



Integration of mental health and HIV interventions

Key considerations

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Definitions and key terms

Integrated services

Area Development Committee Health services managed and delivered so people receive a continuum of health promotion, disease prevention, diagnosis, treatment, disease management, rehabilitation and palliative care services, coordinated across the different levels and sites of service delivery within and beyond the health sector, and according to their needs throughout the life course. People may receive all or some elements of one service incorporated into the regular functioning of another service (1, 2).

Key populations

Groups of people who are more likely to be exposed to or to transmit HIV, and whose engagement is critical to a successful HIV response. These populations often have legal and social issues related to their identities, locations and behaviours that increase their vulnerability to HIV. In all countries, key populations include people living with HIV. In most settings, men who have sex with men, transgender people, people who inject drugs, and sex workers and their clients are at higher risk of exposure to HIV than other groups. People in prisons and other closed settings are also particularly vulnerable to HIV. Each country should define the specific populations that are central to their epidemic and response, based on the local epidemiological context (3–5).

Linkages to health or HIV services

Actions and activities that support access to health or specific HIV services at health-care facilities in communities or other non-health facility settings through collaborative relationships between health-care, community and non-health settings, such as education, justice, legal, immigration and social services (6).

Linkage to HIV care

Actions and activities that support access to HIV treatment and care services for people living with HIV. Refers mainly to entry into specialized HIV care after diagnosis—that is, the time between HIV diagnosis and first clinic attendance date, first CD4 count or viral load date, or HIV treatment start date, with prompt linkage and retention measured within a few months (7).

Mental health status

Continuum from well-being and no distress, through mild distress and early signs of disorder, to defined syndromes for which people may seek services and care. In this document, mental health conditions capture the broad range of experiences of mental health problems that may or may not necessarily entail a diagnosed clinical syndrome (8).

Mental, neurological and substance use conditions

Clinically recognizable set of symptoms or behaviours associated, in most cases, with distress and with interference with personal functions. Mental health conditions are generally characterized by a combination of abnormal thoughts, perceptions, emotions, behaviours or relationships with other people. Substance use conditions include drug or alcohol dependence or harmful use, and related disorders due to substance use and health conditions such as bloodborne infections and overdose. We use these terms to refer to clinical syndromes and conditions that benefit from intervention, consistent with the International Classification of Diseases. The grouping of these terms in this document does not imply that these conditions are necessarily co-occurring or that one causes the other; for example, people who use drugs do not necessarily have mental, neurological or substance use conditions.

People who use drugs

We use this term to remind readers that drug use and drug dependence should not be conflated. People may use drugs in the absence of health problems, for pleasure, or to manage the symptoms of mental health conditions. Access to mental health services and care and community supports can be particularly important for some people who use drugs. Barriers to services, care and support should therefore be addressed.

Vulnerable populations

Groups of people who are particularly vulnerable to HIV in certain situations or contexts, such as adolescents and young people, orphans, street children, people with disabilities, and migrant and mobile workers. These populations are not affected by HIV uniformly across all countries and epidemics. Although this document does not specifically address all vulnerable populations, much of the guidance can apply to them. Additional specific resources are available for adolescent mental health (9).

Introduction

As efforts to end the AIDS epidemic intensify, communities of people living with, at risk of or affected by HIV, clinicians, researchers and advocates are increasingly calling for attention to support mental health and well-being in the context of HIV prevention, treatment and care (10, 11). This requires a holistic approach to person-centred HIV services that ensures HIV prevention, treatment and care address the needs of people with mental, neurological or substance use conditions in all their diversity.

Such services should also meet the needs of people experiencing mild to moderate distress and people living with HIV seeking to maintain their well-being and improve their quality of life.

Context-specific integrated interventions are a priority for delivering quality services and care to people living with, at risk of or affected by HIV, people with mental, neurological or substance use conditions, key populations, and other vulnerable groups.

The mobilization for integration builds on more than 20 years of research showing that mental health conditions are common among people living with, at risk of or affected by HIV, often at higher rates than in the general population (12–23).

According to a review of the literature, the prevalence of depression across surveys of people living with HIV in sub-Saharan Africa is estimated at 24%, compared with less than 3% for the general population (18, 23). A study in the United States of America found a prevalence of 48% (between-site range of 21–71%) for substance use disorders among people living with HIV linked to treatment and care (22). Adolescents living with HIV generally have a higher prevalence of mental health conditions (e.g. depression and anxiety) compared with their HIV-negative peers (24).

People living with HIV are significantly more likely to have suicidal thoughts and to die by suicide compared with the general population (25–27). A systemic review and meta-analysis found that people living with HIV have a 100-fold higher suicide death rate compared with the general population rate (27). Key populations are often affected by stigma and discrimination and social marginalization, which, along with vulnerability to HIV and rights violations, lead to elevated rates of emotional distress and mental health conditions (28–30).

Studies and surveys have shown that lesbian, gay, bisexual, transgender and intersex (LGBTI) adolescents and young people experience high rates of mental health conditions and are at a disproportionately higher risk of suicide than other adolescents and young people (31, 32).

As access to lifesaving HIV treatment increases, the proportion of people living with HIV who are aged 50 years and over has increased, from 8% in 2000 to 16% in 2016 and 21% in 2020 (33, 34). Ageing and older people living with HIV are more likely to experience mental health conditions (e.g. due to social isolation) and decline in neurocognitive performance, and they are at higher risk of developing noncommunicable diseases, including depression. An estimated 13% of adults living with HIV experience major depression (35).

Mental health conditions increase the risk of HIV infection, and people living with HIV have increased risk of mental health conditions (36). Mental health conditions are associated with lower adherence to HIV treatment, increased risk behaviours, and lower engagement with HIV prevention (37, 38).

Although an increasing body of evidence shows that effective treatments for common mental health conditions, including depression and anxiety, and substance use conditions in people living with HIV exist and can be implemented in low- and middle-income countries, treatment and care for mental, neurological and substance use conditions are often not integrated into packages of essential services and care (36, 39), including for HIV. Harm reduction services for people who use drugs also lack adequate reach and integration (40).

Integration of mental health and psychosocial support with HIV services and interventions, including those led by communities, is one of the key priority actions in the Global AIDS Strategy 2021–2026 (3). This highlights the need for person-centred and context-specific integration of services for HIV, mental health, psychosocial support, and other services across the life course, with a focus on people living with HIV and key populations. This should be fully considered across governments' and partners' health, social and economic strategies, recovery plans and budgets, and community support activities.

The global HIV targets for 2025 in the Global AIDS Strategy 2021–2026 (3) and the United Nations Political Declaration on HIV and AIDS (4) include specific targets for the integration of HIV and mental health (41). The Global AIDS Strategy calls for 90% of people living with HIV and people at risk (e.g. gay men and other men who have sex with men, sex workers, transgender people, people who inject drugs) to be linked to people-centred and context-specific integrated services for other communicable diseases, noncommunicable diseases, sexual and gender-based violence, mental health and other services they need for their overall health and well-being, by 2025.

The COVID-19 pandemic continues to have a serious impact globally on physical and mental health, including elevated distress, anxiety, depression, insomnia, and increased levels of alcohol and drug use, and countries have reported disruptions to mental health, substance use and HIV services (42–46).

Inequalities between and within countries, violence, stigma and discrimination create further barriers to ending the COVID-19 and AIDS pandemics and improving mental health (37). The 2021 World Health Assembly called for strengthened integration of mental health in public health emergencies preparedness and responses. The World Health Assembly also urged Member States to develop and strengthen comprehensive mental health services and psychosocial support as part of universal health coverage (47).

The AIDS pandemic cannot end without addressing the mental health of people living with, at risk of or affected by HIV through integrated approaches and ensuring universal health coverage. It also pays off: every US\$ 1 invested in treatment for depression and anxiety leads to a return of US\$ 4 through better health outcomes (48). Investing in mental health and psychosocial support, and ensuring the integration of mental health and HIV interventions, are critical for achieving universal health coverage, ensuring health equity and ending the AIDS epidemic.

Purpose of this publication

This publication emphasizes the importance of integrating HIV prevention, testing, treatment and care; mental health services and care for people living with HIV and key and other vulnerable populations, including linkages to social protection services.

It provides a compilation of tools, best practices and guidelines that facilitate the integration of interventions and services to address the interlinked issues of mental health and HIV. Although focus is on integration of mental health with HIV services, the considerations may be relevant to other services, including HIV comorbidities such as tuberculosis, viral hepatitis and sexually transmitted infections.

This publication is primarily intended for national and local policy-makers; global, regional, country and local programme implementers; organizations working in and providers of health, HIV, mental health and other relevant services; civil society; and community-based and community-led organizations and advocates. It brings together and refers to existing HIV and mental health, psychosocial support and other service provision guidelines, recommendations and tools, including the World Health Organization (WHO) Mental Health Gap Action Programme (mhGAP) mhGAP intervention guide (49) and mhGAP operations manual (50); WHO, United Nations Office on Drugs and Crime (UNODC) and other guidelines and tools related to substance use (51–59); and WHO consolidated guidelines, tools and resources on HIV testing, prevention, treatment and care (5, 7, 60–64).

Additional resources are cited throughout the text and listed in the annexes, including case studies of integrated services and care.

Essential principles

The approaches presented in this publication are based on the following principles:

Integrated health services are managed and delivered so people receive all aspects or some elements of one service incorporated into the regular functioning of another service. Such services help to respond to individual needs of a person, address fragmentation of health systems, and foster greater coordination and collaboration between service providers across service delivery levels and settings (5).

Figure 1.
Essential principles



People-centred services and care adopt the perspectives of individuals, families and communities, and see them as both participants and beneficiaries of health services and support that respond to and prioritize their individual needs and respect their will and preferences in humane, noncoercive and holistic ways (2, 65, 66).

Access to quality health services and support that are effective, safe, person-centred, timely, equitable, science-based, culturally grounded, efficient, age-responsive, gender- and sexual orientation-sensitive and tailored to needs. These services and support should be accessible, acceptable and flexible, taking into account local contexts and people's economic, occupational, time and legal constraints (67–69).

A life-course approach includes policies, strategies and services for HIV, mental health and psychosocial support that take into account health, well-being and social needs across the stages of the life course, including infancy, childhood, adolescence, adulthood and older age (67).

Human rights and access to justice require protection for all people, especially people living with HIV, key and other vulnerable populations, and people with mental health conditions across the life course. This is a foundation of health and well-being. It includes delivery of health services and support without discrimination, based on the principles of medical ethics and human rights (5, 70); freedom from arbitrary arrest and detention; the right to a fair trial; freedom from torture and cruelty, inhumane and degrading treatment; and the right, including in prisons and other closed settings, to the highest attainable standard of health (5). People living with, at risk of or affected by HIV, gay men and other men who have sex with men, sex workers, transgender people, people who use drugs, people with harmful use of alcohol, and other vulnerable groups must be empowered to know their rights and to access justice to prevent and challenge violations of human rights (70).

Empowerment of people with mental health, neurological or substance use conditions and psychosocial disabilities, including people living with, at risk of or affected by HIV, to be involved in mental health advocacy, law and policy-making, programme planning and implementation, service provision, monitoring and evaluation, and research (67). This includes the Greater Involvement of People Living with HIV (GIPA) principle of ensuring the meaningful engagement of communities living with, at risk of or affected by HIV and realizing the rights of people living with HIV to self-determination and participation in decision-making that affect their lives (71).

Gender equality in care requires that services and interventions are gender-sensitive and consider gender perspectives. Strategies for integration should aim to eliminate gender inequalities and end all forms of violence and discrimination based on gender and gender identity (72).

A multisectoral approach is a comprehensive and coordinated response for mental health requires partnerships between multiple sectors, such as health, education, employment, justice, housing and social services, and community and private sector engagement, as appropriate to the country and local contexts (67).

Social determinants of health, well-being and risk

People's social, cultural, economic, legal and physical environments and demographic characteristics influence their health behaviours and their risk of or protection from adverse health outcomes (73). Social inequalities, discrimination and human rights violations are associated with increased risk for many mental health, neurological and

substance use conditions (74), HIV, and poor quality of life (75). Gender bias and stigma and discrimination also contribute to health risks (Box 1) (33, 76–82).

Some populations require special attention due to intersecting social and structural determinants that influence physical and mental health outcomes. These groups include, but are not limited to, people living with HIV; people with multiple health conditions; pregnant and breastfeeding women; people with disabilities; children and adolescents; ageing and older people; women; men who have sex with men; transgender people; people who use drugs; incarcerated people; sex workers; people experiencing social exclusion or marginalization due to poverty, homelessness, limited education or other adversities; people living in remote or rural locations; refugees and migrants; racial and ethnic minority groups; and indigenous people (52). Here we highlight three groups with specific vulnerabilities to HIV and mental health, neurological and substance use conditions.

Adolescents and youth

Adolescence is a critical time of physical, emotional and social transition (83). Heightened vulnerability to HIV, mental health conditions, and initiation of substance use coincide with these important social and developmental changes. Adolescents can be vulnerable to intimate partner violence, coercive sexual encounters, and harmful experimentation with drugs, particularly when they are managing other adversities. Children and adolescents who use drugs and LGBTI children and adolescents are usually exposed to more risk factors and have fewer protective factors (84). These risks often emerge with specific gender differences (Box 1).

Suicide is the fourth leading cause of death among young people aged 15–29 years worldwide (85). Self-harm appeared among 15–31% of adolescents surveyed in low-income countries and 3–4.7% in middle-income countries (86). Adolescents who identify as LGBTI are more likely to die by suicide than their non-LGBTI peers (31, 87).

Family environments can create safety or risk. Exposure to violence or physical or emotional abuse at home increases the likelihood of adolescent mental health, neurological and substance use conditions (84). This in turn can make it difficult for adolescents to protect themselves from HIV.

The majority (75%) of mental health conditions seen in adulthood develop by the age of 24 years, and 50% occur by the age of 14 years (88). Children begin to exhibit different expressions of distress in adolescence and need access to psychosocial support and related services for adolescent mental health and well-being (89). Non-binary gender identities may emerge during this time, and so adolescent services and support require a gender lens (77).

The potential to reduce the effects of harmful experiences from early life and improve long-term outcomes with effective interventions makes adolescents and young people critical populations for focused attention (8). Some mental health conditions can be prevented through strategies that strengthen family emotional and social resources and that prevent violence and abuse of adolescents and young people (90). Peer support groups and safe spaces can improve self-esteem and address self-stigma for adolescents (9, 91). Individual and family counselling can address adolescent mental health comorbidities (49). The involvement of supportive parents or caregivers can be beneficial, especially for adolescents requiring ongoing treatment and care, but it is important to have the person's permission before contacting their parents or caregivers (92, 93). Similarly, some interventions for effective prevention of drug use are tailored for these age groups (53).

Services for mental health, neurological and substance use conditions for adolescents are rarely integrated with HIV services. WHO has developed resources to support the development and delivery of adolescent-friendly HIV services. Principles for adolescent-friendly service delivery should also be applied to the delivery of care for adolescents with mental health, neurological and substance use conditions or who use drugs (9, 52, 94).

Ageing and older people

Ageing and older people, including those living with HIV, generally experience higher rates of social isolation, reduced social participation and engagement, and other stressors such as declining health, loss of loved ones, stigma and discrimination. Major depression, which is linked with reduced retention in HIV care and reduced cognitive performance, occurs among an estimated 13% of adults living with HIV (35).

HIV is associated with accelerated ageing that HIV treatment only partially reverses. Rates of age-related comorbidities, such as noncommunicable diseases (cardiovascular diseases, diabetes, depression and neurocognitive (including HIV-associated) disorders) are generally higher among people living with HIV than people without HIV (35, 95).

Ageing and older people living with HIV may have multi-morbidities (multiple comorbid conditions) because of HIV-related risk factors and age-related conditions. One comorbidity may increase the risk of others, and as the number of conditions increases, so does the number of medicines taken, which may lead to adverse effects on physical and mental health and cognitive functions (35). Substance use conditions further increase the risk of cognitive impairment (96).

Accelerated ageing among people living with HIV underlines the need for integrated screening and care for various comorbidities, including mental health and neurological conditions. This should specifically target ageing and older people through holistic and person-centred integrated approaches that focus on well-being and quality of life, in addition to health outcomes, across the life course (35).

Key populations

Key populations often have overlapping and intersecting vulnerabilities. They are frequently marginalized and criminalized and face a range of human rights abuses that increase their risks of HIV and mental health conditions. Key populations also frequently face social and legal barriers to accessing services for HIV prevention, testing, treatment and care, and psychosocial support and services for mental health, neurological and substance use conditions (5, 97). Globally, key populations (people who inject drugs, transgender women, sex workers, gay men and other men who have sex with men) and their sexual partners accounted for 65% of HIV infections worldwide in 2020 and 93% of infections outside of sub-Saharan Africa (98).

The prevalence of mental health, neurological and substance use conditions is higher among people in prison than in the general population. People in prison are also at increased risk of all-cause mortality, suicide, self-harm, violence and discrimination (29).

Female sex workers who inject drugs are vastly overrepresented among incarcerated people. Sex workers living with HIV who are placed in detention or awaiting deportation face many of the same issues regarding access to HIV treatment, isolation and discrimination as people in prisons (99).

Workplace violence, childhood abuse, physical and sexual violence, and police harassment are among the experiences reported by sex workers who inject drugs. In settings with punitive laws and policies regarding drug use, sex work or same-sex sexual relationships, people who use drugs, gay men and other men who have sex with men, transgender people and sex workers experience interconnected layers of risk and vulnerability caused by the compounded effects of criminalization, stigma and discrimination (99, 100).

Incarcerated youth have high rates of drug and alcohol use and sexual risk behaviours, often complicated by histories of trauma and social disadvantage, including low education levels, unemployment, poverty and homelessness (101).

