

Assemblymember Susan Eggman, 13th Assembly District

AB 362 - Overdose Prevention Programs

SUMMARY

This bill allows the Board of Supervisors of San Francisco the discretion to authorize overdose prevention programs where adults may use controlled substances under supervision of staff trained to prevent and treat overdose, prevent HIV and hepatitis infection, and facilitate entry into drug treatment and other services. This law would be repealed January 1, 2026.

BACKGROUND

According to the California Department of Public Health, drug overdose is a leading cause of accidental death in California. In 2013, California hospitals treated roughly one overdose every 45 minutes, while heroin and opiate use continue to rise.

According to the federal Centers for Disease Control and Prevention, in 2010 nearly 4,000 new cases of HIV were attributed to unsafe injections, and heroin overdose mortality in the United States nearly tripled between 2010 and 2014. Many of the most marginalized and high-risk drug users, who lack housing and other supports, inject in public spaces without clean equipment or a readily accessible method of syringe disposal.

Overdose Prevention Programs, or Supervised Consumption Services, have been utilized in Vancouver, Sydney, and approximately 100 other cities around the world to reduce overdose death and injury, decrease public health concerns like discarded syringes and public injection, reduce the transmission of infectious diseases, and provide entry to treatment for this most marginalized group.

In addition to these benefits, research has shown that these programs *do not* encourage additional drug use or increase crime in the surrounding area, and potentially save millions of dollars in healthcare and incarceration costs. For these reasons, the American Medical Association endorsed piloting these sites in June 2017.

THIS BILL

AB 362 would allow, pursuant to a vote of the Board of Supervisors of San Francisco, exemptions from state controlled substance offenses for employees, staff, volunteers, and clients of health facilities intended to reduce drug overdose death and to facilitate entry into drug treatment.

AB 362 requires any such program to provide access to drug treatment and other services, maintain specified safety and security protocols, and to be accountable to local governments for data collection and reporting.

This bill only allows for authorization of programs for adults, aged 18 years and older, in San Francisco, and requires the local government to hold a public hearing with input from law enforcement, public health, and the general public.

It has a sunset date of January 1, 2026.

CO-SPONSORS

CA Association of Drug Program Executives
California Society of Addiction Medicine
Drug Policy Alliance
Harm Reduction Coalition
Healthright 360
Project Inform
San Francisco AIDS Foundation
Tarzana Treatment Center

SUPPORT

FOR MORE INFORMATION

Office of Assemblymember Eggman Logan Hess Logan.Hess@asm.ca.gov 916.319.2013 February 25, 2019

Honorable Jim Wood Chair, Assembly Health Committee State Capitol, Room 6005 Sacramento, CA 95814 Via fax: 916-319-2197 Regarding: AB 362 (Eggman) Position: Co- Sponsor We are the Drug Policy Alliance.

Board Members
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Dear Assemblymember Wood,

The Drug Policy Alliance (DPA) is honored to be a co-sponsor of AB 362 (Eggman) to allow local health jurisdictions to establish effective harm reduction programs such as overdose prevention projects or supervised consumption services. The bill would give the City and County of San Francisco the ability to better address the increase in drug overdose deaths, connect people to substance use disorder treatment, and reduce new HIV and hepatitis infections. Twelve Californians die every day of an accidental drug overdoseⁱ, on average, leaving behind grieving friends and family. AB 362 would allow San Francisco to provide services proven to make our communities safer and healthier.

Overdose prevention programs (OPP) or supervised consumption services (SCS), such as those that could be established under this bill, have been shown to reduce health and safety problems associated with drug useⁱⁱ, including public drug useⁱⁱ, discarded syringes^{iv}, HIV and hepatitis infections^v, and overdose deaths^{vi}. People who used such a program in Canada were more likely to enter treatment and more likely to stop using drugs^{vii}. OPP are sites where individuals are able to use illicit drugs in a clinical setting, with expert supervision and sterile supplies. Over 120 exist around the world in ten countries, including Canada^{viii}. DPA has long championed OPP as an evidence-based, effective response to the harms of drug use.

The City and County of San Francisco wants and needs these programs. They are supported by the Mayor, the Board of Supervisors, the Sheriff, the District Attorney, the Chamber of Commerce, SF Travel, and 77% of the public, according to a recent poll by the Chamber of Commerceix. HIV/AIDS and viral hepatitis organizations, substance use disorder treatment programs, medical providers, drug user health advocates, and housing providers have been pushing for these programs for over 10 years. In 2017, the Board of Supervisors convened a task force to review the issue and the task force unanimously recommended moving forward with the programs to improve public health and safety in San Francisco. An earlier study showed that San Francisco would save \$3.5 million per year if one program were opened, or \$2.33 for every dollar spent on the services.*

AB 362 provides narrow exemptions to certain controlled substance laws for programs permitted by localities. It would allow the operation and utilization of live-saving public health and medical intervention programs intended to reduce death, disease, or injury related to the use and administration of controlled substances. OPP are a common-sense next step to address drug-related harm beyond sterile syringe access, which has been supported by the California legislature since 1999.

The Drug Policy Alliance envisions a just society in which the use and regulation of drugs are grounded in science, compassion, health and human rights, in which people

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are no longer punished for what they put into their own bodies but only for crimes committed against others, and in which the fears, prejudices and punitive prohibitions of today are no more. Our mission is to advance those policies and attitudes that best reduce the harms of both drug use and drug prohibition, and to promote the sovereignty of individuals over their minds and bodies. Sponsoring AB 362 is consistent with that mission.

For those reasons, Drug Policy Alliance is proud to co-sponsor AB 362 (Eggman) to allow San Francisco to choose to offer these effective and safe programs. Please do not hesitate to contact me at 415/283-6366 or lthomas@drugpolicy.org, or our legislative advocate Glenn Backes at 916/202-2538 or glennbackes@mac.com. Thank you for your prior support for piloting this important intervention.

Respectfully,

Laura Thomas, MPH, MPP Deputy State Director

Laura Thorum

cc: Assemblymember Susan Talamantes Eggman via Logan.Hess@asm.ca.gov

i Centers for Disease Control and Prevention (2015). "Increases in Drug and Opioid Overdose Deaths – United States, 2000-2014". Morbidity & Mortality Weekly Report, 64(50); 1378-82. December 18, 2015

[©] C. Potier et al, "Supervised injection services: What has been demonstrated? A systematic literature review," Drug Alcohol Depend 118, no.2-3 (2011): 100-10

Evan Wood, et al., "Changes in public order after the opening of a medically supervised safer injecting facility for illicit

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v Salaam Semaan et al., "Potential role of safer injection facilities in reducing HIV and Hepatitis C infections and overdose mortality in the United States," Drug & Alcohol Dependence 118 (2011): 100–110

wi Brandon D.L. Marshall et al., "Reduction in overdose mortality after the opening of North America's first medically

supervised safer injecting facility: a retrospective population-based study," Lancet 377 (2011): 1429-37

^{**} Evan Wood et al., "Rate of detoxification service use and its impact among a cohort of supervised injecting drug users," Addiction 102 (2007):916-19.

[&]quot;Drug consumption rooms: an overview of provision and evidence," (2015) http://www.emcdda.europa.eu/topics/pods/drug-consumption-rooms.

ix San Francisco Chamber of Commerce, "2019 Dignity Health CityBeat Poll Results." https://www.dropbox.com/s/o86yu0v9u0lwcll/2019 CityBeat Poll-OneSheet.pdf?

x Irwin, Amos, et al. "A Cost-Benefit Analysis of a Potential Supervised Injection Facility in San Francisco, California, USA." Journal of Drug Issues (2016): 0022042616679829.



