

SYSTEMS THAT SAVE LIVES

Lessons learned from global best practice
on health system strengthening and
noncommunicable diseases

CASE STUDY 3

Building resilient health systems to deliver integrated,
person-centred NCD and HIV care



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This case study is part of a series exploring the importance of strong health systems for the achievement of the Sustainable Development Goal (SDG) target of reducing premature mortality from noncommunicable diseases (NCDs) by one-third by 2030. This case study focuses on efforts to integrate NCD and HIV prevention, treatment and care services to improve quality and reach of person-centred NCD care. Other case studies cover NCDs in humanitarian settings and the NCD response in Ethiopia.



SDG TARGET 3.4

Noncommunicable diseases and mental health

By 2030, reduce by one-third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being.

It is important to note that this case study was developed prior to the US administration's decisions on USAID and other global health programmes. The full implications of this decision for the future of US-supported programmes, including USA's support for the Global Fund to Fight AIDS, Tuberculosis and Malaria, are yet to be seen. Wider implications for many health systems in low- and middle-income countries (LMICs) are also expected. It is likely that impacts of this decision will heighten challenges identified in this case study.

However, this situation also presents an opportunity to reshape health systems to deliver more efficient, integrated person-centred care, to bridge the gap in prevention and care, and to seek sustainable resourcing to unite reproductive, maternal and child health, infectious disease and NCDs, mental health and wellbeing in holistic programmes that work for the good of everyone.

By 2035 most people living with HIV will also have one or more NCD

In many LMICs, one of the most significant co-morbidities is that of HIV and NCDs. It is estimated that by 2035 nearly three-quarters of people living with HIV worldwide will also be living with one or more NCD¹. Responding to this rising prevalence of NCDs among people living with HIV requires investment in robust, resilient, equitable and publicly funded health systems to deliver person-centred and context-specific integrated services for HIV, NCDs and a range of other health concerns, as was clearly recognised during the 2021 High-Level Meeting on AIDS (see Box 1).



BOX 1

The need to invest in person-centred, context-specific, integrated health services²

“Investing in robust, resilient, equitable and publicly funded systems for health and social protection systems that provide 90 percent of people living with, at risk of and affected by HIV with people-centred and context-specific integrated services for HIV and other communicable diseases, noncommunicable diseases, sexual and reproductive health care and gender-based violence, mental health, palliative care, treatment of alcohol dependence and drug use, legal services and other services they need for their overall health and well-being by 2025.”

– Political Declaration of the 2021 High-Level Meeting on AIDS

While there are increasing efforts to deliver this kind of care, especially at primary health care level, critical health system challenges need to be overcome to fully realise the aims of the Political Declaration and make greater progress towards SDG 3.4. Building resilient health systems for HIV and NCD diagnosis, treatment and care requires an integrated approach that strengthens the health workforce, improves the capture and use of combined HIV and NCD data, and expands access to essential diagnostics, medicines and monitoring equipment for NCDs. This case study explores efforts being undertaken to achieve this.

The HIV and NCDs syndemic^I

Dramatic progress in increasing access to HIV prevention, treatment and care has led to substantial gains in quality of life and life expectancy for people living with HIV. However, these gains are under threat from the rising prevalence of NCDs and underlying weaknesses in public health systems that were clearly exposed by the COVID-19 pandemic and the recent changes in US politics and shifts in overseas development aid.

People living with HIV are at increased risk of NCDs, not only because they are living longer, but because their HIV status places them at greater risk of some NCDs³. The four main co-morbidities to HIV in LMICs are cardiovascular disease (CVD), depression, type 2 diabetes and cancer (see Box 2). Evidence also shows that different antiretroviral therapies (ART) increase the risk of NCDs and chronic conditions such as obesity, cardiovascular disease, type-2 diabetes, insulin resistance and metabolic-associated fatty liver disease, among people living with HIV⁴.



BOX 2

The HIV and NCDs syndemic

- Globally, one in four people living with HIV have moderate to severe depression⁵.
- One in five people living with HIV have one or more modifiable risk factor for developing cardiovascular disease⁶.
- The risk of CVD is increased by 50% among people living with HIV⁷.
- For adolescents with a high viral load of HIV, there is a risk of increased triglycerides and cholesterol⁸.
- Cervical cancer prevalence amongst women living with HIV is six times higher than for women without HIV⁹.
- People living with HIV on combination ART are at increased risk of hypertension. It is estimated that one-third of people living with HIV have hypertension¹⁰.
- The risk of developing related conditions – such as myocardial infarction, heart failure, stroke, or pulmonary hypertension – is approximately one and a half to two times higher for people living with HIV¹¹.
- HIV-positive adults in the US were found to be 50% more likely to develop chronic obstructive pulmonary disease (COPD)¹².

