ADDRESSING MENTAL HEALTH:
A Critical Component to Ending the HIV Epidemic

Robert H. Remien, Ph.D.
HIV Center for Clinical and Behavioral Studies
NY State Psychiatric Institute and
Columbia University
New York, NY, USA

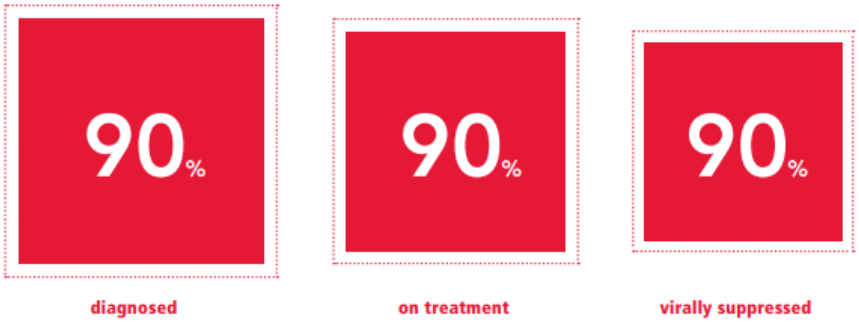
Disclosure

No conflicts to report

“Just imagine the audience in their underwear”

Why focus on mental health in the context of HIV prevention and care?

- Significant gaps along HIV care continuum
- Mental illness influences every step
- PLWHA have significantly higher rates of mental health disorders
- If we do not address mental health, unlikely to achieve “90-90-90” goals or end the HIV epidemic
- The human right to health means that everyone has the right to the highest attainable standard of physical AND **mental health**



FAST-TRACK

ENDING THE AIDS EPIDEMIC BY 2030

Talk outline

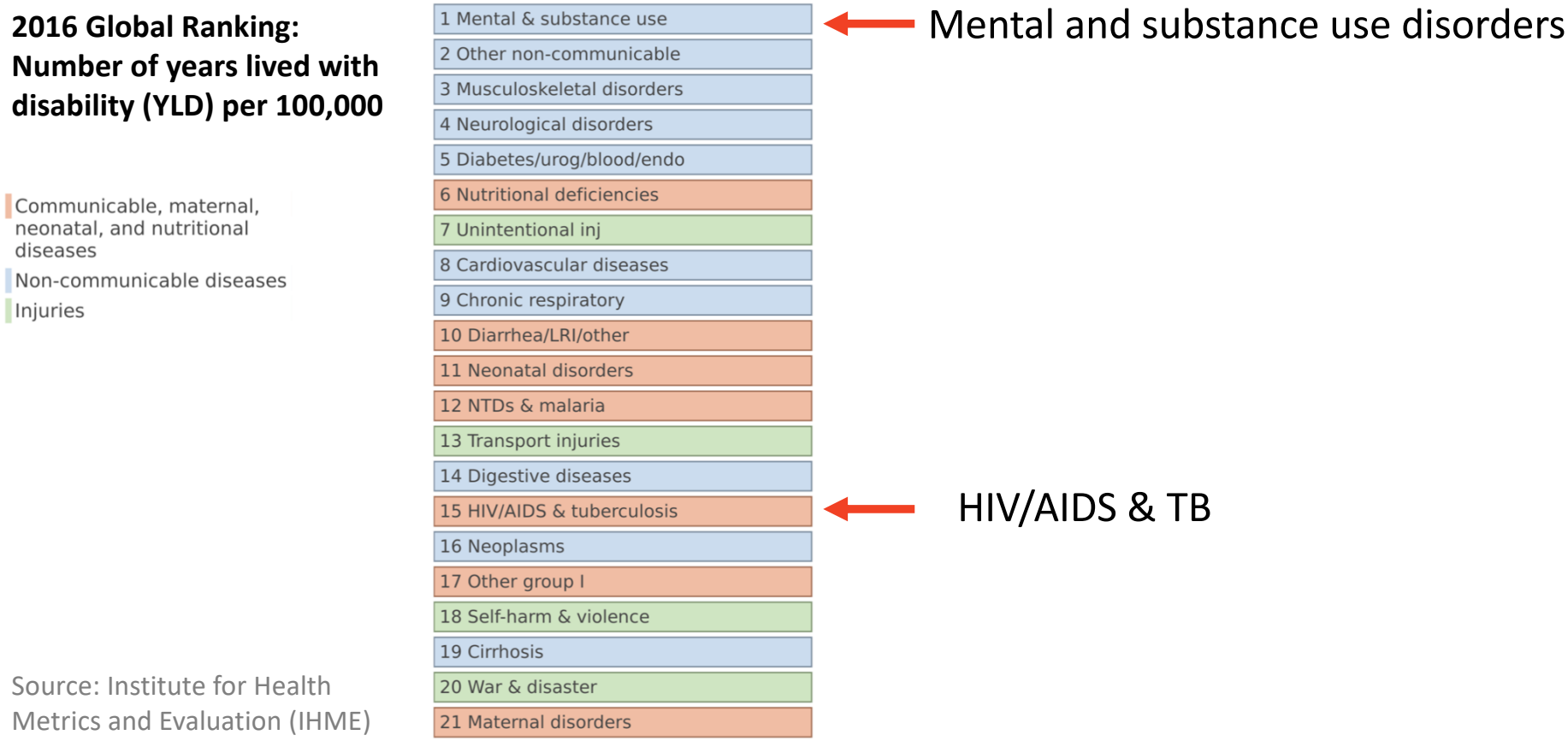
- The Challenges
  - Global burden of mental health disease
  - Mental health and HIV prevention
  - Impact of mental health conditions on HIV health outcomes
  - Challenges of addressing mental health
- The Opportunities
  - Strategic points for mental health interventions in the HIV context
  - Evidence-based mental health interventions for PLWHA
  - The role of “task shifting” and “integrated care”
  - How to move forward

Global Burden of Mental Illness

(independent of HIV)

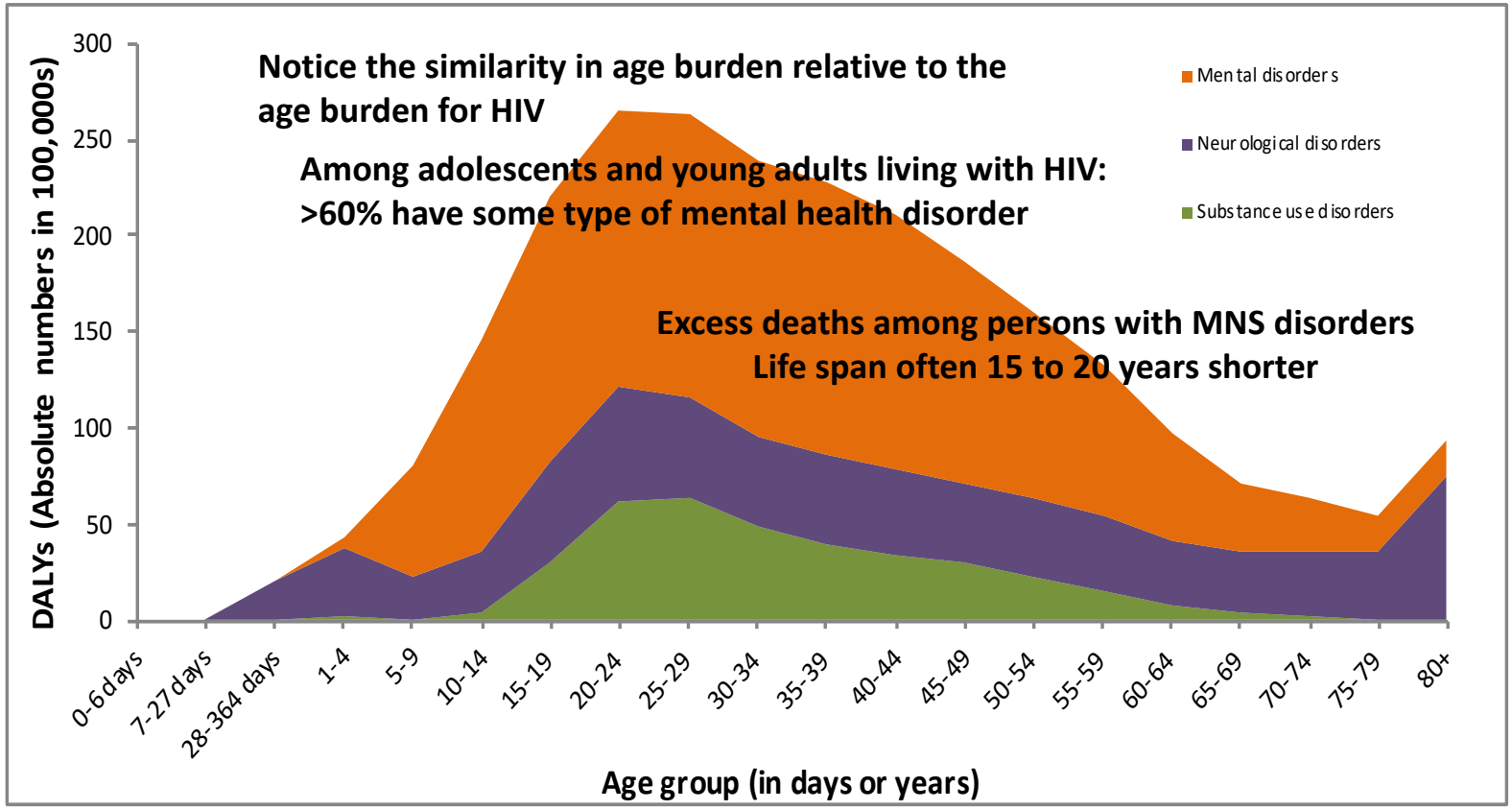
Global burden of disease

2016 Global Ranking: Number of years lived with disability (YLD) per 100,000



Source: Institute for Health Metrics and Evaluation (IHME)

