

HEPATITIS C & INCARCERATED POPULATIONS

THE NEXT WAVE
FOR
CORRECTIONAL
HEALTH INITIATIVES



ASSOCIATION OF STATE AND TERRITORIAL HEALTH OFFICIALS



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EXECUTIVE SUMMARY

Increased funding is needed to enable states to address the growing epidemic of hepatitis C (HCV) among incarcerated populations. In fiscal year 2000, CDC received \$12.9 million for its national plan for the prevention and control of HCV, but virtually none of this funding is directed toward efforts to educate, screen, or treat injection drug users or inmates with HCV infection. Few states have appropriated funds for HCV although many states have explored the need for funding.

Infection with the hepatitis C virus (HCV) has reached epidemic proportions among those persons detained in correctional facilities.* An estimated 1.4 million HCV-infected persons pass through the correctional system each year. Studies of inmate populations in several states found HCV infection rates ranging from 20 to 40 percent, well above the 2 percent infection rate in the general U.S. population.

HCV is a blood-borne viral infection once commonly transmitted through blood transfusions but now spread primarily through intravenous drug use and the sharing of contaminated needles. Today, 60 percent of HCV infections are attributed to illegal intravenous drug use and that percentage is expected to rise since 9 out of 10 injection drug users may become infected within five years after initiating injection drug use. This transmission trend is especially problematic in the nation's correctional facilities. Twenty-five percent of state inmate populations and 14 percent of federal prisoners have histories of injection drug use and 80 percent of all inmates are implicated in crimes linked to drug and alcohol abuse.

* For the purpose of this paper, *correctional facilities*, *corrections*, and the term *correctional system* refers to short- and long-term facilities including detention centers, jails, prisons, and houses of correction.

HCV is an insidious virus. Symptoms can remain hidden for 15 to 20 years after infection. Approximately 15 percent of those who test positive for HCV eventually clear the virus without treatment, however, the remaining 85 percent develop chronic infections and 70 percent of these individuals develop chronic liver disease.

The high rate of HCV among incarcerated populations has highlighted a number of medical and public health-related policy issues for which there are no definitive answers.

Among those issues are:

- There are no specific federal guidelines for screening or treating inmates who may be at risk or infected with HCV so what policy should correctional facilities follow?
- Who pays the tab for the HCV screening and treatment costs for inmates (treatment costs approximately \$14,000 per person, per year)?
- While the cost of HCV treatment is high, a number of limiting factors such as length of sentence result in very few inmates being offered treatment. Is this situation the best public health approach to disease control?
- The majority of inmates are released within three years and return to communities where in some cases, the cost for their medical treatment falls to public-sector programs. What policies and funding streams are in place to pay for HCV treatment for clients who are indigent?

The Centers for Disease Control and Prevention (CDC) and the National Institutes of Health (NIH) have published similar recommendations for the prevention and control of HCV but these recommendations do not address many of the HCV issues specific to incarcerated populations. The absence of policies and guidelines designed to address the issues pertaining to incarcerated populations leaves many issues unanswered and unresolved.

The majority of incarcerated individuals at high risk for HCV fall into categories where the CDC guidelines recommend testing. Those guidelines recommend testing individuals engaged in risky behaviors that may put them at risk for human immunodeficiency virus (HIV) or where there may be some benefit to testing, such as persons with any history of injection drug use.¹ Few inmates know their HCV status prior to incarceration because most have poor access to health care, making it unlikely that they have been tested for HCV. Therefore it may make sense for them to be tested in a correctional facility. And, while it may seem appropriate for corrections to routinely screen inmates for HCV due to the prevalence of injection drug use, most do not.² Treatment of an inmate's HCV infection may not be the

priority health concern if the inmate presents multiple morbidities such as co-infection with HIV. Moreover, because treatment options are limited due to severe side effects associated with the treatment, and limited effectiveness of the treatment, correctional doctors may choose not to test when there is no clear course of action for those testing positive. Compounding the challenges associated with treatment is the fact that many correctional facilities do not have the financial resources to test inmates for HCV.

A course of treatment lasts a year and often correctional facility doctors feel it is inappropriate to start a treatment the patient cannot finish. A consequence of this approach is that many inmates with lesser sentences do not have access to treatments that take extended periods of time. This type of treatment protocol significantly decreases the number of eligible individuals and the treatment costs.

Despite the limitations and shortcomings associated with HCV screening and treatment, there are many potentially successful interventions that could be undertaken that could make a difference. Additional educational efforts regarding risk factors for HCV infection and preventative strategies are urgently needed including outreach efforts targeted to at-risk populations in the community. Educational efforts should include information on alcohol abstinence as alcohol can lead to cirrhosis of the liver in persons infected with HCV. Education is currently the most effective means of preventing HCV infection because there is no vaccine and symptoms do not develop for decades, making it common for persons to be unaware of their infection. Despite the limitations of treatment, specific protocols need to be developed and explored so that there is a foundation of policy on which to formulate decisions about who to treat and when.