A review of the scientific literature on mental health among LGBTI groups shows elevated rates of mental health conditions, including depression, bipolar disorder, suicide attempts, substance use and dependence (28). Transgender people often lack access to the formal economy, leading to increased rates of homelessness, harmful use of alcohol, drug use, and work that exposes them to additional risks (e.g. sex work) (100–104).

Routine mental health screening and management, particularly for depression and psychosocial stress, should be offered and provided together with HIV services to key populations, including those living with HIV, to optimize their health and HIV outcomes (5).

Countries should address structural barriers for key populations and create enabling environments, such as abolishing policies that criminalize people living with HIV based on their HIV-positive status; decriminalizing sex work, drug use, same-sex sexual relationships and diverse sexual identities; addressing stigma, discrimination and marginalization; community empowerment; and addressing physical, sexual and other violence against key populations (5).

Providers should be trained to work with people from key populations. Interventions should include the following (105):

- ▶ Protection from violence, physical and mental harm, and exploitation.
- ▶ Use of evidence-based practices in establishing programmes and services.
- ▶ Provision of secure conditions that ensure dignity and promote self-reliance.
- ▶ Participation of key populations in all their diversity in decision-making processes regarding their health and well-being.

Key populations and other vulnerable groups, including adolescents, youth, and ageing and older people, face biomedical, social, political and economic factors that contribute to their high risk of mental health, neurological and substance use conditions (106).

Key populations and other vulnerable groups are not affected uniformly by HIV in all countries and epidemics. Based on epidemiological, social context and other evidence, each country should also define other vulnerable groups to be focused on with policies, strategies, programmes and tailored interventions, including services for HIV and mental health, neurological and substance use conditions (7). These groups may include people with severe mental health conditions; people with particular patterns of drug use (e.g. using multiple psychoactive substances); people with particular health needs (e.g. with multiple co-occurring conditions, pregnant women); people with social care and support needs (e.g. homelessness, contact with the criminal justice system); and people with other social and cultural circumstances (e.g. migrants, refugees, religious or ethnic minorities, indigenous populations).

Gender, HIV, and mental health, neurological and substance use health outcomes

Gender-based discrimination yields specific risks for adolescent girls, such as violence; child, early or forced marriage; sexual abuse and exploitation; and exclusion from employment, education and decision-making.

Early pregnancy is associated with increased risk of HIV and other sexually transmitted infections.

Gender norms can reinforce young women's unequal positions in relationships, households, workplaces and society.

Norms and expectations of masculinity and boys' experiences of neglect or violence can lead boys to engage in behaviours that increase risk of injury and violence.

Gender differences in depression occur in adolescence, with greater risk of depressive disorders for girls and women compared with boys and men. Depression is the second leading cause of disease burden for girls and young women aged 10–19 years, whereas interpersonal violence and self-harm are the second and third leading causes in boys and young men.

LGBTI people experience interlocking and reinforcing systems of oppression that can threaten health, safety and economic opportunities. More than 65 countries criminalize same-sex sexual relations, including at least 8 that impose the death penalty.

Women living with HIV experience higher rates of depression, anxiety and post-traumatic stress symptoms than men living with HIV and women who do not have HIV.

Gender norms and stereotypes influence risks of acquiring HIV:

- ▶ Female sex workers who use drugs often experience physical and sexual violence and have higher rates of HIV than men who use drugs.
- ▶ Women are more likely to be "second on the needle", injecting after male partners.
- ▶ Women often have less access to harm reduction programmes than men, and their safety needs may go unaddressed.
- ▶ Men are less likely than women to take an HIV test and to initiate and adhere to HIV treatment, reflecting general patterns of health-seeking behaviours among men, which have been linked to, among other things, prevailing norms of masculinity. Traditional masculinity norms and gender stereotypes are also linked with intimate partner and gender-based violence, which increases vulnerability to HIV among women and LGBTI people.

Women's drug use patterns and outcomes differ from those of men:

- ▶ Women begin using psychoactive substances later but increase their consumption more rapidly than men.
- ▶ Women who use drugs experience a two to five times higher prevalence of gender-based violence compared with women who do not use drugs.
- ▶ Women with mental health, neurological or substance use conditions have less access to treatment than men with the same conditions. Treatment generally lacks a women-centred focus, including for the specific needs of pregnant women with substance use disorders.

Sources: (89, 107–111).

Stigma and discrimination

Multiple forms of stigma (enacted, anticipated, perceived, structural and internalized stigma) and discrimination create obstacles to health and well-being for people with mental health, neurological and substance use conditions. Stigma and discrimination may be associated with HIV, substance use, mental health conditions and certain behavioural symptoms. Multiple or intersectional stigmas (e.g. stigma associated with HIV and drug use or mental health conditions) can lead to discrimination and social exclusion, making access to services difficult (Box 2) (112–114).

Health-care providers may stigmatize and discriminate against people living with HIV, key populations, people with mental health, neurological or substance use conditions, and other vulnerable groups (115). Dismissive or disrespectful interactions with health-care workers can lead to denial or delays in services and create ongoing barriers to quality care (5, 100, 115). Health-care providers may not have the skills or training to detect psychological symptoms or may fail to take the necessary action for further assessment, management and referral even if they detect symptoms (115).

Threats to health and psychosocial well-being and quality of life

Threats to health and psychosocial well-being and quality of life for people living with HIV, people from key populations, and people with mental health, neurological or substance use conditions include the following (116):

Stigma and discrimination associated with social identities, behaviours or legal status, such as:

- ▶ Being LGBTI.
- ▶ Drug use.
- ▶ Sex work.
- ▶ Non-conforming or non-binary gender expression.
- ▶ History of incarceration.
- ▶ Migration or immigration status.

Policies and legislation that criminalize or affect the following:

- ▶ Key populations, including sex workers, gay men and other men who have sex with men, people who inject drugs, and transgender people.
- ▶ People with mental health, neurological and substance use conditions.
- ▶ HIV non-disclosure, exposure or transmission.
- ▶ Substance use.
- ▶ Harm reduction and treatment services for substance use conditions.
- ▶ Age of consent for sexual and reproductive health services.

Exposure to violence, including:

- ▶ Childhood sexual abuse.
 - ▶ Child maltreatment or neglect.
 - ▶ Age-disparate sexual relationships and child marriage.
 - ▶ Gender-based violence.
 - ▶ Intimate partner violence.
 - ▶ Police violence.
-

In health-care settings, shared drivers of stigma related to HIV and mental health, neurological and substance use conditions include associating the condition or behaviour with blame or guilt; lack of awareness of stigma and its impact; myths about mental health, neurological and substance use conditions; limited knowledge; and institutional policies and practices.

Fear of transmission or acquisition of infection is often associated with HIV-related stigma. Fear of a behaviour may be associated with stigma related to mental health, neurological and substance use conditions (115).

To address these challenges, the WHO QualityRights training tools provide guidance to strengthen a rights-based approach to care. The objectives are to build capacity to combat stigma and discrimination; promote a person-centred, individual needs-responsive, rights-based approach; improve human rights conditions; improve the quality of care in mental health and related services; create community-based, community-led and recovery-oriented services that respect and promote human rights; develop a civil society movement to conduct advocacy and influence policy-making; and reform national policies and legislation in line with international human rights standards (117).

Integration of interventions and services

Context-specific integrated interventions and services are a priority for delivering quality services and care to people living with, affected by or at risk of HIV, people with mental health, neurological and substance use conditions, and people from other vulnerable populations (Box 3).

Mental health, neurological and substance use conditions are bidirectionally associated with HIV through multiple mechanisms, including shared disease determinants such as biological risk, cognitive and behavioural risk factors, and social and environmental determinants (118).

Health service providers should be trained to apply HIV-relevant health and behaviour counselling skills and psychosocial support and to recognize and treat common mental health, neurological and substance use conditions, which can often be managed effectively at the primary health-care level (49, 59, 119).

In turn, services for prevention and treatment of mental health, neurological and substance use conditions should ensure ongoing access to voluntary and confidential HIV prevention, testing and counselling services and psychosocial support for people who may be at increased risk of HIV (120).

Integrated approaches should cut across sectors and involve health-care, social, legal, justice and educational services. Planners and implementers must engage community-based and community-led organizations in service delivery, monitoring and accountability to ensure services are acceptable and do no harm (50, 121).

Evidence suggests it is feasible to integrate interventions and services for mental health, neurological and substance use conditions and HIV. Data from around the world show that these can be effectively managed in diverse settings despite huge variations in resources (90, 122). When specialists are scarce, task-sharing with peers, lay health workers, treatment adherence counsellors, or other community-based or community-led human resources is a useful strategy for administering evidenced-based psychosocial support in communities affected by HIV (123–126).

For the most prevalent conditions, such as depression and anxiety disorders, investing in and scaling up treatment and psychosocial support makes economic sense and could yield a two- to five-fold return on investment (48). HIV service delivery programmes are using strategies to integrate these services. Cost-effective, affordable interventions for people living with HIV in high-prevalence settings that can be delivered despite poverty, stigma and rurality continue to emerge (127, 128).

In the context of a chronic condition such as HIV, people tend to look for physical causes of their health or other issues. Sometimes, however, mental health conditions can signal a worsening medical condition, and comprehensive evaluation is important (128).

Integrated services can increase access to care. Integrating mental health and psychosocial support services, harm reduction, treatment for substance dependence, and HIV prevention, testing, treatment and care could help prevent new HIV infections and improve the health and well-being of people living with or affected by HIV (25, 49, 128–158).

HIV and mental health, neurological and substance use conditions: prevalence and interactions

HIV

- ▶ An estimated 37.7 million adults and children are living with HIV. Of these, 31.6 million know their status, 27.5 million are on antiretroviral therapy, and 24.9 million have suppressed viral loads (106).
- ▶ An estimated 1.5 million people were newly infected with HIV and 680 000 died from AIDS-related causes in 2020 (106).

Mental health conditions

- ▶ An estimated 970 million people live with mental health conditions.
- ▶ Mental health conditions are disproportionately common among people living with HIV and people from key populations. Mental health conditions are associated with increased risk of HIV. People with severe mental health conditions have a high prevalence of HIV.
- ▶ Mental health conditions can delay access to and outcomes of HIV prevention, testing and linkage to care. They can also reduce adherence to and retention in HIV treatment and care. Treatment for depression can improve HIV prevention, treatment adherence and outcomes, especially when combined with adherence skills training (38).
- ▶ Mental health conditions are sometimes associated with increased AIDS-related mortality.

Neurological conditions

- ▶ HIV has broad effects on the nervous system, causing direct pathology in the brain, spinal cord and peripheral nerves.
- ▶ HIV-associated neurocognitive disorder affects around 50% of adults living with HIV and includes asymptomatic neurocognitive impairment, mild neurocognitive disorder and HIV-associated dementia. HIV-associated neurocognitive disorder is linked to poor HIV treatment adherence, irreversible central nervous system injury associated with untreated HIV, and chronic HIV infection (e.g. in ageing people living with HIV).
- ▶ HIV-associated central nervous system opportunistic infections (e.g. central nervous system cytomegalovirus, central nervous system tuberculosis, cryptococcal meningitis, progressive multifocal encephalopathy) can be life-threatening. Symptoms include delirium, fever and focal neurological deficits.

HIV and mental health, neurological and substance use conditions: prevalence and interactions

Substance use conditions

- ▶ An estimated 283 million people are affected by harmful use of alcohol. High-risk patterns of alcohol use increase risk of HIV infection. About 33 000 deaths (3.3%) of AIDS-related deaths were attributable to alcohol in 2016.
- ▶ An estimated 11.3 million people worldwide inject drugs. Of these, 1.4 million are living with HIV.
- ▶ Around 36 million people are living with drug use conditions, including drug dependence. Drug use (especially injecting drug use) increases the risk of HIV transmission (144–146).
- ▶ Substance use poses challenges to HIV identification, treatment and treatment adherence. People with substance use conditions have worse HIV treatment outcomes than people without substance use conditions (147–153).
- ▶ An estimated 20% of new HIV infections outside sub-Saharan Africa are associated with injecting drug use, but political and social barriers to care and scarcity of substance dependence treatment and other services and specialists persist (144).
- ▶ Treatment for substance use conditions and harm reduction (especially needle–syringe programmes and opioid substitution therapy) is associated with effective HIV prevention and an increase in coverage of and adherence to HIV treatment (154, 159).

Suicide

- ▶ An estimated 700 000 people die annually by suicide. Suicide rates are increased among people living with HIV (33, 25, 155–158).
 - ▶ There is an increased risk of suicide among people in prisons and other key populations, including young key populations, particularly LGBTI adolescents and youth (29–32).
 - ▶ Targeted strategies to reduce risk for suicidal ideation, suicide attempts and deaths benefit people living with, affected by or at risk of HIV.
 - ▶ Rates of suicidal ideation or attempts ranged from 13% to 17% among people living with HIV in three African studies (155, 157).
-

HIV service continuum

Services delivered across the HIV service continuum support HIV prevention, testing, treatment initiation, retention in care, viral suppression and support for people living with HIV, including provision of or linkages to services for comorbidities such as tuberculosis, viral hepatitis and sexually transmitted infections. The continuum provides entry points for the integration of services for mental health, neurological and substance use conditions.

There is increasing evidence that people with mental health conditions and substance use (especially young people, ageing people, and people from key populations) who are not accessing mental health and substance use treatment and support have limited access to and worse outcomes of HIV prevention, testing, treatment and care (36–38).

Considerations for integrating screening, diagnosis and care for mental health and substance use conditions into settings that provide services across the HIV service continuum are described in this section. WHO provides comprehensive recommendations (Box 4) (5, 7, 62, 93, 160–168).

HIV prevention

The diverse delivery settings for HIV prevention interventions, including antenatal care, family planning, and health facility- and community-based services, offer opportunities to integrate harm reduction (5, 7), behaviour change counselling, condom distribution, voluntary medical male circumcision (164) and pre-exposure prophylaxis (64, 170) with education, assessment, referral and support for mental health, neurological and substance use conditions (171).

Pre-exposure prophylaxis guidelines require HIV testing services and linkage to treatment and care to be available, including self-testing with trained health workers and lay or peer providers. For women and key populations, HIV prevention services should include provision of services for sexually transmitted infections and family planning (172). Providers could be trained to conduct screening and referral for mental health, neurological and substance use conditions as part of a package of HIV prevention and risk assessment services (63).

Facility-based antenatal care and services for prevention of vertical transmission of HIV are opportunities to educate women about mental health, screen for mental health conditions, deliver psychosocial support and low-intensity psychological therapies, and provide peer support interventions (173, 174).

Screening and brief intervention for drug and alcohol use and dependence during pregnancy can be administered at antenatal visits as part of comprehensive interventions to meet the needs of women who use drugs and women with substance dependence and other conditions (55).

Nurses, peers, community health workers and volunteers who conduct perinatal home visits for women living with HIV can be trained to assess and deliver psychosocial and psychological interventions for depression (175, 176).

Voluntary medical male circumcision should continue to be advocated for and supported as an effective option within combination HIV prevention for adolescents and men aged

15 years and over in high-priority countries to reduce the risk of heterosexually acquired HIV infection. Voluntary medical male circumcision can be integrated with health services and programmes for men and adolescent boys, including services for mental health, sexual and reproductive health, noncommunicable diseases and vaccinations (164).

Multilevel interventions are needed to reduce barriers to accessing HIV prevention interventions among people at risk of HIV, including key populations, people with mental health, neurological and substance use conditions, and other vulnerable groups (171). Approaches include peer champions, support groups and m-health programmes to help people deal with HIV-related stigma, mental health conditions, drug dependence, harmful use of alcohol, and fears around HIV prevention approaches. Other interventions include community outreach activities to change norms and attitudes towards pre-exposure prophylaxis, services for people who use drugs and people with harmful use of alcohol, and community-based and community-led delivery of HIV prevention services outside clinic settings (5, 63, 177).

HIV testing services

HIV testing services are the full range of services that should be provided together with HIV testing. They include brief pre-test information and post-test counselling; linkages to appropriate HIV prevention or treatment and care and other clinical and support services; and coordination with laboratory services to support quality assurance (61).

A multipronged approach is needed to meet the global HIV testing targets for 2025 to identify 95% of all people living with HIV by 2025 (178), particularly for key populations in all their diversity and other vulnerable groups (52, 56, 92, 179). Addressing barriers to access and uptake of HIV testing among people from these populations and people with mental health, neurological and substance use conditions is critical (5, 61, 160).

Community-based HIV testing services, provider-initiated or community-led referral, social network testing, and HIV self-testing approaches can help to reduce stigma around HIV testing (61, 180). Such programmes could integrate screening for common mental health conditions and psychosocial support; provide education on self-care and self-help for mental health concerns; and establish formal referral linkages through peers or providers to mental health and substance use services and care at the facility and community levels (181).

Guidelines for post-test counselling recommend ensuring access to support for people who test positive for HIV (61), including assessment of suicide, drug dependence, harmful use of alcohol and mental health conditions (7, 160).

Pre-test counselling is not recommended as part of HIV testing services, but evidence supports the use of concise pre-test information and messages that offer and encourage testing, including the opportunity to ask questions in a private setting (61).

HIV testing services can be integrated with mental health and psychosocial support services and treatment for substance use conditions to help identify people at risk of HIV infection, introduce HIV prevention interventions, and increase linkages to HIV care and other services. In- and outpatient centres for treatment of mental health, neurological and substance use conditions should incorporate access to HIV testing with comprehensive medical and psychological evaluations and facilitate linkage to HIV care.

Community mental health service settings can include messaging related to risk reduction, peer-led demand creation, and HIV testing and counselling as part of individual assessments. Providers of services for HIV, mental health, psychosocial support and substance use can create community-based and community-led treatment networks by

leveraging broad partnerships across health facility and community-settings or co-locate these services to ensure integrated services are provided as part of a one-stop shop (127).

