



Harm Reduction, By Mail: the Next Step in Promoting the Health of People Who Use Drugs

Benjamin T. Hayes · Jamie Favaro · Corey S. Davis ·
Gregg S. Gonsalves · Leo Beletsky · David Vlahov ·
Robert Heimer · Aaron D. Fox

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In 2020, accessing healthcare services through the Internet has become commonplace. Web sites offer discrete assessment and pharmaceutical manage-

ment of conditions that may be associated with shame or social stigma, such as erectile dysfunction. Health insurance plans have simplified ordering and refilling medications through secure Web sites. Could this private and accessible approach to care delivery improve services for people who use drugs (PWUD)?

Providing harm reduction supplies, including sterile injection equipment and naloxone for overdose reversal, reduces morbidity and mortality for people who use drugs. Yet, despite the strong public health imperative, scaling these services to people in need has been slow and inadequate. Syringe service programs (SSPs) that distribute these supplies are unavailable in many areas of high need in the USA. Online access and mail-delivery may be a modern solution to problems that have limited the impact of harm reduction for decades.

B. T. Hayes (✉) · A. D. Fox
Division of General Internal Medicine, Montefiore Medical
Center, 3300 Kossuth Ave., Bronx, NY 10467, USA
e-mail: bhayes@montefiore.org

J. Favaro
NEXT Harm Reduction, New York, NY, USA

C. S. Davis
The Network for Public Health Law, Los Angeles, CA, USA

G. S. Gonsalves · D. Vlahov · R. Heimer
Yale School of Public Health, New Haven, CT, USA

L. Beletsky
School of Law, Bouve College of Health Sciences, and Health in
Justice Action Lab, Northeastern University, Boston, MA, USA

L. Beletsky
UCSD School of Medicine, La Jolla, CA, USA

D. Vlahov
Yale School of Nursing, New Haven, CT, USA

The Scope of the Problem

Every year thousands are affected by preventable consequences of drug use. In 2018, there were 5600 new cases of hepatitis C virus (HCV) infection in the USA, almost all attributed to transmission from injection drug use [1]. Despite an overall trend in reduced HIV incidence among PWUD, outbreaks of HIV in drug using communities continue to occur. Most have occurred in locations where SSPs either do not operate or do so under constrained conditions. [2–5] Complications from

skin and soft tissue infections due to injection drug use, including infective endocarditis, have become increasingly common and more costly over the past 20 years [6–8]. Meanwhile, between 1999 and 2018, the number of Americans dying from opioid-involved overdoses increased 6-fold, reaching 46,802 people in 2018 [9, 10]. Overdose-related deaths have only accelerated since then, with more deaths recorded in the 12-month period ending May 2020 than in any other 12-month period on record [11]. There is mounting evidence that the COVID-19 pandemic has further aggravated already-worsening overdose trends, including by exacerbating access to harm reduction and treatment resources [12].

Indeed, providing harm reduction supplies has long been demonstrated to prevent morbidity and mortality, while improving health outcomes among PWUD. Adequate access to sterile syringes reduces transmission of HIV and HCV [13, 14]. Likewise, naloxone, a full opioid antagonist, quickly and effectively reverses opioid overdose in most cases [15, 16]. Leading health agencies, including the Centers for Disease Control and Prevention (CDC), the World Health Organization (WHO), and the Office of the US Surgeon General, recognize access to sterile syringes and naloxone as evidence-based practices for public health [17–22].

Yet, program coverage remains dismal, so most PWUD in the USA have no or inadequate access to these harm reduction services. One review estimated that in the USA, people who inject drugs have access to only 39 syringes per year, yet the WHO has recommended that reducing blood-borne pathogen transmission risk requires closer to 200 per year [23]. The CDC has identified 220 rural counties in 26 states that are vulnerable to outbreaks of HCV and HIV due to injection drug use [24], yet only 7% of those counties have SSPs [25].