Drug Policy Alliance www.drugpolicy.org

FOR IMMEDIATE RELEASE February 4, 2019

Contact: Laura Thomas 415-283-6366

California Legislature to Consider Allowing Pilot Overdose Prevention Projects

Legislation Allows People to Legally Consume Drugs Under Supervision of Staff Trained to Prevent Overdose and Provide Access to Drug Treatment

In Sacramento today, State Assemblymember Susan Talamantes-Eggman and State Senator Scott Weiner reintroduced legislation to allow the City of San Francisco to pilot and evaluate an "overdose prevention site" program. These sites would allow drug users could consume illegal drugs, including heroin, cocaine, or methamphetamine, under supervision of staff trained to prevent and treat drug overdose, and to help steer people who use drugs into drug treatment, housing, and other medical and social services.

"San Franciscans understand how desperately we need these programs. They have the support of public health and law enforcement leadership, business groups, neighborhood groups, the Mayor and the Board of Supervisors." said <u>Laura Thomas</u>, California deputy state director of Drug Policy Alliance. "These programs will reach homeless people who use drugs, move them and their syringes off the street, protect their dignity and health, and provide a pathway to drug treatment and other services."

Overdose is the leading cause of accidental death in the state and the U.S. Experts believe that Overdose Prevention Projects are just one part of the continuum of care that reduces death, disease and addiction. They point to the over 120 programs in Europe, Canada and Australia, and the wealth of research that finds reduced number of deaths, reduced calls to emergency rooms and ambulances, and increased intake to drug treatment as rationale for testing these programs in the U.S. The research also shows no increases in drug use, public drug use, or drug dealing in areas where they have been established, and a reduction in the number of syringes being discarded in the streets and people using drugs in public.

Last year, the California State Legislature passed a bill to allow San Francisco to pilot a program, where people who use drugs and program staff would be exempted from state laws that make it illegal to use drugs or to provide a space where people use illegal drugs. It was vetoed by Governor Jerry Brown. In contrast, after the veto, then-candidate for Governor Gavin Newsom said "I'm not wedded to the language of the existing bill, but I am very, very open to a pilot."

Eggman said today, "This will be my fourth year working on this issue and each year we've moved closer toward making these life-saving programs a reality for people facing the greatest risks during our opioid crisis. This bill will grant us another tool in the fight – to provide better access to treatment and counseling, to better protect public health and safety, and to save lives."

The bill is sponsored and supported by experts, associations of physicians, and programs that treat addiction, as well as programs that advocate for the prevention of hepatitis and HIV, among others.

"Overdose prevention programs are essential for both the health of people who use drugs by preventing overdose deaths and HIV or hepatitis C transmission, while also protecting the public from discarded syringes and other social order problems," states Andrew Reynolds, Hepatitis C and Harm Reduction Manager for Project inform.

Randolph Holmes, MD, an addiction specialist and chair of the public policy committee at California Society of Addiction Medicine (CSAM), praised the legislation saying; "This bill and the pilot program show great promise for saving lives and creating a new innovative avenue into treatment in the face of ignorance and fear."

AB 362 is co-sponsored by California Association of Alcohol and Drug Program Executives (CAADPE), California Society of Addiction Medicine (CSAM), Drug Policy Alliance, San Francisco AIDS Foundation, Harm Reduction Coalition, HealthRight 360, Project Inform, and Tarzana Treatment Centers.

Supervised Consumption Services

August 2018



Overview

Supervised consumption services (SCS) – also called overdose prevention programs (OPPs), safer injection facilities (SIFs), drug consumption rooms (DCRs), supervised drug consumption facilities (SCFs) or safer drug use services (SDUS) – are legally sanctioned facilities designed to reduce the health and public order issues often associated with public injection. These facilities provide a space for people to consume pre-obtained drugs in controlled settings, under the supervision of trained staff, and with access to sterile injecting equipment. Participants can also receive health care, counseling, and referrals to health and social services, including drug treatment.

There are approximately 120 SCS/OPP currently operating in ten countries around the world (Australia, Canada, Denmark, France, Germany, Luxembourg, the Netherlands, Norway, Spain and Switzerland) – but none in the U.S.ⁱ In the past two years, Canada, and especially the city of Vancouver, has grown from two authorized sites to thirty, plus multiple smaller Overdose Prevention Sites –a temporary site set up to address the immediate need in a community.

There are plans for the opening of SCS/OPP in Portugal, Belgium, Ireland and the UK. In the United States, Seattle, San Francisco, Philadelphia and New York City have committed to opening sites, but none are in operation yet. There is, however, one underground site in the U.S., according to researchers.

SCS/OPP can play a vital role as part of a larger public health approach to drug policy. SCS/OPP are intended to complement – not replace – existing prevention, harm reduction and treatment interventions.

SCS Improve Safety and Health

Numerous evidence-based, peer-reviewed studies^{iv} have proven the positive impacts of supervised injection services, including:

- Increasing use of substance use disorder treatment, especially among people who distrust the treatment system and are unlikely to seek treatment on their own;
- Reducing public disorder, reducing public injecting, and increasing public safety;
- Attracting and retaining a population of people who inject drugs and are at a high risk for infectious disease and overdose;
- Reducing HIV and Hepatitis C risk behavior (i.e. syringe sharing, unsafe sex);
- Reducing the prevalence and harms of bacterial infections;
- Successfully managing hundreds of overdoses and reducing drug-related overdose death rates;
- Saving costs due to a reduction in disease, overdose deaths, and need for emergency medical services:
- Providing safer injection education, subsequently increasing safer injecting practices;
- Increasing the delivery of medical and social services.

In areas surrounding existing SCS, there has been no evidence of increased community drug use, initiation of injection drug use, or drug-related crime. A 2017 systematic review concluded: "Consistent evidence demonstrates that SCFs mitigate overdose-related harms and unsafe drug use behaviours, as well as facilitate uptake of addiction treatment and other health services among people who use drugs (PWUD). Further, SCFs have been associated with improvement in public order without increasing drug-related crime. SCFs have also been shown to be cost-effective."

And a previous review concluded: "All studies converged to find that SIFs were efficacious in attracting the most marginalized people who inject drugs, promoting safer injection conditions, enhancing access to primary health care, and reducing the overdose frequency. SIFs were not found to increase drug injecting, drug trafficking or crime in the surrounding environments. SIFs were found to be associated with reduced levels of public drug injections and dropped syringes." v

Vancouver's InSite

Vancouver, Canada's supervised injection facility, *InSite*, has been the most extensively studied SIF in the world, with over 60 peer-reviewed articles published examining its effects on a range of variables, from retention to treatment referrals to cost-effectiveness. These reports are in agreement with reviews of Australian and European SIFs, which show that these facilities have been successful in attracting at-risk populations, are associated with less risky injection behavior, fewer overdose deaths, increased client enrollment in drug treatment services, and reduced nuisances associated with public injection. For example, one study found a 30 percent increase in the use of detoxification services among *InSite* clients.

InSite has proved to be cost-effective in terms of overdose and blood borne disease prevention as well. ix One cost-benefit analysis of InSite estimated that the facility prevents 35 cases of HIV each year, providing a societal benefit of more than \$6 million per year. x

"InSite saves lives. Its benefits have been proven. There has been no discernable negative impact on the public safety and health objectives of Canada during its eight years of operation."

- Supreme Court of Canada, 2011. xi

A survey of more than 1,000 people utilizing *InSite* found that 75 percent reported changing their injecting practices as a result of using the facility. Among these individuals, 80 percent indicated that the SIF had resulted in less rushed injecting, 71 percent indicated that the SIF had led to less outdoor injecting, and 56 percent reported less unsafe syringe disposal.^{xii} InSite has produced a "large number of health and community benefits…and no indications of community or health-related harms."^{xdii}

Several Cities on the Verge of Opening First SCS in U.S.

