



# HEPP REPORT

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HIV & HEPATITIS  
EDUCATION  
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PROJECT

## INFECTIOUS DISEASES IN CORRECTIONS

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### ABOUT HEPP

HEPP Report, a forum for correctional problem solving, targets correctional physicians, nurses, administrators, outreach workers, and case managers. Published monthly and distributed by email and fax, HEPP Report 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. HEPP Report 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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### HOT TOPICS IN HEPATITIS C

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The Hepatitis C virus (HCV) is a major public health problem and the most common cause of death from liver disease in the United States.<sup>1</sup> According to population-based studies, HCV accounts for more than 40% of chronic liver disease in the U.S., and causes about 10,000 deaths per year.<sup>2</sup> Although the proportion of these deaths that occur in correctional facilities is believed by many to be as high as 30% and rising, the exact numbers of deaths due to HCV that occur in the U.S. correctional system is unknown. Despite the declining incidence of HCV infection, the prevalence of HCV-related chronic liver disease is increasing because of a substantial time lag between infection and clinical manifestations.

Although the estimated prevalence of hepatitis C in the U.S. is about 2%,<sup>3</sup> it is significantly higher in state and federal correctional facilities (16-49%).<sup>4-6</sup> According to a U.S. Justice Department study, 1.3 to 1.4 million inmates released from prison in 1996 were infected with HCV, or about 30% of the total in the U.S. population with the condition.<sup>7</sup> As in the general population, injection drug use (IDU) accounts for most HCV infections in the correctional setting, as up to two-thirds of inmates have a history of IDU before incarceration.<sup>5</sup> Since there is such a high prevalence of HCV among inmates, the correctional environment affords an opportunity to diagnose and treat the virus in many of those who are infected.

The following topics are among the most important in the realm of HCV treatment as published in medical literature or presented at

scientific meetings in the past two years. For more essentials on HCV epidemiology, natural history and treatment, the reader is encouraged to consult prior issues of HEPP Report.<sup>8-10</sup>

#### EARLY VIROLOGIC RESPONSE

The best therapy currently available for treatment-naïve patients is weekly injections of pegylated-interferon alpha-2a coupled with twice daily oral ribavirin. Sustained virologic

response (SVR is defined as undetectable HCV RNA 24 weeks after the completion of therapy) can be achieved in more than half of those treated.<sup>11-12</sup> However, early identification of treatment non-responders is warranted to spare the expense and side effects of unnecessary medication.

Consequently, the use of the early virologic response (EVR) has been popularized.

The best marker of EVR in terms of sensitivity (capture the largest number of responders) and negative predictive value (eliminate the largest number of non-responders) is a decline in the HCV viral load of at least 2-log from baseline after 12 weeks of therapy. Patients not achieving this treatment milestone have

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*The correctional environment affords an opportunity to diagnose and treat the virus in many of those who are HCV-infected.*

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## HOT TOPICS IN HEPATITIS C... (continued from page 1)

almost no chance of achieving a SVR,<sup>13</sup> and therefore can be spared an additional 12 to 36 weeks of unnecessary therapy. In a recently published economic analysis, the use of EVR decreased costs by 45% when compared to a full course of therapy.<sup>14</sup> Based on these data, many experts recommend terminating therapy for patients who do not reach an EVR at 12 weeks.

There are several caveats to bear in mind when utilizing EVR. Because most patients with genotypes other than 1 achieve an EVR, using a 12-week cut-off reduces costs only marginally in patients with other genotypes.<sup>13</sup> Secondly, variations of up to one 1 log unit can occur with any assay, so a patient with a 1.8-log RNA drop at 12 weeks, for example, may still achieve a sustained response.<sup>15</sup> Moreover, histologic benefits may be achieved despite patients not reaching early or sustained virologic responses.<sup>16</sup> Although many insurance companies have justified stopping coverage of medications for patients who do not reach this threshold, a patient may still show significant hepatic histologic improvement or at least delayed histologic progression without reaching an EVR/SVR. This topic will be discussed in greater detail below. Accordingly, use of EVR should be viewed as an individualized tool and not a hard and fast rule for terminating therapy.

### PERSISTENTLY NORMAL AMINOTRANSFERASES (PNALT)

HCV is usually associated with elevated alanine aminotransferase (ALT) levels, yet about 30% of patients with chronic HCV have persistently normal ALT levels.<sup>17</sup> The study of this patient subset has been compounded by differing definitions of a "normal" ALT.<sup>18,19</sup> The definition of a normal ALT used in the phase III clinical trial of peginterferon alfa-2b and ribavirin was <43 IU/L for men and <34 IU/L for women.<sup>11</sup> Patients with PNALT were defined as those with three separate blood tests drawn at least one month apart that demonstrated ALT measurement at or below the upper limit of the normal level.

