

Triple Diagnosis: HIV, Substance Abuse and Mental Illness

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Objectives (1)

1. Describe HIV prevalence in people with dual diagnosis.
2. Discuss assessment of common mental disorders.
3. Discuss substance abuse assessment and referral.

Objectives (2)

4. Describe harm reduction approach for substance abusers.
5. Identify types of counseling for the triple diagnosed patient.
6. Describe interactions between ARVs and street drugs or psychotropics.

Prevalence of Triple Diagnosis

In Southeastern sample (n=1097) receiving HIV care

- 60% percent reported symptoms of mental illness (general population rate 22%)**
- 32% reported substance use problems (general population rate 9.5%)**
- 23% reported both substance use problems and symptoms of mental illness (general population rate 3%)**

- Possible selection bias toward underestimation of prevalence as mental health and substance abuse negatively impact access to care**

HIV Prevalence (1)

- In an early study, highest rates of HIV infection were in patients with dual diagnosis of severe mental illness and substance use disorder
- 18.4% overall prevalence
 - 33.8% among injection drug users
 - 15.4% among non-injection drug users
 - 10.9% among alcohol users
 - 2.5% among those with no substance abuse

HIV Prevalence (2)

- Study of HIV positive participants with comorbid substance use and psychiatric problems (n=1848) or substance use problems alone (n=4745)
 - HIV prevalence was 4.7% in dually diagnosed patients
 - HIV prevalence was 2.4% in patients with single diagnosis of substance abuse disorder

(Dausey & Desai, 2003)

Assessment and Screening (1)

- **Mental disorders of concern in HIV-infected substance abusers**
 - **Substance-induced mental disorders**
 - Intoxication or withdrawal
 - **HIV or HCV-related mental disorders**
 - Effects of HIV or HCV
 - Drugs used to treat HIV or HCV
 - **Mental disorders related to opportunistic illnesses**

Assessment and Screening (2)

- **Common mental disorders among individuals with HIV and substance abuse**
 - Adjustment disorders
 - Sleep disorders
 - Depressive disorders
 - Mania
 - Dementia
 - Delirium
 - Psychosis
 - Personality disorder

(Batki & Selwyn, 2000; Substance Abuse Treatment for Persons With HIV/AIDS *Treatment Improvement Protocol (TIP) Series 37*. Available from <http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=hstat5.chapter.64746>)

Adjustment Disorders

- **Acute time-limited responses to stressful events characterized**
 - **Anxious or depressed mood lasting 3 to 4 weeks**
 - **Stages of adjustment to stress of HIV infection have are similar to the stages of adjustment to other illnesses**
 - crisis
 - acceptance
 - adaptation

Sleep Disorders (1)

- Insomnia and poor sleep quality are associated with
 - Abuse of CNS stimulants (e.g., cocaine or methamphetamine)
 - Withdrawal from CNS depressants (alcohol, benzodiazepines) or opioids (heroin)
 - Methadone

Sleep Disorders (2)

- **Insomnia and poor sleep quality are associated with (cont.)**
 - **Depression and anxiety**
 - **Efavirenz (associated with insomnia/nightmares) (Lochet et al., 2003)**
 - **Length of time living with HIV disease and use of ARVs associated with poor sleep quality (Nokes & Kendrew, 2001)**

Depression (1)

- Depression observed in 33% of HIV positive IDUs (Rabkin et al. 1997)
- In substance abusers, depression is caused by
 - use of alcohol or opiates
 - withdrawal from alcohol, opiates, and stimulants

Depression (2)

- In nationally representative HIV Cost and Services Utilization Study (N= 1140)
 - Depression is under-diagnosed and under-treated
 - 37% of people with HIV screened positive for depression
 - Of those, only 46% had evidence in their medical record of a diagnosis of depression

(Asch et al., 2003)

Depression (3)

- **Brief questionnaires for assessment of depression by primary care providers**
 - **Beck Depression Inventory (BDI)**
 - **Zung Self-Rating Depression Scale (SDS)**
 - **The Center for Epidemiologic Studies Depression scale (CES-D); has been validated for use in PLWHIV**

Mania

- Incidence of mania in people with HIV has been reported at 8% (Lyketsos, 1993)
- May be due to:
 - Primary bipolar illness
 - HIV infection of the brain (less common since advent of HAART)
- May also be due to substance abuse
 - cocaine
 - other stimulants

Dementia (1)

