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HIV Education Prison Project

HEPP NEWS

HIV EDUCATION PRISON PROJECT

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Sponsored by the Brown Medical School Office of Continuing Medical Education and the Brown University AIDS Program.

ABOUT HEPP

HEPP News, a forum for correctional problem solving, targets correctional administrators and HIV/AIDS care providers including physicians, nurses, outreach workers, and case managers. Published monthly and distributed by fax, HEPP News provides up-to-the-moment information on HIV treatment, efficient approaches to administering HIV treatment in the correctional environment, national and international news related to HIV in prisons and jails, and changes in correctional care that impact HIV treatment. Continuing Medical Education credits are provided by the Brown University Office of Continuing Medical Education to physicians who accurately respond to the questions on the last page of the newsletter.

Faculty Disclosure

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Depression, Neurocognitive Disorders, and HIV in Prisons

Kristine M. Herfkens, Ph.D.*, *Triangle Neuropsychology Services, PLLC, Durham, NC*

Mental health issues are difficult territory for any healthcare provider. The situation becomes exponentially more complex when the patient is incarcerated and HIV is added to the mix. The multifactorial etiology of mental illness makes diagnosis and management of these patients quite challenging. Treatment is further complicated by factors such as potential medication side effects and interactions and mental status changes due to opportunistic infections.

Psychiatric problems in the correctional setting are more prevalent and often more severe than seen in the general population (1). The overall prevalence of psychiatric disorders among inmates ranges from 30-70%; contributing to this high prevalence is co-occurring substance use disorders (about 60%) and neurocognitive disorders (about 50%). The neurocognitive disorders often have multiple etiologies, including acquired brain injury (ABI) and the long-term consequences of substance abuse. In addition, neurocognitive disorders can complicate the management of other concurrent illnesses. Unfortunately, these disorders combine to reduce the likelihood that a patient will adhere to treatment (2).

Factors contributing to the high prevalence of psychiatric and neuropsychiatric disorders in correctional populations should be carefully considered when treating incarcerated patients. Education, adaptive coping skills, and a strong support network are essential for protecting individuals from significant mental health problems. Incarcerated men and women tend to represent a marginalized sector of the general population, who also have very poor social support networks and lower levels of education.

Women often present with additional psychosocial factors. More than 60% of incarcerated women report histories of sexual abuse, and an even greater number approaching 90% report physical abuse (3). This abuse history has been linked to a number of mental illnesses, including substance abuse, personality disorders, affective disorders, and post-traumatic stress disorders. The extent of severe, prolonged physical and sexual abuse histories among incarcerated men is likely to be similar and to contribute to the high prevalence of mental illness among them.

One of the most relevant and underdiagnosed mental health issues among inmates with HIV is depression.

These primary (antecedent to HIV infection) mental health issues play a critical role in determining whether a person will become infected with HIV, will adhere to a long term medication regimen, and will engage in risk factors for the development of other health problems. Thus, managing mental illness is an important part of providing HIV and medical care to incarcerated populations.

Depression

One of the most relevant and underdiagnosed mental health issues among inmates with HIV is depression. Depression is common, potentially life threatening, and generally treatable. Depression is several times more prevalent among people with HIV than among the general population; prevalence of depressed mood approaches 80% and 10-15% have diagnosed major depression (4). Co-morbid mental illness among HIV-infected prisoners is concentrated in even higher numbers due to co-existing substance use disorders among prisoners. While the etiology of depression may be multifactorial, including primary depression, depression from substance abuse, post-traumatic stress, or issues surrounding reasons for incarceration, nonetheless, depression must be diagnosed and effec-

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WHAT'S INSIDE

Depression...*(continued from page 1)*

tively treated to ensure adequate health outcomes. Rates of self-reported depressed mood tend to be highest immediately prior to HIV testing and while waiting for results (5).

Additionally, for individuals undergoing HIV testing, symptoms of depression may be enhanced, particularly in facilities where HIV testing is mandatory. Psychiatric support and crisis intervention may be most required at these times. As patients begin to accommodate to their changing health status, depressive issues may diminish over time, only to reemerge at transition points in the disease.

