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IDCR, a forum for correctional problem solving, targets correctional physicians, nurses, administrators, outreach workers, and case managers. Published monthly and distributed by email and fax, IDCR provides up-to-the moment information on HIV/AIDS, hepatitis, and other infectious diseases, as well as efficient ways to administer treatment in the correctional environment. Continuing Medical Education credits are provided by the Brown University Office of Continuing Medical Education. IDCR is distributed to all members of the Society of Correctional Physicians (SCP) within the SCP publication, *CorrDocs* ([www.corrdocs.org](http://www.corrdocs.org)).

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## DEPRESSION IN THE HIV-INFECTED INMATE

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#### Introduction

Mental illness is common among HIV-infected individuals. Outpatient studies of un-incarcerated HIV-infected patients reveal a prevalence as high as 54% for Axis I psychiatric disorders (major depression, bipolar disorder, schizophrenia and obsessive compulsive disorder) and 26% for Axis II psychiatric disorders (personality disorders).<sup>1</sup> Among the incarcerated, data from the United States (US) Bureau of Justice Statistics indicate that over 16% of all state prison and jail inmates have a mental or emotional condition, 10% receive psychotropic medication and 12.5% participate in mental health therapy or counseling.<sup>2</sup> Given the high prevalence of psychiatric disorders among those with HIV infection, as well as among the incarcerated, it is likely that a significant proportion of HIV-infected inmates are suffering from one or more mental illnesses.

Mental illness complicates the management of HIV infection in several ways. First, studies have shown that mental illnesses, especially depression, contribute to treatment non-adherence and poor HIV outcomes.<sup>3</sup> Second, patients with mental illness are less likely to be prescribed certain treatments including hepatitis C virus (HCV) therapy and highly-active anti-retroviral therapy (HAART) in many settings,<sup>4</sup> despite new data suggesting that patients with mental illness who receive treatment for the mental illness achieve HIV clinical outcomes equal to or better than HIV-infected control

patients without mental illness.<sup>5</sup> Lastly, mental illness, when sub-optimally treated, has been associated with behaviors that risk transmission of HIV.<sup>6,7,8</sup>

A key to improving outcomes in HIV-infected populations is adequate detection and treatment of mental illnesses. At the very minimum, HIV providers should be familiar with the screening and management of the most common mental illness among HIV-infected patients - depression. Reviews on the management of depression, including in HIV-infected patients, have been recently published.<sup>6,9</sup> In this article we highlight diagnostic and therapeutic approaches to depression among HIV-infected incarcerated persons.

#### Screening for Depression

Despite the high prevalence of depression, this disorder is under-diagnosed and under-treated. A major challenge to the clinician is the differentiation between major depression and isolation, demoralization and reactive states of grief and loss associated with negative experiences - including the diagnosis of HIV infection and/or incarceration. In addition, establishment of a diagnosis of depression is complicated by the overlap between symptoms that could suggest depression, but could also be secondary to HIV disease or attendant opportunistic conditions. Indeed, the differential diagnosis that must be considered during the work-up of depressive symptoms in the HIV-infected inmate is extensive, and is discussed in detail below.

Depression may manifest predominantly as somatic complaints. Although readily ascribed

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## DEPRESSION IN THE HIV-INFECTED INMATE

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to underlying HIV disease, symptoms such as abdominal pain, fatigue, insomnia, inexplicable muscle or visceral pain and atypical cardiac symptoms have been found to be more likely due to depression than advancing HIV disease, especially in patients with relatively high CD4 T-cell counts.<sup>10</sup> Data among non-incarcerated individuals suggest men and women with depression present with similar complaints, though women are more likely to report anxiety, somatization, increased appetite, increased weight, increased sleep and hostility.<sup>11</sup>

In the setting of HIV infection, screening for depression can be aided by the use of standardized scales. We have validated two screening tools - the General Hospital Questionnaire (GHQ) and the Beck Depression Inventory (BDI) in HIV-infected individuals. In a study of outpatients with HIV infection, any patient who scored above six points on the GHQ and above 14 points on the BDI was found to have a high likelihood of major depression when evaluated by a psychiatrist.<sup>1</sup> Thus, a patient who breaches these thresholds on both instruments should be evaluated thoroughly to determine the type of depressive illness he or she is experiencing.

Patients with a complaint of depression usually suffer from either endogenous depression (also known as major depression), or reactive depression (also known as adjustment disorder or demoralization). A third diagnosis, dysthymia, is less common. Patients with major depression are less able to experience pleasure from pleasurable stimuli, a state known as anhedonia, and in any given setting the patient will be less able or unable to feel pleasure. A simple analogy is that for patients with major depression, the experience is as if the electrical outlet is not connected to the wires carrying the current - no matter what you plug in or when you try it, there is no power. In contrast, patients with a reactive-type depression are depressed about something, and therefore can experience pleasure when distracted from the circumstance or event that is upsetting. In this instance, it is as if the electrical outlet is controlled by a switch - when the switch is off because the patient is in the depressing setting (e.g., at home, in jail or prison, in the HIV clinic, etc.), there is no power, but when the switch is on because the patient is distracted from the depressing setting, the power flows normally.