Although many patients with PNALT have a slow progression of fibrosis,<sup>20</sup> some PNALT patients have relatively advanced

fibrosis on liver biopsies.<sup>21</sup> In a recent study of 91 HCV RNA-positive patients with PNALT (all of whom had liver biopsy), one in six patients had significant, progressive liver disease that was only identified on liver biopsy.<sup>22</sup>

Treatment for the HCV patient with PNALT has been controversial. An older study of interferon monotherapy for those with PNALT showed that therapy caused elevations in ALT, and was therefore not beneficial.<sup>23</sup> However, subsequent studies treating those with PNALT using standard interferon/ribavirin showed sustained response rates without ALT "flares" in 47% of the patients.<sup>24,25</sup>

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*“...some specialists believe that all PNALT patients who are otherwise candidates for treatment should undergo liver biopsy, and that treatment should be based on histology results.”*

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The 2002 NIH Consensus Guidelines on the Management of HCV recommended that treatment for HCV patients with PNALT should be individualized, taking into account factors such as liver histology, HCV genotype, patient age, motivation for therapy and co-morbid conditions.<sup>26</sup> A recently completed multicenter, multinational, randomized trial showed that HCV-infected PNALT patients had similar rates of sustained response compared to those with elevated ALTs when treated with pegylated-interferon/ribavirin.<sup>27</sup>

In a recent study by Ghany, *et al.*, 123 patients with chronic HCV underwent two liver biopsies, each at extended, but variable intervals. The biopsy reports were correlated with serum aminotransferases. The authors concluded that the best predictors of fibrosis progression in these patients were the extent of serum aminotransferase elevations and the degree of hepatocellular necrosis and inflammation on liver biopsy. Consequently, they felt

these findings support the recommendation that patients with PNALT and mild liver histology can safely defer treatment.<sup>28</sup> As a result of these studies and others, some specialists believe that all PNALT patients who are otherwise candidates for treatment should undergo liver biopsy, and that treatment should be based on histology results.

### LIVER BIOPSY

The necessity of liver biopsy prior to treatment is also a subject of debate. Despite drawbacks like the potential for complications and sampling error, biopsy is the only reliable predictor of natural history of disease.<sup>29,30</sup> Nearly all patients with high-grade necroinflammation and most of patients with intermediate-grade on biopsy develop cirrhosis.<sup>31</sup> Nonetheless, the cost-effectiveness of treating patients without fibrosis on biopsy has been questioned.<sup>32</sup> Expert consensus groups from the U.S. and Europe have previously recommended the routine performance of liver biopsy prior to antiviral therapy initiation.<sup>33,34</sup> However, recent guidelines from the American Association for the Study of Liver Diseases (AASLD) are less dogmatic: "biopsy is not mandatory to initiate therapy...yet a liver biopsy should be done when results will influence the recommendation to treat".<sup>35</sup>

Different prison systems take different approaches to liver biopsy. The Federal Bureau of Prisons, Louisiana, and Georgia require a biopsy prior to treatment, and only treat those with significant fibrosis. On the other hand, Texas and Pennsylvania systems do not mandate biopsy for those who desire treatment and do not have contraindications.<sup>36</sup> A recent cost-effectiveness study of HCV-infected inmates was carried out at the Louisiana State Penitentiary in which 501 patients were evaluated, approximately half of whom had pre-treatment liver biopsies. In an analysis of those patients infected with HCV genotype 1 who received pegylated-interferon/ribavirin, the cost of HCV treatment was \$16,826 per patient treated with liver biopsy and \$14,389 for those treated without liver biopsy. The authors concluded that a protocol using liver biopsy as a means to determine eligibility for therapy does in fact balance costs and complies with current recommendations.<sup>37</sup>

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## HOT TOPICS IN HEPATITIS C... (continued from page 2)

### CIRRHOSIS AND MAINTENANCE THERAPY

Patients with HCV-related cirrhosis have a high risk of dying from end-stage liver disease (30% over 10 years<sup>35</sup>), and thus have much to gain from successful treatment. Patients with advanced liver disease can be successfully treated with interferon-based therapies, but sustained response rates are lower and medication dose reductions are needed more frequently in this population relative to those with less advanced disease.

