

# DISEASE LOCKDOWN

A Publication featuring information and news about infectious diseases for personnel working in and with correctional facilities.

VOLUME 6, ISSUE 1, SPRING 2009

Florida Department of Health

Florida Correctional Medical Authority

Florida Department of Corrections

Florida Sheriff's Association

## HEPATITIS C TREATMENT IN PRISON: IS IT COST-EFFECTIVE?

U.S. prisons incarcerate more than 2 million inmates each year, and between 12 and 31 percent of them are infected with chronic hepatitis C (HCV). This is mostly due to the high rates of intravenous drug use among the incarcerated population. The current standard treatment for HCV has been shown to be cost-effective in the general population and the Federal Bureau of Prisons (BOP) recommends HCV treatment for those who meet the American Association for the Study of Liver Diseases (AASLD) criteria for treatment, when therapy is likely to be completed. Although treatment is recommended by the BOP, each state adopts its own set of treatment guidelines and many prisoners ultimately do not get treated.

There are many arguments for and in opposition to HCV treatment for prison inmates. Proponents argue that we have an ethical duty to provide prisoners with the best medical practices available. In addition, treating HCV could reduce new infections leading to future reductions in medical expenses from advanced liver disease. Opponents argue that treatment is expensive and must be paid for by taxpayers, while many non-imprisoned, uninsured HCV patients are denied access to this care.

Researchers, led by Sammy Saab of the David Geffen School of Medicine at UCLA, sought to determine the cost-effectiveness of HCV treatment in the male prison population. The researchers constructed a decision analysis model employing Markov simulation, using the generally accepted cost-effectiveness threshold of \$50,000 per quality-adjusted life years.

"Our model found that treatment was cost-saving for prisoners of all age ranges and genotypes when liver biopsy was not a prerequisite to starting antiviral therapy," they report. "In other words, treatment resulted in both decreased costs and improved quality of life." Treatment was also cost-saving in most situations that included a pre-treatment liver biopsy.

The authors had not expected treatment to be cost-effective, because of the high re-infection rates and non-liver mortality rates in the prison population. However, they write, "our results demonstrate that pegylated-interferon and ribavirin is cost-saving in the prison population, both in strategies with and without biopsy. Incorporating a pre-treatment liver biopsy may be the most cost-effective approach, however, as one could potentially exclude certain patients with no fibrosis from therapy."

"If the decision to treat is based on pharmacoeconomic measures," the authors conclude, "the results of our analysis suggest that treatment is cost-saving and should not be withheld in U.S. prisoners with hepatitis C."

Researchers suggest that HCV treatment be done in conjunction with substance abuse and education programs to reduce re-infection rates. Mental illness is also widespread in the prison population and can often be exacerbated by HCV treatment. Based on this, careful mental health screening and follow-up should be conducted when HCV treatment is initiated.

This research is published in the November issue of *Hepatology*, a journal published by John Wiley & Sons on behalf of the AASLD.

### Inside This Issue

#### Florida's Perinatal HIV Programs

Page 2

#### STD Awareness Month

#### TB Lawsuit in a Minnesota Prison

Page 3

#### Comorbidity: Drug Addiction & Mental Illness

Page 4 & 5

This issue and previous issues of Disease Lockdown may be viewed online at the following website:

[http://www.doh.state.fl.us/Disease\\_ctrl/aids/corrections/Corrections\\_data.html](http://www.doh.state.fl.us/Disease_ctrl/aids/corrections/Corrections_data.html)

## FLORIDA'S PERINATAL HIV PROGRAMS

### Editorial Board

**Dena Hall, B.A.**

Surveillance & Research Coordinator

Hepatitis Program

(850) 245-4444 x 2589

**Kelly Thompson**

Corrections Specialist

Bureau of HIV/AIDS

(850) 245-4444 x 2611

**Beth Bassham, R.N.**

RN Consultant

Bureau of Tuberculosis and Refugee Health

(850) 245-4350

**Mary Tollefsen, R.N.**

RN Consultant

Bureau of Sexually Transmitted Diseases

(850) 245-4315

We welcome articles from around the state about interesting and successful programs in the correctional/health care setting dealing with infectious diseases. If possible, please limit your article to 400 words or less. Articles should contain a title, author's name, and narrative. We will also take pictures, cartoons, charts, graphs, etc. Please email your material to Kelly Thompson, Florida Department of Health. Electronic copies are preferable via email to: [Nita\\_Harrelle@doh.state.fl.us](mailto:Nita_Harrelle@doh.state.fl.us)

Without appropriate medical therapy, about 25% of babies born to pregnant women with HIV will transmit the virus to their babies. If an HIV-infected pregnant woman takes the prescribed medication and follows all the directions of her physician, the risk to her baby drops to less than 2%. Since 1994, Florida has had a comprehensive perinatal HIV prevention program designed to reduce the incidence of perinatal HIV infection in the state. This program is two-pronged, targeting both healthcare providers and consumers for education and support.