Linkage to and initiation of HIV treatment

Individual-level and structural interventions are necessary to reduce barriers to access to HIV treatment and care, especially for key populations and other vulnerable groups, including adolescents, ageing and older people, and people with mental health, neurological and substance use conditions (7, 60, 62, 92, 166). These barriers should be assessed through gender-sensitive and age-specific lenses. Counselling approaches that strengthen coping skills around a recent HIV diagnosis and encourage initiation of antiretroviral therapy can support people to cope with stigma and discrimination; explore negative reactions regarding HIV and discuss and build communication skills to minimize their impact; and examine their feelings and views of themselves (7, 92).

HIV counsellors can encourage open discussions about stigma and discrimination, develop ways to deal with these in support groups, and provide referrals to one-to-one mental health counselling and psychosocial support.

The unique HIV treatment needs of adolescents, pregnant women, key populations, people with advanced HIV disease, ageing and older people and people from other vulnerable groups are outlined in several sources (5, 60, 62, 92–94, 119, 171, 177, 182, 183). People in these groups often face many negative social factors associated with poor mental health, increased risk of drug use or harmful use of alcohol, loss to follow-up, and challenges with retention in HIV treatment.

Assessment and management of mental health, neurological and substance use conditions can be supported by the WHO *mhGAP intervention guide* (49), *mhGAP operations manual* (50) and *mhGAP community toolkit* (121).

To optimize health outcomes, good-quality HIV services should facilitate personalized integrated services and care, including routine assessment; interventions for mental health conditions (e.g. depression, anxiety, psychosocial stress, suicide risk), neurological disorders and substance use conditions; and psychosocial support for people living with or at risk of HIV (5, 166).

Integrated interventions and services for HIV and mental health, neurological and substance use conditions include the following:

- ▶ Co-counselling for HIV, mental health, substance use conditions, and sexual and reproductive health.
- ▶ Antiretroviral therapy delivered alongside psychopharmacological treatments such as opioid substitution therapy for people who inject opioids.
- ▶ Collaborative care, which inserts a dedicated care manager in HIV services who screens for mental health conditions, offers brief psychosocial interventions and monitors response to care, in collaboration with the medical team and external mental health-care providers (184, 185).
- ▶ Access to psychosocial interventions and support integrated in HIV services, such as:
 - Screening and brief intervention for drug use and dependence and harmful use of alcohol and dependence.
 - Cognitive-behavioural therapy (186, 187).
 - Contingency management.

- Motivational interviewing and motivational enhancement therapy.
- Family-oriented treatment.
- Mutual help groups.
- Problem-solving therapy (188).
- Overdose prevention.

Integration of delivery of HIV services, referral and antiretroviral therapy within mental health services and treatment for substance use conditions could increase uptake of HIV treatment.

HIV treatment adherence and continuity

For people with mental health, neurological and substance use conditions living with HIV, antiretroviral therapy management should be considered in accordance with the WHO *Consolidated guidelines on HIV prevention, testing, treatment, service delivery and monitoring* (169).

Additional psychosocial support for HIV treatment adherence should be provided to people living with HIV and severe mental health conditions (189) in accordance with the WHO *Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection* (7) and *Management of physical health conditions in adults with severe mental disorders* (190).

People living with HIV with uncontrolled depressive symptoms are more likely to have poor HIV treatment adherence due to forgetfulness, poor organization and poor comprehension of treatment plans. Counselling and appropriate medical treatment can improve HIV treatment adherence. WHO recommends including assessment and management of depression in care services for all people living with HIV (7).

For ageing and older people living with HIV, a holistic, age-specific, people-centred approach is needed to routinely provide prevention, screening, treatment and care for multi-morbidities (e.g. noncommunicable diseases, mental health and neurological conditions) and declines in physical and neurocognitive well-being and performance to improve and maintain quality of life (35).

Nurse-led low-intensity structured behavioural interventions may improve HIV treatment adherence and retention in care (191).

Service delivery for people living with HIV: 2021 updated WHO recommendations

WHO has updated its recommendations on service delivery for people living with HIV (161):

- ▶ Antiretroviral therapy initiation may be offered outside the health facility (new conditional recommendation, low- to moderate-certainty evidence).
- ▶ People established on antiretroviral therapy should be offered clinical visits every three to six months, preferably every six months if feasible (updated strong recommendation, moderate-certainty).
- ▶ People established on antiretroviral therapy should be offered refills of antiretroviral therapy lasting three to six months, preferably six months if feasible (updated strong recommendation, low- to moderate-certainty evidence).
- ▶ HIV programmes should implement interventions to trace people who have disengaged from care and provide support for re-engagement (new strong recommendation, low-certainty evidence).
- ▶ Sexual and reproductive health services, including contraception, may be integrated with HIV services (updated conditional recommendation, very low-certainty evidence).
- ▶ Diabetes and hypertension care may be integrated with HIV services (new conditional recommendation, very low-certainty evidence).
- ▶ Psychosocial interventions should be provided to all adolescents and young adults living with HIV (new strong recommendation, moderate-certainty evidence).
- ▶ Task-sharing of specimen collection and point-of-care testing with non-laboratory personnel should be implemented when professional staffing capacity is limited (updated strong recommendation, moderate-certainty evidence).

For people who inject drugs and people with substance use conditions, pharmacies or HIV clinics should integrate non-structured interventions such as needle–syringe programmes and mutual aid groups. Pharmacies or HIV clinics should provide overdose prevention interventions, including naloxone; offer psychosocially assisted opioid substitution therapy with methadone or buprenorphine; and facilitate access to other forms of treatment for people starting antiretroviral therapy, in accordance with the *WHO Consolidated guidelines on HIV prevention, diagnosis, treatment and care for key populations* (5), *mhGAP intervention guide* (49), *Guidelines for the psychosocially assisted pharmacological treatment of opioid dependence* (56), and *WHO/UNODC International standards for the treatment of drug use disorders* (52).

Ensuring access to and uptake of HIV treatment and care for people with mental health, neurological and substance use conditions

WHO recommends the following priority actions and interventions (7, 50, 166):

Optimize and harmonize training of health-care providers:

- ▶ Include key areas of HIV prevention, testing, treatment and care in specialist and non-specialist mental health training curricula, including identification and management of chronic conditions and comorbidities.
- ▶ Ensure health and HIV service providers have the knowledge and skills required to screen for, identify and manage mental health conditions and provide psychosocial support for people seeking services and care for different health conditions, including HIV.
- ▶ Train health-care providers to ask about use of alcohol and drugs and to offer brief intervention and psychosocial support where indicated.
- ▶ Equip health services providers to support stigma-free adolescent-friendly, women-friendly and LGBTI-friendly health services to ensure engagement, treatment adherence, retention in care and improved outcomes.
- ▶ Be aware that cultural factors may influence the presentation of physical and mental symptoms.

Ensure access and referral to HIV prevention, testing, treatment and care in specialty treatment facilities, general hospitals and other health settings for people with mental health, neurological and substance use conditions.

Provide integrated, individual needs-responsive, human rights-based services and care for people with mental health, neurological and substance use conditions:

- ▶ Provide treatment and care services for mental health, neurological and substance use conditions and HIV in community-based and non-specialized health-care settings.
- ▶ Increase coverage of evidence-based interventions for severe conditions. Use a network of community-based mental health services, including short-stay inpatient and outpatient services and care, care in general hospitals, comprehensive mental health centres and day care centres.
- ▶ Ensure HIV services across the prevention, testing, treatment and care continuum are accessible for all people in need across the life course.

Use continuous quality improvement mechanisms in mental health and HIV services:

- ▶ Monitor and evaluate quality of services and implementation of programmes to reduce mortality among people with mental health, neurological and substance use conditions.
- ▶ Integrate and coordinate holistic and comprehensive services, care and support to meet the mental and physical health-care needs of people of all ages, and facilitate the recovery of people with mental health, neurological and substance use conditions.
- ▶ Supervise and provide quality improvement training for health-care providers who deliver mental health and psychosocial support services.
- ▶ Encourage shared decision-making for service users and providers.

Increase awareness and address stigma and discrimination limiting access to services and care for people with mental health, neurological and substance use conditions, including those living with, affected by and at risk of HIV:

- ▶ Disseminate information about mental health and substance use conditions and improve staff attitudes towards people with mental health, neurological and substance use conditions.
- ▶ Engage constructively with the media to ensure non-stigmatizing portrayal of people with mental health and neurological conditions, people who use drugs and people with harmful use of alcohol.

See also *Positive health, dignity and prevention: a policy framework* developed by the Global Network of People living with HIV (GNP+) and UNAIDS (192), and *Management of physical health conditions in adults with severe mental disorders: WHO guidelines* (190).

Support for HIV treatment adherence and retention in care, including psychological support, should be available for all people on antiretroviral therapy. Interventions include peer counselling, text messaging and reminder services, cognitive-behavioural therapy, behavioural skills training, and treatment literacy and adherence training (7).

Screening or clinical assessment are recommended for adolescents and for people who have not achieved viral suppression, who are lost to follow-up, or who have difficulty with retention in HIV care, following mhGAP guidance to identify mental health conditions, including depression and anxiety, drug dependence, harmful use of alcohol and co-occurring physical health conditions, and to develop a treatment plan for psychosocial support (49, 92, 190). (See Annex 3 for screening tools.)

Multidisciplinary team meetings that include the person and tailored age-appropriate peer support can enable person-centred adherence planning (93). Psychological approaches such as cognitive-behavioural therapy and motivational interviewing can help people identify and overcome difficulties with retention in HIV care. Updated WHO Consolidated guidelines on HIV prevention, testing, treatment, service delivery and monitoring include a strong recommendation to provide psychosocial interventions for adolescents and young adults living with HIV (161, 169).

Table 1.

Good practice opportunities for integration of services for mental health, neurological and substance use conditions into HIV service delivery

Guidelines and recommendations	Level	
	Individual, interpersonal	Health facility, community, government
HIV prevention		
<ul style="list-style-type: none"> ▶ Preventing HIV through safe voluntary medical male circumcision for adolescent boys and men in generalized HIV epidemics: recommendations and key considerations, 2020 (164) ▶ WHO implementation tool for pre-exposure prophylaxis (PrEP) of HIV infection, 2017; (63, 64, 165) ▶ Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection: recommendations for a public health approach, 2nd edition, 2016; (7) ▶ Adolescent-friendly health services for adolescents living with HIV: from theory to practice (93) ▶ Guidelines on mental health promotive and preventive interventions for adolescents: helping adolescents thrive (9) ▶ Updated recommendations on HIV prevention, infant diagnosis, antiretroviral initiation and monitoring, 2021 (193) 	<ul style="list-style-type: none"> ▶ Integrate pre-exposure prophylaxis and voluntary medical male circumcision with screening for, and early identification of, mental health conditions, risk of suicide, drug use and dependence, and harmful use of alcohol ▶ Integrate scalable individual and group psychological interventions for mental health conditions with HIV prevention counselling ▶ Equip peer champions, support groups and mobile health interventions to reduce HIV and mental health-related stigma ▶ Engage adolescent peer supporters, including adolescents living with HIV, in HIV prevention, sexual and reproductive health, mental health services and life skills building ▶ Ensure early identification of mental health conditions, including evaluation for perinatal depression, and integration of psychological interventions with prevention of vertical transmission of HIV and early infant diagnosis services 	<ul style="list-style-type: none"> ▶ Train providers of pre-exposure prophylaxis and voluntary medical male circumcision in early identification of mental health conditions as part of a package of HIV prevention services and management of mental health, neurological and substance use conditions, including opioid overdose prevention with naloxone ▶ Conduct community outreach activities to change norms and attitudes towards pre-exposure prophylaxis, voluntary medical male circumcision and mental health interventions ▶ Support community empowerment activities and interventions to address violence against key populations engaging in, interested in or eligible for HIV prevention services ▶ Demedicalize pre-exposure prophylaxis through community-based service delivery ▶ Include mental health counselling services with services for survivors of gender-based violence ▶ Scale up harm reduction and treatment services in settings providing for people who inject drugs HIV prevention services, in particular needle-syringe programmes, opioid substitution therapy, and opioid overdose prevention with naloxone ▶ Ensure delivery of post-exposure prophylaxis ▶ Integrate care for gender-based violence into HIV services ▶ Increase community literacy on alcohol use and its relationship to HIV risk, adherence and metabolism of antiretroviral medicines for HIV treatment

Guidelines and recommendations	Level	
	Individual, interpersonal	Health facility, community, government
HIV testing		
<ul style="list-style-type: none"> ▶ Consolidated guidelines on HIV testing services, 2019 (160) ▶ WHO HTS Info app (194) ▶ Adolescent-friendly health services for adolescents living with HIV: from theory to practice (93) 	<ul style="list-style-type: none"> ▶ Provide HIV post-test counselling, including assessment of mental health (including risk of suicide, depression, anxiety), drug use and harmful use of alcohol, and referral for relevant services 	<ul style="list-style-type: none"> ▶ Deliver facility- and community-based testing, provider-initiated referral, social network testing and HIV self-testing with formal linkages to mental health services and psychosocial support ▶ Deliver dual HIV and syphilis rapid tests in antenatal care with formal linkages to mental health services as part of prevention of vertical transmission of HIV ▶ Provide HIV testing services in settings providing treatment for mental health, neurological and substance use conditions using evidence-based demand-generation messages, including use of peers and virtual interventions ▶ Train HIV service providers in identification and management of mental health, neurological and substance use conditions and distribution of naloxone for opioid overdose prevention ▶ Provide HIV testing services with comprehensive psychological evaluations, and create care teams at inpatient treatment centres for mental health, neurological and substance use conditions ▶ Provide HIV testing services as part of individual assessment, and create community-based and community-led treatment networks with HIV, services for mental health conditions, and support for people who use drugs or with harmful use of alcohol in community settings
Antiretroviral therapy initiation		
<ul style="list-style-type: none"> ▶ Update of recommendations on first- and second-line antiretroviral regimens, 2019 (62) ▶ Consolidated guidelines on HIV prevention, testing, treatment, service delivery and monitoring: recommendations for a public health approach, 2021 (169) 	<ul style="list-style-type: none"> ▶ Provide routine screening and early identification of mental health conditions (including depression and stress) and substance use conditions among people initiating antiretroviral therapy, according to national standards and mhGAP intervention guide (49) ▶ Provide HIV counselling (including discussion of stigma and discrimination and feelings around a new HIV diagnosis) and referrals for counselling and psychosocial support ▶ Establish mutual help groups and family-oriented approaches, particularly for adolescents ▶ Provide antiretroviral therapy prescription in accordance with co-occurring mental health or substance use conditions, drug use or potential side-effects of antiretroviral medicines 	<ul style="list-style-type: none"> ▶ Train HIV providers, including lay health workers and peer counsellors, in identification and management of mental health and substance use conditions and prevention of drug overdose ▶ Advocate for legal, policy and financial commitment to integrate HIV treatment with mental health services and decriminalize HIV and drug use ▶ Implement community empowerment activities and interventions to address violence against key populations newly diagnosed with HIV and initiating treatment ▶ Integrate HIV treatment, care and referral services within mental health services settings ▶ Provide HIV treatment in sites for treatment of mental health, neurological and substance use conditions ▶ Initiate and maintain HIV treatment at care settings where opioid substitution therapy is provided for people living with HIV

Guidelines and recommendations	Level	
	Individual, interpersonal	Health facility, community, government
Antiretroviral therapy adherence and viral suppression		
<ul style="list-style-type: none"> ▶ Guidelines for managing advanced HIV disease and rapid initiation of antiretroviral therapy, 2017 (183) ▶ Updated recommendations on service delivery for the treatment and care of people living with HIV, 2021 (161) ▶ Key considerations for differentiated antiretroviral therapy delivery for specific populations: children, adolescents, pregnant and breastfeeding women and key populations, 2017 (167) ▶ Adolescent-friendly health services for adolescents living with HIV: from theory to practice (93) 	<ul style="list-style-type: none"> ▶ Provide psychosocial interventions alongside HIV treatment provision and adherence and care, and retention support interventions to improve HIV treatment adherence, retention in care and viral suppression (e.g. peer counsellors, text message reminders, cognitive-behavioural or behavioural skills therapy) ▶ Provide regular screening for and early identification of mental health, neurological and substance use conditions during follow-up visits for HIV treatment, particularly for people who have not achieved sustained viral suppression and people with advanced HIV disease, according to WHO classification 	<ul style="list-style-type: none"> ▶ Train HIV providers in identification and management of mental health, neurological and substance use conditions and substance overdose prevention ▶ Create multidisciplinary person-centred services and support teams to overcome adherence and care retention challenges (e.g. include an HIV service provider, mental health services provider and social worker) ▶ Implement measures for adolescent-friendly services for mental health support and HIV

Integration of mental health, neurological and substance use interventions into HIV responses

The mental well-being of all people living with HIV should be promoted. Mental health, neurological and substance use conditions should be prevented or treated in people at risk. This section describes appropriate interventions within health systems and at the community and individual levels.

All programmes, services and interventions are delivered and designed within a set of cultural contexts. Culture (whether the culture of medical practice, or the culture of people from a specific geographical, ethnic or religious community) influences the understanding of symptoms and how individuals and communities explain and interpret signs of ill physical or mental health.

Culture can influence the course and outcome of mental health, neurological and substance use conditions, and shape where and from whom people seek help, how they cope, and how they adapt to recovery. Sensitivity to cultural understanding enables policy-makers, programme implementers, and service and support providers to create meaningful people-centred and local context-specific responses to expressed needs (195).

Mental health promotion

Mental health promotion fosters individual competencies, resources and mental well-being for all people (Table 2). Strategies relevant to people living with, at risk of or affected by HIV, people with mental health conditions, key populations, ageing and older people, and people from other vulnerable groups include physical and mental health promotion and education (121) and advocating for health-enhancing public policies on the social determinants of health (50).