In response to these issues, the Association of State and Territorial Health Officials (ASTHO) prepared this paper. This report makes the following recommendations:

- The Centers for Disease Control and Prevention (CDC) should develop specific guidelines for the prevention and control of HCV in incarcerated populations.
- Funding should be made available for community interventions addressing HCV prevention, screening, diagnosis, and treatment of at-risk populations prior to incarceration.
- States should consider integrating viral hepatitis into existing HIV/AIDS prevention, screening, and treatment programs since HIV positive persons are also at high risk of infection for HCV and another strain of hepatitis—hepatitis B. Similar efforts should be integrated into family planning and STD clinics.

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Compounding the challenges associated with treatment is the fact that many correctional facilities do not have the financial resources to test inmates for HCV.

Policy solutions and new interventions are urgently needed to address the growing public health threat of hepatitis C.

- Public health officials should acknowledge corrections' role in community health in light of the increasing numbers of incarcerated persons at risk of illness acquisition because of risk factors such as poverty, substance abuse, and poor access to health care.
- When addressing HCV among inmates, intervention strategies should involve collaboration between corrections and public health and other stakeholders such as universities and community-based organizations. Previous collaborations have demonstrated the feasibility and benefits of such strategies and can serve as program models.
- States should be enlisted to support correctional agencies in the development and implementation of guidelines that address HCV infection among incarcerated patients.
- Based on existing data of HCV prevalence rates among inmates, states should assume a high HCV infection rate among incarcerated populations, especially if their correctional facilities house a high number of injection drug users.
- The federal government should lift the restriction on the use of federal funds for needle exchange services to allow interested states and localities the financial flexibility to support successful prevention and treatment initiatives within their jurisdiction.
- As a possible public health strategy to reduce the transmission of injection-related blood-borne infections, states should explore the removal of legal barriers such as drug paraphernalia and prescription laws, which criminalize the distribution and/or possession of needles and syringes.
- Primary drug prevention is a key strategy for preventing HCV and other blood-borne infections in injection drug users. Thus, injection drug users should be referred to the most appropriate source for counseling and treatment to eliminate or reduce their use of illicit drugs and injection equipment.
- Strategies that address HCV and incarcerated populations must recognize and address factors that can modify the approach to care (i.e., overcrowded, overstressed correctional health care systems, questionable quality of care, lack of continuity of care, and inmate characteristics including co-morbid conditions). This environment differs dramatically from customary healthcare settings.

In closing, trends in drug enforcement and incarceration of drug users will continue to increase the number of HCV-infected inmates. Policy solutions and new interventions are urgently needed to address this growing public health threat.

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INTRODUCTION AND BACKGROUND

Incarcerated populations have dramatically higher rates of hepatitis C (HCV) than the U.S. population. It has been estimated that 1.4 million HCV-infected persons pass through corrections each year, representing close to a third of all HCV cases in the United States. Random seroprevalence studies of state correctional facilities in California, Virginia, Connecticut, Maryland, and Texas have found infection rates ranging from 29 to 42 percent compared to a 2 percent positivity rate in the total U.S. population.¹ A recent study (yet to be published) conducted by the Riverside Department of Health in California, found an HCV prevalence rate of 25 percent among jail inmates.² It has been noted that “many correctional providers would probably consider the management of HCV and HCV/HIV co-infection in the correctional setting to be their biggest challenge.”³ Many health department officials (including specific health department staff members from California, Georgia, Massachusetts, and New York) also rank HCV among the inmates' most pressing health problems.^{4,2}

HCV is a blood-borne viral infection. Approximately 15 percent of those who test positive for HCV eventually clear the virus without treatment. However, 85 percent develop chronic infection and 70 percent develop chronic liver disease. There is no vaccine for HCV. Education regarding risk factors for HCV infection and preventative strategies are currently the most effective means of preventing HCV infection. Approximately 20 percent of persons

with chronic HCV develop cirrhosis, but the progression takes 10 to 20 years, and after 20 to 40 years some patients develop liver cancer. HCV is the leading cause for liver transplants in the United States. Because HCV can take decades to reach the symptomatic stages, it is not uncommon for persons to be unaware of their infection.

This illness is common among injection drug users, primarily contracted through sharing contaminated needles. Sixty percent of HCV infections are attributed to injection drug use and approximately 90 percent of injection drug users may become infected within five years after initiating injection drug use.⁵ Recent trends toward increasing drug enforcement efforts and higher numbers of drug users incarcerated will increase the number of HCV-infected inmates. Recent studies estimate that close to a quarter of state inmates and 14 percent of federal inmates have histories of injection drug use.⁶

Prior to 1992, the most common route of infection was via blood transfusions. A test to screen donor blood for HCV was developed in 1990, and improved in 1992, making HCV no longer a significant threat to transfusion recipients. HCV can also be contracted through other behaviors, such as sexual contact, although not very efficiently. There are also suggestions that snorting cocaine through a straw can be a means for contracting HCV. Another possible mode of transmission of HCV relevant to incarcerated populations is tattooing and piercing in unregulated settings with high concentrations of HCV-infected individuals, most likely via transfer of small amounts of blood. Approximately 10 percent of HCV-infected individuals have an unknown cause of infection.⁷ Nevertheless, much remains to be learned about HCV transmission.