Most of the data supporting the treatment of compensated cirrhotics comes from subgroup analysis of larger trials in which 43% of those treated with pegylated-interferon/ribavirin achieve an SVR.<sup>11,12</sup> Only one published treatment trial examined patients with advanced liver disease exclusively; cirrhotic patients on pegylated-interferon monotherapy achieved an SVR in 30% of cases.<sup>38</sup> In patients who achieve SVR, the risk of developing hepatocellular carcinoma or liver failure may also be diminished.<sup>39</sup>

Despite some data supporting the treatment of compensated cirrhotics, there is little evidence supporting therapy for those with decompensated liver disease (ascites, encephalopathy, etc.). These patients should be referred to liver transplantation centers or be enrolled in clinical trials (See *HEPP Report* December 2003 issue at [www.hivcorrections.org](http://www.hivcorrections.org) for the management of decompensated liver patients in the correctional setting.).

Even if patients do not achieve an SVR, both cirrhotics and non-cirrhotics may still have significant hepatic histologic improvement or at least delayed histologic progression following treatment with combination therapy. In an analysis of data from over 3,000 patients receiving sequential liver biopsies, interferon-based treatment reduced the rate of fibrosis progression. Despite only a third of patients achieving SVR, nearly half had reversal of their cirrhosis. 73% of patients had improvement of necrosis and inflammation, irrespective of achieving SVR.<sup>18</sup> In a more recent meta-analysis of over 1,000 treatment-naïve patients, pegylated-interferon alfa-2a significantly reduced fibrosis relative to standard interferon.<sup>40</sup>

Based upon the above two studies and others like them, some specialists support the concept of "maintenance therapy" in which patients with cirrhosis who do not achieve an SVR continue therapy in hopes of achieving a regression or slowing of their liver disease. Although many providers are utilizing maintenance therapy in their practices, this approach is still experimental since it has not been proven in well-controlled trials. Large multi-center trials such as HALT-C, COPILOT and EPIC are underway and will likely provide guidance on this issue.

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**“African-Americans with HCV-related cirrhosis may have up to a six times higher risk of developing hepatocellular carcinoma compared to their cirrhotic Caucasian counterparts.”**

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### HCV AND HIV CO-INFECTION

HCV is common in HIV-infected patients because of shared routes of transmission. In fact, the U.S. Public Health Service and the Infectious Disease Society of America advocate screening all HIV-infected individuals for HCV.<sup>41</sup> HIV seropositivity accelerates the rate of HCV-progression by about three-fold.<sup>42</sup>

Many providers are treating co-infected patients for both diseases. The more intact the immune system (CD4+ count >200 cells/mm<sup>3</sup>), the higher likelihood of sustained response to HCV therapy.<sup>43</sup> Several authors have recommended liver biopsy prior to initiating treatment for HCV in co-infected patients.<sup>44</sup> Co-infected patients should be monitored closely because the concomitant use of nucleoside analogs and ribavirin increases the risk of pancreatitis, anemia and lactic acidosis.<sup>45-47</sup> Furthermore, ribavirin is contraindicated with didanosine (ddl) since it increases risks of side effects associated with ddl. Finally, the potential for antiretroviral medication-induced hepatotoxicity is compounded in HCV-infected patients. The results of recently completed trials of

over 400 co-infected patients treated with pegylated-interferon alfa-2a/ribavirin have been made available. Sustained response rates ranged from 27 to 40%, yet discontinuation rates ranged from 12 to 25%.<sup>48-50</sup>

Both response rates and termination rates are significantly higher when compared to those from mono-infected HCV patients. However, in co-infected patients, the rates of SVR are better with treatment with pegylated-interferon alfa-2a than with treatment with standard non-pegylated interferon alpha-2a/ribavirin.

### AFRICAN-AMERICANS AND HEPATITIS C

Compared with Caucasians, U.S. minority populations are disproportionately affected by chronic HCV infection.<sup>3</sup> Furthermore, African-Americans are more likely to be infected with HCV genotype 1 and develop chronic infection than are Caucasians.<sup>51,52</sup> Efforts to assess the natural history of HCV-infected African-Americans have been hampered by inadequate representation of African-Americans in HCV prospective trials. A retrospective study of over 350 patients showed that African-Americans had significantly less necrosis and cirrhosis on liver biopsy compared to Caucasians.<sup>53</sup> However, another retrospective analysis of over 300 inmates from the Virginia Department of Corrections showed there were no clinically significant differences between Caucasians and African-Americans on liver biopsy.<sup>54</sup> Nonetheless, African-Americans with HCV-related cirrhosis may have up to a six times higher risk of developing hepatocellular carcinoma compared to their cirrhotic Caucasian counterparts.<sup>55</sup>

With respect to interferon-based therapy, most studies have reported lower response rates among African-Americans compared to Caucasians. Ongoing studies of standard interferon/ribavirin combination therapy have shown lower sustained responses in African-Americans compared to Caucasians.<sup>56,57</sup> The lower response rate may be due, in part, to an impaired ability of African-Americans to inhibit viral production and clear virus with therapy,<sup>58</sup> but the reason for the discrepant response rates are still unclear.