Depression is thought to be related to damage to, or alterations in the functioning of subcortical brain structures (6). Increased rates of depression have been seen in several neurologic disorders that differentially affect subcortical structures, such as Parkinson's disease, Huntington's disease, and HIV/AIDS. While depression (due to situational factors) can certainly cause a patient to be distractible, irritable, forgetful, disorganized, apathetic and slow, these behaviors may also be symptomatic of the neurocognitive changes associated with subcortical neurologic disorders. Unfortunately, traditional treatments for depression may be less than optimally effective in patients with subcortical neurological disorders.

Cognitive Function

Although many healthcare providers may think of the evaluation of cognitive functioning as being outside the purview of mental health, it is actually an integral part of a mental health evaluation. Further, it is often extremely difficult for physicians to distinguish the behavioral aspects of depression from the consequences of subcortical neurocognitive impairment. In patients with HIV, neurocognitive disorders increase with the presence of psychiatric symptoms, CD4<200, a history of poor medication adherence, and a history of prior neurologic insults (substance abuse, trauma, stroke, etc). Although these patients frequently appear to be depressed, uncooperative, and out of step with the environment, they may in reality be having difficulty comprehending and consistently tracking the changes and demands of the prison setting. Thus, patients with HIV may have symptoms that make differentiating depression from subcortical impairment more challenging, especially since existing screening tools are insensitive to measuring a difference.

Inmates with unrecognized cognitive impairment as a result of HIV may be emotionally labile and behaviorally unpredictable, inviting attacks from other inmates and punishment/retaliation from correctional officers who fail to understand the behavioral impetus. They may receive punishment for rule infractions that they were never entirely capable of understanding or remembering. They may refuse medication, either intermittently or consistently, because of an inability to understand and/or remember the consequences of non-adherence. They may be asked to make decisions about their

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Figure 1. The Center for Epidemiologic Studies Depression Scale

Experts who treat and study depression use a wide variety of tests and rating systems to determine a person's level of depression. The Center for Epidemiologic Studies Depression Scale (CES-D) is one of the most common methods for allowing an individual to determine his or her depression quotient, because it easy to understand, take, and score. This quick self-test measures a patient's depressive feelings and behaviors during the past week. The CES-D - developed by Lenore Radloff, while she was a researcher at the National Institute of Mental Health - is an effective, time-honored tool that has become a standard for identifying depression.

For the following 20 items, please select the choice that best describes how you have felt over the past week:	Rarely or none of the time (<1 day)	Some or a little of the time (1-2 days)	Occasionally or a moderate amount of the time (3-4 days)	Most or all of the time (5-7 days)
1. I was bothered by things that usually don't bother me.				
2. I did not feel like eating; my appetite was poor.				
3. I felt that I could not shake off the blues even with the help from my family and friends.				
4. I felt that I was not as good as other people.				
5. I had trouble keeping my mind on what I was doing.				
6. I felt depressed.				
7. I felt that everything I did was an effort.				
8. I felt hopeless about the future.				
9. I thought my life had been a failure.				
10. I felt fearful.				
11. My sleep was restless.				
12. I was unhappy.				
13. I talked less than usual.				
14. I felt lonely.				
15. People were unfriendly.				
16. I did not enjoy life.				
17. I had crying spells.				
18. I felt sad.				
19. I felt that people disliked me.				
20. I could not get "going".				

TO SCORE:

Step 1: For each answer, assign the following value:

0-Rarely or none of the time (<1 day)
1-Some or a little of the time (1-2 days)
2-Occasionally or a moderate amount of the time (3-4 days)
3-Most or all of the time (5-7 days)

Step 2: Add the total scores and refer to this scale:

- *If the score is 22 or higher, the patient may be suffering from a major depression.*
- *If the score is 15 to 21, the patient may be suffering from mild to moderate depression.*
- *If the score is below 15, this test does not indicate that the patient is depressed.*

Reference: Radloff, L.S. (1977). The CES-D scale: A self report depression scale for research in the general population. Applied Psychological Measurement, 1, 385-401.