In a very simple categorization, major

depression is a brain disease in which the ability to feel pleasure is broken in a pervasive and persistent manner, while adjustment disorders are psychological impairments in which the patient's meaningful experiences of life's events and circumstances cause an understandable bad mood.

Understanding this basic premise of major depression allows for a greater understanding of the experience of life by a depressed person. One may try to imagine a life in which nothing felt good. Food does not have much flavor, sleep is not restful, friends and family bring no joy, sex is not pleasurable and one's usual enjoyable activities are no longer fun. Further, without pleasurable inputs allowing one to interpret one's actions as successful and uplifting, one quickly comes to expect that every action will lead to either numbness or pain. Hopelessness ensues. Major depression driven suicide kills thousands of people who have fallen to despair and have begun to believe that nothing will ever go right again. Of course, things do go right all the time, but the depressed person cannot experience the pleasure that other people and life have to offer - to return to the analogy, it is as if the outlet has been disconnected from the electricity.

When assessing a patient with a complaint of depression, it is therefore important to ask about pleasurable experiences. In a correctional setting, pleasurable experiences may be limited, but an interviewer open to exploring a patient's daily routines may discover several activities that result in good feelings if the patient does not have anhedonia (e.g., playing ball, talking with friends, watching television, playing cards, visiting with relatives/friends, reading, etc). Furthermore, it is often very useful to obtain input from an outside observer, when possible. If a patient will consent, the interviewer could contact a family member or friend to determine how the patient appears to feel when interacting with him or her (e.g., on the phone, during a visit, etc).

It is likewise important to explore any of the patient's interpretations of his or her depression fully, without allowing the interviewer's attitudes about the complaint to interfere. Such is the case, for example, when a patient reports depression about having HIV infection. Just because the interviewer might feel it would be devastating to have HIV, one cannot assume the patient shares those feelings exactly. For many incarcerated individuals, being diagnosed with HIV was not the most devastating life experience that they have endured. He or she may be reacting to an entirely dif-

ferent aspect of the illness, or may be reporting he or she is upset about the illness when nothing, in fact, has changed. By saying the cause of the depression is HIV-related, the patient may be trying to explain depressive symptoms in an understandable way. Likewise, inmates may attribute a host of depressive symptoms to being incarcerated - restriction of activities resulting in less pleasure, other inmates' activities interrupting sleep, cafeteria food taste causing loss of appetite, etc. In this way, a major depressive episode could be missed if the questions do not inquire deeply enough about the experiences to which negative feelings are attributed.

When major depression is diagnosed, assessment should be made for suicidal ideation (see Case #1 in this month's Case Series). Assessment includes past mental health history including prior suicide attempts, symptoms of psychosis (voices commanding the patient harm him/herself), plans for suicide (patients with specific plan for how to accomplish suicide are at greater risk), beliefs regarding HIV disease progression and current life stressors.

### Differential Diagnosis of Depression in HIV-Infected Patients

Depressive symptoms in the HIV-infected inmate may well indicate the presence of major depression, but as CD4 T-cell count decreases, concern for alternative infectious, metabolic and medication causes increases. The differential diagnosis includes dementia, delirium, central nervous system (CNS) illnesses (e.g., lymphoma, toxoplasmosis, neurosyphilis, cryptococcal meningitis), metabolic diseases (e.g., hypothyroidism, hypogonadism), acute medical illnesses, substance abuse, cocaine withdrawal and medication side effects (e.g., interferon, efavirenz, beta-blockers, metoclopramine), among others.

Infectious and opportunistic conditions can be assessed as is appropriate given the clinical stage of the patient and other suggestive symptoms and signs. In all patients with depressive symptoms it is crucial to examine for abnormalities of the thyroid axis in men and women and testosterone levels in men. Patients should be queried for symptoms of these conditions and basic laboratory studies should be done at least annually to detect sub-clinical abnormalities. Correction of hypothyroidism and hypotestosteronemia is often necessary to achieve remission from major depression.<sup>12,13</sup>

In any case where major depression is suspected, probing for symptoms of bipolar

## LETTER FROM THE EDITOR

Dear Corrections Colleagues,

A substantial proportion of persons living with HIV infection in the United States are incarcerated and among these, many - if not the great majority - suffer from psychiatric illnesses. Mental illness places people at risk for acquiring HIV and for those already HIV-infected, complicates treatment and prevention efforts. As most of us have observed, abuse of alcohol, cocaine, heroin and other illicit substances is often a form of self-treatment among the depressed and traumatized, increasing not only their odds for infection with HIV and viral hepatitis, but also for incarceration. In this issue of the IDCR, Drs. Andrew Angelino and Glenn Treisman, psychiatrists leading Psychiatric Services for the Johns Hopkins HIV/AIDS Care Program, provide a guide to the diagnosis and treatment of the most prevalent mental health disorder of HIV-infected individuals - major depression. Drs. Angelino and Treisman have authored a useful book, "The Psychiatry of AIDS", available in paperback and a "must-read" for HIV health care providers - particularly those in corrections. Their article is complemented by a series of illuminating cases from Dr. Jeffery Watts, Psychiatric Medical Director at the CORE Center, a large clinic specializing in mental health care for HIV-infected patients which is associated with Cook County Hospital in Chicago.

