A Practical Approach to HIV-Associated Neurocognitive Disorders

New England AIDS Education and Training Center for Health Policy and Research
University of Massachusetts Medical School
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Mary Ann Adler Cohen, MD, FACP, FAPM, DLFAPA
Clinical Professor of Psychiatry
Icahn School of Medicine at Mount Sinai
Chair and Founder, Academy of Psychosomatic Medicine AIDS Psychiatry Special Interest Group
Chair and Co-Founder of the World Psychiatric Association Section on HIV Psychiatry
Introduction

• HIV/AIDS: severe, stigmatized, and complex multimorbid medical and psychiatric illnesses with a profound impact on patients, families, and caregivers
• HIV-Associated Neurocognitive Disorders (HANDs) magnify HIV-associated discrimination
• Understanding the psychiatric aspects of HIV-associated neurocognitive impairment in persons with HIV and AIDS can provide clinicians with the skills to decrease risk behaviors and HIV transmission, recognize and treat multimorbid psychiatric disorders, decrease morbidity and mortality, and reduce suffering in persons infected with and affected by HIV and AIDS
• Understanding HANDs can provide you with the tools to prevent and treat HIV-associated dementia
Outline of Presentation

• Prevalence of HAND and its Impact on Adherence to Risk Reduction, Medical Care, and ART
• Definition and Classification of Cognitive Disorders
• Delirium vs. Dementia
• Normal Aging vs. Dementia
• Cortical Dementia vs. Subcortical Dementia
• Definition and Classification of HIV-Associated Neurocognitive Disorders (HANDs)
• HIV-Associated Dementia (HAD) vs. Dementia of the Alzheimer’s Type (DAT)
• Neuropsychological Testing and Neuroimaging
• Diagnosis and Treatment of HAND
• Clinical Pearls for Treatment of HAND
Prevalence of HAND

• The prevalence of HIV-associated dementia (HAD) decreased following the development of effective combination ART in 1995

• In persons with access and adherence to ART, HAD prevalence is estimated to have decreased from 15% (MacArthur et al. 1993) to less than 5% (Heaton et al. 2010)

• However, there has been little change in the prevalence of asymptomatic neurocognitive impairment (ANI) and mild neurocognitive impairment (MCI) (Tozzi et al. 2007, Simioni et al. 2010)

• The prevalence of HAND in HIV ranges from 30 to 70%

• The work of Heaton, Letendre, Tozzi, Simioni, Cysique, Spudich, and others suggests that the CNS provides an independent reservoir for HIV
Prevalence of HAND in the ART Era: CNS as Independent Reservoir for HIV Replication

• The research of Heaton (Heaton et al. 2011) and others suggests that starting ARVs as soon as the diagnosis of HIV is made may prevent the development of an independent reservoir of HIV for replication in the CNS and thus prevent future development of HAND
• Can prevent HAND with pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP)
• The role of the psychiatrist in changing risky behaviors and in encouraging early testing and intervention is clear

Prevalence of HAND in the ART Era

- 30 to 69%


Prevalence of Neurocognitive Impairment in Relation to ART Era

ART has Reduced Severe Neurologic Complications (Dementia), but Milder Forms Remain Prevalent

- Asymptomatic and Mild NCI
- HIV-associated Dementia

- Before ART: Grant (1987)
- Early ART: Heaton (1995)
- Current ART: CHARTER (2009)
**Definitions of Mild Cognitive Syndromes, Dementia, and Delirium**

- **Asymptomatic neurocognitive impairment (ANI):** Mild to moderate impairment in at least two cognitive domains but without obvious impairment in daily functioning.

- **Mild cognitive impairment (MCI):** Mild to moderate impairment in at least two cognitive domains that at least mildly interferes with daily activities.

- **Dementia:** A clinical syndrome not entirely due to delirium consisting of global cognitive decline with several areas being affected and significant impact on daily functioning.