Letter from the Editor

Dear Colleagues,

We are extremely pleased to bring you this issue of HEPP News on mental health! It covers a very significant problem for correctional health care providers: the management of dual and triple diagnosed patients (major psychiatric illness, substance use disorder and HIV). Co-occurring mental illness can interfere with both acceptance of and adherence to HIV medications. For such patients, HIV disease cannot be effectively treated without diagnosis and treatment of the mental illness. Unfortunatley, more than 50% of patients with mental illness are either undiagnosed and/or untreated. This is likely to be more prevalent within our correctional systems. Though depression is the most common mental illness among our HIV-infected inmates, we learn from our main article that the diagnosis may not be simple and that neurocognitive disorders and bipolar disorder may mimic depression. Treatment of depression in these patients may have either no effect or adverse consequences if the proper diagnosis is not made.

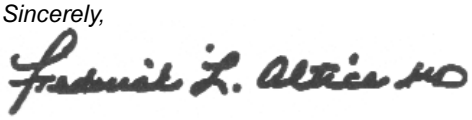
Management of dually diagnosed patients may result in a veritable pharmacy of prescribed medications. In this issue, we try to ferret out potential drug interactions that clinicians must address before administering psychiatric and HIV medications. Thus, it behooves psychiatrists and HIV specialists alike to come to understand these drug interactions to avoid such dilemmas as presented in our Ask the Expert submission and to properly diagnose them when they arise. Proper co-management of these conditions will result in improved outcomes for both HIV disease and mental illness, and may have profound effects on recidivism if these patients are properly managed within our correctional systems and linked to appropriate services upon release.

After reviewing this issue, readers should be able to list which psychiatric medications can be used in combination with antiretrovirals and describe the clinical management of depression and other mental health disorders in HIV-infected patients.

In our next issue, we'll bring you news from the 8th Conference on Retroviruses and Opportunistic Infections in Chicago, IL. January marks the second month of HEPP News continuing medical education (CME) credit online! Be sure to check it out at www.HIVcorrections.org!

As always, we look forward to hearing from you!

Sincerely,



Frederick L. Altice, M.D.

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NAME: _____

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○ Pharmacist ○ Medical Director/Administrator ○ HIV Case Worker/Counselor ○ Other

ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

FAX: _____ PHONE: _____ E-MAIL: _____

SIGNATURE: _____ DATE: _____

Depression...

(continued from page 2)

medical treatment or day to day lives that they are no longer cognitively competent to make. The implications of impaired decision making ability in a prison setting, whether or not it is due to HIV, are enormous due to the unpredictability, complexity, and potential for violence in correctional facilities. Thus, any inmate with non-adherence to medications or health care should be carefully screened for co-existing mental illness.

Screening for Mental Health Disorders

Distinguishing depression from subcortical neurocognitive impairment is difficult in a clinical interview. Fortunately, brief screening instruments are available to quickly identify patients with HIV who may be experiencing cognitive changes as well as affective disorders. The Mini Mental State Examination (MMSE) (7) is widely used as a quick cognitive screen, however, it screens for cortical signs, rather than the subcortical problems usually associated with HIV-related changes. The Johns Hopkins HIV Dementia Scale is an excellent alternative (See HEPPigram, page 6). It is brief, easy to administer and interpret, and freely available on the Internet at http://www.iapac.org/clinmgt/mh/demscale.html. It screens short term memory, concentration, and processing speed. While these areas may show some impairment in patients with moderate to severe depression, the cut off for considering dementia is sufficiently low to reduce the probability of false positive results. Another test is the Center for Epidemiologic Studies-Depression test (CES-D), which is shown in Figure 1. In general, screening should not occur immediately after intake into the facility as substance abuse or reaction to incarceration may overestimate the number of individuals with depression.

Regardless of whether HIV-infected prisoners have depressed affect secondary to depression or impaired neurocognitive changes, a trial of antidepressant therapy is indicated. In general, a trial with selective serotonin reuptake inhibitors (SSRIs) is likely to provide the best attempt at treatment. This class of drugs have few interactions with existing antiretrovirals (see HIV 101, page 7) and unlike tricyclic antidepressants, tend not to suppress cognitive function.