In 2012, New Mexico adopted a proposal to study the feasibility of a safer injection facility in the state – becoming the first state in the nation to consider this potentially life-saving intervention.xiv

In 2016, the city of Ithaca launched the "The Ithaca Plan" – a comprehensive municipal drug strategy which included a proposal for a safer injection site.**

In January 2017, Seattle and the surrounding King County announced a plan to establish several SCS in the area as a pilot test to address overdose and drug use in the community. XMI And in 2018, city officials in Philadelphia, San Francisco, and New York City announced their plans to open sites in their cities. XMII Momentum for SCS has also emerged in cities such as Boston and Baltimore. Additionally, legislation has been introduced in California, Colorado, Maryland, Massachusetts, Missouri, New York and Vermont to allow SCS.

Recommendations

SCS are a vital part of a comprehensive public health approach to reducing the harms of drug misuse. Local, state and national governments should explore the implementation of legal SCS (at least at the pilot level) staffed with trained professionals to reduce overdose deaths, increase access to health services and further expand access to safer injection equipment to prevent the transmission of HIV and Hepatitis C.

DPA supports the efforts of local communities in the U.S. to pursue SCS programs.

Though SCS cannot prevent all risky drug use and related harms, evidence demonstrates that they can be remarkably effective and cost-effective at improving the lives of people who inject drugs as well as the public safety and health of their communities.

^I European Monitoring Centre for Drugs and Drug Addiction, "Drug consumption rooms: an overview of provision and evidence," (2018) http://www.emcdda.europa.eu/systent/files/publications/2734/POD_Drug%20cons umption%20rooms.pdf; Government of Canada, "Supervised consumption sites: status of applications," https://www.canada.ca/en/health-canada/services/substance-abuse/supervised-consumption-sites/statusapplication.html:

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- Alex H. Kral and Peter J. Davidson, "Addressing the Nation's Opioid Epidemic: Lessons from an Unsanctioned Supervised Ijection Facility," Americal Journal of
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- [™] See KPMG, Further evaluation of the Medically Supervised Injecting Centre 2007-2011, http://www.health.nsw.gov.au/resources/mhdao/pdf/nsic_kpmg.pdf; European Monitoring Centre for Drugs and Drug Addiction, "Drug consumption rooms: an overview of provision and evidence."
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- ¹² M. A. Andresen and N. Boyd, "A cost-benefit and cost-effectiveness analysis of Vancouver's supervised Injection facility," Int J Drug Policy 21, no. 1 (2010): 70-76; AM Bayoumi and GS Zaric, "The cost-effectiveness of Vancouver's supervised injection facility," Can Med Ass J 179, no. 11 (2008): 1143-51; SD Pinkerton, "Is Vancouver Canada's supervised injection facility cost-saving?," Addiction 105(2010): 1429-36.
- * Andresen and Boyd, "A cost-benefit and cost-effectiveness analysis of Vancouver's supervised injection facility."
- ^{xi} Brandon DL Marshall et al., "Reduction in overdose mortality after the opening of North America's first medically supervised safer injecting facility: a retrospective population-based study," *The Lancet* 377, no. 9775 (2011): 1429-37.
- **S Petrar et al., "Injection drug users' perceptions regarding use of a medically supervised safer injecting facility," Addict Behav 32(2007): 1088-93. Steven Petrar et al., "Injection Drug Users' Perceptions Regarding Use of a Medically Supervised Safer Injecting Facility," Journal of Addictive Behaviors 32, no.5 (2007):1088-1093.
- ^{xii} E Wood et al., "Summary of findings from the evaluation of a pilot medically supervised injecting facility," Can Med Assoc J 175, no. 11 (2006): 1399-404.
- xw 50th Legislature, State of New Mexico, Senate Memorial 45 (2012) http://www.nmlegis.gov/Sessions/12%20Regular/memorials/senate/SM045.pdf
- ^{xv} Drug Policy Alliance, ¹Ithaca to Release Groundbreaking Plan to Address Over-Incarceration and Skyrocketing Overdose Deaths, While Creating Comprehensive Health-Based Approach to Drug Policy, *February 21, 2016 http://www.drugpolicy.org/news/2016/02/fithaca-release-groundbreaking-plan-
- address-over-incarceration-and-skyrocketing-overdose

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- Recommendations (September 15, 2016) http://www.kingcounty.gov/~/media/depts/community-human-services/behavioral-health/documents/herointf/Final-Heroin-Opiate-Addiction-Task-_Force-Report.ashx?la=en
- xvii Elana Gordon, "What's Next For 'Safe Injection' Sites In Philadelphia?," NPR, January 24, 2018, https://www.npr.org/sections/healthshots/2018/01/24/580255140/whats-next-for-safe-injection-sites-in-philadelphia; Heather Knight, "SF safe injection sites expected to be first in nation open around July 1," San Francisco Chronicle, Feb 6, 2018,
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MotherJones

Refuting Science, Jerry Brown Vetoes Safe Injection Plan

Brown's recent decisions have drug policy experts fuming.

JULIA LURIE OCTOBER 1, 2018 1:26 PM

On Sunday, Democratic California Gov. Jerry Brown vetoed a bill that would have allowed San Francisco to open what could have been the nation's first supervised drug injection sites.

"Fundamentally, I do not believe that enabling illegal drug use in government sponsored injection centers—with no corresponding requirement that the user undergo treatment—will reduce drug addiction," Brown wrote in his veto message.

The veto drew sharp criticism from proponents of safe injection facilities (SIFs), who argue that providing clean, monitored space for drug users to use illicit drugs would reduce overdose deaths. "I am shocked that the Governor turned his back on the science and the experts and instead used outdated drug war ideology to justify his veto," said Laura Thomas of the Drug Policy Alliance. "People will die because of his veto."

SIFs are controversial, but dozens of studies on existing SIFs—there are more than 100 in Canada, Germany, the Netherlands, and elsewhere—have found that the sites reduce drug overdoses and the transmission of infectious diseases like HIV and hepatitis C, increase access to addiction treatment, and save cities money in hospital and prison costs. They are a prime example of harm reduction, or the idea of making drug use less lethal so eventually, users seek treatment. (Needle exchanges, which provide clean injection supplies, and the distribution of naloxone, the overdose reversal drug, are others.)

No US city has a SIF yet, in part because allowing drug use in taxpayer-funded facilities would likely spark a thorny legal battle between state and federal authorities. Days after California lawmakers sent the bill to Brown's office, Deputy Attorney General Rod Rosenstein warned in a *New York Times* op-ed that "cities and counties should expect the Department of Justice to meet the opening of any injection site with swift and aggressive action." Still, support of SIFs is moving mainstream: Last year, the American Medical Association came out in favor of piloting the facilities in the United States. Policymakers in Philadelphia, New York, and Seattle have expressed support.

"It was an opportunity to lead the country in this crisis," says Dr. Dan Ciccarone, an epidemiologist at the University of California-San Francisco, of the bill. "By better engaging the population at risk, we could achieve what both opponents and supporters want: reduce deaths and move folks toward treatment."

This isn't the first time this year Brown has frustrated drug policy experts. Earlier this month, he vetoed a bill that would have required insurance companies to cover all three opioid addiction medications: methadone, buprenorphine, and naltrexone. (He argued that the bill would have removed health plans' ability to require that patients also use other services, like counseling or outpatient treatment, alongside the medications.)

Brown also eliminated popular budget proposals that would have added staff to emergency departments and needle exchange programs to help drug users navigate addiction treatment options. "The public health infrastructure in California has never recovered from the cuts made to it during our years of budget crisis," Thomas told *Mother Jones*. "It's disappointing that a governor who listens to and champions the scientific consensus on climate change, for example, refuses to do so on substance use."