- **Delirium:** A clinical syndrome of global impairment of cognition especially orientation and attention, including abnormal sleep-wake cycle, thinking, perception, language and affect with acute onset and fluctuating course.
Delirium – Terms Used

• Acute cerebral insufficiency
• Acute confusional state
• Encephalopathy
• Intensive Care Unit (ICU) Psychosis
• Reversible toxic psychosis
# Delirium vs. Dementia

<table>
<thead>
<tr>
<th>Delirium</th>
<th>Dementia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute or abrupt onset</td>
<td>Insidious</td>
</tr>
<tr>
<td>Fluctuation of symptom severity over 24-hour period</td>
<td>Non-fluctuating</td>
</tr>
<tr>
<td>Reversible when cause is treated</td>
<td>Progressive, 85% not reversible</td>
</tr>
<tr>
<td>Impaired level of consciousness</td>
<td>Clear level of consciousness unless delirium is superimposed or the dementia is end-stage</td>
</tr>
<tr>
<td>Impaired attention, orientation, memory, executive functions</td>
<td>Impaired memory</td>
</tr>
<tr>
<td>Illusions, hallucinations (visual)</td>
<td>Can have visual or auditory hallucinations</td>
</tr>
<tr>
<td>Delusions – poorly formed, fleeting and paranoid</td>
<td>Delusions – paranoid and fixed</td>
</tr>
<tr>
<td>Reversal of sleep-wake cycle, insomnia</td>
<td>Apathy</td>
</tr>
<tr>
<td>Affective lability</td>
<td>Apraxia</td>
</tr>
<tr>
<td>Irritability</td>
<td>Agnosia</td>
</tr>
<tr>
<td>Hypoactive – often misdiagnosed as depression</td>
<td>Aphasia</td>
</tr>
<tr>
<td>Hyperactive – often misdiagnosed as psychosis</td>
<td>Amnesia</td>
</tr>
<tr>
<td>Normal Aging and Cognition</td>
<td>Alzheimer’s Dementia</td>
</tr>
<tr>
<td>----------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>• New onset beginning at age 50</td>
<td>• Insidious onset</td>
</tr>
<tr>
<td>• Lack of progression</td>
<td>• Unrelentingly progressive impairment</td>
</tr>
<tr>
<td>• Subjective memory complaints</td>
<td>• Prominent memory impairment</td>
</tr>
<tr>
<td>• Annoying but not disabling</td>
<td>• Leading cause of dementia and functional disability in the elderly</td>
</tr>
<tr>
<td>• Frequent problems with name retrieval</td>
<td>• 50 to 75% of all dementia is Alzheimer’s</td>
</tr>
<tr>
<td>• Minor difficulties in recalling detailed events</td>
<td>• The 4 As of Alzheimer’s Dementia: Amnesia, Aphasia, Apraxia, Agnosia</td>
</tr>
<tr>
<td>• Problems related to overloaded neuronal systems</td>
<td>• Prevalence is 6.5%</td>
</tr>
<tr>
<td>• Not associated with any other signs or symptoms</td>
<td>• Prevalence is estimated at 18%</td>
</tr>
</tbody>
</table>
Neuropsychological Profile
Normal Aging versus Dementia

Normal Aging
• Loss of speed and efficiency of information processing
• Impaired fluid abilities – novel problem-solving
• Deficiencies in memory retrieval
• Modest declines in delayed free recall
• Decrements on executive tests of visuoperceptual, visuospatial, and constructional functions

Alzheimer’s Dementia
• Impaired memory consolidation with rapid forgetting
• Diminished executive skills
• Impaired semantic fluency and naming
• Impaired visuospatial analysis and praxis
• Rapid forgetting of new information after brief delays
# Cortical versus Subcortical Dementia

## Cortical Dementia – 4 As
- Amnesia - not helped by cues
- Aphasia
- Agnosia
- Apraxia
- Alexia
- Apathy
- Affective disorders – not frequent
- Loss of initiative
- Psychomotor retardation
- Gait – normal until late
- Extrapyramidal signs - late
- Pathological reflexes – grasp, snout, suck, Babinski - late

