

**THEMATIC
WEBINAR
SERIES**



Opportunities for integrating NCDs in Global Fund Applications: the role of civil society

Thursday 22 June 2023

13:00 – 14:15 CEST



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THEMATIC WEBINAR SERIES

TECHNICAL NOTES

- *Interpretation into English and Spanish is available by clicking on 'Interpretation' button at the bottom of the screen.*
- *Throughout the webinar, participants are invited to contribute questions and comments using the chat/Q&A box at the bottom of the zoom window.*
- *If you would like to speak during the Q&A sections, please indicate in the chat and we will enable your microphone.*



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SECTION 1

Welcome and Agenda

Cristina Parsons Perez



Objectives of the Webinar

- **To highlight the importance of tackling NCDs/MH within the context of addressing comorbidities and integrated people centered services for GF targeted populations.**
- **To understand Global Fund objectives and opportunities for investment in NCDs/MH in the new Global Fund 2023-2025 allocation cycle.**
- **To know about work NCD Alliance members and partners are undertaking in this area.**
- **To encourage engagement of NCD civil society in country level advocacy towards the Global Fund.**

SECTION 1 Agenda

Welcome and scene settings remarks

Cristina Parsons Perez, Capacity Development Director, NCD Alliance

Global perspectives

Global policy and strategy landscape for HIV-NCDs/MH

Ani Shakarishvili, Special Adviser, Team Lead - Access to HIV Treatment and Care, and Integration, UNAIDS

Opportunities to address comorbidities - noncommunicable diseases in the Global Fund application cycle 2023-2025

*Jennifer Manne-Goehler, MD, ScD
Assistant Professor of Medicine, Harvard Medical School
Consultant, WHO Department of Noncommunicable Diseases*

Mental health advocates mobilization towards the Global Fund

Yves Zuniga, Senior Officer at United for Global Mental Health

Q&A

All

National perspectives from NCD Alliance network

Advocating for HIV-NCDs/MH integration in Tanzania

Kaushik Ramaiya, NCD Alliance Board Member and Honorable Secretary of Tanzania NCD Alliance

Working with the HIV community in Kenya to advance NCDs and UHC

Charity Muturi, Our Views Our Voices global advisory committee, advocate with lived experience, NCD Alliance Kenya

Q&A

All

Concluding remarks

Cristina Parsons Perez, Capacity Development Director, NCD Alliance

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SECTION 2

Global perspectives

*Ani Shakarishvili
Jennifer Manne-Goehler
Yves Zuniga*



Integrated people-centred systems and services for addressing comorbidities and coinfections

Considerations for GC7 country applications

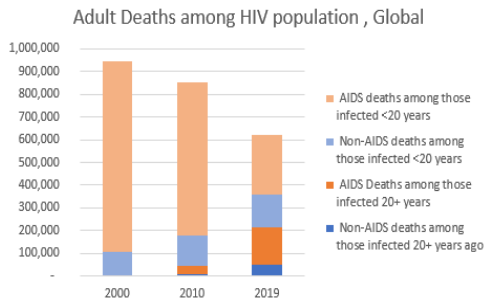
Dr. Ani Shakarishvili
Special Adviser, Team Lead - Integrated Systems and Services
UNAIDS/Geneva

UNAIDS TSM Consultant Clinic, May 15, 2023



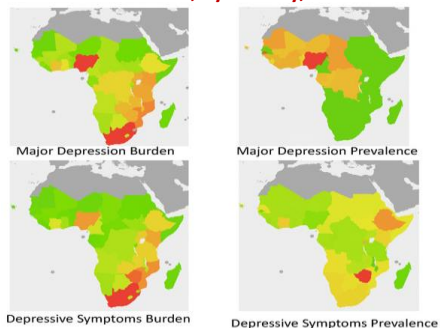
Non-HIV/AIDS morbidity and mortality, and HIV-NCD and HIV-mental health comorbidity

Adult deaths among people living with HIV - global, 2000, 2010 and 2019



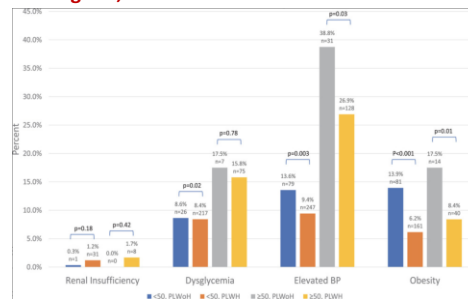
Special analysis of UNAIDS 2020 HIV estimates

Prevalence of depression in Africans living with HIV - in absolute numbers, by country, 2020



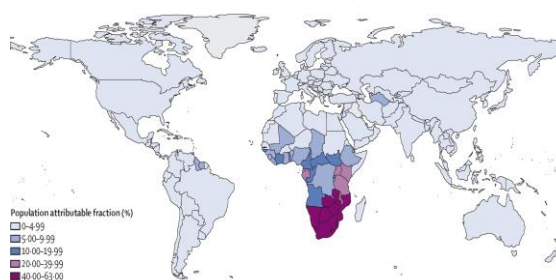
Lofgren, SM et al. (2020) Burden of Depression in Outpatient HIV-infected adults in Sub-Saharan Africa; *Systematic Rev, AIDS Behav.* 2020 June ; 24(6): 1752–1764. doi:10.1007/s10461-019-02706-2.

Prevalence of NCDs by age and HIV status at enrolment visit - AFRICOS cohort study, Kenya, Tanzania, Uganda and Nigeria, 2022



Chang, D. et al. (2022) "Non-communicable diseases by age strata in people living with and without HIV in four African countries." *Journal of the International AIDS Society*, 25(S4).

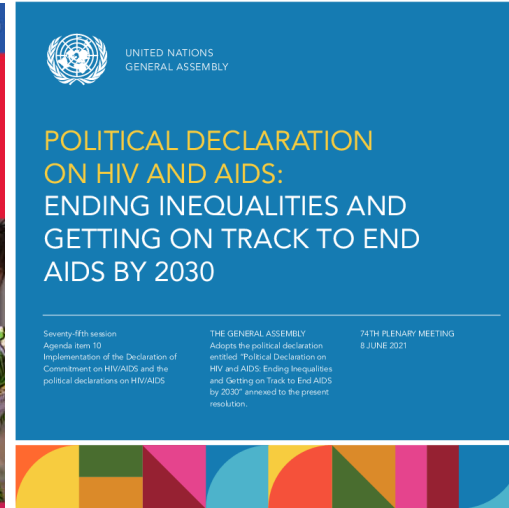
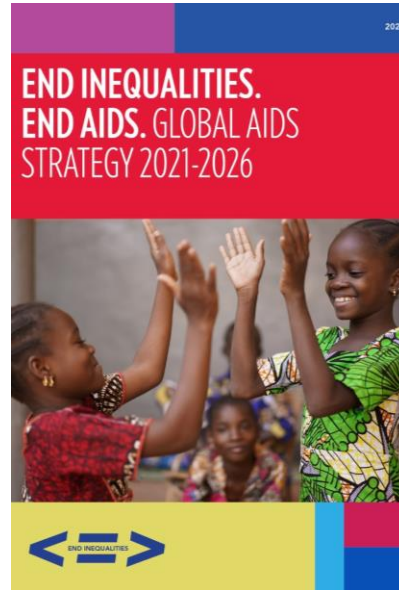
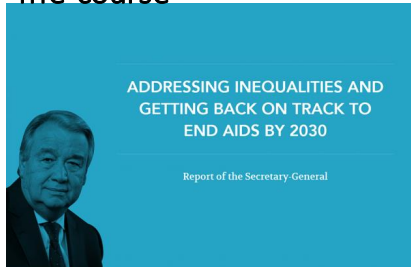
Population attributable fraction (%) – Global burden of cervical cancer attributable to HIV, 2020



Stelzig, D et al. *Lancet Glob Health*, 2021; 9: e161–69 [https://doi.org/10.1016/S2214-109X\(20\)30459-9](https://doi.org/10.1016/S2214-109X(20)30459-9)

Global AIDS Strategy for people and communities

First time global commitments made for **comprehensive integrated people-centred** and local context-specific approaches, systems and delivery of services, and addressing **HIV-HPV/cervical cancer, -NCDs** and **-mental health** comorbidities across the **life-course**

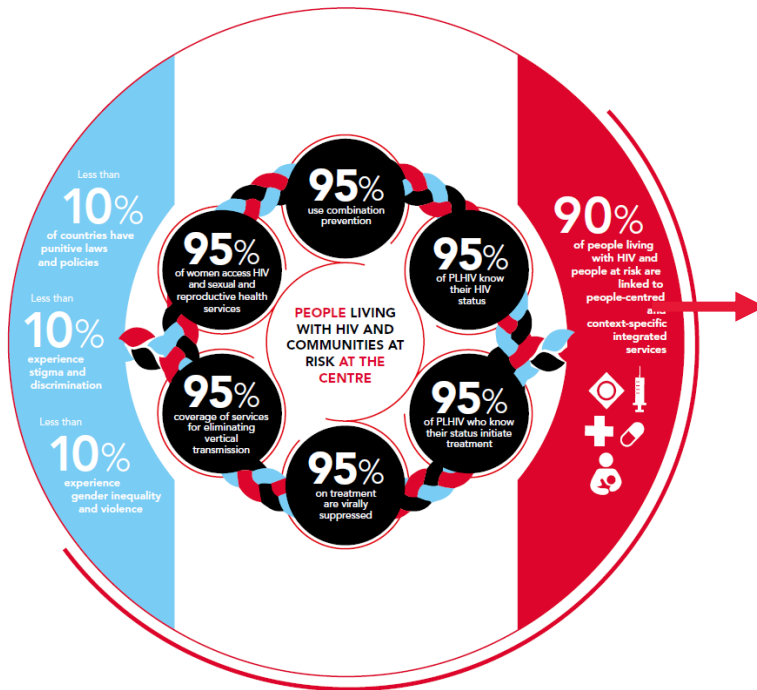


Dedicated result area focused on **integrated systems for health**, including at PHC level, and **social protection** for achieving best HIV and health outcomes, and UHC



Global HIV and NCD integration targets

2025 GLOBAL HIV TARGETS



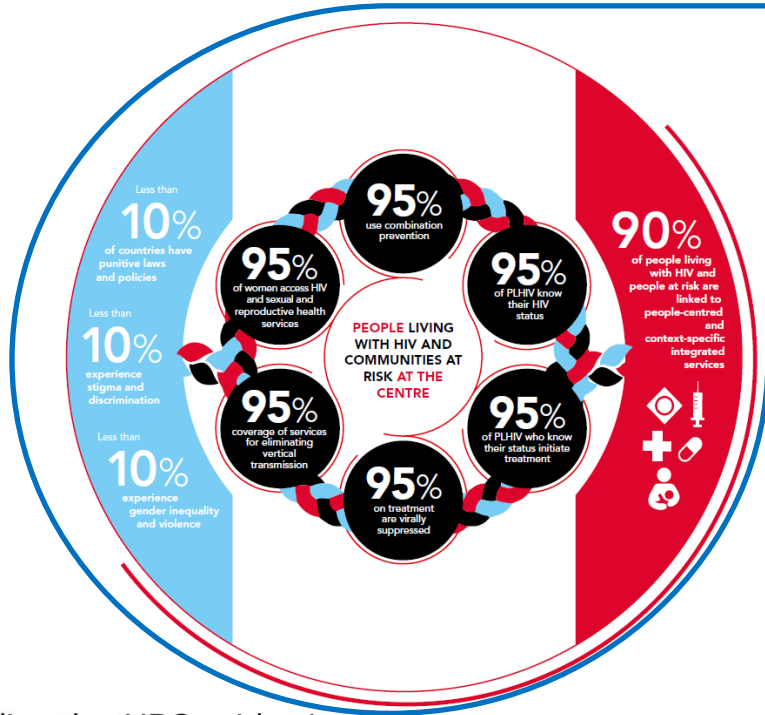
90% of PLHIV and individuals at ↑ risk of HIV linked to and access NCDs, mental health and other services for their overall health and wellbeing