Table 1. Criteria for Manic Episode

A person is having a manic episode if experiencing a distinct period of abnormally and persistently elevated, expansive or irritable mood, lasting at least one week or if hospitalization is necessary. During the period of mood disturbance, three or more of the following symptoms have persisted (four if the mood is only irritable):

1. inflated self-esteem or grandiosity
2. decreased need for sleep
3. more talkative than usual or pressure to keep talking
4. flight of ideas or subjective experience that thoughts are racing
5. easily distractible
6. increase in goal-directed activity (either socially or sexually) or psychomotor agitation
7. excessive involvement in pleasure activities that have a high potential for painful consequences (e.g., illegal activities, sexual indiscretions, buying sprees)

The symptoms must not meet criteria for a Mixed Episode, the mood disturbance must be significantly severe to cause impaired impairment in social functioning, and may not be due to the direct physiological effects of a substance (illicit drugs, medications [e.g. SSRIs], or a general medical condition.

Reference: Diagnostic and statistical manual of mental disorders : DSM-IV, Fourth Edition. Washington, DC : American Psychiatric Association, 1994.

Other mental Illnesses

Other conditions to be considered among HIV-infected inmates who present with a depressed mood or evidence of behavioral problems include bipolar disorder and schizophrenia. One study found that 2-4.3% of all inmates have bipolar disorder, and 2.3-3.9% of all inmates are schizophrenic (8). In their discussion, the authors suggest these numbers may be underestimates. This condition, if misdiagnosed and treated with antidepressants rather than mood stabilizing medications, may result in episodes of mania that may lead to behavioral infractions or inability to adhere to medication regimens. (See Table 1) In some cases, the symptoms may be subtle. Moreover, some patients with thought disorders (e.g. schizophrenia) go clinically undetected because these individuals have become quite skilled at "covering" their mental illness. (For an indepth review of other mental illnesses, see reference 2, Stevens et al, 2000.)

Conclusion

The range of psychiatric disorders that are seen in a correctional population is broad. The prevalence of all psychiatric disorders is higher in an incarcerated population than in the general population (1) , and some disorders are even more likely in an HIV-infected population. Depression is the most frequently encountered psychiatric disorder, both in and out of prison. Treatable and common, depressive symptoms also suggest potential additional complications in HIV-infected individuals. The symptoms of depression can overlap with and mimic the signs of subcortical impairment that is seen in HIV patients. In order to effectively treat symptoms, manage behavior, and promote optimal autonomy in the correctional setting, physicians must begin to erase the imaginary boundary between the mental health and neurocognitive consequences of this complex disease.

**Speaker's Bureau: Bristol-Myers Squibb*

REFERENCES:

1. The Health Status of Soon-to-be-Released Inmates. National Commission on Correctional Healthcare and National Institute of Justice joint project. Meeting of the Expert Panel on Communicable Disease, June 14015, 1999, Chicago, IL.

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4. Boccellari, A., Dilley, J., and Shore, M. (1988). Neuropsychiatric aspects of AIDS dementia complex: A report on a clinical series. Neurotoxicology, 9, 381-390.

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7. Folstein M, Folstein S, and McHugh P. Mini-Mental State: A practical method for grading the cognitive state of patients for the clinician. Journal of Psychiatric Research, 12, 189-198.

8. HEPP News interview with Robert Greifinger, correctional health care consultant. HEPP News, December 1999; 2(12): 4.

Ask the Expert: Managing the Patient with Triple Diagnosis

by Frederick L. Altice, M.D.*

Case:
R.V is a 32 year-old female prisoner who was diagnosed with HIV infection in 1994. In 1996, her CD4 was 454 and HIV-1 RNA was 78,000 copies/mL. She acquired HIV from intravenous drug use and was using 20 bags of heroin and cocaine per day. Since 1996 she has served four prison terms, during which she had repeatedly refused ART. Her brief previous incarcerations (one to three months) were associated with multiple disciplinary actions and the HIV specialists noted she had "paranoid" attitudes about HIV and ART. She had repeatedly denied auditory or visual hallucinations.