## Subcortical Dementia – 4 Ds
- Dysmnesia - helped by cues
- Dysexecutive – difficulty with planning and decision-making
- Delay – slow thinking and moving
- Depletion – reduced complexity of thought
- Affective disorders – severe
- Apathy and inertia
- Absence of the 4 As
- Slow diminution of cognitive functions
- Psychomotor retardation
- Loss of initiative, vitality, physical energy and emotional drive
- Extrapyramidal signs
- Abnormal gait
Neuropsychological Profile
Normal Aging versus Dementia

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- Loss of speed and efficiency of information processing
- Impaired fluid abilities – novel problem-solving
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- Decrement on executive tests of visuoperceptual, visuospatial, and constructional functions

Alzheimer’s Dementia
- Impaired memory consolidation with rapid forgetting
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Definition and Classification of HIV-Associated Neurocognitive Disorders (HANDs)

- Asymptomatic Neurocognitive Impairment – ANI – mild to moderate impairment in at least 2 domains without obvious impairment in daily functioning
- Mild Neurocognitive Impairment – MCI – mild to moderate impairment in at least 2 domains with at least mild interference with daily functioning
- HIV-Associated Dementia – HAD – a subcortical dementia that is severe enough to cause functional impairment and is characterized by slowed information processing, deficits in attention and memory, and impairments in abstraction and fine motor skills
Differentiating Delirium from HIV-Associated Dementia

<table>
<thead>
<tr>
<th>Delirium</th>
<th>Dementia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluctuation of symptoms</td>
<td>+</td>
</tr>
<tr>
<td>Fluctuating levels of consciousness</td>
<td>+</td>
</tr>
<tr>
<td>Drowsiness</td>
<td>+</td>
</tr>
<tr>
<td>Illusions</td>
<td>+</td>
</tr>
<tr>
<td>Hallucinations</td>
<td>+</td>
</tr>
<tr>
<td>Confusion</td>
<td>+</td>
</tr>
<tr>
<td>Carphologia (picking)</td>
<td>+</td>
</tr>
<tr>
<td>EEG background slowing</td>
<td>+</td>
</tr>
<tr>
<td>Insomnia</td>
<td>+</td>
</tr>
<tr>
<td>Impaired attention</td>
<td>+</td>
</tr>
<tr>
<td>Impaired concentration</td>
<td>+</td>
</tr>
<tr>
<td>Slow speech</td>
<td>-</td>
</tr>
<tr>
<td>Slow motor responses</td>
<td>-</td>
</tr>
<tr>
<td>Delusions</td>
<td>-</td>
</tr>
<tr>
<td>Ataxia</td>
<td>-</td>
</tr>
<tr>
<td>Leg weakness</td>
<td>-</td>
</tr>
</tbody>
</table>
What is the Diagnosis of Ms. A’s Visual Hallucinations?

- Cytomegalovirus (CMV) retinopathy and encephalopathy

This vignette illustrates how an HIV-associated medical condition can cause a significant psychiatric symptom in persons with HIV/AIDS
Clinical Pearls for Differential Diagnosis of Psychiatric Symptoms in HIV and AIDS

• There is a need for a comprehensive biopsychosocial approach to psychiatric symptom evaluation in persons with HIV/AIDS

• This comprehensive approach to differential diagnosis includes exploring clues for infectious, neurologic, and psychiatric causes and requires complete medical, psychiatric, and psychosocial assessments as well as ancillary evaluations

Clinical Pearls for Prevention and Recognition of Cognitive Disorders

• Each person with HIV needs a complete cognitive assessment at baseline and on a semi-annual or annual basis
• HIV-associated dementia can be prevented by early diagnosis of HIV infection and initiation of antiretroviral therapy immediately upon diagnosis HIV
• HAND can be prevented by pre-exposure (PrEP) prophylaxis and post-exposure prophylaxis (PEP)
• Cognitive impairment can cause nonadherence at any stage of HIV infection
Clinical Pearls for Prevention and Recognition of Cognitive Disorders

