The evolution of HIV Care in Zimbabwe - two decades of experience from Newlands Clinic (2004 – 2023)

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The landscape for people living with HIV in Sub-Saharan Africa has changed over the past two decades. The primary reasons for this are the evolution of antiretroviral treatment (ART) from toxic, multi-tablet regimens to single tablet, potent, fixed drug combinations with minimal side effects, and the rollout of national ART programmes.[1] The net result has been a marked reduction in deaths due to HIV infection and its complications and the emerging causes of morbidity and mortality now include non-communicable diseases (NCDs) such as cardiovascular disease, diabetes mellitus, obesity and metabolic syndromes.[2] If the goal of HIV elimination is to be reached, it is imperative that HIV treatment programmes adopt a broader focus and include the screening and treatment of NCDs including cancers and mental health.

Newlands Clinic

Newlands Clinic (NC) is an outpatient HIV treatment centre providing care for approximately 8000 people living with HIV (PLHIV) in Harare, Zimbabwe. The Clinic was established by Professor Ruedi Luethy in response to the devastating impact of the HIV/AIDS epidemic that he observed on his visit to the country in 2003. He went on to establish the Ruedi Luethy Foundation (RLF) which runs NC and works tirelessly to raise funds from both private and public donors in Switzerland which sustain the Clinic operations. Professor Luethy remains actively engaged in Clinic activities, providing strategic direction twenty years after his retirement. A multi-disciplinary team of nurses, doctors, a psychologist and counselling team, with the support of pharmacy and laboratory services, delivers care for PLWH of all ages, from infants to geriatrics. The clinic operates as a public-private partnership under the umbrella of the Zimbabwe Ministry of Health and Child Care (MoHCC) and in accordance with the National HIV Care, Treatment and Prevention Guidelines. In addition, the Newlands Clinic Training Centre was established in 2009 and provides training in HIV management for healthcare workers with both theoretical and practical components.

Figure 1. Aerial view of the Newlands Clinic

Figure 2. A view inside Newlands Clinic

Since its inception in 2004, the vision of NC has been to provide comprehensive, family-centred care for PLHIV in peri-urban communities with a high prevalence of poverty and unemployment. There was limited experience in the field of HIV medicine in Zimbabwe at the inception of NC, and concerns regarding the side effects of the medications and the newly described phenomenon of immune reconstitution inflammatory syndrome (IRIS), led to frequent patient visits (2- to 4-weekly). A customised, point of care, electronic database was developed for patient management, and patients were carefully monitored for medication toxicities. Now, in 2023, patients who are stable on ART attend bi-annual or annual clinician visits.

A few years ago, it was observed that patients who had been in care for over a decade and were doing well on ART, were

Figure 3. The staff of Newlands Clinic in December 2022

developing hypertension, diabetes mellitus, obesity and other non-communicable diseases including cancers and mental illnesses. This finding was supported by data from HIV cohorts around the world. It became evident that the longer people live with HIV, the more likely they are to develop NCDs. This prompted the move to integrate screening for these conditions into routine HIV care. Adult patients are now routinely screened and monitored for hypertension, diabetes mellitus, renal disease and are screened for cancers – women for breast and anogenital cancers and men for prostate and anogenital cancers. The most notable increase in cancers has been in those associated with oncogenic viruses such as human papillomavirus (HPV), hepatitis B virus (HBV), Epstein Barr virus (EBV) and Human herpes virus type 8 (HHV8). These cancers include cervical, vulval, anal, penile, hepatocellular carcinoma, lymphomas, and Kaposi sarcoma.

Looking after children, adolescents and young people

For children, the evolution of HIV care has been more dramatic. Children are not miniature adults, and care for this population is more complex. Historically, children have always been left behind in the development of medicines, and this has been true for HIV medicines. Paediatric ART is weight-based and at the inception of NC, paediatric formulations were not available in-country. Creative ways of delivering the medication were required, and with the assistance of a pharmaceutical company, adult ART formulations were ground to a powder, mixed with a glucose base, and formulations were made for individual children using a manual capsule-making machine. Now, in 2023, NC takes care of 264 infants and children 12 years of age and below, and 307 adolescents between the ages of 13 and 17 years. Child-friendly ART formulations are widely available and there is harmonisation of HIV treatment regimens across all ages.