Most recently, she was sentenced to 18 months. Her CD4 has now decreased to 90 and her HIV-RNA is 242,000 copies/mL. During the latest admission, she was fully evaluated by a psychiatrist and diagnosed with bipolar disorder. She was treated with valproic acid (VPA) and stabilized on a therapeutic dose of 750 mg TID; her VPA level was 76 mg/dl. Six weeks later, she agreed to initiate ART. After starting TMP/SMZ, she started stavudine (D4T) 40mg BID, abacavir (ABC, Ziagen) 300mg BID, ritonavir (RTV, Norvir) 200mg BID and indinavir (IDV, Crixivan) 800 mg BID. Three days later, she was brought for medical evaluation for inability to stand up, dizziness and double vision. On exam, she had significant lateral gaze nystagmus. She had no fevers, headaches, or other focal neurological findings. The patient was admitted to the medical infirmary where her VPA was stopped and found to be 152 mg/dl (therapeutic 50 to 100 mg/dl). Her VPA level returned to a therapeutic level after four days and she was changed to lithium to avoid any further drug interactions.

Discussion:
This is an extremely interesting case for three reasons:
1) her undiagnosed co-morbid mental illness resulted in delay of treatment of her HIV disease for four years;
2) ART was initiated in a patient with advanced disease; and
3) there was significant drug interaction between psychiatric and HIV medications.

Communication between the mental health and HIV team was crucial to maximize benefit for this patient with triple diagnosis (mental illness, substance use disorder, and HIV).

Co-morbid mental illness among HIV-infected inmates is extremely prevalent and ranges from 40-60%. As much as 50% of the mental illness is undiagnosed and therefore untreated. As evidenced in this patient, ART was delayed by four years due to undiagnosed and untreated bipolar disorder.

The selection of a potent three-drug combination (a pharmacologically enhanced protease inhibitor) in this patient with advanced disease seems appropriate because the CD4 count is less than 100 copies/mL and the HIV viral load is greater than 100,000 copies/mL. Fortunately, none of the agents used develop resistance rapidly if adherence were poor or the combination was not potent enough.

In this patient, nevirapine (NVP, Viramune) and efavirenz (EFV, Sustiva) would have induced CYP3A4, the major metabolic pathway for VPA, and resulted in subtherapeutic levels. In R.V.'s case, the protease inhibitors, particularly ritonavir, inhibited CYP3A4 and resulted in supratherapeutic VPA levels and increased VPA toxicity.

It is unlikely that this patient's neurological findings were related to a direct effect of a CNS opportunistic infection. Toxoplasma reactivation may occur with immune reconstitution, however this occurs weeks to months after initiation of ART. The timing of ART therapy three days prior makes a drug-related event more likely.

In this case, two other options might have avoided this scenario of increased VPA levels. First, the patient could have been started on D4T, ABC, and nelfinavir (NFV, Viracept) and had therapy intensified if viral load exceeded 400 copies/mL at three months. NFV is much less likely than RTV to inhibit CYP3A4 and result in toxic VPA levels. Second, the patient could have been changed to an alternative treatment for bipolar disorder (e.g. lithium, olanzapine) and then initiated on the D4T/ ABC/ RTV/ IDV as done with this patient.

In either case, communication between the mental health and HIV teams was crucial to maximize benefit for this patient with triple diagnosis (mental illness, substance use disorder, and HIV). The challenge that lies ahead is coordination of care for this person returning to the community.

**Speaker's Bureau: Agouron Pharmaceuticals, Abbott Pharmaceuticals, Roxane, Bristol-Myers Squibb, DuPont, GlaxoSmithKline, Merck, Roche.*

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HEPPIGRAM: The HIV Dementia Scale

This tool screens short term memory, concentration, and processing speed. While these areas may show some impairment in patients with moderate to severe depression, the cut off for considering dementia is sufficiently low to reduce the probability of false positive results. The maximum score is 16. A score of 10 or less suggests HIV dementia.