Global burden of mental, neurological, and substance use disorders, by age



Source: Whiteford et al, Lancet, 2016

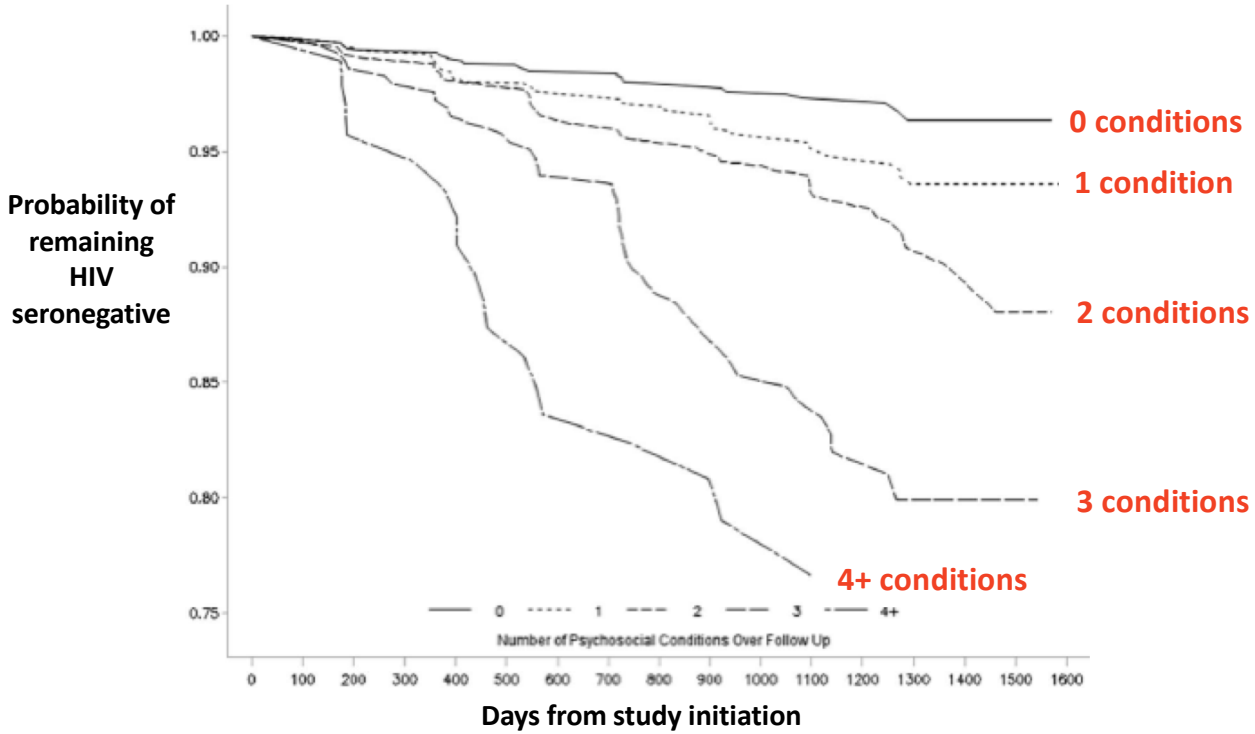
Mental Health and HIV Prevention

Mental illness is a risk factor for HIV acquisition

- Mental illness contributes 4 to 10X increased risk for acquiring HIV
  - HIV prevalence in US people with SMI: 2% - 6%
  - HIV prevalence in US general population: ~0.5%
- Mood disorders + alcohol/substance use + other conditions contribute even higher risk

Source: CDC, 2016; Hughes et al , Lancet Psychiatry, 2016; Hobkirk et al, Current HIV/AIDS Report 2015

Multiple co-occurring conditions magnify HIV risk



- 4295 MSM from 6 US cities
- Co-occurring conditions
  - Depressive symptoms
  - Heavy alcohol use
  - Stimulant use
  - Poly drug use
  - Childhood sexual abuse

Probability of staying HIV negative goes down as number of conditions increases

Source: Mimiaga et al. JAIDS, 2015

Depression influence on risk behaviors and PrEP adherence

Men who have sex with men (MSM) and transgender women (TGW) at risk for HIV infection in iPrEx and iPrEx OLE

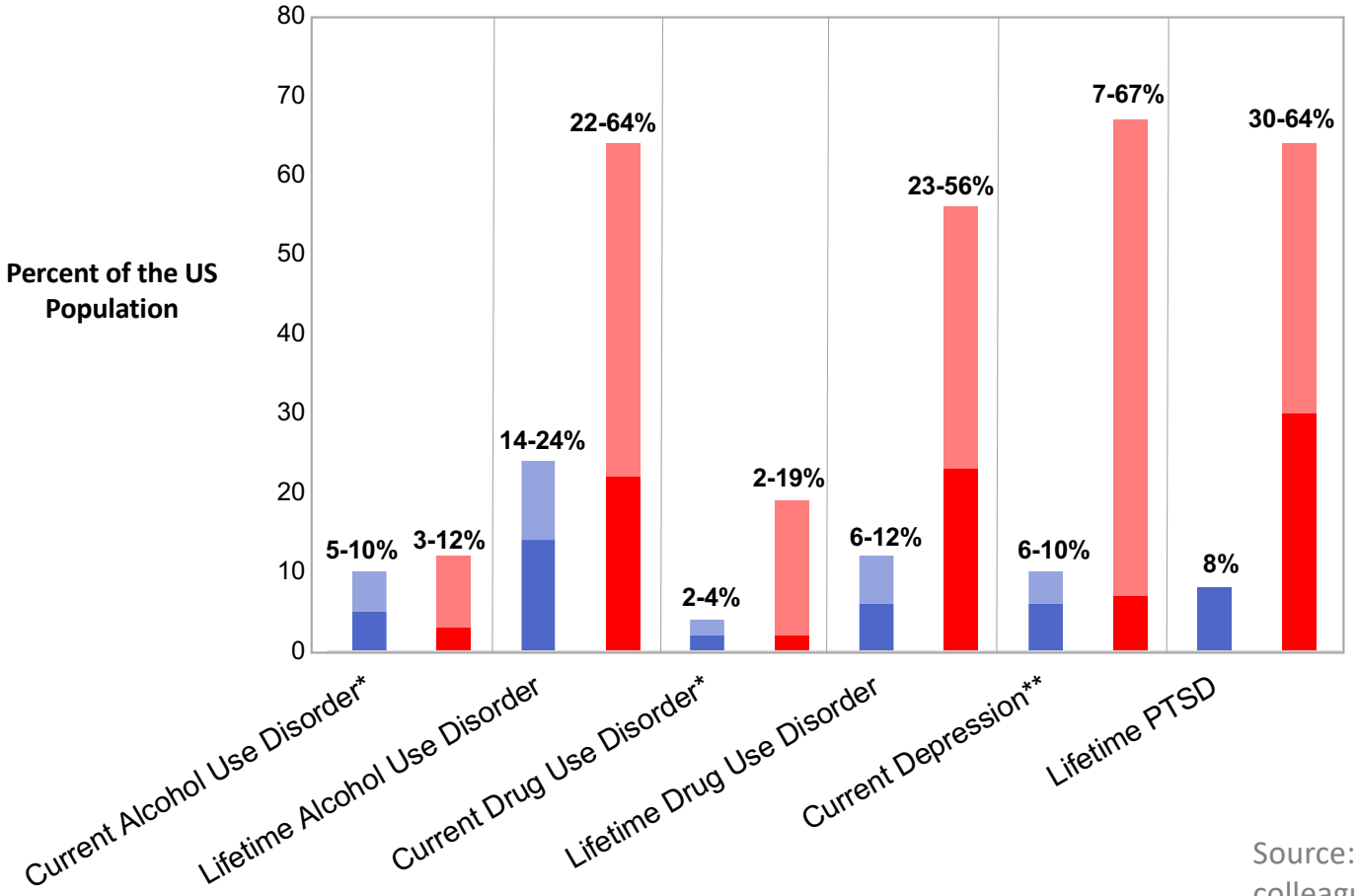
Conclusions:

- Higher depression scores were associated with:
  - lower drug-detection
  - condomless receptive anal intercourse
- Thus, depression screening/treatment may key to maximizing PrEP efficacy

Source: Mehrotra et al, AIDS and Behavior, 2016; Defechereux et al. AIDS and Behavior 2016

People Living with HIV/AIDS

Rates of selected psychiatric disorders: United States general population vs PLWHA



