auxiliary workers, laboratory technicians and clients should be protected by the use of standard precautions, transmission-based precautions, hand hygiene, risk assessment, environmental hygiene, sterilization and disinfection, waste management and sharps safety as well as education and training.[6] Among these, gloves, gowns and eye protectors and a clinical infection prevention protocol which is enforced daily are needed.

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