Local Service Category:	**Mental Health Services**
Amount Available**:**	**To be determined**
Unit Cost	
Budget Requirements or Restrictions **(TRG Only)**:	Maximum of 10% of budget for Administrative Cost.
DSHS Service Category Definition	Mental Health Services include psychological and psychiatric treatment and counseling services offered to individuals with a diagnosed mental illness, conducted in a family/couples, group or individual setting, based on a detailed treatment plan, and provided by a mental health professional licensed or authorized within the State to provide such services, typically including psychiatrists, psychologists, and licensed clinical social workers. Mental health counseling services includes outpatient mental health therapy and counseling (individual and family/couple) provided solely by Mental Health Practitioners licensed in the State of Texas. Mental health services include: • Mental Health Assessment • Treatment Planning • Treatment Provision • Individual psychotherapy • Family psychotherapy • Conjoint psychotherapy • Group psychotherapy • Psychiatric medication assessment, prescription and monitoring • Psychotropic medication management • Drop-In Psychotherapy Groups • Emergency/Crisis Intervention General mental health therapy, counseling and short-term (based on the mental health professional's judgment) bereavement support is available for family members or significant others of people living with HIV.
Local Service Category Definition:	**Individual Therapy/counseling** is defined as 1:1 or family-based crisis intervention and/or mental health therapy provided by a licensed mental health practitioner to an eligible person living with HIV. **Family/Couples Therapy/Counseling** is defined as crisis intervention and/or mental health therapy provided by a licensed mental health practitioner to a family or couple (opposite-sex, same-sex, transgendered or non-gender conforming) that includes an eligible person living with HIV. **Support Groups** are defined as professionally led (licensed therapists or counselor) groups that comprise people living with HIV, family members, or significant others for the purpose of providing emotional support directly related to the stress of caring for people living with HIV.
Target Population (age, gender, geographic, race, ethnicity, etc.):	People living with HIV and affected individuals living within the Houston HIV Service Delivery Area (HSDA).
Services to be Provided:	Agencies are encouraged to have available to clients all modes of counseling services, i.e., crisis, individual, family, and group. Sessions may be conducted in-home. Agency must provide professional support group sessions led by a licensed counselor.

Service Unit Definition(s) **(TRG Only)**:	**Individual Crisis Intervention and/or Therapy:** A unit of service is defined as an individual counseling session lasting a minimum of 45 minutes. **Family/Couples Crisis Intervention and/or Therapy:** A unit of service is defined as a family/couples counseling session lasting a minimum of 90 minutes. **Group Therapy:** A unit of service is defined as one (1) eligible client attending 90 minutes of group therapy. The minimum time allowable for a single group session is 90 minutes and maximum time allowable for a single group session is 120 minutes. No more than one unit may be billed per session for an individual or group session. A minimum of three (3) clients must attend a group session in order for the group session to eligible for reimbursement. **Consultation:** One unit of service is defined as 15 minutes of communication with a medical or other appropriate provider to ensure case coordination.
Financial Eligibility:	Income at or below 300% Federal Poverty Guidelines.
Client Eligibility:	For individual therapy session, person living with HIV or the affected significant other of a person living with HIV, resident of Houston HSDA. Person living with HIV must have a current DSM diagnosis eligible for reimbursement under the State Medicaid Plan. Client must not be eligible for services from other programs or providers (i.e. MHMRA of Harris County) or any other reimbursement source (i.e. Medicaid, Medicare, Private Insurance) unless the client is in crisis and cannot be provided immediate services from the other programs/providers. In this case, clients may be provided services, if the client applies for the other programs /providers, until the other programs/providers can take over services. Medicaid/Medicare, Third Party Payer and Private Pay status of clients receiving services under this grant must be verified by the provider prior to requesting reimbursement under this grant. For support group sessions, client must be either a person living with HIV or the significant other of person living with HIV. Affected significant other is eligible for services only related to the stress of caring for a person living with HIV.
Agency Requirements **(TRG Only)**:	Agency must provide assurance that the mental health practitioner shall be supervised by a licensed therapist qualified by the State to provide clinical supervision. This supervision should be documented through supervision notes. Keep attendance records for group sessions. Must provide 24-hour access to a licensed counselor for current clients with

	emotional emergencies. Clients eligible for Medicaid or 3rd party payer reimbursement may not be billed to grant funds. Medicare Co-payments may be billed to the contract as ½ unit of service. Documentation of at least one therapist certified by Medicaid/Medicare on the staff of the agency must be provided in the proposal. All funded agencies must maintain the capability to serve and seek reimbursement from Medicaid/Medicare throughout the term of their contract. Potential clients who are Medicaid/ Medicare eligible may not be denied services by a funded agency based on their reimbursement status (Medicaid/Medicare eligible clients may not be referred elsewhere in order that non-Medicaid/Medicare eligible clients may be added to this grant). Failure to serve Medicaid/Medicare eligible clients based on their reimbursement status will be grounds for the immediate termination of the provider's contract. Must comply with the State Services Standards of Care. Must provide a plan for establishing criteria for prioritizing participation in group sessions and for termination from group participation. Providers and system must be Medicaid/Medicare certified to ensure that Ryan White funds are the payer of last resort.
Staff Requirements:	It is required that counselors have the following qualifications: Licensed Mental Health Practitioner by the State of Texas (LCSW, LMSW, LPC PhD, Psychologist, or LMFT). At least two years' experience working with HIV disease or two years' work experience with chronic care of a catastrophic illness. Counselors providing family sessions must have at least two years' experience in family therapy. Counselors must be covered by professional liability insurance with limits of at least $300,000 per occurrence.
Special Requirements **(TRG Only)**:	All mental health interventions must be based on proven clinical methods and in accordance with legal and ethical standards. The importance of maintaining confidentiality is of critical importance and cannot be overstated unless otherwise indicated based on Federal, state and local laws and guidelines (i.e. abuse, self or other harm). All programs must comply with the Health Insurance Portability and Accountability Act (HIPAA) standards for privacy practices of protected health information (PHI) information. Mental health services can be delivered via telehealth and must follow applicable federal and State of Texas privacy laws. Mental health services that are provided via telehealth must be in accordance with State of Texas mental health provider practice requirements, see Texas Occupations Code, Title 3 Health Professions and chapter 111 for Telehealth & Telemedicine.

	When psychiatry is provided as a mental health service via telehealth then the provider must follow guidelines for telemedicine as noted in Texas Medical Board (TMB) guidelines for providing telemedicine, Texas Administrative Code, Texas Medical Board, Rules, Title 22, Part 9, Chapter 174, RULE §174.1 to §174.12 Medicare and private insurance co-payments are eligible for reimbursement under this grant (in this situation the agency will be reimbursed the client's co-payment only, not the cost of the session which must be billed to Medicare and/or the Third-party payer). Extensions will be addressed on an individual basis when meeting the criteria of counseling directly related to HIV illness. Under no circumstances will the agency be reimbursed more than two (2) units of individual therapy per client in any single 24-hour period. Agency should develop services that focus on the most current Special Populations identified in the *Houston Area Comprehensive Plan for HIV Prevention and Care Services* including Adolescents, Homeless, Incarcerated & Recently Released (IRR), Injection Drug Users (IDU), Men who Have Sex with Men (MSM), and Transgender populations. Additionally, services should focus on increasing access for individuals living in rural counties. Must comply with the Houston EMA/HSDA Standards of Care. The agency must comply with **the DSHS Mental Health Services Standards of Care**. The agency must have policies and procedures in place that comply with the standards ***prior*** to delivery of the service.

FY 2021 RWPC "How to Best Meet the Need" Decision Process

Step in Process: **Council**		Date: **06/11/2020**
Recommendations:	Approved: Y:_____ No: _____ Approved With Changes:_____	If approved with changes list changes below:
1.		
2.		
3.		

Step in Process: **Steering Committee**		Date: **06/04/2020**
Recommendations:	Approved: Y:_____ No: _____ Approved With Changes:_____	If approved with changes list changes below:
1.		
2.		
3.		

