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VIRGINIA DEPARTMENT OF HEALTH

Preparing for Comprehensive Harm Reduction in Virginia (Chapter 183, 2017)

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Preparing for Comprehensive Harm Reduction in Virginia

Division of Disease Prevention, Office of Epidemiology

Virginia Department of Health

Executive Summary

The *Code of Virginia, Section 32.1-45.4*, authorizes the State Health Commissioner to establish and operate local or regional comprehensive harm reduction (CHR) programs during a public health emergency. The purpose of this law is to interrupt transmission of Human Immunodeficiency Virus (HIV), hepatitis B virus, and hepatitis C virus by providing services such as testing, referral to substance use disorder treatment, and the provision of sterile and disposal of used hypodermic syringes and needles. The Virginia Department of Health (VDH) has provided health education and mobilization efforts to facilitate the development of CHR sites. VDH has also provided trainings to potential service providers and participated in community opioid taskforce and advisory boards to promote this initiative. VDH created protocols and standards for CHR sites to operate safely, with maximum public protections. VDH's CHR strategy focuses on the reduction of both disease and overdose deaths and expedient entry into substance use disorder treatment programs.

From July 1, 2017 to June 30, 2018, the VDH Office of Epidemiology's Division of Disease Prevention hired a Drug User Health Coordinator and participated in or hosted 46 community meetings and trainings. As of August 8, 2018, VDH has authorized the Lenowisco Health District to operate a CHR program in Wise County, and Health Brigade, a free clinic, to operate a CHR program in Richmond. VDH expects to authorize additional sites prior to June 30, 2019.

Barriers encountered include lack of support from some law enforcement entities, a three-year sunset provision in the law, developing suitable rural programs, and the stigma associated

with programs that include syringe exchange services. To address these barriers, this report proposes recommendations to facilitate and improve CHR programs and outcomes.

Introduction

Effective July 1, 2017, the *Code of Virginia, Section 32.1-45.4*, authorizes the State Health Commissioner to establish and operate local or regional comprehensive harm reduction (CHR) programs during a public health emergency. The purpose of the law is to avert a disease outbreak by interrupting the transmission of Human Immunodeficiency Virus (HIV), hepatitis B virus (HBV), and hepatitis C virus (HCV) resulting when people who inject drugs share hypodermic needles and syringes. CHR programs must be located in communities where data indicate a risk of transmission of, or increases in the transmission of, HIV, viral hepatitis, or other blood-borne diseases because of injection drug use. *Section 32.1-45.4* also contains a provision that requires community acceptance of CHR, documented by letters of support from both local government and law enforcement, before instituting it in eligible jurisdictions in the Commonwealth.

CHR is designed to reduce the public health impact of injection drug use and improve health outcomes for people who inject drugs (PWID). CHR includes distribution of sterile hypodermic needles and syringes, disposal of used needles and syringes, health education and counseling, HIV and hepatitis testing, condom distribution, access to naloxone (overdose reversal medication), and referral to medical care, drug treatment, and social services. CHR is also called needle exchange, syringe services, or syringe exchange in public health articles and research; however, CHR encompasses services beyond the distribution and collection of syringes.

This report details the impact of injection drug use associated with the opioid crisis and the potential for an injection-related HIV or hepatitis outbreak. Accomplishments and barriers to establishing CHR sites are discussed. Finally, recommendations for strengthening CHR programming in Virginia are described.

Background

VDH's mission is to protect the health and promote the well-being of all people in Virginia, including people who use drugs. Harm reduction is a public health strategy to reduce the transmission of HIV, HBV, and HCV that may result from the sharing of or contact with equipment used to inject drugs, particularly hypodermic needles and syringes. Blood residue remaining in needles and other drug use paraphernalia can transmit HIV, HBV, and HCV when injection equipment is shared. People living with these infections can transmit them to their sexual partners. Unsafe injection practices, including sharing injection equipment, can spread bacteria that cause skin abscesses and endocarditis. These infections can result in costly hospitalizations and can be fatal. Discarded and used syringes pose a transmission hazard to first responders and the public due to the possibility of accidental needle sticks. Harm reduction works by removing and correctly disposing of used syringes, while supplying sterile ones in their place, alleviating the need for people injecting drugs to share or reuse needles. Harm reduction also includes health education and referrals for medical and substance use disorder treatment.