Adding to the challenge of addressing HCV is the fact that inmates may present with multiple morbidities including chronic physical conditions such as hypertension, seizures, and diabetes. In addition, inmates have poor access to health care; and often have experienced high levels of trauma (such as physical abuse and violence) that exacerbate mental and physical health problems.⁸ Eighty percent of HIV-positive inmates are co-infected with HCV and HIV can accelerate the progression of HCV.¹ While the opposite is not true—HCV does not accelerate HIV/AIDS—it does cause liver damage that may compromise hepatic metabolism of anti-HIV drugs. As the survival time for individuals with HIV infection improves through therapeutic advancements, the possibility of HCV infection and/or chronic manifestations of HCV also increase. Hepatitis C is of particular concern, however, because, unlike hepatitis B, no vaccine is currently

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available. Moreover a significant number of HCV-infected inmates are also infected with hepatitis B.*

Currently, the standard treatment for HCV is a combination of interferon and ribavirin. This treatment approach reduces HCV viral loads to undetectable levels in about 30 percent of cases, with the most common type of HCV in the U.S., but does not produce substantial benefits for the remaining 70 percent.¹ There may, however, be intermediate benefits. Alan Brownstein, president of the New York-based American Liver Foundation, reported that treatment can delay liver damage and the necessity for liver transplantation.⁹

It is important to closely monitor patients on HCV therapy. Treatment is usually accompanied by side effects such as flu-like symptoms, fatigue, bone marrow suppression, depression, other neuropsychiatric effects, and hemolytic anemia. Factors such as depression, alcohol or drug use, cirrhosis, AIDS, pregnancy, and age (under 18 or over 65 years) may preclude an HCV-infected patient from treatment eligibility or dissuade others from treatment, according to the Centers for Disease Control and Prevention (CDC) and the National Institutes of Health (NIH).^{7,10}

On occasion, paradoxical worsening of HCV infection occurs with treatment. In 10 to 40 percent of cases, interferon doses have to be reduced, and treatment is suspended altogether in 5 to 15 percent of patients.⁷

Many correctional officials fear the potential financial strain HCV will impose on their agencies. HCV treatment costs up to \$14,000 a year per inmate. Projections based on the cost of treatment and the number of inmates infected indicate that treating HCV cases could exhaust correctional funding. For example, approximately 15,000 HCV-infected inmates were identified in Texas. The cost of treating all of these inmates surpasses the correctional system's entire health care budget.¹ However, many of these projections do not take into account the actual numbers of inmates who are eligible for treatment and are willing to undergo the treatment. A number of factors affect treatment eligibility (see *There is Limited Treatment Available*). When those limiting factors are incorporated, the number of eligible inmates may decrease significantly, and so will the costs. Dr. Rob Lyerla, of the CDC

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* Many inmates may have been infected with hepatitis B in the past because it is less likely to be chronic, but far fewer are likely to be currently infected. The estimates are 1-2 percent. But hepatitis B is highly contagious, much more than HCV. [Personal communication Dr. Rob Lyerla, CDC, Hepatitis Branch.]

Hepatitis Branch feels that while many institutions are afraid of the costs of treating HCV, an examination of the numbers of inmates who will actually be eligible to receive treatment, will indicate that the cost is much more manageable than expected.¹¹ However, delaying intervention may have cost implications for the future. For example, interferon therapy is associated with \$400 to \$3,500 in savings over a patient's lifetime in those patients who respond to therapy.¹²

Regardless of treatment eligibility, the sheer number of inmates infected can provide an indication of the numbers that will be in need of services from public-sector health programs in the future. HCV-infected persons are often asymptomatic for decades, and on average, persons are incarcerated in prisons for less than three years and have even shorter stays in jails.¹³ Following incarceration, many individuals are likely to be uninsured and thus enroll in Medicaid, visit public health clinics and emergency rooms when they become ill. The majority of infected persons will never develop serious problems even without treatment. However, for the small segment who do, while viewed as a corrections responsibility while incarcerated, unless the sentence is life without probation or parole, care of this segment will fall on public-sector health programs in the future as they return to the community.

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IDENTIFYING THE PROBLEMS OF HCV IN CORRECTIONS

The prevalence of viral hepatitis among the incarcerated population is disproportionately high because of the demographics of the populations behind bars. U.S. correctional facilities are full of individuals charged with or convicted of drug-related crimes. Eighty percent of America's inmates have been implicated in crimes linked to drug and alcohol abuse and addiction. From 1980 to 1995, drug law violators accounted for 30 percent of the total increase in state prison populations while the proportion of offenders in prisons convicted of drug law violations increased from 6 to 23 percent.⁶ Many of these individuals are now experiencing the consequences associated with a substance abuse disorder along with overall poor health. From a public health perspective, this has serious implications for infectious disease control and prevention for the community when these inmates are eventually released. This is of particular concern in terms of the short stays associated with jails. In this setting, a large number of individuals are processed through and released from the jail with untreated infectious diseases that may spread to others in the community.

When identifying the problems of infectious disease diagnosis and treatment among the incarcerated population there must be recognition that the realities of the correctional environment differ dramatically from customary health care settings. Overcrowded, stressed correctional health care systems, variable quality of care, and inmate characteristics that may include co-morbid conditions (such as substance abuse, HIV, and other illnesses), are among the many issues that play a key role in the manifestation of infectious diseases in corrections and disease control strategies. The following sections address the specifics of HCV within the incarceration environment.