SCORE	MAXIMUM	TEST
		Memory-registration: Give the patient four words (dog, hat, green, peach) in four seconds and ask for immediate recall. Repeat words if patient does not recall them immediately. Tell patient you will ask for recall of the words again a bit later.
_____	**4**	Attention: Hold both hands up at patient's shoulder width and eye height and ask patient to look at your nose. Move the index finger of one hand and instruct patient to look at the finger that moves, then look back to your nose. Practice until patient is familiar with task. Then instruct patient to look at the finger that is not moving. Practice until patient understands task. Perform 20 trials. An error is recorded when the patient looks toward the finger that is moving. Score: <3 errors = 4; 4 errors = 3; 5 errors = 2; 6 errors = 1; >6 errors = 0
_____	**6**	Psychomotor speed: Instruct patient to write the letters of the alphabet (upper case) with a Measure time in seconds using a stop watch. As a pretest, ask patient to say the letters of the alphabet out loud. If unable to do so, ask patient to count from 1 to 26 out loud. If the patient is unable to count correctly, ask patient to write numbers from 1 to 20 and time. Convert the score in seconds to a numerical value. Score: <21 sec = 6; 21.1 to 24 sec = 5; 24.1 to 27 sec = 4; 27.1 to 30 sec = 3; 30.1 to 33 sec = 2; 33.1 to 36 sec = 1; >36 sec = 0
_____	**4**	Memory-recall: Five minutes after the start of the test, ask patient to recall the four words. Score: Give 1 point for each word spontaneously recalled. For words not recalled, prompt with asemantic clue as follows: animal (dog); piece of clothing (hat); color (green); fruit (peach). Give 0.5 point for each word recalled correctly after prompting.
_____	**2**	Constructional: Ask patient to copy a 3-D cube as precisely and quickly as possible. Convert the raw score to a numerical score. Score: <25 sec = 2; 25 to 35 sec = 1; >35 sec = 0

This test was developed by Johns Hopkins University and is available on the web at http://www.iapac.org/clinmgt/mh/demscale.html.

RESOURCES

Multi-Health Specialities (MHS) produces a comprehensive catalog of psychological test instruments, including the Becks Depression scale and the CES-D. Call 800.456.3003 or write MHS at 908 Niagara Falls Blvd., North Tonawanda, NY 14120-2060, 800.456.3003.

MENTAL HEALTH WEBSITES:

Mental Health Info Source
http://www.mhsource.com

International Association of Physicians in AIDS Care
http://www.iapac.org/index.html

Depression, Anxiety and Mental Health
http://www.thebody.com/mental.html

Substance Abuse and Mental Health Service Administration
http://www.samhsa.gov/

Mental Health: Knowledge Exchange Network (KEN)
http://www.mentalhealth.org

National Institute of Mental Health Center for Mental Health Research on AIDS
http://www.nimh.nih.gov/oa/index.htm

HIV/AIDS TREATMENT WEBSITES:

Harvard AIDS Institute
http://www.hsph.harvard.edu/hai/

National Library of Medicine Resources on HIV/AIDS
http://sis.nlm.nih.gov/hiv.cfm

HIV Insite
http://hivinsite.ucsf.edu/

AEGiS: The largest HIV/AIDS resource on the internet
http://www.aegis.com

The Body: An AIDS and HIV information Resource
http://www.thebody.com

HIV 101

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 10mg 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 5mg q 2-4 days to effective daily dose of 15-30mg.* ▪ Not likely to be affected by PIs or NNRTIs.
	Tricyclics	Amitryptyline (Elavil)	d
		Doxepin (Sinequan)	d
		Nortriptyline (Aventyl, Pamelor)	Titrate level (70-125mg/dL). promotes sleep. d
		Desipramine (Norpramin)	Desipramine (<125 ng/dl). promotes sleep. d
	Other Agents	Nefazodone HCl (Serzone)	a, b, c
		Bupropion (Wellbutrin/Zyban)	Initial dose is 150mg bid; increase to 300mg/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 HEPP staff.