I hope this issue, my first as editor, will raise awareness of the need to screen all HIV-infected inmates for mental illnesses and provide a starting point for continued clinician education on the detection and management of mental health disorders in correctional settings. Reading this issue has made it clear to me that the benefits patients can accrue when their psychiatric illnesses are addressed is multiple and includes improved quality of life, enhanced medical adherence, reduced substance abuse and adoption of HIV transmission prevention measures. After reading this issue, individuals should be able to differentiate between major depression and reactive states which can produce depressive symptoms, appreciate the differential diagnosis of depression in the HIV-infected inmate and understand the approaches to the pharmacologic and psychotherapeutic treatment of depression in such patients.

In closing, I wish to thank you for the work you do, often in a difficult environment with patients who do not always appreciate the value of the help you are offering. The IDCR staff, including the editorial board of experienced and insightful providers in correctional health care, aim to provide you with the information you need to continue to deliver high quality care. During the next year we will address topics most relevant to your work and will enhance our website to provide clinical resources we hope you will find useful. We can best accomplish these aims with feedback from you, our readers. Feel free to email me regarding the content of the IDCR at [wohl@med.unc.edu](mailto:wohl@med.unc.edu).

Thanks,

David Alain Wohl, MD

### Faculty Disclosure

In accordance with the Accreditation Council for Continuing Medical Education Standards for Commercial Support, the faculty for this activity have been asked to complete Conflict of Interest Disclosure forms. Disclosures are listed at the end of articles. All of the individual medications discussed in this newsletter are approved for treatment of HIV and hepatitis unless otherwise indicated. For the treatment of HIV and hepatitis infection, many physicians opt to use combination antiretroviral therapy which is not addressed by the FDA.

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## DEPRESSION IN THE HIV-INFECTED INMATE (continued from page 2)

disease, specifically symptoms of mania, should be performed given differences in the management of these disorders.

There is some evidence that HIV infection itself directly causes major depression. First, there is a higher prevalence of major depression in HIV-infected patients than in the general population, as previously stated. Second, there is a correlation between progression of HIV disease and development of major depression. This, taken in concert with models for depression caused by chronic CNS inflammation (likely mediated by both pro- and anti-inflammatory cytokine action in CNS glial cells),<sup>14</sup> demonstrates a possible causal relationship for HIV infection and major depression.

In addition to the direct effects of HIV and inflammation on the brain causing major depression, medications can cause or worsen depression. Two medications in particular, efavirenz and alpha-interferon<sup>15,16,17</sup> (the latter used to treat HCV, frequently comorbid with HIV - particularly in correctional settings) can cause depressive symptomatology. In general, depressive symptoms that begin after these medications are started should raise suspicion for a causal relationship. This may be overlooked, however, since the depressive symptoms often take some time to develop. While the time course for efavirenz is less clear, depressive symptoms develop between one and 24 weeks after starting treatment with alpha-interferon, with a mean of eight to 12 weeks after first dose. Screening for depression prior to initiation of alpha-interferon and regularly during therapy is prudent and should be incorpo-

rated into the management of HCV infection.

### Treatment

The best news for patients with major depression from any cause is that it is usually a very treatable condition. In studies of HIV-infected depressed patients, up to 85% had at least some improvement with treatment within 12 weeks and 50% returned to baseline.<sup>6,18</sup> The overall response rate for alpha-interferon-induced depression in the literature is likewise approximately 85%.<sup>16</sup>

The cornerstone of effective treatment for major depression is anti-depressant medication. All available standard anti-depressant therapies have a potential efficacy for treatment of major depression co-morbid with HIV and/or alpha-interferon therapy. Selection of an agent is therefore based primarily on tolerability. In general, anti-depressants with few side effects experienced by the patient may promote adherence to the medications, and therefore, may have a good chance at effective treatment. Treatment should be started at low doses and titrated upward to minimize the risk of adverse effects. An algorithm for the management of depression and a listing of variables to consider when prescribing an antidepressant are shown in this month's IDCR-o-gram.

As the efficacy of the various classes of anti-depressants is similar, the search for a good match between the patient and treatment can be informed by the properties of the agents and the patient's medical and psychiatric symptoms. For example, tricyclic anti-depressants, such as nortriptyline, doxepin and desipramine, often curb diarrhea, promote sleep and assist with weight gain - all of which may be desirable for certain patients. Some selective serotonin-reuptake inhibitors (SSRIs) (e.g., flu-

oxetine and escitalopram), venlafaxine XR, bupropion SR and XL often cause some activation, thus eliminating fatigue. Bupropion SR may also be useful in combination with smoking cessation programs, since it treats symptoms of nicotine withdrawal. Venlafaxine XR may reduce chronic pain. Matching the side effect profile of the medication to the patient's presenting symptoms can be useful in promoting adherence, thus enhancing the likelihood of a therapeutic effect. An excellent review of the properties of anti-depressants has been recently published.<sup>9</sup>

An additional consideration when choosing an anti-depressant for an HIV-infected patient are interactions with current medications and those that are likely to be prescribed in the future.<sup>6</sup> The IDCR published a review of drug-drug interactions between mental health and HIV medications in January 2005, available at [www.IDCRonline.org](http://www.IDCRonline.org).<sup>19</sup> SSRIs, like many protease inhibitors, are metabolized via the cytochrome P450 system. Ritonavir, in particular, is an extremely potent inhibitor of the P450 enzymes. Nevirapine can induce the P450 system, producing relatively decreased SSRI levels. Therefore, there is a potential for drug interactions that can alter SSRI levels; however, in general, the majority of interactions between SSRIs and antiretroviral fail to be clinically significant, and this information is presented to alert potential prescribers of a mechanism for those rare cases of clinically-significant interactions. Again, starting with lower doses of the anti-depressant will reduce the risk of supratherapeutic plasma drug levels and adverse effects and permit titration to doses that are tolerated and effective.

