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Heroin Assisted Treatment: the case for expanding uptake

The modern era of Heroin Assisted Treatment ("HAT") began in Switzerland in 1994. HAT evolved from heroin maintenance, which had been developed in England decades earlier. Heroin maintenance was evaluated in a trial compared to methadone maintenance with mixed results and published by Hartnoll, Mitcheson and colleagues in 1980. But HAT differed from heroin maintenance in a number of very important ways. HAT involves much higher doses of heroin, patients are involved in selecting their dose, intensive psychosocial assistance is provided, all doses are supervised by health professionals and only treatment refractory, severely heroin dependent subjects are included.

HAT has now been evaluated in trials involving a combined total of over 1,500 subjects in seven countries (Switzerland, the Netherlands, Spain, Germany, Canada, the United Kingdom and Belgium). All were randomized controlled trials involving treatment refractory, severely heroin dependent subjects who self-administered pharmaceutical heroin intravenously under supervision. Controls received optimized oral methadone. Experimental and control subjects were provided with intensive psychosocial assistance. The similarities between the trials far outweighed the differences. All trials showed that the experimental subjects had improved physical health, mental health and social functioning, committed less crime and used less street drugs compared to controls. Although HAT was more expensive than the treatment provided to controls, savings exceeded the costs of HAT while the costs of no treatment far exceeded the costs of treatment. Adverse effects among treatment subjects were uncommon, and adequately managed in the clinics.

HAT continues in these seven countries but to a greater or lesser extent. There has been a tendency for slow expansion over time in a number of these countries. Denmark became the first country in the world to adopt HAT without first doing a HAT trial.

It is critical to emphasize that HAT is reserved for a small minority of severely heroin dependent subjects. Consumption of psychoactive drugs is very unequally distributed in communities. This is probably true for all drugs but we only have data for the legal drugs, alcohol and tobacco. The 5% heaviest drinkers in a community account for more than a third of the alcohol consumed, the 10% heaviest drinkers account for over half of the alcohol consumed while the 20% heaviest drinkers in the community account for almost three quarters of the alcohol consumed. Comparable estimates for the distribution of heroin consumption in Australia do not exist, but the distribution for heroin is likely to be similar to that of alcohol. It is known that the heaviest consumers of heroin and cocaine in a community account for a disproportionate share of the crime associated with heroin use. In all likelihood, these 'super-consumers' also probably account for a disproportionate share of the recruitment of novices to heroin and cocaine use. Attracting and retaining a high proportion of 'super-consumers' into treatment benefits these individuals, their families and communities.

The importance of engaging ‘super-consumers’ into treatment was demonstrated in the 1990s in Switzerland. Following years of a public health crisis, drug treatment was expanded and improved and HAT was provided in 20 locations. A study of new treatment registrants estimated that the number of Zurich residents using heroin for the first time declined from 850 in 1990 to 150 in 2002. Drug overdose deaths, new HIV infections among people who inject drugs, crime and the quantity of heroin seized by police all fell.

The potentially important heuristic benefits of conducting a HAT trial should not be ignored. Providing pharmaceutical heroin benefits people who have been severely damaged by using street heroin. This demonstrates clearly that the inevitable black market distribution system that develops when strong demand continues despite prohibition is far more important than the pharmacological properties of a prohibited drug in creating immense net harm. For decades a debate has raged over the effectiveness of drug prohibition with little resolution. There is a growing support for the view that drug prohibition has been ineffective, often counter productive and usually cost ineffective. But the transition to a more effective evidence- and human rights-based approach to illicit drugs has been very slow because poor drug policy has worked so well politically. A heroin trial may not only help to speed up the transition to a more effective policy approach to managing currently illicit drugs but also benefit the people treated and their families and communities.

There is a growing argument that no additional expensive trials of HAT are needed when trials in seven countries have already demonstrated that HAT is effective, safe and cost-effective. But conducting more trials would provide to local addictions specialists and policy decision-makers information about HAT’s efficacy, effectiveness and cost-effectiveness in the context of that country, likely building on the findings of the trials conducted abroad. Also, additional trials could attempt to increase the effectiveness and reduce the adverse effects and costs of HAT. There is also an argument for more research evaluating hydromorphone which a Canadian study found produced similar benefits to HAT and was not accompanied by the substantial political baggage attached to heroin which makes approval of HAT trials so challenging. Additional trials of hydromorphone would be valuable, but in an era of evidence-based medicine, policy practice and advocacy should be based on evidence rather than political expediency.

Why should Australia bother with an expensive trial of HAT when there is a more urgent need to expand and improve already proven treatments which can be provided to much larger populations than HAT? Powerful arguments to expand and improve drug treatment have fallen on deaf political ears for many years and still do so despite compelling arguments. There are similarities in mental health where pleas to improve and better fund mental health services were ignored for decades but were eventually accepted. Previous advocacy for improved drug treatment was based on sound arguments, but did not achieve their desired effect. It is important, therefore, to try new advocacy approaches that might be more effective.

The increasing toll of opioid overdose deaths in North America, UK and Australia adds an additional urgency to the need for HAT trials or implementation without additional research. Opioid overdose deaths began increasing recently in the United States at the turn of the century and have continued to increase rapidly. The increase started later and was slower is other countries. This should be taken as a warning for what could happen in other countries.

The health of people has improved dramatically in many countries since 1900. In large part this was due to policy and practice based on evidence. It is now time to consider HAT in more countries or at least conduct a trial of HAT with a view to implementing it if the trial confirms, as expected, that HAT is effective, safe and cost-effective for treatment refractory, severely heroin dependent persons.

Postscript

Heroin on trial: systematic review and meta-analysis of randomised trials of diamorphine-prescribing as treatment for refractory heroin addiction

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Strang and colleagues published this 'systematic review and meta-analysis of randomised trials of diamorphine-prescribing as treatment for refractory heroin addiction' in 2015. The authors include those who contributed most to the research around the world. This paper includes references to key papers from the different trials.