- **Loss of cognitive and intellectual functions without impairment of consciousness**
- **May occur in the triple diagnosed patient due to**
 - **chronic alcoholism**
 - **head trauma**
 - **HIV disease**
 - **other causes**

Dementia (2)

- Risk of HIV-related dementia is highest in the severely immunocompromised
- Highly active antiretroviral therapy (HAART), substantially decreases the occurrence of dementia

Dementia (3)

- **Diagnosis of dementia is based on presence of significant and disabling impairment in**
 - **cognitive functioning (e.g., memory disturbance, disorientation, disordered judgment)**
 - **behavioral functioning (e.g., altered behavior such as agitation or psychosis), and/or**
 - **motor functioning (e.g., gait disturbance, incontinence)**

Dementia (4)

- Neuropsychological examination is necessary in assessment of dementia
- The International HIV Dementia Scale (IHDS) can be used to screen for cognitive impairment and determine whether additional testing is needed

(Sacktor et al., 2005)

Delirium (1)

- **An altered state of consciousness, includes**
 - **Confusion**
 - **Disorientation**
 - **Disordered cognition and memory**
 - **Agitation**
 - **Faulty perception**
 - **Autonomic nervous system activity**

Delirium (2)

- **More common than dementia in HIV-infected substance abusers**
- **Has a high mortality rate**
- **Requires immediate treatment**
- **Can be caused by**
 - **substance intoxication or withdrawal**
 - **medication toxicity**
 - **infection**
 - **metabolic disturbances**

Psychosis

Symptoms of psychosis (thought disorder, hallucinations, delusions) may be due to:

- advanced HIV/AIDS dementia**
- substance intoxication (e.g. “crack” cocaine)**
- substance withdrawal**
- primary psychiatric disorders (schizophrenia, mood disorders)**

Personality Disorders

- Higher rates of maladaptive personality and antisocial traits in HIV+ substance abusers
 - These correlate with early onset substance abuse
- Discussion of the interaction of personality disorders with substance abuse treatment available at <http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=hstat5.chapter.29713>

Substance Abuse Assessment/ Referral (1)

- **Avoid labeling**
- **Address behaviors without judgment**
 - **Rather than saying “You have to avoid drinking alcohol with this medicine,” you might say, “Drinking alcohol with this medicine causes serious problems. Will it be difficult for you not to drink?”**

If the answer is yes, you might ask: “How can we help?”

Substance Abuse Assessment/ Referral (2)

- **Ask open-ended questions to elicit complete and accurate information**
- **Use permissive language for “permission” to answer truthfully without shame**
- **Acknowledge and respect**
 - **gender**
 - **ethnic differences**
 - **cultural differences**
 - **sexual orientation**

Substance Abuse Assessment/ Referral (3)

- **If an accurate history cannot be obtained from the client,**
 - **consult a significant other**
 - **consult previous health care provider (patient's written consent required)**
- **Assessment may require more than one sitting, depending on the emotional/mental capacity of the patient**

Substance Abuse Assessment/ Referral (4)

- Help patient find his or her own motivation for change: Two questions to suggest are:
 - “What changes do you feel it’s important for you to make?”
 - “What changes do you feel you’re capable of making right now?” (Miller and Rollnick,1991)
- Give a menu of options, help the patient explore the pros and cons of each option
 - If the patient chooses the treatment, he or she will be more likely to be adherent

Substance Abuse Assessment/ Referral (5)

- **When making referrals, give the patient**
 - the name of an agency
 - the name of a person at the agency
 - Or, call the agency with the patient and make an appointment

Substance Abuse Assessment/ Referral (6)

Instruments to detect and assess drug and alcohol abuse include:

- **Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) alcohol/drug abuse/dependence diagnostic criteria**

- **CAGE survey**
 - **four-question format designed for use in primary care settings**
 - **A positive answer to two or more questions indicates a problem with drug or alcohol use, suggesting further assessment**

CAGE

C Have you ever tried to cut down on your drinking (or drug use)?

A Have you ever gotten annoyed or angry when people talk to you about your drinking (or drug use)? (You might ask “does anyone ever get on your case about your drinking or drug use?”)

G Have you ever felt guilty about your drinking (or drug use)?