- Antiretroviral therapy may prevent progression or reverse cognitive impairment
- HAND is still prevalent and is the most common treatable cause of dementia in persons under 50 years of age (Ances and Ellis, 2007)
- Hypoactive delirium is prevalent in persons with HIV and AIDS, can masquerade as depression, and is easily resolved when the underlying cause is identified and treated.
AIDS is different from other severe and complex medical illnesses

- Nonadherence may have serious public health consequences as well as a devastating impact on patients and families
- Discrimination and AIDSism may worsen health care disparities and access to care
- AIDS is a preventable complex and severe illness
- Adherence to risk reduction and care can mean the difference between life and death to self as well as others
- Neurocognitive impairment can occur at any age throughout the course of illness and is highly prevalent
Risk Factors for HAD

- Older age
- History of CNS disease
- Shorter duration of antiretroviral treatment
- Low CD4 (current and nadir)
- Asymptomatic neurocognitive impairment (ANI)
- Mild neurocognitive impairment (MCI)
- Co-infection with hepatitis C (HCV)
- Insulin resistance
- Seroconversion disorder
- Anemia
- Vitamin deficiencies (B6, B12)
- High CSF viral load
- Depression
- Alcohol, amphetamines, cocaine


Alzheimer’s Dementia (AD) versus HIV-Associated Dementia (HAD)

**AD**
- Age over 65 years
- Insidious onset
- Unrelentingly progressive impairment
- Prominent memory impairment
- Amnesia
- Aphasia
- Apraxia
- Agnosia
- Impaired semantic fluency and naming
- Impaired visuospatial analysis and praxis
- Rapid forgetting of new information after brief delays
- May have incontinence
- May have cortical release signs

**HAD**
- Can occur at any age over 18
- Can be prevented
- Can be reversed with antiretrovirals
- Cognitive slowing
- Psychomotor slowing
- Impaired attention and concentration
- Impaired impulse control
- Impaired executive function
- Apathy
- Regression
- Psychosis
- Mood disorders
- Dropping things
- Impaired balance
- Ataxia, tremor
- Incontinence can occur late
What is Your Diagnosis of Mr. B’s Cognitive Impairment?

- Mr. B is a 64 year old with AIDS diagnosed in 1997 when he was found to have late-stage AIDS and a CD4 of 17 who self-referred in 2012 because of memory impairment, difficulty retaining new information and multitasking.

- Fluent in Greek, Russian, Italian, Portuguese, Spanish, French, and English, he resigned from his job at an international firm because he had begun to make mistakes at work.

- He mourns both the loss of his job and the loss of his excellent memory that was once a source of great pride.
What is the Differential Diagnosis of Mr. B’s Memory Impairment?
What is the Differential Diagnosis of Mr. B’s Memory Impairment?

- Delirium
- Mood disorder with depressive features
- Substance use disorder
- Mr. B had no evidence of delirium, depression, or substance use disorder but had difficulty with executive function and planning
- MMSE is 30 and his Bender drawings, formal tests of recall, registration, Mental Alternation Test (verbal Trailmaking), similarity testing, proverb interpretation, and serial 7s are all within normal limits.
What is the Diagnosis of Mr. B’s Memory Impairment?

• His own complaints and validation by collateral informants suggest that his diagnosis is consistent with HIV-associated mild neurocognitive impairment (MCI) and is causing him to resign from his job although his assessment on formal cognitive testing as well as the MAT reveal only minor abnormalities.

There is a need for a complete comprehensive cognitive assessment of persons with HIV/AIDS including clock and cube drawing.
New Cases: Major Causes

- Unprotected sexual behavior
- Sharing needles and drug paraphernalia
SAFE
SEX
How Can We Decrease Transmission of AIDSism and HIV?