Following the initiation of anti-depressant

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## Mental Health Case Series

Jeffrey Watts, MD

Speaker's Bureau: BMS Virology, Abbott Virology

Psychiatric Medical Director, CORE Center

### Case # 1: Management of depression in the HIV-infected patient

A 46 year-old African-American male co-infected with HIV and Hepatitis C virus (HCV) presents for his routine medical appointment. Incarcerated for the past three years, he often reports sadness and

irritability, but has been reluctant to "take another pill." He is prescribed a twice-daily regimen of Combivir and Kaletra and has achieved an undetectable viral load and CD4 cell count of 750 cells/mm<sup>3</sup>. This inmate has a past history of intravenous "speedballing" of heroin and cocaine, but denies prior psychotropic medication trials. With the death of his mother three months ago, he complains of a progression of his depression with persistent low mood, frequent anger episodes, insomnia with early morning awakening and passive thoughts

of dying. He seems despondent but sincere in his presentation and assertions of safety. He is now agreeable to help, including medication, if necessary.

### Case # 1: Questions

How would you manage his depression and thoughts of dying? Does his current antiretroviral regimen impact the selection of antidepressant or dosage?

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## CASE SERIES (continued from page 4)

### Case # 1: Discussion

The first consideration must be patient safety. Many facilities would immediately place this person on suicide precautions or monitoring. However, past suicidal history, current intent and/or plans to harm himself, and his level of anxiety should be assessed when devising the safety management plan. Careful probing to determine each of these can assist the provider in determining whether or not the patient is currently a risk to himself.

The next assessment centers on his depression. Although bereavement is a possibility in the differential diagnosis, the extent and duration of his symptoms are consistent with major depression. Treatment of major depression in HIV/AIDS has been widely studied throughout the AIDS epidemic. The estimate of the lifetime prevalence of major depression in persons with HIV is 50%, greatly exceeding that of the general population. Medication management of depression usually results in 60-70% response within four to eight weeks and remission in eight to 12 weeks. Patients and clinicians alike often have expectations of faster outcomes. Antidepressant selection in HIV/AIDS patients is simpler than other psychotropic classes. Most selective serotonin reuptake inhibitors (SSRIs) and tricyclics (TCAs) have shown similar efficacy and side effect profiles to the general population. Although mild interactions between ritonavir-containing regimens and some antidepressants may occur, (generally leading to increased levels of the antidepressants) most clinicians should feel comfortable and safe in starting an antidepressant in this otherwise stable HIV patient. Since efficacy is essentially equivalent in the spectrum of antidepressants, formulary availability and side effect profiles usually dictate the selection. Drug selection is less important than duration of treatment. Antidepressant medications should be continued for at least six to nine months after remission of the depressive symptoms. The patient should be monitored for the development of side effects initially every two weeks and effectiveness of treatment assessed eight to 12 weeks after starting antidepressant therapy. Continued follow-up every three to four months thereafter is standard.

In addition to the challenge the dual diagnoses of HIV and major depression present to this patient, as well as his clinicians, HCV co-infection further complicates the situation. Interferon used in the treatment of HCV infection can exacerbate depression. However, a history of depression is not an

absolute contraindication for HCV therapy and patients with well controlled depression may be candidates for such treatment in coordination with a psychiatrist.

### Case # 2: Management of co-morbid HIV and severe mental illness

A 35 year-old Caucasian male has been a frequent recidivist in the correctional setting and is newly incarcerated. Diagnosed with schizophrenia, his co-morbid cocaine abuse and homelessness have contributed to his recent HIV infection and diagnosis prior to this incarceration. He has yet to receive antiretroviral medications and is unaware of any prior laboratory information. Past corrections' records indicate various psychotropic trials but the patient indicates that he receives haloperidol (Haldol), carbamazepine (Tegretol) and benztropine (Cogentin) from the local emergency room when needed. He remembers having a seizure after a head wound three years ago, but denies any seizures since that time. He currently has a flat affect and a poverty of thought (e.g. speech is limited to few words). Staff reports that he is paranoid around other inmates over the past few days. His last reported date of cocaine use was two months ago.

### Case #2: Questions

What is the recommended approach in the treatment of severe mental illness in persons with HIV? What is the recommended approach of antiretroviral treatment in the severe mentally ill?

### Case #2: Discussion

As always, the need for coordinated care between psychiatry and HIV primary care is essential. In these situations with two severe disease processes, a prioritization in treatment should follow the basic assessment of the mental illness (diagnosis, current symptoms, level of dysfunction, co-morbid substance abuse) and HIV status (viral load, CD4 count, current symptoms). In this case, the patient's recent HIV infection would not likely need immediate antiretroviral medication; however he does need immediate psychiatric treatment.