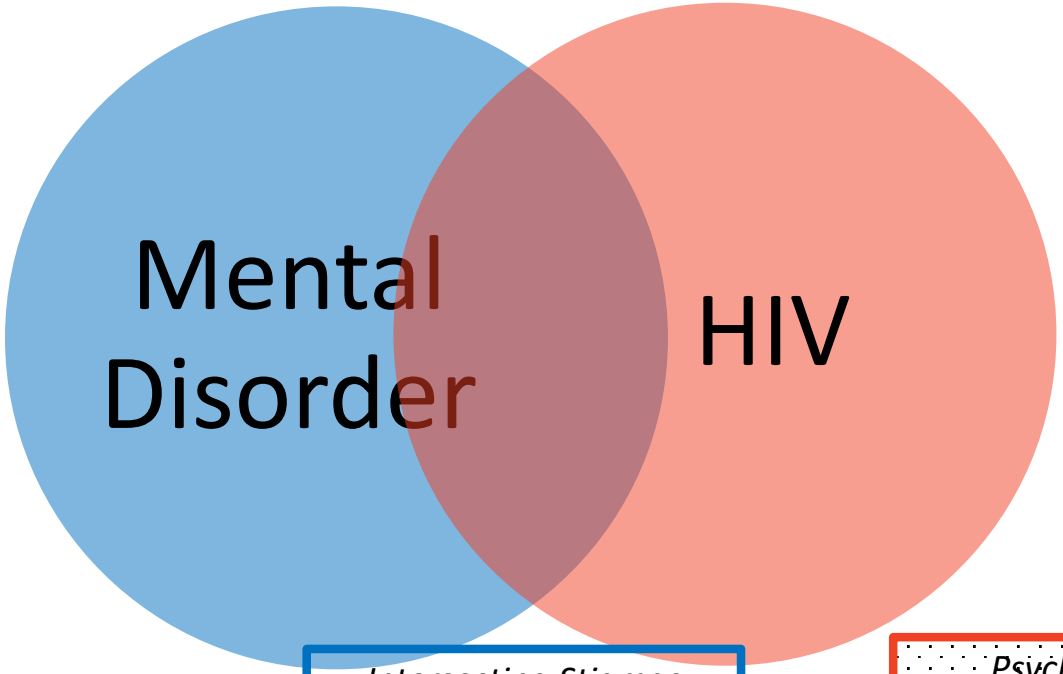
In South Africa, 26 to 38% of PLWHA have a mental disorder vs. 13% in the general population

Jonsson et al., *S Afr J HIV Med 2013; 14(4):155-165*

Even higher rates for adolescents and young adults

Source: Extensive literature review by colleagues in the Northeast/Caribbean AETC

Why the high burden of mental health in HIV?



Demographic
Age
Gender Sexual Orientation
Ethnicity

SES
Income
Education
Housing and Food: Security/Insecurity

Biological
Chronic immune activation and HPA dysregulation
Other Infections (e.g., HCV)

Environmental
Natural Disasters
War/Conflict
Climate / Water
Migration

Community
Density
Safety / Violence

Intersecting Stigmas
Mental Illness
HIV
Gender / Sexual Minority
Substance Use
Sex Work

Psycho-social
Social Support
Loss / Bereavement
Trauma
Gender-based violence
Fear of illness

Depression: the most prevalent and most studied mental health condition in HIV

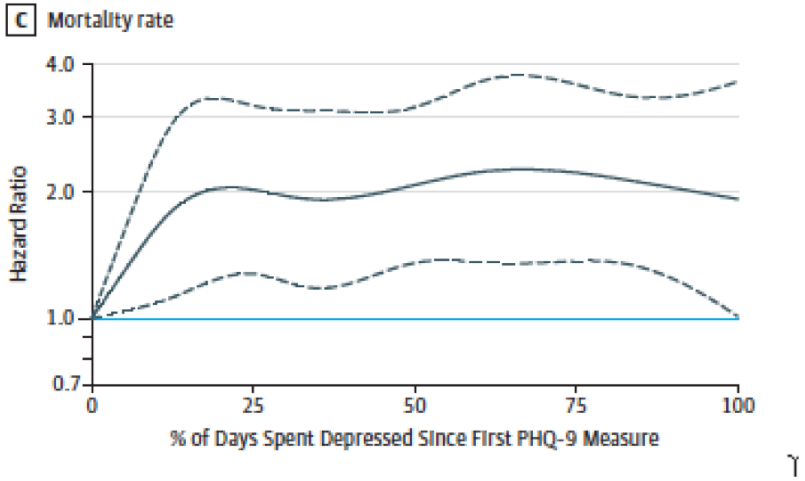
Depression and mortality among PLWHA

- Among 1487 women followed for 24 months in Tanzania, **mortality was 6.6%** among women with depressive symptoms **vs 3.7%** without
- Among 765 HIV+ women at 4 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 (CD4 count, ART duration, age)
- In the US WIHS prospective cohort (study N=858), chronic depressive symptoms was associated **>3 times the hazard of mortality** (women on ART) and >7 times the hazard of mortality (women not on ART) compared to women on ART with no depression

Sources: Sudfield et al., 2017, AIDS; Ickovics JR et al, 2001, JAMA; Todd et al., 2016, American Journal of Epidemiology;

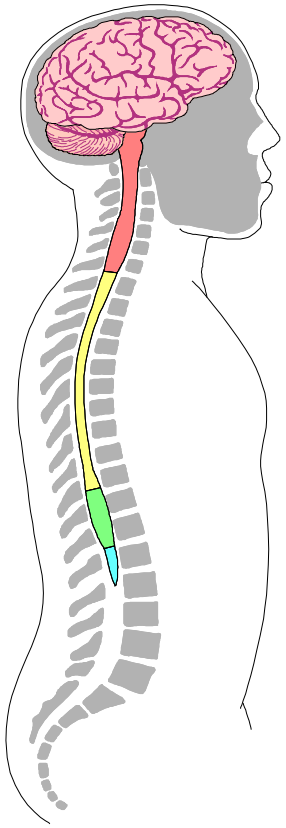
Longer depression yields worse HIV care outcomes

- **Dose-response relationship between depression length and HIV outcomes**
- 5927 US individuals living with HIV
- Each 25% ↑ in days with depression
  - **19% ↑ risk of mortality**



Source: Pence et al, JAMA Psychiatry, Feb 21 2018

What are the potential pathways between mental illness and HIV health outcomes?



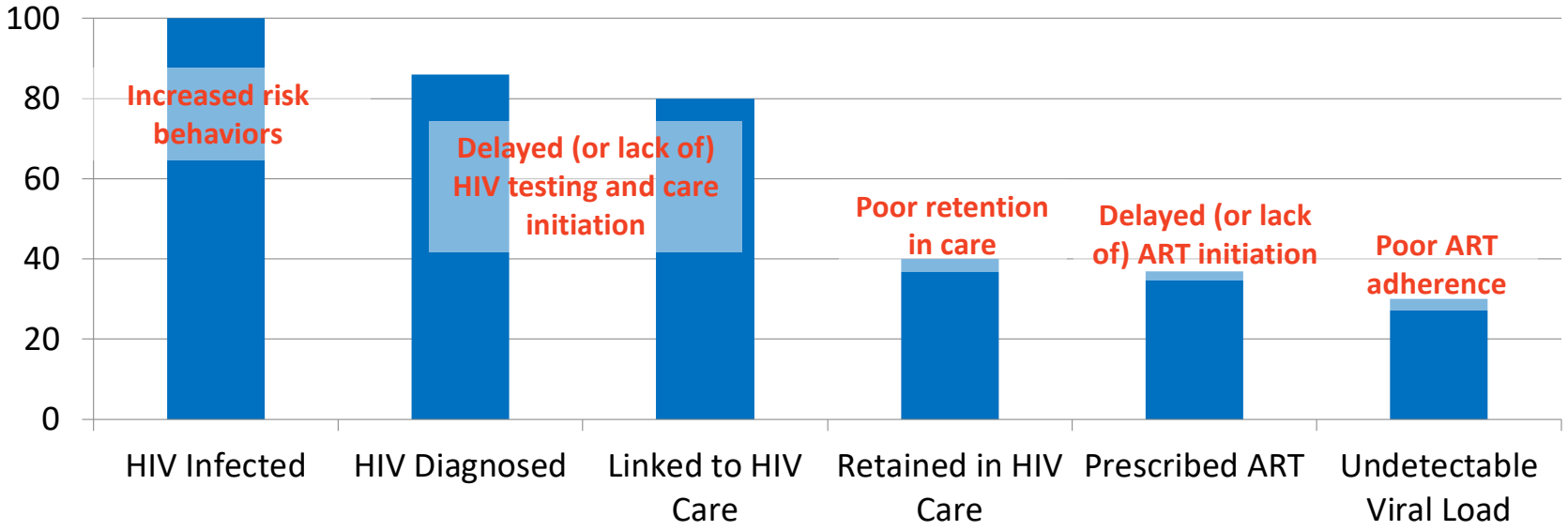
Potential biological mechanisms

- Direct effects of depression → immune system
  - Chronic immune activation, HPA dysregulation
- HIV crosses the blood brain barrier → immune activation in the brain and the CNS
  - Inflammatory proteins → oxidative stress and neuronal injury
- Chronic inflammatory response to HIV infection
  - Elevation in the level of cytokines e.g. Interleukin(IL)-6 and Tumor Necrosis Factor(TNF)-Alpha trigger chain reaction involving Tryptophan depletion through the activation of Indoleamine 2,3-dioxygenase (IDO) enzyme
  - Tryptophan depletion reduces serotonin levels and increases Kynurenine (Kyn) and its metabolites (some are neurotoxic and associated with depression, suicide, and anxiety)

Source: Fu et al, Journal of Neuroinflammation, 2011; Lawson et al, Brain, Behavior, and Immunity, 2011; Capuron et al, Biological Psychiatry, 2011; Castillo-Mancilla et al, Clinical Infections Diseases, 2016; Hunt, Clinical Infections Diseases, 2017; Wada et al, AIDS, 2015; Dantzer, Current Topics in Behavioral Neurosciences, 2016; Martinez et al, JAIDS, 2014

The behavioral pathway is clear

Mental health impairment contributes to:



- All lead to non-optimal HIV treatment and thus, poorer health outcomes (for self and for others)
- Whatever the pathway, it is clear that we need to address mental health problems if we want to improve health outcomes along the HIV prevention and HIV care continua

Source: Bemelmans M et al, J Int AIDS Soc, 2016; Gonzalez JS et al, JAIDS 2011; Uthman et al, Curr HIV/AIDS Rep, 2014; Mayston et al, AIDS, 2012; Krumme et al, J Epidemiol Community Health, 2014; Musisi et al, Int J STD AIDS, 2014; Antelman et al, JAIDS, 2007; Remien et al, AIDS and Behavior, 2007