While new laws have been associated with increased access to naloxone from pharmacies and community organizations, naloxone is often unavailable when and where it is needed [26, 27]. More than 40% of fatal opioid overdoses are witnessed and therefore preventable if naloxone were readily available [28]. Why does this great need for evidence-based harm reduction services remain unmet?

A Historical Perspective

The stepwise evolution of harm reduction services in the US provides context to our current deficits in meeting the health needs of PWUD. During the 1980s HIV crisis, activists began providing relatively small amounts of sterile injection equipment. These early SSPs, illegal at the time, served as vital sources of supplies for PWUD communities [29]. Early programs were centered in urban areas, where HIV transmission through injection drug use was most common, and where there was sufficient political support to sustain their existence [29–31]. Despite high levels of need throughout the country, expansion was limited locally by fierce political and public resistance rooted in stigma toward PWUD and nationally by a ban on federal funding for SSPs that was dating from 1986 [32]. Within the confines of limited funding and political opposition, SSPs created innovative solutions including distributing supplies without requiring one-for-one exchange and encouraging secondary exchange through peer delivery [29]. Even after the ban was eased in 2016, allowing federal funds to be used to support SSPs, federal money appropriated to the departments of Health, Labor, and Education still may not be used to purchase needles or syringes [33]. Local opposition based in stigma against PWUD continues to impede the opening of new drop-in SSPs [33, 34]. Although SSPs positively impact health outcomes, their reach continues to be limited.

The spread of the opioid crisis to rural and suburban areas that intensified in the 2000s profoundly illuminates the missed opportunities to prevent harm. Fostered by under-regulated distribution of pharmaceuticals and belated attempts at opioid supply reduction, PWUD with opioid use disorder in regions that have had historically the lowest numbers of SSP in the country, turned to intravenous heroin and fentanyl use. With Scott County, Indiana as a notable example, non-urban areas were hit with HIV and HCV outbreaks and carried a disproportionate burden of the surging HCV infection rates [2, 35]. However, the risks imposed by poor geographic access to SSPs are not limited to rural areas. An HIV outbreak in an urban area of Massachusetts with insufficient syringe access demonstrates the ubiquity of the problem [36]. Some states have since modified restrictive laws that prevented SSP operations, and the number of SSPs nearly doubled from 2015 to 2017 [32]. However, laws and regulatory bodies place severe, non-

evidence-based limitations on starting and operating SSPs, limiting their reach. In fact, fewer than 300 SSPs were known to exist nationwide as of 2018 and most PWUD remain without local access to harm reduction supplies [37]. Even for programs that are able to function above ground, police interference with clients and staff often impede optimal operation [38–40]. Innovative service delivery models that are rapidly scalable and widely available are urgently required to meet this need.

Rationale for Online Accessed and Mail-Delivered Services

We believe that mail-delivery of harm reduction supplies, including sterile injection equipment and naloxone for overdose prevention, can help bring these commodities to PWUD by streamlining transactions and eliminating the need for a local agency to mediate. Mail can reach anywhere in the country, removing geographic barriers. Through the ubiquity of smartphones and wireless Internet, users can order supplies through confidential Web sites and secure messaging applications, providing ease of access, broad availability, and rapid scalability. Online ordering and mail delivery are also discreet, affording participants confidence in their privacy and security. Moreover, mail-delivery circumvents concerns from community members that drop-in centers would exacerbate crime and the “not-in-my-backyard” challenges that have thwarted many SSPs [41].

NEXT Harm Reduction provides proof of concept for this model. Founded in 2017, NEXT was the first formal mail-delivered harm reduction program in the USA, providing free sterile injection equipment, naloxone, and harm reduction education to PWUD. They also provide supplies for proper disposal of syringes. Harm reduction advocates have used the mail to distribute harm reduction supplies informally for years [42]. However, NEXT formalized this practice by designing a secure and confidential online platform for people to request supplies, communicate with staff, and access harm reduction information. Our initial analysis of transaction data from NEXT suggests that their services are in high demand. For example, in just 2.5 years, NEXT has distributed over 600,000 sterile syringes to over 800 unique enrollees. Importantly, these services are being utilized by people with high needs, reaching high proportions of women, people living with HCV, and people who report no other access to sterile

syringes. These data provide a compelling case that making mail-delivered services more widely available could have an important impact on the health of PWUD.