Although the psychiatrist would prescribe the antipsychotic in this case, some important items are presented here. First, the history and collaborative information would be helpful to ensure the diagnosis of schizophrenia is correct. The current mental status exam and the remote last cocaine usage make a cocaine-induced psychotic disorder unlikely as the sole diagnosis. But in patients with more recent cocaine exposure, this diagnosis must be considered.

In regards to treatment, "typical" antipsychotics or "older" neuroleptics have a higher propensity for hyperprolactinemia, tardive dyskinesia, and extrapyramidal side effects (EPS) including dystonias (involuntary muscle contractions), akathisia (restlessness, fidgeting) and parkinsonism. In patients with HIV/AIDS, this rate may be increased three-fold, reportedly due to the predilection of the HIV virus for the basal ganglia and associated areas of the brain. Furthermore, medications to minimize EPS symptoms such as diphenhydramine (Benadryl) and benztropine (Cogentin) often worsen cognitive functioning due to the anticholinergic effects of these drugs. Newer, or "atypical", antipsychotic medications are considered treatments of choice for schizophrenia but may carry increased risks of the metabolic syndrome with hyperlipidemia and/or non-insulin dependent diabetes mellitus (NIDDM). In particular, studies have most closely linked olanzapine (Zyprexa) to these problems, although all agents in this class carry the warning in their package insert. The NIDDM is not directly associated with the increase in patient weight with the initiation of the drug. One of the six atypical agents (Clozaril) can cause agranulocytosis and is not usually considered in HIV patients. Two of the remaining five agents (Geodon and Abilify) are CYP p450 3A4 substrates, which may create challenges to future antiretroviral management, particularly ritonavir-containing regimens. Risperidone (Risperdal) or quetiapine (Seroquel) might be the best choices in this patient. Risperidone is now available in a depot injection form (Risperdal Consta) that may be administered every two weeks in non-adhering patients. Due to the timing of antiretroviral treatment, potential drug interactions, and the need for metabolic monitoring (glucose/lipid), ongoing coordination between the HIV provider and the psychiatrist will continue to provide the best possible outcome for this patient.

### Summary

The challenges in the management of mental illness and HIV in the correctional setting may seem overwhelming. These cases demonstrate that a thorough history, initial physical examination and basic mental status assessment will provide you the needed tools for diagnosis, initial management, and psychiatric referrals. Although potential drug interactions are overwhelming at times to remember, the key to management and monitoring is in coordination with knowledgeable pharmacists and psychiatrists to ensure patient safety and positive patient outcomes.

## DEPRESSION IN THE HIV-INFECTED INMATE (continued from page 4)

therapy, the patient should be assessed every two weeks initially, at first for monitoring of side effects and later for efficacy. It may take six weeks to notice a significant change in depressive symptoms and patients should be counseled not to expect rapid results. Once remission in depression is achieved, the dose of the anti-depressant should not be altered.

Failure to achieve an effect should lead to reassessment of the diagnosis. Suboptimal dosage, drug-drug interactions and/or poor medication adherence may have contributed to the failure. If these are ruled-out, then a switch to another agent can be attempted. Response rates to a second SSRI after failure to respond to a drug in this class are 60-70%.<sup>11</sup> In cases where a partial effect is seen during initial anti-depressant therapy, the patient may be a candidate for augmentation with a second agent with a slightly different neuropharmacological profile (e.g., adding venlafaxine or bupropion to an SSRI). There is a fair amount of evidence suggesting that lithium carbonate is an effective augmenting agent which can be monitored by serum levels.<sup>20,21</sup> Anti-psychotic medications are also very useful in this regard. In particular, olanzapine<sup>22</sup> promotes sleep and weight gain and ziprasidone provides a nice "energy boost" in lower doses (but must be taken with food to be effectively absorbed in the stomach).<sup>23</sup> All patients with treatment-resistant depression should be referred to a psychiatrist.

It is important to remember that anti-depressant medications themselves will only affect a person's ability to feel pleasure. Psychotherapy is an integral part of the treatment of major depression and is more effective when combined with pharmacological therapy than when either is used alone.<sup>24</sup> Returning to the electric outlet analogy, anti-depressants will turn on the power to the outlet. The patient's attitudes about the use of electric appliances may be unaffected - he or she may believe that life contains no pleasures or that pleasures are fickle and subject to disappear without notice. This is the reason for combining psychotherapy with anti-depressant medication. Psychotherapy is the process of changing the patient's assumptions, behaviors and feelings about the world through discussion, exploration and practice. In essence, a depressed patient has to gain insight that the experiences he or she had while depressed were inherently biased because of a brain disease disallowing the experience of pleasure, and that new experiences, now that the power is back on, will be different. In this way, trials of behaviors once thought to be unrewarding may result in regained pleasures and thus, generate a sense of hope.

Several clinical studies have demonstrated enhanced efficacy of the treatment of depression in HIV-infected patients with psychotherapy<sup>25,26,27</sup> and correctional systems with access to psychiatric consultation and on-going appropriate counseling services for patients with major depression have a distinct advantage in their ability to treat this disorder. For patients who are

about to be released, post-release community counseling and mental health care should be arranged.

In all cases, there needs to be coordination among HIV care providers and those providing psychiatric care to ensure that each is aware of alterations in the status of the patient, modifications in treatment or dosage, potential for drug interactions and the development of relevant treatment-related adverse effects.

