Basic Topics in HIV Psychiatry

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AETC AIDS Education & Training Center Program Southeast

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- **National Coordinating Resource Center –** serves as the central web –based repository for AETC Program training and capacity building resources; its website includes a free virtual library with training and technical assistance materials, a program directory, and a calendar of trainings and other events. Learn more: https://aidsetc.org/
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- **National HIV Curriculum –** provides ongoing, up –to-date HIV training and information for health professionals through a free, web –based curriculum; also provides free CME credits, CNE contact hours, CE contact hours, and maintenance of certification credits. Learn more: www.hiv.uw.edu

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Learning Objectives

- *1) To review the most common psychiatric comorbidities in patients with human immunodeficiency virus (HIV) infection as well as the most common psychiatric manifestations in people with HIV infection.*
- *2) To elucidate the most recent research on evidence based treatments for psychiatric symptoms and disorders in people with HIV infection.*
- *3) To discuss topics related to suicide and safety planning among people with HIV.*

A Brief Overview of HIV Psychiatry

What is HIV Psychiatry?

"...focuses on prevention, care, and treatment of HIV and AIDS; psychiatric aspects of risk behaviors and their antecedents; psychiatric manifestations of HIV and its stigma; psychological consequences of HIV infection and its multimorbidities and their impact on persons infected with and affected by HIV; and the imperative for an integrated biopsychosociocultural approach to prevention, care, and adherence."

- A subset of consult and liaison psychiatry
  - Though comprises many mental health specialists including but not limited to emergency, inpatient, and ambulatory psychiatrists; social workers; nurses; psychologists, neuropsychologists; etc.
- Involved both in the prevention of HIV infection and the care of patients living with HIV/AIDS (PLWHA)