MANY INMATES ARE UNAWARE THEY ARE HCV INFECTED

A majority of incarcerated individuals are at high risk for HCV and fall into the categories where CDC recommends testing or where testing may be beneficial.⁷ For example, CDC strongly recommends counseling and testing persons with any history of injection drug use. However, CDC reports that currently, there are insufficient data to recommend routine testing of noninjection drug users, including intranasal cocaine users, persons with multiple sex partners or sexually transmitted diseases (STDs), and long-term steady partners of persons with HCV infection or individuals who have undergone tattoos or piercing.

Many inmates have poor access to health care outside correctional facilities, which makes it unlikely that they are being tested for HCV on their own. While it may seem legitimate for corrections to routinely screen inmates, most do not.¹⁴ Many facilities do not have the resources to test inmates. Others may simply not want to test for HCV when there is no clear plan of action for those with a positive test. In addition, many inmates are in correctional settings for such a short time, that testing doesn't seem advantageous. Dr. David Thomas of Johns Hopkins University and a medical expert on HCV and corrections reported that even if correctional facilities offered voluntary HCV testing, he expected that many inmates would not opt to be tested. He stated that inmates may want to limit their involvement with correctional systems, including correctional health care services. It is possible that inmates fear that identified health problems could prolong their incarceration, lead to being quarantined, or lead to a drug test or other drug use disclosure. Further, many inmates are unaware of the dangers of HCV and thus would not necessarily seek testing.

Even if inmates are tested for HCV, one cannot necessarily infer that the inmates will be informed of the results. There are reports of inmates who were screened for HCV but not informed of the results—or notified that they were tested—until years later.^{15,16,17,18} These instances include individuals incarcerated for long periods of time and readily available for results. The magnitude and reasons for these occurrences is unknown. Dr. Thomas speculated that a physician may not think a HCV diagnosis a priority in light of other co-morbid conditions.¹⁹

But, counseling on the hazards of alcohol and its detrimental effect on the weakened livers of HCV-infected persons is important for HCV-infected inmates. Dr. Thomas noted that the potential benefit of basic education on alcohol should not be underestimated, even among drug addicts. In his experience of working with drug abusers, including heroin

abusers, he found that those who are unable to stop using drugs are able to abstain from alcohol when informed of the dangers.¹⁹

THERE IS LIMITED TREATMENT AVAILABLE FOR INFECTED INMATES

The available treatment for HCV—interferon and ribavirin—can only be administered to a subgroup of patients. It has side effects that have been described by some as worse than the symptoms of the disease itself. Moreover, treatment must be administered for a year, and the treatment itself has variable effectiveness. In addition, due to co-morbid conditions, undergoing aggressive HCV treatment may not be a medical priority.

Because treatment must be administered for a year, an individual's length of sentence is a factor in treatment eligibility—often correctional doctors feel it is inappropriate to start a treatment the patient cannot finish. In general, a remaining sentence of a year or longer is often required for an inmate to be eligible for HCV treatment in a correctional facility. The National Commission on Correctional Health Care (NCCHC) recommends that long-term incarceration institutions should provide HCV treatment for inmates, but there is ambiguity regarding inmates with shorter incarceration stays.²⁰ A consequence is that many inmates (often those with lesser sentences) do not have access to treatments that take extended periods of time. And sometimes treatment is denied to persons incarcerated longer than the eligibility cut off because they are up for probation or parole within the designated time but denied release.

HCV treatment is provided in Rhode Island, which has been hailed as one of the more progressive states in treating HCV-infected inmates. However, 60 percent of inmates are ineligible because they have sentences of less than 15 months (the minimum stay for treatment), 30 percent decline treatment, and 9 percent are denied treatment primarily because of drug, alcohol, or medical problems. Consequently, only 1 percent get treated.³ The combination of a drug regimen with less than optimal efficacy and many side effects, plus the unique characteristics of inmate/patient populations, makes it difficult to provide treatment to even those eligible. Because the doctor-patient relationship will terminate once the inmate is released, treatment continuity is difficult to ensure.

Despite all the arguments against treatment, restricted access to treatment can present some challenges. Inmates sentenced to two to five years may suffer the consequences of untreated HCV disease if they are not afforded care. Treating HCV/HIV co-infections is

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pertinent since HIV hastens the progression of HCV, and when one progresses from HIV to AIDS he/she is no longer eligible for HCV treatment. Still, though treatment efficacy is lower than desired, chances for recovery may be better with treatment than without. Further, a study demonstrated that six months* of interferon therapy resulted in a savings of \$400 to \$3,500 over a lifetime and that treatment had a similar cost effectiveness as other diagnostic tools such as stool guaiac testing, pneumococcal vaccination, coronary bypass surgery, and mammography.¹²

MANY HCV-INFECTED INMATES NEED SUBSTANCE ABUSE TREATMENT

Alcohol and drug use can increase the risk of contracting viral hepatitis, be detrimental to the health of those infected, and make persons ineligible for treatment. In addition, even if an HCV-infected inmate clears the infection, if they continue to inject drugs or participate in other risk factors they can be re-infected with HCV or they may be infected with other bloodborne pathogens. Injection drug use and needle sharing also occurs within correctional facilities.^{21,22}

