Overview of Mental Health and Neurocognitive Screening in HIV Care

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ACTHIV
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Learning Objectives

At the conclusion of this presentation, participants will be better able to:

- Improve their skills in the differential diagnosis of altered mental status in HIV positive patients
- Select screening tools that will aid them in making neuropsychiatric diagnoses
Faculty and Planning Committee Disclosures

Please consult your program book.

Off-Label Disclosure

There will be no off-label/investigational uses discussed in this presentation.
ARS question: What percentage of your (your program's) patients have a mental illness, substance use disorder, and/or cognitive disorder?

- 1. Less than 25%
- 2. 25% to 50%
- 3. 50% to 75%
- 4. More than 75%
ARS question: How often do you (your program) use screening tools to detect substance use disorders?

- 1. Never
- 2. Occasionally
- 3. Frequently
- 4. All the time
ARS question: How often do you (your program) use screening tools to detect other mental illnesses?

- 1. Never
- 2. Occasionally
- 3. Frequently
- 4. All the time
Psychiatric and Cognitive Problems Often Precede HIV Infection in Most-at-Risk Populations
Psychiatric Disorders Among Injection Drug Users (IDU)

Multiple studies of injection drug users demonstrate:

- Nearly universal opioid dependence
- Dependence on multiple other non-opioid substances (including alcohol) exceeding 50%
- Elevated rates of mood and personality disorders

Reference documents at www.psych.org/aids and www.hivguidelines.org
Substance Use Disorders Among Opioid Users

716 opioid abusers in methadone Rx in Baltimore

Lifetime rates of drug dependence

- Opioids: 100%
- Cocaine: 65%
- Cannabis: 51%
- Alcohol: 50%
- Sedatives: 45%
- Stimulants: 19%
- Hallucinogens: 18%

Most studies of MSM show higher rates of the following disorders when compared to their heterosexual counterparts:

- Depression
- Anxiety disorders
- Alcohol and other substance disorders
- Suicide risk/attempts

Reference documents at [www.psych.org/aids](http://www.psych.org/aids) and [www.hivguidelines.org](http://www.hivguidelines.org)
Elevated rates of psychiatric disorders among sex-workers include:

- Substance abuse and dependence
- Suicide risk/attempts
- PTSD and other anxiety disorders
- Mood disorders

Reference documents at www.psych.org/aids and www.hivguidelines.org
Elevated rates of physical and sexual traumas both during childhood and in adult life. Physical and sexual traumas are risk factors for mental disorders.

Factors that can lead to cognitive problems, such as substance use and head trauma.

Ongoing stigma and discrimination.

Reference documents at www.psych.org/aids and www.hivguidelines.org
50% Comorbidity of Substance Use and Other Mental Disorders in U.S.

Possible explanations:

- One disorder is a marker for the other.

- Mental illness leads to self-medication with substances.

- Substance use and withdrawal lead to symptoms of mental illness.

Reference documents at www.psych.org/aids and www.hivguidelines.org
Neuropsychiatric Problems Associated with HIV/AIDS
Neuropsychiatric Problems Are Common among HIV+ People

- Mood disorders
- Anxiety disorders
- Alcohol/Substance use disorders
- Psychotic illnesses
- Somatic problems: insomnia, pain, fatigue, sexual dysfunction, body habitus changes
- Neuropsychiatric disorders due to opportunistic diseases, medication side effects, HIV itself (neurocognitive disorders)

Reference documents at www.psych.org/aids and www.hivguidelines.org
ARS question: A 47 year old woman with AIDS, schizophrenia and diabetes mellitus presents with worsening psychotic symptoms. What would you do next?

1. Increase her antipsychotic medication
2. Refer her to a psychiatrist
3. Check her blood sugar
4. Evaluate her for HIV-associated neurocognitive disorder
Assessing Mental Status Changes in People with HIV Infection

Look for underlying biological causes and multiple etiologies

1. HIV-related illnesses:
   - CNS lesions, infections
   - Non-CNS medical problems

2. Medications: HIV, psychiatric, other

3. Non-HIV medical problems

4. Substances: Alcohol, drugs, herbal, other

Psychiatric Syndromes

• HIV-associated Neurocognitive Disorders (HAND)

American Psychiatric Association Practice Guidelines and other reference documents
www.psych.org/aids
Assessing Altered Mental Status

Consider the patient’s symptomatic picture

- Agitation, frightening or unusually impulsive behavior?
- Unkempt appearance, odd ways of relating, odd mannerisms?
- Disorganized or strange speech, thoughts or behavior?
- Reporting or responding to hallucinations or delusions?