Responding to the complex and multiple co-morbidities of HIV and NCDs requires a comprehensive, person-centred approach to HIV and NCD prevention, treatment and care, that can in turn help to strengthen health services for all at the primary health care level.

^I A syndemic can be identified by the presence of two or more disease states that adversely interact with each other, negatively affecting the mutual course of each disease trajectory, enhancing vulnerabilities which are exacerbated by inequities.

Building resilient health systems to improve integrated HIV-NCD prevention, treatment and care

“The reality on the ground in regions such as Sub-Saharan Africa is that for a person living with HIV having access to treatment and care for other chronic conditions like diabetes or hypertension is just as important as receiving antiretroviral drugs.”

– Monika Arora, Vice-President Research and Health Promotion, Public Health Foundation India

Integration of NCD prevention, diagnosis, and treatment within HIV services is critical for improved health outcomes and healthy ageing. Data from an increasing number of LMICs shows that multifaceted HIV-NCD programmes delivering a wider range of services can improve access, acceptability, and affordability of services whilst improving efficiencies within health systems and at a patient level. To maximise these benefits, strong health systems, with high quality primary healthcare and robust referral mechanisms are essential¹³.

Achieving this, however, is not easy. The historical fragmentation of health services, caused by multiple vertical, disease-focused programmes, means that investment in NCD care has been lacking and there are critical health system challenges that need to be overcome to deliver high quality, integrated HIV and NCD services. This case study illustrates some of the key challenges that need to be addressed, alongside existing solutions that have the potential to be scaled up, as summarised in Box 3.



BOX 3**Key health system challenges and solutions to delivering integrated HIV and NCD services**

| HEALTH SYSTEM 'BUILDING BLOCK' | CHALLENGES | SOLUTIONS |
|--------------------------------------|--|--|
| Service delivery | <ul style="list-style-type: none"> Fragmented health systems. | <ul style="list-style-type: none"> Strengthened primary health care. Improved referral systems. Clear guidelines on integrated HIV and NCD care. |
| Health workforce | <ul style="list-style-type: none"> Limited knowledge of NCD diagnosis and management among health workers. | <ul style="list-style-type: none"> Training of health workers on NCD prevention, diagnosis, treatment and care. Engaging community health workers in delivery of integrated HIV-NCD care. |
| Medical products and supplies | <ul style="list-style-type: none"> Demand for NCD drugs outweighs supply. Lack of reliable supply chain for essential NCD commodities. Frequent stock-outs of NCD drugs and commodities. | <ul style="list-style-type: none"> Multi-month dispensing of HIV and NCD drugs. |
| Health financing | <ul style="list-style-type: none"> High levels of out-of-pocket payments for NCD services (diagnosis, treatment, and ongoing management). Lack of global health financing for NCDs. Imbalance between out-of-pocket payments and global health financing of NCD and HIV services. | <ul style="list-style-type: none"> Integration of HIV co-morbidities, including NCDs, into Global Fund to Fight AIDS, Tuberculosis and Malaria 2023-2028 strategy. |
| Surveillance/ data | <ul style="list-style-type: none"> Lack of data on prevalence of NCDs among people living with HIV. NCD co-morbidities not included in tracking/reporting of HIV treatment and care programmes. | <ul style="list-style-type: none"> Co-located HIV and NCD clinics. Sharing and integration of health record-keeping systems. Introduction and use of shared digital health platforms. |
| Leadership and governance | <ul style="list-style-type: none"> Senior managers of global health initiatives unfamiliar with NCDs and 'whole-of-person' care. Lack of management support for integrated HIV-NCD programmes. | |

Fragmented systems and imbalanced funding: critical barriers to delivering integrated NCD-HIV healthcare services

The most significant health system challenge to delivering integrated HIV and NCD care includes the historic fragmentation of health systems, which creates challenges and complexities when attempting to move from vertical, disease-focused programmes to integrated, person-centred, primary healthcare programmes. These challenges include lack of skills and knowledge on NCDs among health workers, inadequate and unreliable medical equipment and drugs for the treatment and management of NCDs, and a lack of data on NCDs. Perhaps most importantly, there are substantial imbalances in funding for HIV services and NCD services at global, national and local levels leading to high out-of-pocket payments for NCD medications, monitoring and care, whilst HIV treatment and care services are frequently provided free-of-charge.

