

# Hepatitis C Prevention and Needle Exchange Programs in Rhode Island: ENCORE

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## ABSTRACT

As Rhode Island's only needle exchange program, ENCORE (Education, Needle Exchange, Counseling, Outreach, and REferrals) serves a wide range of clients infected or at risk for infection with hepatitis C virus (HCV). Through its on-site and outreach platforms across Rhode Island, ENCORE is in a unique position to serve at-risk individuals who may not otherwise present for prevention, testing and care for HCV, as well as human immunodeficiency virus (HIV). In this article, we discuss the role of needle exchange programs in preventing HCV transmission, and provide an overview of the history and current operations of ENCORE.

**KEYWORDS:** Hepatitis C, needle exchange program, Rhode Island, drug injection

## INTRODUCTION

Needle exchange programs are a core component of harm reduction programs for people who inject drugs (PWID).<sup>1</sup> At a minimum, needle exchange programs (also known as needle and syringe programs) provide sterile needles and syringes to PWID; most also provide other injecting paraphernalia (e.g., alcohol swabs, sterile water and tourniquets) as well as health information and referrals. In this article, we describe the role of needle exchange programs in preventing hepatitis C virus (HCV) transmission, and provide an overview of the history and current operations of Rhode Island's only needle exchange program, ENCORE.

## NEEDLE EXCHANGE PROGRAMS AND HEPATITIS C PREVENTION

In middle- and high-income countries, injecting drug use is the primary route of HCV transmission.<sup>2</sup> HCV is easily transmitted through shared use of needles and other drug injecting equipment, with transmission requiring the transfer of only microscopic amounts of blood from an infected person to an uninfected person, and the virus maintaining infectivity in dried blood for as long as 6 weeks.<sup>3</sup> Globally, it is estimated that 10 million PWID, or 67% of the PWID population, are infected with HCV.<sup>4</sup> By way of contrast, an

estimated 3 million PWID are infected with human immunodeficiency virus (HIV).<sup>5</sup>

There is very strong evidence that needle exchange programs reduce HIV transmission among PWID.<sup>6,7</sup> Although the evidence for needle exchange programs is less conclusive in relation to HCV prevention,<sup>7,8</sup> needle exchange programs are an essential part of any comprehensive intervention strategy to prevent HCV transmission.<sup>1,2</sup> Other components of health care for PWID, recommended by the World Health Organization (WHO), include opioid substitution therapy (also known as methadone maintenance treatment; the medical prescription of opioids such as methadone and buprenorphine to people with opioid dependence, in order to reduce illicit opioid use and injection) and other drug treatment; hepatitis B vaccination, with incentives to initiate and complete the vaccination schedule; integration of medical services for hepatitis with treatment of opioid dependence; and peer-led interventions.<sup>2</sup> These are in addition to the WHO-recommended comprehensive package of intervention for HIV prevention, treatment and care in PWID, including blood-borne virus testing and counseling; antiviral therapy, prevention and treatment of sexually transmitted infections, condom distribution to PWID and their sexual partners, targeted information and education, and prevention, diagnosis and treatment of tuberculosis.<sup>2</sup>

## THE ENCORE PROGRAM

ENCORE (Education, Needle Exchange, Counseling, Outreach, and REferrals) is Rhode Island's only needle exchange program. It aims to reduce risk and transmission of HCV, HIV and other drug-related harms among PWID through a range of harm reduction services (**Box 1**). Harm reduction

### Box 1. Harm reduction services provided by ENCORE

- E**ducation – on HIV, viral hepatitis and other blood-borne pathogens prevention
- N**eedle Exchange – to reduce the risk of transmitting HIV, viral hepatitis and other blood-borne pathogens prevention
- C**ounseling – on reducing risks, HIV and viral hepatitis testing, following through on medical care and substance abuse treatment options
- O**utreach – into the community to help identify clients for the ENCORE program
- R**eferrals – to health care and social service agencies and drug treatment

services focus on preventing harms associated with drug use, rather than preventing drug use *per se*, in acknowledgment that there are people who are unwilling or unable to stop using drugs.<sup>9</sup>

ENCORE has been coordinated by AIDS Care Ocean State (ACOS) since 1998. ACOS is a 501(c)(3) nonprofit AIDS Service Organization and the largest provider of HIV support services in Rhode Island. ACOS has an extensive infrastructure to support HIV prevention and harm reduction services, and has an established reputation in the community of being able to service hard-to-reach, high-risk individuals.