The following interventions could be implemented primarily in the community and involve linkages to community organizations and sectors beyond the health system (50):

- ▶ Create employment opportunities.
- ▶ Enact antidiscrimination laws.
- ▶ Decriminalize people from key populations.
- ▶ Support survivors of gender-based violence and implement community interventions to prevent violence.
- ▶ Create supportive environments through interventions in schools.
- ▶ Strengthen community actions by connecting people to resources, building social capital, and developing personal skills such as resilience.
- ▶ Reorient health services, such as screening for perinatal depression.

Structured asset-based interventions that support economic empowerment for young people and their families, such as cash transfers, have positive effects on mental health (196, 197). Improving access to free education has mental health benefits and reduces HIV risk for adolescents (198, 199).

In the context of HIV service delivery, policies and community action that promote mental health and well-being should emphasize decriminalization of HIV, stigma reduction and advocacy for human rights. In combination with HIV awareness campaigns, the wider community can be engaged in health promotion for mental health, neurological and substance use conditions, such as:

- ▶ Mass public awareness campaigns to raise public awareness about the importance and availability of mental health services and generate demand for those when needed. To reach key and vulnerable populations, targeted awareness campaigns are more effective, especially in contexts of high risk and/or criminalization.
- ▶ Strategies to merge anti-stigma campaigns for mental health conditions and HIV (200).
- ▶ Dissemination of awareness-raising materials in health facilities on mental health, neurological and substance use conditions and their treatments.
- ▶ Dissemination of awareness-raising materials on HIV in treatment and care services for mental health and substance use conditions (50).
- ▶ Ensuring people with mental health conditions, people who use drugs and people with harmful use of alcohol, and their communities, play an active role in raising awareness and generating demand for services and support.

Table 2.

Mental health promotion, services and support activities that can be implemented in the community and community health-care settings

Talking about mental health	Mental health promotion and prevention	Support for people with mental health conditions	Recovery and rehabilitation
Community education on mental health	Healthy lifestyle	Promoting human rights	Community follow-up
Reduction of stigma, discrimination and social exclusion	Life skills	Identifying mental health conditions	Vocational, educational and housing support
Involving people with mental health conditions and their families	Strengthening caregiving skills	Engaging and building relationships	Social recovery and connectedness
	Suicide prevention	Providing psychological interventions	Self-management and self-care, and peer support
	Prevention of drug use and substance use conditions	Referring for more care and services	
	Self-care for community providers	Supporting carers and families	

Source: reproduced from mhGAP community toolkit: field test version. Geneva: World Health Organization; 2019.

Prevention

Preventive interventions can reduce the risk, incidence, prevalence and recurrence of a condition, time spent with symptoms, and impact on the person and their family and community (50).

Prevention of mental health, neurological and substance use conditions begins with awareness and understanding of early signs and symptoms (49, 201). Signs and symptoms of prevalent conditions are outlined in the WHO mhGAP intervention guide (49).

Some interventions for prevention of mental health conditions or suicide can be delivered in community, primary health-care or HIV service delivery settings by training existing service providers.

Perinatal and maternal mental health

Management of perinatal and maternal mental health among women living with or at risk of HIV improves maternal well-being and has indirect beneficial impact on caregiving and child development outcomes, as maternal depression is associated with several adverse outcomes among children. Women living with HIV show higher risk for perinatal depression than women without HIV. Experience of gender-based violence further increases women's risk of perinatal depression. Perinatal depression is a risk factor for suicide and is associated with increased risk of noncommunicable diseases such as gestational diabetes and (among those living with HIV) problems with HIV treatment adherence and retention in care.

Prevention, screening and evaluation and treatment for depression in the perinatal period can be integrated into prevention of vertical transmission of HIV or HIV primary care services (202, 203). WHO recommends psychosocial interventions to support maternal mental health integrated into early childhood health and development services. Such services must be made available to women living with or at risk of HIV (203, 204). (See Annexes 2 and 4.)

Suicide prevention and assessment

As communities are increasingly engaged in HIV prevention, testing, treatment and care programmes, including by leading and providing services and addressing stigma and discrimination, they can also be engaged in suicide prevention, given the evidence of elevated rates of suicide among people living with, affected by and at risk of HIV (205–207).

WHO has published detailed guidance for establishing community-based interventions for suicide prevention (205) and for implementing LIVE LIFE suicide prevention in countries (206). (See Annex 2.) Suicide prevention requires assessment of people at risk and of people who have made a suicide attempt, follow-up care and community support. The mhGAP intervention guide outlines comprehensive guidelines on assessment, management and follow-up of self-harm. Providers should ask any person over the age of 10 years about thoughts or plans of self-harm in the past month and acts of self-harm in the last year if they experience any of the following (49):

- ▶ Priority mental health or neurological conditions—depression, psychosis, dementia, child or adolescent mental health conditions and behavioural disorders, epilepsy, anxiety and stress-related conditions.

- ▶ Substance use conditions.
- ▶ Chronic pain.
- ▶ Acute emotional distress.

Asking about self-harm does not provoke acts of self-harm. Rather, it can reduce anxiety associated with thoughts of self-harm.

Integrating suicide prevention within community-based harm reduction programmes for people who inject drugs

A survey in Delhi, India has recorded a high prevalence of suicidal thoughts (53%) and attempts (36%) among people who inject drugs. Suicidal thoughts were associated with increased likelihood of sharing needles and syringes. Correlates of suicidal thoughts were homelessness, strained family or marital relationships, poor physical health, severe depressive or anxiety symptoms, recent experience of physical violence, and history of coerced sex (207).

Equipping staff in harm reduction programmes and health services in community-based organizations to support suicide prevention could include awareness-raising and capacity-building on the following (207):

- ▶ Ask about suicidal thoughts, take suicidal gestures seriously, identify warning signs, and undertake basic suicide risk assessments.
 - ▶ Monitor people at risk and refer for specialist assessment and support, as necessary.
 - ▶ Combat myths about suicide—talking about suicide will not make a person act on suicidal thoughts.
 - ▶ Equip clients to provide peer support.
 - ▶ Advocate for services to address psychosocial drivers of suicidality, such as access to safe, affordable housing; vocational educational opportunities that give purpose; reduction in violence and discrimination against people who inject drugs; and familial connections.
-

Prevention of substance use conditions

Preventive interventions can be delivered in primary health-care, HIV service delivery and community settings by training existing service providers. Screening and brief intervention consists of one-to-one counselling sessions for adolescents or adults. It may include follow-up sessions or additional information to take home. The sessions can be delivered by a variety of trained health and social workers to people who might be at risk because of their drug or alcohol use but who would not necessarily seek treatment (23).

Health-care providers should ask all pregnant women about their past and present use of drugs and alcohol as early as possible in the pregnancy and at every antenatal care visit. Health-care providers should offer a brief intervention to all pregnant women using drugs or alcohol. Health-care providers managing pregnant or postpartum women who use drugs or with substance use disorders should offer comprehensive assessment and individualized care (53).

Pregnant women dependent on opioids should be encouraged to use opioid substitution therapy when available rather than attempt opioid detoxification (55).

Family interventions to reduce use of drugs and substance use conditions include prenatal and infancy home visits by trained health workers to provide women with parenting skills and support with health, housing, employment and legal issues; and parenting skills programmes on positive development, prevention of child maltreatment and youth violence, and support management of behavioural problems in children and adolescents.

Other interventions for prevention of substance use conditions require policies or legislative responses. Interventions in the community may require linkages to education, social services and community networks. Community-based prevention interventions to reduce use of drugs and substance use conditions include school-based interventions such as (208):

- ▶ Classroom environment improvement programmes.
- ▶ School policies on drug and alcohol use.
- ▶ Policies to retain children in school.
- ▶ School-wide programmes to enhance school attachment and belonging.
- ▶ Personal and social skills education for children and adolescents.
- ▶ Addressing individual psychological vulnerabilities.
- ▶ Early childhood education.

Other community interventions include (208):

- ▶ Emotional learning programmes to reduce adolescent risk for HIV and to prevent use of alcohol and drugs, self-harm and suicide (50). (See Annex 4.)
- ▶ Skills training for service providers and caregivers.
- ▶ Psychosocial interventions with children for prevention of use of drugs and alcohol.
- ▶ Community interventions for suicide prevention (205).

Table 3.

Preventive interventions for mental health, neurological and substance use conditions

Condition	Preventive intervention
Depression and anxiety in adults	<ul style="list-style-type: none"> ▶ Cognitive-behavioural therapy for subthreshold symptoms
Conduct and behavioural problems in children and adolescents	<ul style="list-style-type: none"> ▶ Psychosocial interventions, including life skills education for social and emotional learning ▶ Parenting skills training ▶ Cognitive behavioural skills-building
Harmful alcohol use	<ul style="list-style-type: none"> ▶ Reduce availability of alcohol ▶ Increase taxation and pricing of alcohol ▶ Ban promotion and advertising of alcohol ▶ Label alcohol beverages ▶ Enforce drink-driving laws ▶ Strengthen health literacy on alcohol-related risks
Drug use	<ul style="list-style-type: none"> ▶ Population-based interventions in accordance with drug conventions 1961, 1971 and 1988, including restriction of availability, distribution, production, export and import ▶ Implement recommendations of the United Nations General Assembly Special Session on the World Drug Problem (2016)
Suicide and self-harm	<ul style="list-style-type: none"> ▶ Restrict access to means of suicide, such as highly hazardous pesticides, firearms and medicines ▶ Encourage responsible media reporting of suicide ▶ Foster socioemotional life skills in young people ▶ Implement early identification, assessment, management and follow-up of all people affected by suicidal behaviours

Sources:

Mental, neurological, and substance use disorders: disease control priorities, third edition. Washington, DC: World Bank; 2016.

International standards on drug use prevention: second updated edition. Vienna: United Nations Office on Drugs and Crime and World Health Organization; 2018.

Global strategy to reduce the harmful use of alcohol. Geneva: World Health Organization; 2010.

The International Drug Control Conventions: Single Convention on Narcotic Drugs of 1961 as amended by the 1972 Protocol, Convention on Psychotropic Substances of 1971, United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988. New York; United Nations; 2013.

Guidelines on mental health promotive and preventive interventions for adolescents. Geneva: World Health Organization; 2020.

LIVE LIFE: an implementation guide for suicide prevention in countries. Geneva: World Health Organization; 2021.

A/RES/S-30/1. Our joint commitment to effectively addressing and countering the world drug problem. New York: United Nations General Assembly; 2016.

Interventions and services to address mental health, neurological and substance use conditions

Tools to address mental health, neurological and substance use conditions include psychosocial and pharmacological interventions. Some psychosocial interventions are sufficient on their own to support well-being and quality of life and reduce distress.

Pharmacological interventions may be needed for more severe conditions. They can be used along with psychosocial interventions when necessary and should be monitored alongside delivery of antiretroviral therapy for people living with HIV.

Tools for screening for problems related to mental health, neurological and substance use are described in Annex 3.

Psychosocial interventions

Psychosocial interventions are interpersonal or informational activities, techniques or strategies that target biological, behavioural, cognitive, emotional, interpersonal, social or environmental factors. They aim to reduce symptoms; improve functioning, well-being, quality of life and social inclusion; educate people about mental health; and address mental health promotive, preventive and treatment needs (209, 210).

Psychosocial interventions may include psychotherapies (e.g. cognitive-behavioural therapy, interpersonal psychotherapy, problem-solving therapy), community-based treatments (e.g. assertive community treatment, first-episode psychosis intervention), vocational rehabilitation, individual, peer and community support services, and integrated care interventions (209).

Basic psychosocial support skills are at the core of all mental health and psychosocial support interventions. All health-care, social services and support providers should be equipped with these skills. The Inter-Agency Standing Committee guide developed for health-care workers responding to COVID-19 provides resources for skills-building (211).

The *mhGAP intervention guide* outlines psychosocial interventions for mental health, neurological and substance use conditions across the life course, with specific interventions addressing conditions affecting children and adolescents (49). The 2021 WHO consolidated HIV guidelines recommend provision of psychosocial interventions for adolescents and young people living with HIV (161, 169). *The Guidelines on mental health promotive and preventive interventions for adolescents* offer specific recommendations for adolescent mental health promotion and care (9). The specified interventions aim to:

- ▶ Educate people about mental health and substance use (e.g. psychoeducation).
- ▶ Reduce stress and strengthen psychosocial support.
- ▶ Promote functioning in daily activities.
- ▶ Address the mental health promotive, preventive, treatment, care and support needs of adolescents, including young people in humanitarian contexts, facing pregnancy or parenthood, with emotional problems, and with oppositional or disruptive behaviours.

Education is often the most appropriate starting point for psychosocial support. Examples include:

- ▶ Explaining that depression is very common, does not indicate weakness or laziness, and cannot be controlled by sheer willpower.
- ▶ Offering basic information about dementia and explaining options for individual, family and community support.
- ▶ Explaining that HIV is associated with depression and mania in some people.
- ▶ Providing information about which antiretroviral medicines can cause depressive symptoms or otherwise affect mental health.
- ▶ Explaining that substance use conditions, including drug dependence, can be treated effectively, and that people can and do get better.

These techniques can be readily integrated into routine psychosocial support interventions provided within HIV programmes and service delivery settings, including at the primary care level.

Psychological treatments (psychotherapies) are effective interventions for many mental health and substance use conditions (Table 4). These treatments traditionally require substantial time and are provided by specialists. To increase uptake and overcome barriers, they have been adapted for wider use by trained, supervised non-specialist workers (49, 212).

Potentially scalable psychological interventions may include modified evidence-based and needs-tailored psychological treatments (e.g. brief basic versions of cognitive-behavioural therapy or interpersonal therapy) and self-help materials drawing from evidence-based psychological treatment principles (e.g. self-help books and audio-visual materials, online self-help interventions, guided individual or group self-help programmes) (212, 213).

For moderate to severe depression, the *mhGAP intervention guide* notes that health-care providers may select psychological treatments such as behavioural activation, problem-solving therapy, problem management plus, group support psychotherapy, cognitive-behavioural therapy or interpersonal psychotherapy as first-line therapy (49). Group interventions based on cognitive-behavioural therapy showed the best evidence for reducing depressive symptoms among people living with HIV in a review (214). (See Annex 2.)

Table 4.

Psychological therapies for mental health and substance use conditions

Intervention	Recommended for
Behavioural activation	<ul style="list-style-type: none"> ▶ Depression
Relaxation training	<ul style="list-style-type: none"> ▶ Depression
Problem-solving treatment	<ul style="list-style-type: none"> ▶ Depression
Cognitive-behavioural therapy	<ul style="list-style-type: none"> ▶ Depression ▶ Child and adolescent mental health conditions ▶ Substance use conditions ▶ Psychoses
Contingency management therapy	<ul style="list-style-type: none"> ▶ Substance use conditions ▶ Psychoses
Family counselling or therapy	<ul style="list-style-type: none"> ▶ Depression
Interpersonal therapy	<ul style="list-style-type: none"> ▶ Depression
Motivational interviewing and motivational enhancement therapy	<ul style="list-style-type: none"> ▶ Substance use conditions ▶ Child and adolescent mental and behavioural health
Family-oriented treatment approaches, including parenting skills	<ul style="list-style-type: none"> ▶ Depression ▶ Anxiety ▶ Traumatic stress
Common elements treatment approach	<ul style="list-style-type: none"> ▶ Depression ▶ Anxiety ▶ Traumatic stress ▶ Substance use conditions

Source: mhGAP intervention guide for mental, neurological and substance use disorders in non-specialized health settings. Geneva: World Health Organization; 2016.

Neurocognitive conditions

HIV infection is associated with an array of neurocognitive conditions (HIV-associated neurocognitive disorders), including asymptomatic neurocognitive impairment, mild neurocognitive disorder and HIV-associated dementia. Neurocognitive effects of HIV can affect people across the life course. Among children living with HIV, 10–50% who receive antiretroviral therapy experience cognitive deficits. In settings where infants do not receive early treatment, the risk of HIV-associated progressive encephalopathy persists (141).

HIV can exacerbate cognitive decline associated with ageing. Comorbid conditions such as metabolic syndrome, drug and alcohol dependency, co-infections (e.g. viral hepatitis C, tuberculosis, toxoplasmosis) and noncommunicable diseases (e.g. diabetes, hypertension) increase the risk of cognitive impairment (96, 141, 215).

Cognitive impairment may be associated with depression and use of medicines with strong anticholinergic side-effects (i.e., that block the action of the neurotransmitter acetylcholine) (216).

Assessment and management of cognitive impairment in people living with HIV should be integrated into routine HIV clinical visits (215). (See Annex 3 for screening information and tools.) The management of HIV-associated cognitive impairment begins with initiating antiretroviral therapy or optimizing the antiretroviral therapy regimen for people already on treatment. Recommended strategies include reducing use of alcohol and drugs, managing depression and stress, treating co-occurring medical conditions, encouraging participation in cognitively stimulating activities, and cognitive remediation (142). The WHO *Integrated care for older people* guidelines propose evidence-based recommendations for health care professionals to prevent, slow or reverse declines in the physical and mental capacities of older people (217).

The *mhGAP intervention guide* outlines the assessment and management of dementia, which should be incorporated into routine HIV clinical visits (49). Psychosocial interventions for neurocognitive conditions include:

- ▶ Psychoeducation, which can be carried out in home visits by trained nurses, peers or community health volunteers.
- ▶ Encouraging caregivers to conduct interventions to improve cognitive functioning.
- ▶ Promoting independence, functioning and mobility.
- ▶ Providing carers with support.
- ▶ Managing behavioural and psychological symptoms and cognitive functioning.
- ▶ Identifying and treating underlying health problems, including HIV.
- ▶ Identifying and modifying factors that lead to behavioural problems (e.g. if going outside alone results in the person getting lost, ensure the person is accompanied or that exits lead to safe spaces).
- ▶ Adapting the environment to create safety for the person.
- ▶ Providing regular information to orient the person to time, date and names of people.
- ▶ Using newspapers, radio and television to orient the person to current events and to stimulate memories.
- ▶ Using clear verbal communication and short sentences, and listening carefully to the person.
- ▶ Keeping routines simple and surroundings familiar.