Step in Process: **Quality Improvement Committee**		Date: **05/19/2020**
Recommendations:	Approved: Y:_____ No: _____ Approved With Changes:_____	If approved with changes list changes below:
1.		
2.		
3.		

Step in Process: **HTBMTN Workgroup #2**	Date: **04/21/2020**
Recommendations:	Financial Eligibility:
1.	
2.	
3.	

MENTAL HEALTH SERVICES
2019 CHART REVIEW

PREFACE

DSHS Monitoring Requirements

The Texas Department of State Health Services (DSHS) contracts with The Houston Regional HIV/AIDS Resource Group, Inc. (TRG) to ensure that Ryan White Part B and State of Texas HIV Services funding is utilized to provide in accordance to negotiated Priorities and Allocations for the designated Health Service Delivery Area (HSDA). In Houston, the HDSA is a ten-county area including the following counties: Austin, Chambers, Colorado, Fort Bend, Harris, Liberty, Montgomery, Walker, Waller, and Wharton. As part of its General Provisions for Grant Agreements, DSHS also requires that TRG ensures that all Subgrantees comply with statutes and rules, perform client financial assessments, and delivery service in a manner consistent with established protocols and standards.

As part of those requirements, TRG is required to perform annual quality compliance reviews on all Subgrantees. Quality Compliance Reviews focus on issues of administrative, clinical, data management, fiscal, programmatic and quality management nature. Administrative review examines Subgrantee operating systems including, but not limited to, non-discrimination, personnel management and Board of Directors. Clinical review includes review of clinical service provision in the framework of established protocols, procedures, standards and guidelines. Data management review examines the Subgrantee's collection of required data elements, service encounter data, and supporting documentation. Fiscal review examines the documentation to support billed units as well as the Subgrantee's fiscal management and control systems. Programmatic review examines non-clinical service provision in the framework of established protocols, procedures, standards and guidelines. Quality management review ensures that each Subgrantee has systems in place to address the mandate for a continuous quality management program.

QM Component of Monitoring

As a result of quality compliance reviews, the Subgrantee receives a list of findings that must be address. The Subgrantee is required to submit an improvement plan to bring the area of the finding into compliance. This plan is monitored as part of the Subgrantee's overall quality management monitoring. Additional follow-up reviews may occur (depending on the nature of the finding) to ensure that the improvement plan is being effectively implemented.

Scope of Funding

TRG contracts with two Subgrantees to provide hospice services in the Houston HSDA.

INTRODUCTION

Description of Service

Mental Health Services are treatment and counseling services offered to individuals with a diagnosed mental illness, conducted in a group or individual setting, and provided by a mental health professional licensed or authorized within the State to render such services. **Individual Therapy/counseling** is defined as 1:1 or family-based crisis intervention and/or mental health therapy provided by a licensed mental health practitioner to an eligible HIV positive or HIV/AIDS affected individual. **Support Groups** are defined as professionally led (licensed therapists or counselor) groups that comprise HIV positive individuals, family members, or significant others for the purpose of providing emotional support directly related to the stress of caring for an HIV positive person.

Tool Development

The TRG Mental Health Services Tool is based upon established local standards of care.

Chart Review Process

All charts were reviewed by Bachelors-degree registered nurse experienced in treatment, management, and clinical operations in HIV care of over 10 years. The collected data for each site was recorded directly into a preformatted computerized database. The data collected during this process is to be used for service improvement.

File Sample Selection Process

Using the ARIES database, the file sample was created from a provider population of 216 who accessed mental health services in the measurement. The records of 51 clients were reviewed, representing 24% of the unduplicated population. The demographic makeup of the providers was used as a key to file sample pull.

NOTES: DSHS modified their review process to exclude indicators that were <51% in last years this year. As a result, only one (1) indicator was reviewed in 2018. The results listed below are from 2017, with the exception of the one (1) indicator reviewed.

Demographics- Mental Health

2018 Annual

Total UDC: 216

Age	Number of Clients	% of Total
Client's age as of the end of the reporting period		
Less than 2 years	0	0.00%
02 - 12 years	0	0.00%
13 - 24 years	4	1.85%
25 - 44 years	73	33.80%
45 - 64 years	127	58.80%
65 years or older	12	5.55%
Unknown	0	0.00%
	216	100%
Gender	**Number of Clients**	**% of Total**
"Other" and "Refused" are counted as "Unknown"		
Female	20	9.26%
Male	196	90.74%
Transgender FTM	0	0.00%
Transgender MTF	5*	2.31%
Unknown	0	0.00%
	216	100%
Race/Ethnicity	**Number of Clients**	**% of Total**
Includes Multi-Racial Clients		
White	138	63.89%
Black	73	33.80%
Hispanic	38*	17.59%
Asian	2	0.93%
Hawaiian/Pacific Islander	0	0.00%
Indian/Alaskan Native	1	0.46%
Unknown	2	0.93%
	216	100%

From 01/01/18 - 12/31/18

2019 Annual

Total UDC: 282

Age	Number of Clients	% of Total
Client's age as of the end of the reporting period		
Less than 2 years	0	0.0%
02 - 12 years	0	0.0%
13 - 24 years	9	3.2%
25 - 44 years	139	49.2%
45 - 64 years	119	42.2%
65 years or older	15	5.3%
Unknown	0	0.0%
	282	100%
Gender	**Number of Clients**	**% of Total**
"Other" and "Refused" are counted as "Unknown"		
Female	42	14.9%
Male	240	85.1%
Transgender FTM	0	0.00%
Transgender MTF	9*	3.19%
Unknown	0	0.00%
	282	100%
Race/Ethnicity	**Number of Clients**	**% of Total**
Includes Multi-Racial Clients		
White	160	56.7%
Black	115	40.8%
Hispanic	66*	23.4%
Asian	0	0.0%
Hawaiian/Pacific Islander	1	0.35%
Indian/Alaskan Native	2	0.70%
Multi/Unknown	4	1.4%
	282	100%

From 01/01/19 - 12/31/19

RESULTS OF REVIEW-2018

Psychosocial Assessment

Psychosocial Assessment completed no later than third counseling session.

	Yes	No	N/A
Clients with psychosocial assessment completed no later than the 3rd appt.	59	-	-
Client records reviewed that included in this measure.	59	-	-
Rate	**100%**	-	-

Psychosocial Assessment: Required Elements

Psychosocial Assessment included assessment of all elements in the Mental Health Standards.

	Yes	No	N/A
Clients with assessment completed no later than the 3rd appt.	59	-	-
Client records reviewed that included in this measure.	59	-	-
Rate	**100%**	-	-

Treatment Plan

(**NEW 2018**) Documentation of detailed treatment plan and services provided within client's primary record.

	Yes	No	N/A
Treatment plan and services detailed in client record.	38	12	1
Client records reviewed that included in this measure.	50	50	51
Rate	**76%**	**24%**	2%

Treatment Plan completed no later than third counseling session.

	Yes	No	N/A
Clients with treatment plans completed no later than the 3rd counseling session.	52	-	7
Client records reviewed that included in this measure.	52	-	59
Rate	**100%**	-	12%

Treatment Plan: Signed by Therapist

Treatment Plan was signed by the mental health professional who rendered service.

	Yes	No	N/A
Clients with treatment plans signed by the mental health professional rendering service.	52	-	7
Client records reviewed that included in this measure.	52	-	59
Rate	**100%**	-	12%

Treatment Plan: Reviewed/Modified

Treatment Plan was reviewed and/modified at least every ninety (90) days.

	Yes	No	N/A
Clients with treatment plans reviewed/modified every 90 days.	50	2	7
Client records reviewed that included in this measure.	52	52	59
Rate	**96%**	**4%**	12%

Services Provided: Required Elements

Treatment included counseling covering all elements outlined in the Mental Health Standards.

	Yes	No	N/A
Clients who received counseling covering all elements.	59	-	-
Client records reviewed that included in this measure.	59	-	-
Rate	**100%**	-	-

Services Provided: Psychiatric Evaluation

Treatment included psychiatric evaluation was conducted/referral completed if needed.

