

Centers for Disease Control (CDC) – Consulting Meeting on Prevention and Control of Viral Hepatitis in Prisons

Part One

Alan Franciscus

In March 2001, approximately 120 consultants, including prison activists, prison officials, doctors, CDC officials, lawyers, and pharmaceutical representatives gathered in Atlanta, GA. This meeting was sponsored by the CDC to begin the process of establishing recommendations for the prevention and control of viral hepatitis in prisons. This article (Part One) will discuss some of the known data on hepatitis in prisons. Part Two will delve into the recommendations that came out of Atlanta and my impressions of the consulting meeting. The CDC estimates that final recommendations for diagnosis and treatment of hepatitis in prisons will be released by Fall 2001.

It should be noted that treatment and management recommendations for co-infection of viral hepatitis with HIV were not addressed. It is estimated that between 30 and 40% of people infected with HIV are also infected with HCV. This is an area that should be addressed in the very near future due to the implications of possible HIV drug-induced liver toxicities and a more aggressive liver disease progression in co-infected individuals.

Population Statistics

Adults

The number of adults in prisons and jails is staggering. In 2000, an estimated 2 million Americans were in prison. This is a dramatic increase of 600% from 1970 when the adult prison population was only 325,000. Minorities currently held in prison are over-represented – 33% are white non-Hispanics, 45% are black, 18% are Hispanic and 3% are of other racial/ethnic groups. Approximately 7% of the adult prison population is female and accounts for approximately 8,820 prison births annually. Thirty-one percent of State prisoners and 60% of Federal prisoners have been locked up for drug-related crimes.

Adolescents

Two and one-half million or 4% of the 70 million Americans below the age of 18 were arrested in 1999. Between 50% and 75% of these adolescents spend time in adult prison. Minorities' now account for approximately 70% of this population, which is especially over-represented by blacks. Females accounted for 27% of this population and accounted for 14% of all juveniles in residential placement. Approximately 9% of all juveniles in jail or prison are there as the result of drug-related crimes.

Health Care in Prisons

Health care in prisons is substandard. Even this level of care was granted to prisoners only after lengthy litigation. Notably, the U.S. Supreme Court ruled that deliberate indifference to medical needs, which includes denied or unreasonably delayed access to a physician for diagnosis and treatment; failure to administer treatment prescribed by a physician; and the denial of professional medical judgment, constitutes a cruel and unusual punishment as forbidden by the Eight Amendment. Additional litigation resulted in courts requiring that medical care be provided for "serious medical needs." This definition has been interpreted differently by different prisons with consideration given to the length of the patient's expected prison stay.

Disease burden in Prisons

Disease prevalence in prisoners is higher than in the general public. An estimated 78,000 prisoners in jail and prison have tested positive for syphilis, and it is estimated that 558,000 prisoners are released each

year from prison with active syphilis. It is estimated that 1% of prisoners are infected with gonorrhea and 2.4% with chlamydia. HIV- infected prisoners' account for approximately 4% of the total number of people living with HIV in the United States. Prevalence rates for tuberculosis (TB) is between 5 times (in prison) and 21 times (in jail) higher than in the general U.S. population. In 1996, approximately 200 people were released from prisons and over 12,000 were released from jails with active TB, which represents 6% of the estimated 200,000 Americans infected with TB.

Hepatitis A (HAV)

HAV is an inflammation of the liver caused by the hepatitis A virus and was formerly known as infectious hepatitis. HAV is a highly infectious disease that is mainly spread by household or sexual contact (oral/anal contact), but approximately 50% of cases are of unknown origin. Approximately 134,000 new infections occur annually in the United States and it is estimated that 33% of all people in the United States have been infected with HAV. New infections in the U.S. are most commonly observed among:

- ◆ Men who have sex with men
- ◆ People who practice oral/anal sex
- ◆ Injection drug users
- ◆ Household contacts with an HAV infected individual
- ◆ Children and employees of day-care centers

Immunization against HAV results from either prior infection or by vaccination. The vaccination against HAV is considered safe and effective. Routine mandatory vaccination of school age children in some states has reduced the incidence of outbreaks among children. Vaccination programs have the potential to dramatically reduced future outbreaks if not eliminate the disease. The two-dose vaccine is administered by injection with the second dose given six to twelve months after the first injection. Ninety-five to 100% of people vaccinated develop protective antibodies one month after the initial dose. HAV does not cause chronic liver disease and is rarely fatal except in individuals with a compromised liver and in people infected with another viral hepatitis. It is highly recommended that older adults and people with hepatitis B and hepatitis C be vaccinated.

Infection rates among prisoners with prior hepatitis A virus (HAV) infection are unknown and acute infection is rarely reported in prison settings. As well, no data are available on HAV vaccinations in prisons.