HCV

HCV attacks the liver and, if left untreated, can cause liver cirrhosis and liver cancer. Prior to 1990, most cases of HCV were acquired from blood transfusions, but with the inception of blood testing technology, HCV rates in the United States declined by 80% between 1990 and

1996, (Ward, 2014). Since 2010, national HCV rates began to rise again due to the sharing of injection equipment among PWID, (Centers for Disease Control and Prevention [CDC], 2017). One study reported that each PWID infected with HCV is likely to infect about 20 others, and this rapid transmission of the disease occurs within the first three years of initial infection, (National Institute on Drug Abuse, 2018). Approximately 20-30% of PWID acquire HCV within the first two years of injection drug use, and 50% are infected within five years, (Williams, Bell, Kuhnert & Alter, 2011).

Prior to 2014, treatment for HCV relied on interferon-based medications, which involved lengthy treatment periods with frequent, adverse side effects (Franciscus, 2018). An effective and better-tolerated class of drugs, called direct-acting antivirals, became an available cure in 2014; however, cost for treatment ranges from $26,400 to $94,500, and reinfection with HCV is still possible for those re-exposed to the virus, (Toich, 2017).

Both the CDC and VDH use HCV rates in 18-30 year olds as an indicator of transmission related to injection drug use. Virginia has experienced a significant increase in HCV cases in the 18-30 year old age group. From 2011 to 2017, 9,796 young adults with HCV were reported to VDH. Cases of HCV reported in this age group are most likely due to sharing injection equipment, since exposure from blood transfusion in this age bracket is unlikely and sexual transmission of HCV is rare. During this same time period, the rate of infection in this age group increased from 52 to 140 cases per 100,000 young adults, a 169% increase. Some of this increase may be attributable to a change in the surveillance case definition in 2016; however, the overall trend was increasing prior to this change (Figure 1).

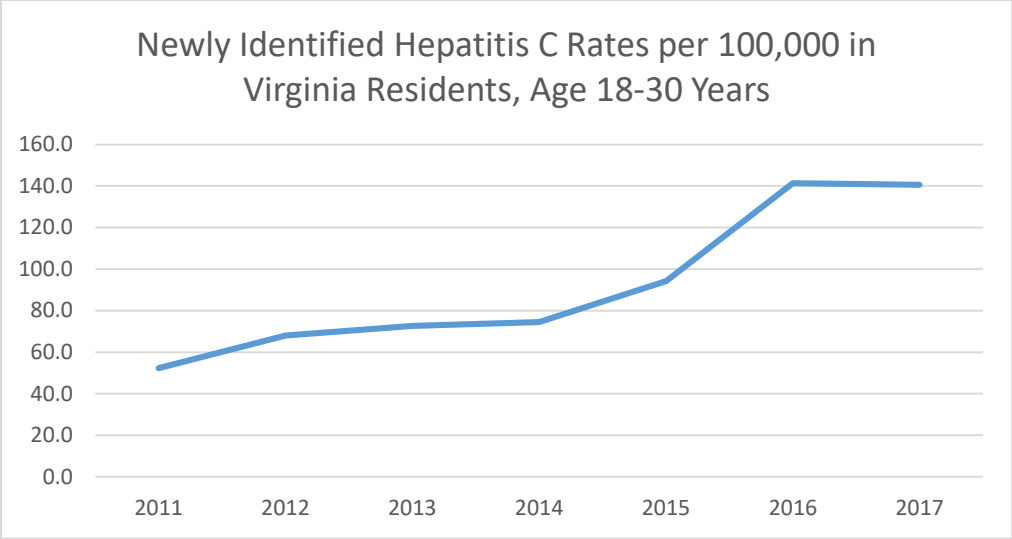

Figure 1 Source: Virginia Electronic Disease Surveillance System (VEDSS)

HIV

Injection drug use plays a significant role in the transmission of HIV and in the epidemiology of the disease. In 1985, 17% of Acquired Immunodeficiency Syndrome (AIDS) cases reported to CDC were among PWID; in 1995, that percentage had risen to 35% (CDC, 1986; CDC, 1996). HIV infection related to sharing needles began to decline in the mid-1990s when CHR programs were established in New York City, Seattle, and other major cities.

CHR programs have traditionally been located in large metropolitan areas. As HCV rates began to grow in rural communities in 2010 due to needle sharing for the injection of prescription opioids, public health officials became concerned that HIV outbreaks would follow. In 2015, 11 confirmed cases of HIV appeared in a small community of 4,200 people in Scott County, Indiana. As public health officials investigated these cases, the transmission route was determined as needle sharing or sex with someone who injected drugs. Needle sharing and sex

partners of these 11 individuals were offered HIV testing, resulting in finding 231 cases of HIV diagnosed in this small rural community, (Indiana State Department of Health, 2017).