Sexual Reproductive Health

HIV is predominantly a sexually transmitted infection (STI) and may be accompanied by other STIs. Studies have shown that the prevalence of STIs in PLHIV is higher than the general population and most infections are asymptomatic.[3] Patients would not receive treatment if the syndromic approach to the management of STIs was adhered to, therefore screening for STIs is now included as part of routine care at NC. Screening and treatment for *Neisseria gonorrhoea*, *Chlamydia trachomatis*, *Trichomonas vaginalis*, *Mycoplasma genitalium* and Syphilis is included as part of routine care for young people between the ages of 18 and 25 years, sex workers and other high-risk individuals, and targeted screening is done for those presenting with signs and symptoms of an STI. The provision of a wide range of family planning services and cervical cancer screening is conducted as part of HIV care for all sexually active females. Women living with HIV are 6 times more likely to develop cervical cancer (CC). The primary screening test for CC is the detection of high-risk HPV (hr-HPV) which is associated with over 90% of cases of CC. Women who test positive for hr-HPV undergo visual inspection with acetic acid (VIA) to detect cervical pre-cancer. Both men and women who present with anogenital warts are treated with either cryotherapy, topical therapy with an immunomodulator (imiquimod), laser treatment or, where appropriate, are referred for surgery.

Psychosocial support

Mental illness in PLHIV may occur on a spectrum from mild disorders including anxiety, depression and substance use disorders to severe psychosis. The success of HIV care will rise and fall on the mental health of the individuals receiving this care. This been shown in studies in adolescents and young people, but the overall prevalence of mental illness in PLHIV has been poorly documented in the Sub-Saharan African context. The limited data that exists indicates the prevalence of depression in PLHIV to be as high as 30%. Emerging data on substance use disorders indicates that individuals receiving HIV care are not exempt from this and HIV treatment programmes have not been capacitated with mental health expertise to provide appropriate and culturally acceptable interventions.[4] At NC, the mental and social health department is led by a psychologist together with a social worker and a team of 3 counsellors. Individual, couple and family counselling are provided for patients who are attend for routine HIV care and show signs and symptoms of mental health challenges. Support groups for adolescents, cancer survivors and those with ART adherence challenges are held on a regular basis. Economic empowerment programmes providing capital input, training and mentorship for men and women in small business enterprises are conducted for individuals assessed to be the most vulnerable. These interventions have brought transformation to many individuals and their families living in poverty and hopeless circumstances.

Caring for older PLHIV

Successful programmes have resulted in PLHIV growing old on ART. In 2017, it was estimated that four million people aged 50 years and over were living with HIV in Sub-Saharan Africa. It is essential to ensure that this expanding cohort ages healthily, and in order to do this, ART programmes need to be cognisant of the challenges facing the older person living with HIV (OPLHIV). These challenges include: an accelerated rate of ageing due to chronic inflammation and ART toxicity, increased rates of multimorbidity and polypharmacy, geriatric syndromes such as frailty and falls that occur at an earlier age and mental health issues are more prevalent.[5] NC has established a specialised geriatric service which screens for the common NCDs (hypertension and diabetes mellitus) and other ageing associated health conditions such as osteoporosis, mental health screening, ophthalmological and hearing impairment, and nutritional deficiencies.

Conclusions and lessons learned

The evolution of HIV science has resulted in HIV becoming a chronic disease and the life expectancy of PLHIV is approaching that of HIV-uninfected people. The experience of NC over the past twenty years has shown that HIV care must go beyond aiming for HIV disease control and include diverse strategies to improve the overall health of PLHIV. An integrated approach is required to provide services that address sexual and

reproductive health needs, the diagnosis and management of NCDs including cancers, mental illnesses, and the provision of comprehensive care for OPLHIV. This approach will require a shift in the current mindset of HIV clinicians and the intentional acquisition of skills to manage patients with these conditions.

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