Population-specific:

- 90% PLHIV have access to HIV treatment and CVD, Cx Cr, mental health, diabetes services, health education, smoking cessation, PA
- 90% of gay men and other MSM, sex workers, transgender people have access to HIV services integrated with/linked to mental health and PSS
- 90% of PWID have access to comprehensive harm reduction, including mental health, services
- 90% of AGYW have access to SRHR services, including HPV/cervical cancer screening and treatment, that integrate HIV services

Global HIV and NCD integration targets

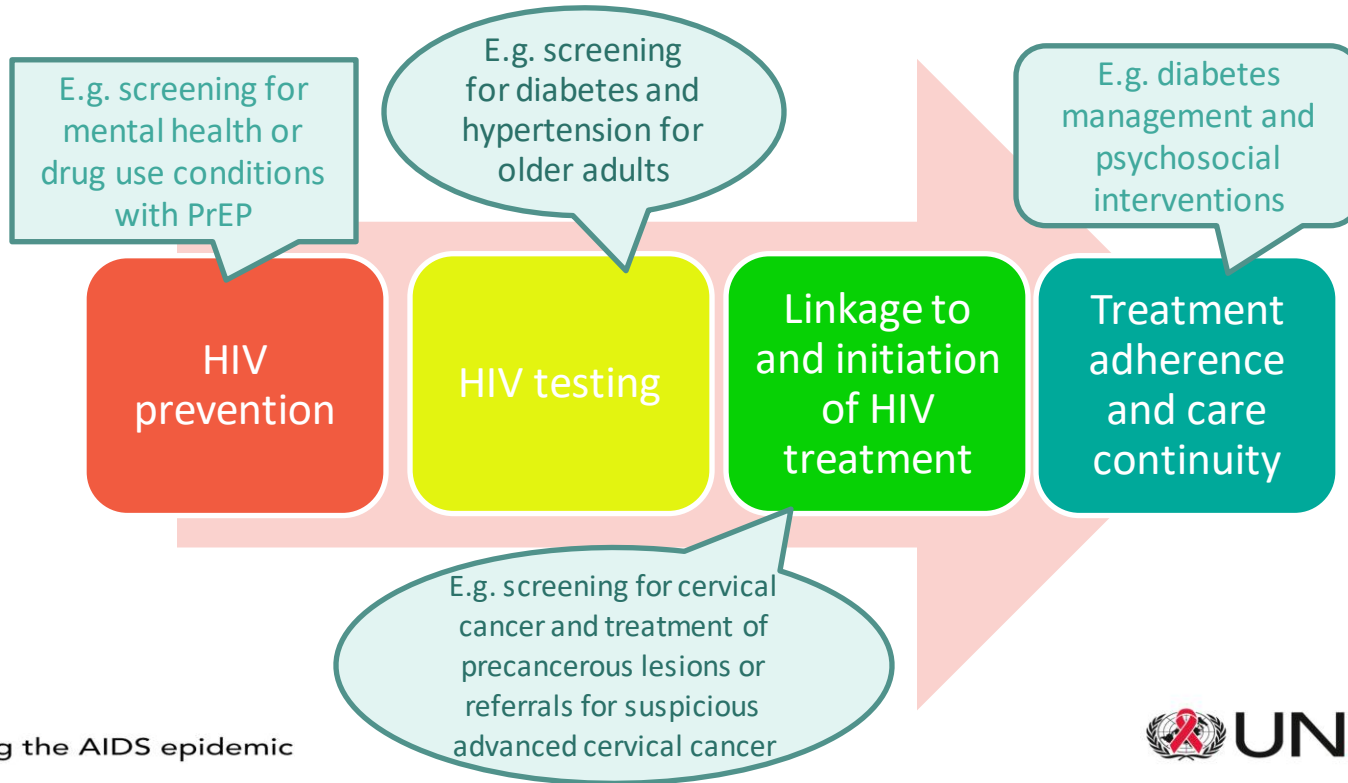
2025 GLOBAL HIV TARGETS



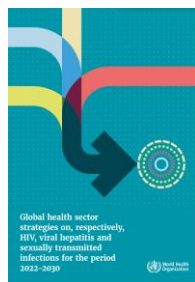
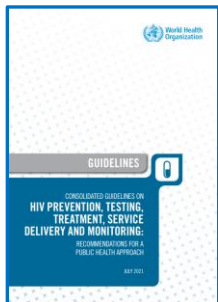
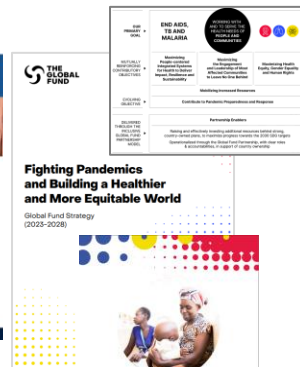
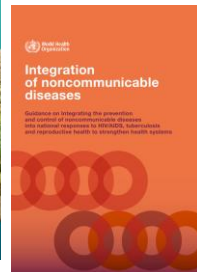
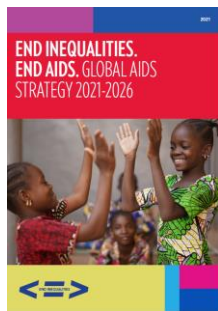
Community-led responses:

- 30% of HIV testing and treatment should be delivered by CLOs
- 80% of service delivery for HIV prevention programmes for key populations and women to be delivered by CLOs
- 60% of the programmes supporting the achievement of societal enablers, including programmes to reduce/eliminate HIV-related stigma and discrimination, etc. to be delivered by CLOs

**HIV service continuum provides entry points for the integrated services...
but it should not be unidirectional integration**



Global strategies, policies and recommendations (selected)



Technical HIV guidance

1

TRP observations –GC6

2

HIV Program Essentials

3

HIV Prioritized Interventions and approaches for Global Fund Investments

4

Health and Longevity guidance

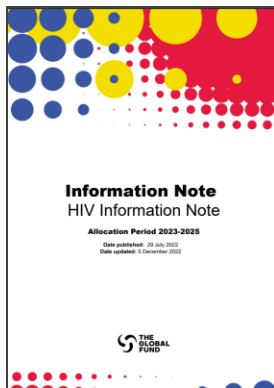
Seven Priority areas

Key considerations in addition to the 2015 Framework for Financing Co-infections and Co-Morbidities

HIV platform approach

5

Modular framework



Priorities and Approaches for Global Fund HIV Investments

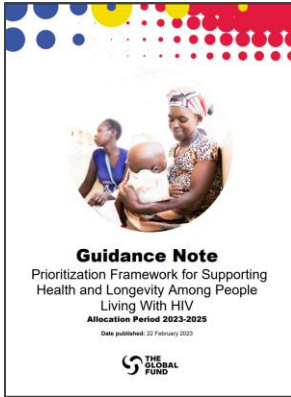
Prioritize interventions that can be delivered at sufficient **coverage, quality and scale to have an impact.** Design and deliver **highly targeted** approaches.

Prioritize **people living with HIV** across their life-course and **populations with the highest risk and vulnerability to HIV.**

Support the **rapid adoption and scale-up of new products, technologies, and service delivery approaches,** as recommended in global strategies and technical guidance.

Contribute to **making health systems and service delivery more equitable, efficient, effective, and sustainable** in delivering **integrated people-centred health services.**

Address **human rights- and gender-related barriers** to service access.



Seven Priority Areas

Advanced HIV
Disease

Viral Hepatitis

Cervical Cancer

Anal Cancer

Non-Communicable
Diseases

Mental Health

Coronavirus Disease
(COVID-19) and
other emerging
pandemics

TB/HIV co-infection

Key considerations in addition to the 2015 Framework for Financing Co-infections and Co-Morbidities of HIV/AIDS, Tuberculosis and Malaria (COIM)

A strong investment case.

Proposed interventions reflect integrated people-centered services and approaches.

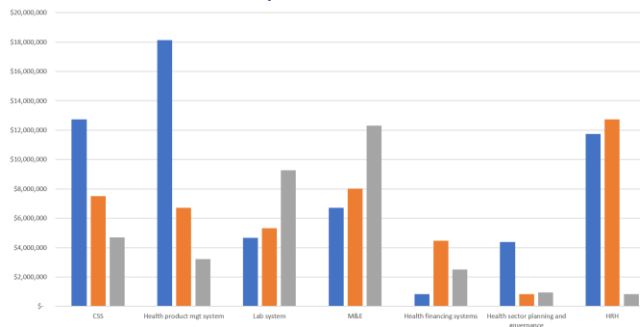
Proposed interventions leverage HIV service delivery platforms.

Identification of, and alignment with relevant co-financing-domestic and other funders.

UNAIDS rapid review of 4 NSP-tailored FRs in Window 1

- 3 out of 4 of the countries **less suited to the NSP-tailored model**:
 - The version of NSPs used for developing FRs were incomplete
 - NSP revisions/development under revision or being developed almost at same time as the FR
 - Misalignment with NSP and grant durations/cycles; NSP processes evidently driven by GF funding application windows
- Hard to follow or ‘trace’ **NSP into FR**.
- Countries moving forward with **integration and CSS but not radically** – with only small incremental shifts.

Investments by RSSH modules for 3 countries



Integrated services and comorbidities	Country 1	Country 2	Country 3	Country 4	RSSH elements	Country 1	Country 2	Country 3	Country 4
TB/Diabetes	●	●	●	●					
STIs	●	●	●	●	Shift to horizontal from vertical components	○	●	●	●
Cervical cancer	○	●	●	●	CLM increased attention	●	●	●	●
Hep B and C	●	○	○	●	HRH – including CHW	○	●	●	●
Mental health	○	●	○	●	HMIS – focus beyond HIV and TB	●	●	●	●
Hypertension - other NCDs	○	○	○	●	Integrated procurement and supply chain management systems	●	●	●	●
TB	●	●	●	●					

○ Either not mentioned at all or just mentioned once with no description

● Included but not described in detail, but some progress identifiable

● Included and described in detail, not necessarily fully funded

Integrated people-centred quality services (IPCQS), COIMs – additional observations from Window 1 countries' FRs

- Overall **prioritization and specificity** around IPCQS better than in GC6/NFM3, but still very insufficient.
- **Weak justification** (epi and programmatic data), rationale (e.g. specific population group needs when they are apparent, to increase efficiency, to increase scale/coverage of interventions, etc.), prioritization, and [except for TB-HIV] if proposed, lack of specific indication of **expected outcome results/impact**, and what, how, for **whom and where exactly to integrate** (e.g. NCDs, cervical cancer, mental health, viral hepatitis, STIs; integrated health and non-health interventions, including for SRHR and social protection)
- **No targets or expected results/outcomes/impact** included
- Only a very few FRs described the **current state of IPCQS and co-investments/co-financing**, and what additional investments from the GF would contribute to
- **Sustainability** of proposed interventions/activities not described except for a few countries for some COIMs

Integrated people-centred quality services (IPCQS), COIMs – additional observations from Window 1 countries' FRs (cont.)

