HIV and Co-Occurring Mental Health and Substance Use Disorder Issues

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Objectives

1. Identify mental health challenges and strengths across the spectrum of living with HIV/AIDS.
2. Understand the impact of substance misuse on HIV risk, medication adherence, and health outcomes.
3. Formulate provision of culturally competent services to persons living with HIV/AIDS and co-occurring diagnoses.
HIV, Mental Health and Substance Misuse

One study estimates that at least 30% of all people with HIV require mental services to treat the emotional and cognitive sequelae of HIV.

Substance use increases risk for HIV and other sexually transmitted infections due to its effect on decision-making and sexual risk-taking behaviors.

HIV is a causal factor in depression, and depression is a causal factor in HIV-related morbidity.

Sources: HRSA, NIDA, Ciesla & Roberts, 2001; SAMSHA/ 2008 results-NSDUH Findings

Working with Clients with Multiple Diagnoses: Common Issues

Difficulty accessing services due to poverty, institutionalization, homelessness or lack of entitlements
Difficulty remaining in treatment with one provider (shop around)
Mood, cognition, impulse control, and motivation may be affected
Adherence is not as simple as taking medication: complex and varied psychosocial dynamics
Increase in high-risk or at-risk behaviors

Cite Source: Wainberg
The link to trauma

Exposure to violence, abuse, and risk of HIV

- History of sexual, physical, emotional abuse
- Survival sex
- Coerced sex
- Sexual assault and rape
- Intimate partner violence
- Trafficking
Structural/Environmental Factors - Risk

Availability and accessibility of services (health, mental health, substance use, reproductive health/family planning, victim services)

Provider/agency sustainability and geography/location

Policy/laws (criminalization, Syringe Service Programs (needle exchange services), immigration status

Transportation and accessibility

Food security

Housing

Employment

Poverty

Underlying Factors Affecting HIV/AIDS Disparities

- Amount of HIV already in the community
- Late diagnosis of HIV or AIDS
- Access to/acceptance of care
- Stigma, denial
- Discrimination, homophobia
- HIV/AIDS complacency
- Poverty and unemployment
Syndemics

The aggregation of two or more concurrent or sequential epidemics in a population which exacerbate the prognosis and burden of disease.

HIV

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What is it?

Retrovirus – replicate through reverse transcription

(Subtype) Lentivirus – it takes a long time to develop adverse reactions in the body

Attacks the immune system

Two strains: HIV 1 and HIV 2

Attacks and infects CD4 lymphocytes, which are critical to the body’s immune response

Identified in 1981 - GRID

Originated from Simian Immunodeficiency Virus

Definitions of Mode of Exposure Categories

» **MSM** = Men who have sex with men, or male-to-male sexual contact with person with HIV/AIDS or known HIV risk

» **IDU** = Injection Drug User

» **MSM/IDU** = Men who have sex with men, or male-to-male sexual contact and Injection Drug User

» **Heterosexual** = Heterosexual contact with person with HIV/AIDS or known HIV risk

» **OTHER** = includes hemophilia, transfusion, perinatal, other pediatric risks and other confirmed risks

» **NIR** = Cases reported with No Identified Risk
HIV in Body Fluids

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Average HIV Particles/1 ml</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood</td>
<td>18,000</td>
</tr>
<tr>
<td>Semen</td>
<td>11,000</td>
</tr>
<tr>
<td>Vaginal Fluid</td>
<td>7,000</td>
</tr>
<tr>
<td>Amniotic Fluid</td>
<td>4,000</td>
</tr>
<tr>
<td>Saliva</td>
<td>1</td>
</tr>
</tbody>
</table>

Host’s Immune Response

Immune responses partially control the viral production but in this process they destroy the infected CD4 T cells, leading to a gradual decline of CD4 T cells.
HIV to AIDS

CD4 count less than 200

One of many opportunistic infections:

Bacterial infections, multiple or recurrent
Candidiasis of bronchi, trachea, or lungs, esophagus
Cervical cancer, invasive
Cytomegalovirus retinitis (with loss of vision)
Kaposi sarcoma
Pneumocystis jirovecii pneumonia
Non-Hodgkins Lymphoma
Kaposis Sarcoma

Window Period

The period after becoming infected when an HIV test still shows a negative result.