• Teach sexual and drug history-taking
• Diagnose and treat neurocognitive disorders
• Diagnose and treat substance use disorders
• Diagnose and treat other multimorbid psychiatric disorders such as PTSD and depression
• Educate and encourage use of barrier contraception for sexually active patients
• Encourage use of PrEP and PEP
• Make free condoms openly available in ambulatory and inpatient medical and psychiatric settings, day treatment programs, MMTPs, and drug rehabilitation facilities

Cohen MA. AIDSism, a new form of discrimination.
*AMA News*, January 20, 1989; 32:43
HIV/AIDS: A Paradigm for Comprehensive and Compassionate Care with a Biopsychosocial Approach

- Complex and severe medical and psychiatric illness
- Persons with HIV/AIDS are vulnerable
  - Medically
  - Psychiatrically
  - Socially


HIV/AIDS
Psychiatry

Taboo Topics
- Sex
- Trauma
- Drugs
- Infection
- Death

Prevention
- Barrier contraception
- Drug treatment
- Safe sex
- Sterile works
- Trauma prevention

Stigmatized Illness
- Hepatitis C
- STDs
- TB
- PTSD
- Dementia
- Delirium
- Psychosis
- Injecting Drug Use

Adherence to Prevention and Treatment
- African-American Women
- Latino-American Men who have sex with men
- Addicted Children
- Elderly

Vulnerable Populations

Severe Multisystem Illness
- Cardiac
- Dermatological
- Endocrinological
- GI
- Infectious
- Neurological
- Oncological
- Ophthalmological
- Psychiatric
- Pulmonary
- Renal

Lethality
- Severe Multisystem Illness
- Cardiac
d- Dermatological
- Endocrinological
- GI
- Infectious
- Neurological
- Oncological
- Ophthalmological
- Psychiatric
- Pulmonary
- Renal

- Elderly

Prevention
- Barrier contraception
- Drug treatment
- Safe sex
- Sterile works
- Trauma prevention

HIV/AIDS Psychiatry

- Taboo Topics
- Prevention
- Vulnerable Populations
- Severe Multisystem Illness
- Lethality
HIV/AIDS Psychiatry

Vulnerable populations
• Illnesses with discrimination
• Risk behaviors with discrimination
• Marginalized populations
• High prevalence of psychiatric disorders
• Multidisciplinary team approach
• Comprehensive, and compassionate care
• Integrated model of care with psychiatrists co-located in the HIV clinic
Need for Recognition and Treatment of Psychiatric Disorders

- Vectors of HIV
- Barriers to adherence
- Psychiatric treatment:
  - transmission, morbidity, mortality, suffering
  - adherence
Easy Ways to Differentiate Psychiatric Disorders

- **PTSD** – history of childhood or adulthood trauma, nightmares, intrusive thoughts, hypervigilance, easy startle
- **Mania** – irritability, rapid speech, difficult to follow, excitable
- **Psychosis** – delusions, difficult to understand, guarded
- **Depression** – sadness, crying, suicidal thoughts or attempts, guilt, low self-esteem, soft, slow speech, makes clinician feel sad or angry
  - are you depressed?
  - are you suicidal?
- **Delirium** – confusion, nodding out, disorientation, fluctuating behaviors, illusions
  - hypoactive delirium can masquerade as depression
- **Dementia** – memory impairment, slow speech and responses, slow movements, problems recalling dates and history
- **Substance Use Disorders** – how much can you hold/use in a day?
  - what happens if you do not use for a day?
What is Your Diagnosis of Ms. C’s Nonadherence to Medical Care?

- Ms. C is a 33 year old unemployed single woman with AIDS who was referred for depression because of decreasing CD4 counts and elevated viral load despite treatment with antiretrovirals.
- Ms. C has an excellent relationship with her HIV clinician for the six years since her diagnosis of AIDS and keeps most of her appointments.
- Her HIV clinician believed that untreated masked depression may have contributed to her immune system unresponsiveness since her virus was sensitive to the antiretrovirals he prescribed.
What is Your Diagnosis of Ms. C’s Nonadherence to Medical Care?
What is Your Diagnosis of Ms. C’s Nonadherence to Medical Care?