## Conclusion

HIV infection and major depression are prevalent and often co-morbid conditions among inmates in the U.S. Health care providers practicing in the correctional setting are most effective when they can accurately diagnose and treat major depression in HIV-infected inmates. Following the general principles in this article will assist health care providers to diagnosis depression and differentiate between this disorder and other conditions that can cause depressive symptomatology, choose treatments that are tailored to the patient and recognize the potential for toxicity and drug interactions. Psychiatric consultation should be sought for patients with treatment-resistant depression, such as those failing a second anti-depressant. In addition, psychotherapy is an important complement to pharmacologic therapy and should be a component of the treatment of major depression in the HIV-infected inmate. Coordination between clinicians providing HIV care and those providing psychiatric care is essential to the safe and effective management of shared patients.

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# MENTAL HEALTH 101

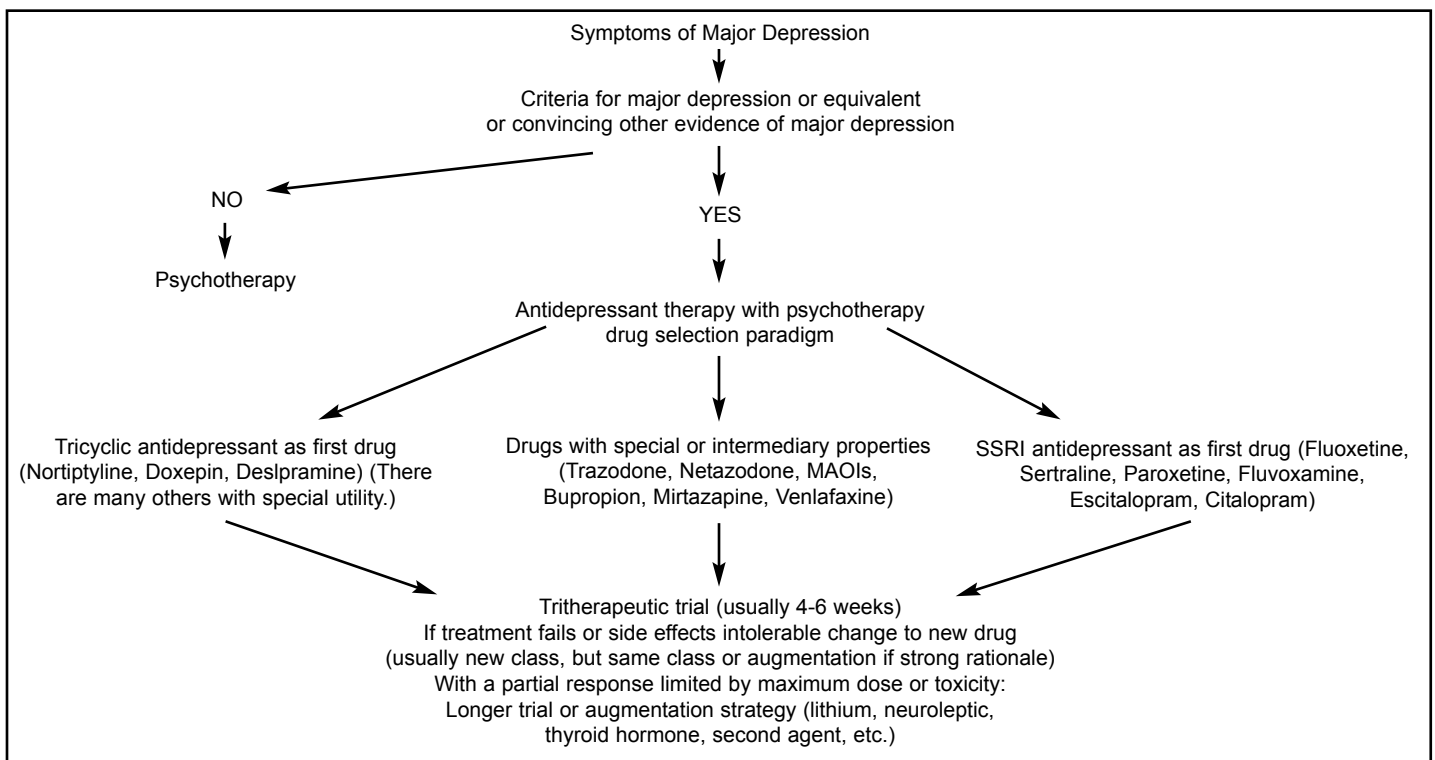
## Selection of a First Line Antidepressant Medication