The Florida Department of Health (FDOH) contracts with the Florida/Caribbean AIDS Education and Training Center (AETC) to educate medical providers who care for pregnant women. The goal of the AETC project is to deliver innovative training to health care providers on Florida's requirements for the HIV testing of pregnant women, and the most up-to-date treatment options for reducing perinatal HIV transmission. They work to assist in the development of written protocols for rapid testing in labor and delivery for women with no record of HIV testing during pregnancy, and women with no prenatal care. The AETC has created a number of social marketing materials for consumers and providers that incorporate information on the Florida statute pertaining to the HIV testing of pregnant women.

The Targeted Outreach for Pregnant Women Act (TOPWA) program was established to find at-risk or HIV-infected pregnant women who are not receiving adequate prenatal care and link them with services. The TOPWA program is currently in seven counties with community-based organizations providing services. Over 185,898 women were screened for TOPWA since its inception in 1999, and informed about the importance of early and ongoing prenatal care, HIV prevention for women, preventing mother-to-child transmission, and the dangers of substance abuse. In order to identify pregnancy as early as possible, TOPWA conducted over 36,570 free on-site pregnancy tests for women unsure of their pregnancy status, identifying over 5,000 pregnant women.

Over 28,600 high-risk or HIV-infected pregnant women have been enrolled in TOPWA and assessed to determine their level of risk and service needs. The program's emphasis on minority groups reflects the high numbers of non-white women becoming infected with HIV in Florida, and FDOH commitment to eliminate racial and ethnic health disparities.

Every baby born to an HIV-infected mother is prescribed Zidovudine (AZT) for six weeks after birth. In 2008, a program was instituted to provide this medication free of charge for HIV-exposed newborns whose families have no means to purchase the medication. This is a pilot program in the communities near the hospitals that have the greatest number of HIV-exposed births. The perinatal nurse receives a voucher, which can be redeemed for the prescription of Zidovudine. Specific Walgreens pharmacies near these hospitals are prepared to redeem the vouchers.

## SEXUALLY TRANSMITTED DISEASE AWARENESS MONTH

The Florida Department of Health, Bureau of STD Prevention and Control, and local county health departments will observe National Sexually Transmitted Disease (STD) Awareness Month during April. STDs pose a serious public health threat to Americans – particularly young women, African Americans, men who have sex with men (MSM), and individuals living in poverty or who have limited access to healthcare. Some STDs include human papillomavirus (HPV), herpes simplex virus, chlamydia, gonorrhea, trichomoniasis, syphilis, hepatitis B and HIV. These diseases continue to be the most commonly reported infectious diseases in the nation.

Approximately 19 million new sexually transmitted infections occur every year in the United States – and almost half of these are among young people aged 15 to 24. For the year 2008, Florida provisionally reported nearly 97,000 cases of sexually transmitted infections. Approximately 66 percent (64,129) of the cases occurred among individuals between the ages of 15-24. According to the Centers for Disease Control and Prevention (CDC), STDs cost the United States' health care system as much as \$15.5 billion annually.

Most STDs are easily diagnosed and treated, but they often have no symptoms and go undetected. Bacterial STDs, specifically chlamydia and gonorrhea, can lead to pelvic inflammatory disease (PID) which increases the risk for infertility and ectopic pregnancy. Viral STDs like herpes simplex virus, for which there is no cure, have a life long impact on physical, psychological, and emotional health.

STD related consequences may be avoided through education, early detection, and proper treatment. The 2009 STD Awareness Campaign emphasizes 3T's to prevent the spread of STDs: Talk, Test, and Treat.

The 3 T's represent key behaviors individuals need to practice in order to protect themselves and their partners from STD's.

**Talk** - Talk to your partner and your health care provider about risk factors, safer sex methods, and testing

**Test** - Make an appointment for STD testing with your health care provider or contact your local county health department

**Treat** - Treat the disease to avoid more health problems

Presentations, exhibits, video showings, material distributions, and screening events are planned statewide to help Floridians make informed decisions about involvement in STD prevention and treatment services.

For more information about STDs and awareness resources, please visit the Bureau of STD Prevention and Control's website at

[www.floridadiseasecontrol.com/std](http://www.floridadiseasecontrol.com/std).



## MINNESOTA PRISON CLASS ACTION LAWSUIT

A class action lawsuit filed by some former inmates of the Ramsey County Workhouse in Minnesota alleges that corrections staff did not properly test an inmate who had TB disease. As a result, the infection spread to other inmates. The suit claims that the corrections staff knew of and disregarded the risk to the health of the other inmates and acted with deliberate indifference in violation of the eighth and 14<sup>th</sup> amendments of the United States Constitution. According to the complaint, about 80 former inmates and 30 county employees later tested positive for TB infection. Assistant County Attorney Darwin Lookingbill said that the inmate was screened for TB, but did not test positive for infection. Lookingbill noted that when the symptoms showed up later and the disease was identified as TB, the inmate was isolated. According to the complaint, the inmate showed obvious signs and symptoms of TB. Inmates complained to staff about this person's health, and 20 people signed a complaint requesting that action be taken. The corrections staff response was that the inmate had a "smoker's cough." Of 300 persons (both inmates and corrections staff) tested by the county, six tested positive for active TB disease, and 104 tested positive for latent TB infection. The inmates are seeking unspecified financial damages and an order requiring changes in the policies and procedures of the workhouse regarding training of corrections and medical staff.