Absence of antibodies do not confirm lack of HIV infection

Newer test types can show results sooner

PEP, if begun within 72 hours, can significantly reduce the possibility of converting to positive

95% develop antibodies by week 4

99.9% develop antibodies by week 12
HIV Medication Issues

ADAP - AIDS Drug Assistance Program (waiting lists)
Adherence
Resistance
Multiple drugs; single dose
When to start meds?
Cost
Side effects
Protease & Cognition

Adherence Issues

Client cultural and health beliefs
Client/provider relationship
Perceived efficacy of drugs
Degree of behavior change required
Management of side effects
Life stressors
Mental health and/or trauma history
Substance use history (current or in recovery)
Mental Health Disorders and HIV

Living with HIV/AIDS

- Pre-testing
- Testing
- Asymptomatic
- Symptomatic
- End-of-Life
- Chronic
- AIDS Diagnosis

- common psychosocial reactions/concerns
- impact of trauma
- mental health problems/disorders
- reactions increased due to preexisting diagnosis
- neuropsychiatric complications or CNS infection
Adjustment Disorders

High frequency of its diagnosis in the clinical settings but little research to document incidence.

Clinically significant emotional or behavioral symptoms that occur within 3 months of onset of stressor
- Precipitated by identifiable personal or medical stressors
- Characterized by a negative impact on social and/or occupational functioning
- In excess of the normal reaction to the stress

Cite: clinicaloptions.com; [http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2710332/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2710332/)

Anxiety Disorders

26% - 47% of clients living with HIV experienced some form of anxiety disorder within a 12 month period in various studies.

Among persons with undetectable viral load


Cite: [http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2710332/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2710332/)
Depression

Up to 60% of persons living with HIV had either a major depression or dysthymia within a 12 month period.

http://www.aidsinfonet.org/fact_sheets/view/558

Clinical depression affected patients’ adherence to their HIV medication regimen.


Depression

Depressed mood most of day, nearly every day
Anhedonia
Weight or appetite change
Sleep disturbances
Psychomotor agitation or retardation
Difficulty concentrating
Fatigue
Worthlessness/hopelessness
Suicidal ideation

HIV and Suicide

The rate of suicide for men was double that of the general population

Men living with HIV have an elevated rate of suicide, particularly in the first year after diagnosis

In one study, 91 of 96 deaths by suicide occurred in men, with similar rates in gay and heterosexual men. Rates were elevated in injecting drug users, compared to other groups.

Women’s suicide rates were not higher than those in the general population.

Four in ten suicides occurred in the first year after diagnosis. During this time, men’s suicide rate was five times that of the general population (SMR 5.3).


Long Term Survivors

Pre-HAART or living with HIV more than 10 years

More than half PLWHA > age 50

PTSD

Anxiety, nervousness, or sense of feeling constantly ‘on guard’

Depression

Irritability or flashes of anger

Lack of future orientation

Low self-esteem & self-worth

Substance abuse

Social withdrawal & isolation
Neuropsychiatric Complications

Prior to HAART/ART, on average 25% of asymptomatic clients showed mild neurocognitive disorders; up to 90% in late stage (AIDS diagnosis).

Post HAART/ART initiation, MND found in 5% in asymptomatic clients; 15% in early stage HIV, 25% in late stage.

Older age
Female gender
More advanced HIV disease (including CD4 count of <100 cells/µL, wasting)
High plasma HIV RNA (viral load)
Comorbid conditions (especially anemia and infection with cytomegalovirus, human herpesvirus 6, and JC virus)
History of injection drug use (especially stimulants)

HIV-Associated Neurocognitive Disorder

Mental slowness
Trouble with memory
Poor concentration
Motor symptoms
- loss of fine motor control leading to clumsiness, poor balance and tremors
Behavioral changes may include apathy, lethargy and diminished emotional responses and spontaneity
Substance Misuse and HIV

Injected Opioids:

Nearly one-quarter of AIDS cases stem from intravenous drug use

One in four people living with HIV/AIDS in the period of 2005–2009 reported use of alcohol or drugs to an extent that required treatment

Targeting the Supply and Demand Problem

5% of World Population
99% of Hydrocodone Consumed
85% of Oxycodone Consumed
80% of New Heroin Abusers Start with Opioids

HEROIN TYPES: SOURCE-FORMS

“Black Tar” Heroin: Mexican
Brown powder Heroin: Colombian/SWA
White powder Heroin: SEA
Novel Psychoactive Opiate-Like Substances

- Fentanyl Analogues
- W-18
- AH -7921
- U-47700
- MT-45
- Carfentanil

Overdose Prevention: Naloxone
Meth trends

- Increased production in Mexico
- New users becoming psychotic in short period of time due to potency.
- More crystal meth use among younger & older MSM, and high-risk heterosexual populations.
- STIs being spread by use of GRINDR® and Craig’s List® but outreach workers also using these apps to locate their cases.