Substance use conditions

Effective, accessible harm reduction, treatment of substance use conditions and interventions for people who use drugs or with harmful use of alcohol may reduce the risk of acquiring HIV and significantly improve outcomes.

Treatment of substance use conditions (e.g. opioid substitution therapy) is associated with an increase in HIV treatment coverage, adherence and retention in HIV care. People on methadone or buprenorphine opioid substitution therapy reduce their use of heroin and other drugs, and have lower mortality rates, fewer medical complications, lower rates of HIV and viral hepatitis transmission, decreased involvement in criminal activities, and improved social and occupational functioning, health and well-being (52).

Management of substance use conditions is rarely integrated into HIV and tuberculosis services and care. One of the main challenges in low-resource settings is a lack of programmes for harm reduction and treatment of substance use conditions.

- ▶ Core evidence-based treatment, pharmacological and psychosocial interventions can be integrated into HIV services (49). Interventions may include:
 - Screening, brief interventions and referral to treatment.
 - Harm reduction services for people who inject drugs (in particular, needle and syringe programmes and opioid substitution therapy).
 - Management of acute substance intoxication and substance withdrawal.
 - Management of substance-induced mental health conditions (e.g. psychosis, depression).
 - Psychosocially assisted opioid substitution therapy with methadone or buprenorphine.
 - Pharmacological management of other substance dependence.
 - Management and relapse prevention of conditions due to use of other substances (e.g. alcohol, psychostimulants, cannabis, benzodiazepine).
 - Prevention, identification and management of substance overdose (including use of naloxone for opioid overdose).
 - Recovery management and after-care.
- ▶ Psychosocial interventions may include:
 - Cognitive-behavioural therapy.
 - Contingency management.
 - Motivational interviewing and motivational enhancement therapy.
 - Family-oriented treatment approaches.
 - Community-based approaches (e.g. mutual-help groups, peer support).

Primary health-care services can provide basic interventions such as screening, brief interventions and referral to treatment, and establish clear links with specialized services for referral.

Good practices include engagement of communities, peer support networks, and trained peers working in treatment services to provide specific interventions aimed at identifying and engaging clients and keeping them on substance use treatment.

In some settings, observed or supervised injection facilities can prevent complications, overdose, and sharing of syringes, needles and other paraphernalia, thus contributing to harm reduction (218). These services could be scaled up in locations with high HIV prevalence.

UNODC and WHO provide an overview of treatment settings and modalities in *International standards for the treatment of drug use disorders* (52).

Harm reduction for people who inject drugs

The comprehensive package of harm reduction interventions for people who inject drugs includes the following:

- ▶ Needle and syringe programmes.
 - ▶ Opioid substitution therapy and other evidence-based drug treatments.
 - ▶ HIV testing services.
 - ▶ Antiretroviral therapy.
 - ▶ Prevention, diagnosis and treatment of sexually transmitted infections.
 - ▶ Distribution of male and female condoms.
 - ▶ Targeted information, education and communication.
 - ▶ Prevention, vaccination, diagnosis and treatment of viral hepatitis.
 - ▶ Prevention, diagnosis and treatment of tuberculosis.
 - ▶ Community distribution of naloxone for the prevention of overdose deaths.
-

Pharmacological interventions

Pharmacological treatments for mental health, neurological and substance use conditions can be integrated with HIV services using the *mhGap intervention guide* (49). General principles include:

- ▶ Consider the short- and long-term side-effects of the medicine, efficacy of previous treatment, and drug–drug and drug–disease interactions.
- ▶ Consult the national formulary or the WHO formulary as needed.
- ▶ Explain the risks and benefits of treatment, potential side-effects, duration of treatment, and importance of treatment adherence.
- ▶ Exercise caution when using medication for older people, people with chronic disease (including HIV), pregnant or breastfeeding women, and children and adolescents.
- ▶ Central nervous system diseases caused by HIV infection can lead to sensitivity to psychotropic medicines such as antidepressants, anti-anxiety medicines, stimulants, antipsychotics and mood stabilizers—use their lower doses and consult a specialist as needed (219).

Psychopharmacological management of neurocognitive conditions should be done in conjunction with psychosocial interventions. Antipsychotic medicines may be used with caution in people with dementia, starting at the lowest effective dose, if there is a risk to the person or their caregivers (49).

For moderate to severe depression, antidepressants may be used as first-line treatment (e.g. selective serotonin reuptake inhibitors, tricyclic antidepressants). Providers should keep in mind possible adverse effects, the ability to deliver treatment (e.g. expertise, treatment availability), and individual preferences (49).

Some antiretroviral medicines commonly prescribed to treat HIV can cause neuropsychiatric side-effects. Efavirenz has been associated with central nervous system toxicity (e.g. dizziness, insomnia, abnormal dreams), anxiety, depressive symptoms, confusion and suicidal behaviour. Risk factors include baseline or previous depression and other mental health conditions (60, 220, 221). Efavirenz 400 mg is better tolerated than standard-dose efavirenz (62). Interactions may occur between antiretroviral and psychotropic medicines, affecting the metabolism of both (222, 223). The 2021 WHO consolidated guidelines recommend dolutegravir-based regimens as a way to avoid the more frequent neuropsychiatric side-effects associated with efavirenz (169).

Table 5 lists the interactions between selected antiretroviral and commonly used medicines for mental health, neurological and substance use conditions. Providers must monitor side-effects and be aware that modified doses of psychopharmacological therapies or substitution of antiretroviral medicines may be required. For a detailed assessment of drug interactions, see Web Annex J of the *Updated recommendations on first-line and second-line antiretroviral regimens and post-exposure prophylaxis and recommendations on early infant diagnosis of HIV: interim guidelines or HIV drug interactions* (222).

Table 5.

Interactions between antiretroviral medicines and commonly used medicines for mental health, neurological and substance use conditions^{a,b,c}


Antiretrovirals	Antipsychotics ^d	Antidepressants ^e	Mood stabilizers and anticonvulsants ^f	Opioid substitution therapy ^g	Other ^h
Tenofovir disoproxil fumarate			Lithium		
Lamivudine			Lithium		
Emtricitabine					
Dolutegravir			Carbamazepine Valproic acid		St John's wort
Efavirenz 400	Haloperidol Risperidone Pimozide ⁱ	Bupropion Citalopram Clomipramine Escitalopram Imipramine Mirtazapine Sertraline Trazodone Venlafaxine	Carbamazepine Valproic acid	Buprenorphine Methadone	St John's wort
Abacavir			Carbamazepine	Buprenorphine Methadone	
Zidovudine	Fluphenazine		Carbamazepine Valproic acid	Methadone	
Raltegravir			Carbamazepine Valproic acid		St John's wort

Antiretrovirals	Antipsychotics ^d	Antidepressants ^e	Mood stabilizers and anticonvulsants ^f	Opioid substitution therapy ^g	Other ^h
Atazanavir	Fluphenazine Haloperidol Pimozide ⁱ Risperidone	Amitriptyline Bupropion Citalopram Clomipramine Doxepin Escitalopram Fluoxetine Imipramine Mirtazapine Nortriptyline Paroxetine Sertraline Trazodone Venlafaxine	Carbamazepine Gabapentin Lithium Valproic acid	Buprenorphine Methadone	St John's wort
Lopinavir	Fluphenazine Haloperidol Pimozide ⁱ Risperidone	Amitriptyline Bupropion Citalopram Clomipramine Doxepin Escitalopram Fluoxetine Imipramine Mirtazapine Nortriptyline Paroxetine Sertraline Trazodone Venlafaxine	Carbamazepine Gabapentin Lithium Valproic acid	Buprenorphine Methadone	St John's wort

^a Medicines with potential interactions are shown; if not shown, no interaction is expected. For more information, see the sources below.

^b  no interaction expected.

 interaction likely—should not be co-administered.

 potential interaction that may require close monitoring and alteration of dose or timing.

 weak potential interaction.

^c The purpose of this table is to show drug–drug interactions of commonly used medicines in some countries. The inclusion of a specific medicine in this table does not necessarily indicate it is included in the WHO essential psychotropic medicines list or recommended in WHO mhGAP guidance for treatment of depression and psychosis.

^d Antipsychotics: fluphenazine, haloperidol, pimozide, risperidone.

^e Antidepressants: amitriptyline, bupropion, citalopram, clomipramine, doxepin, escitalopram, fluoxetine, imipramine, mirtazapine, nortriptyline, paroxetine, sertraline, trazodone, venlafaxine.

^f Mood stabilizers and selected anticonvulsants: carbamazepine, gabapentin, lithium, valproic acid.

^g Opioid agonist substitution maintenance treatment: buprenorphine, methadone.

^h Other medicines not approved for treatment of depression or mental health, neurological or substance use conditions: St John's wort.

ⁱ These medicines compete for or inhibit the CYP3A4 isoform of cytochrome P450, elevating pimozide levels.

Sources:

Consolidated guidelines on HIV prevention, diagnosis, treatment and care for key populations: 2016 update. Geneva: World Health Organization; 2016.

Guidelines for the psychosocially assisted pharmacological treatment of opioid dependence. Geneva: World Health Organization; 2009.

Web annex J: table of drug interactions with antiretroviral drugs In: Updated recommendations on first-line and second-line antiretroviral regimens and post-exposure prophylaxis and recommendations on early infant diagnosis of HIV: interim guidelines. Geneva: World Health Organization; 2018.

HIV drug interactions. Liverpool: University of Liverpool (<https://www.hiv-druginteractions.org/checker>).

Considerations for integrated services for HIV and mental health, neurological and substance use conditions

Attaining universal health coverage, including high-quality services and financial protection for all, is Target 3.8 of the Sustainable Development Goals (SDGs). Prevention, treatment and care for mental health, neurological and substance use conditions must be integrated into accessible, effective, affordable services in which the rights and dignity of everyone are respected (50, 224).

Models of integrated services

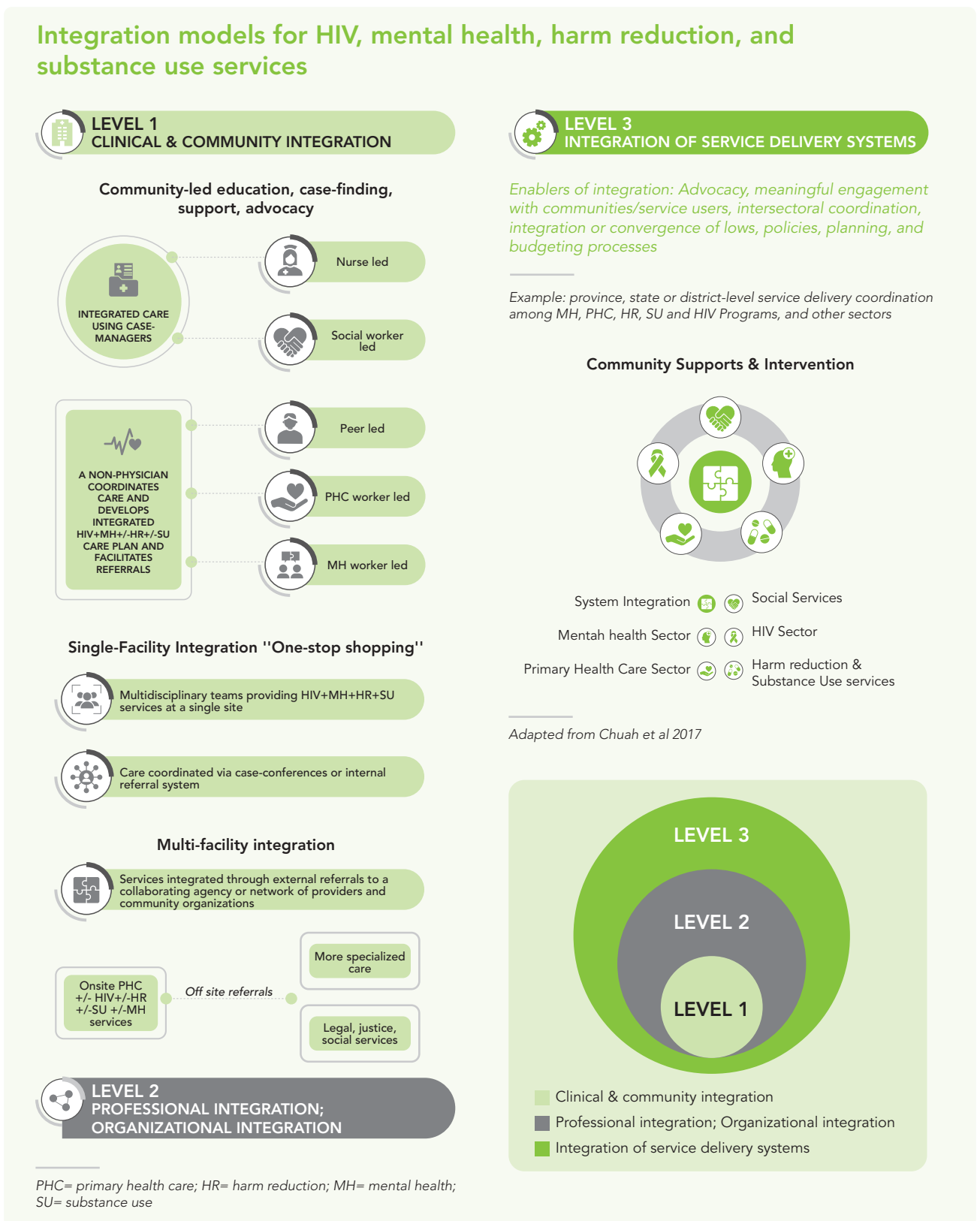
Integration of services and care provides the opportunity for human rights-based, gender-sensitive, age-specific, equitable, person-centred prevention, treatment and care for multiple conditions. Integrated services facilitate better communication and coordination of service provision, and show efficiency and positive impact on health outcomes, well-being and quality of life (5).

Many integration models exist for different local contexts and health systems. Integration can occur at various stages of clinical care and prevention, including promotion, prevention, screening and early detection of conditions, counselling for behavioural risk factors, and management of existing conditions (50, 127).

Strong linkages between services for mental health, neurological and substance use conditions, harm reduction, HIV prevention, testing, treatment and care, and relevant support systems (e.g. services for survivors of intimate partner and other forms of violence, education, housing, social services, legal services and justice) should be established and maintained.

HIV prevention, testing, treatment and care services can be integrated into specialized or primary health-care services for mental health or substance use conditions. Likewise, services for mental health, harm reduction and substance use can be integrated into HIV services.

Figure 2.
Models of integrated services



Source: Adapted from Chuah FLH, Haldane VE, Cervero-Liceras F, et al. Interventions and approaches to integrating HIV and mental health services: a systematic review. Health Policy Plan. 2017;32(suppl. 4):iv27–iv47.

It is important that integrated services meet the needs of people from key and vulnerable populations. These could include psychosocial support and screening for mental health conditions in HIV mobile outreach services and integration of mental health services into services for sexual and gender-based violence.

The *mhGAP operations manual* (50) and the *International standards for the treatment of drug use disorders* (52) provide guidelines for adaptation of treatment approaches for particular contexts and population needs.

Figure 1 shows the three levels of integrated care: integration at the health system level (level 3); integration across organizations or facilities or professional networks (level 2); and clinical integration through one-stop co-located services and care coordination using a care manager (level 1). The lower levels are nested within and interact with higher levels of integration. Each level of integration requires distinct but related interventions and activities. Ideally, there is synergy, interaction and coordination of integration activities within and between levels (127).

Integration by resource level

The balanced service and care provision model for mental health, neurological and substance use conditions informs the level of services that can be delivered in different resource contexts, including community, outpatient and inpatient services (8, 225). HIV programmes must assess the level of human and financial resources available to complement and integrate with services and resources for people with mental health, neurological and substance use conditions and drug use.

Integrated services potentially increase the efficiency and decrease the cost of delivering multiple interventions for care or prevention. A majority of studies of integration (e.g. of HIV into one-stop primary health-care services) show that it is feasible and cost-effective, although more nuanced studies and research on the cost-effectiveness of integrating HIV, mental health and substance dependence services are required (181, 226–230). These studies should be context-specific and examine the feasibility of integration. Mental health interventions that can be integrated into community platforms or primary health care are cost-effective to implement, including group support. Group support psychotherapy used to treat depression in people living with HIV was more cost-effective than group HIV education sessions: costs to prevent 1 year lost to depression equated to US\$ 13 using group support psychotherapy and US\$ 26 using group education sessions (126).

Building capacity among community-based and primary health-care service providers, with proper supervisory structures, can expand the coverage of psychological and pharmacological interventions for mental health, neurological and substance use conditions and drug use (83). Psychosocial support and low-intensity psychological interventions such as the Thinking Healthy programme (see Annex 2) can be delivered effectively by trained and supervised lay health workers or peers in settings where mental health-care providers are scarce (175, 202, 231). The Mental Health Integration Programme case study in Annex 4 demonstrates examples of specific activities and roles of a collaborative care team providing integrated care in South Africa.

Table 6 shows the key activities for mental health and substance use services based on resources available.

Table 6.