- Information included in the background/justification **narrative or approaches proposed** for IPCSS and addressing COIMs in the narrative not reflected in actual proposed interventions/activities and even lesser or not at all in proposed budget allocations.
 - Except 2 countries, others have **aggregated** those together for various COIMs without specific budget or activity breakdowns.
- **Implementation mechanisms or where integration** of systems or services should happen is not well described (except for 1 country).
- **Role of community engagement** (except for TB community), community-based and community-led interventions and service delivery for ensuring IPCQS and addressing COIMs not described/proposed
- In case of evident lack of evidence/data on comorbidities and coinfections, no proposal suggesting **investment into strategic information/data**
- **Commodities, human resources, health information systems, CSS** for IPCQS generally not specified or integrated with respective HIV or TB RSSH elements

The Global Fund TRP Window 1 Debrief – 8 May 2023

HIV Lesson 2: Uneven progress to address gaps in HIV cascades and care, despite improved data

Observations

- Most countries adopted or plan adopting the UNAIDS targets of 95-95-95. Some countries with generalized epidemics show improving cascades. However, some other applicants continue to struggle with particularly poor cascades and insufficient plans to address challenges at each stage of the cascade.
- Some applicants continue to delay normative guidance such as WHO-recommended testing and diagnostic algorithms, decentralizing ART from tertiary or secondary care and insufficient planning for higher-scale viral load testing.
- Countries continue progressive use of multi-month dispensing and other differentiated service delivery approaches. However, few set up effective systems for preventing loss or reaching lost-to-follow-up and measuring/addressing treatment adherence.
- Several funding requests lacked strategies for addressing HIV care gaps among children, key populations and/or PTMCT including through greater integration with RMNCAH, SRHR, TB and primary care.
- Applicants—even those close to 95-95-95—often missed opportunities to address advanced HIV disease (AHD), including co-infections and non-communicable disease integration.

HIV Lessons :



Recommendations

For Applicants

- Increase focus on quality of key population programming, notably for people who use drugs, engaging them to adapt to complex environments and gender inequalities.
- Update AGYW programming prioritization and packages using HIV incidence data in line with the new guidance from the Global HIV Prevention Coalition.
- Follow national strategic plans and national guidelines in developing funding requests, ensuring sustainability and visibility of country-owned national priorities to external partners including the Global Fund.
- Reinvalidate focus on quality of care, treatment adherence, reaching those lost-to-follow up, and longevity, in addition to 95-95-95 targets.

For Partners

- Provide TA to countries to address challenges preventing progress towards 95-95-95 targets, especially in countries with weak points in their cascades, some concentrated epidemics and among underserved populations;
- Support visibility and provide TA to address treatment adherence, and longevity.
- For the Global Fund, technical partners and other major donors align messages, and funding policies on diversified PrEP delivery options, AHD, CD4 and management of coinfections/comorbidities in restrictive funding environment.
- Support countries to update HIV diagnostic algorithm especially in the context of the changing epidemic.



The Global Fund TRP Window 1 Debrief – 8 May 2023
The Global Fund TRP Window 1 Debrief – 8 May 2023
The Global Fund TRP Window 1 Debrief – 8 May 2023

Community engagement in decision making, advocacy, accountability, priority and target setting, programme implementation, service delivery, addressing societal and other barriers, resource mobilization is critical – one of the most important lessons learned from the AIDS response !



Community engagement in the GF funding request and grant processes in GC7 (2023-2025 funding cycle)

- Engagement in/with the Country Coordination Mechanism and relevant TWGs
- Advocacy for addressing HIV/TB-NCDs/MH interlinks and comorbidities and the role of communities and civil society - together with HIV, TB and other community and civil society groups and leaders, and governmental HIV, TB, NCDs, MH and health systems stakeholders, as well as development partners (including the UN – UNAIDS, WHO, etc.)
- Support collection, generation and promotion of most up-to-date strategic information and evidence on HIV/TB-NCDs/MH, and their translation into decision and policy making, prioritization and inclusion in national strategies and programmes, resource mobilization, etc.
- Engage in GF FR planning, prioritization and actual development/drafting processes, and grant planning and implementation



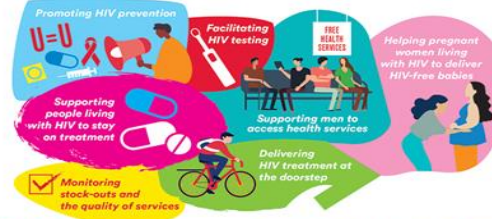
Thank you!



COMMUNITIES ARE THE BEST WAY TO REACH



COMMUNITIES ARE AN ESSENTIAL PART OF A MODERN HEALTH SYSTEM



COMMUNITIES ARE THE TORCHBEARERS OF HUMAN RIGHTS



COMMUNITIES make the difference

COMMUNITIES HAVE THE TRUST OF THE PEOPLE THEY SERVE



INVESTING IN COMMUNITIES IS VALUE FOR MONEY



COMMUNITIES ARE LEADERS IN INNOVATION



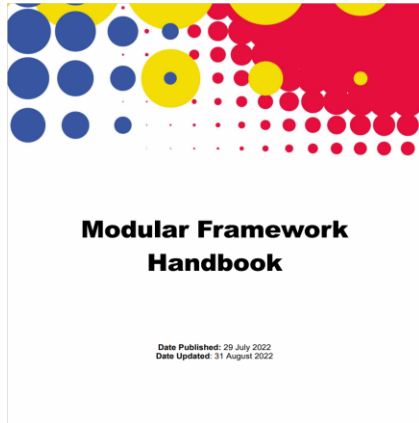
Opportunities to address comorbidities - noncommunicable diseases in the Global Fund application cycle 2023-2025

Jennifer Manne-Goehler, MD, ScD
Assistant Professor of Medicine, Harvard Medical School
Consultant, WHO Department of Noncommunicable Diseases

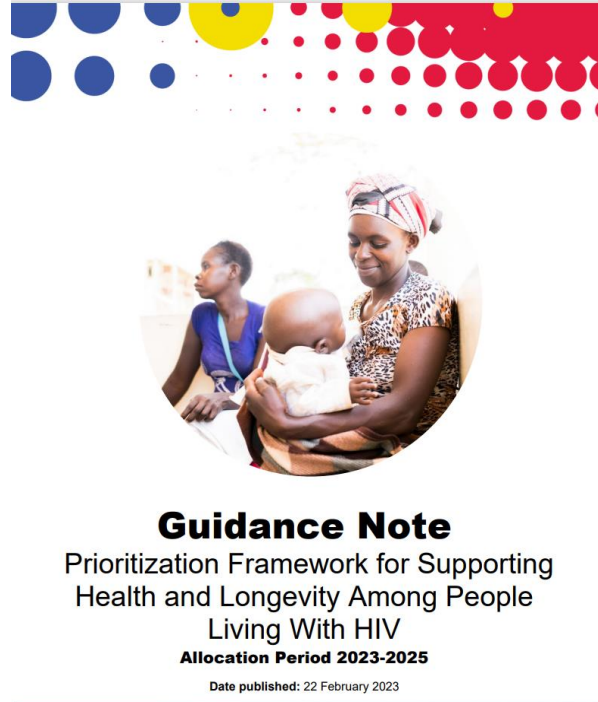
Content

1. Main comorbidities - NCDs considered in the GF application cycle
2. The new Global Fund application cycle - opportunities for NCDs
3. Entry points for NCD CSOs engaging with the Global Fund at country-level
4. Lesson learned from countries that applied in March 2023 (Window 1)
5. Additional resources

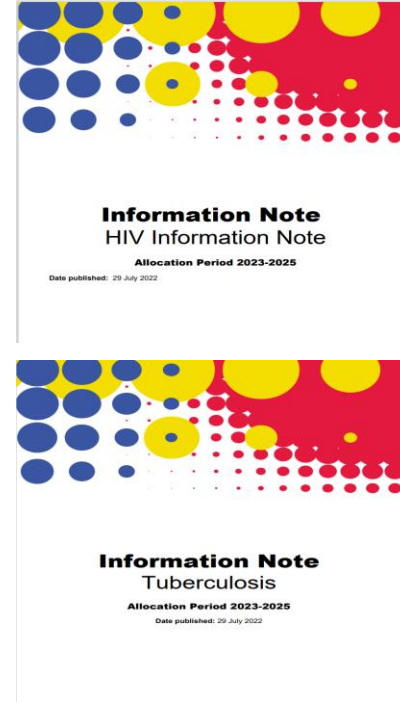
Comorbidities/NCDs in the Global Fund application guidance



Provides examples of interventions and activities that can be considered



Provides detailed information on the interventions that can be funded under the HIV grant for health and longevity including NCDs



These two provide general guidance for applicants to HIV TB including comorbidities

Summary of NCDS addressed in three GF grants

HIV grant

Package of services for PLWHIV for early detection & management of:

- CVD including HTN (PLWHIV)
- Diabetes (PLWHIV)
- Mental health (PLWHIV)
- Cervical cancer (Women LWHIV & HIV vulnerable groups)

TB grant

Collaborative framework for TB and:

- Diabetes
- Mental health
- NCD risk factors (smoking & alcohol)

Resilient sustainable systems for health grant (RSSH)

- NCDS & MH as part of integrated people centered services in PHC

The Global Fund application (2023-2025): opportunities to address NCDs

HIV health and longevity guidance

Priority 5: Non-communicable diseases associated with ageing

Up to a quarter of all people with HIV are over age 50.²³ Associated with the aging cohort is a large and growing burden of NCDs. Where NCD integration is proposed, countries are encouraged to align services with epidemiological contexts and the WHO package of essential NCD disease interventions for primary health care,²⁴ focusing on cardiovascular and chronic respiratory diseases, diabetes, and early diagnosis of cancer.

- i. Early detection for NCDs is an HIV integration priority. Applicants are encouraged to integrate early detection for NCDs as part of integrated packages delivered within HIV platforms as an integration priority aligned with WHO consolidated guidelines on HIV prevention, testing, treatment, service delivery and monitoring: recommendations for a public health approach.²
- ii. Primary and secondary prevention of NCDs: Applicants are encouraged to provide behavioral advice and support as a part of integrated packages delivered within HIV platforms, addressing modifiable disease risk factors including blood pressure, smoking, obesity, unhealthy diet and lack of physical activity, as recommended by the WHO guidance.²
- iii. Treatment: Integration of nationally available and procured treatment within HIV service delivery platforms is supported by the Global Fund. Where there is a strong investment case to address gaps in NCD management for people living with HIV, it will be considered on a case-by-case basis. Applicants are encouraged to align NCD follow-up visits with those for HIV care and integrate multmonth dispensing of NCD medicines with ART.