Los Angeles Times

Gov. Brown, don't let the feds scare you into vetoing safe injection site

By THE TIMES EDITORIAL BOARD SEP 12, 2018 | 4:05 AM

About 72,000 Americans <u>died from drug overdoses</u> in 2017. That's nearly 200 people per day — more than the number of people killed in car accidents. Fatal overdoses have been on the rise in recent years, due in large part to the proliferation of tremendously dangerous synthetic opioids such as fentanyl, and it's a safe bet that the daily death rate will be higher again by the end of this year.

This escalating crisis has forced state and local governments to think about new approaches to the problem, including harm-reduction strategies that will help keep people alive and expand treatment options. That has included equipping police officers and emergency medical staff with naloxone, a medication that can reverse opioid overdoses. And thank heaven for that, or the overdose rate would have likely been higher.

Another promising way to reduce fatal drug overdoses is by opening so-called safe injection facilities, where addicts can self-administer illicitly obtained drugs, including heroin and fentanyl, under medical supervision. Dozens of safe injection sites, also known as drug consumption sites, have been operating successfully for years in Europe and Canada, and authorities in a handful of U.S. cities — San Francisco, Seattle and New York, among them — are either considering or planning to open facilities.

We should be doing everything possible to help addicts stay alive.

Last month, the Legislature gave its blessing to a proposal under which San Francisco would be allowed to open one safe injection facility on a three-year trial basis. It was a scaled-back version of a

controversial bill that gave the same permission to seven other counties, including Los Angeles. That bill stalled a year earlier after a contentious legislative battle.

The narrower bill is now on the desk of Gov. Jerry Brown. He should sign it, despite the threat leveled by Deputy U.S. Atty. Gen. Rod Rosenstein in an op-ed in the New York Times in August, the day after the Legislature approved the bill.

"Because federal law clearly prohibits injection sites, cities and counties should expect the Department of Justice to meet the opening of any injection site with swift and aggressive action," Rosenstein wrote.

What a waste of taxpayer money that would be. Sure, it's a bit strange for government to be in the business of helping people consume drugs. Some people think that it's immoral to "normalize" drug use that way; others fear that government-sanctioned drug use will merely encourage the problem. But surely, given the breadth of the problem, its worth a try to see if it reduces deaths.

Despite Rosenstein's assertions to the contrary (which he bases on one person's observations and the treatment rate at a year-old safe injection site), there are data showing that the facilities reduce overdoses and direct addicts into treatment. These aren't dirty drug dens but sterile health facilities staffed with medical professionals who can recognize and reverse deadly overdoses, provide clean needles to reduce infection and help addicts connect with treatment providers. One study of Canada's first safe injection facility, which has been open since 2003 in Vancouver, found that drug overdoses decreased by 35% in the surrounding community, prompting the Canadian government to develop more such facilities across the country.

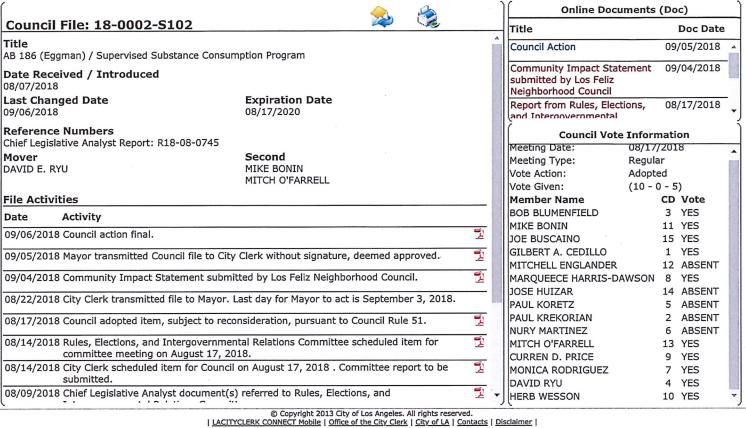
Why wouldn't we at least try out a program with such promise?

Of course, the ideal way to lower fatal drug overdoses is for people to stop using dangerous drugs. But helping people kick opioid addictions requires public investment in treatment options, and often time for treatment to work. Meanwhile, we should be doing everything possible to help addicts stay alive. That's where harm-reduction strategies such as naloxone, needle exchanges and safe injection facilities can help.

We hope that Rosenstein's threat was an empty one, not an indication that the Department of Justice is planning to waste its crime-fighting resources prosecuting social workers and nurses trying to help addicts. Instead, the federal government should be supporting desperate cities and counties as they work to develop strategies to cope with the effects of the overdose crisis.

Happily, Gov. Brown isn't one to be cowed by federal government bullies when it comes to doing what's best for Californians.

http://www.latimes.com/opinion/editorials/la-ed-safe-injection-pilot-20180912-story.html



RESOLUTION

WHEREAS, any official position of the City of Los Angeles, with respect to legislation, rules, regulations or policies proposed to or pending before a local, state, or federal governmental body or agency must have first been adopted in the form of a Resolution by the City Council with the concurrence of the Mayor; and

WHEREAS, AB 186 (Eggman), introduced on January 19, 2017, would allow Los Angeles, along with other specified cities and counties, to authorize the operation of supervised injection services programs for adults that satisfy specified requirements; and

WHEREAS, supervised substance consumption programs would create a space where medical staff could oversee the injection of controlled substances without the public health risks of communicable diseases and overdose deaths; and

WHEREAS, drug overdose is a leading cause of accidental death in California; and

WHEREAS, in 2010, nearly 4,000 new cases of HIV were attributed to unsafe injections, and heroin overdose mortality in the United States nearly tripled between 2010 and 2014; and

WHEREAS, a recent study projects that a supervised substance consumption program, like the ones proposed by AB 186, could save San Francisco \$3.5 million annually per site by reducing the incidence of HIV and Hepatitis C, and increasing the number of people entering treatment; and

WHEREAS, similar supervised substance consumption programs around the world reduce overdose deaths and show no increase in the number of people who use drugs, drug trafficking or consumption crimes, or relapse rates; and

WHEREAS, the homeless population in the City of Los Angeles increased by 20% from 2016 to 2017; and

WHEREAS, homeless populations face increased risk with regard to health risks surrounding controlled substance use, including overdoses and communicable diseases;

NOW, THEREFORE, BE IT RESOLVED, with the concurrence of the Mayor, that by the adoption of this Resolution, the City of Los Angeles hereby includes into its 2017-2018 State Legislative Program SUPPORT for AB 186 (Eggman) which would allow the City of Los Angeles and the County of Los Angeles to open supervised substance consumption program sites in an effort to reduce overdoses and communicable diseases and partner those sites with medical and health professionals to offer counseling and services.