The Depression and ART Adherence Connection is VERY Clear

Depression and ART adherence

J Acquir Immune Defic Syndr • Volume 58, Number 2, October 1, 2011

CRITICAL REVIEW: CLINICAL SCIENCE

Depression and HIV/AIDS Treatment Nonadherence: A Review and Meta-analysis

Jeffrey S. Gonzalez, PhD,†‡ Abigail W. Batchelder, MPH, MA,* Christina Psaros, PhD,‡§ and Steven A. Safren, PhD‡§*

- 95 independent samples
- Depression significantly associated with non-adherence ($p < .001$; $r = 0.19$; CI: 0.14 - 0.25)

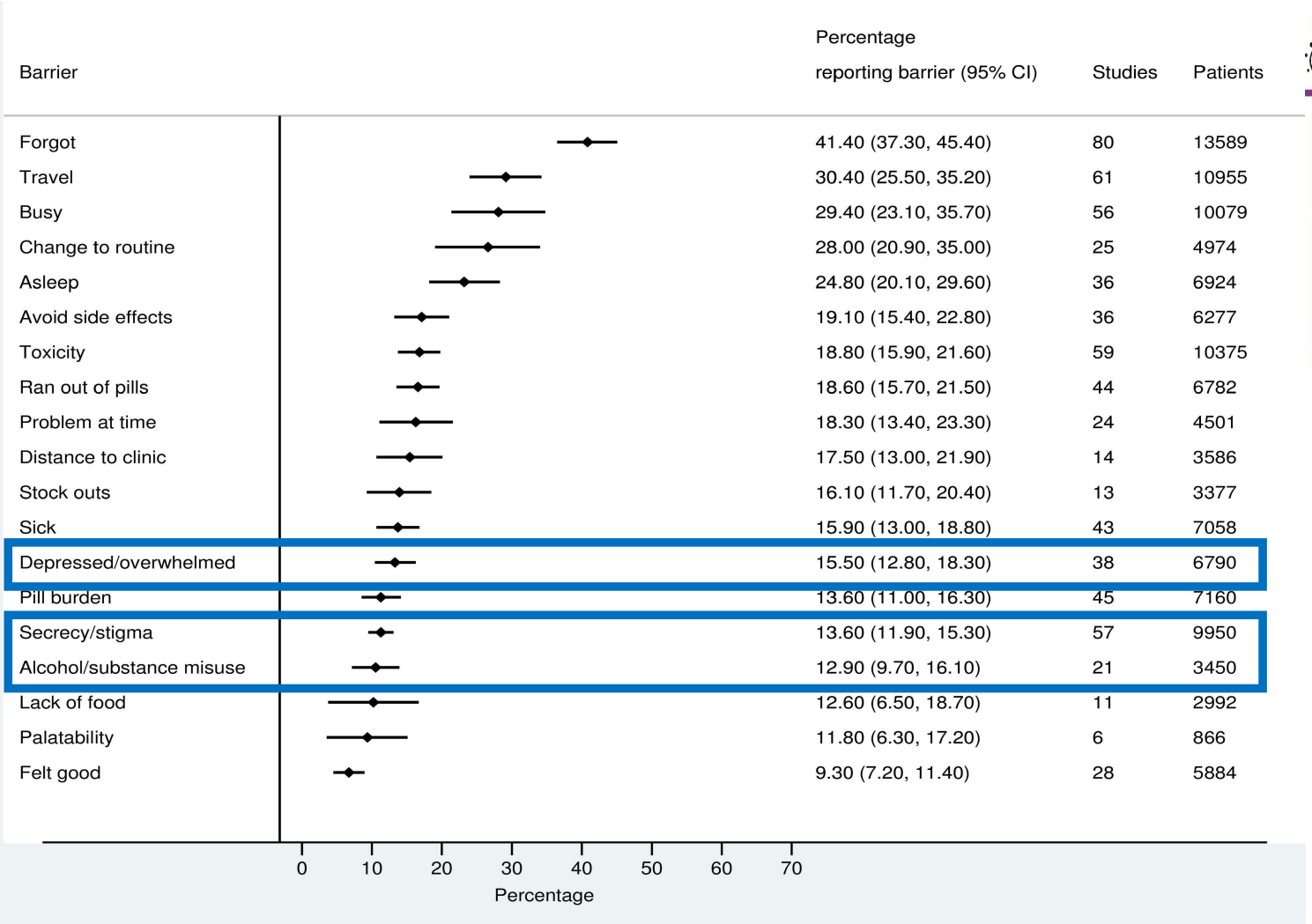
Curr HIV/AIDS Rep (2014) 11:291–307
DOI 10.1007/s11904-014-0220-1

CO-INFECTIONS AND COMORBIDITY (CM WYATT AND K SIGEL, SECTION EDITORS)

Depression and Adherence to Antiretroviral Therapy in Low-, Middle- and High-Income Countries: A Systematic Review and Meta-Analysis

Olalekan A. Uthman · Jessica F. Magidson · Steven A. Safren · Jean B. Nachega

- 111 independent samples
- Likelihood of achieving good (80%) adherence 42% lower among those with depressive symptoms than those without
- Consistent across country's income group, study design, and adherence rates



PLOS MEDICINE

RESEARCH ARTICLE

Patient-Reported Barriers to Adherence to Antiretroviral Therapy: A Systematic Review and Meta-Analysis

Zara Shubber[1], Edward J. Mills[2], Jean B. Nachega[3,4,5], Rachel Vreeman[6,7], Marcelo Freitas[8], Peter Bock[9], Sabin Nsanzimana[10,11], Martina Penazzato[12], Tsitsi Appolo[13], Meg Doherty[12], Nathan Ford[12,14]*

125 Studies
19,016 patients
38 countries

Depression – a barrier for 15% adults, 25% adolescents

Beyond depression

In the context of co-morbid vulnerabilities, such as **unstable housing**, **food insecurity**, **domestic violence**, **trauma**, **stigma** and **discrimination** a wide range of psychiatric problems are found among PLWHA, including:

- Depressive disorder
- Anxiety disorders
- Alcohol and other substance-use disorders
- Stress disorders, including Post-Traumatic Stress Disorder (PTSD)
- (1) Somatic problems, including insomnia, pain, fatigue, and sexual dysfunction, and (2) Non-somatic problems such as hopelessness and shame

Screening and Treatment

Mental health treatments

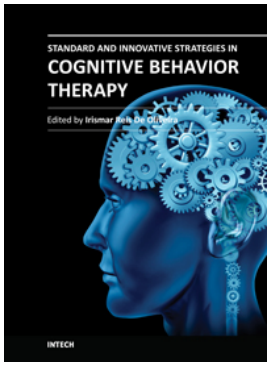
Psychopharmacological (Psychotropic medications)

Psychotherapies

- Psychodynamic
- Cognitive-behavioral therapy (CBT)
- Motivational enhancing therapy (MI)
- Interpersonal therapy (IPT)
- Stress-reduction / Mindfulness interventions
- Harm-reduction and Abstinence treatments

Manualized and tailored across languages and cultures – thus, capable of being scaled up

Technology as part of scale-up



Mental Health Screening Tools

General Health Questionnaire (GHQ-5/12)

Patient health questionnaire (PHQ-9)

Center for Epidemiological Studies depression scale (CES-D)

Generalized anxiety disorder scale (GADS)

Edinburgh postnatal depression scale (EPDS)

Hospital anxiety and depression scale (HADS)

Children's depression inventory (CDI)

Hamilton rating scale for depression (HAM-D)

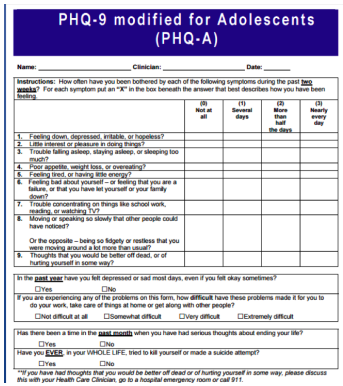
Harvard trauma questionnaire (HTQ)

Substance Abuse and Mental Illness Symptoms Screener (SAMISS)

Beck depression inventory (BDI)

Kessler psychological distress scale (K10)

Self-report questionnaire (SQR-20)


PHQ-9 modified for Adolescents (PHQ-A)

Name: _____ Clinician: _____ Date: _____

Instructions: How often have you been bothered by each of the following symptoms during the past two weeks? For each symptom put an "X" in the box beneath the answer that best describes how you have been feeling.

	(0) Not at all	(1) Several days	(2) More than half the days	(3) Nearly every day
1. Feeling down, depressed, irritable, or hopeless?				
2. Little interest or pleasure in doing things?				
3. Trouble falling asleep, staying asleep, or sleeping too much?				
4. Poor appetite, weight loss, or overeating?				
5. Feeling tired, or having little energy?				
6. Feeling bad about yourself – or feeling that you are a failure, or that you have let yourself or your family down?				
7. Trouble concentrating on things like school work, reading, or watching TV?				
8. Moving or speaking so slowly that other people could have noticed? Or the opposite – being so fidgety or restless that you were moving around a lot more than usual?				
9. Thoughts that you would be better off dead, or of hurting yourself in some way?				