Preliminary results are available from the first well-controlled clinical trial conducted exclusively in African-Americans infected

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## HOT TOPICS IN HEPATITIS C... (continued from page 3)

with genotype 1. This trial evaluated the safety and efficacy of pegylated-interferon alpha-2a/ribavirin treatment. When compared to the historical control group (genotype 1 patients of similar weight to those in the study), there was a lower rate of SVR, 26% versus 39%, respectively, for the trial participants and controls. The utility of EVR was confirmed in this population; i.e. EVR had a good negative predictive value in both studies involving African-Americans and non-African-Americans. Although no unexpected adverse effects were noted in this trial, African-Americans in this trial developed

more neutropenia than did controls.<sup>59</sup> For unknown reasons, the significance of neutropenia-related treatment was less clinically significant than previously thought, especially in African-Americans.<sup>60</sup> Finally, the study showed that even the patients without an SVR achieved a benefit with respect to hepatic histology.<sup>61</sup> In summary, although the likelihood of an SVR is decreased among African-Americans, are less than those of non-African-Americans, HCV treatment may be beneficial, and ethnicity should not be a criterion on which to base suitability of therapy.

Since there is such a high prevalence of HCV among inmates, the correctional

environment affords an opportunity to diagnose and treat the virus in many of those who are infected. In this month's Spotlight (David Thomas, J.D., MD) discusses the complex medical, legal, and financial issues surrounding HCV treatment in prisons and jails. The absence of any formal guidelines for treatment of HCV in correctional settings remains the most significant roadblock to providing good care to all HCV-infected inmates. The time is ripe for either the Society for Correctional Physicians or the National Commission on Correctional Health Care to develop these much-needed benchmark standards.

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## LETTER FROM THE EDITOR

Dear Correctional Colleagues:

An estimated two million Americans are infected with hepatitis C, which now accounts for more than 40% of chronic liver disease in the U.S. and causes about 10,000 deaths per year. In jails and prisons, the prevalence of HCV is ten to twenty times higher than that in the free population, and an estimated one-third of all HCV-infected Americans have spent time in jail or prison. By all measures, correctional health care systems are bearing the brunt of the responsibility for responding to this nation's HCV epidemic. The financial aspects of this responsibility are overwhelming. Many correctional departments are faced with difficult decisions concerning allocation of inadequate resources.

Essential components of a comprehensive response to HCV should include:

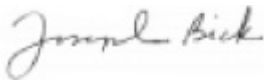
- Education of at-risk persons about the importance of knowing their HCV serostatus
- Harm reduction education of at-risk individuals on how to prevent transmission of the virus
- Vaccination of hepatitis A and B non-immune individuals to protect them from further liver injury
- Alcohol and substance abuse treatment for those in need
- Treatment of those HCV-infected persons who are most likely to benefit

Some correctional health care programs have attempted to implement targeted HCV testing based upon risk assessment histories. As this month's HIV 101 demonstrates, virtually all inmates fall into a risk group for which HCV testing would be recommended (individuals with abnormal alanine aminotransferase levels, those who have had more than 10 lifetime sex partners, those who have had a history of a sexually transmitted disease, injection-drug users, and men who have had sex with men.) Therefore, rather than attempting to coordinate risk-based screening, it is likely to be more cost-effective to simply offer testing for HAV, HBV, and HCV to all individuals whose serostatus is unknown.

This month, Drs. Brian L. Pearlman and Joseph E. Paris provide a review of current HCV issues including early viral response, management of those with persistently normal transaminases, the role of the liver biopsy, management of HIV co-infected persons, and treatment outcomes based upon racial background. In this month's spotlight, Dr. David Thomas reviews HCV treatment from public health, legal, ethical, risk/benefit, and patient responsibility perspectives.

In an effort to reflect the broad spectrum of infectious diseases that impact the correctional setting, **HEPP Report will soon be changing its name to IDCR: Infectious Diseases in Corrections Report.** The print and online versions will continue to provide the same up-to-date information but in a more reader- and user-friendly format. We encourage our readers to share their opinions on both the content and new appearance of the newsletter.