PRESENTED BY:

DAVID E. RYU

Councilmember, 4th District

SECONDED BY

Original list of supporting organizations

Re: Controlled substances: overdose prevention program (Eggman)

- 1. Aegis Treatment Centers
- 2. AIDS Community Research Consortium
- 3. AIDS United
- 4. amfAR
- 5. American Civil Liberties Union of California
- 6. A New path
- 7. APLA Health
- 3. Asian American Drug Abuse Program only
- 9. Association for Medical Education and Research Substance Abuse
- 10. Bienestar Human Services only syringes
- 11. California Alliance for Retired Americans
- 12. California Association of Alcohol and Drug Program Executives (cosponsor)
- 13. California Council of Community Behavioral
- 14. California Hepatitis Alliance (cosponsor)
- 15. California Opioid Maintenance Providers
- 16. California Psychiatric Association
- 17. California Society of Addiction Medicine (cosponsor)
- 18. Center for Living and Learning19. Community Health Project Los Angeles both syringes + naloxone
- 20. Coalition on Homelessness
- 21. CORE Medical Clinic, Inc.
- 22. Dataway
- 23. Desert AIDS Project Palm Springs
- 24. Drug Policy Alliance (cosponsor)
- 25. Encompass Community Services
- 26. Equality California
- 27. Face to Face/Sonoma County AIDS Services
- 28. Fresno Needle Exchange
- 29. Gender Health Center
- 30. Harm Reduction Coalition (cosponsor)
- 31. Harm Reduction Services Sacramento
- 32. Health Right 360
- 33. Health Officers Association of California
- 34. HEPPAC Alameda
- 35. Homeless Healtheare <mark>Los Angeles both</mark> syringes + naloxone
- 36. Homeless Youth Alliance
- 37. Humboldt Area center for Harm Reduction
- 38. Insurance Commissioner Dave Jones, Dept of Insurance, State of CA
- 39. Law Enforcement Action Partnership
- 40. Legal Services for Prisoners with Children

- 41. Los Angeles Overdose Prevention Task Force
- 42. Los Angeles LGBT Center
- 43. Los Angeles Regional Reentry Partnership
- 44. Mental Health America of California
- 45. National Association of Social Workers CA
- 46. Needle Exchange Emergency Distribution
- 47. Positive Women's Network
- 48. Professor of Medicine at UCSF Paula J. Lum
- 49. Project Inform
- 50. San Francisco Marin Medical Center
- 51. SF AIDS Foundation
- 52. SF Chamber of Commerce
- 53. SF Mayor London Breed
- 54. SF Sheriff Vicki Hennessy
- 55. SF Travel
- 56. Saint Francis Foundation
- 57. St. Anthony Foundation
- 58. The Spahr Center
- 59. Tarzana Treatment Centers (cosponsor) botł syringes + naloxone
- 60. Tenderloin Neighborhood Development Corporation
- 61. Glide Foundation
- 62. The Gubbio Project
- 63. Tides Advocacy
- 64. Transitions Clinic
- 65. Treatment Action Group
- 66. West County Health Services
- 67. Venice Family Center both syringes + naloxone
- 11 organizations have centers/offices in the city of
- Organizations providing syringes and naloxone within the city of LA



DRUG POLICY ALLIANCE www.drugpolicy.org

FOR IMMEDIATE RELEASE February 19, 2019

Contact: Art Way, 720-579-1265 Jag Davies 212-613-3035

DPA Releases New Report: The Costs and Benefits of a Supervised Use Site in Denver, Colorado

Report Highlights Extensive Potential Cost Savings and Public Health Benefits Of A Supervised Use Site For Denver

Advocates Say Report Findings Should Inspire Urgent Action By the Legislature

Today the Drug Policy Alliance is releasing a new report, *The Costs and Benefits of a Supervised Use Site in Denver, Colorado*. Produced in collaboration with Colorado Fiscal Institute, Law Enforcement Action Partnership and Harm Reduction Action Center, the report marshals the best available data from Denver and from existing facilities in Canada and Europe to analyze the cost effectiveness of a prospective supervised use site in Denver.

Facilities providing <u>supervised consumption services</u> (SCS) are legally sanctioned to allow people to consume pre-obtained drugs under the supervision of trained staff while providing access to sterile equipment, health care, counseling, and referrals to medical and social services, including drug treatment. Such facilities are also referred to as supervised use sites (SUS), the terminology adopted most commonly in Denver, as well as overdose prevention centers, safe or supervised injection facilities (SIFs) and drug consumptions rooms (DCRs).

Report findings include:

- A full capacity SUS in Denver could generate \$8.6 million in health benefits for a total cost of under \$1.8 million, yielding a cost-benefit ratio of \$4.89 saved for every dollar spent.
- The net savings associated with a full capacity SUS in Denver is projected to be \$6.9 million per year.
- Health benefits and associated fiscal savings projected for a Denver-based SUS include:
 - o \$300,000 in savings through HIV prevention
 - o \$3.8 million in annual savings through HCV prevention
 - o \$2.8 million in annual savings through SSTI prevention
 - o Multiple lives saved and reduced ambulance, emergency room and hospital costs through overdose prevention
 - o \$320,000 in reduced annual drug-related health care and crime costs

Recent cost-benefit analyses have reached similar conclusions in **San Francisco** and **Baltimore**.

Advocates are lauding this report as confirmation that the Colorado General Assembly should move forward without delay with legislation to allow a supervised use site. In November of 2018, Denver City Council nearly

unanimously <u>passed</u> an ordinance authorizing establishment of a supervised use site pilot program contingent upon approval of corresponding state legislation that is pending introduction. The new report shows that the legislature has an urgent opportunity to save money and lives by introducing and approving this bill.

Several state legislators, including Senator Brittany Pettersen (D - District 22), Senator Kevin Priola (R - District 25), and Representative Leslie Herod (D - District 8) have been involved in plans to introduce a bill that would allow Denver to implement the supervised use site pilot program ordinance, but Senator Pettersen announced today that those efforts are stalling. Local experts from the public health, medical, faith and legal communities, as well as families impacted by overdose, insist on the urgent need to move forward.

"The legislature has a duty to pursue fiscally responsible and evidence-based public health policy. We need to face the fact that opposition to Denver's supervised use site pilot program is based solely in bias, stigma and misinformation," says <u>Amanda Bent</u>, Policy Manager for the Colorado office of the Drug Policy Alliance. "Extensive studies prove that supervised use sites save money and resources while preventing disease and death. This cost-benefit analysis report shows how an initiative that will funded by private foundations, grants and individual donors will benefit the entire Denver community. It's irresponsible and unconscionable for the legislature to stop Denver from implementing this ordinance."

The <u>coalition</u> to establish a supervised use site in Denver is publicly supported by over fifty local businesses and officially endorsed by over fifty medical, public health, social service and faith organizations. Supporters include Colorado Medical Society, <u>Denver Medical Society</u>, the American Medical Association and the American College of Emergency Physicians.

"We need to act swiftly to bring new, scientifically proven tactics to address the opioid epidemic, which is why physicians and physician organizations overwhelmingly support pilot supervised injection facilities or supervised use sites," says Dr. Donald Stader, MD, FACEP, and President of the Colorado American College of Emergency Physicians. "Backed by significant and compelling scientific data, these are a key component of our response to the opioid epidemic. A supervised use site in Colorado will save lives, prevent disease, facilitate patients getting into treatment and save our medical system millions of dollars. This represents not only a logical, scientific solution to problems around injection drug use, but also a moral response to a public health crisis."

Colorado Governor Jared Pölis has <u>suggested</u> that supervised use sites may represent innovative, cost-effective access to treatment under the appropriate purview of local control. The Colorado Office of the Attorney General, previously under Republican Cynthia Coffman, endorsed the supervised use site coalition and current Democratic Attorney General Phil Weiser, who assumed office this year, is also <u>supportive</u>. The findings of this report only bolster the existing backing from diverse stakeholders and buy-in from bipartisan officials.

Approximately 120 SCS facilities are currently operating in twelve countries around the world including Australia, Canada, Denmark, France, Germany, Luxembourg, the Netherlands, Norway, Spain and Switzerland. Over 100 evidence-based, peer-reviewed studies have consistently proven the positive impacts of <u>supervised</u> <u>consumption services</u>, including increasing entry into substance use disorder treatment, reducing public disorder and public injecting, reducing HIV and Hepatitis C risk behavior, and saving costs due to a reduction in disease, overdose deaths, and need for emergency medical services.