• Ms. C endorses worries about her forgetfulness and cannot give accurate dates of significant events in her life
• She states that she left her apartment to come to her doctor without turning off a burner on her stove and that only the vigilance of her neighbor who called the fire department resulted in saving her home and her pets
• Ms. C has constructional apraxia on clock and Bender drawings
• She registers 4/4 items but recalls 0/4 items in 5 minutes
• She is unable to perform on serial 7s or serial 3s
What is Your Diagnosis of Ms. C’s Nonadherence to Medical Care?

- She has a great deal of difficulty remembering to take her medication and is not sure when to take them.
- A diagnosis of HIV-associated dementia (HAD) explained her rising VL and diminishing CD4 count.
- When use of cues, support from family, and DOT were instituted her lab values improved along with her memory.

There is a need for a complete biopsychosocial assessment and plan of care for persons with HAD.
Adherence

- Need 95% adherence to ARVs
- Need 100% adherence to safer sex
- Need 100% adherence to use of sterile works
- Only 28% of persons with HIV in the US have achieved viral suppression
- Only 69% are linked to care and 59% retained in care

Tragic Results of Psychiatric Barriers to Adherence

• Lack of access to care
• Nonadherence to care
• Stopping and starting ARVs
• Emergence of viral mutations and viral multidrug resistance
• Dying of opportunistic infections
HIV Psychiatry – High Prevalence of Disorders and Unique Manifestations

- PTSD
- Mood disorders
- Anxiety disorders
- Cognitive disorders – delirium and HAND
- Substance use disorders
- Insomnia
- Fatigue
- Pain
- Suicide
What Psychiatric Disorder is a Factor in Mr. D’s Refusal to Remain in a Nursing Home?

- Mr. D is a 37 year old disabled former investment banker with AIDS (CD4 112 and elevated viral load) who was admitted to a nursing home when he was no longer able to care for himself in the community or perform activities of daily living (ADLs) or instrumental ADLs (IADLs). He was referred for refusal to stay in the nursing home.

- Mr. D was no longer able to care for his partner or himself and did not believe that he was ill or that he had HIV.
Diagnosis and Treatment of Mr. D

- On initial psychiatric consultation Mr. D denied being ill or needing care. He wanted to return home to live with his partner.
- What is your diagnosis?
On initial psychiatric consultation Mr. D denied being ill or needing care. He wanted to return home to live with his partner.

He had impaired memory, abstract thinking, and executive function as well as anosognosia. He had constructional apraxia on clock and Bender drawings, psychomotor retardation, and profoundly diminished intellectual functioning relative to his educational (MBA) and occupational levels. He was incontinent of urine and feces.
Diagnosis and Treatment of Mr. D

- Mr. D’s diagnosis was HIV-associated dementia.
- After two years of directly administered ART in the nursing home setting, evidence of dementia could not be detected on psychiatric examination. Mr. D was able to resume independent living and went from disabled young man with dementia to dapper investment banker.

Dementia can occur at any age in persons with HIV infection. Early treatment with ART and early recognition of HAND can lead to decrease or resolution of cognitive impairment and restoration of function in some persons with HIV/AIDS.
This vignette illustrates that although ART has had a major impact on both morbidity and mortality in persons with AIDS, HAND is still prevalent and is the most common treatable cause of dementia in persons under 50 (Ances and Ellis, 2007).

It is important to diagnose HIV infection early and begin ART, since there is evidence that HIV begins to damage the brain within months of infection.

Every person with HIV infection needs a comprehensive evaluation for cognitive impairment at baseline and at least twice yearly to ensure early diagnosis and of HAND. Comprehensive psychiatric assessment for HAND and other psychiatric disorders in persons with HIV and AIDS is described in the *Handbook of AIDS Psychiatry*.

HAND is a prevalent diagnosis young persons as well as in elderly persons with AIDS.
HIV-Associated Neurocognitive Disorder (HAND)

- HAND is found in 69% of viral suppressed HIV+ *
- Neurocognitive disorders can resemble depression and are seldom diagnosed
- Diagnosis requires complete cognitive assessment but brief screening can help lead to diagnosis
- HAD leads to nonadherence with HIV care
- HAD may reverse with ART
- Once treated, adherence improves, preventing illness progression

Simioni et al. 2010
HIV-Associated Neurocognitive Disorders: Screening

- Do you experience frequent memory loss - do you forget the occurrence of special events even the more recent ones?
- Do you feel that you are slower when reasoning, planning activities, or solving problems?
- Do you find it more difficult to perform activities that used to be automatic for you (paying bills, writing checks, making plans)?
- Do you have difficulties paying attention (to a conversation, a book, or a movie)?