Sincerely,



Joe Bick, MD

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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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## SPOTLIGHT: HCV-To Treat or Not to Treat? That is the Question...

David Thomas\*, MD, J.D., Chair, Department of Surgery, Division of Correctional Medicine, NovaSoutheastern University, College of Osteopathic Medicine

*The difficult question of if and when to treat those infected with Hepatitis C Virus (HCV) can be evaluated from a myriad of perspectives, including public health concerns, risk/benefit in corrections, legal issues, ethical issues, and personal physician-patient responsibility. The discussion that follows reflects the opinions of the author.*

### PUBLIC HEALTH CONCERNS

1. There is no clinical test for HCV disease risk to determine which of the 2.5 to 4 million HCV-infected people in the U.S. will develop liver failure or hepatocellular carcinoma, and therefore, are most in need of treatment.
2. Some of those who are infected may continue to participate in activities that put them at high risk for reinfection.
3. Most individuals (80%) do not develop complications from HCV infection.
4. HCV mutates easily, making it unlikely that a vaccine will be developed in the near future.

Reflecting these concerns, public health resources have been directed to the prevention of infection and disease. The goals of the National Hepatitis C Prevention Strategy are "to lower the incidence of acute hepatitis C in the United States and reduce the disease burden from chronic HCV infection," through:

- 1) Harm reduction programs directed at persons at increased risk for infection to reduce the incidence of new HCV infections;
- 2) Counseling, testing, and medical evaluation and management of infected persons to control HCV-related chronic liver disease;
- 3) Surveillance to evaluate the effectiveness of prevention activities;
- 4) Research aimed at prevention and control of HCV.<sup>1</sup>

### RISK/BENEFIT TO CORRECTIONAL HEALTHCARE SYSTEMS

Up to one third of those with HCV in this country have been incarcerated. Correctional health care workers see two discrete HCV epidemics in prisons and jails—one that is decades old and the other that is comprised of "rapid progressors, i.e. patients who have not been infected for the traditional two to three decades that are required to show problems with this disease."<sup>2</sup> HIV has a clear role in the more rapid progression of HCV disease in co-infected patients. In some prison systems, HCV has become the single largest cause of death,<sup>3</sup> reminiscent of the situation of HIV a decade ago.

Although prisoners have a constitutional right to healthcare, correctional healthcare standards vary significantly from state to state. Some argue that to treat HCV aggressively would draw scarce resources away from other essential correctional healthcare programs. Prison budgets are at the whim of the respective state legislatures (and the U.S. Congress in the federal system), and must compete with all other healthcare initiatives. Few states have appropriated recurring funding for HCV care as they have for the treatment of HIV. Some prison systems have chosen to ignore the issue because with an average length of stay of less than three years,<sup>4</sup> it is unlikely that while incarcerated, a patient with HCV will develop sequelae that will lead to an economic burden for the penal system.

However, some large systems, particularly in the South, have average lengths of stays that approach a decade.<sup>5</sup> These systems are more likely to face the economic consequences of therapeu-

tic nihilism. Paradoxically, most of these systems have been among the least aggressive when it comes to HCV treatment.

### LEGAL ISSUES

There are currently pending lawsuits involving correctional facilities concerning failure to treat HCV;<sup>6</sup> most of these cases are progressing at a very slow pace. It is still unclear whether or not the plaintiffs will prevail in these cases. Last year at the "Management of Hepatitis C in Prisons 2003" meeting (San Antonio, TX), healthcare providers discussed various approaches to developing effective guidelines for HCV treatment in corrections but failed to achieve a definitive consensus on management of this infection.<sup>7</sup> It is therefore unlikely that the courts will intervene and require a particular approach to treatment.

One area in which correctional systems may be vulnerable is by requiring an inmate to have a specific amount of time left on their sentence to be considered for treatment. The justification for this requirement has been that it is necessary to allow the patient to be able to complete a full course of therapy prior to release. In the same way that one cannot withhold cancer treatment because the regimen may not be completed prior to discharge, there is a requirement to initiate treatment for eligible patients and then refer the patient to non-correctional resources once the inmate has reached the end-of-sentence. In this sense, requiring a specific period of time left to serve may be more legally risky than having a policy of not treating HCV at all.