The Global Fund application (2023-2025): opportunities to address NCDs

TB and diabetes

Intervention	Description of Intervention Package - Illustrative List of Activities
Collaboration with other programs/sectors	<p>Activities related to establishing collaboration mechanisms with other service providers for patients with comorbidities, including diabetes, mining ect,,, For example:</p> <ul style="list-style-type: none">• Screening, detecting, (including bi-directional or simultaneous screening/testing for co-morbidities).• Prevention, treatment, and management of co-morbidities including TB/Diabetes, TB/COVID-19, and TB/Mental illness.• Establishing linkages and referral systems across services and sectors including for people with undernutrition.• Training/capacity building of health care workers.• Linkages with harm reduction programs for patients with TB/DR-TB who inject drugs, alcohol, and smoking.

The Global Fund application (2023-2025): opportunities to address NCDs

Addressing PHC through RSSH

RSSH scope: Activities related to primary health and care workers who are responsible for delivering integrated, people centered health services, including for more than one disease (HIV, TB and malaria) or a disease (HIV/TB/Malaria) and other health services such as PHC, reproductive maternal, newborn, child and adolescent health (RMNCAH), co-morbidities including **non-communicable diseases (NCDs) and mental health**, international health regulations (IHR) competencies. This covers health and care workers in both public and private sector.

Interventions that include comorbidities (NCDs and MH) under RSSH in the modular template are the followings:

- Planning and governance for integrated people centered services
- HRH and Quality of Care
- Remuneration and deployment for multiple diseases
- In-service training
- Supportive supervision for health workers
- Service quality improvement
- Data

The Global Fund application (2023-2025): opportunities to address NCDs

Principles of addressing comorbidities

A strong investment case/proposal is required by GF to approve the interventions.

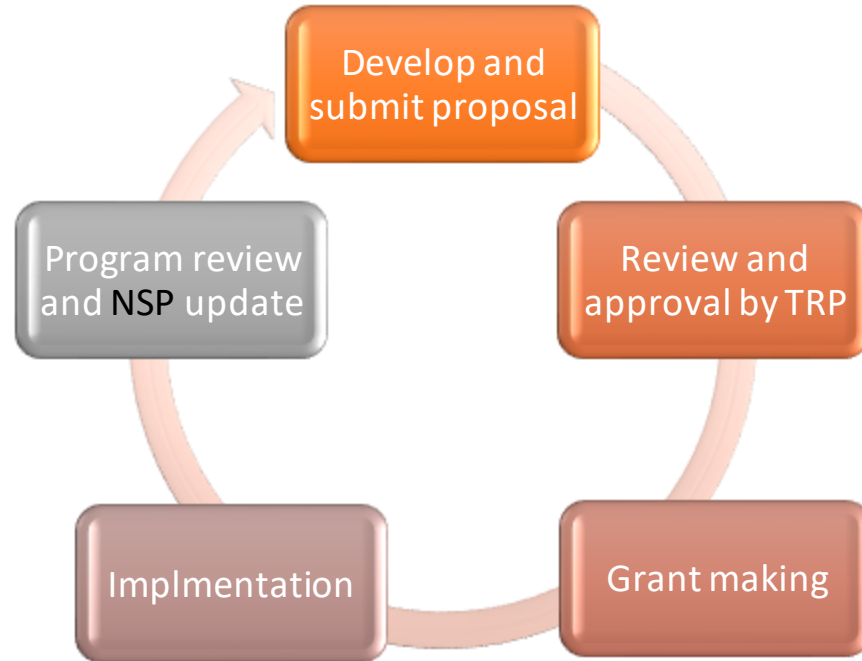
Here are some of the criteria of strong investment case:

- Funding request aligned with the national disease strategy
- Excellent understanding of the context:
 - NCDs burden among the general population and PLWHIV
 - Barriers to services
- Interventions that address the gap
- Description of people and geographic coverage of interventions
- Rationale for prioritization
- Expected outcomes

Factors influencing the use of the recommendation by countries

- **Being informed**
- **Relevance:** NCDs is a priority for the country and PLWHIV & TB patients
- **The country envelope size:** funding
- **The programs performance:** HIV & TB
- **The “know how:”** how to address comorbidities in the GF and how to integrate services, presence of demonstration sites
- **Strong advocacy:** program managers, writing group, consultants, patients societies, and CCM
- **Expression of demand:** Patients and experts’ groups and civil society

When to engage: Global Fund application cycle every 3 years



Focus for funding

- **Governance and accountability:** Expand partner engagement to relevant comorbidity stakeholders, including civil society and affected communities
- **Analysis of burden and access to services:** Activities for comorbidity assessment and mapping of existing services for TB and comorbidities and assess gaps in service access
- **Planning and resource mobilization:** Update and harmonize TB and comorbidity NSPs and national guidelines
- **Scale-up of people-centred services:**
 - **Strengthen capacity:** training and deployment of staff for screening and testing for comorbidities, drug management, M&E, and joint supervision, and lab network & sample transportation
 - **Tools, consumables & equipment:** SOPs, algorithms and job-aids (PHQ9, ASSIST), screening and diagnostic tests (CRP, X-ray, mWRDs, LF-LAM, glucometers, HIV tests), medicines (ARVs, TPT, metformin, insulin), equipment for nutrition assessment, nutrition supplementation and related logistics
 - **Patient support:** transport costs, patient education materials, community-based support
- **Strengthen M&E and operational research:**
 - Adjustment and alignment of data collection tools and procurement supply management tools
 - Operational research to test out models of collaboration (effectiveness & cost)
 - Operational research to test out TPT among people from risk groups where evidence is limited – e.g. diabetes, alcohol, alignment of procurement supply management tools

Proposed Actions for civil societies

- Understand the current situation, such as plan to scale-up ongoing activities or introduce new ones related to NCDs in the GF funding request
- Sensitize organizations representing PLWHIVs on the opportunity to achieve better care for their members with comorbidities & establish collaboration with them
- Advocate for NCD inclusion in relevant grants (HIV, RSSH & TB), among the program managers and CCM
- Contribute to the funding request development or review processes to ensure that NCDs service gaps are addressed and prioritized

Lessons learned from WINDOW 1 applicants: The Global Fund Technical Review Panel (TRP) debrief on Window 1 Funding Requests Review

TRP comments related to comorbidities:

- Number of countries applied in Window 1 is 42.
- HIV grant: applicants--even those close to achieving the HIV 95-95-95- targets often **missed opportunities** to address advanced HIV disease (AHD), including co-infections and non-communicable disease integration
- TB grant: Most applicants plan for HIV-TB collaboration but **do not cover other TB comorbidities** and social determinants, such as malnutrition, diabetes, smoking, silicosis, etc.
- Resilient sustainable systems for health (RSSH) grant: investments are **insufficiently prioritized** in allocation budgets especially for **PHC level**, in focused portfolios and challenging operating environment countries.

Additional resources

TECHNICAL BRIEF



Integration of noncommunicable diseases into HIV service packages

Noncommunicable diseases (NCDs) – primarily cardiovascular disease, cancer, diabetes, and chronic respiratory diseases cause nearly 75% of deaths worldwide. NCDs are associated with huge inequity, often caused by, or exacerbate poverty. Every year, 17 million people under 70 years of age die of NCDs, and 86% of the deaths are in low- and middle-income countries. Many of the premature deaths could be avoided by addressing major NCDs risk factors and by early detection and treatment.

People living with HIV (PLHIV) and NCDs: PLHIV are at increased risk of NCDs (especially cardiovascular disease, cervical cancer, diabetes, and mental health conditions) than people without HIV. Cardiovascular disease is one of the leading causes of non-AIDS-related morbidity and mortality among PLHIV. Furthermore, with increased coverage of antiretroviral therapy, the life expectancy of PLHIV has improved, exposing them to the risk of diseases that are common with aging and exposure to NCD risk factors.

Integration of NCDs and HIV services: National responses for both HIV and NCDs require health systems that can deliver effective acute and chronic care and support adherence to treatment. Chronic HIV care also provides an opportunity to assess, monitor and manage NCDs, especially in primary care. Integrating interventions for the prevention and management of major NCDs in PLHIV care can reduce the risks of NCDs among PLHIV and improve HIV treatment outcomes.

Furthermore, integration of NCDs services into HIV service delivery models and provision of integrated care will contribute to sustaining the gains made in survival by the introduction of antiretroviral therapy. It will also improve access to services for advancing towards universal health coverage.

Objective of the technical brief:

Provide ministries of health, health authorities, HIV and NCD programme managers, and stakeholders involved in planning and implementing HIV services with practical information to facilitate the integration of NCDs services into existing HIV service packages.

NCDs services to be prioritized and integrated into HIV services

1. prevention, early detection and management of hypertension, diabetes, and cardiovascular diseases; and
2. screening and treatment of pre-cancerous lesions to prevent cervical cancer.

Approaches and actions to promote integration of NCD services into HIV services:

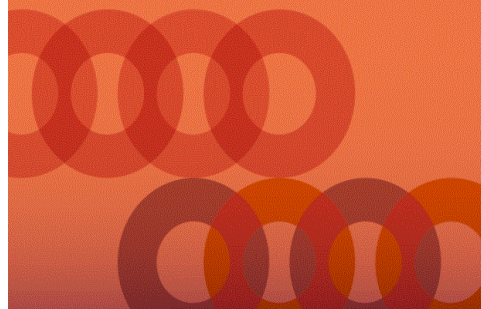
Governance, financing, and community involvement

- Policy directives for integration: Policies for services integration encourage investment of resources into integrated services. This action should be considered during development and review of national strategic plans.
- Ensure adequate financing to cover prevention, screening, and care for NCDs within HIV services and HIV prevention, testing and care into NCDs care services; and align financing mechanisms. Donors such as the Global Fund to Fight AIDS, Malaria and Tuberculosis and the US President's Emergency Plan for AIDS Relief (PEPFAR) have included diagnosis and management of comorbidities, including NCDs, in their funding scope. Their investment should be aligned with domestic resources and contributions from other donors to ensure sustainable integrated services for PLHIV.
- Ensure that the community, including PLHIV and NCDs, is involved in identifying demands, planning of services, health promotion and prevention and in monitoring implementation.



Integrating the prevention and control of noncommunicable diseases in HIV/AIDS, tuberculosis, and sexual and reproductive health programmes

Implementation guidance



Thank you



HIV, TB and Mental Health

Agenda

1. Why mental health when thinking of HIV and TB?
2. How are mental health advocates mobilising towards the Global Fund?
3. What are some recommendations for NCD civil society to promote people centered services in country?