	Yes	No	N/A
Clients who psychiatric evaluation was conducted/referral completed if needed.	1	-	58
Client records reviewed that included in this measure.	59	-	59
Rate	**100%**	-	-

Services Provided: Psychiatric Medication

Treatment included psychotropic medication management services, if needed.

	Yes	No	N/A
Clients who documented psychotropic medication management service was provided if needed.	-	-	59
Client records reviewed that included in this measure.	59	-	59
Rate	**0%**	-	100%

Services Provided: Progress Notes

Progress notes completed for each counseling session and contained all elements outlined in the Mental Health Standards.

	Yes	No	N/A
Clients with progress notes complete and containing all elements.	59	-	-
Client records reviewed that included in this measure.	59	-	-
Rate	**100%**	-	-

Services Provided: Medical Care Coordination

Evidence that care was coordinated as appropriate across all medical care coordination team members.

	Yes	No	N/A
Clients with care coordinated across team.	59	-	-
Client records reviewed that included in this measure.	59	-	-
Rate	**100%**	-	-

Referrals: Referrals Made as Needed

Documentation that referrals were made as needed to specialized medical/mental health providers/services.

	Yes	No	N/A
Clients with referral needed and made.	27	-	32
Client records reviewed that included in this measure.	27	-	59
Rate	**100%**	-	-

Referrals: Referrals Outcome

Documentation is present in client's record of the referral and the outcome of the referral.

	Yes	No	N/A
Clients with referral document with outcome of referral.	27	-	32
Client records reviewed that included in this measure.	27	-	59
Rate	**100%**	-	-

Discharge Planning

Documentation is present that discharge planning was completed with the client.

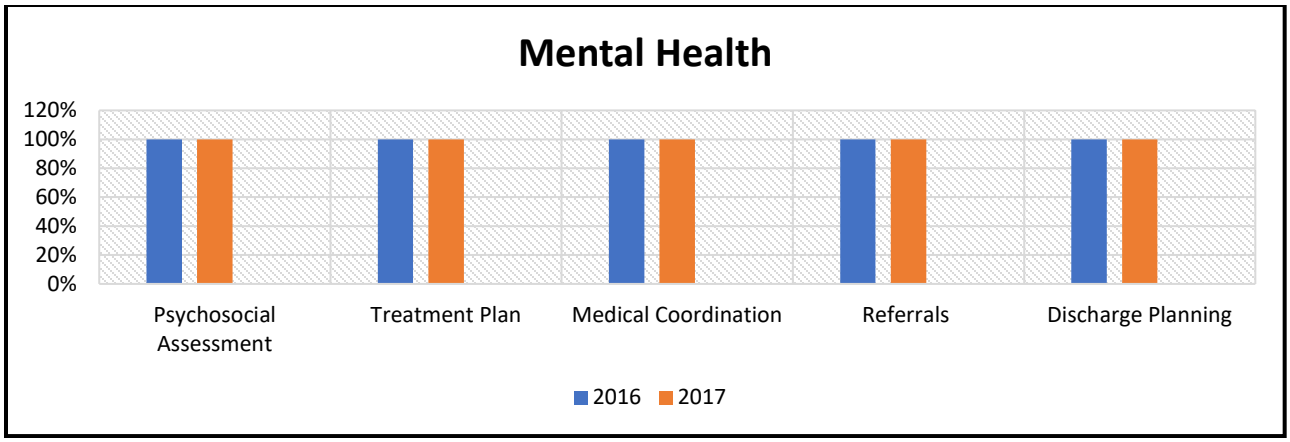
	Yes	No	N/A
Clients with documented discharge planning.	26	-	33
Client records reviewed that included in this measure.	26	-	59
Rate	**100%**	-	-

Discharge

Documentation is reason for discharge is located in the client's record and is consistent with agency policies.

	Yes	No	N/A
Clients with documented reason for discharge.	23	-	36
Client records reviewed that included in this measure.	23	-	59
Rate	**100%**	-	-

HISTORICAL DATA



CONCLUSION

Quality of mental health services continues to excellent. All clients reviewed (100%) completed a psychosocial assessment no later than the third counseling session, all clients had a treatment plan and medical care coordination was appropriate across all medical care coordination team members. Eleven data elements were met at 100%.

AMERICAN PSYCHOLOGICAL ASSOCIATION
NEWS

Ending HIV

By Melody Schreiber March 1, 2020

About 1.1 million people in the United States have been diagnosed with HIV, and each year about 39,000 more learn that they have the virus. Meanwhile, fewer than half of those living with HIV have the virus under control, according to the Centers for Disease Control and Prevention (CDC), and only about 15% of those at high risk for contracting HIV are being treated with pre-exposure prophylaxis (PrEP), a drug that protects against the virus.

In his 2019 State of the Union address, President Donald J. Trump announced an ambitious new goal: to stop the HIV epidemic in the United States by 2030. By focusing on "hot spots" of new infections—48 U.S. counties, seven rural states and two cities—the administration aims to reduce new infections by 75% over the next five years and by 90% over the next decade. In October, the Department of Health and Human Services (HHS) through the CDC awarded $13.5 million in its first round of funding to local and state departments of health, and the fiscal year 2020 HHS budget will include $291 million in new funding to address the HIV epidemic.

However, how all of that money will be used is still an open question. The Substance Abuse and Mental Health Services Administration (SAMHSA), for instance, did not receive additional funding in the president's plan to address the epidemic, and some experts are concerned that this omission reflects a largely biomedical approach from the Trump administration, when a behavioral approach may be equally important.

"We were really glad that [HIV] became a topic again," says Monica Ulibarri, PhD, chair of APA's Committee on Psychology and AIDS (COPA) and associate program director in the California School of Professional Psychology's clinical psychology PhD program in San Diego. But, she says, addressing issues such as mental health and substance use is "half the battle" in ending the HIV epidemic. "If you have the medications but you don't bring people to them, you can't use those tools."

Barriers to care

The administration's plan has four prongs: prevent new cases of HIV through prescribing PrEP to those at high risk, diagnose all of those with the virus, treat them with anti-retroviral therapy medications and respond rapidly to emerging hot spots of new infection. The last aspect is key because many new cases of HIV in the United States are found in close-knit communities and geographic regions, such as the 2011–14 outbreak in Scott County, Indiana, where the virus quickly spread among people sharing drug-injection equipment.

Officials say the plan will allow counties, states and districts receiving federal funds to decide where to allocate funding—so if Scott County, for instance, decides that substance use counseling would help curb the epidemic among those who use drugs, local officials could put some of the funds toward counseling. But because behavioral health is not explicitly part of the plan or mentioned in its four main areas of focus, some experts worry that officials implementing the plan across the country may not realize that psychosocial resources are necessary or even permissible under the federal funding. And while the plan does target geographic hot spots, it is less successful at prioritizing the specific communities in those areas that are the hardest to reach with health care, says psychologist Jennifer Brown, PhD, an associate professor of psychiatry at the University of Cincinnati College of Medicine and a COPA member. "Oftentimes those are the communities at greatest risk for acquiring [and] spreading HIV."

Indeed, U.S. HIV infection rates are growing most rapidly in the communities that face significant challenges in accessing health care, including among Latinx people, African Americans, American Indians and Alaska Natives, men who have sex with men, transgender

people, sex workers and people who inject drugs. And the region of the country where HIV infection rates are increasing fastest is the South, especially the rural areas. Only about 37% of Americans live in the South, but the region sees more than half of all new HIV infections in the United States.

Without addressing the tangled web of issues that make tackling the HIV epidemic in these communities so challenging, some psychologists say, ending the epidemic isn't possible. Those issues include stigma, discrimination, racism, homophobia and transphobia, as well as the ways in which those biases interact with existing health barriers like poverty, lack of health insurance and a paucity of providers. Many patients have difficulty adhering to medication regimens, which is complicated by social issues such as unsteady income, unstable housing and food insecurity, as well as cultural insensitivity or lack of knowledge on the part of some providers. And many people at risk for or living with HIV also have co-morbid conditions, such as exposure to trauma and violence, substance use disorders and mental health issues.