From 2013-2017, 159 Virginians who were diagnosed with HIV acknowledged injection drug use as a risk behavior. These 159 individuals were 84% male, 50% white, 32% in the 25-34 age group at diagnosis, and 30% living in the Eastern health region. HIV infections attributed to injection drug use have remained stable over the past ten years in Virginia.

The number of PWID tested at publically supported HIV test sites in Virginia increased by more than 170% between 2013 (673) and 2017 (1,819), while the total number of HIV tests declined from 74,057 to 66,640 tests. The rate of diagnosis among PWID receiving an HIV test has risen in the past four years from two positive diagnoses out of every 1,000 HIV tests (2014) to nine positive diagnoses out of every 1,000 HIV tests (2017), a statistically significant increase. In 2017, approximately 11% (2,620) of the 24,004 people living with HIV in Virginia named injection drug use as one of their possible transmission risks.

Skin Infections and Endocarditis

Reusing needles is associated with bacterial infections. These infections may occur around injection sites, or be transferred into the blood stream. Blood stream infections can cause endocarditis, a serious and often deadly infection of the heart. In a North Carolina study from 2010-2015, incidence of opioid-related endocarditis increased from 0.2 per 100,000 patients to 2.7 per 100,000 patients. The cost for treatment rose from $1.1 million in 2010 to $22.2 million in 2015. Researchers recommended that health care systems refer patients with opioid use to syringe services programs to reduce the risk of infection (Fleischauer, Ruhl, Rhea & Barnes, 2017).

Harm Reduction

In the 1990s, states began authorizing and supporting syringe exchange programs. One of the first sites was in New York City, where 50% of new HIV infections in 1990 were attributed directly to injecting drugs (via sharing injection equipment) or indirectly (via a sex partner who injected drugs). In the mid-1990s, syringe exchange programs began offering additional services, such as testing for HIV, sexually transmitted diseases, and tuberculosis; health education; and referrals to substance use disorder treatment to reduce the harm caused by injection drug use. These programs became known as harm reduction programs, and focused on the holistic care of PWID, not just their infectious disease status. For people unable or unwilling to enter treatment programs, harm reduction serves as a vital link to health services. Harm reduction programs facilitate entry to substance use disorder treatment and recovery programs when PWID indicate they are ready. Participants in harm reduction programs are five times more likely to enter drug treatment than other PWID, (Hagan et al., 2000).

Harm reduction programs promote public health and safety by taking used needles and syringes off the streets and protecting first responders from needle stick injuries. A study in San Diego, California, (Lorenz, Hill & Samini, 2000), showed that nearly 30% of police officers had been stuck by a needle at some point in their career, and a study in Connecticut, (Groseclose et al, 1995), found that needle stick injuries were reduced by 66% after harm reduction programs were implemented.

Virginia's Comprehensive Harm Reduction Program

VDH incorporated best practices from neighboring states and recommendations from the CDC when creating Virginia's CHR program. The authorization of sites by the State Health

Commissioner can only occur during a public health emergency, which Virginia is currently under as a result of the opioid and heroin epidemic Organizations seeking authorization to administer a CHR program must apply to VDH, and submit a work plan and letters of support from local government, local law enforcement, and the area's public health director. VDH created standards and protocols for the operation of CHR sites, which were approved by the Secretary of Health and Human Resources and the Secretary of Public Safety and Homeland Security and are available here: http://www.vdh.virginia.gov/content/uploads/sites/10/2017/06/CHR-Standards-and-Protocol-rev-24.10.18.pdf.

Virginia's CHR initiative includes an array of services designed to reduce the public health impact of injection drug use and improve health outcomes for the individual who is injecting drugs. Mandatory services each site must provide or refer to include the following:

- HIV testing and counseling,
- Hepatitis A, B, C testing and counseling,
- Sexually transmitted diseases testing and counseling,
- Tuberculous testing,
- Distribution or referral to obtain naloxone,
- Referral for wound care and medical care,
- Pregnancy testing,
- Access to free condoms,
- Health education regarding drug use and injection,
- Referral to mental health services,
- Referral to substance use disorder services and/or medication-assisted therapy,
- Active referrals to care for any condition discovered during the testing and engagement process, and
- Referrals to social services for housing, food, etc.

CHR sites may operate from fixed or mobile sites. Each site creates a safety plan that is shared with local law enforcement, and includes hours and locations of operation, outreach methods, and disposal of hazardous waste.