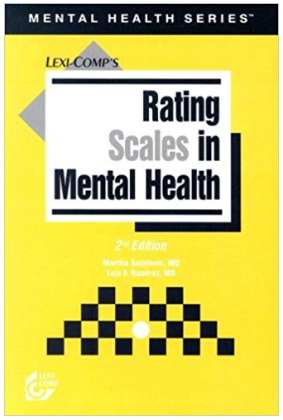
In the past year have you felt depressed or sad most days, even if you felt okay sometimes?
☐Yes ☐No

If you are experiencing any of the problems on this form, how difficult have these problems made it for you to do your work, take care of things at home or get along with other people?
☐Not difficult at all ☐Somewhat difficult ☐Very difficult ☐Extremely difficult

Has there been a time in the past month when you have had serious thoughts about ending your life?
☐Yes ☐No

Have you EVER, in your WHOLE LIFE, tried to kill yourself or made a suicide attempt?
☐Yes ☐No

*If you have had thoughts that you would be better off dead or of hurting yourself in some way, please discuss this with your Health Care Clinician, go to a hospital emergency room or call 911.

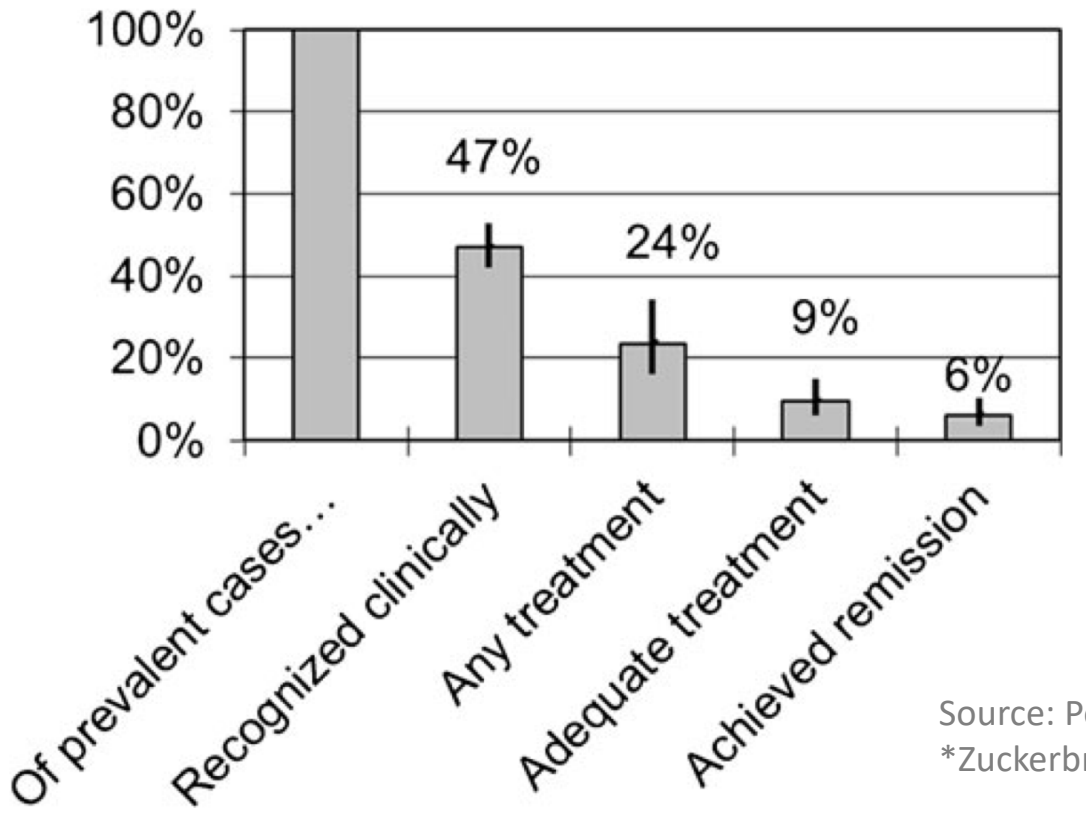


Source: Ali, PLoS One, 2016, "Validated screening tools for common mental health disorders in low and middle income countries: a systematic review

So - we have valid mental health screening tools AND an array of effective mental health treatments.

How are we doing diagnosing mental health conditions and treating them?

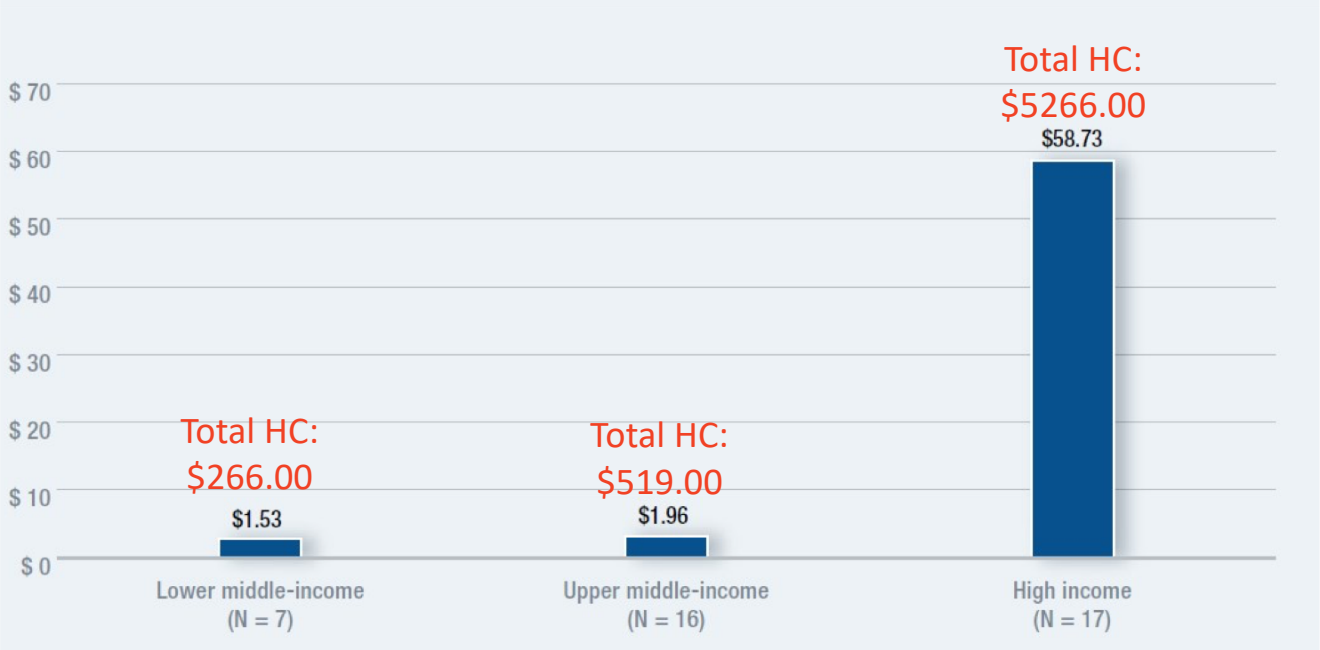
The depression treatment cascade



As many as 2 in 3 youth with depression are not identified by their primary care clinicians and fail to receive any kind of care*

Source: Pence et al, Psychiatry in Primary Care, 2013;
*Zuckerbrot et al, Pediatrics, 2018

Worldwide mental health budgets are significantly underfunded



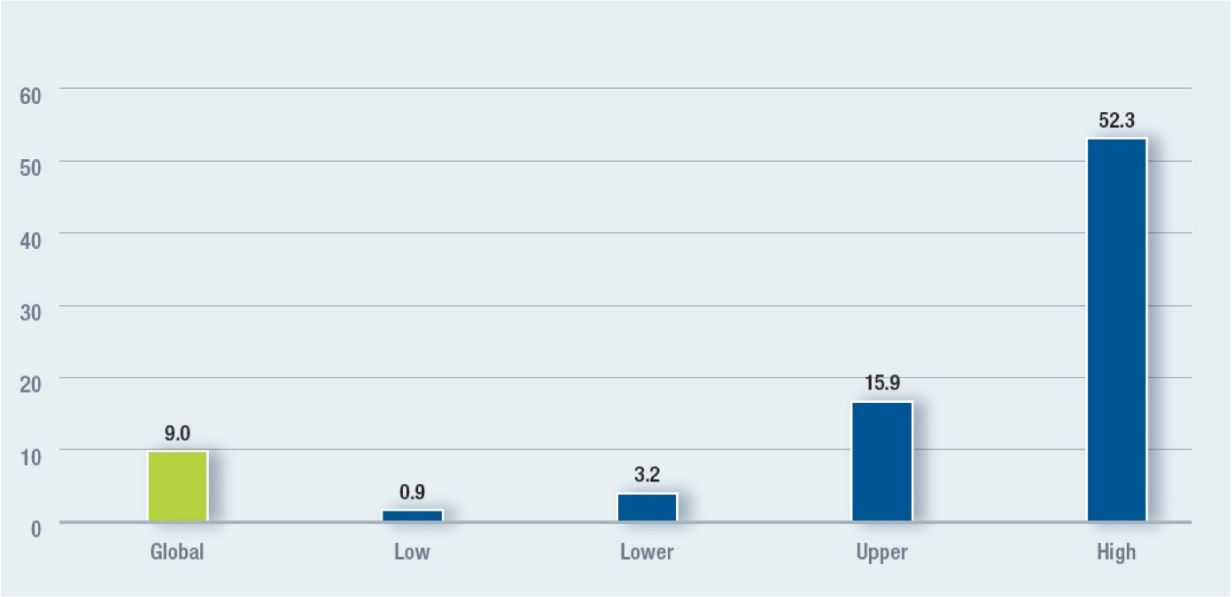
Median government mental health expenditure per capita (US$)

Source: WHO, Mental Health Atlas, 2014; World Health Organization Global Health Expenditure database 2014