SERVICE DELIVERY

Many low-and middle-income countries have fragmented health systems that make the provision of effective, integrated NCD care challenging.

Research has found that weak referral systems, an inability to follow up with patients, and a lack of clinical guidelines were impeding efforts to better integrate HIV and NCD services. Furthermore, the need to attend different clinics for the treatment and management of various co-morbidities was identified as a key barrier to accessing services for people living with HIV and NCDs¹⁴.

HEALTH WORKFORCE

While investment in the HIV response has resulted in increased availability of health workers with expertise in long-term care for chronic diseases, this skills development has been specific to HIV.

As a result, while many health workers have the knowledge and skills needed to provide long-term care for HIV, they do not have the same level of knowledge and skills to be able to diagnose and provide long-term care for NCDs. Poor support of frontline health workers has also been identified as a key barrier to integration efforts with challenges in motivating staff, high workloads, and a lack of overarching national guidance or directives for integrated care¹⁵.

MEDICAL PRODUCTS AND SUPPLIES

Availability of medical supplies for NCDs has been noted as a particular challenge for the integration of NCDs into HIV or wider primary health care programmes.

In many LMICs, the demand for NCD drugs significantly outweighs supply¹⁶, while a lack of reliable supply chains for essential NCD commodities means frequent stock outs of drugs to manage NCDs. The impact of this is that some people may not travel to health clinics and, as a result, miss out on other essential components of their care¹⁷.



HEALTH FINANCING

A frequent challenge of programmes that have begun to integrate HIV and NCD care is the cost of treatment for NCDs.

The cost of treatment for HIV has progressively been lowering and, until very recently, has been largely covered by international programme support. Treatment and care for NCDs, however, remains comparatively expensive and in many LMICs, costs are primarily paid out-of-pocket by patients¹⁸. This has been shown to drive people living with NCDs, especially those with multiple conditions, into or further into poverty¹⁹. This is worsened when people living with HIV are required to attend separate clinics or health facilities for NCD care, leading to siloed care and additional costs due to factors like travel and taking time off work.

“I had a scenario where a patient of a heart condition had a child who also had a heart condition, they also tested positive (for) HIV. (...) she said ‘... since I cannot afford the treatment, and we are both sick am going to kill this child and myself (...)’. We need special trained people who can handle these scenarios.”

(Uganda NCD Alliance, 2017²⁰)

HEALTH FINANCING

A second critical health financing challenge is that, despite efforts to move towards whole-of-person care, most global health financing remains targeted at disease-specific or intervention-specific programmes, such as HIV, TB or malaria programmes, vaccination programmes, or programmes targeting neglected tropical diseases (NTDs).

In a survey conducted by the NCD Alliance, 76% of respondents (85 out of 112) stated that a lack of flexibility in donor funding was either a big or very big barrier to effective NCD integration²¹. To begin to address this challenge, the Global Fund to Fight AIDS, TB and Malaria (the Global Fund) explicitly endorsed in its 2023-2028 strategy the integration of services to prevent, identify and treat HIV co-morbidities, including NCDs^{22,23}.

SURVEILLANCE/DATA

A key barrier to effective HIV and NCD programme integration is a lack of understanding of the HIV and NCD syndemic, due to a lack of data on the prevalence of NCDs among people living with HIV.

Research conducted in 2021, for example, found that only a few countries had systems in place to collect data on the NCD needs of people living with HIV²⁴. Another study on integrating care for NCDs into routine HIV services in sub-Saharan Africa also found that country-specific estimates on the prevalence of common NCDs among people living with HIV remain largely unknown and that HIV treatment programmes do not routinely track NCD co-morbidities, as there are no associated reporting requirements for these conditions²⁵.

“All partners should advocate for data information systems to serve multiple purposes, to monitor both HIV and NCDs in a harmonised way.”

–UN Representative²⁶

LEADERSHIP AND GOVERNANCE

A particular leadership challenge was identified in programmes funded by global health initiatives such as the Global Fund.

Research found that while specialist managers of global health initiatives were well versed in disease-focused areas, they did not show the same level of understanding of whole-of-person primary health care. This makes it difficult to gain management support for integrated programmes that address NCDs sufficiently and presents a challenge to identifying and managing life-threatening and life-altering co-morbidities such as cardiovascular disease, hypertension, diabetes, obesity, and other cardio-renal-metabolic diseases. In addition, teams were often organised along the lines of specific disease interventions, making it challenging to implement new models of care that include NCD services²⁷.