Key Concepts

HIV, TB and Mental Health

- Mental health is a critical component of HIV and TB programming and a named priority in the new Global Fund Strategy
 - An estimated 28%-62% of people living with HIV experience any form of mental health condition (Hoare, 2021)
 - An estimated 45.2% of people with any form of TB have depression (*Duko, 2020*), and there is an elevated risk of depression, anxiety and psychosis among people with MDR-TB (*Alene, 2018*).
 - Mental ill health has a bi-directional relationship with HIV/TB – untreated mental disorders result in poor treatment outcomes
 - Addressing mental health needs of people affected with TB will only add value to the investment of GF in ending the TB epidemic. Evidence supports providing integrated mental health interventions within HIV and TB services to boost the rates of treatment completion (*Pasha, 2021*).
 - Mental ill health will negatively impact global HIV and TB targets if not addressed

Sources

Hoare, J., Sevenoaks, T., Mtukuzhe, B., Williams, T., Heany, S., & Phillips, N. (2021). Global Systematic Review of Common Mental Health Disorders in Adults Living with HIV. *Current HIV/AIDS reports*, 18(6), 569–580. <https://doi.org/10.1007/s11904-021-00583-w>

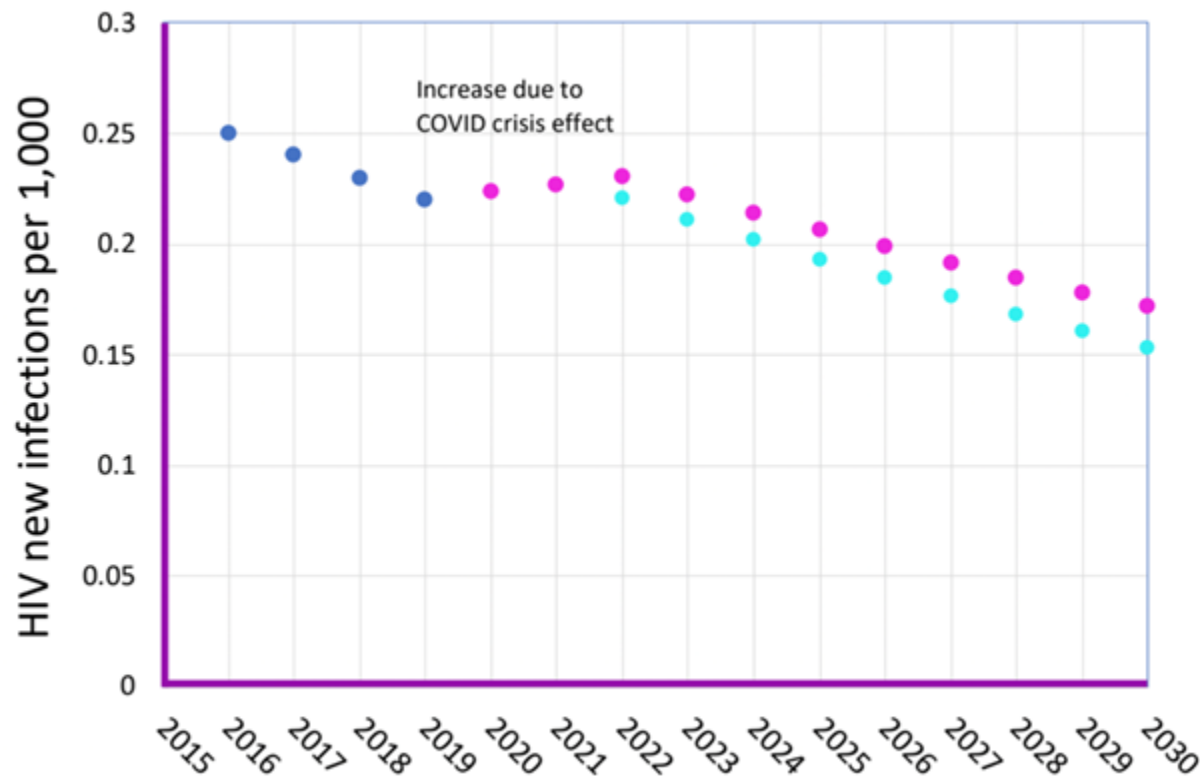
Duko, B., Bedaso, A., Ayano, G. The prevalence of depression among patients with tuberculosis: a systematic review and meta-analysis. *Ann Gen Psychiatry*, 2020;19:30. doi: 10.1186/s12991-020-00281-8

Alene KA, Clements ACA, McBryde ES, Jaramillo E, Lönnroth K, Shavano D et al. Mental health disorders, social stressors, and health-related quality of life in patients with multidrug-resistant tuberculosis: a systematic review and meta-analysis. *J Infect*. 2018;77:357–67. doi: 10.1016/j.jinf.2018.07.007.

Lee GE, Scuffell J, Galea JT, Shin SS, Magill E, Jaramillo E et al. Impact of mental disorders on active tuberculosis treatment outcomes: a systematic review and meta-analysis. *Int J Tuberc Lung Dis*. 2020;24:1279–84.

Pasha A, Siddiqui H, Ali S, Brooks MB, Maqbool NR, Khan AJ. Impact of integrating mental health services within existing tuberculosis treatment facilities. *Medicine Access @ Point of Care*; 2021. doi:10.1177/23992026211011314.

Projection for SDG target 3.3.1 - Number of new HIV infections per 1,000 uninfected population



- Current trend
- Business as usual
- Bending the curve

**At least
10% faster
progress**

**in SDG 3.3.1 progress
reducing the number
of new HIV infections**

Prevention of HIV infections could be at least 10% faster (SDG target 3.3.1), as a result of **integrating mental health to HIV programmes**



Over 900,000 people across the world



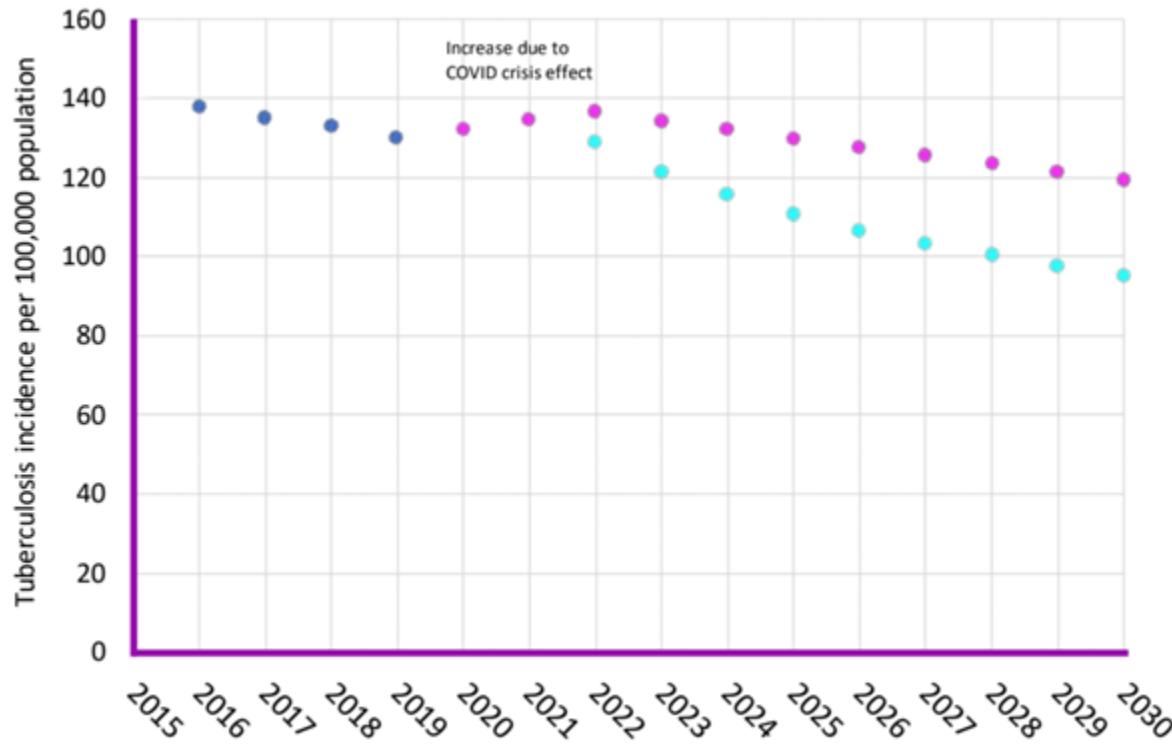
COULD AVOID BEING INFECTED WITH HIV BY 2030.



Sources

United for Global Mental Health. (2021). Bending the curve: The impact of integrating mental health services on HIV and TB outcomes

Projection for SGD target 3.3.1 - Tuberculosis incidence per 1,000 population



- Current trend
- Business as usual
- Bending the curve

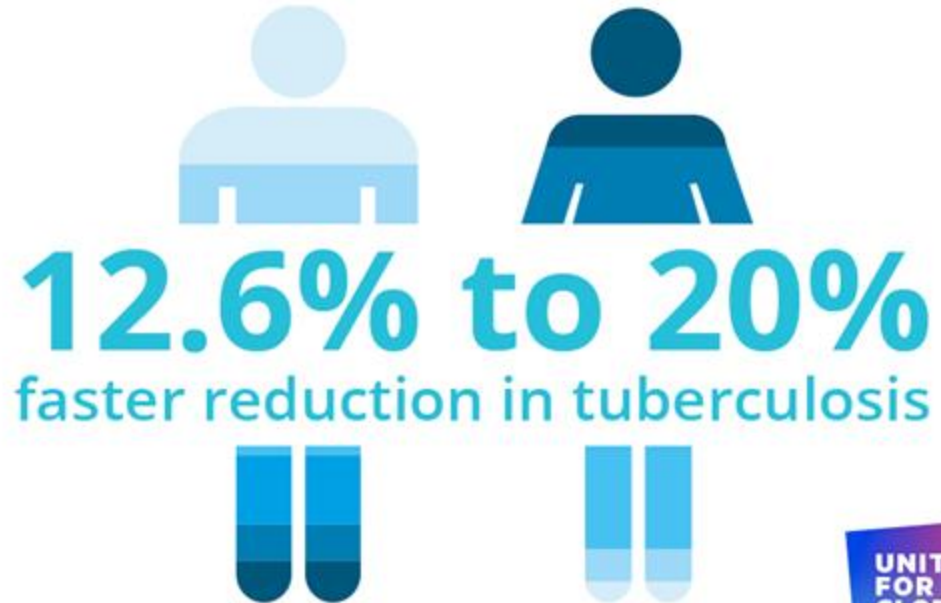
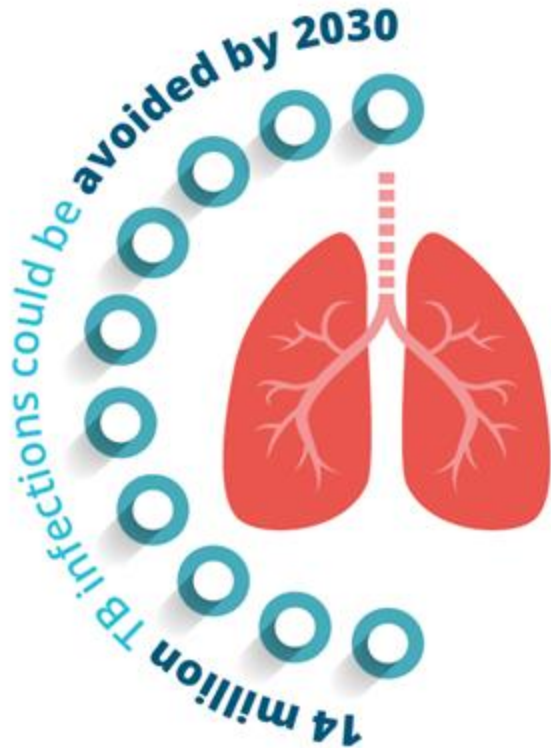
**Up to 20%
faster
progress**