Matching services for mental health conditions to resource settings

Community (provided across relevant sectors)	Primary health care (provided by general primary care workers)	Secondary health care (provided in general hospitals)	Tertiary health care (provided by mental health specialized services)
Low-resource settings			
<ul style="list-style-type: none"> ▶ Basic opportunities for occupation, employment and social inclusion ▶ Basic community interventions to promote understanding of mental health ▶ Interventions to reduce stigma and promote help-seeking ▶ Range of community-level suicide prevention programmes (e.g. reduce access to pesticides, responsible reporting by local media, school-based interventions) ▶ Early childhood and parenting intervention programmes ▶ Basic school-based mental health programmes ▶ Promotion of self-care interventions ▶ Integration of mental health into community-based rehabilitation and inclusive development programmes ▶ Home-based care to promote treatment adherence ▶ Activating social networks 	<ul style="list-style-type: none"> ▶ Case identification ▶ Basic evidence-based psychosocial interventions ▶ Basic evidence-based pharmacological interventions ▶ Basic referral pathways to secondary care ▶ mhGAP interventions 	<ul style="list-style-type: none"> ▶ Training, support and supervision of primary care staff ▶ Outpatient clinics ▶ Acute inpatient care in general hospitals ▶ Basic referral pathways to tertiary care 	<ul style="list-style-type: none"> ▶ Improve quality of care in psychiatric hospitals ▶ Initiate move of mental health inpatient services from psychiatric hospitals to general hospitals ▶ Initiate closure of long-stay institutions and develop alternative community settings ▶ Establish means of licensing all practitioners treating people with mental health conditions, including non-formal care facilities ▶ Range of evidence-based psychological treatments ▶ Ensure compliance with relevant human rights conventions ▶ Initiate consultation and liaison services in collaboration with other medical departments and improve physical health care of people in mental health services
Medium-resource settings			
<ul style="list-style-type: none"> ▶ Community services as provided in low-resource settings ▶ Coordinated opportunities for occupation, employment and social inclusion ▶ Coordinated community interventions to promote understanding of mental health ▶ Coordinated interventions to reduce stigma and promote help-seeking ▶ City- and district-wide coordination of integrated mental health plans ▶ Attention to mental health in policies across all sectors 	<ul style="list-style-type: none"> ▶ Primary health-care services as provided in low-resource settings ▶ Equitable geographical coverage for mental health integrated into primary health care ▶ Coordinated, collaborative care across service delivery platforms ▶ Comprehensive mental health training for general health-care staff 	<ul style="list-style-type: none"> ▶ Secondary health-care services as provided in low-resource settings ▶ Multidisciplinary mobile community mental health teams for people with severe mental health conditions ▶ Integration of mental health care with other secondary health care 	<ul style="list-style-type: none"> ▶ Tertiary health-care services as provided in low-resource settings ▶ Consolidate move of mental health inpatient services from psychiatric hospitals to general hospitals ▶ Basic range of targeted specialized services (e.g. children and young people, older adults, forensic settings) ▶ Consolidate consultation and liaison services

Community (provided across relevant sectors)	Primary health care (provided by general primary care workers)	Secondary health care (provided in general hospitals)	Tertiary health care (provided by mental health specialized services)
<ul style="list-style-type: none"> ▶ Range of independent and supported accommodation for people with long-term mental health conditions ▶ Substance use prevention programmes ▶ Range of services for homeless people with mental health or substance use conditions ▶ Community-based rehabilitation for people with psychosocial disabilities 			
High-resource settings			
<ul style="list-style-type: none"> ▶ Community services as provided in low-resource settings ▶ Intensive opportunities for occupation, employment and social inclusion ▶ Intensive community interventions to promote understanding of mental health ▶ Intensive interventions to reduce stigma and promote help-seeking ▶ Full range of independent and supported accommodation for people with long-term mental health conditions ▶ Range of evidence-based services in schools, colleges, workplaces and other community platforms ▶ Intensive substance use prevention programmes ▶ Intensive childhood and parenting intervention programmes (e.g. life skills training) ▶ Intensive community-level suicide prevention programmes (e.g. reduce access to means of self-harm, media training, school-based interventions) 	<ul style="list-style-type: none"> ▶ Primary health-care services as provided in low-resource settings ▶ Full geographical coverage of mental health care integrated in primary health care ▶ Collaborative care model with specialists supporting primary health care practitioners ▶ mhGAP interventions 	<ul style="list-style-type: none"> ▶ Secondary health-care services as provided in low-resource settings ▶ Full range of evidence-based psychosocial interventions delivered by trained experts ▶ Full range of evidence-based pharmacological interventions available 	<ul style="list-style-type: none"> ▶ Tertiary health-care services as provided in low-resource settings ▶ Complete move of mental health inpatient services from psychiatric hospitals to general hospitals ▶ Full range of targeted specialist services (e.g. early intervention for psychosis, children and young people, older adults, addiction, forensic settings)

Sources:

The Lancet Commission on global mental health and sustainable development. *Lancet*. 2018;392(10 157):1553–1598.

Thornicroft G, Tansella M. The balanced care model for global mental health. *Psychol Med*. 2013;43(4):849–863.

Integrated programmes, systems and service delivery

Integrating programmes, systems, interventions and services requires leadership and shared commitment by policy-makers, funders, managers and implementers of HIV, mental health, primary health-care, harm reduction and other relevant programmes, service providers, managers, civil society and communities. Their collaboration must ensure provision of evidence-informed, human rights-based integrated or linked people-centred, needs-responsive, local context-responsive, quality comprehensive services, including prevention, detection, diagnosis and timely treatment, care and support; supportive policy, legislative, budgetary and organizational enabling environments; joint programme planning, resourcing and implementation; integrated health information and other data systems; and joint monitoring, evaluation and accountability systems.

In all these efforts, the full participation of affected communities, people living with HIV, people with mental health conditions, people who use drugs or with substance use conditions, and others is critical for accountability, advocacy, awareness raising, demand creation, direct service delivery and support, and addressing stigma and discrimination (50, 52, 120, 128, 232–234).

The activities outlined in this section can be applied to people across the life course, to different models or levels of integration, and to integration of services and programmes for mental health, neurological and substance use conditions into HIV services and programmes, and vice versa.

Planning

Integration begins with planning for mobilization of resources, systems and people to ensure delivery of quality integrated or linked services, care and support at the local, regional and country levels. Such planning should be organized around five foundational pillars (69):

- ▶ Stakeholder and community engagement to ensure their regular active participation in quality service planning, delivery and improvement, including upholding the GIPA principle.
- ▶ Onsite support of health and other service providers through clinical and programme mentoring and skills support.
- ▶ Monitoring to track delivery of quality services, care and support, and ensure accountability.
- ▶ Sharing and learning from experiences at every level of health, social, legal and other relevant services.
- ▶ Management to ensure the structures and systems are in place to support carrying out these actions and actual service delivery.
- ▶ Planning at the country and regional levels should involve the following:
 - ▶ Identify and engage in the planning processes all key stakeholders and communities, including people in need of services (e.g. people living with HIV, key populations, people who use drugs, people with harmful use of alcohol, people with mental health conditions), national and regional policy-makers, programme implementers, health-care systems and other sector managers (e.g. justice, social protection, education) (120, 235):
 - Ensure gender and age perspectives are represented. Prioritize inclusion of affected communities and people with lived experiences, including people living with HIV,

- people from key populations, people who use drugs, people with mental health conditions, and people with intellectual and psychosocial disabilities.
- Facilitate working relationships between, and identify focal points in, departments and ministries responsible for programmes and services for HIV, harm reduction, noncommunicable diseases, mental health and substance use conditions, and social, justice and legal services. Formalize partnerships with written work agreements.
- Specify decision-makers to commit resources and specify resource-sharing arrangements.
- Identify targeted regions for implementation of integrated programmes, services, care and interventions.
- ▶ Determine the goals, functions and resources of the integrated programmes, service delivery and support:
 - Share, increase or retain resources for HIV, mental health, harm reduction, and other relevant services and support.
 - Establish mechanisms for joint planning, programming and implementation.
 - Establish responsibilities and management structures to ensure processes of integration operationalize principles of quality services, care and support.
- ▶ Conduct joint situational analyses to assess current gaps and needs for integrated programmes, services, care and support with the engagement of communities (50).

Planning at the local level should involve the following:

- ▶ Determine the levels and modalities of integration feasible for the programme and the setting.
- ▶ Identify specific programmes, communities and facilities where integration will occur, and how it will be implemented and scaled up.
- ▶ Determine resource and systems capacity, direction and modality of integration (into HIV care, mental health or other services, or both).
- ▶ Determine whether additional service delivery resources are needed for programme monitoring and evaluation, clinical mentoring, coaching and supervision, or whether existing community and facility resources (e.g. lay providers, peer workers, professional clinicians) can be equipped to deliver services.

Preparation

At this stage, key stakeholders execute the plans that prepare for implementation of integrated services, care and support, including establishing systems, processes and standards. Preparation at the country and regional levels should involve the following:

- ▶ Establish technical working groups with clear terms of reference and broad representation, ensuring involvement of affected communities, including people with mental health conditions, people living with HIV, adolescents and young adults, key populations and people who use drugs.
- ▶ Create an enabling environment for integration:
 - Address discriminatory legal frameworks that prevent access to quality respectful services, care and support.
 - Establish or improve supply chains and their management for medicines and other commodities essential for the management of mental health, neurological and substance use conditions within HIV programmes, interventions, services and care.

- Establish or improve supply chains and their management for medicines and other commodities essential for HIV testing, treatment and care within mental health and neurological care and services, harm reduction programmes, and care for substance use conditions.
- Specify resource mobilization for sustained support of integrated programmes, delivery of services, interventions and support.
- ▶ Facilitate linkages and working relationships between communities and health, social justice, education and other sectors, programmes and service providers.
- ▶ Establish protocols for referrals between health service delivery settings and to and from non-health services, especially social, legal, violence prevention and survivor services.
- ▶ Prepare policies, strategic plans, programme implementation plans, clinical guidelines and protocols for integration of HIV and mental health, neurological and substance use services, care and support, including at the community level.
- ▶ Establish programme, performance and activity monitoring indicators.
- ▶ Introduce minimum standards for quality services and care for all service and care users, with specific standards for adolescents (68, 69).
- ▶ Facilitate linkages and working relationships between the mental health, noncommunicable diseases, HIV or national AIDS control programme, and primary health care (or analogous) divisions or departments in the ministry or department of health.
- ▶ Develop plans to monitor and evaluate implementation and scale-up of integration.

Preparation at the local level should include the following:

- ▶ Implement policies and strategic and implementation plans.
- ▶ Ensure HIV, mental health and other programme implementers and service providers together with communities, including people living with HIV, people with mental health conditions, key populations, people who use drugs, adolescents, ageing and older people and other key groups are involved in determining ways to integrate the services and care interventions to be offered within (among others) HIV care clinics and other HIV service providing settings, settings providing services for the prevention of vertical transmission of HIV, community- or home-based care and support services, and spiritual or traditional healing systems.
- ▶ Map strategies to integrate mental health, neurological and substance use services in the context of differentiated service delivery and care.
- ▶ Determine which providers should be engaged for which services and interventions.
- ▶ Depending on the local context, train HIV service providers, HIV counsellors, HIV treatment adherence and other support providers, community health workers, and primary health-care and other providers to screen, diagnose and deliver psychosocial or pharmacological interventions, appropriate to their roles and skills.
- ▶ Train peer educators in mental health, neurological and substance use conditions, HIV services and care basics.
- ▶ Train mental health and neurology specialists (psychiatrists, neurologists, specialists in addiction medicine, psychiatric nurses, psychologists) and social workers in HIV prevention, treatment, care, risk assessment, drug interactions, and central nervous system effects of HIV.

- ▶ Engage and build capacity of traditional and faith healers and representatives of faith-based organizations in the principles of integrated services, care and support, and involve them in collaborative and community-based and community-led services, care and support approaches (236).
- ▶ Build capacity of HIV service providers to work with people with intellectual and psychosocial disabilities; to run inclusive and accessible services, to develop accessible materials, to provide comprehensive HIV prevention services, and to ensure integration of sexual and reproductive health and rights services for women with disabilities.
- ▶ Create enabling environments within communities by highlighting opportunities to promote mental health; identifying local mental health needs; and building on available resources and opportunities to deliver mental health activities, programmes and interventions in the community (121).
- ▶ Ensure all providers are aware of and sensitive to people's experiences of social exclusion and discrimination, and how these may be expressed in the local context.

Provision and implementation

At the country and regional levels, clinical guidelines and protocols respective of integrated service, care and support delivery should be developed and provided.

At the local level, the following should be provided and implemented:

- ▶ Raise awareness among clients and health facility- and community-based workers of the importance of integrating, linking and co-locating services for HIV and mental health, neurological and substance use conditions (50, 128).
- ▶ Provide a package of information, counselling, diagnostic, treatment and care services that fulfils the needs of key populations, adolescents, ageing and older people, and people from other vulnerable groups (68).
- ▶ Deliver collaborative co-training of service managers and providers, implement task-sharing activities, sustain ongoing supervision, implement guidelines for referral to services for mental health, neurological and substance use conditions, and implement service quality monitoring (49, 128).
- ▶ Deliver competency-based training of health facility-based and other service providers to provide quality, effective, rights-based, non-discriminatory and non-judgemental services to people living with HIV, people living with mental health, neurological and substance use conditions, key populations, ageing and older people, adolescents, and people from other vulnerable groups (68).
- ▶ Co-locate services for HIV, mental health, neurological and substance use conditions and harm reduction where appropriate and feasible.
- ▶ Deliver evidence-based interventions and services for mental health, neurological and substance use conditions in facility- and community-based HIV care and service delivery settings.
- ▶ Deliver HIV prevention, testing, treatment and care interventions in community mental health settings.
- ▶ Deploy community health workers, other community workers, traditional and faith healers, and peers for awareness-raising, service demand generation, psychosocial support, screening and brief intervention, and delivery of low-intensity psychological interventions when skilled supervisors are available.

- ▶ Deploy peers for community outreach to people who inject drugs for linkages to harm reduction services and substance dependence treatment (52).
- ▶ Implement a stepped care approach to services that provide a pathway to more intensive services.
- ▶ Link people with mental health, neurological and substance use conditions and their carers to HIV awareness campaigns and HIV education and treatment literacy programmes (50).

At the individual level, the following should be implemented:

- ▶ Address stigma related to HIV, mental health and substance use conditions and use of drugs with group and individual counselling.
- ▶ Ensure adolescents, young people, and people from other vulnerable groups are knowledgeable about their own health, including mental health, and know where and when to seek services (68).
- ▶ Provide self-help resources to support management and self-monitoring of mental health and substance use (237).
- ▶ Provide educational information about mental health, HIV prevention, testing, treatment and care, substance use and harm reduction.
- ▶ Address health-care providers' HIV and mental health related stigma through information, education, skills-building and policy and practice changes (115).
- ▶ Provide social support through direct services or linkage to care.

Monitoring, evaluation and learning

For monitoring and evaluation at the country and regional levels, the following should be in place:

- ▶ Policies, plans and guidelines that specify ways to integrate programmes, services and interventions, and mechanisms and systems for monitoring and evaluation of their implementation.
- ▶ Established budgetary lines for integrated programmes and services for HIV, mental health, neurological and substance use conditions, and harm reduction.
- ▶ Integrated health information and other data systems and streamlined indicators for measuring access to and uptake of integrated or linked HIV, mental health, substance use conditions, and harm reduction services.
- ▶ Functional working groups focusing on integrated policies, programmes and service delivery, supporting and monitoring their implementation.

At the local level, the following should be carried out:

- ▶ Record the number or percentage of people living with HIV who access and uptake services for mental health, neurological and substance use conditions and harm reduction.
- ▶ Record the number or percentage of health facilities with plans for, or involvement of community health and outreach workers in, activities to increase use of services by key populations, adolescents, ageing and older people, and people from other vulnerable groups.

- ▶ Record the number or percentage of people receiving mental health services or services for substance use conditions who receive HIV prevention (including pre-exposure prophylaxis), testing services, treatment, care and viral load monitoring.
- ▶ Record the number and proportion of people with mental health or substance use conditions living with HIV.
- ▶ Record the number and proportion of people living with HIV with estimated or reported mental health, neurological and substance use conditions.
- ▶ Document pathways to services and care for mental health, neurological and substance use conditions for people living with HIV, and pathways to HIV care for people with mental health, neurological and substance use conditions.

Monitoring and assessment at the individual level involves measuring satisfaction with services, quality of life, symptom severity, and met needs for care. This could be led by programme implementers, service delivery managers and affected communities.

Life-course considerations for integrated services and interventions

One in four women, including women living with HIV, experience depressive and anxiety symptoms during and after pregnancy. Perinatal mental health conditions increase the risk of poor health outcomes for women and their children and are associated with low retention in HIV care. Antenatal services provide opportunities to integrate mental health and HIV services for reduction of vertical transmission of HIV and good-quality care for pregnant women. HIV, mental health and substance use services should link pregnant women to HIV combination prevention options when they are identified as high risk for HIV (3, 238–241).

The first 1000 days of life constitute a critical period for brain development. Poverty, malnutrition and trauma during this period can affect the potential for the child's healthy growth, cognition and mental development. Good nutrition is critical as part of a broader approach of nurturing care.

Quality primary education, a nurturing home environment and supportive parenting facilitate mental and psychosocial wellness and cognitive development in childhood. For infants and young children living with HIV, providing access to HIV treatment and care, and equipping parents with skills and practical and financial support to provide sensitive and responsive parenting and create stimulating environments are particularly important (242–244).

Social connectedness in families, at school, with peers and within the community can mitigate some of the threats to mental health and well-being that accumulate during adolescence. Good mental health provides the foundation for strengthening agency, especially among adolescent girls and young women, and reducing risky sexual behaviours and other risks and vulnerabilities. Provision of school-based prevention and comprehensive sexuality education, behaviour change programmes and HIV pre-exposure prophylaxis can further support risk reduction.

Psychosocial interventions that focus on developing adolescents' problem-solving, social and emotional skills have been effective in improving mental health and reducing the occurrence of emotional and behavioural problems. This effect is especially strong when interventions are accompanied by other activities that address family, school and community contextual factors. These interventions provide foundational skills for healthy behaviours and reduce risky behaviours such as violence, bullying, and use of tobacco, alcohol and drugs. Engaging young people in community activism appears to be beneficial. Community-based peer support interventions for adolescents living with HIV can improve linkages to care and adherence (198, 245, 246).

