NURSING CARE *of the* HIV-Infected INMATE

MENTAL HEALTH ISSUES in HIV-Infected INMATES

Module 7

SPRING 2006

Albany Medical Center

This learning activity is co-provided by The Albany Medical Center Hospital Provider Unit and the Division of HIV Medicine.

MISSION:

This module is designed to equip correctional nurses with the basic knowledge needed to provide safe, comprehensive care to inmates infected with HIV. Each module provides an overview of a pertinent topic so that correctional nurses have a reference tool readily available for their care of HIV-infected inmates. To obtain copies of Modules 1 – 5, please visit Albany Medical College's website at: **www.amc.edu/Patient/hiv/index.htm** *(go to correctional education).*

LEARNING OBJECTIVES:

After reading this monograph, the corrections nurse should be able to:

1) Discuss the impact of mental illness on HIV transmission and on HIV treatment adherence.
2) Describe central nervous system manifestations resulting from HIV infection.
3) Discuss the association of HIV disease, mental illness and substance abuse.
4) Identify pharmacologic considerations in the treatment of mental disorders in HIV-infected inmates.

DISCLOSURE STATEMENT:

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NY/NJ AIDS EDUCATION AND TRAINING CENTER

NURSING CARE *of the* HIV-Infected INMATE

LEARNING MODULE 7: MENTAL HEALTH ISSUES in HIV-INFECTED INMATES

MODULE DIRECTIONS

ABOUT CONTINUING EDUCATION CREDIT:

To obtain Continuing Nursing Education credit, a minimum of 80% of the questions must be answered correctly on the self assessment test on page 13. The estimated time for completion of this activity is 1 hour.

There is no fee for the nursing continuing education credit for this monograph. This learning activity is awarded 1.0 contact hour through **June 30, 2006.**

IMPORTANT: READ THESE INSTRUCTIONS BEFORE PROCEEDING!

DIRECTIONS:

1. Time yourself throughout all portions of this activity.
2. Read the enclosed monograph.
3. Take the self assessment test.
4. Fill out the program evaluation. Please be sure to include the length of time it took you to complete the activity, self assessment test, and evaluation.
5. Complete the reader information form including your name and address.
6. Fully complete the HRSA participant information form in black pen. Each bubble must be fully shaded.
7. To assure your receipt of Continuing Nursing Education credit, please mail your completed self assessment test, program evaluation, reader information form and HRSA participant information form (3 pages total) to:

Jim Ybarra
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If you have any questions, please contact Jim Ybarra at **(518) 262-4674** or **ybarraj@mail.amc.edu**.

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INTRODUCTION

Providing health care to the HIV-infected inmate is challenging on many levels. HIV is a complex multi-system disease. Treatment requires strict medication adherence to avoid drug resistance. Many drug-drug interactions exist. Common co-morbidities in this population such as hepatitis B and C complicate treatment even more. Psychiatric co-morbidity is a significant issue among HIV-infected individuals, even more so among the incarcerated. Substance abuse, mental health disorders and HIV disease frequently present together and create risks for disease transmission and problems with treatment adherence. The purpose of this learning module is to familiarize the correctional nurse with ways to identify and manage HIV-infected inmates with mental health disorders.

Inmates suffer from a disproportionately high rate of mental illness. Of the 2.1 million incarcerated individuals in the country, one out of five suffers from serious mental illness and at least 13% of inmates will have an acute episode requiring psychiatric care at some point during their incarceration (Veysey et al, 2002). Mental health problems are more prevalent among people with less education, fewer social supports and poor coping mechanisms. Many inmates have this constellation of risks in their backgrounds. Other factors associated with a mental health disorder include:

- History of violence
- Family or personal history of mental illness
- History of prior incarceration
- Inadequate housing
- Chronic pain
- Multiple medical problems

(Bookhardt-Murray, 2002)

Female inmates have higher rates of depression and post traumatic stress disorder (PTSD) related to significant physical and sexual abuse histories (60-90%) (Hutton et al, 2001). Little data are available estimating psychiatric disorders in the jail populations due to their transient nature and short duration of stay. However, recent statistics pertaining to inmates in the state facilities estimate: 13-18% have major depression; 22-30% have PTSD; 26-45% have antisocial personality disorder and 6-12% have anxiety disorder (this rises to 32% in inmates with opiate-dependence) (Veysey et al, 2002).

Individuals with untreated mental illness are at great risk for HIV transmission due to the likelihood of risky behaviors (needle-sharing for intravenous drug use and unprotected sex). In addition, once HIV-infected, these patients are less likely to adhere to their medical appointments and treatment regimens, often resulting in poor clinical outcomes (Angelino and Treisman, 2006).