Leveraging HIV programmes to deliver integrated HIV-NCD services: finding solutions to critical health system challenges

Some of the solutions being implemented to strengthen health systems and deliver more integrated HIV-NCD care include integrated care models, task sharing, multi-month dispensing of HIV and NCD medications, and developing shared digital platforms for the capture of data on HIV and NCD co-morbidities. These solutions are explored in more detail below.

SERVICE DELIVERY

A study into integrated care of HIV, diabetes and hypertension in Tanzania and Uganda²⁸ found that treatment adherence of patients with NCDs improved and that integrated chronic care services were able to achieve a high standard of care for NCDs without adversely affecting outcomes for HIV.

Key elements of the integrated care provided included patients with HIV, diabetes and/or hypertension being managed by the same health workers. In addition, the same pharmacy was used, there were similarly designed medical records, patients shared the same registration and waiting areas, and there was an integrated laboratory service for all diseases.

HEALTH WORKFORCE

Task sharing^{II} has been widely used in the context of HIV programmes to make more efficient use of the available human resources for health.

Building on this task sharing model, which includes engaging community health workers to deliver health services at the primary care level can increase access to care and reduce health costs for patients²⁹. This is particularly important for people living with HIV and NCDs, given the out-of-pocket costs that are often associated with NCD care.

MEDICAL PRODUCTS AND SUPPLIES

Initially developed to address the challenges of stable drug supplies for people living with HIV during the COVID-19 pandemic, the model of multi-month dispensing is being increasingly recognised as a strong integration strategy for HIV and NCD care.

Benefits of issuing multi-month prescriptions for HIV and NCD treatment for people living with HIV include decongestion of facilities, preventing unnecessary queues in clinics, and providing access to health education and peer support while patients collect their medication. This in turn leads to less treatment interruption and increased treatment adherence. A significant challenge with multi-month dispensing, however, remains the cost of NCD drugs and the fact that most people living with HIV still pay out-of-pocket for NCD medications³⁰.

DATA/SURVEILLANCE

Co-located HIV and NCD clinics (i.e. clinics providing both HIV and NCD services) offer an opportunity to improve the sharing and integration of health record-keeping systems through the introduction and use of shared digital health platforms.

This can contribute to not only increasing the availability of data on NCDs, but also improving referrals between services, across disease specialties and across different levels of health care provision and expertise. For example, in Malawi, Partners in Health and the Malawi Ministry of Health established an Integrated Chronic Care Clinic (IC3) which integrates HIV care with treatment for NCDs. This IC3 model includes integrated electronic medical records for HIV and NCDs, allowing real-time patient tracking, detection of missed clinic visits, and longitudinal clinical information for patients with HIV and NCDs who are hospitalised.³¹

Research has shown that users and clients of services prefer quality integrated, people-centred service delivery that is more convenient, has greater continuity, takes less travel time, with less need to see multiple providers. Health care workers generally also prefer integrated service delivery, if given adequate training, support and resources, leading to greater job satisfaction and broader skills development.³²

II WHO defines task sharing as the expansion of the levels of health providers who can deliver health services. It involves the safe expansion of tasks and procedures that are usually performed by higher-level staff to lay- and mid-level healthcare professionals.

CASE STUDY

Integrating HIV and NCD care in Malawi³³

The experience of Neno District in Malawi illustrates the benefits of integrating HIV and NCD care and how some of the health system barriers to implementing integrated care can be overcome.

In 2015, HIV/AIDS treatment and care was reaching almost two-thirds of the district population of people living with HIV, through the provision of services at a community level and an established referral system to the two district hospitals for more specialised care when needed. By contrast, care for NCDs was provided only through two clinics located at the district hospitals, leading to limited reach and poor accessibility of the services. As a result, the NCD clinics had low patient numbers, with low follow-up rates.

Witnessing this stark contrast between the HIV and NCD service models, and an increasing number of persons enrolled in the HIV programme with multiple NCDs, Partners in Health and the Malawian Ministry of Health began implementing an Integrated Chronic Care Clinic (IC3) model. Leveraging the established decentralised HIV service delivery platform, IC3 commenced with the delivery of integrated HIV and hypertension screening at the community level. The programme has since expanded to encompass provision of comprehensive integrated primary care for a range of chronic conditions – including HIV, hypertension, asthma, epilepsy, diabetes and mental health – available to all persons in Neno District.