The Costs and Benefits of a Supervised Use Site in Denver, Colorado

A supervised consumption services / supervised use site in Denver, Colorado could generate annual net savings of \$6.9 million.







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In recent years, Colorado has made strides in establishing and improving vital harm reduction services like sterile syringe access programs and naloxone distribution, but our communities still experience far too many needless overdose deaths. Multiple counties in Colorado, including Denver, have had overdose rates among the highest in the nation. Public injecting is also an ongoing concern. Just in Denver in 2018 alone, at least 25 people passed away from overdose in public locations such as parks, alleys, parking lots, and business restrooms. These deaths were unnecessary and preventable.

Along with the risk of overdose, unsafe injection practices are associated with blood-borne disease transmission and skin and soft tissue infection (SSTI)—also extremely costly, yet preventable, concerns. Injection drug use is the primary cause of new hepatitis C virus (HCV) infections in Colorado, with half of all reported cases occurring among people who inject drugs (PWID).³ In the past year, more than half of all PWID in the city of Denver experienced a skin or soft tissue infection, requiring them to utilize emergency rooms and hospital beds.⁴

Prevention and treatment are important aspects of our public health infrastructure, but they are not enough. By enhancing harm reduction services that directly address the risks associated with *continued* drug use, we can better mitigate some of the most costly problems and improve access to effective public health resources that would better protect our communities.

What are supervised consumption services?

Supervised consumption services (SCS), also known as supervised use sites (SUSs) and safer or supervised injection facilities (SIFs), are legally sanctioned facilities designed to reduce the health and public order issues often associated with public injection.⁵ These facilities provide a space for people to consume pre-obtained drugs in controlled settings under the supervision of trained staff and with access to sterile injecting equipment. Participants can also receive health care, counseling, and referrals to health and social services, including drug treatment. The impacts of SCS/SUSs/SIFs have been thoroughly evaluated by researchers studying the over 100 facilities now operating in more than 60 cities and twelve countries worldwide.⁶ These sites are empirically proven to:

- Reduce blood-borne disease transmission by providing sterile syringes and injection education.⁷
- Reduce SSTIs by cleaning wounds and identifying serious infections early.8
- Prevent overdose emergencies and deaths—these facilities are designed to reduce risk behaviors that contribute to accidental overdose and staff intervene promptly to reverse overdoses if they do occur. As a result, even though tens of thousands of people have used SCS worldwide, there have not been any overdose deaths. 9
- Build relationships between staff and hard-to-reach PWID, supporting participants into social services, substance use disorder treatment and other successful harm reduction outcomes. Enrolling more PWID in treatment means fewer associated medical issues and less crime.¹⁰

While delivering these benefits, there is no evidence that existing SCS facilities increase or initiate drug use or drug-related crime.¹¹

We have yet to establish any SCS facilities in the U.S. despite the alarming fact that one quarter of all global drug-related deaths, including overdose deaths, occur here. 12 Legislatures across the country have moved bills to pave the way for SCS in states including New York, Vermont, Massachusetts, Maryland, California and New Jersey while local campaigns are continuously evolving in cities such as Seattle, San Francisco, Ithaca, Baltimore, Boston, New York City and Philadelphia. Here in Colorado, a broad coalition of individuals, organizations, and businesses—including the Colorado Medical Society and Denver Medical Society—is calling for the timely establishment of SCS. In November of 2018, Denver City Council passed an ordinance¹³ authorizing establishment of a supervised use site pilot program contingent upon approval of corresponding legislation that is pending introduction in the General Assembly.

Organizational and business support for a supervised use site is echoed by community members in Denver who inject drugs. A recent local survey found that most of them reported doing so in a public or semi-public place in the last six months, commonly in public bathrooms and streets or alleys. ¹⁴ Eighty-five percent of those same respondents stated that they would utilize a SCS site without reservation if it were available. ¹⁵

Research also shows that SCS sites generate several other benefits that have not been quantified in the costbenefit analysis below. They reduce syringe littering and injection in public places and private businesses, physical and sexual violence against PWID, and drug use-related public disturbances. They also reduce overdose emergencies, which means fewer ambulance calls, emergency room visits and hospital stays for overdose complications in addition to fewer overdose deaths. SCS sites facilitate high-quality research on the notoriously hard-to-reach PWID population. Finally, they provide easy access for medical and social service programs to serve PWID. They accomplish all of this without increasing drug use, initiating new users, or fostering drug-related crime.

As demonstrated in the cost-benefit analysis below, SCS/SUSs are a fiscally responsible component of a comprehensive public health response to the challenges associated with injection drug use in Denver.

While SUSs and other public health programs should never be judged solely on financial savings, it is important for city and state officials to be aware of such a facility's expected financial impact. We marshal the best available data on PWID in Denver and on the impact of existing SCS/SUSs/SIFs elsewhere to answer the question: Would a supervised use site in Denver be an effective and efficient use of financial resources?

Results

Insite, located in Vancouver, British Columbia, was the first legally-sanctioned SCS facility in North America. It is a well-established, extensively-studied program that has been operating since 2003. Using it as a model, we are estimating the impact of establishing a facility in Denver at similar scale—1,000 square feet (about the size of a large hair salon) serving 13 PWID at a time, and operating 18 hours per day.

We estimate that an Insite-sized SUS in Denver would cost under \$1.8 million per year while generating roughly \$8.6 million in health benefits, for a net savings of \$6.9 million per year. The financial cost and benefits, along with the underlying health impacts, are listed in Table 1.

Table 1: Estimated annual financial and health impact of a SUS in Denver

Costs	\$1,761,752		
Annual Operating Cost	\$1,596,500		
Annualized Upfront Cost	\$165,252		
Savings	\$8,612,216		
HIV	\$345,117	0.8 new infections prevented	
Hepatitis C	\$3,802,741	55.8 new infections prevented	
Skin and Soft Tissue Infections	\$2,815,332	462.3 hospital days prevented	
Overdose Deaths	\$1,330,403	2.8 deaths prevented	
Medication-Assisted Treatment	\$318,623	40.5 additional people entering treatment	
Summary			
Cost-Benefit Ratio	\$4.89	in savings for each \$1 spent	
Net savings	\$6,850,464		

establish baseline efficacy and provide the basis for expanding capacity if outcomes are successful, we have every reason to believe that the benefits and associated savings of a Denver-based SUS can eventually be maximized to the scale projected here.

ⁱ It should be noted that our study evaluates an Insite-sized facility while a smaller SUS is likely to be implemented as an initial pilot in Denver. Both the benefits and costs of a smaller facility will be reduced compared with a larger counterpart. Since a pilot program is meant to

Discussionii

This analysis suggests that establishing a single SUS in Denver at the capacity of the counterpart facility, Insite, would be highly cost-effective; each dollar spent on the facility would return an estimated \$4.89 in savings. A single SUS would also have a large impact city-wide—the net savings of \$6.9 million are equivalent to 13% of Denver County's entire budget for Environmental Health.²⁰

The savings could free up local and federal tax dollars, reduce costs across the health system, and potentially increase business profits by reducing crime while raising productivity and sales.

Health benefits and associated fiscal savings projected for a Denver-based SUS

- Each dollar spent on the facility would return an estimated \$4.89 in savings
- Net annual savings of \$6.9 million
- \$300,000 in annual savings through HIV prevention
- \$3.8 million in annual savings through HCV prevention
- \$2.8 million in annual savings through SSTI prevention
- Multiple lives saved each year through overdose prevention
- \$320,000 in reduced annual drug-related health care and crime costs

Our \$1.8 million cost estimate includes \$1.6 million in annual operating costs and an annual payment of roughly \$200,000 to account for a conservative upfront cost estimate of \$2 million. Our analysis suggests that given the long lifetime of the facility, the operating cost makes up a far greater share of the total cost than the upfront cost. While actual cost figures could diverge widely from this estimate based on decisions around neighborhood, size of medical staff, and additional services, we believe that this figure represents a conservative cost estimate for an Insite-sized facility.iii

In the first category of savings, a SUS would prevent about one new HIV infection every year, saving over \$300,000 annually, by educating PWID about the risks of infection and ensuring that they do not share injection equipment.