Availability of mental health care providers is inadequate

South Africa
1 psychiatrist/psychologist per 1.5 million people

Zimbabwe
12 psychiatrists/16 psychologists per 13 million people

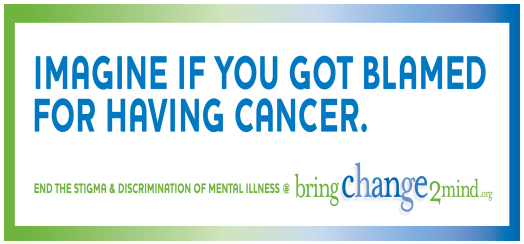


Median number of mental health workers per 100,000, by World Bank income group

Source: WHO, Mental Health Atlas, 2014; Chibanda, International Health, 2017; Chibanda, Epidemiology and Psychiatric Sciences, 2017

The Reality: mental health treatment gap

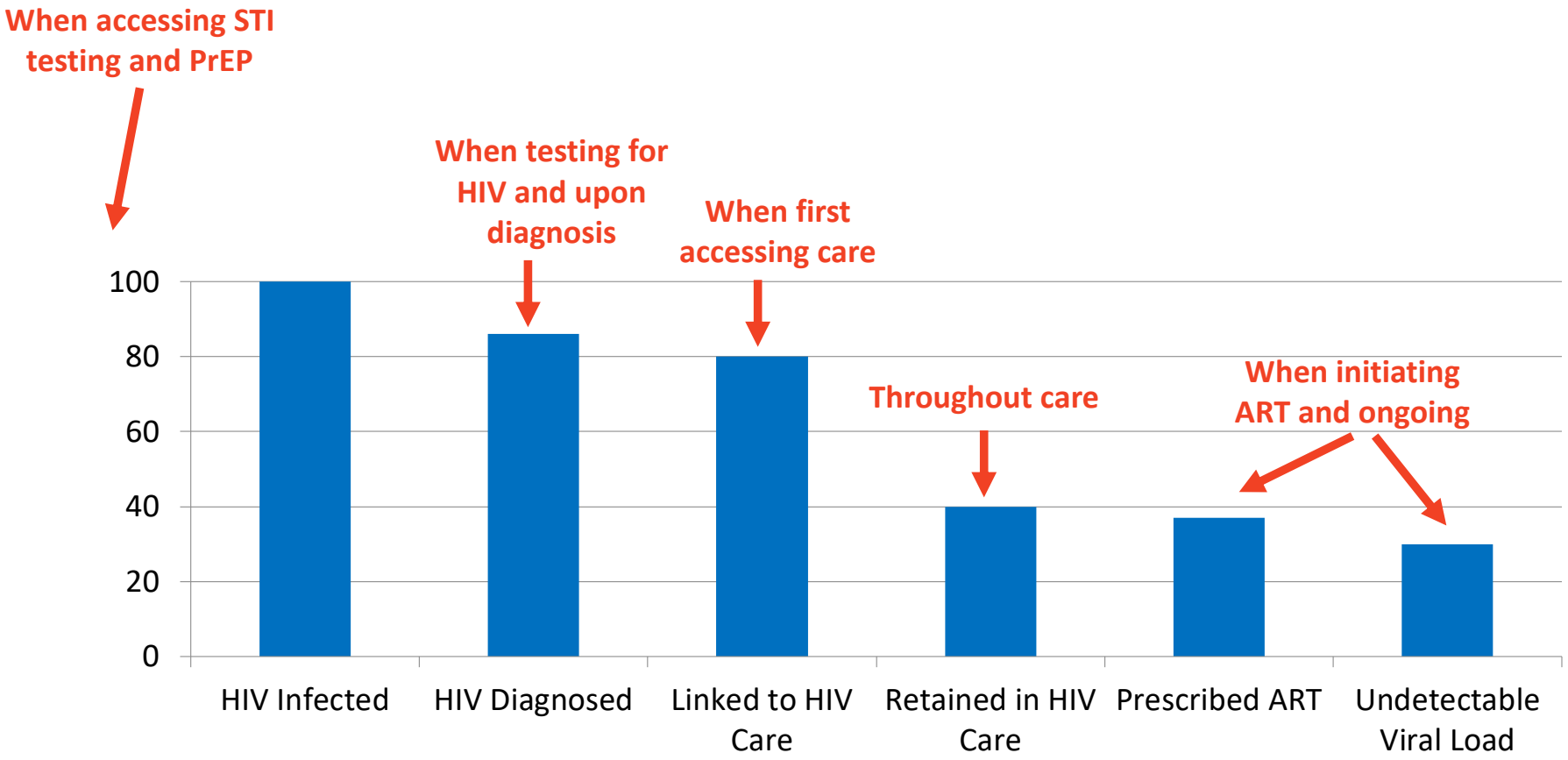
- The majority of people (70-85%) with mental disorders – across all country settings - do not receive care
- Contributors: Human resource shortages, fragmented service delivery models, and lack of capacity for implementation and policy change
- Unfortunately, the stigma of mental illness exists at all levels: patients, health care workers, and policy makers



Source: Demyttenaere K et al, JAMA, 2004; Wainberg et al, Current Psychiatry Reports, 2017

Maybe the HIV Field can Lead the Way

Opportunities for intervention: Mental health screening and intervening



Let’s now examine what we know regarding effective treatments of mental health problems among PLWHA

Systematic reviews and meta-analyses of mental and behavioral health interventions for PLWHA

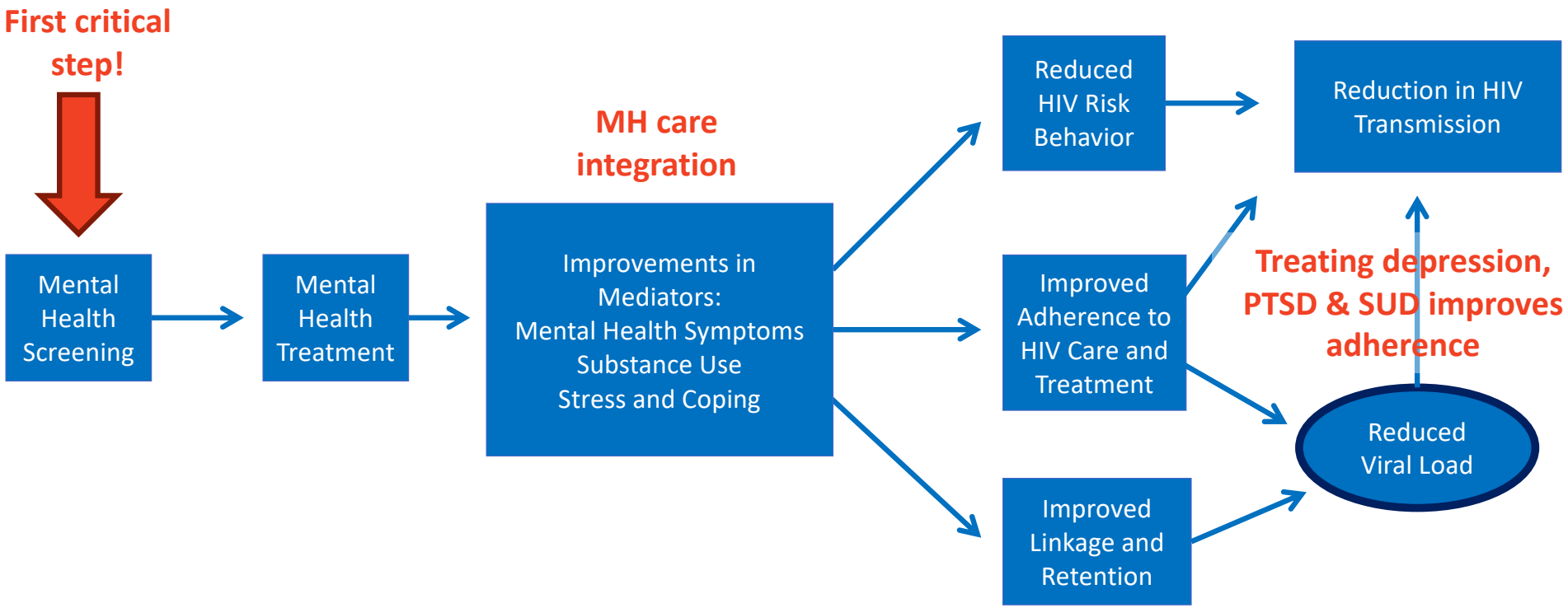
- 181 studies in total across low-, middle-, and high-income countries
- Total Participants >20,000 (representing all populations)
- Types of Studies: RCTs, Pilot/Feasibility Studies, and Quasi-experimental Designs
- Types of Interventions: (duration range 1-30 hours, 1-54 weeks, 1-48 sessions, follow-up range 1-17 months)
  - **Pharmacological intervention** (e.g., administration of psychotropics)
  - **Symptom-oriented intervention** (e.g., cognitive and/or behavioral therapy, stress management, motivation interviewing, interpersonal therapy)
  - **Supportive intervention** (e.g., support, psycho-education)
  - **Meditation intervention** (e.g., mindfulness, meditation, relaxation)

Source: van Luenen et al, AIDS and Behavior, 2018; Sikkema et al, Global Mental Health, 2015; Sherr et al, Psychology, Health, and Medicine, 2011,

Key takeaways from reviews

- Small to moderate positive effects on mental health
  - Reduce depression and anxiety, improve quality of life and psychological well-being
- Biggest effects with lengthier and multi-level interventions
  - **Integrated in community-based health care**
  - Contextualized HIV/AIDS and mental health within family interactions and peer support
- Interventions that are primarily **focused on mental health AND also delivered by mental health care professionals** most effective