**in SDG 3.3.1 progress reducing
the incidence of tuberculosis**

Sources

United for Global Mental Health. (2021). Bending the curve: The impact of integrating mental health services on HIV and TB outcomes

TB outcomes if mental health is **integrated into TB programmes**



Sources

United for Global Mental Health. (2021). Bending the curve: The impact of integrating mental health services on HIV and TB outcomes

Investing in mental health impacts several SDGs including those related with HIV and TB

- Widely cited economic modelling - return of investment is USD 1 : USD 5.7 invested in treating common mental health conditions. **For HIV and TB, savings are estimated at USD 6.40 USD 43 for every dollar spent, respectively.**
- Integrating mental health and psychosocial services into HIV and TB programmes will not only help millions of vulnerable people with ill mental health but contribute ending this pandemics much quicker **at no additional cost.**

Sources

Chisholm, D., Sweeny, K., Sheehan, P., Rasmussen, B., Smit, F., Cuijpers, P., & Saxena, S. (2016). Scaling-up treatment of depression and anxiety: a global return on investment analysis. *The lancet. Psychiatry*, 3(5), 415–424. [https://doi.org/10.1016/S2215-0366\(16\)30024-4](https://doi.org/10.1016/S2215-0366(16)30024-4)

United for Global Mental Health. (2021). *Bending the curve: The impact of integrating mental health services on HIV and TB outcomes*



Global Fund Strategy and 2023-2025 allocation

Fighting Pandemics and Building a Healthier and More Equitable World

Global Fund Strategy
(2023–2028)

- **Increase alignment with patient-led advocacy groups across relevant health sectors,** including with groups focused on SRHR, NCDs, **mental health**, Long COVID, social justice, and the health and well-being of front-line health care workers, to strengthen and underpin taking integrated, people-centered approaches to HTM and broader health programming.

prevention, addressing the structural drivers of HIV infection and AIDS-related deaths, and challenging inequities and human rights and gender-related barriers to services including stigma, discrimination and criminalization. **The global response must leverage advances in HIV research including new prevention and treatment modalities; precision public health approaches, as well as support synergies between HIV services and related areas of health such as sexual and reproductive health and rights (SRHR), maternal and child health, mental health, TB, and non-communicable disease (NCD) programs.**

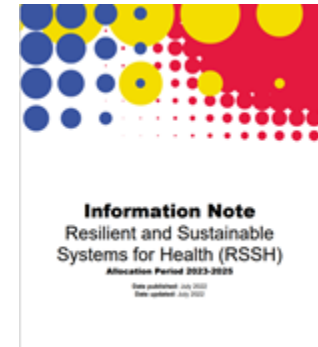
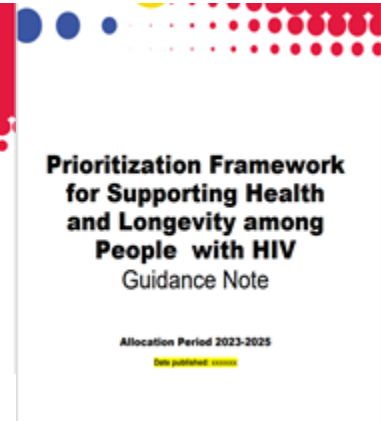
- **Integrate services to prevent, identify, and treat advanced HIV disease, comorbidities, and coinfections.** This includes promoting HIV service integration with those for TB, viral hepatitis, syphilis, other sexually transmitted infections, cervical cancer, NCDs, and mental health, and as part of services for ANC and PNC, SRHR and harm reduction, with care pathways adapted for aging populations, as further described under the *Maximizing Health Equity, Gender Equality and Human Rights* sub-objective on *Supporting comprehensive SRHR programs*.

- **Support comprehensive quality TB services that are human rights based, gender-responsive, people-centered, and integrated into health and community systems to co-manage existing conditions and comorbidities including mental health,** HIV, COVID-19 and diabetes in collaboration with other stakeholders. This will include working across disease and relevant non-health sectors to tackle social determinants of TB. There will be a focus on supporting linkages to appropriate chronic care, including through comprehensive assessments of people completing treatment.

4. Expand partnerships with communities living with and affected by emerging and related health areas to support more inclusive, responsive and effective systems for health

- **Proactively engage people living with disabilities and the mental health community** at national, regional and global levels to ensure that Global Fund-supported and national programs become more responsive and accessible to people living with disabilities and mental health challenges and give greater attention to the numerous intersectionalities between these communities and those affected by the three diseases, including efforts to prevent and address disabilities associated with HTM disease and its treatment. As the long-term health consequences of COVID-19

New language in Information Notes and Modular Framework presents opportunity for meaningful discussions on mental health during country dialogue



HIV Modular Framework & Mental Health

Intervention	Description of Intervention Package - Activities
<p data-bbox="117 274 394 402">TREATMENT, CARE & SUPPORT MODULE*</p> <p data-bbox="117 469 394 738">Integrated management of common co-infections co-morbidities (adults and children)</p>	<ul data-bbox="465 274 1715 551" style="list-style-type: none">• Routine screening and management of mental health, including sexual identity development, depression, anxiety, and trauma.• Evidence-based interventions to address harmful alcohol or drug use.• Screening and management of hypertension, diabetes, and obesity in PLHIV• Linkage of people living with HIV, women, and adolescents to HPV vaccine services.• Screening, triage, and secondary preventive treatment of HPV and cervical cancer. <p data-bbox="436 610 1734 689">→ Activities related to strengthening the broader health system for the management of co-infections and co-morbidities should be included under the respective RSSH modules</p>

**Note, there are other modules in the HIV Modular Framework where MH interventions may be included, for example: Elimination of Vertical Transmission of HIV, Syphilis and HBV; Prevention Package for AGYW and Male Partners; and Prevention Packages for KPs.*

TB Modular Framework & Mental Health

Intervention	Description of Intervention Package - Activities
Collaboration with other programs/sectors	<p>Activities related to establishing collaboration mechanisms with other service providers for patients with comorbidities. For example:</p> <ul style="list-style-type: none">• Screening, detecting, (including bi-directional or simultaneous screening/testing for co-morbidities).• Prevention, treatment, and management of co-morbidities including TB/Diabetes, TB/COVID-19, and TB/mental illness.• Establishing linkages and referral systems across services and sectors including for people with undernutrition.• Training/capacity building of health care workers.• Linkages with harm reduction programs for patients with TB/DR-TB who inject drugs, alcohol, and smoking.

RSSH Modular Framework & Mental Health

Description of Intervention Package - Activities

Activities related to primary health and care workers who are responsible for delivering integrated, people-centered health services, including services for more than one disease (HIV, TB and malaria) or a disease (HIV/TB/Malaria) and other services (PHC, RMNCAH, co-morbidities including NCDs and mental health, IHR competencies). It covers health and care workers in both public and private sector facilities. For example:

Interventions that include comorbidities (NCDs and mental health) in the modular template are the followings:

- **Planning and governance**
- **HRH and quality of care**
- **Training and supervision for human resources for health**
- **Data**

Making the case for mental health in the funding request

1. Prioritize request

Population, geographies and/or barriers addressed; list of activities; expected outcome(s); budget

1. Provide a clear rationale for inclusion

1. Reflect on lessons learned

1. Maximize impact on HIV/TB

Explain how investments in mental health will: i) advance the primary goal of ending HIV and TB; ii) strengthen overall health and community systems; and iii) maximize the engagement and leadership of the most affected communities

1. Improve implementation

Explain how the proposed mental health interventions will: i) improve effectiveness, efficiency or equity; ii) address past programmatic gaps (e.g., poor ART adherence, LTFU, etc.); and iii) improve connections between programs and sectors



Case Studies

Tanzania: Building Capacity of Health Care Workers and Peer Supporters to Provide Mental Health Services to Adolescents and Young Mothers living with HIV

- Challenge: For the **110,000 adolescents aged 10 to 19 living with HIV in Tanzania**, high-quality mental health services integrated within HIV care are needed to improve their wellbeing and ensure the best possible outcomes. However, **services are not widely available due to a shortage of mental health professionals**.
- Approach: **A ‘Mental Health and Psychosocial Wellbeing’ manual on supporting adolescents living with HIV**, which features **didactic modules and group and individual activities**, was developed and delivered to 11 HCWs and 15 peer supporters from 6 health facilities during a workshop in Dar es Salaam in June 2021. A follow-up session was held with peer supporters in August 2021, and a self-guided workbook developed for HCWs.

Tanzania: Building Capacity of Health Care Workers and Peer Supporters to Provide Mental Health Services to Adolescents and Young Mothers living with HIV

- Impact: Feedback from HCWs and peer supporters suggests that MH workshops and resources **improved their knowledge, skills, and confidence in providing mental health support services to adolescents and young mothers living with HIV**. Providers also reported an increase in services at facility level including mental health and substance abuse screenings with referral to care, client support groups, support with HIV status disclosure and development of client-centered treatment plans.



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Pakistan: Impact of integrating mental health services within existing tuberculosis treatment facilities

- Approach: Integrated practice units for TB and mental health were established within six existing TB treatment facilities in Karachi, Pakistan. Patients were screened for depression and anxiety and, if symptomatic, offered a mental health intervention consisting of at least four counseling sessions. Changes in reported levels of depression and anxiety symptoms from baseline following completion of counseling sessions, and rates of TB treatment completion were measured.
- Impact: Total of 3500 TB patients screened for depression and anxiety – 1057 (30.2%) symptomatic patients received a baseline adherence session and 1012 enrolled for a mental health intervention received at least 1 counseling session. Of these, 522 (51.5%) reported no symptoms after four to six sessions. **Symptomatic patients who completed at least four counseling sessions had higher rates of TB treatment completion than those who did not** (92.9% vs 75.1%; $p < 0.0001$).



Call to Action

Leveraging upcoming opportunities for GC7: Key messages in engaging national CCMs and key stakeholders



Integrating mental health alongside NCD prevention, promotion and treatment services at every stage of the HIV and TB service continuum will **end these co-epidemics at a faster rate, and in a cost-effective way.**

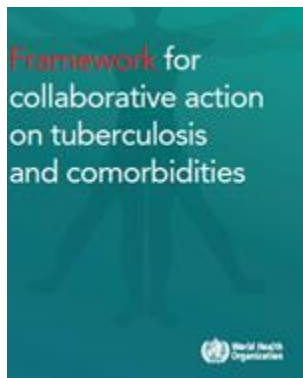
The integration of mental health services and other NCDs into HIV and TB programmes will contribute to the mainstreaming of mental health into health systems leading to more **effective disease control programs** and **improved pandemic preparedness.**

Integrating mental health services and psychosocial support at every stage of the HIV and TB service continuum would **transform the quality of life of those most at risk of HIV and TB, and those living with HIV and TB.**

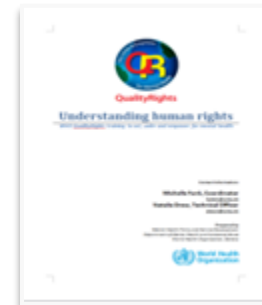
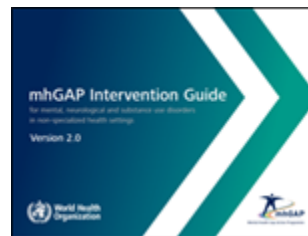
Call to Action/Next Steps

- Collaborate with the the national partners to push for discussions with the CCMs and relevant in-country stakeholders to **break down silos and integrate mental health into the response to the HIV and TB response and health system strengthening interventions**
- Advocate for the the **promotion and protection of the right to good mental health** in the key populations that are most vulnerable to ill mental health, HIV and TB
- **Include voices of persons with lived experience** of mental health, HIV and TB to determine the physical and mental health support they require.
- Integrate mental health and wellbeing across **services and programs for key populations**. Request **TA** to support country dialogue and broader scope of work, as needed.