We find that the greatest financial benefits would come through reduced syringe-sharing—lowering HCV transmission, which we estimate would prevent 56 infections per year. iv Savings from HCV prevention would be even higher than HIV because a greater share of PWID have HCV and because it is much more easily transmitted. Since a single new case of HCV carries a lifetime treatment cost of over \$60,000, preventing 56 infections would save roughly \$3.8 million. With respect to SSTI, we estimate that a SUS would reduce the amount of time that PWID spend in the hospital each year by about 462 days, saving \$2.8 million. v Research suggests that Insite reduces SSTI hospital stays 67 percent by providing sterile equipment, risk education, wound treatment, and preventative referrals.

ii Appendix I details the methodology, assumptions, uncertainties, and limitations of our models and data. While we base our financial estimates on the best available data, it should be noted that gathering health data on the population of PWID is notoriously difficult. This limitation also points to the need for SCS, since establishing them is the best means of acquiring reliable health data on PWID and researching their response to health interventions. To date Insite has served as a recruitment center for dozens of high-quality PWID studies and a Denver-based facility would become a similar invaluable resource. For all comparative references to similar cost-benefit analyses for San Francisco and Baltimore, see Irwin et al. 2017.

facility would be significantly less expensive.

This prediction of 56 infections greatly exceeds the prevention estimates in similar studies for San Francisco and Baltimore—19 and 21 cases, respectively. While Denver has a lower total number of PWID, this does not reduce the SCS site's impact, because there are still far more PWID than would be able to use a single facility. The difference in HCV impact stems from two numbers—first, Denver has a

higher rate of syringe-sharing, with over 35 percent of PWID reporting syringe-sharing in the past year (Denver Public Health (2014), Report: HIV Behavioral Surveillance in the Denver Metro Area). Second, half of Denver's PWID already have HCV—compared to over 75 percent in San Francisco and Baltimore—meaning that Denver has a greater share of HCV-negative PWID who are at risk of contracting HCV every day.

VMhile the 462 hospital days figure is only slightly higher than the estimate of 415 days in San Francisco, Denver's financial savings are far higher—\$2.8 million versus \$1.7 million. This difference stems from new data in the Denver study, which was not available for San Francisco. While the San Francisco study used generic hospital costs of \$4,000 per day, data from the Colorado Hospital Association shows that PWID hospital stays in Denver for SSTI cost a much higher average of \$6,000 per day. Since San Francisco has higher hospital costs in general, this new data suggests that San Francisco's SSTI savings would greatly exceed a previous \$1.7 million prediction by Irwin et al (2017).

Our study predicts that SUS staff would prevent about three overdose deaths every year. Vi Saving three lives is an enormous achievement in a city that loses 50 people to heroin overdose each year. Since overdoses can be stopped using the reversal drug naloxone, these deaths can be prevented simply by moving injection drug use from public places into this monitored facility.

Finally, because SUS staff build trust with those PWID who might not otherwise be connected to treatment or other services, we estimate that the SUS would usher dozens of additional PWID into the treatment system every year. VII Medication-assisted treatment (MAT) using methadone or Suboxone has been shown to save society more than four times its cost by reducing health care spending and crime losses.

We calculate that by bringing 40 new PWID into MAT, the SUS would reduce drug-related health care and crime costs by roughly \$320,000 per year.

Appendix: Study Methodology, Data, Limitations, and Sources

Cost of Operating the Facility

For a very rough estimate of annual SCS facility cost, we combine the estimated annual operating cost with an annualized equivalent of the upfront cost. We approximate the operating cost by adjusting the Insite SCS' reported operating cost to account for the cost of living in Denver. We annualize the upfront cost with the levelized annual payment model that Irwin et al. (2017) used for a Baltimore facility in the *Harm Reduction Journal*:²¹

$$C = \frac{i(P)}{1 - (1+i)^{-N}}$$

For the variable definitions and Denver data, see Table 2 below. While there cannot be any accurate cost estimates without concrete plans for a SUS facility in Denver, we believe that our cost estimate is conservatively high.

Table 2. Values, notes, and sources for variables used to predict facility cost

Variable	Value	Note	Source
Insite operating cost	\$1.55 million	CAD 1.53m in 2013 converted to USD and adjusted for inflation	Jozaghi et al. (2015) ²²
Cost of living adjustment	3%		Expatistan (2017) ²³
Upfront cost (P)	\$1.5 million	Conservative estimate	Rider Levett Bucknall (2017) ²⁴
Loan interest rate (i)	10%	Conservative estimate	Standard assumption
Lifetime of facility, in years (N)	25	Conservative estimate	Standard assumption

For a discussion of the limitations and uncertainties with this model, see Irwin et al. 2017.

ambulance, emergency room, and hospital costs that were not included in this analysis.

vi The three overdose deaths figure is half of the prediction for Baltimore, which has a significantly higher overdose death rate, but significantly higher than for San Francisco, where PWID overdose death has been practically eliminated by naloxone availability and education, as well as Good Samaritan Laws. SCS sites also prevent medical complications from nonfatal overdose, which carry enormous

will While we predict that a single SCS facility could bring about 120 people into treatment per year, currently Denver's treatment infrastructure does not have the capacity to intake such a large number of people.

Benefits of Operating the Facility

HIV and HCV savings

We base our HIV and HCV prevention estimates on the finding that Insite reduced SCS client syringe-sharing by 70 percent.²⁵ We use an epidemiological "circulation theory" model, developed to assess the impact of syringe exchange, to evaluate how the 70 percent syringe-sharing reduction would reduce HIV and HCV transmission. Our approach uses the same model as Irwin et al. (2017)'s cost-benefit analysis of a potential SCS facility in Baltimore:²⁶

$$I_{HIV} = iNsd[1 - (1 - qt)^M]$$

$$s_{post} = s_{pre} \frac{(T-N) + (1-n)N}{T}$$

For the variable definitions and Denver data, see Tables 3 and 4 below.

Table 3. Values, notes and sources for variables used to predict HIV infection reduction savings

Variable	Value	Note	Source
Proportion of PWID HIV- (I)	94%		Denver Public Health (2014) ²⁷
Number of syringes in circulation (N)	1,052,903		Raville (2017) ²⁸
Percent PWID shared syringes in past year	35.5%	Converted to per-injection value (s) by comparing to 15.1% in San Francisco	Denver Public Health (2014) ²⁹
Rate of syringe sharing (s)	2.58%	Percent of injections with a syringe already used by another person	Calculated using SF data from Bluthenthal et al (2015) ³⁰
Percentage of syringes not bleached (<i>d</i>)	100%		Bluthenthal et al. $(2015)^{31}$
Proportion of PWID HIV+ and infectious (q)	1.8%	70% of HIV+ PWID are virally suppressed	Rowan (2017) ³²
Probability of HIV infections from a single injection (t)	0.67%		Kaplan and O'Keefe (1993) ³³ Kwon et al. (2012) ³⁴
Number of sharing partners (m)	1.4	HRAC Intake data	Raville (2017) ³⁵
SIF client reduction in syringe-sharing (n)	70%	From Insite	Kerr et al. (2005) ³⁶
Number of SIF clients (N)	2,100	Approximate monthly unique Insite injection room clients	Maynard (2017) ³⁷
PWID population (T)	7,500	Estimated using HRAC registration, Denver metro area estimate	Raville (2017) ³⁸ ; Tempalski et al. (2008) ³⁹
Lifetime HIV treatment cost	\$408,000	National data	CDC (2015) ⁴⁰
Cross-check: New HIV infections among PWID	16	Excluding MSM-IDU	Raville (2017) ⁴¹

