RECOMMENDATIONS FOR EXPANDING HEPATITIS B SCREENING AND PREVENTION IN CORRECTIONS

A White Paper by the Hepatitis B Foundation

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BACKGROUND

In the United States, up to 2.4 million people are chronically infected with the hepatitis B virus (HBV) (Wong et al., 2021). Hepatitis B infects the liver and can lead to cirrhosis, liver failure, and liver cancer (OIDP, 2023). Because HBV can be asymptomatic, most people living with it are unaware of their status and risk transmitting the virus to close contacts who may not be vaccinated (Kim et al., 2019; Kodani & Schillie, 2020; CDC, 2024). As hepatitis B viral DNA is present and infectious in blood and bodily fluids, certain practices such as injection drug use, unprotected sexual activity, and sharing sharp household items increase the risk of transmission. Hepatitis B can also be passed from an infected mother to a child during the labor and delivery process (CDC, 2020; OIDP 2023).

Although hepatitis B has no cure, there are effective treatments to manage the disease, and it is vaccine-preventable (Cohen et al., 2013). The hepatitis B vaccine is safe and highly effective in providing lifetime protection (Schillie et al., 2018; Bruce et al., 2022).

Research has shown that screening and vaccination are cost-effective strategies for reducing the hepatitis B burden among highly impacted and at-risk populations, including incarcerated persons, defined by the Bureau of Justice Statistics as people being held under the jurisdiction of state or federal prisons or in local jails (Chahal et al., 2019). In the U.S., the HBV prevalence among people who are incarcerated ranges from .9% to 11.4% - a much higher rate than the estimated national prevalence of .3%. The number of incarcerated individuals who have ever been infected with HBV ranges from 6.5% to a staggering 42.6% (Smith et al., 2017; Hyun Kim et al., 2018). Despite the availability of a hepatitis B vaccine since the 1980s, only 30% of adults over age 19 in the U.S. are fully vaccinated (Lu et al., 2021). Although significant progress has been made with infant and childhood vaccination coverage, most individuals born before the hepatitis B vaccine became universally recommended at birth in 1991 are not immunized.

Low vaccination coverage among adults may be attributed to several barriers including low provider and community awareness of hepatitis B; limited financial resources and staff capacity to administer screening and vaccination programs in clinical, community, and other settings, including correctional facilities; and challenges with vaccine dose series completion (Mast et al., 2006). However, positive movement has been made towards addressing adult screening and vaccination gaps. In 2022, the CDC's Advisory Committee on Immunization Practices (ACIP) issued updated hepatitis B vaccination recommendations for all adults aged 19-59 and adults over 60 with risk factors (Weng et al., 2022). Additionally, CDC now recommends universal HBV screening for all adults over age 18 (Conners et al., 2023).