Hepatitis B (HBV)

HBV is an inflammation of the liver caused by the hepatitis B virus and was formerly known as serum hepatitis. HBV is highly infectious and is found in blood, semen, sweat, saliva, tears, vaginal secretions, breast milk and menstrual blood. Approximately 120,000 new infections occur annually in the United States. New infections in the US are most commonly observed among:

- ◆ Men who have sex with men
- ◆ Household and sexual contact with an HBV infected individual
- ◆ Injection drug users
- ◆ Health care workers
- ◆ Children born to infected mothers

Immunization against HBV results from prior infection or by vaccination. The vaccination against HBV is considered safe and effective. Adults are given three injections. The second injection is given one month after the first injection with the third and last injection given 6 months after the first injection. It is recommended that all healthcare workers, newborns and pregnant women receive the vaccination, and that children are vaccinated prior to beginning daycare or school. Additionally, people with liver disease are encouraged to be vaccinated if not previously exposed to HBV. The majority of HBV cases resolve, but an estimated 5% to 10% of people that contract HBV do not resolve the infection on their own and develop chronic infection. It is estimated that 1.25 million Americans are chronically infected with HBV. Over 5,000

individuals die annually of complications from HBV.

HBV in Prisons

The CDC estimates that in 1996, 155,000 prisoners were released from prisons with chronic hepatitis B, which accounts for 12-15% of the total 1.25 million Americans chronically infected with HBV.

Vaccination Programs in Prisons

Routine testing or vaccination against HBV is seldom given in prisons. Thirty-four states responded to a recent survey on HBV vaccination in prisons—25 states reported that they offered HBV vaccinations to some inmates, while 8 states replied that they do not offer any vaccination. Hawaii, Michigan and Texas currently offer vaccinations to prisoners admitted into state prisons with certain criteria or evidence of susceptibility. In Texas, all prisoners are vaccinated if they do not have a history of prior HBV infection or were not previously vaccinated based upon review of patient medical charts.

HBV Treatment

FDA approved medications to treat chronic HBV include alpha interferon (injection), and a nucleoside analogue (oral)—Lamivudine (Epivir-HBV). Approximately 30-40% of people with chronic HBV respond to these medications. There is not a cure for chronic HBV.

Data on treatments available in prisons is not available.

Hepatitis C (HCV)

HCV is an inflammation of the liver caused by the hepatitis C virus and was formerly known as non-A non-B hepatitis. HCV is a highly infectious disease that is spread by blood-to-blood contact. Approximately 10% of cases are of unknown origin. It is estimated that 1.8% of the U.S. population or 4 million Americans are infected with HCV. Of those, 2.7 million Americans are chronically infected. Approximately 36,000 new infections occur each year. A common route of transmission of HCV prior to 1992 was through blood transfusions or blood products / procedures. Since 1992, the blood supply has been screened and the likelihood of contracting HCV through tainted blood is less than .01%. The main source of new infections in the U.S. is among injection drug users. Sexual transmission is controversial--most experts believe the incidence of sexual transmission (1% to 5%) is very low. Mother-to-child transmission is less than 5%. There have not been any documented HCV infections from exposures to a tattoo or piercing, but these are considered potential transmission routes. Since instruments and ink are less likely to be sterilized in prisons, however, the potential for infection is somewhat greater.

Prior exposure to HCV does not confer immunization. There is not a cure or vaccine against HCV although antiviral treatment may permanently clear the virus in some patients. The majority (80% to 85%) of people who become infected with HCV become chronically infected. A small subset of patients infected with HCV clear the virus on their own. In the United States, approximately 8,000-10,000 people die annually of complications from HCV.

HCV in Prisons

Information of the prevalence rate of HCV among juvenile prisoners is very limited. Of the limited data it is estimated that between 2% and 7% of juvenile prisoners are infected with HCV.

Similarly, information on the incidence of HCV among adults in prisons is limited. Current estimates range anywhere from 17% to more than 40%.

Random seroprevalence studies conducted in adult prisons show the following:

<u>State</u>	<u>HCV Infection Rates</u>
California	41.7%
Connecticut	32%
Maryland	38%
New York	17%
Texas	28.6%

It is estimated that 1/3 of the estimated 4 million Americans infected with HCV pass through the prison system each year.

HCV Treatments

FDA approved medications include interferon and the combination of interferon and ribavirin (oral) and recently approved Schering's PEG-Intron, a pegylated interferon (injection). Roche's pegylated interferon, Pegasys, is expected to be FDA approved soon. Approximately 30-40% of people with HCV respond to the combination of interferon and ribavirin. Schering's PEG-Intron response rate is 24% and the response rate for Roche's Pegasys is approximately 39%. Clinical trials of pegylated interferon and ribavirin are very encouraging with up to 54% response rates reported. FDA approval is pending.

HCV Treatment in Prisons

At this time, there are very few prisons that have established guidelines for treatment of HCV. Few states offer treatment to HCV-infected prisoners; of those that do, all have strict protocols that prohibit all but a small percentage of prisoners from receiving treatment.

Next month the recommendations made by the CDC and experts/consultants will be discussed. Furthermore, I will discuss my impressions on the good, the bad and the ugly of the consulting meeting. Click [here](#).

Sources:

CDC Draft – Prevention and Control of Infections with Hepatitis Viruses Among Persons in Corrections Settings.

Palmer, Mellissa, MD, Dr. Melissa Palmer's Guide to Hepatitis & Liver Disease: What You Need to Know, Avery, 2000

Visits these websites for more information on hepatitis C:

HCV in Prison Project: <http://www.hcvprisonnews.org>

HCV Advocate: <http://www.hcvadvocate.org>