The Biopsychosociocultural Model of Care

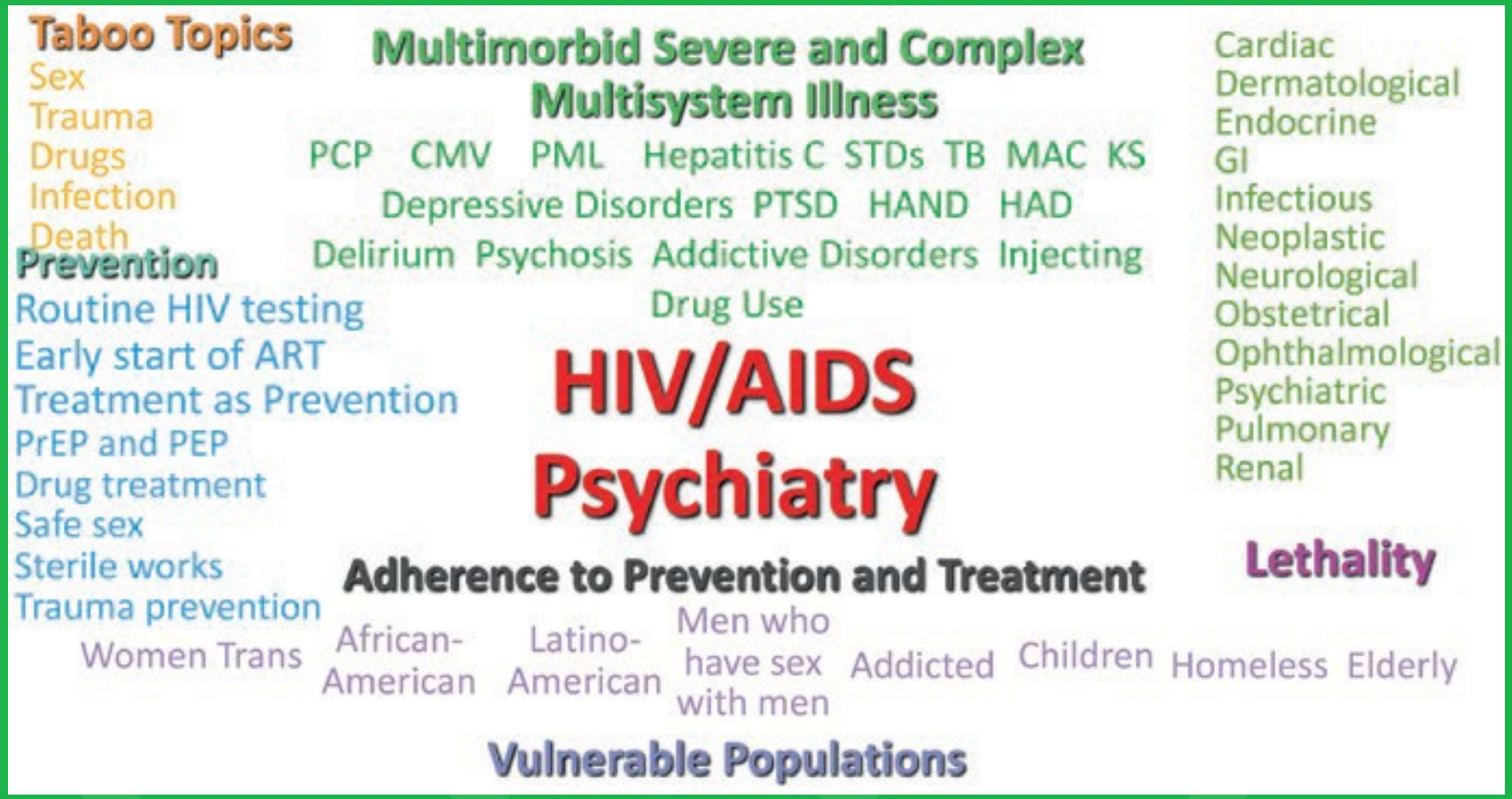

Figure from Bourgeois JA, et al. (eds.), 2022

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The Relationship Between HIV and Psychiatric Disorders

- The rate of HIV is **5x higher** in patients with mental illness
- The rate of mental illness is **4x higher** in patients with HIV infection

Why?

- Disinhibition
- Increased risk of houselessness
- Increased risk of substance use disorders
- Another third variable (e.g. violence, trauma, discrimination)

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The Relationship Between HIV and Psychiatric Disorders

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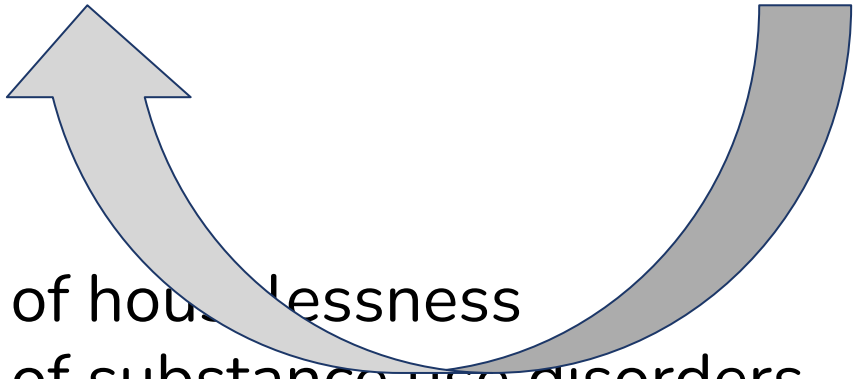

Why?

- Disinhibition
- Increased risk of homelessness
- Increased risk of substance use disorders
- Another third variable (e.g. violence, trauma, discrimination)

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Collaborative Care

1. Patient-centered and Team Based
2. Population Based
3. Measurement Based
4. Evidence Based
5. Accountable Care

- Patient is prioritized; care manager is pivotal in coordinating care
- Patients are screened, evaluated, and triaged with a population registry
- Validated measures are used to monitor progress
- Treatment is based on evidence based medicine
- The treatment team is responsible for outcomes and quality of care

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Collaborative Care

Several models of collaborative/integrated care:

1. Co-located Mental Health Teams
2. Mental Health Team Leader Model
3. Triage Model

- No evidence-based advantage to any model
- Each model has its own advantages and disadvantages
- Meaningful, coordinated, and consistent communication between providers is key

Collaborative Care

Evidence-Based Effectiveness of Collaborative Care

- IMPACT Study 2002 (Improving Mood Promoting Access to Collaborative Treatment)
  - Further studies have shown effectiveness in Bipolar Disorder, PTSD, Anxiety, Chronic Pain; populations such as older adults, adolescents, women.