HIV-ASSOCIATED DEMENTIA

Psychiatric symptoms in the person infected with HIV may be a result of HIV itself. Subtle changes in cognition can be the result of HIV-associated dementia (HAD). It can be difficult to differentiate these symptoms from those of a primary psychiatric disorder. The effects of HIV on the central nervous system (CNS) occur soon after initial infection. Although the virus does not directly infect neurons, damage is caused by neurotoxins released by both the virus and infected cells in the CNS. The virus crosses the blood-brain barrier readily. Even in patients with undetectable serum HIV, detectable virus can exist in the CNS. Patients can present with a range of abnormal neurocognitive symptoms. Common symptoms of HAD are forgetfulness, problems with word-finding, decreased visual/motor skills and mental slowing. CT and MRI scans as well as lumbar puncture are useful diagnostic tools to determine the source of pathology. **Table 1 highlights the range of disorders to be considered in the HIV-infected patient with neurocognitive symptoms.**

If the patient is not on HIV treatment, or is on a treatment regimen that is not fully suppressing his/her HIV viral load, the risk for HIV-related complications of all sorts is higher. The best

TABLE 1 CLINICAL MANIFESTATIONS OF HIV-ASSOCIATED DEMENTIA

TYPE OF IMPAIRMENT	MANIFESTATIONS
Affective	-Apathy (depression-like features) -Irritability -Mania, new-onset psychosis
Behavioral	-Psychomotor retardation (slowed speech or response time) -Personality changes -Social withdrawal
Cognitive	-Lack of visuospatial memory (misplacing things) -Lack of visuomotor coordination -Difficulty with complex sequencing (difficulty in performing previously learned complex tasks) -Impaired concentration and attention -Impaired verbal memory (word-finding ability) -Mental slowing
Motor	-Unsteady gait, loss of balance -Leg weakness -Dropping things -Tremors -Poor handwriting -Decline in fine motor skills

HIV Clinical Guidelines for the Primary Care Practitioner: Mental Health Care for People with HIV Infection. www.hivguidelines.org

treatment for HAD is HIV viral suppression with highly active antiretroviral therapy (HAART). Advanced immunosuppression, (CD4 count <200 cells/mm), puts the patient at greater risk for both opportunistic infections of the CNS and metabolic abnormalities that affect cognitive function. Since symptoms can mimic those of a primary psychiatric disorder and substance abuse, accurate diagnosis is necessary to ensure appropriate treatment. An infectious disease specialist should be consulted for the HIV-infected inmate with neuropsychiatric symptoms (Forstein, 2003).

An additional consideration in the correctional setting is that inmates suffering from undiagnosed HAD may have problems with impulse control, adhering to rules and making simple decisions. These behaviors may put them at risk for problems with correctional staff and with other inmates. They may refuse medications due to an inability to understand cause and effect, and consequences. Medication refusal should serve as a red flag for HAD (Herfkens, 2001).

Screening for HAD can be accomplished using one of several quick tools such as the Johns Hopkins Dementia Scale: www.hivguidelines.org/public_html/mh-cog/mh-cog-appa.htm Screening close to the time of prison intake should be avoided as results may be skewed by any recent substance abuse, and by the higher rate of depression at this point in incarceration. Abnormal results should be repeated at a later date.

Nursing interventions for the patient with HAD can be critical in successful management. Some interventions include:

- Use of written reminders and simple instructions
- Repetition of all instructions
- Use of pill boxes, timers and family members to stay on track with medications upon discharge
- Orienting confused inmates to time, place and person

- Redirecting/distracting inmates from inappropriate behaviors
- Maintaining calm demeanor with confused or agitated inmates

Patients with CD4 cell counts >200 cells/mm may exhibit a more subtle version of some of the same symptoms observed in HAD. This is known as minor cognitive motor disorder. These patients should be started on HAART to control HIV viral replication.

DELIRIUM

Delirium is an acute or subacute change in level of consciousness. Patients wax and wane in their ability to maintain attention. In the setting of co-existing substance abuse, the diagnosis of delirium is often missed. Immediate medical attention is required. There are three major causes of delirium:

- Medications: some of the many medications that can cause delirium are anticholinergics, antihistamines, sedatives, theophylline, digoxin, corticosteroids, benzodiazepines and recreational drugs including alcohol. Assess if the patient has recently started any new medications; screen for possible exposure to illegal substances.
- Infection: particularly in the patient who is immunocompromised, work-up for any sources of infection, (even in the absence of fever), should be aggressive **(see Table 2).**
- Metabolic: potential causes of delirium are hypoxemia, hyperglycemia, hyponatremia, hypercalcemia, hypotension and seizures.

Treatment for delirium entails prompt identification and treatment of the cause. The

TABLE 2 **OPPORTUNISTIC INFECTIONS/NEOPLASMS OF THE CENTRAL NERVOUS SYSTEM**

DIAGNOSIS	CAUSE	CD4 COUNT	TREATMENT	NURSING IMPLICATION
Toxoplasmosis	Parasite	<100 cells/mm	Pyrimethamine + Folinic acid + Sulfadiazine	Treatment is lifelong; monitor CBC, renal function; encourage hydration
Cryptococcal meningitis	fungus	<200 cells/mm	Acute treatment: Amphotericin Maintenance: Diflucan	Monitor BP during infusion; watch RFTs Monitor CBC and LFTs
PML	virus	<50 cells/mm	HAART	High mortality rate
CMV encephalitis	virus	<50 cells/mm	Ganciclovir/Foscarnet	High mortality rate
CNS lymphoma	malignancy	<100 cells/mm	Radiation	Treatment is palliative; high mortality rate
Neurosyphilis	bacteria	any	Penicillin	Monitor RPR annually on all HIV patients
Tuberculosis meningitis	bacteria	any	Anti-TB medication for 12-18 months	Monitor PPD annually on all HIV patients, unless previously positive

HIV/AIDS Nursing Secrets, 2003

patient should be oriented to time and place regularly. In severe cases, sedation may be necessary. These patients need close, frequent monitoring.