Benefits of integrating mental health screening and treatment into HIV care

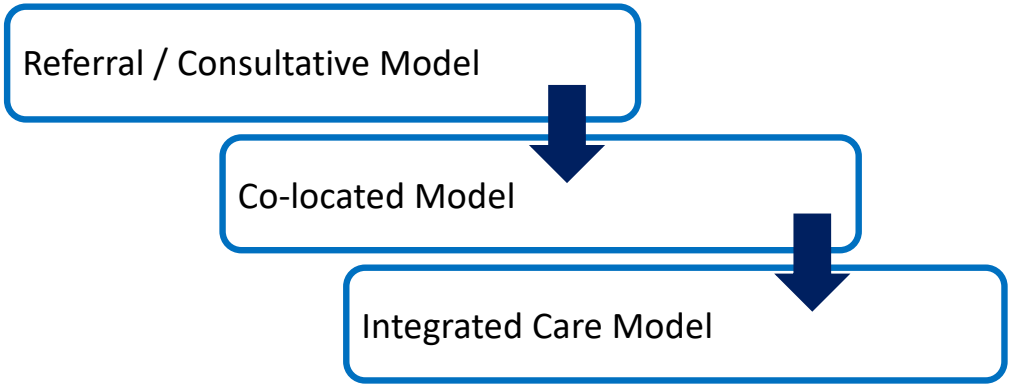


Source: Shim et al, Psychiatric Services, 2012; Sikkema et al, AIDS and Behavior, 2010; Tucker et al, EBioMedicine, 2017; Safren et al, Lancet HIV, 2009

The scale-up challenge

Task Shifting / Sharing

Integrated Care



Source: van Ginneken N et al., Cochrane Database Syst Rev. 2013; WHO, 2007; Verdeli H et al, 2008; Rojas et al, Lancet, 2007; Bass et al, BJP, 2006; Patel et al, Lancet, 2007; Araya et al, Lancet, 2003; Patel and Thornicroft, PLoS Med, 2009; GMHGroup, Lancet, 2007

Evidence-based depression care is feasible with existing HIV clinic staff in LMIC

- INDEPTH-Uganda: NIH-funded comparative, cluster RCT comparing task-shifting approaches to integrating depression treatment into HIV care in Uganda
  - Care provided by **trained nurses** using a structured protocol
  - Care provided by **trained primary care (PC) providers** using "clinical acumen"
- N=1252 clients across 10 public HIV clinics (5 structured protocol, 5 clinical acumen)

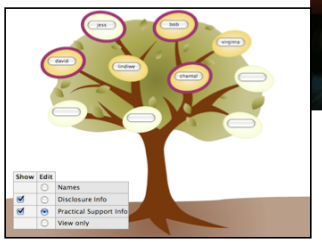
	Trained Nurses	Trained PC providers
% Screened with PHQ-2	76%	80%
% Positive screens who received PHQ-9	84%	49%
% Clinically depressed, prescribed antidepressants	69%	56%
Among treated, % with full remission	65%	69%

Source: Wagner et al, PLoS One, 2016; Wagner et al, Research and Advances in Psychiatry, 2016

- **Existing staff (nurses, doctors) can provide quality depression care**
- **Limited funding is needed for training and ongoing supervision by specialists who are available**
- **Both models were widely adopted by providers and depression care reached most depressed clients**

Mental Health Screening and Adherence Counseling by Lay Counselors in South Africa

- Provincial adherence counselors: trained on multimedia-supported intervention
  - Screening for psychiatric distress and alcohol/substance use problems
  - 3-4 session problem solving counseling with the patient and support partner, focused on adherence behaviors, social support, and psychological well-being
- Results (N=345)
  - Acceptable and Feasible
  - ↑ **mental health screening & referrals**
  - ↑ ART initiation and viral suppression



During the past month, that is, from last month to yesterday, about how often did you feel:

	None of the time	A little of the time	Some of the time	Most of the time	All of the time
1. Tired out for no good reason?	1	2	3	4	5
2. Nervous?	1	2	3	4	5
3. So nervous that nothing could calm you down?	1	2	3	4	5
4. Hopeless?	1	2	3	4	5
5. Restless or fidgety?	1	2	3	4	5
6. So restless you could not sit still?	1	2	3	4	5
7. Sad or depressed?	1	2	3	4	5
8. So depressed that nothing could cheer you up?	1	2	3	4	5
9. That everything was an effort?	1	2			
10. Worthless?	1	2			

Interpretation of Total Score

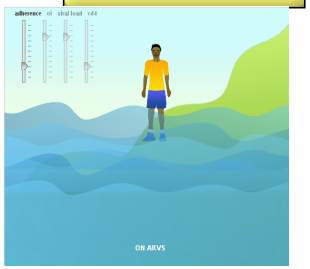
10-19: No significant distress

20-24: Mild distress consistent with mild depression and/or anxiety

25-29: Moderate distress consistent with moderate depression and/or anxiety

30-50: Severe distress consistent with severe depression and/or anxiety

"It seems like you're really under a lot of stress and having some difficulties. At the end of our Masivukeni session today, I'm going to give you information for you to talk with someone trained to help you with your problems. You don't have to talk to anyone, but I really encourage you because it could help you feel better."



Robbins et al., AIDS Behav, 2015
Remien et al., AIDS Behav, 2013
Remien et al., 2017; IAPAC; Remien et al., 2016 IAS

Intervention Intensity Level

The Challenge of Short vs Long Interventions

- There is an increased focus on – and demand for – brief interventions; and there is evidence for success with certain brief interventions
  - Manualized and able to be administered by a wider range of staff
- However, there is also evidence for longer and multi-level interventions generally having greater and longer-lasting benefits
- **Level of intervention intensity needs to vary depending on the severity of the problem(s) and the level of need for the patient**

van Luenen et al, AIDS and Behavior, 2018; Sikkema et al, Global Mental Health, 2015; Sherr et al, Psychology, Health, and Medicine, 2011,

Preventing AIDS through Health for HIV Positive persons (PATH+) for SMI Patients

- Adaptive treatment design implemented through an **"intervention cascade"**
- 1 year of in-home consultations and coordinated medical and mental health services from Advanced practice nurses (APNs)
  - **APNs collaboration with prescribing providers, pharmacists, and case managers** → organize medication regimens, address barriers to adherence, promote participant's ability to self-care
  - **Minimum 1/week meeting** with participant
  - **Psycho-education, pillboxes, beeping watches**
- **Adherence to HIV and psychiatric medications calculated weekly**
  - If adherence <80%, implemented intervention cascade until adherence >80% for 3 weeks (social networks, reminder beepers, prepaid cellular phones)
  - Directly observed therapy (DOT) final step in intervention cascade
- Outcome
  - Significant reductions in viral load at 12 months
  - Significant changes in viral load, CD4, and health-related quality of life over 24 months

Source: Blank et al, Current HIV/AIDS Reports, 2013

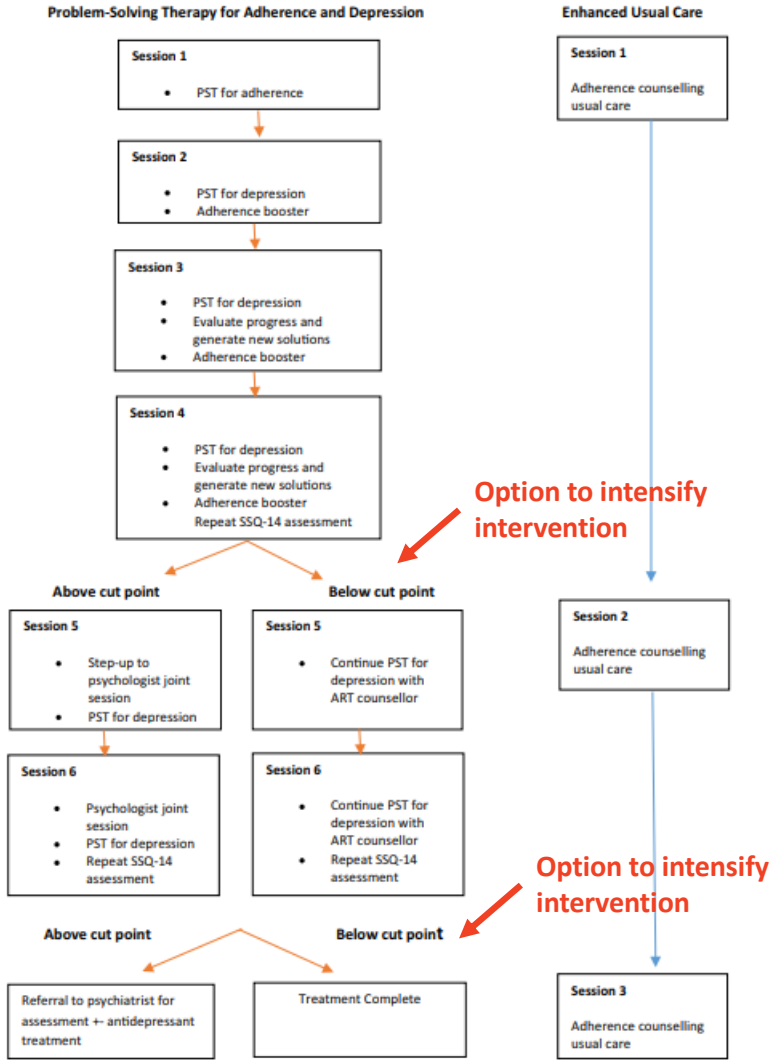
AIDS Behav (2018) 22:86–101
https://doi.org/10.1007/s10461-016-1659-4

ORIGINAL PAPER

Feasibility and Acceptability of a Task-Shifted Intervention to Enhance Adherence to HIV Medication and Improve Depression in People Living with HIV in Zimbabwe, a Low Income Country in Sub-Saharan Africa

Melanie Abas[1] · Primrose Nyamayaro[2] · Tarisai Bere[3] · Emily Saruchera[2] · Nomvuyo Mothobi[4] · Victoria Simms[5] · Walter Mangezi[2] · Kirsty Macpherson[1] · Natasha Croome[1] · Jessica Magidson[6] · Azure Makadzange[6] · Steven Safren[7] · Dixon Chibanda[2,3] · Conall O'Cleirigh[6]

- 32 adults with poor ART adherence and at least mild depression
- Pilot RCT comparing Problem Solving Therapy for adherence and depression delivered by an adherence counselor vs. enhanced usual care
- Acceptable and feasible, efficacy study currently underway
  - Promising results at 6 months follow-up:
  - ↑ electronic ART adherence, viral suppression
  - ↓ depression



Given the “resource reality,” how do we meet the challenge of addressing the MH need in the context of expanding ART scale-up?