### ETHICAL ISSUES

#### Systems that have policies that do not offer treatment for HCV claim:

1. The natural history of the disease is not well-studied because we have interfered in a disease process before we have truly worked out the natural history;
2. The morbidity of treatment for treatment is very high;
3. Risk of re-infection is very high unless the patient modifies his/her behavior;
4. The long-term effects of treatment and repeated treatment is unknown;
5. Waiting until there are better drugs available is a better course for the protection of our patients;
6. Of the patients who undergo therapy, it is not possible to predict those who will have a long-term benefit and those who will not;
7. Using scarce resources on patients for whom treatment benefits are uncertain leaves fewer resources for other patients who may be in greater need or have better documented response to therapy.

#### Systems with policies for treatment of HCV in place claim:

1. Some people may be cured by treatment;
2. It is unethical to withhold treatment simply because the patient will not comply with the physician's directive (e.g. diabetics who do not remain on a diet);
3. The morbidity of treatment is very low;
4. Cost concerns should not play a role in our decision to advocate for our patients;
5. The correctional setting is the ideal setting in which to reduce the impact of this disease because illicit drug use is probably less than outside the correctional setting and patients generally will complete a regimen.

*Continued on page 7*

## HCV | O | : Prevalence of Hepatitis C Virus in the United States

The following table is adapted from the Centers for Disease Control and Prevention's HCV web-based training course *Hepatitis C: What Clinicians and Other Health Professionals Need to Know*. The text is based upon the Recommendations for Prevention and Control of Hepatitis C Virus (HCV) Infection and HCV-related Chronic Disease\*

\*Centers for Disease Control and Prevention. *MMWR* 1998; 47 (No. RR-19)

**TABLE 1. Estimated average prevalence of hepatitis C virus (HCV) infection in the United States by various characteristics and estimated prevalence of persons with these characteristics in the population.**

	HCV-infection prevalence		Prevalence of persons with characteristic, %
	%	(range, %)	
Persons with hemophilia treated with products made before 1987	87	(74-90)	<0.01
Injecting drug users			
current	79	(72-86)	0.5
history of prior use	No Data	- -	5
Persons with abnormal alanine aminotransferase levels	15	(10-18)	5
Chronic hemodialysis patients	10	(0-64)	0.1
Persons with multiple sex partners (lifetime)			
>50	9	(6-16)	4
10-49	3	(3-4)	22
2-9	2	(1-2)	52
Persons reporting a history of sexually transmitted diseases	6	(1-10)	17
Persons receiving blood transfusions before 1990	6	(5-9)	6
Infants born to infected mothers	5	(0-25)	0.1
Men who have sex with men	4	(2-18)	5
General population	1.8	(1.5-2.3)	NA*
Healthcare workers	1	(1-2)	9
Pregnant women	1	- -	1.5
Military personnel	0.3	(0.2-0.4)	0.5
Volunteer blood donors	0.16	- -	5

\*Not applicable

### SPOTLIGHT...(continued from page 6)

As with most ethical dilemmas, all sides have compelling arguments. In addition, most issues fall into grey areas.

#### PERSONAL PHYSICIAN/PATIENT RESPONSIBILITY

Irrespective of our practice setting, each of us has a responsibility to our individual patients. This responsibility exceeds that of "what is good for most of the population." This unique relationship is one reason why physicians understand the global problem of antibiotic overuse, but continue to excessively prescribe in their own practices. The legal issues notwithstanding, (which in the correctional setting include malpractice and licensure actions, as well as allegations of deliberate indifference and Civil Rights infraction) there is the matter of patient trust. Your patient expects you to do what is best for him or her. Your final decision is based on your background of knowledge, your ethical framework and the interaction between you and your patient at that particular moment in time.

This kind of subjectivity is the nemesis of managed care companies. As physicians, we claim it is part of the art of medicine. It is one of the major reasons there is not uniformity of decision-making among physicians or, more importantly, even for a single physician seeing patients with similar problems. Most of us would comfortably say medicine is an art as well as a science and explain

it that way. Should it not be our unique physician/patient relationship that determines whether to treat or not to treat? After all, it is our name on the prescription and our irrevocable, non-delegable responsibility for the patient.

#### Disclosures:

\*Nothing to disclose.