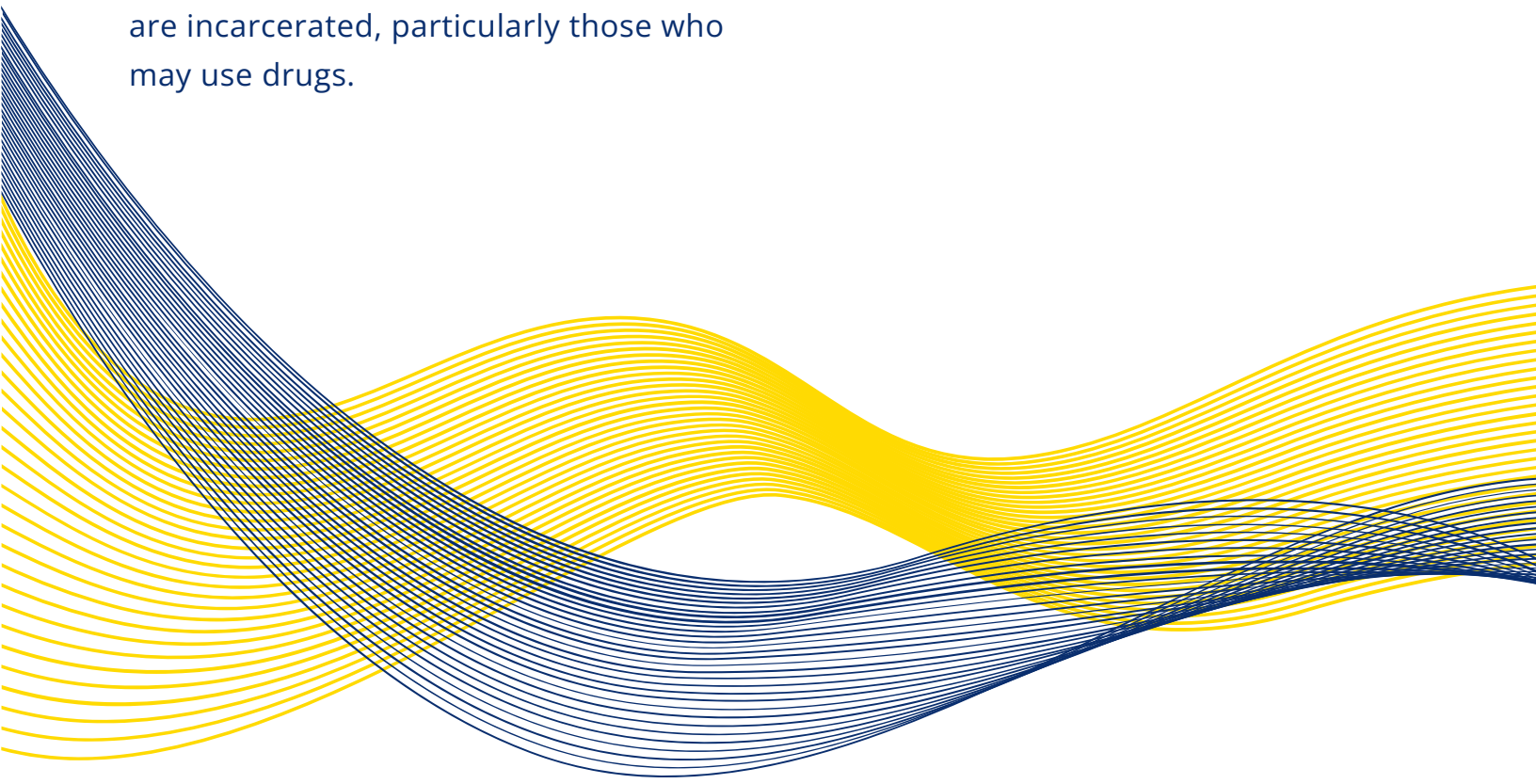
Barriers to providing adequate correctional health services and health education limit the extent to which individuals are aware of their risk of contracting or spreading infectious diseases like hepatitis B, and their ability for self-protection (Greifinger, 2007). Hepatitis B screening in correctional facilities would allow for early detection and linkage to care or vaccination as appropriate. Knowledge of one's hepatitis B status can also empower an individual to take precautionary measures to prevent the spread of infection. Targeted immunization and education programs further help reduce the risk of infection among incarcerated populations (Gupta & Altice, 2009). Such programs are particularly important, given the overlap in populations at risk for hepatitis B infection and for incarceration (Smith et al., 2017), which includes racial and ethnic minority populations and people who use drugs.

In its 2021-2025 Viral Hepatitis National Strategic Plan, the Department of Health and Human Services (HHS) highlights the need to address viral hepatitis in high-risk and high-impact settings including correctional facilities, where there are "opportunities to efficiently identify, screen, treat, and vaccinate large numbers of disproportionately affected populations" (OIDP, 2021). The plan calls for providing viral hepatitis vaccination in clinical and community-based settings including correctional facilities; developing training, technical assistance, and clinical decision support tools for providers in nontraditional settings, such as

corrections; expanding innovative models for viral hepatitis testing in correctional facilities; increasing the number of people living with viral hepatitis who are linked to quality care in correctional settings; educating people who are incarcerated and newly diagnosed with viral hepatitis about monitoring, vaccination, treatments, and treatment adherence; scaling up implementation of opt-out testing and viral hepatitis prevention, management, and treatment in correctional facilities; and providing general hepatitis prevention education for people who are incarcerated, particularly those who may use drugs.

DISCLAIMER

Please note: The authors are aware that some of the citations referenced within this section may be outdated. This reflects the lack of existing research on this topic and highlights the glaring and urgent need to address this critical health concern within this deeply marginalized population.