Table 4. Values, notes and sources for variables used to predict HCV infection reduction

Variable	Value	Note	Source
Proportion of PWID HCV- (I)	49%		CDPHE (2017) ⁴²
Number of syringes in circulation (N)	1,052,903	*	Raville (2017) ⁴³
Percent PWID shared syringes in past year	35.5%	Converted to per-injection value (s) by comparing to 15.1% in San Francisco	Denver Public Health (2014) ⁴⁴
Rate of syringe sharing (s)	2.58%	Percent of injections with a syringe already used by another person	Calculated using SF data from Bluthenthal et al (2015) ⁴⁵
Percentage of syringes not bleached (d)	100%		Bluthenthal et al. (2015) ⁴⁶
Proportion of PWID HCV+ (q)	51%	See p12	Denver Public Health (2014) ⁴⁷
Probability of HCV infections from a single injection (t)	3%		Kaplan and O'Keefe (1993) ⁴⁸ ; Kwon et al. (2012) ⁴⁹
Number of sharing partners (m)	1.4	HRAC Intake data	Raville (2017) ⁵⁰
SIF client reduction in syringe - sharing (n)	70%	From Insite	Kerr et al. (2005) ⁵¹
Number of SIF clients (N)	2,100	Approximate monthly unique Insite injection room clients	Maynard (2017) ⁵²
PWID population (T)	7,500	Estimated using HRAC registration, Denver metro area estimate	Raville (2017) ⁵³ ; Tempalski et al. (2008) ⁵⁴
Lifetime HCV treatment cost	\$68,200	Adjusted for inflation	Razavi et al. (2013) ⁵⁵
Cross-check: New HCV infections among PWID	359	Adjusted the 617 total since 58% are PWID	CDPHE (2017) ⁵⁶

We cross-checked the model by comparing its predictions for total HIV and HCV incidence to actual HIV and HCV incidence data. Since actual incidence exceeded our model's predictions (16 to 4 for HIV and 359 to 284 for HCV), we believe that our estimates are quite conservative, and that actual prevention would likely be higher. For a discussion of the limitations and uncertainties with this model, see Irwin et al. 2017.

Skin and soft-tissue infection savings

Our calculation relies on the finding by Lloyd-Smith et al (2010) that the hospital stays of patients referred by the Insite SCS facility were on average 67% shorter than those not referred by Insite.⁵⁷ We use the model from Irwin et al. (2017):

$S_{SSTI} = NhLrC$

For the variable definitions and Denver data, see Table 5 below.

Importantly, we were able to generate new data on the hospitalization rate, cost, and length of stay for Denver PWID admitted to the hospital for SSTI. Following the methodology of Lloyd-Smith et al. (2010), we identified all Denver County hospital admissions that included ICD-10 codes for both SSTI and drug abuse. We believe that this approach yields a conservative estimate, since hospitals often admit PWID for SSTI without including a drug abuse code in the file, excluding those cases from the analysis.

Table 5. Values, notes and sources for variables used to predict skin and soft-tissue infection reduction savings

Variable	Value	Note	Source
Number of SIF clients (N)	2,100	Approximate monthly unique Insite injection room clients	Maynard (2017) ⁵⁸
Hospitalization rate for skin and soft-tissue infection (h)	6.49%	Denver hospital data analysis using ICD- 10 codes	Smith (2017) ⁵⁹
Average length of skin infection-related hospital stay for PWID (L)	5.06 days	Denver hospital data analysis using ICD- 10 codes	Smith (2017) ⁶⁰
Reduction in soft-tissue and skin infection for PWID that visit SIF (t)	67%	From Insite	Lloyd- Smith et al. (2010) ⁶¹
Average hospital cost per day (C)	\$6,090	Denver hospital data analysis using ICD- 10 codes	Smith (2017) ⁶²

For a discussion of the limitations and uncertainties with this model, see Irwin et al. 2017.

Averted Overdose Deaths

Methodology:

Since medical staff revive anyone who overdoses in a SCS facility, we expect that the share of the city's overdose deaths prevented by the SUS would be the same as the share of citywide injections taking place inside the facility. We follow the overdose prevention model that Irwin et al. (2016) used for San Francisco⁶³ and the financial valuation approach that Irwin et al. (2017) used for Baltimore:

$$S_o = \frac{I}{PN}DV$$

and

$$V = \sum_{n=1}^{30} \frac{W}{(1+r)^n}$$

For the variable definitions and Denver data, see Table 6 below.

Table 6. Values, notes and sources for variables used to predict savings from averted overdose deaths

Variable	Value	Note	Source
Total annual injections in the SIF (I)	213,621	Based on Insite capacity and use	Health Canada (2008) ⁶⁴ ; Milloy et al. (2008) ⁶⁵
PWID Population (T)	7,500	Estimated using HRAC registration, Denver metro area estimate	Raville (2017) ⁶⁶ ; Tempalski et al. (2008) ⁶⁷
Average number of injections per person per year (N)	508.8		Bluthenthal et al. (2015) ⁶⁸
Annual heroin overdose deaths (D)	50	2016 heroin overdose deaths	Raville (2017) ⁶⁹
Estimated value per death averted (V)	\$475,311		Calculated using the below variables:
Average years until retirement (n)	30	Average age 35, retirement age 65	Genberg et al. (2011) ⁷⁰
Poverty line annual wage (W)	\$24,250	Federal data	DHHS (2015) ⁷¹
Discount rate (r)	3%		Andresen & Boyd (2010) ⁷²

For a discussion of the limitations and uncertainties with this model, see Irwin et al. 2016.

Medication-Assisted Treatment Savings

Studies of Vancouver's Insite show that SCS users are significantly more likely than non-SCS-users to accept referrals to medication-assisted treatment (MAT).73 As a result, we base our analysis of treatment savings on a finding from Sydney, Australia's Medically Supervised Injecting Centre (MSIC) that 5.8% of SCS users accepted MAT referrals per year.74 MAT programs, principally methadone and buprenorphine maintenance, have been shown to reduce patients' health care needs and criminal activity, as well their drug and alcohol use. 75 Studies estimate that they save taxpayers \$4 to \$13 for every \$1 spent, mostly by reducing users' criminal activity to get money to buy drugs.⁷⁶ We estimate the financial benefits of SUS referrals to MAT programs, considering both health care and crime savings, according to the model

$$S_{MAT} = Nr(b-1)T$$

For the variable definitions and Denver data, see Table 7 below.

1 Colorado Health Institute. (2016, Sept 20). Colorado County Drug Overdose Death Rate

Table 7. Sources for variables used to predict savings from medication-assisted treatment referrals

Variable	Value	Note	Source
Number of SIF clients (N)	2,100	Approximate monthly unique Insite injection room clients	Maynard (2017) ⁷⁷
Percent of SIF users who access MAT as a result of SIF referrals (t)	5.78%	From MSIC	MSIC (2003) ⁷⁸
Treatment retention factor (f)	50%	General retention rate estimated at 60- 90%	CSAM (2011) ⁷⁹
Cost-benefit ratio for MAT (b)	4.5	Conservative: average of low estimates	CHPDM (2007) ⁸⁰ ; Gerstein (1994) ⁸¹
Average cost of one year of MAT (T)	\$3,000	Conservative: average of low estimates	Jones et al. (2009) ⁸²

For a discussion of the limitations and uncertainties with this model, see Irwin et al. 2017.

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