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.*

Save the Dates

Management of HIV/ AIDS in the Correctional Setting: A Live Satellite Videoconference Series "Primary Care of the HIV-Infected Incarcerated Patient"
January 30, 2001
12:30-3:30 p.m. EST
CME Credits Available
Call: 518.262.6864
Email: santosm@mail.amc.edu
www.amc.edu/patient/HIV/hiv.htm
(videoconference series)

Funding Opportunity: National Partnerships for HIV Prevention with a Focus on Business and Labor, Youth at High Risk, and Migrant Workers.
Applications due:
February 23, 2001.
Call: Julia Valentine at 888.472.6874
Visit: http://www.cdc.gov/od/pgo/funding/01017.htm

25th Annual NCCHC Conference
November 2001
Abstract DEADLINE is February 28, 2001.
Visit: www.ncchc.org

American Correctional Health Services Multidisciplinary Training Conference
March 15-18, 2001
Atlanta, Georgia
Call: 877.918.1842
Visit: www.corrections.com/achsa/conferences.html

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News Flashes

CDC warns: Use of Nevirapine for Post Exposure Prophylaxis Associated with Adverse Events
Serious adverse events have been attributed to nevirapine (NVP, Viramune) regimens in otherwise healthy, uninfected healthworkers who experienced a needle stick while treating a potentially HIV-infected patient (CDC. Serious Adverse Events Attributed to Nevirapine Regimens for Postexposure Prophylaxis After HIV Exposure - Worldwide, 1997-2000. MMWR 1/05/01; 49(51): 1153.) Nevirapine has not been recommended for PEP. Nevirapine is recommended, however, to treat individuals infected with HIV and to prevent vertical transmission of HIV from mothers to their infants during birth, with the different recommendations based on the "relative benefits and risks" of the drug. No serious adverse effects have been found in vertical transmission studies with nevirapine, and UNAIDS supports the CDC's recommendation for using the drug to prevent such transmission.

The December issue of *Infection Control and Hospital Epidemiology* (2000;21:780-785) published a study showing that side effects from postexposure prophylaxis (PEP) for HIV are common, although treatment toxicity is rarely serious. Of the 449 patients for whom six-week data were available, more than half of the 197 people who discontinued PEP reported doing so because of adverse effects.

BMS Issues Caution on D4T and DDI Use in Pregnant Women
While the Food and Drug Administration (FDA) conducts a review of the two products, Bristol-Myers Squibb has issued a warning to AIDS doctors around the world cautioning that two of its AIDS drugs, stavudine (d4T, Zerit) and didanosine (Videx, ddI), should be used sparingly in pregnant women after the deaths of three expectant mothers who were taking the medications. Three cases of fatal lactic acidosis were reported to the FDA that occurred in pregnant women taking Zerit and Videx in combination with other drugs used to treat HIV. Although data have suggested that women may be at increased risk for the development of lactic acidosis and liver toxicity, it is unclear whether pregnancy potentiates these known side effects. The complete FDA Talk Paper can be accessed at http://www.hivatis.org/atisnew.html.

Recent Evidence Supports HAART Intitiation During Primary HIV Infection
According to the December issue of AIDS, initiation of HAART during primary HIV infection results in more rapid and complete immune reconstitution than when started later. Australian researchers conducted a prospective study of 58 treatment-naive individuals who received indinavir or nelfinavir plus two nucleoside reverse transcriptase inhibitors. Dr. Gilbert Kaufmann and colleagues found that at 12 months, the median CD4 count increased from 470 to 758 copies/mL in patients with primary infection compared with an increase from 204 to 310 copies/mL in chronically infected individuals. Normal levels of CD4 cells were achieved in 93% and 37% of primary and chronically infected individuals, respectively. Kaufmann et al note, however, that longer followup will be required to determine whether enhanced immunological recovery translates into improved long-term outcome. (AIDS 2000;14:2643-2651).