Tools for integrating mental health



WHO Operational Handbook on the management of mental disorders in tuberculosis programmes to be available in Q1 2023



Tools for integrating mental health

E-learning on Mental Health

Register on iLearn

E-learning courses are available on:

- ✓ Country Coordinating Mechanism orientation
- ✓ Country Coordinating Mechanism Code of Conduct training
- ✓ Disease and health systems
- ✓ ***New: Mental Health***
- ✓ Fighting wrongdoing for better grant impact
- ✓ Guidelines for Grant Budgeting

More e-learnings and recorded webinar sessions on the 2023-2025 allocation cycle will be published.



The screenshot shows the 'iLearn Online Learning' page on The Global Fund website. The page header includes 'THE GLOBAL FUND' logo, navigation links for 'Applying for Funding', 'COVID-19', and 'EN | FR', and a search bar. The main content area features the title 'iLearn Online Learning' with a 'Home' link and a 'VIEW RELATED RESOURCES' button. Below this are social media icons for Twitter, Facebook, LinkedIn, and YouTube. The text describes iLearn as the Global Fund's online education platform, offering free e-learning courses, recorded webinars, and training resources for applicants, partners, and civil society. It lists topics such as HIV, tuberculosis, malaria, funding model, and implementation processes. A 'Getting started' section is also visible.

Tools for integrating mental health

Mental Health Technical Toolbox

United for Global Mental Health developed a toolbox to support national-level stakeholders to engage in the Global Fund country dialogue and position mental health as core to improving HIV and TB program effectiveness.

- **Target users:** CCMs, National Disease Programs, PRs/SRs and other key stakeholders
- **Contents:**
 - Factsheet on the relationship between HIV/TB and mental health
 - Annotated bibliography summarizing the existing normative guidance
 - Compendium of case studies which demonstrate *how* to integrate mental health into HIV/TB programs and its *impact* on health outcomes
- Toolbox available at this [link](#). Live resource that will expand as more resources are developed and made available.

Tools for integrating mental health

E-training module on TB and mental health

The WHO Global Tuberculosis Programme has developed an operational training module on mental health and TB for facility-based primary care providers. Stay tuned for launch.

The training will be available on WHO's [End TB Course Channel](#)

End of presentation

Visit us at <https://unitedgmh.org> | Join GMHAN at <https://gmhan.org/join>

**THEMATIC
WEBINAR
SERIES**

SECTION 2

Q&A



**THEMATIC
WEBINAR
SERIES**

SECTION 3

**National perspectives
from NCD Alliance
network**

*Kaushik Ramaiya
Charity Muturi*



Nexus between Communicable Diseases and Non-Communicable Diseases (NCDs): Integration

**Dr Kaushik Ramaiya
Tanzania NCD Alliance
Shree Hindu Mandal Hospital
Dar es Salaam**

NCDs: Status at present

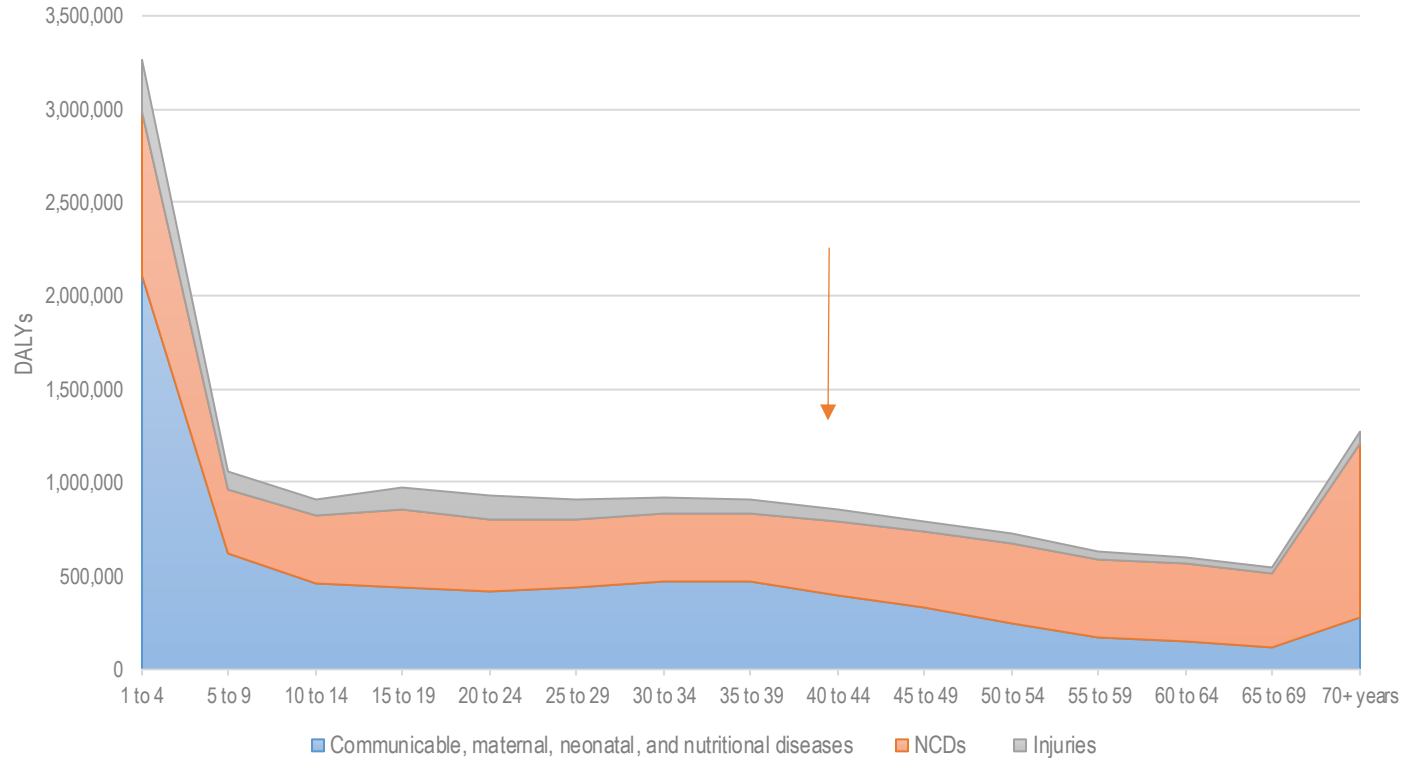
Burden

- **Every second, 28 lives between the ages of 30 and 70 are cut short** because countries have not taken policy, legislative and regulatory measures to respond to the needs of people living with or at risk of cardiovascular diseases, cancers, diabetes, chronic respiratory diseases, or mental health conditions, including preventive, curative, palliative, and specialized care.
- **25 out of 28 lives lost each second occur in low- and middle- income countries** where the social, economic, and physical environments afford populations much lower levels of protection from the risks and consequences of NCDs than in high-income countries, including protection from tobacco use, the harmful use of alcohol, unhealthy diets, physical activity, and air pollution.
- WHO Progress Monitor 2020

Current prevalence of various noncommunicable disease risk factors in East African Community countries. (STEPS data)

Risk Factor	Burundi	Kenya (1)	Rwanda (2)	South Sudan	Tanzania (3)	Uganda (4)	Zanzibar (5)
Current tobacco smokers	7.6%	10.1%	12.8%	7.5%	14.1%	9.6%	7.3%
Current heavy drinkers	-	12.7%	23.5%	-	20.4%	16.7%	1.0%
Percentage who consume less than 5 servings of fruit and/or vegetables per day	-	94.0%	99.3%	-	97.2%	87.8%	97.9%
Percentage with insufficient physical activity	-	6.5%	13.3%	-	7.5%	4.3%	17.6%
Percentage who are overweight	-	19.0%	14.3%	-	26.0%	19.1%	36.6%
Percentage who are obese	5.4%	8.9%	2.8%	-	8.7%	4.6%	14.3%
Percentage with raised blood pressure	-	23.8%	16.8%	19.3%	26.0%	24.3%	33.0%
Percentage with raised fasting blood glucose	-	1.9%	3.06%	7.0%	9.1%	1.4%	3.8%
Percentage with raised total cholesterol	-	10.1%	2.6%	-	26.0%	6.7%	24.5%

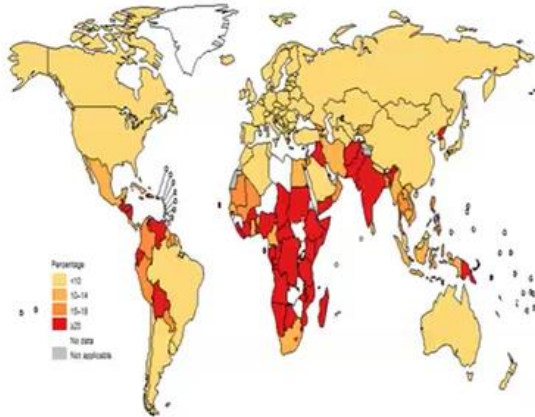
Over 50% of NCDI burden of disease in Tanzania occurred before age 40 (GBD 2017)



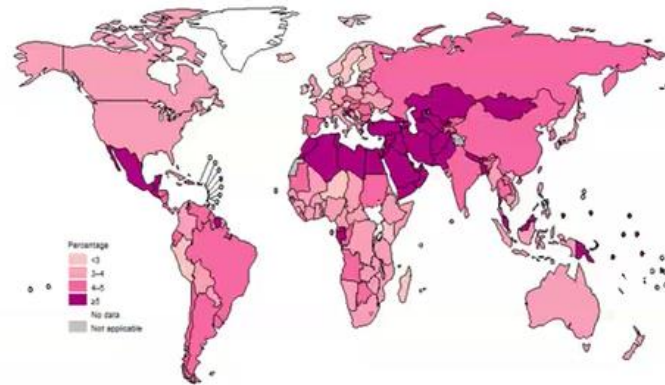
Key drivers of the TB epidemic

Undernutrition, HIV, Alcohol, Smoking and diabetes

Estimated percentage of incident TB cases attributable to five risk factors at country level, 2021



Estimated percentage of incident TB cases attributable to diabetes at country level, 2021



There is considerable variation among countries in the relative importance and contribution of the five factors, and thus also variation in which of these factors need to be prioritized as part of national efforts to reduce the burden of TB disease.

