

Opioid substitution: improving cost–efficiency

Sheena Sullivan^a

The United Nations Office of Drugs and Crime in its 2012 *World drug report* estimates that 0.6% of the world's adult population – some 27 million people – are problem users of illicit drugs.¹ This represents about 10% of all people who used illicit drugs in 2011 and suggests that most people can use drugs recreationally without becoming dependent. What makes these 10% different is the subject of active research and remains poorly understood, but whatever the reason, drug dependency frequently has damaging effects to the user and society and is therefore stigmatized both socially and legally.

Opioids (heroin, morphine and prescription opioids) may be the most harmful of the illicit drugs used.² Fortunately, treatment is available and has been for some decades. In the late 1940s methadone was tested as an abstinence treatment for opioid dependence and later as a maintenance treatment³ under the hypothesis that at high, sustained doses methadone could block both the euphoric and adverse effects of opioids to a sufficient level that patients could stabilize their lives, find employment and reintegrate into society.⁴ Worldwide, its use has increased considerably since the onset of the HIV epidemic⁵ and it is now recognized as an important component of any strategy to control HIV infection among injecting drug users. Among 120 countries that report HIV transmission among people who inject drugs, 97 countries support a harm reduction approach and 78 have a methadone programme or are piloting one.⁶

The worldwide scale-up of methadone maintenance treatment has been largely facilitated by the generosity of programmes such as the Global Fund to Fight AIDS, Tuberculosis and Malaria as well as through bilateral foreign aid agreements. However, in the current economic climate, the stability of these sources of funding is precarious. The Global Fund has already announced reductions in its funding capacity and without financial support from their own governments, many low- and

middle-income countries may not be able to continue to support methadone maintenance programmes. Few countries are in the same position as China where the shortfall in Global Fund support was, commendably, met by the central government.

While methadone maintenance has been repeatedly shown to be an effective intervention for reducing drug-associated harms, no programme is without its problems. Chief among these is client retention. By definition, methadone maintenance is a long-term treatment typically requiring at least one year to achieve positive outcomes.⁷ Retention is strongly predicted by the methadone dose administered,⁸ but most programmes routinely under-dose their clients, ignoring evidence from the initial methadone maintenance trials which used 100 mg/day⁴ and even ignoring later recommendations to maintain clients on 60 mg/day.⁹ But under-dosing is not the only reason clients leave treatment. Many may never have intended to stay in treatment for the long term. To satisfy policy-makers, programmes may attempt to enrol as many clients as possible, disregarding screening criteria that might have ensured the client was ready for long-term therapy. The frequent enrolment of short-term clients or re-enrolment of prior clients is at enormous cost to the clinics in terms of staff members' time.

Similarly, staff retention is a problem for many programmes. Limited job satisfaction as well as stigma contribute to high staff turnover, adversely affecting client retention and therefore programme effectiveness. Drug dependency is not an illness which can be cured with pharmaceuticals alone. It requires a comprehensive package of services, of which methadone maintenance is just one. As such, clinics require staff who are able to provide quality services not only in dispensing but skills in training and psychosocial support, which can be difficult to achieve in low- and middle-income countries. While many programmes claim to provide such

services, their quality may be too poor to be effective. Thus the cost–benefits of investing in staff development also need greater appreciation.

This special issue of the *Bulletin* includes a range of papers describing various aspects of methadone maintenance programmes from around the world. While methadone maintenance may be the most effective treatment currently available, in a precarious funding environment, programmes will need to explore options for increasing the cost-efficiency of service delivery while improving client outcomes. ■

References

1. United Nations Office on Drugs and Crime. *World drug report 2012*. New York: United Nations; 2012. Available at: <http://www.unodc.org/unodc/en/data-and-analysis/WDR-2012.html> [accessed 10 January 2013].
2. Nutt DJ, King LA, Phillips LD. Drug harms in the UK: a multicriteria decision analysis. *Lancet* 2010;376:1558–65. doi:10.1016/S0140-6736(10)61462-6 PMID:21036393
3. Duvall HJ, Locke BZ, Brill L. Followup study of narcotic drug addicts five years after hospitalization. *Public Health Rep* 1963;78:185–94. doi:10.2307/4591754 PMID:19316439
4. Dole VP, Nyswander ME, Kreek MJ. Narcotic blockade. *Arch Intern Med* 1966;118:304–9. doi:10.1001/archinte.1966.00290160004002 PMID:4162686
5. Sorensen JL, Copeland AL. Drug abuse treatment as an HIV prevention strategy: a review. *Drug Alcohol Depend* 2000;59:17–31. doi:10.1016/S0376-8716(99)00104-0 PMID:10706972
6. Harm Reduction International. *The global state of harm reduction: towards an integrated response*. In: Stoicescu C, ed. London: Harm Reduction International, 2012.
7. Simpson DD, Joe GW, Broome KM, Hiller ML, Knight K, Rowan-Szal GA. Program diversity and treatment retention rates in the Drug Abuse Treatment Outcome Study (DATOS). *Psychol Addict Behav* 1997;11:279–93. doi:10.1037/0893-164X.11.4.279
8. Faggiano F, Vigna-Taglianti F, Versino E, Lemma P. Methadone maintenance at different dosages for opioid dependence. *Cochrane Database Syst Rev* 2003;CD002208. PMID:12917925
9. Effective medical treatment of opiate addiction. National Consensus Development Panel on Effective Medical Treatment of Opiate Addiction. *JAMA* 1998;280:1936–43. PMID:9851480

^a UCLA Department of Epidemiology, Los Angeles, CA 90095-1772, United States of America.

Correspondence to Sheena Sullivan (e-mail: sgsullivan@ucla.edu).