SUBSTANCE ABUSE

Rates of mental health disorders among substance abusers are quite high: major depressive disorder 34%, antisocial personality 68% and an eight-fold increase in attempted suicide. Addiction problems frequently co-exist with mental health disorders, and lead to incarceration in many cases. In the months just prior to incarceration, 64-70% of inmates abuse illegal substances. The link to HIV prevalence among this group is strong. In New York State prisons, 93% of AIDS patients had histories of substance abuse (Altice and Springer, 2005).

Underdiagnosed and undertreated mental health problems among substance abusers can contribute to the spread of HIV. Significant associations have been made between both depression and anxiety, and needle-sharing; adequate treatment for mental health disorders has been linked to less needle-sharing (Lundgren et al, 2005).

Active substance abuse often results in poor treatment adherence. Female inmates report extremely high rates of unprotected sex with intravenous drug users, putting them at great risk for HIV infection (Belyea, 1999). Intravenous drugs are not the only recreational substances linked to HIV transmission. Cocaine abusers have higher rates of trading sex for drugs. Alcohol abuse is linked to lowered inhibition which can lead to risky sexual behaviors. The recent rise in methamphetamine use is of great concern due to its effects on increasing libido while decreasing inhibitions. Contrary to popular belief, however, substance abuse disorders can be successfully treated. An AIDS clinic in inner city Baltimore with a significant percentage of drug abuse among its clients reports that one-third of their patients have been able to achieve long-term recovery from substance abuse (Treisman, 2003).

Symptoms of substance abuse can often look much the same as those of HIV: malaise, fatigue, sweats, fevers, weight loss. HIV-infected substance

TABLE 3 RECOMMENDED MENTAL HEALTH SCREENING FOR PATIENTS WITH HIV

ASSESS AT INTAKE AND THEN ANNUALLY:

- Cognitive impairment
- Depression
- Anxiety
- Sleep habits and appetite
- Suicidal/violent ideation
- Post-traumatic stress disorder
- Psychosocial status
- Past psychiatric history (meds, hospitalizations)
- Alcohol and substance use
- Stigmatization issues (due to HIV, substance abuse, sexual identity)

CLINICAL MONITORING FOR HIV-INFECTED PATIENTS WITH MENTAL HEALTH SYMPTOMS:

- Thyroid function tests
- B12 level
- Folate
- Cortisol level
- Chemistries and electrolytes
- Liver function tests
- Complete blood count
- Testosterone level
- Rapid plasma reagen (RPR)
- Glucose level

www.hivguidelines.org

abusers have higher rates of medical complications such as bacterial infections (pneumonia, meningitis, endocarditis, sepsis), tuberculosis, sexually transmitted diseases, hepatitis B and C, and lymphomas.

Mental health disorders such as depression and affective disorder frequently overlap with substance abuse. These patients are at high risk for worsening addiction, poor treatment outcomes and even suicide. Referral to a psychiatrist for evaluation is critical. Treatment for both addiction issues and psychiatric illness should be initiated during incarceration, and will need to be included in the inmate's release plan. Long-term treatment is the best way to maintain recovery behaviors and adherence to HIV treatment.

It is very important to communicate with the community substance abuse treatment providers regarding inmates on HIV medications. Significant drug interactions exist between methadone and several antiretrovirals. Inmates taking non-nucleoside reverse transcriptase inhibitors (NNRTIs: efavirenz, delavirdine or nevirapine) can go into withdrawal if methadone levels are not carefully monitored. Several protease inhibitors (PIs) also have drug interactions (Bartlett, 2005).

DEPRESSION

As previously stated, prevalence of depression among inmates is quite high. The experience of being incarcerated frequently results in depression. HIV-infected patients suffering from depression have higher mortality rates and may experience greater immune compromise than those without depression (Clinical Manual for Management of the HIV-infected Adult, 2005).

In patients with HIV, there are certain risk periods for depression: the time of initial diagnosis, periods of clinical instability such as developing symptoms or illness, disclosure of HIV status to family and friends, introduction of medication, death of a significant other, and progression to AIDS diagnosis. Depression that occurs as a result of these negative experiences is termed reactive depression (adjustment disorder, demoralization). Patients are reacting to a specific situation in their lives but maintain the ability to be distracted from it and enjoy other parts of their lives.

In contrast, patients experiencing major depression (endogenous) are not able to experience much pleasure in other aspects of their lives. Both of these syndromes can present with a variety of somatic complaints such as abdominal pain, headache, backache, insomnia, fatigue and cardiac symptoms. Possible symptoms of depression are:

- Depressed mood, sadness, hopelessness
- Insomnia or hypersomnia
- Fatigue or loss of energy
- Decreased ability to concentrate
- Recurrent thoughts of death or suicide
- Diminished interest or pleasure in activities
- Appetite changes with weight changes (up or down)
- Feelings of worthlessness or guilt
- Psychomotor agitation or retardation

Patients with five of these symptoms occurring more days than not for at least two weeks have **major depression.** These patients should have an immediate psychiatric evaluation as they are at high risk for suicide. Patients with **reactive depression** will have at least one of the five symptoms. In both cases, prompt psychiatric evaluation can result in initiation of treatment with medications and counseling, with a good chance for managing symptoms. The patient should always be worked up for other potential causes of symptoms, as noted earlier (Angelino and Treisman, 2006).