TB and NCDs

- Lack of enough evidence on TB and MMM within the region
- TB presents with transient hyperglycemia, more studies to understand the association between TB and diabetes and their management
- COPD increases the risk for developing TB and TB particularly having a history of TB increases the risk for COPD
- TB remain a risk among patients with NCDs and related immune suppression
- The prevalence of TB among HIV remain high

Linkages between HIV and NCDs

Statistics

- A 2019 systematic review reported the prevalence of depression among people living with HIV globally as 31%
- PLHIV have nearly a two-fold increased risk of CVD compared with HIV negative individuals
- Women living with HIV have nearly a six-fold increased risk for cervical cancer
- Cardiovascular disease is now one of the leading causes of non-AIDS-related morbidity and mortality in PLHIV
- The global burden of CVD among PLHIV has tripled over the past two decades, the large majority being in sub-Saharan Africa and the Asia Pacific region.
- 86% of premature NCD deaths occur in LMICs
- The prevalence of tobacco smoking is significantly higher among HIV-positive men and women than HIV-negative men and women, respectively. This is the case in almost all world regions.

References

- Rezaei, S., Ahmadi S., Rahmati J., Hosseinifard H. and Afsaneh D., 2019. Global prevalence of depression in HIV/AIDS: a systematic review and metaanalysis. *BMJ Supportive & Palliative Care*, 9(4) pp. 404-412. DOI:10.1136/bmjspcare-2019-001952
- Aidsmap, Women with HIV have sixfold increase in risk of cervical cancer, 30 December 2020. Available at: <https://www.aidsmap.com/news/dec-2020/women-hiv-have-sixfold-increase-risk-cervical-cancer>
- Bijker, R., Jiamsakul, A., Uy, E., Kumarasamy, N., Ditango, R., Chaiwarith, R., Wong W.W. Avihingsanon, A., Sun, L.P., Yunihastuti, E., Pujari S., Cuong D., Merati T., Kantipong, P., Nguyen K.V., Kamarulzaman, A., Zhang, F., Lee M.P. Choi J. Y., Tanuma J., Ng O.T., Sim B., Ross J, and Kiertiburanakul, S, 2019. Cardiovascular disease-related mortality and factors associated with cardiovascular events in the TREAT Asia HIV Observational Database (TAHOD). *HIV Medicine [ejournal]* 20(3), pp. 183_191. DOI: 10.1111/hiv.12687.
- Shah A.S.V., Stelzle D., Lee K.K., Beck E.J., Alam S., Clifford S., Longnecker C.T. Strachen F., Bagchi S., Whitely W., Rajagopalan S., Kottlil S., Nair H., Newby D.E. McAlliaster D. A. and Mills N.L. 2018. Global Burden of Atherosclerotic Cardiovascular Disease in People Living With HIV: Systematic Review and MetaAnalysis. *Circulation [ejournal]* 138(11), pp.1100–12. DOI: 10.1161/circulationaha.117.033369 [published Online First: 2018/07/04]

Health System

Pwani Region: Health facilities (CTC) reported availability of specialized health services in the last one month by level/status (2015)

Total number of Facilities	Total, n (%)	Hospitals	Health Centres	Dispensaries
		31 (100)	6	16
Antenatal care / PMTCT	31 (100)	6	16	9
Delivery	28 (90.3)	6	15	7
Immunization/Growth monitoring	31 (100)	6	16	9
Family planning	29 (93.5)	6	15	8
HIV	30 (96.8)	6	15	9
TB/Leprosy	27 (87.1)	6	15	6
Diabetes/other NCDs	6 (19.4)	3	2	1

Way Forward

Integrating diabetes, hypertension and HIV care in sub-Saharan Africa: a Delphi consensus study on international best practice

G McCombe, S Murtagh, JV Lazarus, MC Van Hout, M Bachmann, S Jaffar, A Garrib, K Ramaiya, NK Sewankambo, S Mfinanga, W Cullen

Acknowledgements: The study was part of the INTE-AFRICA project which is funded through the EU Horizon 2020 Programme

Findings

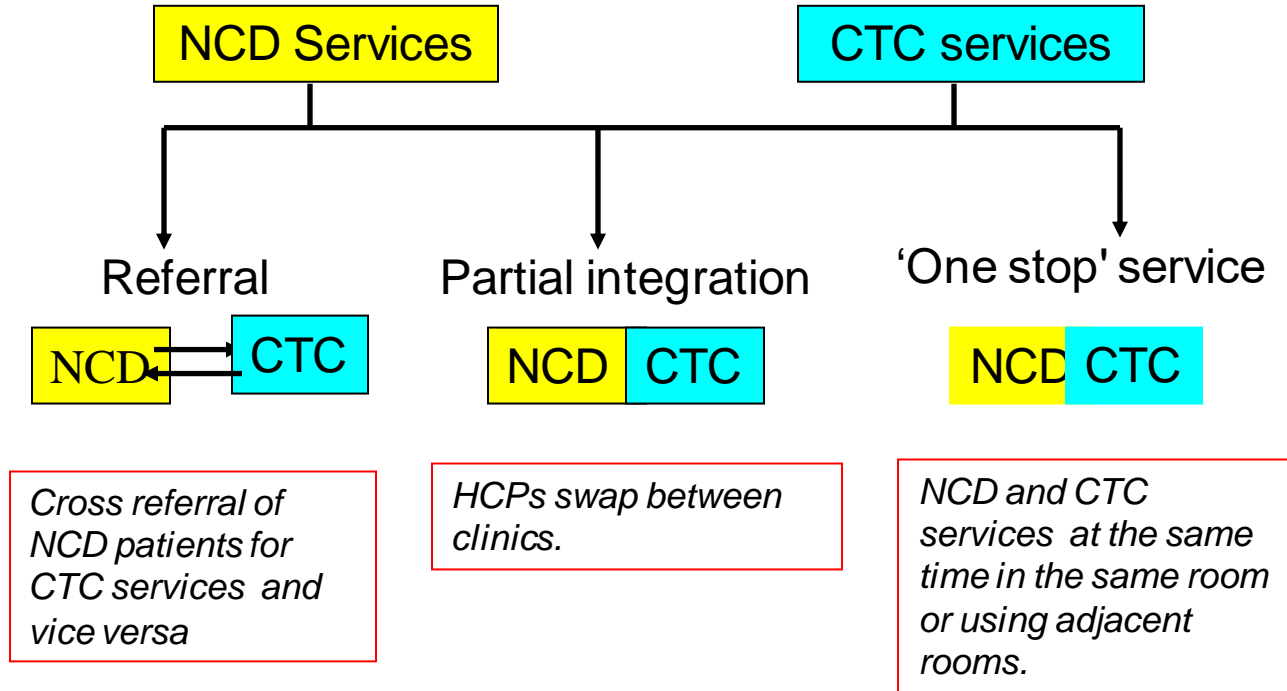
Largest consensus reached on the following components/outcomes

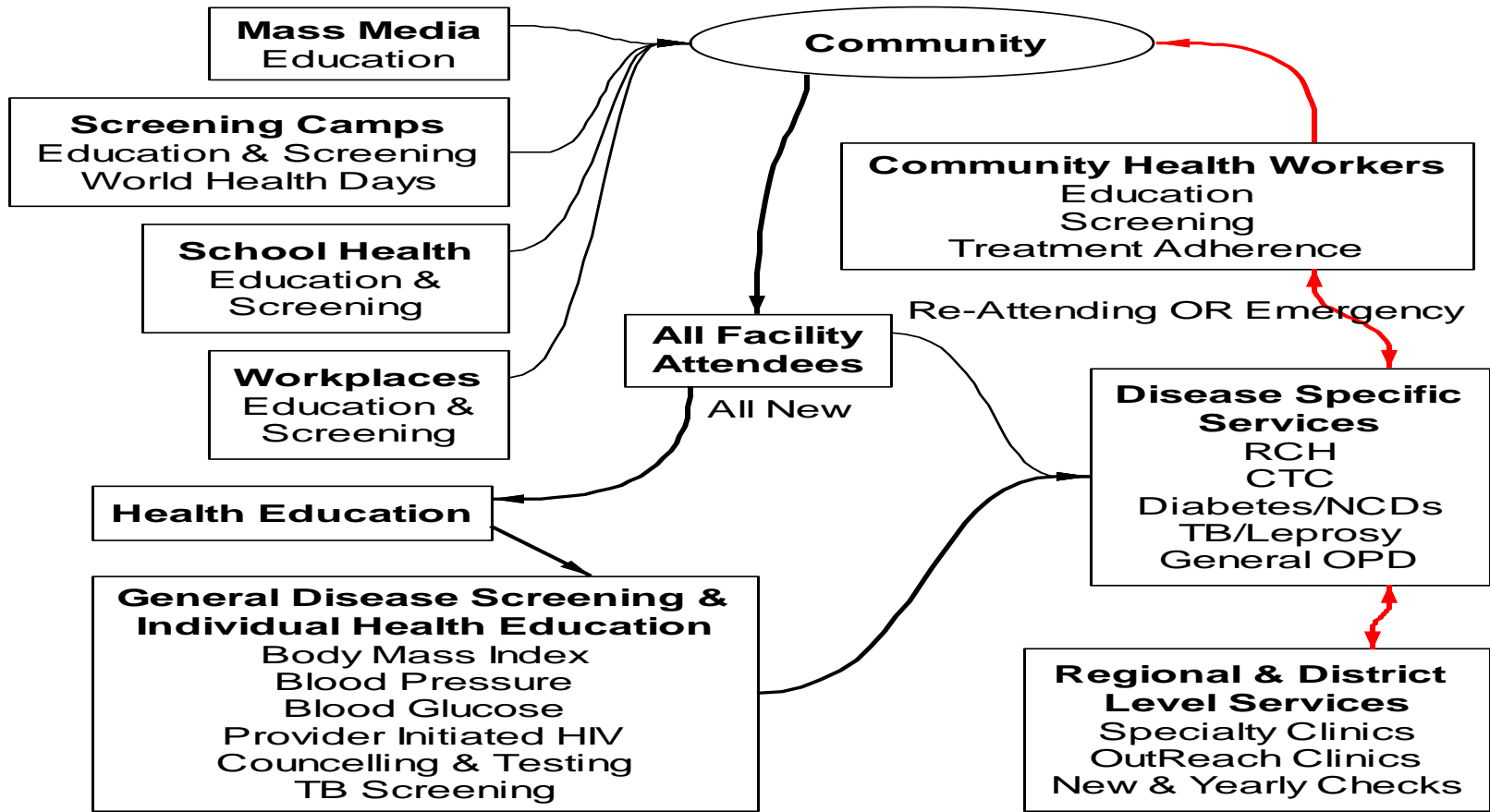
- Improved data collection and surveillance of NCDs among people living with HIV to inform integrated NCD/HIV programme management.
- Strengthened drug procurement systems.
- Availability of equipment and access to relevant blood tests.
- Health education for all chronic conditions.
- Enhanced continuity of care for patients with multimorbidity..

Conclusions

- We identified the key components/outcomes that are most important to a range of international key stakeholders including researchers, policymakers and academics.
- The outcomes identified can form key components of future complex interventions to define a model of integrated healthcare delivery for diabetes, hypertension and HIV in SSA.

Integration of NCD and CTC services: the models





Thank you



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Q&A



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SECTION 4

Wrap up

Cristina Parsons Perez



THANKS

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