Authorization of Eligible Jurisdictions

VDH compared 13 indicators (see Figure 2) against the state average when determining jurisdictions eligible to establish CHR programs. Both independent cities and counties are included in the determination process. The indicators are similar to those used by the CDC to determine counties vulnerable to HIV outbreaks due to needle sharing. If the majority (seven or more) of these indicators are above the state average, the jurisdiction is eligible to submit an application to provide CHR services. In 2017, VDH utilized rates per 100,000 people when quantifying the indicators. This method excluded several densely populated metropolitan areas from eligibility, despite high numbers of HIV and HCV cases, overdose deaths, and emergency room admissions associated with opioid use. In the second round of determination in 2018, both rates and case counts were used to rectify this problem, thus authorizing 75 jurisdictions eligible to provide CHR services. A list of current eligible jurisdictions and map is located at http://www.vdh.virginia.gov/disease-prevention/chr/.

Figure 2: List of Indictors Used for Determining CHR Eligibility for Jurisdictions

CHR Eligibility Indicators	
1.	HCV cases
2.	HIV cases
3.	Overdose deaths by heroin or fentanyl
4.	Overdose deaths by prescription pain medication (opioid)
5.	Emergency room visits for heroin overdose
6.	Emergency room visits for prescription pain medication (opioid) overdose

7.	Buprenorphine prescriptions written
8.	Opioid pain medication prescriptions written
9.	Arrest attribute to heroin and other opioid possession
10.	Substance abuse treatment admissions
11.	Jurisdiction's poverty level
12.	Jurisdiction's unemployment rate
13.	Naloxone administration to reverse overdose

Accomplishments

In December 2017, VDH hired a Drug User Health Coordinator (DUHC) to manage the program. From February 2017 to July 1, 2017, VDH created standards and protocols, developed an eligibility system for jurisdictions, and created an application process in order to administer the program components. Once finalized, VDH disseminated CHR program information and application requirements to HIV service providers, and in regional meetings where organizations expressed interest in providing CHR services. Dissemination of information evolved into the development of a web page dedicated to CHR on VDH's website: http://www.vdh.virginia.gov/disease-prevention/chr/. The DUHC facilitated a large community education and mobilization effort in order to increase knowledge and acceptance of CHR programs, and address concerns or misperceptions about CHR in communities with high disease burdens attributed to injection drug use. VDH developed two fact sheets (one for the public and one for potential CHR providers), which can be found on the CHR webpage, to present accurate information and dispel myths associated with CHR. The DUHC joined community opioid taskforces and prevention councils in order to foster and support community collaboration. VDH conducted two webinars, one for service providers and one for law enforcement, to dispel myths and alleviate concerns. The law enforcement webinar included a North Carolina law enforcement officer who discussed his experience with harm reduction programs and the role these programs play in the health and safety of his community.

VDH facilitated three regional trainings provided by the Harm Reduction Coalition and the New York City Department of Health. The DUHC also conducted trainings for two health districts specific to CHR and stigma associated with drug use, and one community-based organization in Fairfax County interested in providing CHR. In addition, VDH has presented information about CHR to the Department of Corrections, District 19 Community Services Board, a statewide meeting of probation and parole officers, and a statewide meeting of community services boards. VDH staff regularly attends opioid advisory groups and taskforces in Roanoke, Lynchburg, Richmond, Norfolk, and Culpeper. Additionally, the DUHC conducted three focus groups among PWID to gain their input on proposed services. VDH staff attended seven CHR planning group meetings to present the program to local government and law enforcement personnel, through invitation of the local providers or health departments. The VDH Office of Epidemiology, Division of Disease Prevention (DDP) has established a drug user health workgroup within the Community HIV Planning Group, an advisory body to VDH.

Collaboration with neighboring states was a key strategy in Virginia's CHR program development. These states have offered valuable guidance around protocol development, engagement with law enforcement, and lessons learned about program start-up. Fostering a unified and coordinated public health effort among states is vital, as PWID will cross jurisdictional borders to seek services. Currently, some Virginians travel to North Carolina, West Virginia, and the District of Columbia (DC) to obtain sterile syringes and injection equipment. During a syringe services site visit to Asheville, North Carolina in 2017, the provider informed VDH that one-third of the participants in its programs come from southwest Virginia, creating a financial strain on its resources.