Comprehensive inmate substance abuse treatment programs have been noted to reduce “recidivism rates, the incidence of drug relapse, and even play a critical role in preventing disease transmission inside and outside of correctional institutions.”¹³ Yet over the years, the opportunity for addiction treatment has become less available in terms of treatment slots per inmate, and much of what is provided is short term and insufficient to address the magnitude of inmates’ addictions and related problems.²¹ While a recent estimate found that the vast majority, 70 to 85 percent, of state inmates were expected to need some level of substance abuse treatment, only a small minority, 13 percent, received treatment.⁶ Furthermore, according to Fred Johnson, the project coordinator for the Whitman-Walker Clinic Proud and Positive Project in Washington D.C., some treatment programs offered in corrections are viewed as punitive by inmates, and inmates experience the feeling of being punished for addiction beyond what the normal incarceration incurs. In turn, inmates may decline the opportunity when offered or be resistant when forced.¹⁵

* If after six months the patient has not improved, they are taken off treatment.

TRANSMISSION OF HCV DURING INCARCERATION

There is concern about HCV transmission within correctional facilities among inmates and among correctional staff members, hence creating an occupational hazard. There are some suggestions that the correctional facility environment may be associated with HCV and other forms of viral hepatitis transmission. According to a Canadian study, time spent in a prison or juvenile detention center was predictive of HCV infection independent of previous injection drug use, previous blood transfusion, sexual contact with an injection drug user, and tattooing.²³ While it is very possible that unreported drug use accounted for this finding, the study authors noted it is also possible that the incarceration environment promotes HCV transmission.

Speculative causes for HCV transmission in facilities include sharing items (such as razors), tattooing, consensual sex, rape, violence between inmates and correctional staff, and overcrowding. Often in corrections, inmates share such personal items as razors.¹⁵ Many inmates participate in consensual and non-consensual sex with other inmates and correctional staff, and because condoms and latex barriers are scarcely available, inmates are unable to protect themselves from infections like HCV and HIV.²² Dr. David Thomas of Johns Hopkins University believes HCV is sometimes transmitted via tattooing, which is prevalent and largely gang related.¹⁹ Tattooing is not sanctioned in corrections and thus it occurs in a highly unregulated manner. But since tattoos represent gang affiliation, they may be viewed as essential for survival within this environment, and because there may be strong adherence to these practices, changing such behavior is complex. Recently, there was documentation of the first case of HCV transmission resulting from a bloody fight where those involved shared a handkerchief to wipe the blood.²⁴

Additionally, it has been stated that “health services delivery within prisons has been increasingly strained during the last decade primarily as a result of (a) more inmates coming into prisons, and (b) new inmates arriving less healthy than their counterparts a decade ago.”²⁵ Correctional agencies were especially unprepared for HCV and the exploding need for gastrointestinal specialists.

A study of state prisons also found health professionals at risk for blood-borne infections.²⁶ Close to a third of workers reported not wearing protective eyewear, masks or clothing when treating inmates. Within a six-month period, 28 correctional health workers, 13 percent of those interviewed, reported 73 exposures to blood. It was noted that “unlike

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community health-care settings, security-related concerns always have priority and this may impede health-care-workers' ability to not only deliver health care but to do it safely." While there are many correctional physicians who are very dedicated to the population, correctional medicine is not necessarily viewed as a desirable medical practice option and it may be difficult to attract high-quality health professionals to this field.

LACK OF HCV GUIDELINES AND INACTIVITY IN THE FACE OF AMBIGUITY

There is a scarcity of guidance for management of HCV infection among incarcerated persons. CDC and NIH published similar recommendations for the prevention and control of HCV but these recommendations have a paucity of directives specific to jails and prisons.^{7,10} NCCHC adopted a position statement entitled the *Management of HCV in Correctional Institutions*. In 1999 it noted that there was no national policy on the screening or treatment of HCV in federal and state correctional systems.²⁰

There are many unique characteristics of correctional health care and inmate/patient populations which leaves much unanswered when looking solely at guidelines intended for the general population. The absence of policies and guidelines makes it unclear who is responsible for providing services. Optimal management strategies for patients with HCV infection continue to evolve. Many correctional institutions (as well as HCV advocates and infected individuals) struggle with what to do and feel hampered in the face of this ambiguity.

The development of HCV guidelines and legislation, especially those specified for incarcerated populations, will shape the corrections and public health response. In the spring of 2001, CDC plans to convene a panel of experts in order to develop recommendations for the management of HCV infections in correctional facilities. Dr. Anthony Swetz, Director of Inmate Health Care for the Maryland Department of Public Safety and Correctional Services (DPSCS), reported that correctional facilities nationwide are motivated to follow CDC and NIH guidelines. Further, they are aware of the potential legal consequences when correctional agencies deviate from guidelines.²⁷ Jackie Walker of the American Civil Liberties Union, National Prison Project reported that litigation often uses federal guidelines as the standard of care.²⁸ However, she reports that if guidelines are not specific, corrections can have significant latitude on whether or not to implement programs and may opt not to provide services.

It should also be noted that the feasibility and timeframe in which corrections and public health implement HCV management guidelines are related to the funding provided.