Collaborative Care

Collaborative Care and HIV

- Studied since the 1980s
  - VA instituted HIV Translating Initiatives for Depression into Effective Solutions (HITIDES) model
  - SLAM-DUNC (Strategies to Link Antiretroviral and Antidepressant Management

Common Psychiatric Comorbidities

Depressive Disorders

Epidemiology

- The most common neuropsychiatric complication in PLWHA
  - Exact prevalence unknown though most recent numbers show prevalence of 31% (2019)
  - 2-4x more likely in patients with HIV infection
- Higher risk in women, pregnant people, MSM, trans people, history of trauma, family history of depression, financial instability, underemployment, likely other subgroups
- Can occur in all phases of HIV infection
- Lower CD4 counts, higher viral loads, increase risk

Depressive Disorders

Diagnosis

- Differential
  - Major Depressive Disorder
  - Adjustment Disorder with Depressive Symptoms
  - Depressive Disorder due to another Medical Condition
    - HIV
    - Hypothyroidism
  - Medication-Induced Depressive Disorder
    - Dolutegravir, Raltegravir, Rilpivirine, Efavirenz
  - Substance-Induced Depressive Disorder
- Confounding Symptoms
  - Appetite
  - Motivation
  - Fatigue
  - Sleep
  - Libido
  - Concentration

Depressive Disorders

Screens

- Beck Depression Inventory (BDI), Patient Health Questionnaire-9 (PHQ-9), Hamilton Rating for Depression (HAM-D), while validated in general population, are less effective with systemic medical illness
- The Hospital Anxiety and Depression Scale (HADS) excludes somatic symptoms
- Clinical Interview

Hospital Anxiety and Depression Scale (HADS)

Tick the box beside the reply that is closest to how you have been feeling in the past week.
Don't take too long over you replies: your immediate is best.

D	A		D	A	
		I feel tense or 'wound up':			**I feel as if I am slowed down:**
	3	Most of the time	3		Nearly all the time
	2	A lot of the time	2		Very often
	1	From time to time, occasionally	1		Sometimes
	0	Not at all	0		Not at all
		I still enjoy the things I used to enjoy:			**I get a sort of frightened feeling like 'butterflies' in the stomach:**
0		Definitely as much		0	Not at all
1		Not quite so much		1	Occasionally
2		Only a little		2	Quite Often
3		Hardly at all		3	Very Often
		I get a sort of frightened feeling as if something awful is about to happen:			**I have lost interest in my appearance:**
	3	Very definitely and quite badly	3		Definitely
	2	Yes, but not too badly	2		I don't take as much care as I should
	1	A little, but it doesn't worry me	1		I may not take quite as much care
	0	Not at all	0		I take just as much care as ever
		I can laugh and see the funny side of things:			**I feel restless as I have to be on the move:**
0		As much as I always could		3	Very much indeed
1		Not quite so much now		2	Quite a lot
2		Definitely not so much now		1	Not very much
3		Not at all		0	Not at all
		Worrying thoughts go through my mind:			**I look forward with enjoyment to things:**
	3	A great deal of the time	0		As much as I ever did
	2	A lot of the time	1		Rather less than I used to
	1	From time to time, but not too often	2		Definitely less than I used to
	0	Only occasionally	3		Hardly at all
		I feel cheerful:			**I get sudden feelings of panic:**
3		Not at all		3	Very often indeed
2		Not often		2	Quite often
1		Sometimes		1	Not very often
0		Most of the time		0	Not at all
		I can sit at ease and feel relaxed:			**I can enjoy a good book or radio or TV program:**
	0	Definitely	0		Often
	1	Usually	1		Sometimes
	2	Not Often	2		Not often
	3	Not at all	3		Very seldom

Please check you have answered all the questions

Scoring:
Total score: Depression (D) _____ Anxiety (A) _____
0-7 = Normal
8-10 = Borderline abnormal (borderline case)
11-21 = Abnormal (case)