E Have you ever had a drink (or a drug) first thing in the morning or to get rid of a hangover (an eye opener)? (You might ask if they ever drink or use without eating)

DSM-IV Drug Dependence Criteria (1)

- **DSM-IV Criteria determine dependence by finding evidence of**
 - **physical or psychologic dependence on a drug or tolerance to it**
 - **disruption of social life patterns**
 - **disregard of the negative medical consequences of using drugs**
- **A person is considered to be drug dependent if they fulfill 3 of the following 7 criteria within a 12-month period**

DSM-IV Drug Dependence Criteria (2)

- 1. Presence of drug withdrawal symptoms/syndrome**
- 2. Escalation of drug doses or reduced effect of the same dose**
- 3. Persistent inability to reduce or control drug use**
- 4. Increased time obtaining and using the drug**

DSM-IV Drug Dependence Criteria (3)

- 5. Personal and business activities reduced by drug use**
- 6. Substance taken in larger amounts or for longer than intended**
- 7. Knowledge of drug use's negative health and personal effects, yet continuing to use drugs**

Source: Adapted from DSM-IV, 4th edition, 1994

Drug Abuse Disorders: General Signs (1)

- Signs that indicate the need for additional drug abuse assessment include: (NLM, 2000)
 - Intoxication or withdrawal symptoms:
 - Tremors
 - Delirium
 - Hallucinations
 - Exhaustion
 - Convulsions
 - Severe cravings
 - Paranoia
 - Flu-like symptoms

NOTE: (patients in withdrawal should be referred for inpatient detoxification and subsequent substance abuse treatment)

Drug Abuse Disorders: General Signs (2)

- **Nodding off during appointments:**
 - may indicate intoxication or withdrawal
- **Asking for a specific psychotropic or pain medication:**
 - may be used as drugs of abuse
- **The presence of hepatitis C:**
 - may have been contracted through IDU

Drug Abuse Disorders: General Signs (3)

- **Track marks:**
 - Indicate current or recent IDU
- **Unexplained side effects:**
 - may be due to interactions with illicit drugs or alcohol
- **Memory and concentration deficits:**
 - misunderstandings and difficulty understanding may indicate psychiatric issues

Drug Abuse Disorders: General Signs (4)

- **Disrupted sleep patterns:**
 - insomnia (inability to fall asleep or waking up in the middle of the night) may indicate depression
- **Talk of suicide or homicide:**
 - these impulses may be signs of underlying mental health issues

Drug Abuse Disorders: General Signs (5)

- **Confusion and/or gaps in medical history:**
 - a patient may be hiding substance use and/or mental illness
- **Unexplained Changes:**
 - changes in appearance, behavior, eye contact, or speech might be signs of the onset of mental disorders

HIV+ Substance Abusers: (1)

Initial Mental Health Assessment (NLM, 2000)

1. Developmental/Social History

- 1. Childhood trauma or illness**
- 2. Education**
- 3. Employment**
- 4. Sexual orientation**
- 5. Relationship history**
- 6. Current support system/social network**

HIV+ Substance Abusers: (2)

Initial Mental Health Assessment (NLM, 2000)

2. Family

- 1. Family relationships**
- 2. Family psychiatric history**
- 3. Family substance abuse history**

HIV+ Substance Abusers: (3)

Initial Mental Health Assessment (NLM, 2000)

3. Medical History

1. HIV history:

- a) Date of diagnosis**
- b) Stage of disease**
- c) Most recent CD4+ T cell count**
- d) Most recent viral load**
- e) HIV-related illnesses**

2. Other medical illnesses

3. Current medications

HIV+ Substance Abusers: (4)

Initial Mental Health Assessment (NLM, 2000)

4. Substance Abuse History

- 1. Age of onset of substance abuse**
- 2. Substance abuse description**
- 3. Substance type**
- 4. Amount, frequency, and route of administration**
- 5. Past or current substance abuse treatment**
- 6. Involvement with self-help (e.g., AA, NA)**

HIV+ Substance Abusers: (5)

Initial Mental Health Assessment (NLM, 2000)

5. Psychiatric History

- 1. Age of first psychiatric problems**
- 2. Outpatient treatment**
- 3. Inpatient treatment**
- 4. Past and current diagnosis/diagnoses**
- 5. Past and current medications and responses**

HIV+ Substance Abusers: (6)

Initial Mental Health Assessment (NLM, 2000)

6. Current Psychiatric Symptoms

- 1. Behavior (e.g., agitation)**
- 2. Appearance of psychomotor retardation**
- 3. Cognitive (level of arousal/ alertness, attention/concentration, orientation, memory, calculation)**
- 4. Mood (e.g., depression)**
- 5. Mania**

HIV+ Substance Abusers: (7)

Initial Mental Health Assessment (NLM, 2000)