BARRIERS TO HEPATITIS B SCREENING AND VACCINATION IN CORRECTIONAL FACILITIES

Limited financial resources

In the U.S., the incarcerated population is constitutionally guaranteed healthcare. However, providing high-quality healthcare in these settings is fraught with financial challenges, especially related to infectious disease management. Many correctional systems are unable to vaccinate or test for hepatitis B due to a lack of funding and staff capacity (Charuvastra et al., 2001). HHS and CDC provide limited funding for hepatitis B testing and vaccination initiatives in correctional institutions. This funding shortfall leads to major disparities in hepatitis B services offered to incarcerated individuals, which are further exacerbated by the disjointed provision of correctional healthcare services, and the fact that many who are incarcerated cannot afford the costs of healthcare while detained (Avila, 2022). Given the disorganized and insufficient nature of funding sources for healthcare services in incarcerated populations (more pronounced in some states than others), most correctional directors and medical officials are unable to implement hepatitis B testing and vaccination robustly, as the CDC recommends.

Lack of consistent guidelines for state and federal authorities that operate jails and prisons, leading to lack of clarity about each agency's responsibilities

The multi-layered and disconnected character of the correctional healthcare system makes any hepatitis B recommendations difficult to enforce and implement (Gates et al., 2014). Notably, comprehensive recommendations from the Bureau of Prisons (BOP), which are followed by the American Correctional Association, have not been updated since 2011 (FBOP, 2011). County or municipal authorities operate local jails, while prisons are run by state governments or the BOP. Additionally, local, state, and federal agencies contract with private correctional facilities, while the U.S. territories, U.S. Armed Forces, and U.S. Immigration and Customs Enforcement (ICE) operate their own correctional centers. The healthcare standards required by each of these entities intersect with state, local, and

federal laws, which may make adherence to and enforcement of the recommendations established by the BOP difficult.

Underutilized and decentralized Electronic Health Record (EHR) systems

Electronic Health Record (EHR) systems maintain individual medical histories and allow for the exchange of patient information between correctional and non-correctional healthcare professionals ("Benefits of EHRs," 2017). However, many prisons and jails do not utilize EHRs, so the collection of medical history depends on transferred non-electronic health records, self-disclosure, or pre-entry screening, all of which present difficulties with accuracy, efficiency, and continuity. In a 2019 survey of departments of correction across the United States, Woods et al. found that only 4.5% of survey respondents had the capacity to send medical records via an EHR upon release of incarcerated individuals. Implementation of EHRs in correctional settings has demonstrated human rights benefits to their inclusion in these spaces, namely that EHRs can assist with tracking the progression of serious health conditions.

Utilizing health information technology, such as centralized EHR systems in corrections, presents an opportunity to improve the quality, safety, and efficiency of healthcare, and the prevention and treatment of hepatitis B (Goldstein, 2014). EHRs can also generate complete health profiles for incarcerated individuals, which can accompany them throughout facility transfers and into the broader community, thus making the case for continual maintenance and availability of these records (Glowa-Kollisch et al., 2015). Failure to uphold this basic standard for effective healthcare delivery severely impacts the quality of care received and does a grave disservice to individuals impacted by the carceral system.

Lack of education about hepatitis B

General awareness about hepatitis B remains low. With nearly 300 million people worldwide living with the virus, as many as two thirds of these individuals are unaware of their infection (OIDP, 2023). While transmission of HBV is similar to that of HIV, hepatitis B is 50 to 100 times more infectious (Ekanem et al., 2013) and receives a disproportionately low level of prioritization compared to the HIV epidemic globally (O'Hara et al., 2017; Graber-Stiehl, 2018).

A lack of awareness about hepatitis B, including potential risk factors and preventative measures, is especially harmful in incarcerated populations where individuals are up to 10 times more likely to be infected than the general population (Conners et al., 2023). This, coupled with minimal hepatitis B information in health education programs provided by correctional facilities, leaves incarcerated people ill-equipped to make informed decisions about HBV testing and vaccination.

RECOMMENDATIONS

Provide adequate and sustainable funding designated specifically to address hepatitis B in correctional settings.