YES

- Sad or low mood?
- Loss of interest or pleasure?
- Feeling tense, anxious, excessively frightened?
- Somatic symptoms associated with sad/anxious states (e.g., fatigue, disturbances of appetite or sleep, palpitations, etc.)

Delirium
- Dementia
- Psychotic disorders

Urgent medical workup

NO

Sad/anxious states of mind: r/o mental or physical disorders

World Health Organization IMAI guideline, in press
HIV and People with Severe Mental Illness

- People with these disorders are increasingly found in HIV/AIDS medical programs
- The most common diagnoses are schizophrenia, schizoaffective disorder, bipolar disorder, depression with psychotic features
- A history of psychiatric hospitalization, functional impairment, recurrent episodes is usually present
- Patients often require specialty psychiatric care

Level of evidence: Expert opinion
Screening for Mental Disorders

Simple and Commonly Used Instruments That Have Been Studied in Primary Care
Some Easy to Use Screening Tools: PHQ-2, PHQ-9 and GAD-7

- Readily available online at no charge
- Scoring forms also free and on-line
- Already translated into multiple languages
- Well studied in general medical populations
- Easy to administer or self administer
- Can be used to screen and/or make a diagnosis
- Can be used to follow patient’s progress
Over the last two weeks how often have you been bothered by any of the following problems:

- Little interest or pleasure in doing things.
  - 0 = Not at all
  - 1 = Several days
  - 2 = More than half the days
  - 3 = Nearly every day

- Feeling down, depressed or hopeless
  - 0 = Not at all
  - 1 = Several days
  - 2 = More than half the days
  - 3 = Nearly every day

If the score is 3 or more, major depression is likely; consider further screening with the PHQ9.

Kroenke, et. al. Medical Care 2003
Diagnosis Instrument for Depression: PHQ9 – Items Rated from 0-3

1. Little interest or pleasure in doing things
2. Feeling down, depressed, or hopeless
3. Trouble falling or staying asleep, or sleeping too much
4. Feeling tired or having little energy
5. Poor appetite or overeating
6. Feeling bad about yourself — or that you are a failure or have let yourself or your family down
7. Trouble concentrating on things, such as reading the newspaper or watching television
8. Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual
9. Thoughts that you would be better off dead or of hurting yourself in some way

Spitzer et al, JAMA, 1999
Diagnostic Instrument for Generalized Anxiety Disorder: GAD-7 – Items Rated from 0-3

- 1. Feeling nervous, anxious or on edge
- 2. Not being able to stop or control worrying
- 3. Worrying too much about different things
- 4. Trouble relaxing
- 5. Being so restless that it is hard to sit still
- 6. Becoming easily annoyed or irritable
- 7. Feeling afraid as if something awful might happen

Spitzer et al, Arch Intern Med 2006
Primary Care PTSD Screen

In your life, have you ever had any experience that was so upsetting, frightening, or horrible that you:

♦ Have nightmares about it or think about it when you do not want to?

♦ Try hard not to think about it or go out of your way to avoid situations that remind you of it?

♦ Are constantly on guard, watchful, or easily startled?

♦ Feel numb or detached from others, activities, or your surroundings?

Three yes answers = a positive screen

Prins, et. al. Primary Care Psychiatry, 2003
Screening for Hazardous Alcohol Use: Audit-C Questionnaire

- There are 3 questions:
  - How often do you have a drink containing alcohol?
  - How many standard drinks containing alcohol do you have on a typical day?
  - How often do you have six or more drinks on one occasion?

- Each item is rated on a five-point scale used to identify hazardous alcohol use and alcohol use disorders.

- The Audit-C is easily accessed online at no charge.

Bush et. al., Arch Intern Medicine, 1998
Screening for Substance Use: Cage-AID (CAGE Adapted to Include Drugs)

Target Population: Adults and Adolescents > 16

♦ Have you ever felt the need to cut down on your use of alcohol or drugs?

♦ Has anyone annoyed you by criticizing your use of alcohol or drugs?

♦ Have you ever felt guilty because of something you’ve done while drinking or using drugs?

♦ Have you ever taken a drink or used drugs to steady your nerves or get over a hangover (eye-opener)?

A total of ≥ 2 may be suggestive of a problem

References and more tools: www.hivguidelines.org
Substance Abuse and Mental Illness Symptoms Screener (SAMISS)

- A single instrument with 16 items that screens for multiple mental disorders
- Free and online
- 7 items screen for alcohol/substance use
- 9 items screen for mental disorders: mania (1 item), depression (3-4 items), anxiety (3 items), posttraumatic stress disorder (1-2 items)
- Positive screens for mental disorders can be followed by additional more specific screening

Pence et. al. JAIDS, 2005
Assessment Instruments for Mental Disorders Among Children and Adolescents

- Often include observations of child by parents /teachers
- Apply as early as infancy
- Include assessments for depression, anxiety, attention deficit hyperactivity disorder, behavioral difficulties, and the presence of any DSM psychiatric diagnosis
- Many instruments also exist for assessing learning disabilities
- Unlike adult screening instruments, many instruments for children and adolescents cost money to use.