Corrections' inability to implement guidelines can lead to legal repercussions that may in turn ensure that guidelines are followed, or may in turn lead to financial repercussions, the termination of correctional staff, and the debilitation of the correctional infrastructure in general. If the ultimate goal is to improve inmate health care, then funding should accompany guidelines to ensure that systems are capable of actualizing recommendations.

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DEBATING PUBLIC HEALTH AND CORRECTIONS COLLABORATION

This paper has clearly illustrated that correctional facilities, both long-term and short-term offer significant opportunities to reach inmate populations through important health interventions. The emergence of HCV in correctional settings provides an opportunity to address and improve the health of the incarcerated. This also pertains to HIV, hepatitis B, and other infectious diseases. The unique circumstances of the incarceration environment make it possible to provide health care, prevention, and education to individuals who have been beyond reach and resistant to interventions and services in the past. More effective viral hepatitis and HIV prevention and treatment programs for the incarcerated will have strong public health benefits, because the vast majority of inmates return to the community.

There are even greater benefits to interventions when public health collaborates with corrections. Collaboration between public health departments and corrections departments can provide much-needed documentation of the burden of disease among inmates, which can be used to establish funding priorities. This can also lead to expansion of public health services in correctional settings

Despite these benefits, HCV presents some challenges that must be further explored before recommendations are formulated. Public health and public safety have historically seemed to develop as independent agencies. Dr. Rob Lyerla, of the Hepatitis Branch within CDC noted however, that there is an overwhelming overlap of populations served. With the expanding number of persons incarcerated and the vast number of inmates acquiring illness, corrections is recognizing its role as a public health care institution.

Yet, some argue that inmate health is a correctional responsibility that corrections is

funded and mandated to provide. Further, some health departments fear (especially without supplemental funds or reimbursement from corrections) that becoming involved with corrections could drain their already limited funds and thus threaten other projects.

It is important to note that when discussing objections to public health involvement with HCV-infected inmates it is vital to differentiate between resistance to provision of expensive interferon and ribavirin treatment with debatable benefits versus resistance toward any involvement in diagnosis or treatment of HCV infection. The issues, controversy, and perhaps exaggerated fears around the cost of treatment often dominate discussions about HCV and inmates. Creative strategies can be implemented that are at low cost to both corrections and public health and within traditional public health parameters such as surveillance, counseling, education, and provision of discharge referrals. While a public health official may be resistant to implementing screening to identify treatment candidates, the same person might be willing to implement screening to give priority for substance abuse treatment or hepatitis B vaccinations. In efforts to garner support for HCV intervention, it is important that the issues around treatment be separated from other activities and discussed individually.

There are also many supporting arguments that HCV among incarcerated populations is an issue that is both relevant and impacts public health and warrants collaboration. A resolution by the National Association of County and City Health Officials (NACCHO) states its intent to work with state health officials and CDC to develop a plan of action for local health departments and states to respond to HCV.²⁹ NACCHO also stated that there should be collaboration with correctional institutions, and corrections were highlighted as a constructive target for HCV intervention. Other institutions, including CDC, support the collaboration.¹² Further, a National Institute of Justice (NIJ) report, authored by Theodore Hammett and colleagues, stated “because prisoners are part of the community and because correctional health and public health are increasingly intertwined, health care and disease prevention in correctional facilities should be based on the collaborative efforts of correctional, public health, and community-based health care and social service organizations.”²¹ The public health community has a vested interest in correctional health and HCV because the cost consequences of strategies in corrections are absorbed by public-sector health programs which may provide care for infected inmates once they are released. Moreover, as the majority of inmates are released and return to the community, those communities will be impacted by the released inmates’ illnesses. This issue is even more exacerbated in jails due to a constant infusion of individuals and short period of detention.

Creative strategies can be implemented that are at low cost to both corrections and public health and reside within traditional public health parameters such as surveillance, counseling, education, and provision of discharge referrals.

EXAMPLES OF STATES' COLLABORATION INITIATIVES

COLLABORATIONS TO ADDRESS HIV/AIDS

In some places, the groundwork for public health and correctional collaboration on HCV infection issues is in place and joint efforts have begun. In addition to the Rhode Island program already mentioned, a selected survey conducted by ASTHO revealed that Massachusetts, Maryland, and Texas are among the states where collaborative efforts have begun to address infectious diseases (such as HIV, hepatitis, and tuberculosis) in corrections. There have also been conversations about initiating such collaborative efforts in Florida and Georgia. In New York, these matters are also being looked at, perhaps instigated by health department staff responding to inmates' written requests for HCV educational information. Further, California's Department of Health Services has made inquiries with correctional systems to discuss collaboration and has conducted HCV surveillance and needs assessment within corrections.⁴

The Massachusetts Department of Public Health and county sheriffs' departments work together to provide a comprehensive HIV/AIDS program in county correctional facilities in conjunction with community-based organizations (CBOs).³⁰ Facility staff and subcontracted infectious disease specialists provide HIV testing and counseling, primary care, and clinical case management. County correctional facilities provide aftercare/transitional planning prior to an inmate's release, and the CBOs are also involved in this process. The program also has a strong peer-education component. Some officials have noted that there has been an increase in inmates requesting HIV testing, counseling, and other services, that can be attributed to the program's success. Massachusetts is looking for ways to integrate HCV into its successful HIV program. The state health department has also provided HCV services to

incarcerated populations with regard to supporting screening efforts, health care and treatment, education, surveillance, and advocacy.⁴ In addition, the Statewide Hepatitis C Advisory Committee has put incarcerated individuals and substance users in treatment as first priorities for programming on the basis of levels of infection and accessibility.