There are a number of easily-administered screening tools available for depression. The Beck Depression Inventory and General Health Questionnaire are short, reliable tools that can be administered to all HIV-infected inmates. Screening can be simplified even further by asking the inmate if during the past month he/she has (1) experienced little pleasure in doing things and (2) felt down, depressed or hopeless. Those with positive results should be referred to psychiatry (Treisman and Angelino, 2003).

Treatment for depression is highly effective, with a high proportion of patients experiencing at least some improvement of symptoms within the first three months. Although anti-depressants all have side effects, medications can be selected that will help manage other symptoms the patient might be experiencing. For instance, an inmate with

insomnia and/or weight loss can be given doxepin, desipramine or nortriptyline which cause drowsiness and weight gain. All medications should be started at low dose and titrated up while monitoring the patient's tolerance. It can take up to four to six weeks to see a response after treatment initiation. Even when symptoms of depression resolve, it is recommended to continue the patient on treatment to avoid recurrence (Angelino and Treisman, 2006).

Drug interactions should be assessed as antiretrovirals, especially ritonavir, can interact with anti-depressants. HIV-infected patients on anti-depressant medications should be closely monitored (Mann, 2005). **Tables 4 & 5 on pages 9 and 10 outline interactions between HIV and mental health medications.** Paroxetine should be avoided in pregnant patients (FDA, 2006). Patients who will be undergoing treatment for hepatitis C infection are at high risk for interferon-induced depression. These patients may need to be started on an anti-depressant early during the course of treatment. Some clinicians will even start the patient on anti-depressant therapy prior to the initiation of hepatitis C treatment.

ANXIETY DISORDER

Anxiety disorder can overlap with depression and also occur more frequently in inmates at the time of incarceration as well as at various time-points related to HIV (initial diagnosis and disease progression). Such episodes related to life events are usually transient. True anxiety disorder is defined as unrealistic, excessive worry about two or more life circumstances with at least six of the following complaints:

- Sweating or cold, clammy hands
- Dry mouth
- Skin rashes
- Dizziness/lightheadedness
- Nausea, diarrhea or other abdominal distress
- Flushes or chills
- Frequent urination
- Dysphagia/"lump in throat"
- Feeling keyed up or on edge
- Exaggerated startle response
- Difficulty concentrating
- Trouble falling or staying asleep
- Irritability

The inmate should be questioned about family history of psychiatric problems as well as any recent stress or sleep disturbances. Caffeine intake and all medications should also be assessed to look for other sources of symptoms. A physical exam and laboratory evaluation should be done to rule out cardiac, thyroid or metabolic disturbances.

The psychiatrist or primary care provider can treat the inmate with anxiolytics such as buspirone, venlafaxine or escitalopram. Benzodiazepines should be used for short term, only in patients with severe anxiety disorder. Midazolam and triazolam are contraindicated with all protease inhibitors and with efavirenz and delavirdine (www.hivguidelines.org).

BIPOLAR (MANIC/DEPRESSIVE) DISORDER

Bipolar disorder occurs in approximately 8% of people living with HIV/AIDS (ten times higher than among non-infected people). Generally, the onset of symptoms is late adolescence/early adulthood with a strong genetic component. The patient experiences moods vacillating between long periods of depression and extended cycles of elevated, euphoric moods. The latter are characterized by high energy, insomnia, irritability and inflated self-thinking (hypomania). The emotions are disconnected from the environment and progress to a state known as mania with highly disorganized thoughts, hallucinations and delusions. Particularly during the manic phase, judgment is impaired and high risk behavior is common, contributing to HIV transmission and difficulty with medication adherence.

These patients require assessment, treatment and monitoring by mental health providers. Treatment usually consists of therapy and medications with mood stabilizing drugs and/or anticonvulsants. As with all other medications, be alert for drug/drug interactions in patients on HAART. Of particular note, carbamazepine has significant interactions with NNRTIs, PIs and lamivudine (Treisman and Angelino, 2003).

PERSONALITY DISORDERS

It is beyond the scope of this learning module to address all of the mental health disorders encountered in corrections. Some of the most prevalent personality disorders found among the inmate population are borderline, antisocial and histrionic patients. These are perhaps the most difficult inmates to manage as they often display manipulative behavior designed to split the staff. Common to all of these disorders is a tendency towards impulsivity, sensation seeking and neuroticism. All require a full psychiatric evaluation for therapy and medication recommendations. A comprehensive treatment plan developed with the entire staff, including psychiatry, is essential. Consistency among staff and frequent re-evaluation of the plan can have a significant positive effect. Management strategies include:

- Avoid issuing ultimatums (they result in power struggles and worsen the problem). Instead, appeal to cognitive capabilities to set clear and realistic goals.
- Set consistent, firm limits on negative behaviors.
- Reward positive behaviors
- Assess suicidal ideation

(Clinical Manual for Management of the HIV-infected Adult, 2005).