#### References:

1. National Hepatitis C Prevention Strategy-A Comprehensive Strategy for the Prevention and Control of Hepatitis C Virus Infection and its Consequences. CDC. Summer 2001.
2. Cassidy, WM. *Treating Hepatitis C in Prison. Proceedings of the Management of Hepatitis C in Prisons; 2003. Jan 25-26; San Antonio, Texas.*
3. Personal communication. *Mortality and Morbidity. FL DOC. 2002-2003.*
4. US DOJ National Institute of Corrections Bureau of Justice Statistics-2001; 2002.
5. *Ibid.*
6. Personal communication. Diane Moratti, Deputy Attorney General.
7. *Management of Hepatitis C in Prisons 2003. January 25-26, 2003, San Antonio, Texas.*

## SAVE THE DATES

### National HIV Testing Day (NHTD)

June 27, 2004

Nationwide

Call: (202) 464-5652

Email: [pfeldman@napwa.org](mailto:pfeldman@napwa.org)

Visit: [www.nhtd.org](http://www.nhtd.org)

### 2004 Annual Conference on Antimicrobial Resistance

June 28 - 30, 2004

Bethesda, MD

Call: (301) 656 0003 x19

Fax: (301) 907 0878

Email: [scooper-kerr@nfd.org](mailto:scooper-kerr@nfd.org)

Visit: [www.nfid.org/conferences/resistance04/](http://www.nfid.org/conferences/resistance04/)

### XV International AIDS Conference

July 11 - 16, 2004

Bangkok, Thailand

Visit: [www.aids2004.org/](http://www.aids2004.org/)

### Centerforce 5th Annual Inside/Out Summit

September 11-15, 2004

San Francisco Airport Marriott, Burlingame, CA

Contact: Beth Houghton

Call: 415-456-9980 x124

Visit: [www.centerforce.org/summit](http://www.centerforce.org/summit)

### Infectious Disease Society of America

September 30 - October 3, 2004

Boston, MA

Early preregistration deadline is July 7. Regular Registration

Deadline is August 26.

Visit: [www.idsociety.org](http://www.idsociety.org)

### 44th Annual ICAAC

October 30 - November 2, 2004

Washington, DC

Discounted preregistration

deadline is August 27. Final

Preregistration deadline is

September 24.

Visit: [www.asm.org](http://www.asm.org)

### National Conference on Correctional Health Care

November 13 - 17, 2004

New Orleans, LA

Tel: 773.880.1460

Visit: [www.ncchc.org](http://www.ncchc.org)

## INSIDE NEWS

### FDA Approves Viracept® 625 mg Tablets

The Food and Drug Administration recently approved a new alternate dosing formulation of Viracept® (nelfinavir mesylate). The new formulation of 625 mg reduces the pill burden from five 250 mg tablets bid to two 625 mg tablets bid, potentially facilitating adherence to treatment regimens. It is recommended that Viracept® be taken with a meal. Both retail and correctional pharmacies will have the product in stock as of June 1, 2004.

[www.viracept.com](http://www.viracept.com)

### National HCV/HIV Coinfection Coalition Meets Capitol Hill

*HEPP Report* was among the several HCV/HIV coinfection advocacy groups represented at the National HIV/Hepatitis C Coinfection Coalition's first round of visits to key House and Senate members on April 6 and 7, 2004. At the core of the Coalition's message was increased funding for programs that address the specific needs of coinfecting individuals. Incorporating specific language on HCV/HIV coinfection into the Ryan White Care Act (RWCA) was identified by the Coalition as the most effective vehicle for attaining this goal. The Coalition also advocated for available funding for testing, the implementation of an effective referral system for co-infected patients, and increased funding for ADAPs (AIDS Drug Assistance Programs) so they can incorporate drugs to treat co-infection into their formularies. It is estimated that 30% of the 900,000 HIV-infected individuals are co-infected with HCV, and this percentage is projected to be higher among those who access ADAP funding. Furthermore, it is estimated that 60-90% of those who acquired HIV through intravenous drug use are also HCV-infected. While ADAP does not cover incarcerated patients, the outcome of this issue will certainly have serious implications for the thousands of co-infected inmates released each year. While individual members of Congress supported the Coalition's arguments, the question of finding the money was a recurring issue for some. The outcome of the Coalition's efforts will be decided when RWCA comes up for reauthorization by the U.S. Congress later this year, marking the third round of negotiations for reauthorization of the gov-

ernment's landmark legislation dealing specifically with HIV/AIDS care.