Anxiety Disorders

Epidemiology

- Exact data is spotty but higher prevalence in PLWHA than general population
  - Studies typically show prevalence of approximately 23%
- Higher risk in PLWHA due to social stigma and other sociocultural factors
- Unlike Depression, less data on correlation between anxiety disorders and HIV markers

Anxiety Disorders

Diagnosis

- Differential
  - Generalized Anxiety Disorder
  - Panic Disorder
  - Adjustment Disorder with anxious symptoms
  - Social Anxiety Disorder
  - Depression with Anxious Distress
  - Anxiety Disorder due to another Medical Condition
    - HIV
    - Hyperthyroidism
  - Medication-Induced Anxiety Disorder
    - E.g. Efavirenz, Raltegravir, Dolutegravir, interferon, corticosteroids
  - Substance-Induced Anxiety Disorder
- Confounding Symptoms
  - Fatigue
  - Sleep
  - Concentration
  - Autonomic symptoms such as palpitations, sweating, trembling, shortness of breath, chest pain, etc.

Anxiety Disorders

Screens

- Anxiety disorders are diagnosed using same methods as general population
- Client Diagnostic Questionnaire (CDQ), Generalized Anxiety Disorder-7 (GAD7), Hospital Anxiety and Depression Scale (HADS)
- Clinical Interview

Trauma and Stressor-Related Disorders

Epidemiology

- PLWHA experience higher rates of trauma
  - Studies showed 20.5% of women and 11.5% of MSM, with approximately half of each reporting violence due to HIV diagnosis
- High rates of childhood sexual abuse
  - Increased frequency/types of trauma correlates with HIV risk behaviors, e.g. unprotected sex, multiple sexual partners, sex work, illicit drug use, excessive alcohol consumption
- PLWHA have PTSD prevalence of 28% (vs. 6-10% in general population)

Trauma and Stressor-Related Disorders

Diagnosis

PTSD (DSM-5, 2013)

A. Exposure to actual or threatened death, serious injury, or sexual violence

B. Intrusions

C. Avoidance

D. Changes in cognitions and mood

E. Arousal & reactivity

F. Duration more than 1 month

G. Clinically significant distress or impairment of function

H. Due to event, not due to physiological effects of a substance or medical condition

Consider screens such as the Primary Care PTSD Screen (PC-PTSD-5)

Trauma and Stressor-Related Disorders

Complex PTSD (CPTSD)

- Introduced in 1990s
- Comprises the emotional effects of people who experienced chronic trauma
- Personality, self-regulation changes
  - Somatization
  - Dissociation
  - Affect Dysregulation
  - Difficulty in identity consolidation
  - Attachment difficulties
- Overlap with Borderline Personality Disorder?
- Speaks to developmental impacts of trauma both biologically and psychologically

Serious Mental Illness (SMI)

Epidemiology

- This includes the psychotic spectrum disorders (Schizophrenia, Schizoaffective Disorder), Bipolar Disorder, and MDD with psychotic features
- Most recent meta analyses show HIV prevalence of 1.8-6% in patients with SMI
- High rates of behaviors related to HIV transmission including but not limited to increased sexual partners, sex without condoms, sex work, and IV drug use.
- High rates of related factors such as childhood trauma, substance use, incarceration.

Serious Mental Illness (SMI)

- Differential Diagnosis
  - Bipolar I Disorder
  - Bipolar II Disorder
  - Schizophrenia
  - Schizoaffective Disorder
  - Psychotic/Bipolar Disorder due to another Medical Condition
    - HIV (Typically a late-course manifestation)
    - Thyroid disease
    - MS
    - SLE
    - Malignancy
  - Medication-Induced Psychotic/Bipolar Disorder
    - Zidovudine
    - Abacavir
    - Efavirenz
  - Substance-Induced Psychotic/Bipolar Disorder
    - Cannabis
    - Stimulants

Serious Mental Illness (SMI)

Complications

- 40% of patients with Bipolar Disorder do not adhere to psychiatric medications as prescribed
- Data limited but recent research shows lower likelihood of ART adherence (47.7% vs. 90.9%) in PLWHA and Bipolar Disorder vs. PLWHA without
- Multiple psychiatric hospitalizations disrupts employment and housing, increasing reliance on risky behaviors like sex work
- Stigma is significant both for HIV as well as SMI