Financial investment is crucial for implementing nationwide testing and vaccination programs in correctional settings. Congress is urged to fund pilot programs for hepatitis B initiatives, as these have previously proven successful. From 2012 to 2015, the CDC funded 14 health departments to implement a pilot HBV vaccination program for high-risk adults with 459 participating settings, including 81 correctional facilities.

These correctional settings administered 8,116 hepatitis B vaccines, which was the second most of any setting in the study. This pilot program also highlighted challenges faced when administering vaccines in high-risk populations. Correctional facilities only had a 17.6% completion rate of the three-dose series (Bridges et al., 2019), suggesting significant challenges associated with completion rates in high-risk settings, including loss to follow-up and insufficient provider reminders. Funding federal pilot programs will not only increase the number of vaccines administered but also provide greater insight into how decision-makers can further address difficulties in meeting public health goals (Bridges et al., 2019).

In addition, the CDC runs a grant-funded program for state and local health departments to increase testing and improve hepatitis B and C care cascades, which have been identified as essential frameworks for assessing patient retention across consecutive stages of care necessary to achieve a successful treatment outcome (Subbaraman *et al.*, 2019). Correctional facilities and health departments can apply for this funding to utilize in a clinical setting.

For example, in 2015, acute hepatitis B infection rates skyrocketed in Maine, and by 2017, the state had the second-highest rate of acute HBV in the U.S., as reported by the CDC. To address this alarming trend, the Maine Center for Disease Control and Prevention spearheaded a Hepatitis Testing and Linkage to Care Project to test for viral hepatitis in the state's highest-burdened and highest-risk geographic areas (Caulfield, n.d.), including incarcerated individuals. The project encompassed both education and testing (Maine CDC, 2020). While a federal CDC grant helped cover testing costs, various challenges arose, including stigma and fear of cost. The barriers to screening and vaccination identified through these pilot projects can be addressed with more financial support for tailored and robust educational and programmatic resources that confront the issues specifically facing justice-involved individuals.

Support implementation of correctional health education programs that include hepatitis B.

Educational outreach is crucial for conveying the importance of hepatitis B prevention and diagnosis.

Health education programs in correctional settings help ensure incarcerated individuals are aware of their constitutional right to medical care, and are better informed about options for vaccination and testing. Correctional facilities could partner with community-based organizations to implement hepatitis B education programs. For example, the New Mexico Peer Education Project (NMPEP), a collaboration between Project ECHO and the New Mexico Corrections Department, offers training for people who are incarcerated to become peer educators. The goals of this project include providing community education on key health issues, increasing health literacy, and reducing behavioral risks (NMU School of Medicine, n.d.). Peer educators receive intensive training from experts on hepatitis C and HIV transmission and harm reduction, and measurable changes in attitudes, knowledge, self-efficacy, and behavioral intention, as well as a sense of autonomy, have been observed in program participants as a result (Thornton *et al.*, 2018). This model could also incorporate hepatitis B. Additionally, the Hepatitis Education Project, a Seattle-based nonprofit organization, is contracted by the Washington State Department of

Corrections to conduct a Correctional Health program to deliver viral hepatitis classes and peer educator trainings (HEP, n.d.). These programs exemplify successful collaboration between correctional facilities and community organizations and should serve as a blueprint for establishing similar initiatives in other states. Allocating federal and/or state funding to support these types of partnerships is key to expanding the implementation of such programs nationally, as they are aligned with the goals of the HHS Viral Hepatitis National Strategic Plan, which calls for an integrated approach to hepatitis and related public health challenges to decrease fragmented care and ultimately reduce rates of viral hepatitis infection (OIDP, 2021).

Implement opt-out testing and vaccination programs in correctional facilities.

HHS recommends implementing broad viral hepatitis screening and vaccination programs to lower the likelihood of transmission in high-risk settings such as correctional facilities. This includes conducting HBV assessment as part of the regular intake process, which would help "routinize and destigmatize these services" (OIDP, 2021). Standardized opt-out testing could be applied, which notifies incarcerated people that testing will be conducted and gives them the option of declining or deferring. This could normalize testing and increase testing rates. By implementing opt-out testing and vaccination programs in settings with a higher proportion of people at risk for hepatitis B, limited staff capacity and resources can be maximized, and individuals in need of prevention and linkage to care can be easily identified. However, implementation requires leadership, guidance, and coordination with various health and justice authorities.