Key elements of the model include:

- **Community-based screening** for a range of chronic conditions including HIV and NCDs.
- **Treatment and medication** provided at the point of care, with up to 90-day supplies provided for most chronic conditions.
- **Referral of people requiring more specialised care** to one of two district hospitals.
- **Active home-based** follow-up of enrolled patients by IC3 community health workers.
- **Integrated electronic medical records** for HIV and NCDs, allowing real-time patient tracking, detection of missed clinic visits, and longitudinal clinical information for patients with HIV or NCDs who are hospitalised.
- **Integration of NCD data from electronic medical** records into the national health information systems (DHIS2) every quarter.
- **Socioeconomic support** for the most vulnerable.

Over the first three years of the IC3 initiative, 6233 new patients were enrolled (48% with an NCD diagnosis), and data on treatment retention revealed that after 12 months 72% of patients with NCDs remained enrolled in the programme.

This case study found that key enablers for the effective integration of NCD and HIV services included flexible funding, local leadership and decision-making, efficient patient flow and data systems, and adequate referral systems between community, primary and secondary care.

CONCLUSIONS

Integrating HIV and NCD prevention, diagnosis, treatment and care services can have important benefits and efficiencies for both people living with HIV and NCDs and for the health system at all levels. Key benefits include the streamlining of services, which can reduce the amount of time, and money, needed for people living with HIV and NCDs to access care for different comorbidities. Integrating HIV and NCD services can also help to identify the increased risk factors of NCDs among people living with HIV; can increase the availability of NCD prevention, treatment and care; and can improve the quality of health data available on NCDs and HIV. Achieving this integrated care requires robust health systems and a skilled workforce that can diagnose, treat, and manage the long-term health needs of people living with HIV and NCDs. It also requires consistent supplies of NCD medicines, diagnostic tools, and monitoring equipment, as well as accurate collection of data on the prevalence of HIV and NCD co-morbidities. Most crucially, however, there is a need to address the imbalance of financing for HIV and for NCDs, so that people living with HIV are not pushed into or further into poverty by high out-of-pocket expenditure on NCD care.

Lessons learned

The 2021 Political Declaration on HIV and AIDS commits governments to “provide 90% of people living with, at risk of or affected by HIV, with people-centred and context-specific integrated services for HIV and other communicable diseases, NCDs... and other services they need for their overall health and well-being by 2025”³⁴. This commitment offers an unprecedented opportunity to build on the successes of the HIV response and to use HIV service delivery platforms for integration with other health services such as NCD prevention, screening, diagnosis, treatment, rehabilitation and palliative care.

The current environment of dramatic cuts to ODA budgets and the abrupt ending of many HIV programmes makes it more important for national governments, multilateral organisations and donor agencies, HIV and NCD advocates, civil society, community organisations and researchers to come together to maximise the synergies and efficiencies that can be achieved by integrating HIV and NCD care and building more resilient health systems.

The following lessons have emerged for integrating HIV and NCD care services and improving health outcomes for people living with NCDs and HIV.

- **Coordinating efforts across all stakeholders**, including governments, WHO, UNAIDS, global health donors, civil society, community and people living with HIV and NCDs, and the private sector, is essential to achieve the 90% integrated care targets.

- Taking a **phased, context-specific approach** in national strategies for NCD and HIV prevention is beneficial. This means aligning with the developmental stage of the country's health system, their priorities and disease burden, and the strengths of existing HIV-specific systems and platforms. Effective integration will utilise existing platforms and resources, also ensuring that services for both HIV and NCDs are affordable and accessible.

- Sharing **evidence on cost-effective, gender-sensitive, and age-responsive** strategies for integrating HIV and NCD services amongst all key stakeholders can inform policy development and ensure that the growing needs for NCD prevention, treatment and care of people living with and affected by HIV are met.

- National governments can use partnerships to **leverage disease-specific programmatic systems** and platforms to support more integrated prevention and care services, including in national health systems.

- Multilateral agencies and donors have a crucial role to play in **creating funding and technical support opportunities** for integrating HIV and NCD care.

- HIV and NCD advocates, civil society, community organisations and researchers are key actors for **raising awareness of the need for both HIV and NCD services** and calling for integration through existing networks, campaigns and other civil society-led advocacy and accountability initiatives.

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