Substance Use Disorders (SUDs)

Epidemiology

- An estimated 2.8 million people who inject drugs (PWID) globally live with HIV (17.8% of all PWID)
- In the US, IDU accounted for 9% of all new HIV infections in 2017
  - 14% of women, 4% of men
- Most SUDs correlate with higher risk behaviors, increased rates of trauma.
  - The “SAVA Syndemic”
- SUDs have high comorbidities with other psychiatric diagnoses
  - 90% of patients with antisocial personality disorder, 50% with SMI have SUDs
- Medical complications with SUDs (e.g. Hepatitis, Tb) can further complicate HIV and mental health treatment

Suicide

Epidemiology

- PLWHA have a 3x increased risk of dying by suicide
  - Drug overdose is the most common route
  - Used to be 6x increased risk, has decreased with ART
- In 2011, 26.9% with suicidal ideation, and 22.2% with a suicide plan
- Compared to general population:
  - Women are at higher risk for death by suicide than men
  - Attempts at death by suicide may occur at any stage of HIV infection, though often bimodal at diagnosis or end stage AIDS

Suicide

- **Biological Risks**
  - Comorbid Depression, SUDs, SMI, Personality Disorders, Dementia, and/or PTSD
  - Comorbid pain, insomnia, sensory or motor deficits, opportunistic infections, cancers
  - Prior attempts, family history
- **Psychological Risks**
  - Hopelessness, guilt, shame, loneliness
  - Sense of foreshortened future
  - Awareness of cognitive decline
  - History of trauma
- **Sociocultural Risks**
  - Access to means
  - Poor social support, isolation
  - Unemployment, unstable housing, poverty
  - Stigma/discrimination

Suicide

Protective Factors

- **Biological**
  - Treatment Adherence
- **Psychological**
  - Enhancement optimism, self-esteem
  - Capacity to express and process emotions
  - Adaptive coping skills
  - Secure attachments
  - Sense of hope, meaning and purpose
- **Sociocultural**
  - Increased education on illness
  - Increased social support
  - Religious engagement
  - Experiential involvement

Suicide

Screening

- Screening tools such as the PHQ9 include questions about suicidality
- A full suicide history includes:
  - Current ideation, intent, and plan
  - Past attempts
  - History of self injurious behaviors
  - Family history of suicide attempts
  - Access to firearms and other means
- Additional screening may include risk factors such as feelings of hopelessness, shame, guilt, history of abuse, discrimination, perceived lack of social support

Considerations in Treating Psychiatric Illnesses in PLWHA

Antidepressants

- SSRIs
  - Fluoxetine
  - Sertraline
  - Escitalopram
- SNRIs
  - Duloxetine
  - Venlafaxine
  - Desvenlafaxine
- Novel Antidepressants
  - Mirtazapine
  - Trazodone
  - Bupropion
  - Vilazodone
  - Vortioxetine
- TCAs
  - Amitriptyline
  - Clomipramine
  - Desipramine
  - Nortriptyline
- MAOIs
- NMDA Antagonists
  - Esketamine
- First line treatment for:
  - Depression
  - Anxiety
  - Trauma or stressor related disorders
- SSRIs superior to placebo in treating depressive disorders in PLWHA
- No evidence that one class is superior to another
- Little literature on SNRIs, none on Esketamine
- Typically 6-8 weeks to maximum effectiveness

Antipsychotics

- FGAs:
  - **Chlorpromazine**
  - Haloperidol
- SGAs
  - **Risperidone**
  - Olanzapine
  - Aripiprazole
  - Quetiapine
  - **Ziprasidone**
  - **Clozapine**

- First line treatment for:
  - Psychosis
  - Bipolar Disorder
- Augmentation for:
  - Depression
- No studies specifically examining comorbid HIV and Psychosis
- Case reports involving treatment of Psychosis due to HIV
- No evidence that one class is superior to another