Beginning in 2013, the Tennessee Department of Health piloted a program to vaccinate people incarcerated in county jail clinics with the highest rates of acute HBV (Lakey, 2019). In 2015, the pilot was converted into a state-funded program, and by August 2018, all 24 counties in East Tennessee were participating. As a result of the program, 46,746 vaccines for hepatitis A and B combined were administered and, with the introduction of the two-dose hepatitis B vaccine, series completion rates rose from 20 to 33 percent. Similarly, in partnership with the Oregon Health Authority, the Oregon Department of Corrections implemented hepatitis B initiatives to improve hepatitis B testing and vaccination through a Vaccine Access Program (VAP) (Chakwin, n.d.).

Given the success of these initiatives, it is evident that strategic partnerships and thoughtful execution of hepatitis B screening and vaccination programs are possible in correctional settings. Adding an opt-out component would only go further to strengthen these important undertakings.

Encourage uptake of federal guidelines to standardize federal and state correctional policies around hepatitis B.

Standardized federal policies and guidelines to implement hepatitis B testing and vaccination are critical for eliminating transmission within correctional settings. The CDC maintains updated HBV screening and vaccination recommendations for the general population and people who are incarcerated (CDC, 2022). Similarly, the BOP recommends that correctional facilities detect, evaluate, and treat the disproportionate burden of viral hepatitis among this population in a published set of Clinical Practical Guidelines (BOP, 2011). These recommendations, however, are not used broadly in practice.

In the absence of enforceable federal guidelines for addressing infectious diseases in correctional settings, states have pursued legislation and policies for elimination. For example, the California Penal Code identifies tuberculosis as a serious contagious disease, deeming it necessary to take all possible measures to protect all individuals from becoming infected, including immediate testing for tuberculosis upon arrival to correctional facilities (Justia Law, n.d.). Similarly emphasizing the severity and urgency of hepatitis B may result in an appropriate response and support the need for increased testing and vaccination in correctional facilities. Several states in the U.S. have also begun testing for HIV during intake or while an incarcerated person is in custody, and the number of jurisdictions, including both state prison systems and the federal BOP, that provide testing for HIV continues to grow (Maruschak, 2023). Extensive tracking and surveillance of HIV within correctional facilities has allowed for federal and state support to address the epidemic in proportion to the issue. Given that HBV is similarly transmitted and more infectious than HIV, the BOP should also monitor and submit detailed reports on hepatitis B infections in federal and state corrections. Collecting this data creates a source of reliable information about needs and feasibility so future program planners can utilize the information to improve interventions. An annual BOP report would help fill gaps in national viral

hepatitis surveillance data, which are significantly lacking (NASEM, 2017), and identify what specific hepatitis B services need to be improved in correctional facilities.

Utilize EHR systems to foster a reliable method of communication between correctional health authorities and healthcare providers in the general population.

A centralized electronic medical record system accessible by all federal and state correctional institutions is critical for the coordination of care. A recommendation to capture health records electronically would help eliminate loss of important information regarding a person's HBV status, and allow access to evidence-based tools for correctional providers to make informed decisions. EHRs also support the implementation of the updated hepatitis B prevention recommendations and aid in maintaining accurate medical records once incarcerated people are released.

CONCLUSION

People who are incarcerated in the U.S. rarely receive the education, testing, and vaccination necessary to prevent hepatitis B transmission. The fragmented nature of the correctional healthcare system and lack of standardized and updated hepatitis B recommendations hinder the ability of correctional healthcare staff to improve hepatitis B screening and vaccination practices in their facilities. Additionally, government agencies do not hold strong authority in the enforcement of correctional healthcare standards. Failure to utilize resources like EHRs impedes successful screening and vaccination programs. The lack of integration of hepatitis B services and education into healthcare programming inhibits the capacity of justice-involved individuals to make informed decisions about their health. These barriers inspire recommendations calling for more comprehensive federal guidelines to eliminate correctional healthcare inefficiencies, the establishment of opt-out screening and vaccination programs, and increased funding to support necessary initiatives and improve health equity for incarcerated populations.

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