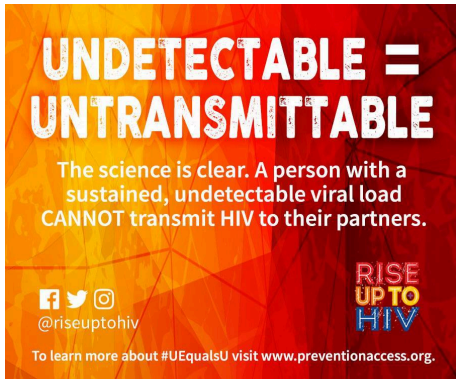
- It will look different in different regions, depending on political will, advocacy, and local policy
- There is a spectrum of MH impairment and level of need in our populations
  - Most need minimal intervention; while some need greater intensity of intervention
- We need more “stepped interventions” with algorithms and tools for determining level of need.

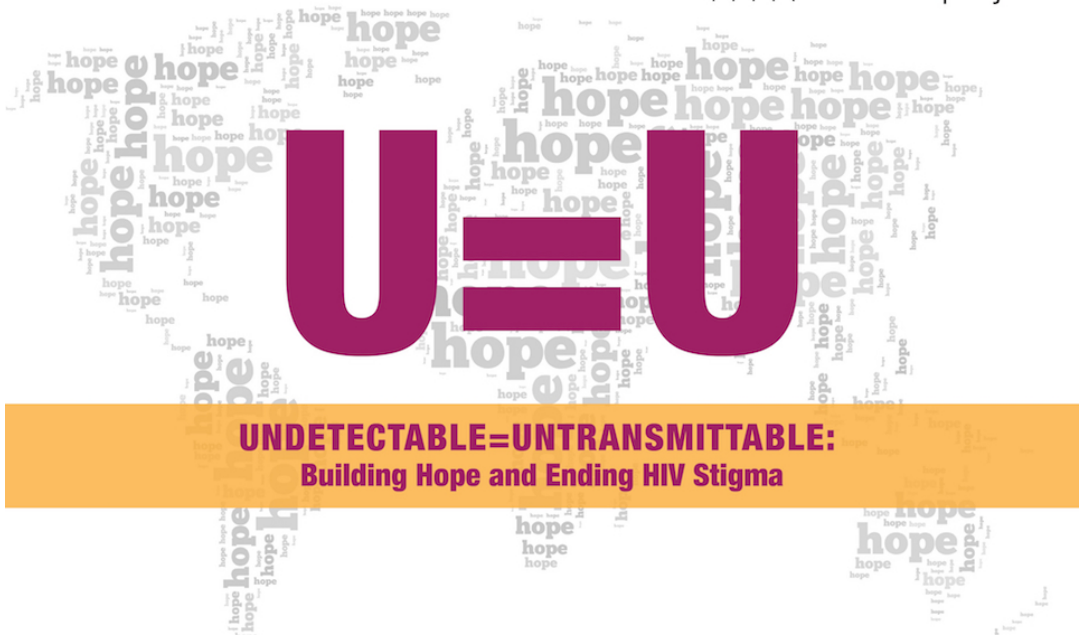
"HIV made me feel unattractive and made me afraid to have sex with my husband, who is HIV negative. Since I learned about U=U, I have lost 20 pounds, I feel sexy, and my husband and I are making up for all the times we missed."

*"When I learned I was HIV+, I became **isolated and depressed**. I went on medication, but knowing I had the virus made me feel dirty and ashamed. I stayed that way for seven years, stigmatizing myself. **U=U has given me my life back**. Knowing that I can't infect anyone else has allowed me to forgive myself."*

*"It was only when I learned about U=U that I realized that I have been living for all these years carrying this heavy weight. Because I took my meds, I kept on living. **But inside I felt like I was dying.** And that made me afraid to get close to anyone else. **The night I heard about U=U**, I couldn't stop crying. **It was like that burden I didn't even realize I was carrying just fell away**."*

thewellproject





Long-term psychosocial challenges for people living with HIV: let's not forget the individual in our global response to the pandemic

Robert H. Remien and Claude A. Mellins

Since the beginning of the HIV epidemic, people living with HIV have faced numerous psychological and behavioral challenges. With the advent of antiretroviral therapy (ART) there have been dramatic shifts in some of these key challenges and new ones have come to the forefront. This paper highlights several critical psychological and behavioral aspects of HIV disease, a few of which require focused attention, including mental health, stigma and disclosure, adherence, and sexual behavior. Although the focus is primarily on adults living with HIV, we also comment on some of the additional challenges for children and young people. Our critical examination in these areas draws upon the lessons learned in contexts in which ART has been available for a decade, and we explore what is currently happening in settings with more recent treatment access. In the end we offer our insights into what we may expect in the future, and provide recommendations for ongoing prevention and care initiatives with adults, children, and young people affected by this disease.

AIDS 2007, **21** (suppl 5):S55–S63

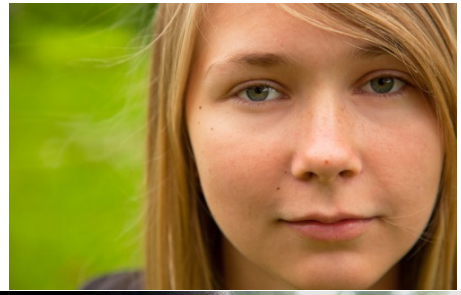
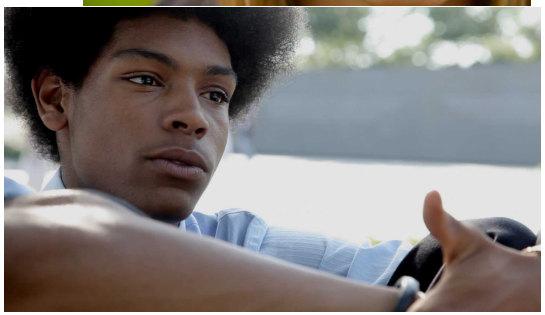
Diversity and Tailoring

An HIV+ mother of 3 in SSA, suffering from PTSD

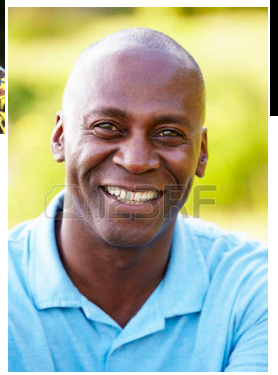
A young HIV- Black man in the southern US kicked out of his home due to his homosexual orientation, suffering from depression

A 40-year old transgender woman recently diagnosed with HIV, suffering from an acute anxiety disorder

A 28-year old heterosexual man in Central Asia, coping with opiod addiction (of unknown HIV status)




Take Home Messages: Mental Health Matters!

- Mental health problems (ranging from distress to SMI) are elevated among people at-risk for HIV and those living with HIV
- Mental health problems contribute to HIV acquisition and poor outcomes along the HIV treatment continuum
- We have the necessary assessment (screening) tools and efficacious treatments. However, we need to prioritize mental health treatment with appropriate resources to address the current gap
- In the HIV context, promising advances have been made integrating mental health care into primary care (via task-shifting, and stepped-care interventions)

Take Home Messages: Mental Health Matters! (cont.)

- Integrating mental health assessment and treatment into HIV care should be routine and is essential to achieving our “90-90-90” and “EtE” goals
- Stronger advocacy for the human right to the highest attainable standard of MENTAL health is urgently needed

The HIV field can lead the way – Let’s do it!!!

Acknowledgments

Columbia University Medical Center
Nadia Nguyen
Claude Ann Mellins
Elaine Abrams
Reuben Robbins
Andrea Norcini Pala
Javier Lopez Rios
Kathleen Pike
Karen McKinnon
Francine Cournos
Milton Wainberg

Yale School of Medicine
Serena Spudich

University of North Carolina
Brian Pence

University of Miami
Steven Safren

RAND Corporation
Glenn Wagner

HIV CENTER for Clinical and Behavioral Studies
at the New York State Psychiatric Institute and Columbia University

Funding Support: NIMH Center Grant
P30-MH43520; PI: Remien

National Institute of Mental Health
Michael Stirratt
Dianne Rausch
Christopher Gordon
Teri Senn
Greg Greenwood

NIH
National Institute of Mental Health

NYC Department of Health and Mental Hygiene
Demetre Daskalakis
Mary Irvine
Matthew Feldman

University of Washington
Pamela Collins
Jane Simoni

Duke University
Kathleen Sikkema

University of Cape Town
John Joska

University of Pennsylvania
Robert Gross
Michael Blank

Housing Works, NYC
Charles King

“No health without mental health”

Take care of your body AND your mind

You all look beautiful in your underwear!

Thank You!