Antipsychotics

- PLWHA are more sensitive to extrapyramidal symptoms such as dystonia, akathisia, parkinsonism, and tardive dyskinesia, so SGAs usually preferred
- SGAs, like NRTIs and PIs, also increase risk of metabolic syndrome
  - Consider using aripiprazole, lurasidone, or ziprasidone
- Limited research on use of Clozapine; beware risk of decreased ANC
- Long Acting Injectables not well studied in HIV, not recommended in advanced HIV

Mood Stabilizers

- Lithium
- Valproate
- Lamotrigine
- Carbamazepine
  - Second line

- First line for treatment of:
  - Bipolar Disorder
- Second line for:
  - Mood lability
- No evidence that Valproate reduces HIV viral levels

Mood Stabilizers

- PLWHA are more sensitive to side effects of Lithium
- Lithium has not been found to improve cognitive function in HAND

Anxiolytics and Hypnotics

- Buspirone
- Benzodiazepines
- Nonbenzodiazepines ("Z-Drugs")
- Hydroxyzine
- Clonidine

- Buspirone not specifically studied in PLWHA
- Higher risk of long term use of BZDs and Z-drugs in PLWHA over a 13 year period

Medication Interactions

Interacting Side Effect Profiles

- Metabolic Syndrome (NRTIs, PIs, SGAs)
- Bone Marrow Suppression (Zidovudine, Clozapine)
- Oversedation (many different medications but especially anticholinergics)
- Increased risk of delirium (especially with anticholinergics)
- QTc Prolongation
  - lopinavir, ritonavir, saquinavir, atazanavir, and efavirenz
  - Ziprasidone, Quetiapine, Paliperidone, Haloperidol
- Risk of Hepatic Failure
  - Valproate
  - Duloxetine
  - Efavirenz, Nevirapine

Medication Interactions

CYP Interactions
Inhibitors usually increase substrates (“boosters”)
Inducers usually decrease substrates
Carbamazepine is considered pan inducer
Ritonavir, Lopinavir are considered pan inhibitors

- 3A4
  - Inhibitors
    - Ritonavir, Elvitegravir
    - Cobicistat
    - Fluoxetine
  - Inducers
    - Efavirenz, Nevirapine
    - Rifampin
  - Substrates
    - Alprazolam
    - Bictegravir
    - NNRTIs
    - Protease Inhibitors
    - Mirtazapine
    - SGAs
    - TCAs
- 2D6
  - Inhibitors
    - Paroxetine, Ritonavir, Efavirenz
  - Substrates
    - TCAs
    - Tramadol
- 1A2
  - Inducers
    - Cigarette Smoke
  - Substrates
    - Olanzapine, Clozapine, Haloperidol

Medication Interactions

Other Metabolic Interactions

- Uridine 5’-diphosphate glucuronosyltransferases (UGTs)
  - Inhibitors
    - Valproate
  - Substrates
    - AZT, Zidovudine
    - Lamotrigine
    - Lorazepam, Oxazepam, Temazepam

Medication Interactions

Pharmacokinetic Considerations

- Renally eliminated medication
  - Lithium and Tenofovir (though this has not been proven)
- Ziprasidone
  - Few interactions with CYP enzymes
  - Food increases absorption x2

Complaints of Fatigue?

Consider:

- Fluoxetine
- Bupropion (unless comorbid anxiety)
- Stimulant medications (if patient is on palliative care)

Insomnia?

It's estimated that as many as 70% of PLWHA suffer from insomnia

Consider:

- Mirtazapine
- Trazodone
- TCAs
- Most FGAs, SGAs

GI Complaints?

Consider:

- Mirtazapine (will also stimulate appetite)
- TCAs
- Haloperidol, Olanzapine (stimulates appetite)

Neuropathic Pain?

Consider:

- Duloxetine
- TCAs

Polypharmacy?

Consider:

- Sertraline
- Escitalopram
- Lithium (IF tolerable)
- Ziprasidone (IF no other QTC prolonging medications)

When to Consult Psychiatry

- Can occur at any stage of HIV Infection, in many treatment settings
- Differential Diagnosis
- Comorbid Psychiatric Disorders unrelated to HIV (e.g. SMI, Substance Use Disorders)
- Complex Psychopharmacologic Management
  - Polypharmacy
  - Multimorbid psychiatric and medical illnesses unrelated to HIV

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Questions?

Thank you!