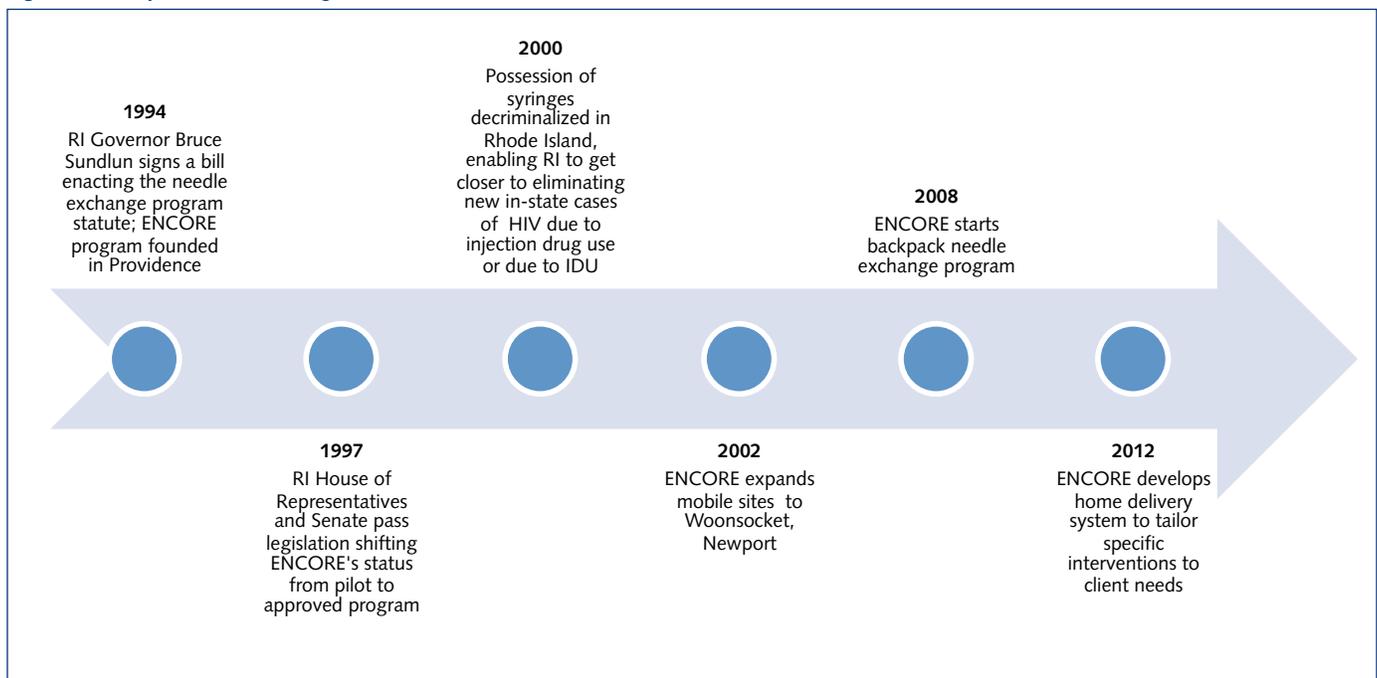
Local development of a needle exchange program in Rhode Island has its roots in the epidemic of HIV transmission through PWID. As early as 1988 in New York City, community advocates such as Edith Springer pioneered harm reduction techniques and needle exchanges to prevent HIV and HCV transmission. In Rhode Island, methadone maintenance treatment programs were expanded into pilot needle exchange programs as acceptable interventions for PWID. Local political opposition to pilot needle exchange shifted when the Rhode Island Department of Health partnered with a community-based AIDS service organization, ACOS, with roots in the urban neighborhoods of Providence.