The Maryland Department of Corrections has established a relationship with Johns Hopkins University that helped bridge a relationship with the health department, which had good relations with the university. The combined efforts of these agencies are highly valuable. In Maryland, high volumes of people pass through the criminal justice system each year and these persons are streamlined through a very focused pathway. All persons arrested in Baltimore City are processed through a single booking facility. According to Dr. Anthony Swetz, medical director, Maryland DPSCS, up to 400 people can be processed at the Baltimore facility a day.²⁷ This centralized processing of persons at high risk for infectious diseases is an optimal point for public health intervention. Infectious disease health initiatives (such as a syphilis campaign) conducted in Baltimore have had beneficial outcomes (contributing to a significant decline in syphilis rates statewide). All receptions to the State Correctional System are processed through single facilities, one each for men and women. These reception facilities focus as points for health intervention as well. Currently, Maryland is in the process of trying to acquire funding to establish viral hepatitis initiatives.

In Texas, Dr. David Smith chairs the Texas Correctional Managed Health Care Advisory Committee. Formerly, Dr. Smith was the commissioner of the Texas Department of Health, demonstrating the commonality and applicability of both fields. Dr. Smith is currently president of the Texas Tech University Health Sciences Center. Texas Tech provides medical services to over 35,000 inmates. Dr. Smith was successful in seeking legislative support for implementation of hepatitis B vaccination programs in corrections and screens and treats inmates for HCV (under certain circumstances). However, while Texas has been hailed as among the more progressive states with regard to addressing HCV, Dr. Smith reported that a lot more needs to be done.³¹

STRATEGIES TO BUILD COLLABORATION AND HCV INTERVENTIONS

Collaborations between public health and corrections often integrate CBOs and universities. Models developed around HIV/AIDS can be adapted to address HCV and other forms of viral hepatitis, and one promising step might be to integrate

Integrating viral hepatitis vaccinations and prevention services into existing HIV programs could also be an essential step in prevention and control of all of these diseases.

these programs. Integrating viral hepatitis vaccinations and prevention services into existing HIV programs could also be an essential step in prevention and control of all of these diseases. Integration should include incorporating hepatitis counseling, testing, and referral services into existing HIV and STD prevention and treatment services. While little structure has been actualized regarding HCV, partly because the disease is so new, many conversations are already taking place and some correctional health officials anticipate that HCV is the next wave for correctional health initiatives.

Professionals from public health, corrections, and community-based organizations have offered ideas about program components needed to address HCV, drawing on their experience working with inmates and infectious diseases. Collaboration potential is largely dependent on individual correctional systems administration and infrastructure. Paul Loberti, of the Rhode Island Health Department, recommends that health officials first assess corrections' infrastructure, existing relationships, facility capabilities, and available resources. He then suggests officials determine from the correctional perspective what is available to do and what auxiliary services public health can provide.

Some challenges may exist around territorial feelings from both institutions. Dr. Gary Feldman, director of Public Health in Riverside County, California, reported candidly that an "invitation" from corrections is what can best facilitate collaboration.² Jackie Walker of the American Civil Liberties Union, National Prison Project reported public health officials will need to foster trust with corrections in order for collaboration to be successful.²⁸ In addition, while top correctional officials may initiate and approve of various programs, correctional officers and other persons on staff may be resistant and make the actual delivery of services difficult. Educational outreach and relationship building may also be needed to begin a dialogue with the broader staff members of corrections. Loberti also cautions that public health officials must take into account corrections' needs and considerations.

Some feel that in order to initiate HCV strategies, need-assessment data on HCV is required. Dr. Smith reported that the lack of sero-prevalence data and treatment efficacy studies make it hard to influence funders to support HCV screening and other interventions.³¹ Health departments could be instrumental in filling these gaps. However, if data are not readily available, states may be able to estimate the prevalence of HCV among inmates in their area based on inmate characteristics (such as the number of incarcerated injection drug users) and random sero-prevalence studies conducted in other states.

A strong prevention piece should also be included in correctional health programs which incorporates educational outreach. NCCHC asserts that HCV educational programs should be integrated into correctional health education programs and include information that is culturally sensitive. NCCHC also suggests involving the target population in the development and provision of HCV education.²⁰ Integrating HIV and HCV education may be very feasible considering the similarities between the mode of transmission of these two viruses. Thus greater emphasis needs to be placed on prevention, screening, diagnosis, and treatment of populations at risk for HCV when they reside in the community.

In addition, many inmates are in need of medical discharge planning, referrals for services upon discharge, as well as follow-up case management. The first 72 hours following an inmate's release can be critical—when the inmate wants to see family and friends, familiar places, get high and/or have sex.¹⁵ In addition, released individuals are often anxious: relationships with their partners may have changed; they may have low self-esteem; they may be homeless; dealing with substance abuse; or other stressful factors. It is important that inmates be referred to services prior to release to help manage health problems and to minimize other problems that can further compromise their health and facilitate transmission. Effective discharge planning must take into account the reality of inmates' situations. For example, toll-free telephone numbers and transportation are essential because inmates are often released without the means to go home let alone contact a health clinic.

