

A B S T R A C T

Illicit opiate use in Canada causes considerable harm and social cost. Methadone substitution treatment, which has been proven effective in reducing the negative effects associated with opiate use, has been used in Canada, but so far only on a small scale. Recent research suggests that, while expanding the availability of methadone substitution is certainly in the public health interest, it would not be sufficient in itself to reduce to a minimum the harms from illicit opiate use. On the basis of the epidemiology of opiate use and of related harms, and building on the experience of intervention efforts currently underway elsewhere, this paper argues for the establishment of a heroin substitution trial in Canada. Such a trial should have the goal of investigating the potential of heroin substitution to significantly reduce the health and social costs to Canadians from illicit opiate use.

A B R É G É

La consommation illégale d'opiacés au Canada est responsable de méfaits considérables et d'un lourd fardeau social. Le traitement de substitution à la méthadone a fait ses preuves quant à son efficacité à réduire les effets néfastes associés à l'usage d'opiacés. On y a recours au Canada, mais à petite échelle seulement. Des recherches menées récemment laissent supposer que bien qu'il serait dans l'intérêt de la santé publique de multiplier le nombre de programmes de traitement à la méthadone, cette mesure serait insuffisante en soi pour réduire au minimum les méfaits causés par l'usage illégal d'opiacés. Le présent article plaide pour qu'un essai de traitement de substitution de l'héroïne soit tenu au Canada. Il est fondé sur l'étude de l'épidémiologie de l'usage d'opiacés et de ses méfaits, et des interventions mises de l'avant à l'étranger. Un essai semblable aurait pour objectif d'investiguer le potentiel de la substitution de l'héroïne à réduire considérablement les fardeaux sociaux et de santé liés à l'usage illégal d'opiacés au Canada.

The Case for a Heroin Substitution Treatment Trial in Canada

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*"[O]ur recommendation is ... that heroin maintenance be permitted on a controlled, experimental basis, as a treatment adjunct to be used in exceptional cases. ... It is an experiment that would have to be watched very closely. ... On balance, however, we believe that the availability of heroin maintenance will increase the capacity of the overall treatment system to win patients from the illicit market and for this reason it is a justified experiment."*¹

Twenty-five years ago, the much respected Le Dain Commission recommended the establishment of a heroin maintenance trial in Canada.^{1,2} In this paper, we reiterate this call, based on an overview of the epidemiology of illicit opiate use and related harm, and an assessment of the limitations of the current treatment options.

Epidemiology and harm indicators for opiate abuse in Canada

Since the first emergence of injection opiate use on a broader scale in the 1950s, Canada's population of opiate addicts has been expanding. Although no reliable user counts exist, the number of regular injection opiate users can be estimated by various methods, including surveys, drug-related mortality, and by using capture-recapture methods or a synthesis of information.³⁻⁵

Estimates based on population surveys of 12-month prevalence rates suggest an

opiate user population of 90,000 individuals in Canada. This estimate is based on data from Canada's Alcohol and Other Drugs Survey⁶ combined with assumptions about rates of non-respondents, since they are more likely to be drug users than the general population. These assumptions are derived from a NIDA study on non-respondents in U.S. general population surveys.⁷

Based on the fact that the mortality rate tends to be quite stable in drug-taking populations (with 1% per annum as the lower and 2% per annum as the upper limits from a meta-analysis of relevant studies⁸), one can calculate back from drug-related deaths to the population (first applied by Baden⁹). Such a calculation would result in a Canadian opiate user population estimate between 37,000 and 73,000 persons, based on the Canadian cost study which estimated 732 drug-related deaths in Canada in 1992.¹⁰ Looking back beyond the death record to coroners' reports, however, suggests that this estimate should be higher,¹¹ especially since the number of drug-related overdose deaths has increased since 1992.

There are not yet any estimates for Canada using capture-recapture methodology, which is considered to yield the most valid data, but such a study is underway by an expert consortium.¹² Altogether, given the sparse information, we conservatively estimate that between 40,000 and 90,000 persons regularly abuse opiates in Canada. Such an estimate is consistent with a recent estimate of 14,000 individuals in Metropolitan Toronto alone.¹³

Recent ethnographic and economic studies have shown that the social and individual harms of regular illicit opiate use under a control system of criminal pro-

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hibition, as currently exists in Canada, are extensive.¹⁴ These harms fall into the following major categories: morbidity and mortality from drug use or drug-related health complications (physical and psychological health status), criminal activity and constraints on public safety due to opiate use-related activities, law enforcement and criminal justice costs, reduction or loss of social and economic functionality, and the increased health risks presented through interactions between infected opiate users and other individuals. There is ample evidence that under conditions of prohibition, the majority of untreated opiate addicts report a high prevalence of medical problems (including serious infections), commit substantial numbers of acquisitive crimes, and engage in risky practices like unsafe sex, prostitution and needle sharing. IDU populations in Vancouver currently have an HIV prevalence rate of 25%, while the respective rate in Montreal is 20%.¹⁵ A recent Vancouver study even suggests a new infection rate of 18.6 per 100 person years, which would be the highest reported rate in North America.¹⁶