Simioni et al, AIDS 2010 (adapted with additions)
Treatment of Psychiatric Disorders in Persons with HAND

- Crisis Intervention
- Individual psychodynamic psychotherapy
- Supportive psychotherapy
- Cognitive behavioral therapy
- Group psychotherapy
- Couple therapy
- Family therapy
- Bereavement therapy
- Substance use treatment
- Palliative psychiatry
- Psychoeducational approaches to prevention
- Psychopharmacology
Treatment of Psychiatric Disorders in Persons with HAND: Support Groups

- Provide a safe environment to discuss concerns about HIV, its stigma, and its treatments
- Provide support from both members and leaders
- Confidential
- Non-judgmental
- Compassionate
- Caring
- “All in the same boat”
- Acceptance and sense of family
Treatment of Psychiatric Disorders in Persons with HAND: Alleviation of Symptoms

- Exercise emphasizing walking, balance, core strength
- Relaxation response
- Yoga
- Music therapy, dance therapy
- Reading, crossword and jigsaw puzzles, Ken Ken, movies
- Brain games including computer use
- Education and involvement of family in care
- Spiritual assessment and support
- Development of support networks if family or friends are unavailable
- Directly observed ART and other medications where indicated
Psychopharmacologic Treatment of Psychiatric Disorders in Persons with HAND

- High prevalence of multimorbid psychiatric disorders
- Increased risk of suicide
- Vulnerability to all side effects of medications
- Increased vulnerability to the psychiatric side effects of antiretroviral medications
- Increased vulnerability to anticholinergic side effects of medications (includes antihistamines, antispasmodics, most psychotropic medications, some ARVs, and warfarin)
- Special affinity of HIV to basal ganglia makes for high risk for extrapyramidal side effects especially psychotropic medications and antiemetics (except ondansetron)
The maxim for geriatric psychiatry is even more significant for AIDS psychiatry because of the increased vulnerability of this population.

In the US, 26% of persons with HIV and AIDS are over 50 years old.

Avoid use of psychototropic medications except where essential for safety or alleviation of distress.

Avoid combinations of psychototropic medications if possible to prevent multiplication of side effects.
HIV/AIDS Psychopharmacology: Effects on Patients

- Slowing of Metabolism
- Drug-Drug Interactions
- Drug–Illness Interactions
  - vulnerability to dysglycemia
  - Vulnerability to anticholinergic side effects
  - vulnerability to extrapyramidal side effects
  - vulnerability to falls
  - vulnerability to confusion
  - vulnerability to lipodystrophy
HIV/AIDS Psychopharmacology: Recommendations

• Antidepressants
  – Citalopram, 5 mg to 40 mg
  – Escitalopram, 10 mg
  – Bupropion, 75 mg to 150 mg

• Antipsychotics
  – Quetiapine, 12.5 mg to 100 mg
  – Olanzapine, 1.25 mg to 10 mg
The Role of Collaborative Care in the HIV Pandemic

- **Prevention**
  *Can promote adherence to:*
  - safe sex
  - drug treatment
  - harm reduction
  - needle exchange

- **Treatment**
  *Can improve adherence to:*
  - medical care
  - antiretrovirals

*Can decrease:*
  - suffering
  - morbidity
  - mortality
Founded 2003, meets annually at the APM
To develop networks
To present work and share findings
To develop consensus on treatment
To develop collaborative research
To educate other clinicians and trainees
Has 324 mental health clinician members
Since 2012 it is a Section of the WPA
Presentations at WPA meetings throughout the world
macohen@nyc.rr.com to join – no dues
www.apm.org/sigs/oap