6. Current Psychiatric Symptoms (cont.)

- 6. Emotional instability**
- 7. Anxiety (acute or chronic)**
- 8. Symptom pattern (episodic; e.g., panic attacks vs. generalized)**
- 9. Psychotic symptoms**
- 10. Hallucinations**
- 11. Delusions**

HIV+ Substance Abusers: (8)

Initial Mental Health Assessment (NLM, 2000)

7. Danger to Self or Others

- 1. Ability to care for self**
- 2. Suicidality**
- 3. Assaultive/homicidal ideation**

Triple Diagnosis: Barriers to Treatment

- Factors that contribute to delayed entry, or lead to dropping out of care include:
 - Unstable housing
 - Lack of food
 - Lack of transportation
 - Complexities of the system

Triple Diagnosis: Treatment (1)

- **Study of triple diagnosed women lost to follow-up in an HIV clinic** (Andersen et al., 2005)
 - **nursing outreach intervention over 3 months included**
 - Home visits to assist in making and keeping appointments
 - Accompanying the women on their initial clinic visits
 - Integration of care among HIV, substance abuse and mental health providers

Triple Diagnosis: Treatment (2)

- **Study of triple diagnosed women lost to follow-up in an HIV clinic (cont.)** (Andersen et al., 2005)
 - 42% of the intervention group kept all appointments over a 3 month period
 - At 6 months the number of clinic visits decreased sharply
 - Unmet needs identified by participants included eye and dental care, care for other physical illnesses, housing, transportation and food

Triple Diagnosis: Treatment (3)

- Injection drug users are less likely to receive ART than any other population
- Factors associated with poor access to treatment include
 - Active drug use
 - Younger age
 - Female gender
 - Sub-optimal health care
 - Not being in a drug treatment program
 - Recent incarceration
 - Lack of health care provider expertise (DHHS, 2008)

Triple Diagnosis: Treatment (4)

- **DHHS Guidelines state that ART can be successful in IDUs (DHHS, 2008)**
- **ART requires**
 - **Supportive clinical care sites**
 - **Awareness of interactions with methadone**
 - **Awareness of increased risk of side effects and toxicities**
 - **Use of simple regimens to enhance adherence**

Triple Diagnosis: Treatment (5)

- Cognitive impairment can reduce adherence to medications and medical care
- Assess patient's ability to understand education and counseling
- Patient should be allowed to recover from acute effects of substance intoxication or withdrawal

Triple Diagnosis: Causes of Cognitive Impairment

- **Even in early stages of HIV infection, brain function associated with tasks related to memory, attention, concentration, planning, and prioritizing may be affected**
- **Symptoms of cognitive impairment may be due to**
 - **Depression**
 - **Substance-induced dementia**
 - **Mental retardation**
 - **Poorly controlled diabetes or liver disease**

Triple Diagnosis: Cognitive Impairment Intervention (1)

Trial of harm reduction group therapy for IDUs:

- **Cognitive-remediation strategies used to address cognitive impairment (Avant, 2004)**
 1. **Presented material in multiple modalities to stimulate interest, facilitate learning**
 - **Material was presented:**
 - **-verbally (didactic and discussion)**
 - **-visually (slides, videos, charts, written material)**
 - **-experientially (practice, role-play, and behavioral games)**

Triple Diagnosis: Cognitive Impairment Intervention (2)

- **Cognitive-remediation strategies used to address cognitive impairment (cont.)**

- 2. Provided frequent review of material**

- 3. Minimized distraction and fatigue**

- 4. Provided consistency**

- 5. Assessed knowledge and skill acquisition
and provided immediate feedback**

Triple Diagnosis: Cognitive Impairment Intervention (3)

- **Cognitive-remediation strategies were used to address the cognitive impairment (cont.)**

6. Facilitated transfer of learned skills to daily life (real-world examples, at-home exercises)

7. “Memory book” to aid retention of group material, and organize and remember activities

8. Improved stress management skills

- **10-min stress management technique at the conclusion of each group**

Harm Reduction Approach (1)

- **Goal: to reduce harm from drug or alcohol use, not to reduce substance use itself**
 - **Develop a hierarchy of realistic goals for the patient to decrease the negative consequences of drug or alcohol use**
 - **More realistic goals are placed first to be accomplished as steps toward abstinence**

Harm Reduction Approach (2)

- **Harm reduction for IDUs includes:**
 - **needle exchange programs**
 - **controlled drug availability**
 - **education on how to bleach shared IDU equipment**
 - **methadone or buprenorphine maintenance**