These aren't just complications to overcoming the epidemic, says clinical psychologist Robert Remien, PhD, director of the HIV Center for Clinical and Behavioral Studies at Columbia University, which is funded by the National Institute of Mental Health. "These are drivers of the HIV epidemic."

Interventions that work

Psychologists are uniquely qualified to help address many of these barriers, says Remien, who was on a New York state governor's task force to develop a plan to end the HIV epidemic in the state. They can help by identifying those who may be living with HIV or more likely to acquire HIV, offering them HIV counseling and helping them stay in care. They also have a deep understanding of how certain experiences and behaviors—including exposure to trauma and violence, substance use disorders and mental health issues—drive risk by leading to risky sexual behaviors or injection drug use.

The administration's plan aims to stop the HIV epidemic by prescribing anti-retroviral medication to people with HIV and PrEP to those at high risk of acquiring it.

"There's a real emphasis right now on biomedical strategies, whether that's PrEP for prevention or getting individuals living with HIV onto anti-retroviral medications," Brown says. But psychologists understand that reaching people who need the medications and getting them to take the pills regularly are enormous challenges that have more to do with behavior than anything else.

In one study of men who have sex with men, for example, she and her co-authors found that among participants living with HIV, stigma often led to depression—and that depression diminished patients' ability to adhere to their medication regimens (Mitzel, L.D., *AIDS and Behavior*, Vol. 19, No. 8, 2015). The study concluded that effective HIV adherence programs need to include treatment for depressive symptoms.

Treatment for mental health and substance use disorders is important for prevention as well as treatment adherence. In Ohio, where Brown lives, the HIV epidemic has shifted toward individuals who use opioids and other drugs, she says. In an analysis of randomized controlled trials with more than 1,300 total participants, she and her colleagues found that addiction treatment was often associated with decreased risky sexual behaviors, such as those that could lead to HIV (*Prevention Science*, Vol. 19, No. 6, 2018).

Iván Balán, PhD, a clinical psychologist and research scientist at the HIV Center for Clinical and Behavioral Studies at Columbia University and a COPA member, studies sexual risk behavior among men who have sex with men, among other topics. He stressed the importance of listening to patients and working with them toward their goals. For instance, providers who offer PrEP may be eager to get at-risk patients on medication as quickly as possible—but if patients aren't ready to take it, they won't. "Just because we as providers are ready for someone to begin on PrEP doesn't mean that they are ready to do so," Balán says. Instead, providers need to engage

with such patients—a field in which psychologists often have experience they can share, he says. Balán recommends "motivational interviewing," a patient-centered counseling approach with demonstrated efficacy in facilitating behavior change, including improving treatment adherence. Instead of asking, for example, why patients didn't take their medication on a certain day, Balán will ask them what helped them take it on the days they were successful—thus helping the patients solve problems and set goals.

"If their goals are to remain HIV negative or their goals are to achieve undetectable viral loads, you align yourself with those goals," he says. "Because if we impose something on them and they're not ready, then they fail and the next time just becomes so much harder." Balán and other researchers found that providers who used motivational interviewing while staying attentive to their community's views of antidepressants helped Latinx patients stay on medications for depression (Lewis-Fernández, R., *Psychiatry: Interpersonal and Biological Processes*, Vol. 76, No. 3, 2013) as well as stay in behavioral therapy programs (*Cognitive and Behavioral Practice*, Vol. 23, No. 2, 2016).

On the basis of such research, psychologists recommend integrating mental health care and substance use treatment more fully into the Trump administration plan. For example, the Ryan White HIV/AIDS Program is a safety net program offering supportive services, including mental health care and substance use treatment, that help patients adhere to HIV treatment plans—and 86% of patients enrolled in the program have the virus under control.

"Those kinds of services and programs work, but those are not available to everyone," Remien says—including patients on PrEP. "There's not an equivalent of the wraparound services if you're not living with HIV."

Jessica Sales, PhD, associate professor of behavioral sciences and health education at Emory University in Atlanta, says that addressing social and psychological factors is crucial to ending the epidemic. Without supporting patients' psychological and socioeconomic well-being, she says, "we will likely still be in a similar place."

Psychologists and other researchers also emphasize the need to change federal policies to reach marginalized people. That includes addressing cuts and limits to Medicaid, the Affordable Care Act and other programs that provide reproductive health services, harm reduction, safe housing, food assistance, disability benefits and more. And laws and court decisions removing legal protections for sexual and gender minority individuals and other marginalized groups mean that those who are at risk for HIV or who have tested positive for the virus may not feel comfortable accessing needed services for fear of being refused services or facing discrimination.

"Some of the rhetoric that's happening in this country around sexual orientation and gender identity is not helping these efforts," Remien says. "Battles over bathroom rights or all that stuff.... It's rhetoric, but it's also the policies that are coming from that rhetoric—that are working against our goal of ending the HIV epidemic."

HIV, mental health & emotional wellbeing

Roger Pebody *September 2019*

Key points

- Being diagnosed with a serious illness like HIV can have a big emotional impact.
- People with HIV have higher rates of mental health problems than people in the general population.
- There's a lot you can do to look after your emotional wellbeing.

Emotional wellbeing and mental health are important for everyone. Going through difficult times is part of life, but from time to time these can be especially hard to deal with. Furthermore, some people also experience mental health problems, such as depression or anxiety – where emotions such as being in a low mood, feeling helpless or hopeless about the future, experiencing grief – carry on for some time, or return again and again, and start to interfere with quality of life.

Being diagnosed and living with a serious illness like HIV is likely to have a big emotional impact, and people with HIV, as a group, have higher rates of mental health problems than those seen in the general population.

One reason for this may be HIV-related stigma, in other words the prejudices and negative attitudes that some people have about HIV. Stigma is one of the reasons that some people end up having quite negative feelings about themselves in relation to their HIV diagnosis. It can be difficult for anybody, including people living with HIV, to avoid being exposed to the negative and inaccurate ideas and beliefs that have developed about HIV.

Also, some of the groups most affected by HIV in the UK (such as gay men, migrants and drug users) are more likely to have mental health problems, because of the stresses associated with being marginalised from mainstream society. Women are more likely to experience mental health difficulties than men.

Some anti-HIV drugs can affect your emotional and mental health. If you have had mental health problems in the past, it is helpful to tell your HIV doctor this when you start discussing treatment options. That way, the most appropriate anti-HIV drugs for you can be prescribed.

Adjusting to life with HIV

Life involves emotional stresses and strains. Being diagnosed with HIV, and living with it, will at times cause such stresses, and some aspects of your life will become more complicated – and possibly stressful – because of HIV.

Finding out that you have HIV can lead to a wide range of feelings. It is common to feel fear, uncertainty, worry, concern about what other people will think, guilt, shame, embarrassment, anger and sadness after a diagnosis. Some people feel numb, and others feel a sense of relief that they have finally found out about their status.

It can be easy to assume the worst about life with HIV. It's possible that, before your diagnosis, no one told you that HIV treatment is now so effective that most people with HIV can expect to live as long as people who don't have HIV. Or that the medications also prevent the sexual transmission of HIV – if you take anti-HIV drugs and have an 'undetectable viral load', you won't pass HIV on to your sexual partners.

The feelings people have about HIV can change over time, so your initial response to finding out that you have HIV is unlikely to last. Many people find that they gradually come to terms with having HIV, although some aspects of being HIV positive can still make them feel anxious or distressed.

Attending regular medical appointments, experiencing ill health, starting or changing treatment, talking about having HIV or starting a new relationship can all be sources of anxiety or cause emotional distress. Sometimes these can involve a revisiting or reconsideration of feelings about life with HIV. In the end, many people with HIV will find that their emotional wellbeing is affected by life with the virus from time to time, no matter how successful an adjustment they have made to their diagnosis.