Italian Prisons Successful with DOT for HAART
A recent letter to JAMA reported that directly observed therapy (DOT) was well accepted and improved adherence to HAART regimens among Italian prisoners. Italian researchers selected nine Italian prisons in which antiretroviral drugs are administered by DOT (DOT schedule), and nine prisons in which nurses leave all drugs with the patient once a day (NDOT schedule). Eighty-four HIV-infected intravenous drug users were consecutively enrolled from April 1997 to September 1998. All patients in the DOT group showed a significant decrease in viral load (>2 log) after therapy. Of these, 23 (62.1%) had a plasma HIV RNA level below the detection limit compared with 16 patients (34.0%) in the NDOT. In the DOT group, only two patients (5.4%) had CD4 <200 106/L, while 15 NDOT (31.9%) had CD4 cell CD4<200 106/L. The authors assume that the DOT group had 100% adherence to the treatment regimen. The cost of implementing DOT in this setting was low; according to the authors, no additional staff was required to administer this therapy. Ensuring adherence to treatment regimens by DOT results in a higher efficacy of HAART. (Babudieri S, Aceti A, D'Offizi GP, Carbonara S, Starnini G. Directly observed therapy to treat HIV infection in prisoners [letter] JAMA. 2000 Jul 12;284(2):179-80.)

Other News . . .
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Self-Assessment Test for Continuing Medical Education Credit

Brown Medical School designates this educational activity for 1 hour in category 1 credit toward the AMA Physician's Recognition Award. To be eligible for CME credit, answer the questions below by circling the letter next to the correct answer to each of the questions. A minimum of 70% of the questions must be answered correctly. This activity is eligible for CME credit through Jan. 22, 2002. The estimated time for completion of this activity is one hour and there is no fee for participation.

CME is now available ONLINE at www.hivcorrections.org

1. Which of the following medications decrease levels of efavirenz (EFV, Sustiva) and nevirapine (NVP, Viramune)?
   a) Citalopram (Celexa)
   b) Amitryptyline (Elavil)
   c) Fluoxetine (Prozac)
   d) Haloperidol (Haldol)
   e) Buspirone (BuSpar)
   f) None of the above

2. Which of the following classes of psychiatric medications could be effected by ritonavir (RTV, Norvir)?
   a) Serotonin Reuptake Inhibitors
   b) Tricyclics such as Amitryptyline (Elavil) or Doxepin (Sinequan)
   c) Some mood stabilizing agents such as valproic acid
   d) b and c
   e) a and b
   f) None of the above

3. What percentage of HIV-infected inmates also have a mental health disorder?
   a) 5-10%
   b) 10-15%
   c) 25-40%
   d) 40-60%

4. Which of the following regimens would be appropriate for an HIV-infected patient who is taking valproic acid (Depakote)?
   a) stavudine (D4T), abacavir (ABC, Ziagen), ritonavir (RTV, Norvir) and indinavir (IDV, Crixivan).
   b) nevirapine (NVP, Viramune) and efavirenz (EFV, Sustiva)
   c) D4T, ABC, and nelfinavir (NFV, Viracept)
   d) b and c
   e) None of the above.

5. The likelihood that a neurocognitive disorder is present increases with the presence of which of the following conditions?
   a) CD4 <200 copies/mL
   b) poor adherence to medications
   c) a history of substance abuse
   d) stroke
   e) all of the above
   f) None of the above

6. Which of the following statement are true about patients with HIV?
   a) Depression is more common among HIV-infected patients than non-infected patients.
   b) Traditional treatments for depression may be inefficient in patients with subcortical neurological disorders.
   c) A history of sexual or physical abuse may be linked to mental health disorders.
   d) The etiology of depression is frequently multifactorial.
   e) b and c
   f) All of the above

HEPP News Evaluation

5 Excellent 4 Very Good 3 Fair 2 Poor 1 Very Poor

1. Please evaluate the following sections with respect to:

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Main Article	5 4 3 2 1	5 4 3 2 1
HIV 101	5 4 3 2 1	5 4 3 2 1
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2. Do you feel that HEPP News helps you in your work? Why or why not?

3. What future topics should HEPP News address?

4. How can HEPP News be made more useful to you?

5. Do you have specific comments on this issue?

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