Harm Reduction Approach (3)

- Harm reduction for alcohol abusers includes
 - making cheap alcohol more easily available to alcoholics to reduce the consumption of non-beverage alcohol products (solvents, household cleaners and hairspray)

Methadone Maintenance

- **Effective harm reduction method for HIV+ opioid abusers because**
 - **It substitutes an oral medication for an injected drug**
 - **It requires regular attendance at a clinic where medical care, psychiatric consultation and treatment, neuropsychological evaluation, and social services can be accessed**
 - **Longer acting opioid substitutes normalize immune and endocrine systems, which are disrupted by irregular use of heroin or other abused opioids**

Methadone Maintenance and ARVs (1)

- **Methadone is metabolized by the cytochrome P450 system**
 - **Increases or decreases in methadone levels are mainly caused by inhibition or induction of cytochrome P450 by other drugs**
 - **This can result in opiate withdrawal or overdose and/or increase in toxicity or decreased efficacy of drugs administered concurrently with methadone**

Methadone Maintenance and ARVs (2)

- Some ARVs are metabolic inducers (increase the activity) of cytochrome P450 enzymes
- Some ARVs decrease the amount of methadone available, and can precipitate opioid withdrawal symptoms
- Patient on ARVs and methadone should be closely monitored, and adjustment of daily methadone dose clinically guided

Methadone Maintenance and Drug Interactions (1)

Assessment of potential drug interactions for the patient on methadone maintenance (Ferrari, et al. ,2004)

- 1. Record all drugs and any abuse substances, including alcohol; consult the record before prescribing a new drug**
- 2. Know the pharmacodynamics and the pharmacokinetics of drugs prescribed, and potential mechanisms of drug-drug interactions**

Methadone Maintenance and Drug Interactions (2)

Assessment of potential drug interactions for the patient on methadone maintenance (cont.)

- 3. Closely observe patients with illnesses that could modify drug kinetics and dynamics (renal or hepatic insufficiency)**
- 4. Consider possible drug interaction whenever patient complains of withdrawal symptoms, excessive sedation, or unusual symptoms**
- 5. Watch for interactions in patients on new meds**

Methadone Maintenance

- Methadone maintenance does not provide analgesia
- It is appropriate to give opiates to patients on methadone
- Because of methadone's receptor blockade, people on methadone require higher doses of pain medication, often at shorter intervals
- Methadone is available only from Opioid Treatment Programs (OTPs), methadone clinics, which require special licensing

Buprenorphine (1)

- **Alternative to methadone for management of opioid dependence**
- **Available in other treatment settings (PCP office, drug treatment centers)**
- **An opioid partial agonist**
 - **It is an opioid, and can produce typical opioid agonist effects and side effects such as euphoria and respiratory depression**
 - **its maximal effects are less than those of full agonists like heroin and methadone**

Buprenorphine (2)

- **At low doses, produces sufficient agonist effect to enable opioid-addicted individuals to discontinue opioids without withdrawal**
- **Agonist effects of buprenorphine increase linearly with increasing doses; at moderate doses effects plateau ("ceiling effect")**
 - **Therefore, a lower risk of abuse, addiction, and side effects compared to full opioid agonists**

Buprenorphine (3)

- In the U.S., a special federal waiver is required to prescribe Subutex (buprenorphine) and Suboxone (buprenorphine/naloxone) for outpatient opioid addiction treatment.
- Each approved prescriber is allowed to manage up to 100 outpatients on buprenorphine for opioid addiction.

Counseling

- Individual, family, and group therapy can assist the HIV-infected substance abuser with mental illness to:
 - maintain health
 - achieve recovery from the substance abuse
 - build coping skills
 - attain the best possible level of psychological functioning (Batki & Selwyn, 2000)

Counseling: Individual Therapy

- Appropriate for the patient who is not ready to share information with a group
- May not be as effective as group intervention in reducing the sense of isolation, shame, and guilt associated with HIV infection
- Can be used to prepare clients to participate in group therapy

Counseling: Family Therapy

- Family includes anyone the patient regards as family
- Often used to support patients in recovery from substance abuse
- Provides a forum to discuss partner or child abuse, and HIV risk reduction for uninfected family members

Counseling: (1)

Group Therapy and Support Groups

- Typically include 10-12 participants with one or two group leaders
- Groups may be heterogeneous and homogeneous
- Those who strongly self-identify with a particular group may prefer to participate only in homogeneous groups

Counseling: (2)