Must assess for concurrent compulsive sexuality/impulse control disorder
Dangerous trends in meth production

Today:
Cartel “superlabs” revolutionize production

Until 2005:
“Mom and Pop: labs

2005 “Combat Methamphetamine Epidemic Act

Price and Purity of Methamphetamine in USA 2007 – 2012

Source: USDJ: DEA – STRIDE Data
LIMBIC / Reward Circuit

- Food
- Sex
- Excitement
- Comfort
- Nurturing

- Reinforcement for pleasure, then neural pathway formed: creates tolerance

Meth and Dopamine

- Meth forces dopamine from neuron
- Meth blocks receptor reuptake
- Meth is neurotoxic
- Meth destroys dopamine transporters
Limbic System – Relative Dopamine Reward

Partial Recovery of Brain Dopamine Transporters in Methamphetamine Abuser After Protracted Abstinence

Drivers of meth use

• Numb uncomfortable feelings:
  • Shame
  • Stigma
  • Fear
  • “Less than”
  • “I feel like damaged goods”
  • Financial stressors, uncertain future

• Boredom
• Search for connection and belonging
• “Celebrating” gay sex

Chemsex

Most common:
• Methamphetamine
• Cocaine or Crack Cocaine
• GHB
• Ketamine
• “Ecstasy”
• Poppers

• *Mephedrone (UK)
• Other synthetics
Chemsex

• Longer periods of continuous sexual intercourse
• Careless in choice of partner
• Not using condoms
• Increased sexual desire

Meth-Sex Fusion

Dopamine causes bonding

Sexual desire becomes highly focused, meth dependent

Requires increasing stimulation, risk, taboo for same effect
Complications of Meth Use

Erectile Dysfunction
Hijacks sexual template
Constant triggers
Visual triggers and cravings
Greatly increased risk of HIV, Hep C, and other infections
Poor HIV medication adherence

Meth & HIV Drug Interaction

The effect of methamphetamine is two or three times greater for individuals on combination therapy, especially combinations including ritonavir (Norvir)

CYP2D6
Protease Inhibitors can create cognitive decline (especially ritonavir)
Study Meds to Reduce Meth Cravings and Prevent Relapse

**Bupropion (Wellbutrin):** may reduce meth use in light meth users only.

**Modafinil (Provigil):** mixed results. One study has suggested that this drug – when combined with CBT – may help reduce meth use. Other studies have not shown a lot of promise for this drug.

**Naltrexone (Vivitrol):** more than one study have suggested that this drug has potential for reducing use and increasing abstinence of methamphetamine.

**Mirtazapine (Remeron):** one study found that mirtazapine – with CBT – was associated with significant reductions in meth use among a sample of men who have sex with men (MSM).

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**Best Practices**

Most valuable modalities

- Cognitive Behavioral Therapy (and “CBT Light”)
- Dialectical Behavioral Therapy
- Motivational Enhancement
- Contingency Management
- Retention
Best Practices

- Family involvement important
- 12 step participation valuable
- Combination of CBT groups and self-help support
- Individual therapy
- Non-judgmental approach
- Healthy social connections

High impact prevention

Scientifically proven HIV prevention interventions:
- HIV testing and linkage to care
- Antiretroviral therapy
- Access to condoms and sterile syringes
- Prevention programs for people living with HIV and their partners
- Prevention programs for people at high risk of HIV infection
- Substance abuse treatment
- Screening and treatment for other STIs
Harm Reduction: Addressing HIV/AIDS and Substance Use

Syringe service programs (SSP)
Barrier methods to reduce HIV transmission
HIV Treatment as Prevention (TasP)
PrEP (pre-exposure prophylaxis)
PEP (post – exposure prophylaxis)

CDC, 2017

PrEP (Pre-Exposure Prophylaxis): Part of Comprehensive Sexual Health

PrEP should be considered for people who are HIV negative and at risk for HIV infection.

- When taken consistently, PrEP has been shown to reduce the risk of HIV infection in people who are at high risk by up to 92%*

- PrEP is a powerful HIV prevention tool and can be combined with condoms and other prevention methods to provide even greater protection than when used alone

  * Newer studies very high rates of effectiveness (>99%)

Pre-conception care and reproductive health:

- Conceive with reduced risk of HIV transmission in discordant couples.

CDC, 2017
PrEP

Help prevent HIV by taking one pill a day

Must be taken every day to be effective

Truvada: a single pill containing two medications
  ◦ Tenofovir and Emtricitabine

May 2014: CDC releases guidance

For people at high risk
  ◦ Ongoing relationship with HIV+ partner; unprotected anal receptive intercourse; IDU

PrEP approved with counseling component

Undetectable Viral Load

Viral load is the best predictor of disease progression. The goal is to maintain undetectable level of viral load.

HAART

The virus mutates rapidly and may become resistant to the drugs

High level of adherence needed (95-99%) to achieve maximum viral load suppression, but this may vary by regimen

Work with health provider to monitor status and change regimen if needed.
U+U Undetectable = Untransmittable

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