PSYCHOTIC DISORDERS

People with a history of psychotic disorder are increasingly common among inmates. A report of 49 surveys of psychotic illness in incarcerated populations revealed that 3.7% of male prisoners and 4.0% of female prisoners had psychotic illness (Fazel & Danesh, 2002).

This means that there is a two to four fold excess of psychotic illness in prisons when compared to the general population. People with psychotic illness are much more likely than the general population to be HIV infected (Cournos & Bakalar, 1996). These individuals will most likely be treated with both anti-retroviral and psychotropic medications. Significant drug interactions can be problematic in such patients and expert consultation is best when beginning or changing either class of medication.

CONCLUSION

Caring for the inmate with HIV and mental health disorders requires the efforts of the entire medical team, including ongoing assessment and adequate discharge planning. The needs of this type of patient are significant; treatment of mental health disease will lead to improved HIV treatment adherence, better clinical outcomes and reduced risk of HIV transmission.

TABLE 4 INTERACTIONS BETWEEN HIV AND MENTAL HEALTH MEDICATIONS

		MEDICATION (Brand Name)	INTERACTION
ANTIDEPRESSANTS	Serotonin Reuptake Inhibitors (SRIs or SSRIs)	Fluoxetine (Prozac)	See * below. a, b, c
		Citalopram (Celexa)	Could be affected by RTV, monitor for toxicity. Of SSRIs, this agent is less likely to be affected by PIs.
		Sertraline (Zoloft)	Side effects are similar to those noted for Prozac, but are less severe due to shorter half-life. a, b, c
		Paroxetine (Paxil)	Promotes sleep; initial dose is 20 mg/d; increase by 10 mg increments. Less likely to interfere with other medications than other SRIs. d
		Fluvoxamine (Luvox)	a, b, c
	Mixed Agents	Venlafaxine (Effexor)	a, b
		Buspirone (BuSpar)	• Nonbenzodiazepine-nonbarbiturate; dependence liability negotiable; increase dose 5 mg q 2-4 days to effective daily dose of 15-30 mg.* • Not likely to be affected by PIs or NNRTIs.
	Tricyclics	Amitryptyline (Elavil)	d
		Doxepin (Sinequan)	d
		Nortriptyline (Aventyl, Pamelor)	Titrate level (70-125 mg/dl). promotes sleep. d
		Desipramine (Norpramin)	Desipramine (<125 ng/dl). promotes sleep. d
	Other Agents	Nefazodone HCI (Serzone)	a, b, c
		Bupropion (Wellbutrin/Zyban)	Initial dose is 150 mg bid; increase to 300 mg/day after 3 days, as necessary. a, b, c
ANTIPSYCHOTICS		Haloperidol (Haldol)	d
		Chlorpromazine (Thorazine)	d
		Respiridone (Respirdal)	d
		Imipramine (Tofranil)	d
		Thioridazine (Mellaril)	d
		Perphenazine (Trilafon)	d
MOOD STABILIZING AGENTS		Lithium	Not affected by PIs or NNRTIs
		Olanzapine (Zyprexa)	a, b, d
		Valproic Acid (Depakote, Divalproex)	a, b, c
BENZODIAZAPINE		Diazepam (Valium)	d, e
		Clonazepam (klonopin)	b, d, e
		Alprazolam (Xanax)	b, d, e
		Temazepam (Restoril)	b, d, e
		Lorazepam (Ativan)	b, d, e

COMMENTS KEY:

a - potential ↓ levels by efavirenz (EFV) nevirapine (NVP; clinical significance unclear, monitor for sub-therapeutic effect

b - potential ↑ levels by Protease Inhibitors (PIs); clinical significance unclear, monitor for toxicity

c - potential ↑ levels of PIs and Non-nucleoside Reverse Transcriptase Inhibitors (NNRTIs); clinical significance unclear, monitor for toxicity

d - possible ↑ levels by ritonavir

e - Metabolites could be affected by PIs and NNRTIs, clinical significance unclear. Suggested start with reduced dosage and titrate up.

**Major side effects are nausea, nervousness, insomnia, weight loss, dry mouth, constipation; insomnia may be treated with Desyrel* 25-50mg hs.

**tetracycline, fluoroquinolones contraindicated in pregnancy*

Developed by the HIV & Hepatitis Prison Project. ***References:*** *Bartlett JG and Gallant JE. 2000-2001 Medical Management of HIV Infection. Johns Hopkins University, Baltimore, MD. 2000. Available at http://www.hopkins-aids.edu/publications/book/ch7_1std.html.*