Group Therapy and Support Groups

- **Variables to consider in forming homogeneous groups**
 - **Language**
 - **Ethnicity**
 - **Gender**
 - **Sexual orientation**
 - **Type of substance abuse**
 - **Stage of recovery from substance abuse**
 - **Stage of HIV infection**

Counseling: (3)

Group Therapy and Support Groups

- **Single-sex groups may be beneficial for**
 - **Those who have not disclosed their status to their partners**
 - **Women who have been abused**
 - **Men or women involved in the sex industry or in sex-for-drugs transactions**
 - **Men who have difficulty discussing issues of sexuality, sexual abuse or incest, in a mixed-gender group**

Counseling: (4)

Group Therapy and Support Groups

- **Study of effects of weekly harm reduction group therapy, conducted over 12 weeks, in IDUs receiving methadone (N=224) (Avants et al., 2004)**

Participants in the intervention had

- **Higher cocaine abstinence rates**
- **Lower sexual risk behavior compared to those receiving standard care**

ARVs and Street Drugs (1)

- **Resource:**

- **Drug-drug interactions between HAART, medications used in substance use treatment, and recreational drugs. January, 2008.**

Available at

<http://www.hivguidelines.org/Content.aspx?PageID=262>

ARVs and Street Drugs (2)

(AETC National Resource Center, 2006; Batki & Selwyn, 2000)

- **Toxicity of MDMA (ecstasy) is significantly increased with some PIs (e.g., ritonavir)**
 - MDMA is metabolized through the cytochrome P450 (CYP450) 2D6 enzyme
 - Ritonavir inhibits 2D6 as well as several other CYP450 pathways
 - There are several cases of life threatening interactions or death in individuals who took MDMA while taking ritonavir (Oesterheld, 2004)

ARVs and Street Drugs (3)

(AETC National Resource Center, 2006; Batki & Selwyn, 2000)

- **Amphetamine (crystal meth) levels may increase with PIs ritonavir and delavirdine**
 - **Inhibition of CYP2D6 interferes with hepatic metabolism of the amphetamine compound**
 - **Such inhibitors include delavirdine and ritonavir**
 - **Ritonavir is the most potent CYP3A4 inhibitor; can increase amphetamine levels by a factor of 2 or 3 (AETC National Resource Center, 2006)**

ARVs and Street Drugs (4)

(AETC National Resource Center, 2006; Batki & Selwyn, 2000)

- The combination of ketamine (“special K”) and ritonavir can lead to chemical hepatitis
- The combination of GHB (gamma-hydroxybutyrate (“liquid X”), a CNS depressant, and PIs can be life threatening

ARVs and Psychotropics (1)

- **Resource:**
 - **Psychiatric medications and HIV antiretrovirals: A guide to interactions for clinicians.**

Available at

<http://www.columbia.edu/~fc15/Drug%20Interactions.pdf>

ARVs and Psychotropics (2)

(AETC National Resource Center, 2006; Batki & Selwyn, 2000)

- Like ARVs, psychopharmaceuticals may be susceptible to interactions involving the Cytochrome P450 system
- There is a high risk of clinically significant interactions between ARVs and psychotropics

ARVs and Psychotropics: Some Examples (1)

- Ritonavir co-administration can increase levels of:
 - amitriptyline (Elavil), desipramine (Norpramin)
 - mirtazapine (Remeron)
 - paroxetine (Paxil)
 - venlafaxine (Effexor)
 - fluvoxamine (Luvox)
 - risperidone (Risperdal)
 - zolpidem (Ambien)
 - olanzapine (Zyprexa)

ARVs and Psychotropics: Some Examples (2)

- **PI and NNRTI levels can be decreased with co-administration of:**
 - carbamazepine (Tegretol)
 - Oxcarbazepine (Trileptal, Trexapin)

Key Points (1)

1. Highest HIV rates seen in patients with dual diagnosis.
2. Assess patients for mental disorders and substance abuse.
 - CES-D
 - IHDS
 - DSM-IV criteria (mental disorders; drug dependence)
 - CAGE

Key Points (2)

- 3. Cognitive-remediation strategies can be used to address cognitive impairment.**
- 4. Multiple factors contribute to delayed entry or drop out from treatment.**
- 5. Harm reduction approach can reduce harm from drug or alcohol use.**

Key Points (3)

6. Refer substance abusers or those with mental illness to individual, family or group counseling.
7. Drug interactions between ARVs and street drugs or psychotropics can increase or decrease action of either drug.