Social and gender norms influence behavioural factors that disproportionately place adolescent girls and young women at risk for HIV. Age-disparate sex, multiple partnerships, sexual exploitation, early sexual debut, child and forced marriage, and transactional sex drive HIV incidence. Social and health-care providers in HIV and mental health settings trained to enquire about these issues can facilitate linkages to school-based prevention, social and behavioural change communication programmes, and medical interventions such as pre-exposure prophylaxis. Keeping girls in school shows mental health benefits and risk reduction for HIV (199, 247).

Engaging men of all ages in HIV prevention, treatment and care remains a challenge. Men access, use and receive the benefits of HIV prevention, testing and treatment interventions less than women. Targeted strategies to increase HIV testing among men are a step towards ending the AIDS epidemic. A more comprehensive reframing of men’s health includes changing how health systems interact with and engage men, and recognizing that men’s health-care needs are largely underserved, resulting in poorer health outcomes. Gendered social norms yield unhealthy behaviours early in life. Intervening in adolescence produces benefits now, across the life course and for future generations (162, 248–250).

For all adults, healthy diet and exercise help to maintain good health and contribute to emotional and cognitive health and well-being. Access to mental health services and care in the workplace and community can help prevent disability, prolonged time out of work, and poor functioning in the family. Initiation and maintenance of HIV treatment in the context of quality primary care services for people living with HIV can help sustain health and well-being. Beyond the health-care sector, poverty initiatives and protective laws and policies can facilitate access to care, food, income and other resources that help sustain well-being. Social and community engagement can support health, well-being and quality of life (90, 251).

In older adults, preserving mental activity through continued learning, working, exercise and maintenance of health supports mental health and psychosocial wellness. Ageing people living with HIV are at higher risk of developing noncommunicable diseases, particularly cardiovascular diseases, diabetes and depression. Prevention, screening, treatment and care services for these should be integrated into HIV services to improve HIV and health outcomes, longevity, well-being and quality of life (18, 35).



Task-sharing for delivery of integrated services for HIV and mental health, neurological and substance use conditions

Human resources for provision of services for mental health, neurological and substance use conditions are insufficient in most parts of the world, but they are particularly scarce in regions with the highest HIV prevalence. Globally, only 7.1% of people with past-year substance use conditions received adequate treatment, decreasing to 1% in low- and middle-income countries.

Evidence-based interventions can be delivered through task-sharing—the rational redistribution of health-care tasks to health workers with shorter training. A variety of providers, including lay health workers, peer counsellors and community health workers, can deliver interventions and services for common mental health, neurological and substance use conditions, including cognitive-behavioural therapy, interpersonal psychotherapy and problem-solving therapy (49, 122, 124, 126, 252–266). See Annex 2 for evidence-based intervention manuals and Annex 3 for case studies of integrated services and care.

Task-sharing for delivery of quality antiretroviral therapy

WHO recommends the following for all adults, adolescents and children living with HIV (169):

- ▶ Trained and supervised lay providers can distribute antiretroviral therapy (strong recommendation, low-certainty evidence).
 - ▶ Trained non-physician clinicians, midwives and nurses can initiate first-line antiretroviral therapy (strong recommendation, moderate-certainty evidence).
 - ▶ Trained non-physician clinicians, midwives and nurses can maintain antiretroviral therapy (strong recommendation, moderate-certainty evidence).
 - ▶ Trained and supervised community health workers can dispense antiretroviral therapy between regular clinical visits (strong recommendation, moderate-certainty evidence).
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Task-sharing core competencies for providing services for mental health, neurological and substance use conditions

The following competencies are recommended for all providers of mental health, neurological and substance use condition services, including community, lay and peer health workers, non-specialist clinicians and non-prescribing clinicians (267, 268):

- ▶ Screening and identification:
 - ▶ Demonstrates awareness of common signs and symptoms.
 - ▶ Recognizes the potential for risk to self and others.
 - ▶ Demonstrates basic knowledge of causes of conditions.
 - ▶ Provides patients and community members with awareness or education.
 - ▶ Demonstrates cultural competence.
 - ▶ Formal diagnosis and referral:
 - ▶ Demonstrates knowledge of when to refer to the next level of care.
 - ▶ Demonstrates knowledge of providers of specialized care within the community.
 - ▶ Treatment and care:
 - ▶ Supports patients and families during treatment and care.
 - ▶ Identifies and assists patients and families to overcome barriers to successful treatment and recovery (e.g. adherence, stigma, finance, accessibility, social support).
 - ▶ Initiates and participates in community-based and community-led treatment, care and prevention programmes.
 - ▶ Demonstrates knowledge of and identifies available treatment and care systems and resources in the community.
 - ▶ Promotes mental health literacy and raises awareness of and engages in activities that minimize the impact of stigma and discrimination.
 - ▶ Communicates to the public about mental health, neurological and substance use conditions and drug use.
 - ▶ Monitors treatment adherence and retention and side-effects of medical treatment.
 - ▶ Practises person-centred interactions with people who need services (e.g. communication, relationship-building).
 - ▶ Protects vulnerable people and identifies vulnerabilities such as threats to human rights.
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Digital HIV and mental health tools

Digital interventions for health are increasingly important tools for extending the reach of health systems and can be leveraged as part of integrated approaches to improve reach of and adherence to services and data collection. The COVID-19 pandemic has led to increased use of digital tools and social media for mental health and psychosocial support. A rapid increase in the use of mobile devices in low- and middle-income countries, where facility-based and specialized services may be less accessible, further underlines the potential for using digital technology as part of integrated services for mental health, psychosocial support and HIV (269).

WHO has published HIV apps for easy reference and access to guidelines, policy guidance and resources (270, 271). Mental health apps from all sources number more than 10 000. They include crisis text messaging, cognitive-behavioural therapy presented in game form, online training, and capacity-building resources for community-based providers. The *mhGAP intervention guide 2.0* app provides access free of charge to comprehensive information for diagnosis and treatment of multiple mental health, neurological and substance use conditions (49).

The following digital tools have been used for mental health and psychosocial support or care, although not all have been rigorously evaluated (271–273):

- ▶ Social networking sites with mental health content.
- ▶ Personal health trackers enabling people to track their goals, behaviours and emotional state.
- ▶ Mental health apps and games.
- ▶ Meditation and mental wellness apps.
- ▶ Online support forums for mental health and substance use conditions.
- ▶ Online information and education.
- ▶ Data systems to improve and manage service delivery.
- ▶ Digital assessment, including rapid assessment tools (e.g. use of algorithms to track risk of suicide or mental health conditions using personal smartphone data or short questionnaires).
- ▶ Human, computer and self-guided therapies, including chatbots basic counselling and information.
- ▶ Virtual training and clinical decision support.

Considerations for monitoring and evaluation of integrated service delivery and care models

The desired outcome of integrated services and care for HIV and mental health, neurological and substance use conditions is optimal person-centred and needs-based management of each condition and improvement of associated social stressors, including stigma and discrimination.

Monitoring and evaluation can occur at several levels, using existing global mechanisms such as SDGs 3.3, 3.4, 3.5 and 3.8, Global AIDS Monitoring, the Global Mental Health Assessment Tool, universal health coverage targets and indicators, and locally designed monitoring and evaluation frameworks.

Resources for monitoring and reporting progress towards global goals and targets using existing indicators and frameworks include the following:

- ▶ WHO Mental health action plan 2013–2030 (67).
- ▶ Global AIDS progress reporting, including country-level reporting, under the Political Declaration on HIV and AIDS (4).¹
- ▶ Global Information System on Alcohol and Health, used to monitor health trends related to alcohol consumption and associated risks (274, 275).
- ▶ NCD Global Monitoring Framework, which enables tracking of progress towards prevention and control of noncommunicable diseases (276).
- ▶ *Annex of the world drug report* (277) and UNODC data (278), which inform monitoring and evaluation.
- ▶ Global Health Observatory for broad categories of data, including data to monitor progress towards SDG health target 3.5 (279–281).
- ▶ WHO *Consolidated strategic information guidelines for HIV in the health sector*, which identifies 10 global indicators and 50 national indicators for monitoring and evaluating the health sector response to HIV (282).
- ▶ *mhGAP operations manual* monitoring and evaluation framework for clinical implementation that can be applied at the national, regional or facility levels (50).

Table 7 Gives some examples of targets and indicators.

¹ The Global AIDS progress reporting indicators are being updated in line with the 2025 Global AIDS targets and the commitments of the 2021 Political Declaration on HIV and AIDS: Ending Inequalities and Getting on Track to End AIDS by 2030.

Table 7

Targets and indicators for monitoring and evaluation of integrated care models

	Target	Indicator
Planning	<ul style="list-style-type: none"> ▶ Establish operations team that includes community leadership to oversee integration, planning and implementation of mental health, neurological and substance use conditions interventions ▶ Conduct situational analysis ▶ Prepare operations plan and budget for integrated services and care 	<ul style="list-style-type: none"> ▶ Operations team exists, with roles assigned and multiple stakeholders represented ▶ Total number of team meetings per year ▶ Completed situation analysis indicates needs and resources at district and facility levels ▶ Services and care for mental health, neurological and substance use conditions and psychosocial support are integrated into district health plan and approved by government ▶ Budget is available that specifies financial, human and physical resources required to integrate mental health and psychosocial support, substance use and HIV services, and care in the district
Building capacity and enhancing readiness of health system	<ul style="list-style-type: none"> ▶ Train HIV or primary health-care workforce in mhGAP ▶ Train mental health-care workforce in HIV treatment and care ▶ Train specified health-care workforce to deliver non-judgemental and destigmatizing care for key populations and people with mental health and substance use conditions 	<ul style="list-style-type: none"> ▶ Number of trainers and supervisors who participated in mhGAP training of trainers and supervisors ▶ Proportion of non-specialist health-care providers trained in mhGAP ▶ Number of community workers trained and meeting competency standards in mhGAP ▶ Proportion of mental health or non-specialist providers trained in HIV care and treatment ▶ Number of trainers, supervisors and facility managers trained in non-judgemental and destigmatizing care ▶ Proportion of providers trained in non-judgemental and destigmatizing care ▶ Number of providers demonstrating capacity to provide non-judgemental and destigmatizing care
Provide treatment and care	<ul style="list-style-type: none"> ▶ Integrate mhGAP into HIV care settings 	<ul style="list-style-type: none"> ▶ Percentage of people treated for HIV who received care for mental health or substance use conditions

Additional tools to assess and map health facility-based treatment of mental health, neurological and substance use conditions can be integrated into a broader monitoring and evaluation framework, such as (283, 284):

- ▶ Integrated tools and interventions to measure the burden of mental health conditions among people living with HIV and key populations, and the prevalence and incidence of HIV among people with mental health, neurological and substance use conditions.
- ▶ Integration of standardized indicators for measuring implementation and results.
- ▶ Integration of data collection and monitoring systems.

Research gaps

To optimize approaches to and delivery of evidence-informed comprehensive integrated HIV, mental health, neurological and substance use services, more research is needed to address the following knowledge gaps:

- ▶ Strengthen the evidence base for different models of HIV and mental health service integration in low- and middle-income countries, especially for adolescents and young people who have low use of health services but are at high risk of mental health conditions and HIV.
- ▶ Strengthen evidence on the effect of mental health interventions on HIV outcomes.
- ▶ Study the delivery of integrated HIV and mental health services among different population groups, especially women, key populations, adolescents and young people, ageing people, and people with disabilities, to document the impact on their HIV and health outcomes and their well-being of integrated delivery models.
- ▶ Evaluate the cost and cost-effectiveness of different models of integrated services for HIV and mental health, neurological and substance use conditions.
- ▶ Build the evidence base for integrating care for severe mental health conditions into HIV service delivery platforms and identify the best settings for managing these and other medical comorbidities.
- ▶ Explore how mental health can be supported in the context of differentiated service delivery.
- ▶ Develop research to expand the evidence base on models of supervision for task sharing.
- ▶ Design studies to assess the impact of policies and community mobilization on supporting the human rights of people with mental health conditions and HIV.
- ▶ Design studies to assess the impact of criminalization and decriminalization of key populations on mental health conditions, drug use, harmful use of alcohol, access to HIV services and care, and access to psychosocial support.
- ▶ Strengthen the evidence base for stigma reduction interventions for people living with HIV, including intersectional stigma interventions and policy interventions, and understand the drivers of intersectional stigma.
- ▶ Expand and enrich the evidence base through use of multiple research methods, including qualitative research methods to capture lived experience and user-centred design of services and community-led support.
- ▶ Expand implementation research on the most appropriate providers, settings and implementation strategies to address harmful use of alcohol and treatment and care for substance use conditions in low-resource settings.
- ▶ Expand the knowledge base on prevention of mental health, neurological and substance use conditions and promotion of well-being for people living with HIV across the life course.

- ▶ Assess how interventions that reduce the impact of social determinants and inequalities of poor health affect substance use conditions, mental health and HIV outcomes.
- ▶ Expand the set of validated screening tools for neurocognitive disorders and mental health conditions in people living with, at risk of and affected by HIV.
- ▶ Establish clear guidance for assessment of neurocognitive impairment in diverse cultural and care contexts.

Annexes

Annex 1. Selected resources to support integration of HIV and mental health and substance use care and treatment

Global instruments, strategies and plans

The 2030 goal to achieve universal health coverage calls for “individuals and communities [to] receive the health services they need without suffering financial hardship”. It calls for integrated services, reoriented with strengthened coordination, that focus on individual and community needs and are provided in the most appropriate settings.

Consistent with these goals, the bold ambition to end the AIDS epidemic leads with a vision of person-centred, rights-based services, accompanied by social transformation that enables all people to live with civil, cultural, economic, political, social, sexual and reproductive rights.

Integration of policies, interventions and services provides a route to achieve SDG targets 3.3 (ending the epidemics of AIDS and tuberculosis), 3.4 (reducing premature mortality from noncommunicable diseases and promoting mental health and well-being), and 3.5 (strengthening the prevention and treatment of substance abuse) by 2030 in the context of universal health coverage (target 3.8).

The following instruments, strategies and plans support the need for high-quality integrated programmes and services relevant to all people across the life course:

- ▶ UNAIDS 2016–2021 strategy: on the Fast-Track to end AIDS. Geneva: Joint United Nations Programme on HIV/AIDS; 2015 (http://www.unaids.org/en/resources/documents/2015/UNAIDS_PCB37_15-18).
- ▶ Transforming our world: the 2030 Agenda for Sustainable Development. New York: United Nations; 2015 (<https://sustainabledevelopment.un.org/post2015/transformingourworld/publication>).
- ▶ A/HRC/29/33. Report of the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health. New York: United Nations General Assembly; 2015 (<https://www.ohchr.org/en/issues/health/pages/srrihealthindex.aspx>).
- ▶ Universal health coverage fact sheet. Geneva: World Health Organization; 2021 ([https://www.who.int/news-room/fact-sheets/detail/universal-health-coverage-\(uhc\)](https://www.who.int/news-room/fact-sheets/detail/universal-health-coverage-(uhc))).
- ▶ Global accelerated action for the health of adolescents (AA-HA!): guidance to support country implementation. Geneva: World Health Organization; 2017 (<https://www.who.int/publications-detail-redirect/9789241512343>).
- ▶ The global strategy for women’s, children’s and adolescents’ health (2016–2030). Geneva: World Health Organization; 2015 (<https://www.who.int/life-course/partners/global-strategy/globalstrategyreport2016-2030-lowres.pdf>).

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- ▶ End inequalities. End AIDS. Global AIDS strategy 2021–2026. Geneva: Joint United Nations Programme on HIV/AIDS; 2021 (<https://www.unaids.org/en/resources/documents/2021/2021-2026-global-AIDS-strategy>).
- ▶ Agenda for zero discrimination in health-care settings. Geneva: Joint United Nations Programme on HIV/AIDS; 2017 (https://www.unaids.org/sites/default/files/media_asset/2017ZeroDiscriminationHealthCare.pdf).
- ▶ A/Res/70/266. Political Declaration on HIV and AIDS: on the Fast Track to accelerating the fight against HIV and to ending the AIDS epidemic by 2030. New York: United Nations General Assembly; 2016 (<https://www.unaids.org/en/resources/documents/2016/2016-political-declaration-HIV-AIDS>).
- ▶ A/75/L.95. Political Declaration on HIV and AIDS: ending inequalities and getting on track to end AIDS by 2030. New York: United Nations General Assembly; 2021 (https://www.unaids.org/en/resources/documents/2021/2021_political-declaration-on-hiv-and-aids).
- ▶ Thirteenth general programme of work 2019–2023. Geneva: World Health Organization; 2019 (<https://www.who.int/about/what-we-do/thirteenth-general-programme-of-work-2019---2023>).
- ▶ Global health sector strategy on HIV 2016–2021: towards ending AIDS Geneva: World Health Organization; 2016 (<https://apps.who.int/iris/bitstream/handle/10665/246178/WHO-HIV-2016.05-eng.pdf?sequence=1>).

Mental health and human rights

- ▶ A/HRC/34/32. Mental health and human rights: report of the United Nations High Commissioner for Human Rights. New York: Human Rights Council; 2018 (<http://undocs.org/A/HRC/34/32>).
- ▶ The right to mental health. New York: Office of the United Nations Commissioner for Human Rights (<https://www.ohchr.org/EN/Issues/Health/Pages/RightToMentalHealth.aspx>).
- ▶ Convention on the rights of people with disabilities (CRPD). New York: United Nations Department of Economic and Social Affairs (<https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html>).
- ▶ Comprehensive Mental Health Action Plan 2013–2030. Geneva: World Health Organization; 2021 (<https://www.who.int/publications/i/item/9789240031029>).
- ▶ QualityRights materials for training, guidance and transformation. Geneva: World Health Organization; 2019 (<https://www.who.int/publications/i/item/who-qualityrights-guidance-and-training-tools>).
- ▶ Global action plan on the public health response to dementia 2017–2025. Geneva: World Health Organization; 2017 (<https://www.who.int/publications/i/item/global-action-plan-on-the-public-health-response-to-dementia-2017---2025>).
- ▶ The digital mental health revolution: Transforming care through innovation and scale-up. Roland J, Lawrance E, Insel T, Christensen H. Doha, Qatar: World Innovation Summit for Health; 2020 (<https://2020.wish.org.qa/app/uploads/2020/09/IMPJ7849-03-Digital-Mental-Health-WISH2020-201103-WEB.pdf>).