Remember that it's perfectly normal and acceptable to have feelings that you find difficult. Although it can be easier said than done, don't feel bad about not feeling OK. Acknowledging and accepting your feelings is an important first step to working them

out. Even though it can be hard to feel this way, experiencing emotions like anger, anxiety and fear are often normal responses to events during your life, including some of the adjustments you may have to make because of HIV.

It's also important to know that there's a lot you can do to look after your emotional wellbeing.

Looking after your emotional wellbeing

Talking about your experiences and feelings with a loved one, friend or another person with HIV can be a big help. When you are finding your thoughts and feelings difficult to understand or work through, psychological therapies can be helpful. Your HIV clinic should be able to help you find a suitable therapist if they don't offer such services themselves.

Looking after the basic requirements of life – getting enough sleep, eating properly and managing stress – provides an important foundation for your emotional wellbeing. So, if you are having problems with these daily activities for any reason, it may be good sense to ask for professional help.

Trouble sleeping is a widely reported psychological disorder, both in the general population and among people living with HIV. Difficulty going to sleep or staying asleep can be the result of worry, stress or mental health problems, or the cause of them.

> "Finding ways of interacting with other people in ways that you are comfortable with is important to good emotional wellbeing."

For many people, having a drink or occasionally using recreational drugs is a pleasurable part of life. However, alcohol and mind-altering drugs are also used by many people for short-term relief when they are experiencing difficult feelings. They might offer temporary relief, but in the long run relying on them is likely to make your feelings harder to deal with. Prolonged and excessive drinking and drug-taking can also damage your physical health and affect how your body absorbs anti-HIV drugs, as well as making it harder to remember to take your HIV treatment.

Feeling isolated can be a source of distress, or can make feelings of distress worse. Finding ways of interacting with other people in ways that you are comfortable with is important to good emotional wellbeing. Many HIV support organisations offer one-to-one and group peer support. You can get support online if you prefer. You may also want to join non-HIV-related organisations, based on your interests, to meet other people and help you feel less alone.

Taking part in productive and enjoyable activities can help promote a feeling of wellbeing. For example, volunteering in your local community – perhaps with a charity or community group – can be a good way of meeting people, developing new skills and increasing self-esteem and confidence, as well as of helping others. You can find out more about volunteer work and see what types of opportunities are available, on the Volunteering England website: do-it.org.

Having interests that you find engaging and rewarding (in any way) are important. Setting goals for yourself can give you a sense of purpose. It's most helpful if these goals are realistic and can be achieved by taking small, measurable steps.

Many people find practising mindfulness helps them with their day-to-day wellbeing. It is a technique you can learn that involves paying attention to the present moment, to your thoughts and feelings and the world around us, in the here and now.

Others find that faith or spirituality are important sources of comfort and stimulation. Prayer, meditation or quiet reflection can be helpful for reducing stress and loneliness. Religious or cultural communities can be key networks of support and social interaction.

And some people also find that complementary therapies, such as acupuncture or massage, can relieve some of the symptoms of emotional distress.

Older black HIV-positive women have more mental distress than other women with HIV, but get less help for it

Gus Cairns

Older African women are also better educated than others, but more likely to be poor

A study looking at women aged over 45 living with HIV in the UK has found that while black African and Caribbean women experience greater social isolation and subjective mental distress than white women, they are less likely ever to have been diagnosed with depression or have it treated.

Older African women were also more likely to experience poverty than white or Caribbean women despite being twice as likely to have had a university education.

Psychological distress had a potential impact on health, as women with moderate or severe distress were 75% more likely to have missed clinic appointments in the last year and more than twice as likely to have missed doses of their antiretroviral therapy in the last week.

Defines who cannot take part in a research study. Eligibility criteria may include disease type and stage, other medical conditions, previous treatment history, age, and gender. For example, many trials exclude women who are pregnant, to avoid any possible danger to a baby, or people who are taking a drug that might interact with the treatment being studied.

These findings from the PRIME study were presented to the British HIV Association (BHIVA) conference two weeks ago by Dr Rageshri Dhairyawan of the Barts and Royal London NHS Trust. She said that the ageing of the HIV-positive population in the UK was particularly accentuated in women. In 2006, 14% of women with HIV in the UK were over 45 years old and 44% under 35; in 2016, 52% were over 45 and 15% under 35.

Women with health issues were affected by both their gender and their age, Dr Dhairyawan said. General health surveys show that being female is associated with a poorer health-related quality of life in older people; older women have a lower socioeconomic status than men; and black and minority ethnic (BAME) women have worse mental health as they age than white women.

Surveys of HIV-positive women in the past had found that women were more likely to be diagnosed with depression than their male counterparts and that depression was related to poorer HIV health outcomes. They also found that 45% of HIV-positive women in the UK were living below the poverty line and that poverty was also related to poorer HIV health outcomes.

So one of the objectives of the PRIME study was to explore the relationship between ethnicity and socioeconomic status, ethnicity and mental health, and mental health and HIV-related health in women over 45.

The PRIME study

PRIME involved three phases. First, during 2015, three focus groups attended by 24 women explored themes and helped researchers formulate the questionnaire for the second phase, in which 869 women aged 45-60, approached at 21 HIV clinics across England, took part. The questionnaire covered education, employment and immigration status as well as socioeconomic and mental health needs.

Finally, 20 women out of the 869 were selected for in-depth interviews to further explore themes.

For the purposes of the analysis presented at BHIVA, only women of white British, black African, and black Caribbean ethnicity were selected, for the purposes of isolating the clearest contrasts between them. So 115 women of other and mixed ethnicity (12% of the total) were excluded. This left 607 black African women (72%), 71 white British women (8.4%) and 46 black Caribbean women (5.4%).

Eighty-five per cent were born outside the UK, and there was a very wide range in the amount of time they had been in Britain. A quarter of them had been here less than three years, while another quarter had been here more than 43 years (in other words had moved to the UK aged 3-22).

African women were, on the whole, better educated: about half of them had been to university compared with a quarter of both white and Caribbean women. They were also slightly more likely to be employed. Despite this, they were more likely to be living below the poverty line. Forty-two per cent of African women said they did not have enough money for basic needs compared with 36% of Caribbean women and 15% of white UK-born women.

Caribbean women were the most likely to say they felt socially isolated: 48% did, compared with 40% of African women and 25% of white UK women.

There was striking inequality when it came to women's mental health needs. A quarter of all women had moderate to high levels of psychological distress, i.e. they experienced depression, anxiety and other symptoms. Caribbean women were more likely than average to experience these (38%) and white women less likely (14%).

Despite this, white women were considerably more likely to be taking anti-depressants (41% took them, compared with 28% of Caribbean women and 26% of Africans). White women were even more likely to have *ever* been diagnosed with depression: 72%, compared with 47% of Caribbean women and only 25% of African women. This shows pretty clearly how diagnoses of mental illness do not reflect actual mental health needs.

Poor mental health had potential physical consequences. Women with moderate to severe psychological distress were 2.3 times more likely to have forgotten to take at least one dose of their antiretrovirals in the last week (33% versus 18%) and were 75% more likely to have forgotten an HIV clinic appointment in the last year. However, this had no effect on viral suppression; 13% of women with moderate to severe distress had a detectable viral load versus 11% with no or mild distress, and this difference was not statistically significant.

EDITORIAL REVIEW

Mental health and HIV/AIDS: the need for an integrated response

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Tremendous biomedical advancements in HIV prevention and treatment have led to aspirational efforts to end the HIV epidemic. However, this goal will not be achieved without addressing the significant mental health and substance use problems among people living with HIV (PLWH) and people vulnerable to acquiring HIV. These problems exacerbate the many social and economic barriers to accessing adequate and sustained healthcare, and are among the most challenging barriers to achieving the end of the HIV epidemic. Rates of mental health problems are higher among both people vulnerable to acquiring HIV and PLWH, compared with the general population. Mental health impairments increase risk for HIV acquisition and for negative health outcomes among PLWH at each step in the HIV care continuum. We have the necessary screening tools and efficacious treatments to treat mental health problems among people living with and at risk for HIV. However, we need to prioritize mental health treatment with appropriate resources to address the current mental health screening and treatment gaps. Integration of mental health screening and care into all HIV testing and treatment settings would not only strengthen HIV prevention and care outcomes, but it would additionally improve global access to mental healthcare.