Variable	Medication
<b>Patient history</b>	
Age group	
Children and adolescents	SSRI* (fluoxetine)
Adults < 65 yr	SSRI, NRI <sup>^</sup> or SNRI <sup>**</sup>
Adults ≥ 65 yr	SRI <sup>^^</sup>
Family history of response	Same medication that was effective in first-degree relative
Past response	Same medication that was effective previously
<b>Depression characteristic</b>	
Bipolar depression	Mood stabilizer (lithium or lamotrigine) plus antidepressant
Psychotic depression	Antidepressant plus antipsychotic (atypical)
Depression with features of obsessive-compulsive disorder	SSRI
Panic attacks	SSRI
Agitated depression	Sedating antidepressant
Depression with psychomotor retardation	Nonsedating antidepressant (NRI, SSRI)
Medication-resistant depression	Electroconvulsive therapy or combination of medications
<b>Coexisting medical conditions</b>	
Heart disease	Nontricyclic antidepressants
Stroke	Caution with SNRIs or NRIs and blood pressure
Pain	Duloxetine, venlafaxine
<b>Concern regarding side effects</b>	
Gastrointestinal symptoms	Nontricyclic antidepressant
Anticholinergic symptoms	Nontricyclic antidepressant
Sexual dysfunction	Non-SSRI antidepressant
Weight gain	Avoid atypical antipsychotics
Postural hypotension	NRI
Diabetes	Avoid atypical antipsychotics

\*SSRI = selective serotonin-reuptake inhibitor  
<sup>^</sup>NRI norepinephrine-reuptake inhibitor  
<sup>\*\*</sup>SNRI = serotonin-norepinephrine reuptake inhibitor  
<sup>^^</sup>SRI serotonin-reuptake inhibitor.

*Table adapted from:  
 Mann, J. Drug therapy: the medical management of depression. NEJM. 2005; 353(17):1828.*

## IDCR-o-GRAM: HIV and Major Depression



## SAVE THE DATES

**Politics on Paper - Global Tragedies/Personal Perils. Featuring the work of Eric Avery MD, John Risseuw and Robbin Ami Silverberg.**  
January 13 - March 11, 2006  
Columbia College Chicago  
Center for Book & Paper Arts  
1104 S. Wabash Ave  
Chicago, IL 60605  
Phone: 312.344.6684

**13th Annual Conference on Retroviruses and Opportunistic Infections**  
February 5-9, 2006  
Denver, Colorado  
Visit: [www.retroconference.org](http://www.retroconference.org)

**13th Annual Ryan White National Youth Conference on HIV/AIDS**  
February 18-20, 2006  
Philadelphia, Pennsylvania  
Visit: [www.napwa.org/rwnyc/](http://www.napwa.org/rwnyc/)

**National Conference on African-Americans and AIDS**  
February 27-28, 2006  
Philadelphia, PA  
Visit: [www.minority-health-care.com/](http://www.minority-health-care.com/)

**NIMH/IAPAC Conference on HIV Treatment Adherence**  
March 8-10, 2006  
Jersey City, New Jersey  
Visit: [www.hivadherenceconference.com](http://www.hivadherenceconference.com)

**Updates in Correctional Health Care**  
April 8-11, 2006  
Las Vegas, Nevada  
Visit: [www.ncchc.org](http://www.ncchc.org)

**Satellite Videoconference "Hepatitis B & C with HIV Co-infection"**  
April 19, 2006  
12:30-2:30 EST  
CME-accredited webstream of last conference available on-line  
Visit: [www.amc.edu/patirnt/hiv/hivconf/index.htm](http://www.amc.edu/patirnt/hiv/hivconf/index.htm)

**ACHSA 2006 Multidisciplinary Training Conference**  
May 11-13, 2006  
Durham, North Carolina  
Visit: [www.achsa.org](http://www.achsa.org)

## NEWS AND LITERATURE REVIEWS

### Screening Tool for Mental Illness, Substance Abuse Validated

Pence, et al conducted a validation study of the Substance Abuse and Mental Illness Symptoms Screener (SAMISS), a 16-item screening instrument designed to identify substance abuse and mental illness in HIV-infected patients. The Structured Clinical Interview for DSM-IV (SCID) was used as the reference to evaluate the performance of the SAMISS in this study. The study population was comprised of HIV-infected patients who had never previously been screened with the SAMISS. Of 148 participants who completed follow-up, 37.2% screened positive on the SAMISS substance abuse (SA) module. Compared with the SCID, the SA module of the SAMISS had 86% sensitivity and 75% specificity. Of 143 participants who completed SCIDs and complete data information, 69.2% screened positive on the mental illness (MI) module of the SAMISS. Compared with the SCID, the MI module of the SAMISS had 95% sensitivity and 49% specificity. Study authors concluded that the SAMISS demonstrated high sensitivity and moderate specificity as a screening tool for the identification of SA/MI in this HIV-infected patient population. The brevity of the SAMISS makes it practical for routine use in busy clinical settings, but should be followed by a more rigorous psychiatric evaluation for patients who screen positive.

*Pence B, Gaynes B, Whetten K, et al. Validation of a brief screening instrument for substance abuse and mental illness in HIV-positive patients. J Acquir Immune Defic Syndr. 2005; 40(4):434-44.*

### Clinician-Delivered Intervention to HIV Patients Reduces Risk Behaviors

Fisher, et al conducted a prospective clinical trial to evaluate the effectiveness of a clinician-delivered intervention in reducing unprotected sexual behavior of HIV-infected patients. The risk reduction intervention consisted of brief, patient-centered discussions, conducted during routine clinical visits, over a study interval of 18 months. During these discussions, clinician and patient negotiated an individually tailored behavior change, goal or plan. Sessions concluded with the patient being given a "prevention prescription" written on a prescription pad. Analysis of the intervention demonstrated that unprotected vaginal, anal and insertive oral sexual events decreased significantly over time among HIV-infected patients who received the clinician-delivered HIV prevention intervention. By contrast, the same measures increased significantly over time for HIV-infected patients in the standard-of-care control arm. Study authors concluded that a clinician-delivered HIV prevention intervention, implemented during the course of routine clinical

care, can be effective in reducing a broad measure of HIV-infected patients' unprotected vaginal, anal and insertive oral sexual behavior.