## COMORBIDITY: DRUG ADDICTION & MENTAL ILLNESS

The National Institute on Drug Abuse (NIDA), as a part of their Research Report Series, released in December 2008 a report entitled, Comorbidity: Addiction and Other Mental Illness. The report summarizes some of the science regarding the complex relationship between substance abuse and other mental disorders. The highlights of this report are below. The full report is at: <http://www.nida.nih.gov/researchreports/comorbidity/index.html>

*It is estimated that about 75 percent of offenders in state and local prisons and jails have a mental health problem comorbid with substance abuse or addiction.*

**What is Comorbidity?** When two disorders or illnesses occur in the same person, simultaneously or sequentially, they are called comorbid. Comorbidity also implies interactions between the illnesses that affect the course and prognosis of both. A variety of diseases commonly co-occur with drug abuse and addiction (e.g. HIV, hepatitis C, cancer, cardiovascular disease). However, this report focuses only on the comorbidity of drug use disorders and other mental illnesses.

**Is Drug Addiction a Mental Illness?** Because drug addiction changes the brain in fundamental ways, disturbing a person's normal hierarchy of needs and desires and substituting new priorities connected with procuring and using the drug, it can be viewed as a mental illness. The resulting compulsive behaviors that override the ability to control impulses despite the consequences are often similar to hallmarks of other mental illnesses.

**How Common Are Comorbid Drug Use and Other Mental Disorders?** Many people who regularly abuse drugs are also diagnosed with mental disorders and vice versa. Persons diagnosed with mood or anxiety disorders were about twice as likely to suffer also from a drug use disorder (abuse or dependence)

compared with respondents in general. The same was true for those diagnosed with an antisocial syndrome, such as antisocial personality or conduct disorder. Similarly, persons diagnosed with drug disorders were roughly twice as likely to suffer also from mood and anxiety disorders. Patients with schizophrenia have higher rates of alcohol, tobacco, and other drug abuse than the general population.

Based on nationally representative survey data, 41 percent of respondents with past-month mental illnesses are current smokers, which is about double the rate of those with no mental illness. The rate of smoking in patients with schizophrenia has ranged as high as 90 percent. Various self-medication hypotheses have been proposed to explain the strong association between schizophrenia and smoking, although none have yet been confirmed.

Gender is a factor in the specific patterns of observed comorbidities. The overall rates of abuse and dependence for most drugs tend to be higher among males than females, and males are more likely to suffer also from antisocial personality disorder. In contrast, women have higher rates of amphetamine dependence and higher rates of mood and anxiety disorders.

### **High Prevalence of Drug Abuse and Dependence Among Individuals With Mood and Anxiety Disorders**

## High Prevalence of Mental Disorders Among Patients With Drug Use Disorders

cence. Introducing drugs while the brain is still developing may have profound and long-lasting consequences.

Early Drug As a Risk Factor - Strong evidence has emerged showing early drug use to be a risk factor for later substance abuse problems; additional findings suggest that it may also be a risk factor for the later occurrence of other mental illnesses. This link also may hinge upon genetic vulnerability, psychosocial experiences, and/or general environmental influences.

Exposure to Traumatic Events Puts People at Higher Risk of Substance Use Disorders.

### Concurrent Treatment

Recommendations are for a comprehensive approach to intervention that identifies, evaluates, and treats each disorder concurrently. Patients entering treatment for psychiatric illnesses should also be screened for substance use disorders and vice versa. When people who abuse drugs enter treatment, it may be necessary to observe them after a period of abstinence in order to distinguish the effects of substance intoxication or withdrawal from the symptoms of comorbid mental disorders.

Many of those needing treatment are in the criminal justice system. However, adequate treatment services for both drug use disorders and other mental illnesses are greatly lacking within these settings. While treatment provision may be burdensome for the criminal justice system, it offers an opportunity to positively affect the public's health and safety. Treatment of comorbid disorders can reduce not only associated medical complications, but also negative social outcomes by mitigating against a return to criminal behavior and reincarceration.

To learn more about drug use disorders and other mental illnesses, or to order materials on these topics free of charge in English or Spanish, visit the NIDA Web site at [www.drugabuse.gov](http://www.drugabuse.gov) or contact the DrugPubs Research Dissemination Center at 877-NIDA-NIH (877-643-2644; TTY/TDD: 240-645-0228).

## Higher Prevalence of Smoking Among Patients With Mental Disorders

### Common Factors

Overlapping Genetic Vulnerabilities - A particularly active area of comorbidity research involves the search for genes that might predispose individuals to develop both addiction and other mental illnesses. It is estimated that 40-60 percent of an individual's vulnerability to addiction is attributable to genetics.

Involvement of Similar Brain Regions - Some areas of the brain are affected by both drug use disorders and other mental illnesses. Brain changes stemming from one may affect the other.

Adolescent Drug Use - The brain continues to develop into adulthood and undergoes dramatic changes during adoles-



Bureau of HIV/AIDS

4052 Bald Cypress Way, Bin A-09

Tallahassee, FL 32399-1717