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Introduction

Tremendous advances have been made in HIV prevention and treatment since the discovery of the virus that causes AIDS. Today, most people newly diagnosed with HIV can expect a near normal lifespan with steady access and adherence to combination antiretroviral therapy (cART). Moreover, in recent years there is great optimism about the potential to end the HIV epidemic – or at least substantially 'bend the curve' of the epidemic – with current biological and behavioral tools. Preexposure prophylaxis (PrEP) is highly effective at protecting individuals from acquiring HIV when taken consistently [1]. Further, people living with HIV (PLWH) who maintain durable viral suppression do not transmit the virus to sexual partners, and in the case of pregnant women, to infants via pregnancy and delivery [2–4].

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Given these advances, many jurisdictions are making concerted efforts to turn the tide of the epidemic through PrEP scale-up for individuals vulnerable to acquiring HIV, and improved HIV diagnoses and rapid provision of cART for PLWH. The Joint United Nations Programme on HIV/AIDS (UNAIDS) goals of '90–90–90' call for 90% of PLWH to be diagnosed, with 90% of them initiating cART, and 90% of people initiating cART to achieve and sustain viral suppression through adherence to the treatment [5]. Some localities are moving toward even more ambitious goals of '95–95–95' and ultimately 'getting to zero' new HIV infections [6]. Although these goals are aspirational, many believe they are achievable with focused resources and concerted efforts.

However, these gains will not be achieved without addressing the significant mental and substance use problems among people vulnerable to acquiring or living with HIV, which exacerbate the many social and economic barriers to accessing adequate and sustained healthcare [7–12], and are among the most significant barriers to achieving the 90–90–90 targets [7–12]. We posit that it will be impossible to significantly 'bend the curve' and approximate an ending of the HIV epidemic without dramatically altering our approach to diagnosing and addressing comorbid mental health (including substance-use) problems among people most vulnerable to HIV.

Global burden of mental and substance use problems

In the general population, mental and substance use disorders are the number one contributors to number of years lived with disability, with greater impact than other communicable, maternal, neonatal, nutritional, and noncommunicable diseases, including HIV, and injuries [13]. Excess mortality among persons with mental, neurological, and substance use disorders is evident, with a shortened life span of approximately 15–20 years. The global burden of these disorders rises in late adolescence and peaks in young adulthood, which emulates the global HIV burden.

Mental health and HIV acquisition

Mental health disorders play a critical role in HIV acquisition across populations, increasing the risk of HIV acquisition by 4–10-fold [14,15]. In the United States, the prevalence of HIV is substantially higher among adults with serious mental illness (SMI; e.g. psychotic disorder, bipolar disorder, recurrent major depressive disorder, comorbid mood, and substance use disorder) – ranging from 2 to 6% – compared with the general population (0.5%) [16–18]. In Africa, where the HIV burden is even greater, the prevalence of HIV among adults with SMI ranges from 11 to 27% [19–22].

Mental health problems can increase risk of HIV acquisition through both direct and indirect pathways. Although people with SMI tend to be less sexually active compared with the general population, sexually active adolescents and adults with SMI evidence higher risk sexual behavior, including inconsistent condom use, having multiple sexual partners, trading sex, and drinking alcohol before sex [23–29]. The risk of HIV infection may also increase with severity of psychiatric illness. In a multisite study in the United States, the prevalence of HIV among persons with SMI rose from 3.9% in community mental health centers, to 5.1% in intensive outpatient case management programs, to 5.9% in psychiatric inpatient units [16]. HIV risk may be further compounded when there are multiple co-occurring conditions, such as a mood disorder, substance use disorder, and posttraumatic stress symptomatology from (for example) physical, sexual, or emotional abuse. A large multisite study of US MSM found a significant positive dose-response relationship between the number of co-occurring conditions and risk of HIV acquisition: men with four to five co-occurring conditions had more than eight times the hazard of HIV infection compared with those with no such conditions [30]. Mental health problems can also interfere with efforts to prevent HIV infection, including regular HIV testing and adherence to PrEP [31–33]. In the iPrEx and iPrEx-OLE trials, which studied PrEP efficacy and open-label use among MSM and transgender women, participants with higher depression scores had lower levels detectable PrEP medication (emtricitabine and tenofovir disoproxil fumarate) and higher levels of condomless receptive anal intercourse [34,35]. Screening and treatment for mental health problems and disorders will be essential to preventing vulnerable populations from acquiring HIV.

Prevalence of mental health disorders among people living with HIV

Many studies have shown that PLWH experience higher rates of mental health disorders than the general population. This includes research conducted with diverse groups of PLWH such as youth with perinatal or behaviorally acquired HIV, adult MSM of color, racial and ethnic minority women, people who inject drugs (PWID), and older adults [36–42]. In a US multisite study with over 2800 PLWH, 36% had major depression and 15.8% had generalized anxiety disorder [36], compared with only 6.7 and 2.1%, respectively, in the general population [43]. Other studies from North America have shown similarly higher rates of mental

health disorders among PLWH. PLWH presenting at an academic medical center in the Southeastern US showed high levels of mood disorder in the past year (32%) and past month (21%), as well as anxiety disorder in the past year (21%) and the past month (17%) [44]. In Ontario, Canada, available electronic medical records indicated that 41% of PLWH had a mental health condition compared with 22% among non-HIV infected adults [38]. A study by Blank *et al.*, conducted HIV tests with over 1000 people who were seeking mental healthcare at university-based psychiatric inpatient units, intensive case-management programs, and community mental health centers. They found that 4.8% had confirmed positive HIV tests – much higher than the HIV prevalence rate in the general US population [16]. Data from across the globe also indicates elevated rates of mental health disorders among PLWH compared with the general population. For example, a study among PLWH in India showed that 59% had signs of major depression [45]. In China, a recent review found prevalence of depressive symptoms in 61% of PLWH [46]. In Uganda, major depression was found in 14% of 1099 cART-naïve PLWH [47]. In South Africa, 26–38% of PLWH are estimated to have a mental disorder compared with 13% in the general population [48]. Although major depression is one of the most commonly seen mental health disorders in PLWH, rates of posttraumatic stress disorder (PTSD) are also much higher among PLWH than in the general population, ranging from 10 to 74% [49–52] compared with only 8% in the US general population [49–53]. Prevalence of substance use disorders also tend to be higher among PLWH than in the general population ranging from 21 to 71% [44,54], as do rates of neurocognitive impairment – about 50% of PLWH, even those who are virally suppressed [55].

Intersecting vulnerabilities

Many factors contribute to the high comorbidity of HIV and mental health conditions. People who have (or are at risk for) HIV and who are vulnerable to mental health conditions often face other significant individual, structural, social, and biological challenges to accessing and adhering to HIV prevention and treatment modalities. These factors fall into the domains of sociodemographics, neighborhood and local environmental factors, social structures, individual biology, and intersecting societal stigmas. Structural factors, including poverty, low education, unstable housing, and food insecurity, contribute to increased vulnerability to HIV infection and poor HIV health outcomes [56,57]. Neighborhood and environmental factors, including violence and lack of safety, lack of adequate safe and steady water supply, wars, and natural disasters, cause psychological trauma, disrupt the delivery of medical supplies, and present barriers to healthcare access [58–60]. Biological factors, including comorbid communicable diseases (e.g. tuberculosis, hepatitis) and noncommunicable diseases (e.g. diabetes, heart, and bone disease), as well as chronic immune activation, contribute to poorer physical and mental health outcomes [61,62]. Intersecting social stigmas, and criminalization in some contexts (e.g. sex work, drug use, and same-gender sex) present additional challenges to key populations that are highly affected by HIV, including MSM, transgender women, sex-workers, people who use drugs (including PWID), and racial and ethnic minorities. These groups experience perceived and internalized stigma as well as enacted stigma (e.g. discrimination) that negatively affect mental health, and this relationship is further compounded by the unfortunate stigma of mental illness in society and among patients and providers [63–65].