TABLE 5 PSYCHIATRIC AND HIV MEDICATION INTERACTIONS

CATEGORY	NNRTIs	NRTIs	PIs
SSRIs	Prozac increases levels of Rescriptor 50%	NPD*	Prozac may lead to increased effects of Norvir, but no dose adjustment of Norvir is needed when used in combination. Norvir increases levels of Prozac, Luvox, Paxil, and Zoloft.
TCAs	NPD	NPD	Norvir decreases Norpramin clearance by 50%, causing higher than anticipated blood levels; may increase levels of Elavil, Sinequan, Tofranil, Depakote. When used in combination with Norvir, caution is required. It is recommended to use lower doses, and regularly monitor EKG and serum TCA levels.
Other: Wellbutrin	Sustiva may increase wellbutrin levels.	NPD	Viracept and Norvir may increase Wellbutrin levels, increasing risk of drug-induced seizures.
Other: Serzone	NPD	NPD	Caution advised; combination of PIs and Serzone may increase levels of both drugs.
SNRIs	NPD	NPD	Effexor may decrease Crixivan levels.
Other: Desyrel	NPD	NPD	Potential for drug interactions when Desyrel is co-administered. Adverse effects including nausea, hypotension, and syncope were observed when Norvir and Desyrel were co-administered. It is likely that Nizoral, Crixivan, and other CYP34A inhibitors may lead to increases in Desyrel plasma concentrations with potential for adverse effects. If Desyrel is used with a potent CYP34A inhibitor, a lower dose of Desyrel should be considered.
Benzodiazepines	NPD	NPD	Kaletra and Halcion may have possible interactions; Halcion and other antipsychotics from this class are contraindicated in combination with PIs due to the potential for serious and life-threatening reactions such as prolonged or severe sedation or respiratory depression. Xanax, Delmane, Klonopin, and Valium should be used in caution with PIs due to the potential for serious reactions such as prolonged or severe sedation or respiratory depression. Ativan, Restoril, and Tranxene are free of the serious interactions with PIs found with other benzodiazepines.
Non-Benzodiazepine sedative/hypnotics	NPD	NPD	Ambien and Sonata should be used with caution in combination with PIs due to the potential for serious reactions such as prolonged or severe sedation or respiratory depression.
Lithium carbonate	NPD	NPD	NPD
Anticonvulsants	Tegretol and Dilantin may decrease levels of PIs and NNRTIs.	Long term clinical implication not known; monitor for Retrovir toxicity.	Tegretol may decrease levels of PIs and NNRTIs. Known to decrease Crixivan levels with loss of viral suppression. Tegretol levels increased by Norvir. Dilantin: co-administered with Kaletra results in decreased concentrations of both Dilantin and Kaletra.
First Generation-Typical	NPD	NPD	Orap is contraindicated in combination with PIs due to potential for serious and life-threatening reactions, such as cardiac arrhythmia. Norvir may increase levels of antipsychotics.
Second Generation-Atypical	NPD	NPD	PIs may increase plasma levels of Clozaril and increase the risk for seizures and orthostatic hypotension. Geodon: caution is indicated when Geodon is co-administered with Norvir.
Third Generation	NPD	NPD	NPD
St. John's Wort	May reduce blood levels of NNRTIs. Induces metabolism of Viramune; increased clearance ~35%.	NPD	May reduce blood levels of PIs.

These tables have been adapted from "Psychiatric Medications and HIV Antiretrovirals: A Guide to Interactions for Clinicians." NY/NJ AIDS Education and Training Center

**No Published Data, (NPD) about drug interactions specific to this combination.*

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ADDITIONAL INFORMATION AND RESOURCES

HELPFUL WEBSITES:

AIDS Education and Training Centers
National Resource Center ..... www.aidsetc.org

American Psychiatric Association Practice
Guidelines for the Treatment of Patients
with HIV/AIDS ..... www.psych.org/aids/index.htm

The Columbia University HIV Mental
Health Training Project..... www.columbia.edu/~fc15

National Clearinghouse for Alcohol
and Drug Information.....www.health.org

National Institute of Mental Health,
National Institutes of Health .....www.nimh.nih.gov

National Institute on Alcohol
Abuse and Alcoholism.....www.niaaa.nih.gov

National Institutes on Drug Abuse.....www.nida.nih.gov

New York/New Jersey AIDS Education
& Training Center .....www.nynjaetc.org

New York State Office of Mental Health
1-800-597-8481 .....www.omh.state.ny.us.

New York State Office of Alcoholism & Substance Abuse Services
1-800-522-5353.....www.oasas.state.ny.us

World Health Organization Department of Mental Health and
Substance Use.....www.who.int/mental_health
www.who.int/substance_abuse

COMMUNICABLE DISEASES: ARE YOU AT RISK?

This 30-minute videotape encourages inmates to get tested for HIV, hepatitis B & C, and sexually transmitted diseases by discussing risk factors. This resource was developed in collaboration with Albany Medical College, the New York State Department of Correctional Services and the pharmaceutical industry. To receive a free copy of this videotape, call (518) 262-4674 or ybarraj@mail.amc.edu. Supply is limited.

DID YOU KNOW?

The AIDS Education & Training Center (AETC) Program, administered by the Health Resources and Services Administration, supports a network of 11 regional centers that coordinate free education for health care providers treating persons living with HIV/AIDS. These 11 centers cover all 50 states and are a resource which is available to health care providers desiring HIV clinical education. To learn of an AETC in your region, visit www.aidsetc.org or call (973) 972-6587.

Please share this monograph with your nursing colleagues making photocopies of the Continuing Nursing Education documents if needed. Additional copies of this monograph can also be downloaded from Albany Medical College's website at: www.amc.edu/Patient/hiv/index.htm (go to correctional education).