VDH has joined Maryland and DC's Substance Abuse Workgroup to coordinate efforts in the DC metropolitan area. VDH regularly participates in Substance Abuse Mental Health Services Administration Region III meetings focused on harm reduction. In 2018, Virginia was one of seven states selected by the National Governors' Association to participate in its Learning Lab on State Strategies for Addressing Infectious Diseases Related to Substance Use. This project brings state teams together to implement best practices that interrupt the transmission of infections associated with injection drug use. These statewide partnerships and efforts have resulted in progress toward the implementation of CHR services.

In May of 2018, the State Health Commissioner authorized Virginia's first CHR site in Wise County, administered by the Lenowisco Health District. In its first month of operations, this site provided CHR services to 12 people and collected 15% more needles and syringes than it distributed. The majority of participants are women (75%), white (83%), unemployed (83%) and own their own residence (75%). Participants report using multiple substances: 58% use prescription opioids, 41% use other substances, and 33% use methamphetamine. No participants report using heroin. Seven naloxone kits have been distributed with two already used by participants to reverse overdoses. VDH authorized a second site located at Health Brigade, a free clinic in the City of Richmond. VDH anticipates authorizing an additional site in the Eastern health region before the end of 2018.

Barriers Encountered to Providing CHR

Stigma associated with a behavior like drug use or a disease like HIV can prevent people from seeking help due to fear of being labeled, chastised, denied services, reported to law enforcement, or having their confidentiality compromised. Beliefs that drug use is a personal or

moral failing and not a health concern are prevalent, and may lead to those in need avoiding treatment.

Syringe services programs are also stigmatized with concerns they increase crime, contribute to increased drug use, and increase the number of syringes discarded in public areas. Numerous studies conducted over the past 30 years refute these beliefs. A study in Baltimore, Maryland compared crime in CHR program areas with crime in non-program areas (Marx et al., 2000; Center for Innovative Public Policies, 2001). There was no change in thefts and burglaries in the CHR program areas, while crimes increased in non-program areas. Arrests for violent crimes decreased in the CHR program areas, and increased in the non-program areas. CHR programs can help decrease crime by connecting people to drug treatment, housing, and social services. Years of scientific research show that CHR programs do not increase drug use (Institute of Medicine, 2006). As previously stated, many studies show that these programs help decrease drug use. Research also indicates that over 90% of syringes distributed are returned, (Ksobiech, 2004).

The current law protects CHR staff who are distributing and collecting syringes, but it does not protect participants from paraphernalia charges. This lack of protection for participants may deter CHR participation and creates a disincentive to return used syringes, since even a trace amount of substance in the syringe could result in a charge related to possession of an illegal substance. Correct disposal of used syringes is crucial to reducing disease transmission; therefore, collecting as many used syringes as possible is essential. Lack of legal protection for participants also creates a dilemma for law enforcement. In order to support CHR, the police must decide not to enforce paraphernalia and drug possession laws if they encounter a CHR participant returning used syringes for exchange.

Lack of participant protection may reduce the number of people who will utilize CHR services. Results from a focus group of PWID conducted by VDH in September 2017 indicated participants would be hesitant to use CHR sites without protections. The group also stated that returning syringes with drug residue would be particularly problematic, and that they would be more likely to discard used syringes in public rather than risk being caught with them by law enforcement.

Law enforcement is a major stakeholder and critical partner in effective use of CHR. Virginia's law enforcement community has demonstrated creativity and commitment in developing effective strategies (e.g. corrections based recovery programs, drug take back programs) to address the opioid crisis. Many communities have very active participation by all levels of law enforcement on multi-disciplinary task forces and work groups addressing the impact of addiction. Law enforcement leadership has been instrumental in the development and implementation of CHR. The Secretary of Public Safety and Homeland Security, together with the Secretary of Health and Human Resources approved the CHR standards and protocols that set the parameters for services. Local law enforcement leadership participates on a statewide team working to reduce the infectious disease consequences of injection drug use, as part of the National Governors' Association Learning Lab. Law enforcement from nearby states have provided training and generously shared their expertise and experiences with implementation of CHR.

Some law enforcement personnel do not support CHR because they feel that the initiative could enable drug users, create new users, and increase crime, although research has indicated none of these is a normal consequence of CHR (American Medical Foundation for AIDS Research, 2013). Some law enforcement leadership has voiced the concern that supporting CHR

may be construed as condoning illegal behavior. Several jurisdictions are not able to move forward with a CHR application because of lack of law enforcement support. Some law enforcement officers have voiced frustration when asked to support CHR programs and feel that decision should be left to lawmakers. If the current law called for protection of participants, they would honor the stipulation, (O'Conner, 2018).