Mental health impairment and outcomes along the HIV care cascade

There is substantial evidence that impairment in mental health leads to negative health outcomes at each step in the HIV care continuum, starting with being diagnosed with HIV, all the way to achieving viral suppression. Lack of HIV diagnosis jeopardizes the health of PLWH by impeding access to the significant health benefits that cART confers. Lack of HIV diagnosis presents a further public health challenge because a substantive proportion of new HIV infections are attributable to persons who are not aware of their HIV status [66–72]. Mental health impairment that results from having a mental health disorder (e.g. major depression, alcohol or other substance use abuse or dependence) or significant levels of psychiatric distress (e.g. elevated depressive, anxiety, or PTSD symptoms) can interfere with regular HIV testing and learning one's HIV status, as well as successfully linking to HIV healthcare, staying in care, initiating cART, and remaining adherent to cART to achieve HIV viral suppression [66–72].

Mental disorders can present a substantial barrier to adequate engagement and retention in HIV primary care. Research has established links between the presence of psychiatric illness and poor rates of HIV care linkage and retention. In one Alabama study, missed HIV primary care visits during the first year of care were more common among patients who had substance abuse disorders, as well as those who were younger, female, black, and lacking private health insurance [73]. A large cohort study of PWIDs found that only 30.5% were continuously retained in HIV care over nearly 9 years of follow-up, and that active drug use was associated with lower care retention [74]. The preponderance of research therefore indicates that substance use disorders represent a frequent impediment to timely HIV care linkage as well as sustained retention in care [75].

The aspect of the HIV care continuum which has been most studied in relationship to mental health is cART adherence. Research has clearly identified depression as one of the strongest predictors of poor cART medication adherence [68]. A large meta-analysis found a significant association between depression and cART nonadherence across 95 independent samples [68], and determined that the likelihood of achieving good (80%) cART adherence was 42% lower among those with depressive symptoms than those without depressive symptoms across 111 independent samples. This robust finding was consistent across low, middle, and high-income countries [72]. Another large review and meta-analysis that synthesized 125 studies with a total of 19 016 patients across 38 countries found that self-reported depression and alcohol and other substance misuse were among the top 15 barriers to adherence, along with other reasons such as forgetting, being busy, a change in routine, and the experience of medication side effects [76]. In perinatally infected youth, for whom nonadherence to treatment across health conditions is a significant issue [77], a range of psychiatric disorders, not just mood disorders, have been associated with nonadherence to HIV treatment and elevated viremia [78].

Mental health impairment clearly contributes to poorer healthcare behaviors across the HIV care continuum, leading to negative HIV health outcomes (i.e. elevated viral load, decreased $CD4^+$ levels, and increased opportunistic illnesses). There is also evidence, however, that suggests a direct biological pathway from mental health impairment to poorer HIV health outcomes, especially in the context of depression.

Depression, HIV, and the immune system

There is evidence suggesting a bi-directional relationship between depression and the immune system [79–81]. Depression is known to negatively affect the immune system (e.g. $CD4^+$ cell decline) although the underlying mechanisms remain poorly understood. Chronic immune activation and hypothalamic–pituitary–adrenal axis dysregulation [82,83], which HIV infection can exacerbate [84–86], are established factors contributing to developing depression and likely contribute to high rates of depression among PLWH [62]. HIV crosses the blood brain barrier causing immune activation in the brain and the central nervous system [87]. Inflammatory proteins (e.g. C-reactive protein, cytokines) lead to oxidative stress and neuronal injury [88], specifically, the chronic inflammatory response to HIV infection leads to elevated cytokine levels, including IL-6 and TNF-α, which can trigger a chain reaction involving Tryptophan depletion through the activation of Indoleamine 2,3-dioxygenase enzyme [82,89,90]. Tryptophan depletion leads to reduced serotonin levels and increased Kynurenine and its metabolites, which are neurotoxic and associated with depression, suicide, anxiety, and physical health conditions, such as cancer, cardiovascular diseases and premature death [91–94]. Therefore, it is possible that chronic inflammation and tryptophan depletion contribute to the deleterious effects of depression on physical health outcomes.

Depression and mortality in the HIV context

Depression has been shown to increase the risk of mortality among PLWH [41,95]. For example, among 1487 women followed for 24 months in Tanzania, mortality was 6.6% among women with depressive symptoms versus 3.7% among women without depressive symptoms [66]. And among 765 HIV+ women at four US sites followed for up to 7 years, women with chronic depressive symptoms were twice as likely to die as women with limited or no depressive symptoms, even after adjusting for predictors of mortality (i.e., $CD4^+$ cell count, cART duration, age) [41]. In the Women's Interagency HIV Study prospective cohort ($N = 848$), chronic depressive symptoms were associated with over three times the hazard of mortality, among women on cART, and over seven times the hazard of mortality, among women not on cART, compared with women on cART with no depression [96]. Examining medical records of close to 6000 ($N = 5927$) PLWH, a dose–response relationship was found between depression length and HIV outcomes. For every 25% increase in days experiencing depression, there was a 19% increase in the risk of mortality [95].

Screening and treatment for mental health problems

Given the strong evidence for the contribution of mental health and behavioral problems to poor HIV health outcomes, there is an obvious need for universal mental health screening and the provision of mental health treatment integrated into ongoing HIV care. There is a wide array of mental health screening tools that are being used in clinical care as well as in research, and they have been validated across many regions of the world, including in low-income and middle-income countries [97]. Screening for mental and behavioral problems is insufficient and arguably unethical to conduct, if follow-up treatment is not made available for those who screen positive and are in need. To advance the provision of mental healthcare, there exists a wide-range of effective mental health treatments including psychopharmacological treatment, and various psychotherapies

(e.g. psychodynamic, cognitive-behavioral therapy, motivational enhancing therapy, and interpersonal therapy), stress reduction and mindfulness treatments, and harm reduction and abstinence treatments. Many of these approaches have been manualized and tailored across languages and cultures [51,98–101].

The broader challenge is that most people (70–85%) with mental disorders, across all country settings, do not receive the needed mental healthcare, in part because they are not even identified as having a mental health disorder [102–107]. Many factors contribute to this gap in mental health screening and provision of treatment, including human resource shortages, fragmented service delivery models, and lack of capacity for implementation and policy change. A central challenge is the stigma of mental illness that exists at all levels: patients, healthcare workers, and policy makers. According to the WHO, worldwide mental health budgets are significantly underfunded, with expenditure on mental healthcare being approximately one percentage of total expenditure on all of healthcare [108,109]. Further, looking at the availability of mental health professionals for the population, there are significant disparities between low-income and middle-income countries and high-income countries, with inadequacy across all settings. This is particularly true in low-income countries, where there is a dramatic paucity of providers, such as one psychiatrist/psychologist per 1.5 million people in South Africa, and 12 psychiatrists/16 psychologists per 13 million people in Zimbabwe [108,110,111].

Mental and behavioral health treatments for people living with HIV

Large systematic reviews and meta-analyses demonstrate that PLWH can benefit from a broad range of mental and behavioral health interventions [98–100]. Mental health research conducted with PLWH in low-income, middle-income, or high-income countries has tested pharmacological interventions and various psychological and psychosocial interventions (e.g. cognitive behavioral therapy, interpersonal therapy, group therapy, motivational interviewing, stress management, meditation, and psycho-educational family interventions). The duration of the tested interventions varies considerably, ranging from 1 to 30 hours, 1 to 54 weeks, and 1 to 48 sessions. The research syntheses report small to moderate positive effects of these interventions on mental health among PLWH, with demonstrated reductions in depression and anxiety, and improved quality of life and psychological well being. Some of the largest and most consistently positive effects have been seen among interventions delivered by mental healthcare professionals over lengthier intervals, and which primarily focus on mental health. Psychological interventions with cognitive-behavioral components were consistently effective. Psychotropic and HIV-specific health psychology interventions were generally effective, with some mixed findings. Within low-income and middle-income countries, multilevel interventions that were integrated into community-based healthcare and which included family interactions or peer support were among the most effective.