SELF ASSESSMENT TEST

LEARNING MODULE 7: MENTAL HEALTH ISSUES in HIV-INFECTED INMATES

DIRECTIONS: Please select the BEST answer and circle your response directly on the self assessment test. To obtain Continuing Nursing Education credit, a minimum of 80% of the questions must be answered correctly. To assure your receipt of Continuing Nursing Education credit, please complete the self assessment test, program evaluation, reader information form and HRSA participant information form (3 pages total).

This activity is eligible for nursing credit through **June 30, 2006**. Individuals who mail the required documentation noted above after this date will be ineligible for credit. The estimated time for completion of this activity is 1 hour. There is no fee for the nursing continuing education credit for this monograph.
Albany Medical College mailing information is on the reverse side of this document.

1) Undiagnosed mental illness in an HIV-infected patient is a concern for all the following reasons except:
- A. It can result in increased rates of risky behaviors which can spread infection.
- B. These patients often have more difficulty adhering to treatment regimens, leading to poorer clinical outcomes.
- C. Changes in cognitive function may result in difficulty following medical instructions.
- D. Patients with co-existing mental illness may respond differently to HIV treatment.

2) Which of the following statements regarding HIV-associated dementia is false?
- A. It is the result of a direct effect of HIV on neurons.
- B. It can cause subtle changes in cognition.
- C. It can occur even when HIV viral load is fully suppressed (undetectable) in the serum.
- D. It can be diagnosed with a simple screening test.

3) The best treatment for HIV-associated dementia is:
- A. Electroshock therapy (ECT)
- B. Antidepressants
- C. Antipsychotics
- D. Highly active antiretroviral therapy

4) If possible, screening for HIV-associated dementia should be delayed until after the initial period of incarceration due to:
- A. Inaccurate results if the inmate has recently used illegal substances
- B. The increased possibility for the inmate to be disoriented
- C. Confidentiality concerns regarding HIV status
- D. Inadequate staffing at reception

5) Major causes of delirium are:
- A. Infection, advanced age, medications
- B. Metabolic, infection, medications
- C. Medications, recent surgery, HIV infection
- D. Metabolic, changes in the environment, infection

6) Inmate J. presents for a routine HIV follow-up appointment. His condition is stable on HIV treatment, with recent CD4 count of 750 cells/mm and viral load <50 copies/ml. He complains of excessive fatigue; he has a 10 lb. weight loss since his past visit and has an apathetic affect. The following interventions would be appropriate except:
- A. Refer for a mental health consultation
- B. Perform some additional laboratory testing
- C. Suspect CNS toxoplasmosis and begin therapy for this
- D. Encourage him to discuss concerns about his medical condition

7) Which of the following is not true regarding antidepressant therapy?
- A. Should start at a low dose and titrate the dose slowly
- B. Should avoid in patients on treatment for hepatitis C
- C. Should continue even after depression symptoms resolve
- D. Should be selected based on appropriate side effect profile

8) Management strategies for patients with personality disorders include all but the following:
- A. Routinely isolate from other inmates to avoid conflicts
- B. Use a team approach when developing a care plan
- C. Set firm, consistent limits on negative behaviors
- D. Reward positive behaviors

9) Inmate S. has just been transferred to your facility. You are reviewing her medication list and note that she is being prescribed Methadone for pain related to her long-standing HIV. You are particularly concerned about potential drug reactions with her:
- A. Antihypertensive medication
- B. HIV medications which include efavirenz (Sustiva)
- C. Bactrim which she takes for PCP prophylaxis
- D. Antidepressant medications

10) Which of the following statements is true regarding bipolar disorder:
- A. It is commonly the result of long-term cocaine abuse
- B. The average onset is in those 40-50 years of age
- C. It does not respond well to medication treatment
- D. It can result in risky behaviors due to judgment impairment

OVER

PROGRAM EVALUATION & READER INFORMATION FORM

LEARNING MODULE 7: MENTAL HEALTH ISSUES in HIV-INFECTED INMATES

To assure your receipt of Continuing Nursing Education credit, please mail your completed self assessment test, program evaluation, reader information form and HRSA participant information form (3 pages total) to: **Jim Ybarra, Albany Medical College, 47 New Scotland Avenue, Mail Code 158, Albany, NY 12208.** Please allow 6-8 weeks for education credit processing. An attendance certificate and self assessment test answer key will be mailed to you at that time. If you have any questions, please contact Jim Ybarra at (518) 262-4674 or ybarraj@mail.amc.edu.

PLEASE COMPLETE THIS FORM BY COMPLETELY FILLING IN THE CIRCLES WITH BLACK PEN OR PENCIL.	STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE
1. As a result of completing the program, I am able to meet the following program goal: to equip the correctional nurse to arrange the necessary care and services to optimize the health of the HIV-infected patient.	①	②	③	④
2. As a result of reading this module, I am able to achieve the following objectives:				
a. Discuss the impact of mental illness on HIV transmission and on HIV treatment.	①	②	③	④
b. Describe central nervous system manifestations resulting from HIV infection.	①	②	③	④
c. Discuss the association of HIV disease, mental illness and substance abuse.	①	②	③	④
d. Identify pharmacologic considerations in the treatment of mental disorders in HIV-infected inmates.	①	②	③	④
3. The objectives of this program were relevant to the overall goals of the program.	①	②	③	④
4. The monograph was an effective learning tool for me.	①	②	③	④
5. The author of this monograph was an effective teacher.	①	②	③	④

Time required to complete this learning activity: _____ minutes

Comments: _____

_____

_____

_____

READER INFORMATION FORM

(Please print legibly as all information is needed for education credit processing.)