*Fisher J, Fisher W, Cornman D, et al. Clinician-delivered intervention during routine clinical care reduces unprotected sexual behavior among HIV-infected patients. J Acquir Immune Defic Syndr. 2006; 41(1):44-52.*

### Hospitalizations, Expenditures Due to HCV on the Rise

As the population of patients infected with hepatitis C virus (HCV) grows older, the treatment burden of HCV continues to grow. Grant, et al sought to provide longitudinal statistics concerning health care resource use by HCV-infected patients. Hospitalization trends using the Nationwide Inpatient Sample (NIS) from the Healthcare Cost and Utilization Project (HCUP) were examined. From 1994 through 2001, HCV-related hospitalizations, hospital days, total charges and deaths increased at average annual rates exceeding 20%, more than three-fold higher than rates for all-cause hospitalizations. HCV liver causes for all ages accounted for almost four times as many hospital days in 2001 as in 1994. Increasing hospitalizations and hospital days coincided with higher expenditures for HCV. Study authors concluded that the future burden of HCV infection will match and may exceed analysts' forecasts.

*Grant W, Jhaveri R, McHutchinson J, et al. Trends in health care resource use for hepatitis C virus infection in the United States. Hepatology. 2005; 42(6):1406-13.*

### Antidepressant Treatment Improves Adherence to ART

Untreated depression has been associated with medication non-adherence. To evaluate the effect of anti-depressant treatment (ADT) on antiretroviral (ART) adherence, Yun, et al., retrieved data from chart review for 1,713 HIV-infected patients seen at an urban health care setting. Of these patients, 57% were depressed and of these, 46% and 52% received ADT and ART treatment, respectively. Adherence to ART treatment was lower among depressed patients not adherent to ADT compared to depressed patients adherent to ADT. Study authors concluded that there may be a benefit of ADT on ART adherence among depressed HIV-infected patients.

*Yun L, Mavari M, Kobayashi J, et al. Antidepressant Treatment Improves Adherence to Antiretroviral Therapy Among Depressed HIV-Infected Patients. JAIDS. 2005; 38(4):432-8.*

## RESOURCES

**American Psychiatric Association.**  
<http://healthyminds.org/copingwithaidsandhiv.cfm>

**Centers for Disease Control and Prevention.**  
<http://www.cdc.gov/hiv/pubs/brochure/care10.htm>

**Information on Efavirenz:**  
Annals of Internal Medicine. 2005; 143(10):1-43.

**Mental Health AIDS.**  
<http://mentalhealthaids.samhsa.gov/index.asp>

**National Institute of Mental Health.**  
<http://www.nimh.nih.gov/publicat/dephiv.cfm>

**National Institute of Mental Health.**  
<http://www.nimh.nih.gov/publicat/index.cfm>

## SELF-ASSESSMENT TEST FOR CONTINUING MEDICAL EDUCATION CREDIT

Brown Medical School designates this educational activity for one hour in category one 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 February 28, 2006. The estimated time for completion of this activity is one hour and there is no fee for participation.

1. HIV-infected patients with treated mental illnesses achieve HIV outcomes equal to or better than those without psychiatric disease. True or False?
  - A. True
  - B. False
  
2. Following initiation of antidepressant therapy...
  - A. the patient should be evaluated approximately every four weeks initially to assess for adverse effects and efficacy
  - B. if there is no response in four weeks therapy should be modified
  - C. the dosage of the medication should be rapidly increased to achieve maximal effect
  - D. if there is suboptimal response after six to eight weeks, therapy can be switched to another agent
  - E. None of the above
  
3. The following statements regarding Major Depression are TRUE:
  - A. A hallmark of the diagnosis is anhedonia
  - B. Patients with major depression can typically experience pleasure when distracted from the situation they find depressing
  - C. In some patients it may manifest as insomnia, weight gain and hostility
  - D. A and B
  - E. A and C
  
4. Which of the following statements regarding treatment medications for depression is FALSE?
  - A. Doxepin may promote sleep and weight gain
  - B. Escitalopram often eliminates fatigue
  - C. Nortriptyline frequently causes diarrhea
  - D. All of the above
  - E. None of the above
  
5. Which of the following need to be assessed in all patients in whom the diagnosis of major depression is considered?
  - A. Thyroid stimulating hormone
  - B. Testosterone level
  - C. Potential for suicidal ideation
  - D. Evidence of mania
  - E. All of the above

### IDCR EVALUATION

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

1. Please evaluate the following sections with respect to:

	educational value	clarity
Main Article	5 4 3 2 1	5 4 3 2 1
In the News	5 4 3 2 1	5 4 3 2 1
Save the Dates	5 4 3 2 1	5 4 3 2 1

2. Do you feel that IDCR helps you in your work?

Why or why not?

3. What future topics should IDCR address?

4. How can IDCR be made more useful to you?

5. Do you have specific comments on this issue?

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