Although the evidence base for mental health interventions among PLWH is encouraging, several limitations are also evident. The preponderance of research on mental health interventions for PLWH has been conducted in high-income countries (and particularly in the United States) rather than low-income and middle-income countries, which is a mismatch to the global burden of HIV [98–100]. This gap could be addressed by drawing upon lessons learned from the large evidence base for delivering mental health interventions with fidelity and effectiveness in general populations using nonskilled personnel (i.e. task-sharing or task-shifting) in low-income and middle-income countries [112]. Mental health intervention trials with PLWH have also generally focused on short-term over long-term outcomes [98,99], and the research could benefit from improved quality and rigor [100]. There is also a paucity of studies that examine mental health interventions in relationship to HIV care outcomes, relative to studies that focus on mental health outcomes alone. Finally, few evidence-based mental health interventions have been tested with youth. One exception is the CHAMP+ program, based on the Collaborative HIV/AIDS Mental health Program [113], a family-based intervention originally developed in the United States to prevent HIV risk behaviors and promote mental health in vulnerable communities of adolescents, and that has been successfully adapted for South Africa [114] as well as Asia [115–117]. However, given the staggering numbers of children and adolescents with HIV globally [118,119], particularly in sub-Saharan Africa, there is a substantive need for development of more evidence-based mental health interventions focused on this particularly challenging developmental stage [40,120].

Scale-up of interventions: challenges and solutions

There are substantial challenges to the provision and scale-up of mental health screening and treatment for those in need, particularly within resource-constrained settings where HIV is endemic and the availability of mental health professionals and services is rare. The following four models offer promising approaches to efficient and effective mental healthcare delivery in resource-constrained settings: task shifting, stepped care, trans-diagnostic approaches, and technology.

Task shifting is a method of strengthening and expanding the health workforce by shifting responsibilities from highly qualified health workers to health workers with less training and fewer qualifications [121]. In the context of mental health screening and treatment, this represents a shift from mental health professionals to healthcare workers who lack formalized training in mental health. There are a few examples of this occurring with some success in HIV care settings. For example, a cluster randomized controlled trial conducted at ten clinics in Uganda studied two task-shifting approaches to integrating depression treatment into HIV care: delivery of depression screening and treatment by trained nurses using a structured protocol, or by trained primary care providers (PCP) using their own 'clinical acumen' rather than a structured protocol [122]. Successful screening occurred in 76% (nurses) and 80% (PCP) of cases, with clinically depressed patients being prescribed antidepressants in 69% (nurses) and 56% (PCP) of cases, and with treated patients achieving full remission of their depression being 65% (nurses) and 69% (PCP). The authors concluded that existing clinic staff (nurses, doctors) can provide quality depression care with limited training and supervision by available mental health specialists.

Stepped care approaches find efficiency by triaging intervention intensity based upon observed need [123]. Patients who do not benefit from initial, lower intensity interventions graduate to higher intensity or more resource-intensive interventions. Stepped care approaches have been used by several HIV-related mental health projects in sub-Saharan Africa. For example, a project in Zimbabwe piloted a stepped-care and task-shifted intervention for HIV patients with depression and low antiretroviral adherence [124]. Lay community health workers were trained to deliver a first-level intervention to patients (six sessions of problem-solving cognitive behavioral therapy for depression and medication adherence). Patients who did not benefit from the first-level intervention were triaged to more intensive treatment (an assessment by a trained clinician for potential provision of antidepressants and/or further counseling). A small pilot trial found reduced depression and improved viral load suppression among intervention recipients compared with enhanced standard care [124].

Transdiagnostic approaches represent another route to advance delivery of HIV-related mental healthcare in resource-constrained settings. Transdiagnostic approaches recognize that different mental disorders (e.g. depression, anxiety) frequently co-occur and may share-related symptomatology, so uniform treatment strategies might be employed to effectively address multiple mental health problems [125]. Applications of transdiagnostic approaches to HIV include cognitive-behavioral counseling to concurrently address depression, anxiety, and HIV risk related to minority stress among young gay and bisexual men in the United States [126]. Outside of HIV, randomized trials found that a transdiagnostic psychotherapy toolkit delivered by lay counselors successfully treated symptomatology from multiple trauma-related disorders among Burmese refugees [127] as well as survivors of violence in Iraq [128].

Finally, technology-based approaches like telephone-delivered and computer-delivered interventions can help scale mental healthcare and support lay-counselor interventions with PLWH who are in need [129,130]. Internet-based mental health interventions, such as internet-based cognitive behavioral therapies [131] are growing in popularity globally to improve access in low resource contexts, as well as among youth and young adults who are at high risk for nonadherence or nonaccess of mental health resources [132].

Community and public health messaging to reduce HIV-related psychological distress

Since the stigma of HIV can lead to significant psychological distress, community and public health campaigns to reduce stigma may have a substantive mental health effect. Improved access to and understanding of HIV treatment and prevention could particularly reduce HIV stigma and benefit mental health. Findings from the HPTN 052 trial and PARTNER studies have definitively demonstrated that HIV treatment is prevention [3,4]. Community advocates have built on this science by advancing a messaging campaign regarding 'U = U' (undetectable = untransmittable), which states that PLWH with sustained HIV viral suppression cannot transmit HIV through sex [133,134]. The campaign holds that the optimistic messaging of U = U will build hope in the community and contribute to a lessening of HIV-related stigma, which in turn can reduce psychological distress among PLWH and their sex partners. Community advocates and anecdotal reports indicate that the U = U message helps many PLWH feel unburdened by the shame and stigma that accompanies HIV infection [133]. There is a need for systematic research on patient understanding of U = U and its potential benefits for mental health and well being among PLWH.

Increased availability and use of effective HIV primary prevention tools could importantly benefit mental health, as well. The high efficacy of PrEP in nearly eliminating the risk of HIV acquisition among HIV-negative individuals adhering to PrEP has been shown to significantly reduce symptoms of anxiety and depression among young people vulnerable to acquiring HIV [135–137]. There is also emerging evidence that engagement in PrEP care can simultaneously promote greater engagement in screening and treatment for mental and behavioral health challenges, as well as screening and treatment for other health conditions, such as diabetes,

hypertension, and tobacco use [138]. With this understanding, expanded PrEP care delivery and use could benefit both HIV prevention and mental health.

Conclusion

Our review has identified the following understandings about the intersection of mental health and HIV/AIDS:

(1) Mental health problems (ranging from distress to SMI) are elevated among people at-risk for HIV and those living with HIV. This risk is true across populations most affected by the epidemic in different regions of the world.
(2) Mental health problems contribute to HIV acquisition and poor outcomes along the HIV treatment continuum.
(3) HIV and the resulting chronic immune activation increase the risk to develop mental health problems.
(4) We have the necessary assessment (screening) tools and efficacious treatments to treat mental health problems among people living with and at risk for HIV. However, we need to prioritize mental health treatment, especially mental health treatment integrated into HIV care, with appropriate resources to address the current screening and treatment gap.
(5) Promising advances have been made integrating mental healthcare into HIV primary care (via task-shifting, stepped-care interventions, and other strategies).
(6) Some community and public health driven campaigns regarding HIV treatment and prevention may help reduce stigma and psychological distress.

Despite the significant challenges that mental health presents to HIV prevention and treatment, there are many important and unmet opportunities to integrate mental healthcare with HIV care. Initiatives like PEPFAR have helped countries around the world dramatically expand HIV care, and the concomitant strengthening of their healthcare systems has offered substantial benefits to wider healthcare delivery. Further integration of mental health screening and care into this infrastructure would not only strengthen HIV prevention and care outcomes, but it would additionally improve global access to mental healthcare. Seizing these opportunities will be crucial if we are to further 'bend the curve' of the HIV epidemic and eventually find an end to AIDS. On a very fundamental and basic level, there can be no health, without mental health.

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Conflicts of interest

There are no conflicts of interest.

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