*Julia Noguchi, Managing Editor, HEPP Report*

### HAART with PI Less Likely to Show Liver Fibrosis

In a cross-sectional Spanish study of HIV/HCV coinfecting patients from a cohort of HIV-infected patients, authors found that the use of HAART regimens including nevirapine is associated with an increased degree of liver fibrosis in HIV-infected patients with chronic HCV. Toxicity related to nevirapine can include either an early idiosyncratic reaction or a late-onset cumulative toxicity, both of which might be implicated in the worsening liver fibrosis among HIV-infected patients with chronic HCV. Patients receiving a protease inhibitor (PI) were less likely to show liver fibrosis. The results of this study suggest that HAART including a PI may be more advantageous in terms liver fibrosis progression than nevirapine-based regimens in HCV co-infected persons. The associations found in this study have not been confirmed by randomized prospective studies with hard clinical end-points, such as development of decompensated cirrhosis or death attributable to liver failure. *Macías, Juana et al. AIDS: Volume 18(5) 26 March 2004 pp 767-774.*

### Undetectable HIV Viral Load Slows Liver Disease Progression in HCV-HIV Co-infection

As reported at the European Association for the Study of the Liver Conference (EASL) - Berlin, Germany, April 14-18, 2004, HCV-HIV co-infected patients with suppressed HIV RNA (<400 copies/ml) have a similar rate of fibrosis as HIV-negative patients with HCV. Co-infected patients with uncontrolled HIV viremia have more rapid fibrosis rates than both patients with suppressed HIV RNA and those who are HIV-negative. In co-infection, the rate of fibrosis is independently predicted by log HIV viral load, Ishak necro inflammatory score, and age at HCV infection; and not by CD4 cell count or alcohol use. Study authors suggest that in co-infected persons, consideration should be given to starting HAART earlier (when CD4 cells are <500) to slow HCV-related fibrosis.

*NATAP - [www.natap.org](http://www.natap.org)*

## RESOURCES

### The CDC's Advisory Committee on Immunization Practices (ACIP) revised guidelines for the Prevention and Control of Influenza:

[www.cdc.gov/mmwr/preview/mmwrhtml/rr53e430a1.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/rr53e430a1.htm)

### HIV and Hepatitis PDF reports formatted for print:

[www.hivandhepatitis.com/reports/2003list.html](http://www.hivandhepatitis.com/reports/2003list.html)

### National Institutes of Health Consensus Development Conference Statement - Management of Hepatitis C: June 10-12, 2002:

[http://consensus.nih.gov/cons/116/091202116cdc\\_statement.htm](http://consensus.nih.gov/cons/116/091202116cdc_statement.htm)

### National Center for Infectious Diseases, Viral Hepatitis C

[www.cdc.gov/ncidod/diseases/hepatitis/c/plan/Implement.htm](http://www.cdc.gov/ncidod/diseases/hepatitis/c/plan/Implement.htm)

**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 December 31, 2004. The estimated time for completion of this activity is one hour and there is no fee for participation.

1. The percentage of chronic liver disease in the U.S. that can be attributed to hepatitis C virus (HCV) is approximately:
  - a) 20
  - b) 40
  - c) 60
  - d) 80
  
2. Sustained virologic response (SVR) is defined as:
  - a) undetectable HCV RNA 24 weeks after completion of therapy
  - b) undetectable HCV RNA 12 weeks after completion of therapy
  - c) a decline in the HCV viral load of at least 2 log from baseline after 12 of therapy
  - d) a decline in the HCV viral load of at least 2 log from baseline after 24 of therapy
  
3. Which statement best supports the argument that an early viral response (EVR) should be used as an individualized tool rather than a hard and fast rule for terminating therapy:
  - a) A recent economic study has shown that the use of EVR decreased costs by 45%.
  - b) Patients not achieving an EVR have almost no chance of achieving an SVR.
  - c) Some patients may obtain histologic benefit from HCV therapy even if they do not reach early or sustained virologic responses.
  - d) None of the above
  
4. Which of the following statements is supported by the literature:
  - a) Among those who are HIV-infected, the rate of progression of HCV-related fibrosis is slowed.
  - b) As compared to those who are not infected with HCV, HIV-infected persons who are also HCV-infected experience a markedly increased rate of decline of CD4 cells.
  - c) Among those who are HIV-infected, the rate of progression of HCV related fibrosis is accelerated.
  - d) Among those who are HCV-infected, co-infection with HIV markedly decreases the likelihood of achieving an EVR and a SVR.

5. The ethnic group that has the highest rate of HCV genotype 1 infection is:
  - a) Hispanics
  - b) Caucasians
  - c) Asian/Pacific Islanders
  - d) African-Americans
  
6. Policies and procedures for HCV care and treatment in the correctional setting varies significantly from state to state. True or False.
  - a) True
  - b) False

**HEPP REPORT 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
Inside 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 HEPP Report helps you in your work? Why or why not?
  
3. What future topics should HEPP Report address?
  
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