The ENCORE program has existed in Rhode Island since 1994 (Figure 1), and currently operates three fixed sites and mobile/street-based exchange units, where a van and a team of outreach workers go out into the community to actively seek out PWID in five cities: Providence, Woonsocket, Newport, Pawtucket and Central Falls. The main hub for ENCORE is located at 557 Broad Street, Providence. ENCORE also has a home delivery system where clients can call in

an order and have their supplies delivered directly to them. Services are provided anonymously and are open to anyone over the age of 18. Clients are recruited through referrals from substance treatment facilities, the street outreach component of the program, or through word of mouth. Harm reduction tools provided to clients include: new syringes, alcohol swabs, antibiotic ointment, ascorbic acid, band-aids, bio-hazard sharps containers, cookers, cotton, rubber tip covers, sterile water, and tourniquets. These items are given to clients to help reduce the spread of HIV and HCV. All staff undergo training sessions on agency policy, Harm Reduction 101, safety guidelines of collection and disposal of syringe, HIV and viral hepatitis basics and prevention, safer injection and overdose prevention, referral networks and cultural competency.

As of 2005, ENCORE became Rhode Island's first free testing site for anti-HCV antibodies, markers of exposure to HCV in the blood, in collaboration with Dr. Lynn E. Taylor of Miriam Hospital and Brown University. Used as an initial screening test to identify patients who have been exposed to HCV, the HCV antibody test requires a confirmatory test, if it is reactive/positive, for the HCV virus itself, HCV RNA. Some 15-25% of patients who are exposed to HCV develop the antibody but clear the virus spontaneously in the first six months of infection, and thus have a negative HCV RNA test. From August 2012 – January 2013, HCV antibody screenings at ACOS have a 13% positivity rate, 10 times higher than the 1.3% for the U.S. population overall. In 2013, Dr. Taylor's program Rhode Island Defeats Hep C began offering free confirmatory HCV RNA testing through ACOS, and referred those individuals with detectable HCV

Figure 1. History of needle exchange in Rhode Island



RNA to HCV care in Rhode Island. Of the 13% of individuals with positive HCV antibody screens who underwent confirmatory RNA testing, 84% had detectable HCV RNA.

In addition to HCV testing, ENCORE also offers free, anonymous and confidential HIV and hepatitis B virus testing; distributes a variety of both male and female condoms as well as lubrication and hygiene packs (combs, deodorant, razors, shaving cream, soap, toothbrushes and toothpaste); and provides referrals to an array of social services. Since ENCORE's inception, the Rhode Island Department of Health has supported the program with State resources for the purchase of supplies and volunteer training.

### CLIENT CHARACTERISTICS

The ENCORE Program collects data on its clients through a pre-enrollment interview completed on first presentation to an ENCORE service. The interview also introduces the client to all of the services ENCORE offers. The interviews contain questions pertaining to client demographics, drug use, sharing of injection supplies, and HIV and HCV testing. ENCORE completes follow-up interviews with clients every three months.

Each client is assigned a unique identifier (their ENCORE Code) at the pre-enrollment interview for the purposes of tracking client activity. In 2012, a new coding system was introduced to match the Rhode Island Department of Health's Counseling Testing and Referral (CTR) codes. **Table 1** presents data from pre-enrollment interviews with ENCORE clients between 1994 and 2011, and 2012–2013. The majority of clients were male and Caucasian, with a substantial minority identifying as Hispanic. The majority of clients first injected drugs prior to 30 years of age, and heroin was the most common primary drug. One in five clients reported sharing needles to inject drugs.