Finally, as a particular category of social harms related to opiate use from a socio-economic perspective, these negative consequences of illicit drug use can be accounted for in the form of 'social costs', including the various amounts of public funds which are invested for dealing with these consequences (i.e., drug enforcement and criminal justice responses). A recent large-scale social cost study on drug abuse has indicated that the direct and indirect annual social costs of illicit drug use are \$1.37 billion for Canada in 1992, or \$48 per capita, about 70% of which can be attributed to opiate use.¹⁰ With a similar approach but on a different scale, U.S. studies concluded a cost account of about \$60,000 per year for each untreated opiate addict, not including indirect costs like productivity losses.¹⁷

Methadone substitution: Current status, possibilities and limitations

Treatment for opiate dependence falls into two categories—substitution treatment and abstinence-oriented treatment. It can be estimated on the basis of most recent numbers for Ontario that the

expenditures for substitution type treatment constitute only between 5-10% of health care costs caused by illicit drug use.¹⁷⁻¹⁹ In this article we will focus on substitution treatment, since heroin maintenance concepts clearly belong to this category and arguments for or against heroin as substitution agent have to be considered in the context of substitution alternatives, especially methadone.

The broad and effective potential of methadone substitution treatment to reduce harmful consequences of opiate use has been widely documented since the first large-scale use in the 1960s.²⁰⁻²⁵ Just to give one indicator: based on U.S. figures (from New York state), the costs of \$60,000 (Cdn) for each untreated opiate user per year could be reduced to about \$3,000 (Cdn) with methadone treatment.¹⁷

After Canada pioneered the use of methadone for opiate substitution purposes in the early 1960s,^{26,27} its use expanded substantially throughout the country in the subsequent decade for a comparably small opiate addict population. In 1972, there were more than 1,500 methadone substitution clients, and the Le Dain Commission called it the "cheapest and most effective weapon" for dealing with the negative consequences of opiate use.² However, federal health authorities claimed "major problems of [methadone] abuse and misuse" in the same year, and the implementation of a federal committee report imposed rigorous restrictions and regulations for methadone treatment on physicians, clients and treatment procedures, including a general requirement for physicians to acquire a methadone prescription licence.^{28,29} The numbers of opiate addicts in methadone substitution treatment and methadone-prescribing physicians subsequently dropped substantially, and until the late 1980s, Canada rarely had more than 1,000 opiate addicts in methadone treatment. Only the administrative shift of regulatory methadone treatment and licensing powers to two provinces, Ontario and British Columbia in the early 1990s, in combination with slightly altered treatment procedures and philosophies, triggered a tentative increase in numbers. As of mid-1996, there were some 3,250 opiate addicts in methadone treatment in Canada.^{19,29,30}

However, when looking at national rates of methadone treatment spots per million capita, Canada (111) finds itself at the bottom end in comparison with public-health-oriented jurisdictions like Australia (1,020), Switzerland (2,000), Belgium (1,000), or countries such as Germany (247) which just started to use methadone treatment a few years ago, or even the U.S. (442).^{25,31-33}

Although there are some efforts ongoing in Canada to expand the number of methadone spots available to opiate addicts and also to lower the 'thresholds' of such treatment, it would be a mistake to ignore the overall limitations and shortcomings of methadone maintenance treatment, even under optimal conditions of nationwide supply. An increasing body of monitoring research suggests that even if methadone treatment were available to every opiate addict, the limits on its desirability among the total pool of opiate users, as well as its limited effectiveness with clients who can be recruited into programs, mean that methadone maintenance might 'work' for a maximum of 25-40% of a given opiate addict population.^{21,34-36} An ongoing research study with untreated opiate users in Toronto suggests that active illicit users are quite divided about methadone as a treatment option for their current use. While some 41% would accept methadone substitution if it were offered to them today, approximately 36% clearly reject it as not being an option for them, and 23% feel ambiguous about it, or are undecided.³⁷ The large number of methadone evaluation studies conducted indicate relatively low retention rates from methadone programs—between 20% and 60% of the total original substitution population after at least one year of treatment—with dropout clients either relapsing directly into previous opiate use habits or switching between addictive lifestyles and temporary phases of treatment.^{23,38-40}

Several factors are known to make methadone substitution an unattractive treatment option for opiate addicts. Many clients are uncomfortable with the rules, regulations and rituals of existing methadone programs, many of which feature daily methadone pick-ups and stringent conditions for 'take-home' privileges,

or still require full abstinence from other drug use as controlled by regular urinalysis. Some clients also complain about the pharmacological discomforts and considerable side effects of methadone, as well as the fact that its withdrawal symptoms can be worse and more difficult to manage than the ones from heroin.^{32,41-43} As well, ethnographic research has shown that it is not only the drug, but also the preferred mode of application (i.e., by injection) in combination with the opiate use 'culture' and its rituals that make heroin users resist substitution with methadone as a viable treatment option.⁴⁴ Thus, the practical limits on the effectiveness, viability and desirability of methadone as a substitution treatment for the opiate addict population clearly indicate that, while methadone can be and is an important element in a 'harm reduction'-based opiate control strategy, it cannot be considered as a sufficient or the perfect 'solution'. Rather, further effective ways to reduce opiate-related harms and costs need to be explored and assessed.