HIV Associated Neurocognitive Disorders

NIMH working group, Neurology 2007

- Asymptomatic neurocognitive impairment (ANI),
- HIV-associated mild neurocognitive disorder (MND)
- HIV-associated dementia (HAD)

Milder impairment is under-diagnosed and may be present even when patients are otherwise well controlled (e.g., stable ARV regimen, undetectable viral load)
ARS question: How often do you (your program) use screening tools to detect HIV-associated neurocognitive problems?

- 1. Never
- 2. Occasionally
- 3. Frequently
- 4. All the time
Frequency of HIV-Associated Neurocognitive Disorders: Charter Study

N=1555 community dwelling HIV+ participants in the U.S. without confounding factors

- HIV-associated dementia: 2%
- HIV-associated mild neurocognitive disorder: 12%
- Asymptomatic neurocognitive impairment: 33%

Heaton, et al. Neurology 2010
Challenges to Screening for and Treating HIV-related Neurocognitive Disorders

- There are no simple screening tools to diagnose asymptomatic impairment or mild neurocognitive disorder. Simple tools (such as the MMSE) pick up advanced cortical deficits.

- Neuropsychological testing takes 1-4 hours.

- Multiple co-morbidities and aging complicate the differential dx.

- There are no clear treatments beyond achieving undetectable viral load (degree of ARV CNS penetration remains of uncertain benefit).

Valcour, et. al. CID, 2011
5-10 Minute Screens for Severe Neurocognitive Impairment

- **HIV Dementia Scales**: original (includes saccadic eye movements), modified (removes eye movements), and international versions—validated in HIV

- **Montreal Cognitive Assessment (MoCA)**—free, online, translated into multiple languages; not yet validated in HIV; may also pick up milder impairment

Valcour, et. al. CID, 2011
Other Strategies to Meet the Challenge of Neurocognitive Disorders

- The brain is protected by beginning ART before CD4 count is less than 200.

- Treat contributing co-morbid medical problems—numerous disorders and substance use contribute to cognitive impairment.

- Assess for and treat depression, which is commonly accompanied by cognitive impairment (there is a bi-directional relationship).

- Changing antiretroviral treatment may help in individual cases.

Reference documents at www.psych.org/aids and www.hivguidelines.org
Limitations of Screening Instruments

- Sensitivity and specificity limitations, as well as cultural factors, can lead to false negatives and false positives.

- Further patient evaluation is often needed for definitive diagnoses.

- Without treatment options, screening is ineffective.
Why Screen? Untreated Mental Illness is Associated with Poorer HIV/AIDS Outcomes

- **Multiple studies worldwide show that depression is associated with**
  - Increased morbidity and mortality in its own right (HIV+ women with chronic depression twice as likely to die)
  - Failure to initiate antiretroviral treatment (ART)
  - Failure to adhere to ART once initiated
  - Slower virologic suppression
  - Increased sexual risk behavior

- **Hazardous alcohol/substance use is associated with**
  - Failure to initiate ART treatment
  - Failure to adhere to ART once initiated
  - Faster virologic failure
  - Increased sexual risk behavior

Reference documents at www.psych.org/aids and www.hivguidelines.org
Associations Between Treatment for Mental Disorders and HAART Use and Outcomes


Odds of discontinuing HAART by mental health visits/year

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<th># Visits</th>
<th>Adjusted Odds Ratio</th>
<th>P Value</th>
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<td>≥ 12</td>
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<td>&lt;0.001</td>
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</tbody>
</table>

Himelhoch, AIDS, 2009
ARS question—a second chance: A 47 year old woman with AIDS, schizophrenia and diabetes mellitus presents with worsening psychotic symptoms. What would you do next?

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2. Refer her to a psychiatrist
3. Check her blood sugar
4. Evaluate her for HIV-associated neurocognitive disorder
Educational Resources on HIV and Mental Health

- Local and national AETCs
- NYS AIDS Institute: www.hivguidelines.org
- HIV InSite http://hivinsite.ucsf.edu
AETC National Programs

- **National Resource Center (FXB/UMDNJ)**
  - Provides virtual library of online training resources for adaptation to meet local training needs
  - www.aidsetc.org

- **Warmline/PEPline (UCSF)**
  - Telephone consultation for HIV clinical management and post-exposure prophylaxis management
  - Warmline: 800-933-3413
  - PEPline: 888-448-4911