Wanda James, a peer educator for the Whitman Walker Clinic Proud and Positive project in Washington D.C., stressed the importance of discharge planning to ensure inmates are discharged with their medications.³² A majority of the HIV positive female inmates with whom she has worked have needed assistance in retrieving medication after release because the medication gets caught in bureaucratic channels. Prematurely terminating or taking a holiday from medication can be detrimental to the patient's health and can also promote drug resistant strains. Dr. Smith also noted the importance of discharge planning, and stressed efforts to include enrollment in Medicaid if eligible.³¹

Intervention strategies will differ between jail versus prison populations, with short-term correction facility inmates presenting a different set of challenges due to the abbreviated nature of their stay. Lela Folkers, chief of the office of Health Communication and Education, California Department of Health, reported that in California the county

Effective discharge planning must take into account the reality of inmates' situations.

health officer is responsible for the health-related care of jail inmates, which is by far the largest, most underserved and understudied incarcerated population in the state.⁴

Finally, lack of funding often obstructs plans to address HCV prevention, treatment and care. In fiscal year 2000, CDC received \$12.9 million for its national plan to prevent and control HCV. Virtually none of this funding is directed toward efforts to prevent, screen, or treat HCV in injection drug users, substance abusers, or inmates.

A barrier discussed by public health and correctional officials includes specialized and segregated funding streams. Interagency agreements may prove useful and relevant considering that HCV is a multifaceted problem. There are many stakeholders including corrections, public health, public health-sector providers, and experts in the field of substance abuse.

CONCLUSIONS AND RECOMMENDATIONS

With the number of incarcerated persons in the U.S. at two million, and estimates that more than a quarter of inmates are infected with HCV, it is apparent that HCV infection could present adverse affects in the community if not addressed. This paper explores the issue of HCV, includes input from leading experts in both the fields of corrections and public health, and examines the efforts of selected states to address HCV and inmates.

The examination of the disease, its prevalence in correctional facilities, and efforts to address it led to the following recommendations drawn from the content of this report:

- The Centers for Disease Control and Prevention (CDC) should develop specific guidelines for the prevention and control of HCV in incarcerated populations.
- Funding should be made available for community interventions addressing HCV prevention, screening, diagnosis, and treatment of at-risk populations prior to incarceration.
- States should consider integrating viral hepatitis into existing HIV/AIDS prevention, screening, and treatment programs since HIV positive persons are also at high risk of infection for HCV and—hepatitis B. Similar efforts should be integrated into family planning and STD clinics.
- Public health officials should acknowledge corrections' role in community health in light of the increasing numbers of incarcerated persons at risk of illness acquisition because of factors such as poverty, substance abuse, and poor access to health care.
- When addressing HCV among inmates, intervention strategies should involve collabora-

tion between corrections and public health and other stakeholders such as universities and community-based organizations. Previous collaborations have demonstrated the feasibility and benefits of such strategies and can serve as program models.

- States should be enlisted to support correctional agencies in the development and implementation of guidelines that address HCV infection among incarcerated patients.
- Based on existing data of HCV prevalence rates among inmates, states should assume a high HCV infection rate among incarcerated populations, especially if their correctional facilities house a high number of injection drug users.
- The federal government should lift the restriction on the use of federal funds for needle exchange services to allow interested states and localities the financial flexibility to support successful prevention and treatment initiatives within their jurisdiction.
- As a possible public health strategy to reduce the transmission of injection-related blood-borne infections, states should explore the removal of legal barriers such as drug paraphernalia and prescription laws, which criminalize the distribution and/or possession of needles and syringes.
- Primary drug prevention is a key strategy for preventing HCV and other blood-borne infections in injection drug users. Thus, injection drug users should be referred to the most appropriate source for counseling and treatment to eliminate or reduce their use of illicit drugs and injection equipment.
- Strategies that address HCV and incarcerated populations must recognize and address factors that can modify the approach to care (i.e., overcrowded, overstressed correctional health care systems, questionable quality of care, lack of continuity of care, and inmate characteristics including co-morbid conditions). This environment differs dramatically from customary healthcare settings.

Advocacy is crucial to garnering support and funding to implement programs, to ensure programs are conducted within ethical and legal standards, and to develop national standards for responding to HCV and incarcerated populations. Public health officials should become involved in advocacy around inmate health. Even if public health officials feel that inmate health care is a correctional responsibility, public health can

advocate to ensure that corrections departments fulfill their responsibilities and not transfer the disease burden to public health. Because of the overlap of HIV/AIDS and viral hepatitis issues, AIDS advocates are beginning to get involved. Further, considering the disproportionate numbers of racial minorities incarcerated, addressing disparities in correctional health care must also respond to disparities among minorities in general. Therefore, civil rights advocacy groups may want to join in advocacy around HCV and incarceration.

HCV is increasingly recognized among incarcerated populations. At present, the burden of caring for these individuals falls to the community at large. It is imperative that public health officials as well as other key constituencies recognize their vested interest in HCV among incarcerated populations and become involved in addressing this epidemic.

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