Heroin substitution in addition to methadone treatment: Lessons from the Swiss trial

It was exactly on the basis of this rationale—aiming for maximum harm-reducing effects from opiate substitution treatment and acknowledging the need to reach opiate users beyond the populations recruited into existing treatment—that the Le Dain Commission called for the scrutiny of heroin maintenance as a "treatment adjunct...in exceptional cases" and a "last resort". On the same grounds, the Swiss government in 1992 decided to conduct a heroin maintenance experiment with a population of 1,000 users,⁴⁵ and Australia, the Netherlands and Germany are preparing similar experimental trials.^{14,46,47} One year before the conclusion of the three-year-long Swiss trial, the preliminary results are most positive and encouraging. Taking into account that those accepted into the Swiss trial mostly had severe health and social problems, lengthy drug-using careers, and a history of extensive criminal activity, the results for the first cohorts of subjects after 12 months show substantial improvement (baseline data in brackets):

- bad physical health status: 10% (27%); poor mental health status: 18% (48%);
- daily illegal heroin use: 3% (86%); daily cocaine use: 7% (31%); daily use of benzodiazepines: 14% (20%);
- illegal income sources: 14% (70%); 'semi-legal' income sources (including prostitution): 7% (46%); employed, full or part-time: 50% (16%).⁴⁵

Furthermore, it needs to be pointed out that the heroin prescription program achieved client retention rates which are significantly higher than those reported for other substitution efforts, including methadone maintenance programs, despite the program clients' being recruited from a pool of highly problematic opiate addicts in terms of health status, drug use patterns and previous treatment efforts. As one negative aspect, a relatively high rate of ongoing consumption of cocaine with heroin-substituted clients needs to be mentioned. Overall, however, the implementation of the trials—in terms of organizational aspects, community aspects and negative occurrences (deaths, etc.)—is in general judged as positive and successful, and it is cautiously to be expected that, after the trial's conclusion, Switzerland will embark on heroin prescription as a firmly integrated component of its medically based opiate treatment policy.

It must be emphasized that these results cannot be applied directly to the Canadian context. Due to the substantially different profiles in North America, drug markets, control and treatment systems as well as illicit drug 'cultures', the baseline scenario as well as potential effects and outcomes of heroin prescription may be substantially different. The bottom line, however, is clear: there is both need and opportunity for improved effectiveness in Canadian opiate substitution policy. In particular, there is an urgent need for an expanded continuum of treatment care for opiate addicts, including a broader variety of forms of opiate substitution treatment. The goals and expected benefits of a heroin substitution treatment trial, as proposed by the Le Dain Commission 25 years ago, include: attracting a wider spectrum of opiate addicts into substitution treatment, including those that cannot be reached otherwise; testing the hypotheses of

improved retention and efficacy in the reduction of harm and of costs compared to other treatments; and examining the applicability of experience elsewhere to the Canadian context and profile of harms and costs related to opiate use. Such a trial should be conducted within a rigorously scientific experimental study design, and could serve as a basis for further policy decisions. Given the present-day harms associated with opiate addiction in Canada, it is time to respond to the Le Dain Commission's call, a quarter of a century ago, for a heroin substitution trial. Indeed, better late than never.

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The Canadian Experience of Intersectoral Collaboration for Health Gains

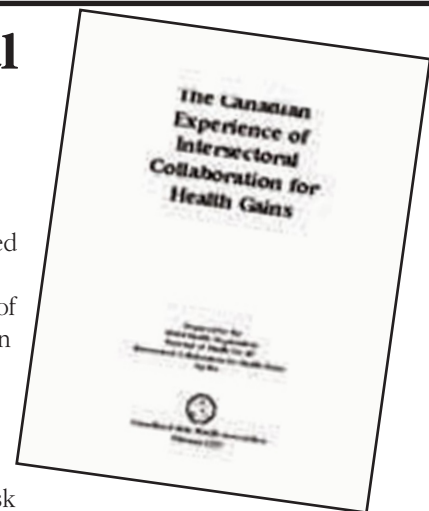
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This paper is the work of a Canadian Public Health Association (CPHA) Task Force, convened in November 1996 to document the Canadian experience in intersectoral collaboration for health gains. The Intersectoral Action for Health (IAH) project forms an integral component of WHO's renewing the Health-for-All policy which grew out of the International Conference on Primary Health Care held at Alma-Ata in 1978. A task force of five Canadian health experts was convened in a two-day session to formulate the content of a draft which was reviewed by an external panel prior to its completion. To add background and context, the task force also requested that five case studies be appended. This paper is intended to contribute to further debate on intersectoral collaboration for health in Canada. To this end, the CPHA Task Force has attempted to provide a perspective which is rooted in Canadian experience but is also one step removed from day-to-day operations. In doing so, this report has tried to capture some of the significant changes in intersectoral collaboration which have played out against the backdrop of social and economic changes in Canada over the past decades.



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