Drug replacement and maintenance therapies have a long history of providing individuals struggling with problematic drug use with legal access to drugs that would otherwise be obtained through illegal means. More than a half dozen countries in Europe and Canada have implemented heroin-assisted treatment (HAT) programs. Under HAT, pharmacological heroin is administered under strict controls in a clinical setting to those who have failed in other treatments like methadone. Every published evaluation of HAT has shown extremely positive outcomes: major reductions in illicit drug use, crime, disease and overdose; and improvements in health, wellbeing, social reintegration and treatment retention. The U.S. should implement this innovative health-centered model.

HAT: A Successful Second-Line Treatment
Several countries have gone beyond methadone and adopted heroin-assisted treatment (HAT) programs, which have proven enormously successful and now operate in Switzerland, Netherlands, United Kingdom, Germany, Spain, Denmark, Belgium, Canada, and Luxembourg. Also known as heroin maintenance, HAT allows for the provision of pharmacological grade heroin (diacetylmorphine) to select heroin-dependent people who have not previously responded to other forms of treatment. Typically, patients receive injectable or inhalable heroin 2-3 times per day from a doctor in a clinic setting under strict controls.

HAT Improves Health, Social Functioning and Quality of Life
Peer-reviewed studies around the world have found that HAT is associated with decreased illicit drug use, crime, overdose fatalities, and risky injecting, as well as improvements in physical and mental health, employment and social relations. In contrast, few reports have appeared in the scientific literature demonstrating any harmful consequences of HAT.

HAT Significantly Reduces Illicit Heroin Use
Every HAT trial has shown a marked decrease in illicit 'street' heroin use. A 2015 systematic review and meta-analysis published in the British Journal of Psychiatry reviewed six randomized controlled trials of HAT and found that, across all trials, there was a greater reduction in the use of illicit heroin among HAT patients compared to the control groups (who generally only received methadone). The authors concluded that "heroin-prescribing, as a part of highly regulated regimen, is a feasible and effective treatment for a particularly difficult-to-treat group of heroin-dependent patients."

Similarly, a 2011 Cochrane systematic review concluded, "Each study found a superior reduction in illicit drug use in the heroin arm rather than in the methadone arm...the measures of effect obtained are consistently statistically significant."

The first Canadian HAT trial reported a two-thirds (67 percent) reduction in illicit drug use or other illegal activity among HAT participants. Similar reductions in illicit heroin use were reported from HAT trials in the UK (72 percent) and Germany (69 percent). HAT patients experience less (and less severe) cravings, helping to explain their decreased use. HAT has also demonstrated an added benefit of reducing participants’ use of alcohol and other drugs.
HAT is Cost-Effective
HAT is not just more effective at reducing street drug use than methadone, but it has also proven to be more cost-effective. While HAT does cost more than methadone initially, cost-benefit studies demonstrate that these higher costs are more than offset by savings in criminal justice and health care.

HAT has been restricted to those who have not responded to other forms of treatment; although evidence now shows HAT is effective even for people with no previous methadone experience or those who switch from methadone to HAT – suggesting that it could easily be scaled up.

HAT Improves Treatment Retention
Once someone begins a HAT program, they are likely to stick around. Retention rates in HAT programs dwarf those of convention treatments. A 2016 systematic review of the past five years of research, for example, found that “heroin-assisted treatment was associated with better retention than methadone among treatment-refractory patients” at 12 month follow-up.

Patients express a strong preference for HAT over methadone or other standard treatments. Moreover, those who end up dropping out of HAT usually do not relapse, but rather tend to freely choose to switch to another form of treatment (like methadone) or to abstinence, while others continue to receive HAT on a long-term basis, with lasting positive results.

HAT Decreases Crime
HAT participants are also much less likely to commit acquisitive crimes and other non-drug offenses. As a result, HAT programs have been shown to decrease crime in areas where they are situated – leading to additional cost savings of the HAT model.

HAT Reduces Demand and Shrinks Drug Markets
Substitution therapies like HAT represent the most effective approaches to demand reduction because they acknowledge that many dependent or serious drug consumers simply cannot or will not cease using their preferred substance of choice (or a close substitute) – regardless of its legal status or the impact their consumption might have on other countries. HAT programs have been so successful precisely because they focus on reducing illicit demand – not demand per se – and channeling this demand towards a licit, regulated supply.

HAT programs currently serve a subsection of the using population that is small, but which consumes a disproportionate amount of heroin.

Available evidence indicates that HAT programs can help destabilize local heroin markets. One published article concluded that HAT participants “accounted for a substantial proportion of consumption of illicit heroin, and that removing them from the illicit market has damaged the market’s viability.” It further states that “by removing retail workers [who] no longer sold drugs to existing users, and…no longer recruited new users into the market…the heroin prescription market may thus have had a significant impact on heroin markets in Switzerland.”

HAT in the United States?
An exploratory analysis of the benefits of implementing HAT in Baltimore concluded, “Enough evidence has emerged in the last 10 years to merit reconsideration of its potential for Baltimore, and the U.S. more generally.”

Researchers, harm reduction advocates and health officials have expressed interest in studying and implementing HAT in the U.S., but zero tolerance policies and federal law have stood in the way of this evidence-based method of treatment.

Congress should amend federal law to make clear that cities that want to conduct trial HAT programs can do so without federal interference. Congress should also fund domestic pilot projects to study this life-saving and successful health-centered intervention.

Conviced by the impressive results from other countries, Denmark moved ahead with implementing HAT programs without conducting its own randomized controlled trial. See Uchtenhagen, "Heroin maintenance treatment: From idea to research to practice."


European Monitoring Centre for Drugs and Drug Addiction, "Country overview: Luxembourg."


The Canadian trial involved an arm of the study that received another opioid agonist, hydromorphone, instead of heroin; these subjects showed similarly impressive results. A second randomized trial in Canada currently underway is administering heroin as well as hydromorphone. See E. Oviiedo-Joekes et al., "Double-blind injectable hydromorphone versus diacetylmorphine for the treatment of opioid dependence: a pilot study," J Subst Abuse Treat 38, no. 4 (2010); Providence Health Care, "The Study to Assess Long-term Opioid Medication Effectiveness (SALOME)," http://www.providencehealthcare.org/salome/index.html.


"Heroin maintenance for chronic heroin-dependent individuals," 10.

"Diacetylmorphine versus methadone for the treatment of opioid addiction."

Strang et al., "Supervised injectable heroin or injectable methadone versus optimised oral methadone as treatment for chronic heroin addicts in England after persistent failure in orthodox treatment (ROITT): a randomised trial." 16

"Heroin-assisted treatment for opioid dependence: randomised controlled trial."

P. Blanken et al., "Craving and illicit heroin use among patients in heroin-assisted treatment," Drug Alcohol Depend 120, no. 1-3 (2012)."