Urban models of service delivery may not meet the needs of rural settings. Harm reduction programs were designed to meet the needs of people who inject drugs in urban areas. Urban centers have more resources, such as mass transportation, that allow residents to access services easily, compared to rural areas. Cities are also able to accommodate an influx of individuals using services for a variety of reasons; there is public parking, food service, and shelters for those without housing. CHR programs in urban centers may even operate unnoticed by those not using the service.

In order to prevent rural communities from a disruptive influx of CHR participants from neighboring communities, operating several sites or mobile sites tends to be more effective. However, this approach may be more costly (e.g. staffing and operating multiple sites, obtaining and maintaining a suitable vehicle). VDH is working with rural communities to develop effective strategies to provide CHR that meet their needs and resources.

The current law expires July 1, 2020, yet the public health emergency resulting from opioid addiction will most likely be ongoing. Maintaining the ability to prevent transmission of HIV, HBV, and HCV caused by the sharing of injection equipment will be an ongoing need after the law expires. At the time of this report, VDH has authorized two sites. In order to collect sufficient data for program analysis, additional time will be necessary due to the community mobilization and application procedures required of potential CHR sites.

Findings and Recommendations

Thoughtful preparation and planning to develop and launch CHR in Virginia are essential. The first year's efforts have centered on community education, law enforcement engagement, and capacity building for potential provider sites. As programs launch, VDH will need time to collect sufficient data to determine the effectiveness of CHR programs in reducing HIV, HBV, and HCV, and successfully linking PWID to treatment. In addition, given that PWID do not have legal protections under the current statute, more time will be required for community CHR sites to gain trust and build rapport with these individuals.

Currently, there are two CHR programs authorized to provide services in the state, one of which began services in July 2018 and one slated to begin services in September. VDH expects to have five programs operating by July 2019, providing services to approximately 1,000 Virginians who inject drugs. VDH will present data and findings in the 2019 report.

When harm reduction programs are sparse, an influx of individuals from outside the area may travel to that program in order to access services. Establishing more CHR sites throughout the state prevents a gathering of PWID in localities that provide CHR services. The provision of mobile services in rural areas prevents mass gatherings around stationary CHR sites and increases access to services by eliminating transportation barriers. For many CHR sites, the cost of purchasing a suitable vehicle may be a barrier to providing mobile services.

Eliminating or extending the expiration date of the law would allow more time to garner the necessary community support, develop and implement programs, and measure effectiveness. CHR is a new initiative in Virginia involving a highly stigmatized behavior. According to social science theory, adoption of a new idea, such as CHR, does not occur immediately in a social

system; rather, it is a process developed over time. During the first year of implementation, education and engagement with law enforcement and other community stakeholders have been major areas of focus. In order to achieve true engagement and support, stakeholders must invest time and support the additional training that is needed to build relationships that enable effective delivery of CHR services. To collect data substantial enough to determine the effectiveness of CHR, additional time is needed. Implementation of services in different parts of the state would allow examination of program effectiveness in both urban and rural communities.

Based on concerns expressed by law enforcement about the dilemma created by lack of protection from paraphernalia and drug possession charges, additional study is needed on the most effective methods for addressing this barrier.

Conclusion

Since the CHR law went into effect July 1, 2017, VDH has established one site in southwest Virginia and one site in Richmond. VDH expects to authorize one additional site later in 2018. Beyond the establishment of sites, VDH has conducted extensive education, training, and community mobilization efforts around the Commonwealth. Community-based organizations, local health departments, medical providers, and other state agencies have participated in effective provision of CHR services trainings. VDH has also held two educational webinars, one for providers of HIV prevention services and one for law enforcement. VDH also contributes to regional efforts to combat opioid overdose and disease transmission via injection drug use through collaboration with neighboring states that have had legal syringe service programs prior to July 1, 2017.

Virginia's law does not provide participant protection, which causes issues with some local law enforcement. Adopting these protections would address the conflict identified by some members of the law enforcement community and address a barrier that PWID cite as a deterrent to using CHR services. The law is currently set to expire on July 1, 2020 and VDH is concerned that, without an extension of the law prior to that date, the agency will not have enough time to educate, train, and mobilize communities to provide CHR services in eligible areas of the state.

Current trends in HCV infection in Virginia, along with overdose and arrest data, show the continuing impact of the opioid epidemic. VDH would like to have the opportunity to have CHR programs running throughout the course of the current state of emergency in order to decrease infectious disease transmission among PWID.

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