NEXT does not supplant existing drop-in harm reduction services, but rather augments already existing programs. NEXT is authorized to distribute harm reduction supplies in New York State and has established partnerships with local agencies in California, Michigan, Louisiana, and Nevada. When a state resident cannot access an in-person SSP, staff members from the SSP can direct them to NEXT, which provides a way to confidentially request supplies and has the logistics to mail them. NEXT also refers people who would benefit from in-person services to local SSPs when available. SSPs continue to be the hub of local harm reduction efforts, while NEXT’s unique online platform and mail-delivery services allows them to reach more people in need. Forty-two states have at least one harm reduction agency [43], thus expanding partnerships between NEXT, or similar organizations, and these local agencies is a feasible and locally sensitive means of addressing the health services shortages. In the states without local harm reduction agencies, mail-delivered harm reduction could act as the provisional source of safe injection equipment and naloxone. The NEXT model shows great promise, but expanded funding and simple policy changes would make adequate access a reality.

Legal Landscape of Mail-Order Services

Federal and state laws can complicate the mailing of both injection supplies and naloxone. Most states continue to criminalize possession of syringes when the intended use is to inject illicit drugs or misused medications [44]. While many have modified these laws to permit SSPs to dispense injection supplies, the rules governing such programs continue to be restrictive. For example, seven states that allow SSPs continue to lack explicit legal protections for syringe possession [45]. In other states, laws only allow possession of syringes at the physical location of an SSP. [37]

Mailing syringes often requires authorization by a state entity and affiliation with an authorized SSP. [46] Further, some states have regulations that make it difficult for syringes to be mailed, such as requiring onsite HIV and HCV testing, or limiting

distribution to officially designated geographic areas [45]. In contrast, unrestrictive syringe policies are associated with increased acquisition of sterile syringe supplies [47]. For mail-delivery to be broadly expanded, participants must have confidence that they will not face prosecution or penalties for using these services.

Many states have erected no clear barrier to authorized SSPs distributing syringes by mail, and some states have even expanded what is permissible in light of the COVID-19 pandemic. For example, in March 2020 Maine's Governor issued an Executive Order permitting SSPs to distribute injection supplies via mail [48]. However, there are still very few programs using these methods; as of April 2020, only 6% of 173 surveyed SSPs reported mailing injection supplies [49]. Clarifying and modifying these laws could address this crisis.

In many states, broad naloxone access laws permit authorized individuals to distribute naloxone to people at risk of overdose and people who may come in contact with them [50]. Federal law generally defers to state law regarding who can use mail to distribute medications that are not controlled substances, like naloxone [51]. Policy changes at the state level would remove major legal obstacles to mail-delivery of both sterile syringes and naloxone.

Overcoming Barriers

We recommend additional public and private funding be allocated to support mail-delivered harm reduction supplies. Funding should support the expansion of NEXT and build the capacity of other organizations interested in replicating similar programs. Funding should also be increased for local harm reduction programs to include mail-delivery services, such as through affiliates like NEXT. To overcome legal barriers, legislators should remove laws and policies that restrict rapid expansion of mail-delivery harm reduction, such as changing paraphernalia laws to completely exempt syringes, naloxone and other harm reduction supplies [37]. Failing that, they should clarify that any person or entity authorized to distribute harm reduction supplies can do so via mail and remove other barriers, such as geographic limitations on the areas an SSP can serve.

Conclusion

Online ordering and mail-delivery is widely used for a range of health services and products. Leveraging these tools for harm reduction services would rapidly expand the reach of sterile injection equipment and naloxone to underserved areas. Broadly supporting these efforts through policy change and targeted funding can maximize the public health impact and lives of PWUD.

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