Substance use

- ▶ A/RES/S-30/L.1. Our joint commitment to effectively addressing and countering the world drug problem. New York: United Nations General Assembly; 2016 (<https://undocs.org/A/RES/S-30/1>).
- ▶ Ministerial declaration on strengthening our actions at the national, regional and international levels to accelerate the implementation of our joint commitments to address and counter the world drug problem. Vienna: United Nations Office on Drugs and Crime; 2019 (https://www.unodc.org/documents/commissions/CND/2019/Ministerial_Declaration.pdf).
- ▶ International drug control conventions. Vienna: United Nations Office on Drugs and Crime (<https://www.unodc.org/unodc/en/commissions/CND/conventions.html>).
- ▶ WHA71/41 Rev.2. Progress report by the Director-General to the Seventy-first World Health Assembly on the public health dimension of the world drug problem (decision WHA70(18) (2017)). Geneva: World Health Organization; 2018 (http://apps.who.int/gb/ebwha/pdf_files/WHA71/A71_41Rev2-en.pdf).
- ▶ A70/29. Report by the Secretariat to the Seventieth World Health Assembly. Public health dimension of the world drug problem. Geneva: World Health Organization; 2017 (http://apps.who.int/gb/ebwha/pdf_files/WHA70/A70_29-en.pdf).
- ▶ Global strategy to reduce the harmful use of alcohol. Geneva: World Health Organization; 2010 (<https://www.who.int/publications/i/item/9789241599931>).
- ▶ The SAFER initiative: a world free from alcohol related harm. Geneva: World Health Organization (<https://www.who.int/initiatives/SAFER>)

Cost and cost-effectiveness

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Annex 3. Structured clinical interviews, screening and measurement-based care

Structured clinical interviews are the gold standard for accurately diagnosing mental health and substance use conditions (285). They have traditionally been used for research purposes, often implemented by non-clinicians trained in their administration. Increasingly, clinicians see the value of using these interviews in routine clinical work.

The Mini-International Neuropsychiatric Interview (MINI) (286) is a short structured diagnostic interview, developed jointly by psychiatrists and clinicians in Europe and the United States of America for the Diagnostic and statistical manual of mental disorders (DSM) IV and the *International classification of diseases* (ICD) 10th revision psychiatric disorders.

With an administration time of approximately 15 minutes, the MINI was designed to meet the need for a short but accurate structured psychiatric interview for multicentre clinical trials and epidemiology studies and to be used as a first step in outcome tracking in non-research clinical settings (287).

The Structured Clinical Interview for DSM-5 (SCID-5) is a structured diagnostic interview for making DSM-5 diagnoses (288). SCID-5 is organized into diagnostic modules. Users can assess mood disorders, psychotic disorders, substance use disorders, anxiety disorders, obsessive–compulsive and related disorders, eating disorders, somatic symptom disorders, some sleep disorders, externalizing disorders, and trauma- and stressor-related disorders. Published versions are available for clinicians (SCID-CV) and for clinical trials (SCID-CT).

The WHO World Mental Health Composite International Diagnostic Interview (WHO WMH-CIDI) is a diagnostic interview that can be administered by trained lay interviewers. It integrates diagnostic criteria of the ICD and the DSM classification systems. It has previously been used for epidemiological and other cross-cultural studies (289).

Symptom-based screening tools

These tools permit providers to quantify symptoms of mental health and substance use conditions to monitor and track symptoms reliably over time (290). Screening should take place only when clinical services are available to provide clinical assessment to verify a diagnosis and to provide any needed care.

Results of screening tools are most meaningful when the assessments have been validated in the populations screened. Several screening assessments are available with strong to very strong evidence for validation in diverse contexts (291), including among people living with HIV (292–294).

Depression and Anxiety: The Physician Health Questionnaire—9 Items (PHQ-9) (295), the Edinburgh Postnatal Depression Scale (EPDS) (296), and the Hospital Anxiety and Depression Scale-Depression (HADS-D) (297) can be administered in primary health care or HIV care settings to assist in measurement-based care for depression.

HADS is notable for its exclusion of somatic symptoms of depression and anxiety, making it useful for assessment of people with medical conditions. The Hospital Anxiety and Depression Scale—Anxiety (HADS-A) is a subscale of HADS that assesses anxiety symptoms.

The Center for Epidemiologic Studies Depression Scale (CES-D10D) (298) and the 10-item short form (CES-D-10) (299) can also be used as screening tools for depression.

Alcohol Use: The Alcohol Use Disorders Identification Test (AUDIT) is a 10-item screening questionnaire used to identify people with harmful or hazardous alcohol use (300).

Substance use, including alcohol, drugs and tobacco: The Alcohol, Smoking and Substance Involvement Screening Test (ASSIST) is an 8-item questionnaire administered in 5–10 minutes that determines a risk score for specific substances and is used to initiate a conversation with people about substance use (51).

HIV-Associated Neurocognitive Disorder: The International HIV Dementia Scale (IHDS) is a brief screening tool for HIV-associated neurocognitive disorder that assesses motor speed, psychomotor speed and memory (301). This was developed for use in low- and middle-income countries, but a recent review suggests it has not been validated adequately for many African settings (142). NeuroScreen, a mobile app-based tool from the United States that has been piloted in South Africa, may be promising for HIV-associated neurocognitive disorder screening in diverse settings (142, 302–304).

Annex 4. Examples of integrated care resources

Collaborative Care Model for managing mental health conditions in primary care

The Collaborative Care Model is an evidence-based approach that leverages task-sharing and a team of providers to deliver person-centred treatment for common mental health conditions such as depression and anxiety in primary health-care settings (184).

The model has five components. All are compatible with HIV care settings:

- ▶ The primary health-care or HIV care team provides medical care and prescribes medication for mental health treatment when needed.
- ▶ A trained behavioural care manager supports adherence, delivers psychological interventions (e.g. motivational interviewing, behavioural activation, problem-solving therapy), coordinates management of mental health medicines when needed in consultation with a mental health specialist, and maintains contact with the person over the course of the treatment.
- ▶ Measurement-based care involves use of an assessment tool such as the PHQ-9 to measure symptoms at each encounter.
- ▶ An electronic registry is used to track outcomes.
- ▶ A mental health specialist provides guidance to the care manager via regularly scheduled reviews of cases and may on occasion consult directly with patients when there is no improvement. The specialist may be local or remote, depending on local human resources.

The Collaborative Care Model has been used successfully to manage mental health conditions and noncommunicable diseases (305). It can be implemented in low- and middle-income countries (233). It has been shown to be acceptable to people living with HIV in settings where it has been tested (185).

Mental Health Integration Programme

The Mental Health Integration Programme is an evidence-based scale-up of an integrated care package for common mental health conditions in South Africa that applies the Collaborative Care Model for stepped-care management of mental health in primary health care for people living with HIV (235). The programme demonstrates how roles can be assigned and capacity built for integrated care delivery.

Facility-based primary health-care nurses are at the core of the model as case managers. They are trained in adult primary care and enhanced adult primary care mental health to assist in standardization of screening, diagnosis, treatment and referral. Primary health care nurses:

- ▶ Identify people with psychosocial problems that could have an impact on adherence.

- ▶ Provide basic psychosocial support and brief advice.
- ▶ Refer people within the stepped collaborative care system according to severity of symptoms to a facility-based lay counsellor trained to provide psychosocial and expanded adherence counselling; a physician for initiation of mental health medicine; or a mental health specialist or outpatient department for further assessment and medical or psychological treatment.
- ▶ Monitor progress and response at follow-up visits and refer people within the collaborative care model as needed.

Facility-based lay counsellors provide:

- ▶ Onsite psychoeducation on psychosocial problems such as depression that may interfere with adherence.
- ▶ Referral services to people with common chronic conditions for expanded adherence counselling, helping people to understand the importance of taking their medicines, possible side-effects, and any difficulties they may have with adherence.
- ▶ Referral services for individual and group psychosocial counselling over a number of sessions to address key psychosocial problems (e.g. poverty, stigma, interpersonal conflict) that may trigger or maintain depressive symptoms and interfere with adherence.

Lay counsellors can consult with people aged 18 years and older. They do not provide counselling for people with severe mental health conditions or suicidal tendencies, couples, or survivors of trauma such as rape and other crimes.

Registered psychological counsellors are based at the subdistrict level and are under the supervision of the district psychologist. They provide:

- ▶ On-site individual supervision of lay counsellors.
- ▶ Group supervision and emotional support to lay counsellors.
- ▶ Individual counselling for people with trauma or complex cases that cannot be managed by lay counsellors.

District primary health-care physicians diagnose mental disorders, prescribe mental health medicines, monitor responses and titrate doses, and review complex or severe cases.

Community health workers conduct home visits and facilitate tracing of people not adhering to treatment and returning them to care, community case detection and referral.

Interactive group counselling for women living with HIV on perinatal depression and disclosure

Pregnant women living with HIV attending hospital-based antenatal clinics in Dar es Salaam, United Republic of Tanzania were invited to participate in a study of a group psychosocial intervention using a problem-solving therapy approach. The women assigned to the experimental psychosocial intervention received a structured group counselling intervention over six weekly sessions. The group counselling intervention was delivered by a nurse midwife. Sessions addressed challenges in living with HIV, information on vertical transmission of HIV and prevention approaches, support systems, safer sex behaviours, the impact of HIV on health, and discussions on disclosure to partners, family and friends (174).

Women in the control intervention received the available pre- and post-test voluntary counselling and testing. Women in the group counselling intervention showed a small reduction in the level of depressive symptoms and reported a higher rate of overall personal satisfaction with the response to their disclosure. There were no differences in rates of disclosure.

SEEK-GSP

The Social, Emotional and Economic Empowerment through Knowledge of Group Support Psychotherapy (SEEK-GSP) programme aims to narrow the treatment gap for depression among men and women living with HIV. Group support psychotherapy treats depression by enhancing emotional and social support, ability to practise positive coping skills, and income-generating skills (306).

Primary health-care workers in rural health centres are trained. They then train lay health workers to identify people with depression and treat them through eight village-based weekly group support psychotherapy sessions lasting two to three hours.

The programme has been successfully scaled up and integrated into HIV care in rural communities in three northern districts of Uganda. Unlike previous studies of group psychotherapies for depression, there was a high level of engagement, with 80% of participants completing all eight sessions.

Evaluation of the programme shows that group support psychotherapy:

- ▶ Is effective in the treatment of mild to moderate depression. Almost all participants achieve remission within 6 months and remain free from depression 12 months later, with a greater effect observed among males than females.
- ▶ Reduces post-traumatic stress symptoms, alcohol use and HIV-related stigma, and improves social support, self-esteem, antiretroviral therapy adherence and viral load suppression.
- ▶ Is more cost-effective than group HIV education.

Let's Talk

Let's Talk is a 14-week intervention offered in a support group format to adolescents aged 13 years and over and their primary caregivers (307). The programme features a structured approach with a consistent pattern of activities delivered in two-hour sessions, including an opening ritual, discussion of home practice from the previous session, and three to five core interactive exercises. Sessions close with a reflective discussion on lessons learned, a home practice assignment, a closing ritual, and a lottery draw as a continued incentive to participation.

The programme, developed in South Africa, aims to build HIV knowledge and behavioural skills in tandem with support for caregiver and adolescent mental health, stronger relationships and improved parenting practices.

Key findings of the pilot study included the following (308):

- ▶ Adolescents exhibited higher levels of HIV transmission knowledge, condom knowledge, and self-efficacy to negotiate condom use.
- ▶ Adolescents demonstrated lower levels of depression and anxiety.
- ▶ Adolescents reported greater connectedness to their caregivers and increased communication with their caregivers about healthy sexuality.

- ▶ Caregivers' HIV transmission knowledge improved.
- ▶ Caregivers reported lower levels of depression and anxiety.
- ▶ Adolescents reported improved ability to cope and express emotions, solve problems and effectively communicate. They described improved relationships with caregivers, including receiving fewer punitive responses from caregivers.

READY+

The Resilient, Empowered Adolescents and Young People (READY+) model, implemented across Eswatini, Mozambique, the United Republic of Tanzania and Zimbabwe, focuses on creating a conducive environment for treatment adherence and psychosocial support for adolescents and young people living with HIV, including interventions at different levels: the individual, the home, the community and the facility (309).

The programme increases access to holistic care and support, including sexual and reproductive health and rights and mental health.

At the heart of the interventions are Community Adolescent Treatment Supporters (CATS), who provide information, counselling and psychosocial support to other children, adolescents and young people living with HIV through home visits, presence at HIV clinics, and support groups and m-health services.

Mental health is promoted through counselling led by CATS and trained support group leaders and through adolescent-friendly services at clinics. Mental health is routinely assessed. People at risk of mental health conditions are linked to services for further assessment, diagnosis and treatment. Support for ongoing counselling, treatment and adherence at home and the clinic is provided.

Friendship Bench

The Friendship Bench is an evidence-based intervention developed in Zimbabwe to expand access to mental health care. The Friendship Bench aims to enhance mental well-being and improve quality of life through the use of problem-solving therapy delivered by trained lay health workers, focusing on people with common mental health conditions such as anxiety and depression. The intervention uses a cognitive-behavioural therapy-based approach. The lay health workers are known as “grandmothers”—trained community volunteers who offer counselling on wooden benches within the grounds of a clinic in a discrete area (310, 311).

The Friendship Bench is implemented in primary care. About 80% of clients are people living with HIV, many of whom report symptoms of common mental health conditions and post-traumatic stress disorder. Problem-solving therapy delivered by Friendship Bench lay health workers reduces symptoms of common mental health conditions. Young adults receiving the intervention perceive improvements in their adherence to care and greater acceptance of HIV status.

A Youth Friendship Bench (YouFB) project builds on the same basic concepts but centres on the needs of people aged 16–19 years. It engages counsellors known as “buddies” who are university students. YouFB delivers interventions in schools, other community settings and clinics. Its services are intended to reach adolescents at high risk for mental health conditions (e.g. pregnant youth, young offenders).

Annex 5. Stigma reduction for people living with HIV and people with mental health conditions

Social stigma manifests at multiple levels for people with HIV, key populations, people with mental health conditions, and people from other vulnerable groups. Stigma may come from intrapersonal, interpersonal, community, organizational or structural levels (312, 313). Strategies to reduce stigma may be most effective when they target these different levels, although the largest evidence base for stigma reduction strategies targets the intrapersonal and interpersonal levels. These strategies include education about the stigmatized population delivered in a variety of formats, contact with people with lived experience of the condition (e.g. HIV, drug use, mental health condition), coping or skills acquisition, social support, drama and problem-solving.

Table 8.

Intervention approaches for stigma reduction

Level of stigma	Intervention focus and strategies
Intrapersonal (self-stigma)	<ul style="list-style-type: none"> ▶ Self-help ▶ Counselling ▶ Treatment of stigmatized condition
Interpersonal	<ul style="list-style-type: none"> ▶ Enhance care and social support
Community	<ul style="list-style-type: none"> ▶ Reduce stigmatizing attitudes and behaviours in the community through education, awareness-raising, social marketing, contact, advocacy, and working with media to reduce perpetuation of stigmatizing attitudes
Organizational, institutional	<ul style="list-style-type: none"> ▶ Institute training programmes and institutional policies
Governmental, structural level	<ul style="list-style-type: none"> ▶ Establish and enforce legal, policy and rights-based structures

The Global Partnership for Action to Eliminate all Forms of HIV-related Stigma and Discrimination, established in 2018, commits to take action on HIV-related stigma and discrimination across six settings: health care, education, the workplace, legal and justice systems, communities and families, and emergency and humanitarian settings (314).

Promising strategies for stigma reduction in health-care settings include the following (115, 315, 316):

- ▶ Providing information about the condition, related stigma and its effects.
- ▶ Equipping providers with skills, such as cultural competency to work with people from the stigmatized group.
- ▶ Encouraging participatory learning for health providers and clients (possibly together) to actively participate in an intervention.
- ▶ Encouraging members of a stigmatized group to participate in the delivery of an intervention to change attitudes among health-care providers (i.e. increased empathy, reduced stereotypical thinking).
- ▶ Empowering people's coping mechanisms to overcome stigma in health-care settings.
- ▶ Changing policies that discriminate, providing clinical materials, and restructuring facilities.
- ▶ Involving people living with HIV, people with mental health conditions, people who use drugs, and people with drug or alcohol dependence in service planning to sensitize health facilities to their needs.

Activities aimed at improving community attitudes towards people with mental health, neurological and substance use conditions (e.g. anti-stigma campaigns) may be considered for implementation. These activities should be planned and implemented with the involvement of service users, carers and the wider community and should include direct and positive social contact with people with mental health, neurological and substance use conditions (317).

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Suggested citation. Integration of mental health and HIV interventions. Key considerations. Geneva: Joint United Nations Programme on HIV/AIDS and the World Health Organization; 2022. Licence: CC BY-NC-SA 3.0 IGO.

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ISBN (WHO) 978-92-4-004317-6 (electronic version)

ISBN (WHO) 978-92-4-004318-3 (print version)

ISBN (UNAIDS) 978-92-9253-092-1
UNAIDS/JC3049E



UNAIDS
Joint United Nations
Programme on HIV/AIDS

20 Avenue Appia
1211 Geneva 27
Switzerland

+41 22 791 3666

unaids.org

World Health Organization
Department of HIV/AIDS

20 Avenue Appia
1211 Geneva 27
Switzerland

Email: hiv-aids@who.int