Name (first and last): _____

Degree: _____ Title: (NP, RN, LPN) _____

Facility Name: _____

Facility Address: _____ STREET _____

CITY _____ STATE _____ ZIP CODE _____

E-mail Address (if applicable): _____

Please proceed to the next page and complete the HRSA participant information form.

PIF

HRSA AIDS Education and Training Centers
PARTICIPANT INFORMATION FORM

OMB No. 0915-0281
Expires: 12/31/2006

Please completely fill in the circles (●) when answering the questions.

1. To create your unique ID number, use the month of your birth, the day of your birth, and the last four digits of your social security number. For example, May 29, 123-45-6789 has the ID number 05296789.

M	M	D	D	#	#	#	#

Unique ID Number

M	M	D	D	Y	Y

Today's Date

2. Your Profession/Discipline (Select one)

- ◯ Advanced Practice Nurse
- ◯ Dentist
- ◯ Mental Health Professional
- ◯ Nurse
- ◯ Nurse Practitioner
- ◯ Other Dental Professional
- ◯ Pharmacist
- ◯ Physician
- ◯ Physician Assistant
- ◯ Social Worker
- ◯ Substance Abuse Professional
- ◯ Other (specify)_____

3. Your Primary Functional Role (Select one)

- ◯ Administrator/Supervisor
- ◯ Care Provider/Clinician
- ◯ Case Manager
- ◯ Intern/Resident
- ◯ Researcher
- ◯ Student/Graduate Student
- ◯ Teacher/Faculty
- ◯ Other (specify) _____
- ◯ Not Working

4. Your Principal Employment Setting (Select one)

- ◯ Community/Migrant Health Center
- ◯ Community Mental Health Center
- ◯ Correctional Facility
- ◯ HMO/Managed Care Organization
- ◯ Hospital or Hospital-Based Clinic
- ◯ Rural Health Center
- ◯ Solo/Group Private Practice
- ◯ State/Local Health Department
- ◯ Substance Abuse Treatment Prog.
- ◯ STD/Family Planning Clinic
- ◯ Tribal/Indian Health Service
- ◯ Other Community-Based Service Organization (CBO)
- ◯ Other Public Health Agency
- ◯ Other Health Care
- ◯ Non-health
- ◯ Not Working

Questions 5-7 are about your principal employment setting

5. Is it a faith-based organization? ◯ Yes ◯ No ◯ Don't Know

6. Zip Code/Setting

◯ Rural ◯ Urban

7. Does the agency receive Ryan White CARE Act funding? ◯ Yes ◯ No ◯ Don't Know

7a. If you don't know, write the full name of your employer:

_____

8. Are you of Hispanic, Latino, or Spanish origin?

◯ Yes ◯ No

8a. Your Racial Background (Select all that apply)

- ◯ White
- ◯ Black or African American
- ◯ Asian
- ◯ Native Hawaiian/Other Pacific Islander
- ◯ American Indian/Alaska Native

9. Your Gender ◯ Female ◯ Male ◯ Transgender

10. Which of the following statements describes the way in which you most often provide services for HIV/AIDS patients (Select one) .

- ◯ Not applicable/Do not see patients **(Skip the rest of this form)**
- ◯ Refer/transfer HIV+ patients for all medical care
- ◯ Provide primary care and refer/transfer HIV+ patients for HIV treatment only
- ◯ Provide all HIV treatment and refer/transfer for primary care
- ◯ Provide all medical care and refer/transfer when antiretroviral treatment fails
- ◯ Provide all medical care throughout the course of the disease

11. Estimate the NUMBER of HIV+ clients/patients you have personally treated/managed in practice in the past month.

◯ Don't Know

For questions 12-18, estimate the PERCENTAGE of your HIV+ clients/patients in the past YEAR who were:

12. Racial or Ethnic Minorities

None	1-24%	25-49%	50-74%	≥75%	Don't Know
◯	◯	◯	◯	◯	◯

13. On Antiretroviral Therapy

None	1-24%	25-49%	50-74%	≥75%	Don't Know
◯	◯	◯	◯	◯	◯

14. Severely/Persistently Mentally Ill

None	1-24%	25-49%	50-74%	≥75%	Don't Know
◯	◯	◯	◯	◯	◯

15. Substance Users

None	1-24%	25-49%	50-74%	≥75%	Don't Know
◯	◯	◯	◯	◯	◯

16. Uninsured

None	1-24%	25-49%	50-74%	≥75%	Don't Know
◯	◯	◯	◯	◯	◯

17. Women

None	1-24%	25-49%	50-74%	≥75%	Don't Know
◯	◯	◯	◯	◯	◯

18. Incarcerated/Parolees

None	1-24%	25-49%	50-74%	≥75%	Don't Know
◯	◯	◯	◯	◯	◯

For Office Use Only

May 2004

AETC	Subsite	Program Number	Agency	RWCA
10	01		23	Yes ◯ No ◯ Don't Know ◯