On the basis of client self-reports, 44% of ENCORE clients in 2012–2013 were HCV-infected (**Table 1**). It is unclear if clients reporting HCV infection were reporting positive antibody test results, signifying exposure, or confirmed infection. By way of comparison, 10% of clients over the same time period reported that they were HIV-positive (which unlike HCV positive testing, always indicates active infection). Additionally, 7% of clients in 2012–2013 were unaware of their HCV status, and 6% of clients were unaware of their HIV status. Among clients between 1994 and 2011, low levels of blood borne virus testing were reported, with only 26% having received an HCV test in the past year, and 30% having received an HIV test in the past year.

### IMPLICATIONS FOR PUBLIC HEALTH IN RHODE ISLAND

There is potential for HCV transmission among PWID in Rhode Island, with nearly half of ENCORE clients reporting prior HCV exposure or infection, and a substantial minority

**Table 1.** Characteristics of ENCORE clients, 1994–2011 (n=2,525) and 2012–2013 (n=596)

CHARACTERISTIC	%	
	1994–2011	2012–2013
Sex		
Male	70	77
Female	29	22
Transgender	<1	1
Unknown	2	0
Race		
Caucasian	69	65
African-American	4	6
Native American	2	3
Asian	<1	1
Other	2	<1
More than 1 Race	<1	0
Unknown/blank	21	0
Hispanic ethnicity	15	25
Homeless	22	40
Drug of choice		
Heroin	72	81
Crack/cocaine	15	9
Speedball <sup>1</sup>	4	5
Other/unknown <sup>2</sup>	9	5
First injected drugs aged <30 years	81	81
Report needle sharing	22	20
Of sharers, sharing with friends	34	55
Of sharers, sharing with sexual partners	38	37
Ever enrolled in drug treatment	50	75
HCV test in the past year		
Yes	26	—
No	10	—
Unknown	63	—
HCV status		
Self-reported HCV positive <sup>3</sup>	—	44
Unaware of HCV status	—	7
HIV test in the past year		
Yes	30	—
No	7	—
Unknown	63	—
HIV status		
Self-reported HIV positive	—	10
Unaware of HIV status	—	7

HCV: hepatitis C virus.

<sup>1</sup>Speedball refers to injection of cocaine and heroin or morphine in the same mixture.

<sup>2</sup>Includes amphetamine and steroids.

<sup>3</sup>May refer to either HCV antibody positive, or confirmed HCV infection.

of clients sharing needles. Furthermore, a small proportion of clients are unaware of their infection status, suggesting that they have not been tested for HCV, or at the least have not been tested recently. Between 1994 and 2011, only one-quarter of clients reported HCV testing in the past year. There are considerable opportunities to increase HCV testing among this group, including through ENCORE. These include better follow-up of clients through ENCORE's home delivery system, and increasing awareness among PWID of the benefits of testing and the availability of highly effective treatments with fewer side effects than in the past. These actions will complement broader ACOS and Rhode Island Defeats Hepatitis C efforts.

Studies of needle exchange programs and HCV have demonstrated that a high level of coverage (i.e., contact with a high proportion of local PWID) is necessary to have an impact on HCV incidence and prevalence.<sup>7</sup> Coverage of needle exchange programs in the United States is among the lowest in the world,<sup>10</sup> in part due to a ban on federal funding for such services. The extent to which ENCORE reaches the population of PWID in Rhode Island has not been formally estimated, but in 2008–2009, only 28% of a small sample of PWID seeking detoxification services in Rhode Island reported having accessed a needle exchange program in the last six months.<sup>11</sup> ENCORE outreach and home delivery services have expanded since 2008, so it is possible that coverage has increased in recent years. There is a need for data estimating ENCORE's coverage of PWID in Rhode Island, as well as the potential impacts of increased needle exchange coverage on HCV incidence and prevalence in the state.

## CONCLUSION

ENCORE is a long-standing program providing harm reduction services, including needle exchange, to PWID in Rhode Island. As the only needle exchange program in the state, it serves as a vital resource for a highly vulnerable population that is at risk of HCV infection. Continued scale-up of ENCORE's reach and services will have a positive impact on the HCV epidemic in Rhode Island.

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## Disclosures

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