Health Policy 95 (2010) 69–73

Contents lists available at ScienceDirect

Health Policy

journal homepage: www.elsevier.com/locate/healthpol

Costs of hospital-based methadone maintenance treatment in HIV/AIDS control among injecting drug users in Indonesia

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ARTICLE INFO

Keywords:
Cost analysis
Methadone maintenance treatment
Injecting drug user
HIV/AIDS
Indonesia

ABSTRACT

Objective: To assess the cost of hospital-based methadone maintenance treatment (MMT) for injecting drug users (IDUs) in Bandung, Indonesia; to address concerns of financial sustainability at the hospital level and financial accessibility and economic attractiveness at the health care policy level.
Methods: In a 1 year observation period in 2006–2007, MMT service delivery costs were estimated on the basis of a micro-costing approach. Patient costs were estimated on the basis of a survey among 48 methadone clients.
Results: A total number of 129 clients attended the MMT clinic, resulting in a total of 16,335 client visits. Total annual societal costs of running the MMT clinic equalled Rp 1130 mln (US$123,672), or Rp 69,206 (US$7.57) per client visit. Of total costs, patient costs established the largest share (65%), followed by that of central government (20%), and the hospital (15%). Present consultation tariffs already cover hospital costs and the patient costs of accessing MMT services constitute almost 70% of their income.
Conclusion: Under current circumstances, MMT services are financially sustainable to the hospital. MMT services are subsidized by the central government, and this is warranted considering the important role of the program in HIV/AIDS among IDUs. Still, the present user fee seems a barrier to utilization, and a higher level of subsidy might be justified to reduce the cost to the patient.

1. Introduction

The HIV epidemic shows an increasing trend in Indonesia, and is even among the fastest growing in Asia [1]. A total of 6066 HIV cases and 11,141 AIDS cases were registered between 1987 and 2007 [2]. The epidemic is mostly driven by the use of non-sterile needles among injecting drug users (IDUs) in many parts of the country. The HIV prevalence in IDUs rose from 26.76% (42,749 cases) in 2002 to 41.09% (90,030 cases) in 2006, while the prevalence among other risk groups remained stable or decreased [3–5].

In response to the increase in drug-related HIV cases, methadone maintenance treatment (MMT) has been provided on a limited scale in Indonesia since 2003 [6]. Its effectiveness to control the HIV epidemic has been reported

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doi:10.1016/j.healthpol.2009.11.003

from different countries in the world [7]. Because of the increasing HIV-seroprevalence rate, Indonesian national policy now aims to scale up MMT services to cover 19% of all IDUs by 2010 [8]. Besides issues of medical, ethical and/or political nature, important concerns prevail at different levels regarding the economic aspects of MMT service implementation.

Firstly, the hospital management is concerned about the financial sustainability of MMT services, considering that MMT services in Indonesia are not fully funded by the government and hospitals need to cover some of their costs through the imposition of a user fee. It, therefore, requires information on the breakdown of costs in order to estimate the appropriate charges to cover costs as well as to assess the efficiency of service delivery. These demand analyses from the hospital's perspective. Secondly, policy makers of the Ministry of Health (MOH) are concerned about the budgetary impact of scaling up MMT services to the whole of Indonesia, which requires analyses from the health system's perspective. Thirdly, the policy makers are also concerned about the affordability and consequently the financial accessibility of the services, and therefore on the level of appropriate subsidy they provide for hospitals (which demands health system perspective analyses), and the costs that patients spend on obtaining MMT services (including MMT fee, but also travel cost and time cost) (which need patient's perspective analyses). Fourth, they are concerned about the benefits of investing in the MMT services, and how this compares to other investments in health sectors. The last concern requires societal perspective analyses.

However, to our knowledge, there are no studies reporting data on the costs of providing MMT in low-income countries, including Indonesia. Most studies in the literature on the cost of MMT services were conducted in developed countries setting, such as Bradley et al. [19], Zaric et al. [9], Barnett and Hui [18], Masson et al. [21] in the USA, and Doran et al. [20] in Australia. These studies have addressed some of the concerns raised above, but the results are context specific and difficult to generalize to the Indonesian setting.

Against this background, this study aims to estimate the cost of providing a hospital-based MMT clinic in the Indonesian setting from the above-mentioned perspectives. The analyses all respond to the above concerns.

2. Methods

2.1. Study setting

The study was conducted at the MMT clinic of Hasan Sadikin hospital, a teaching and provincial top-referral hospital for West Java (approximately 40 million populations). The hospital is a public hospital with a capacity of more than 1100 beds and all the main specialities are represented. The MMT clinic was established in May 2006 and has been running up to now. The clinic is one of the 24 MMT service points across the country and opens everyday from morning to noon.

All newly attending clients receive a medical examination and are assessed for eligibility to receive MMT according to the 2006 National Guidelines Criteria for MMT [4,5]. Urine test is compulsory for every new client and strongly suggested for other clients who show signs of intoxication and/or withdrawal. The dosage of methadone dispensed to each client will be based on the result of the medical examination. New clients receive medical examination and follow-up visits mostly include only counseling and dispensing. MMT clients pay a fixed amount of Rp 15,000 per visit (US$1.64) to the hospital which includes all services mentioned above except for other medical conditions.

2.2. Data collection and cost estimation

The health system costs data (which include the costs from hospital and government perspectives) was constructed from utilization and service delivery cost data. We retrieved data on service utilization from the clinic's records for one calendar year (November 2006 to October 2007). Data collected included for each client visit, information on attendance, methadone dosage, laboratory and other investigations, and referrals to corresponding medical services. Service delivery costs were estimated using a micro-costing approach [10]. All resources consumed were listed and estimated on the basis of clinical records and interviews with medical staff working at the clinic. Costs to the clinic consist of recurrent and capital costs. Personnel recurrent costs were estimated on the basis of government salary scales (issued by Ministry of Finance in 2007) by recording the corresponding scale of all staff members. Other recurrent costs such as the cost of methadone, mineral water and syrup consumed during the 1 year period of observation were estimated using market prices. Capital costs included trainings and workshops attended by the clinic staff, and unit costs on organizing these activities were obtained from government records. Market prices were used to estimate other capital costs, which include the cost of equipment, furniture, space as well as start-up costs (e.g. initial renovation during the clinic establishment). Capital costs were subsequently annualized on the basis of the life time of the capital items. We did not include the cost of utilities (i.e. water, electricity).

The patient costs were estimated by conducting a survey to a consecutive sample of 48 methadone clients attending the clinic in November 2007. We collected information on travel costs and travelling time, the monthly income of the client, and the average number of daily working hours. Additional observations were conducted to estimate average total time spent per client in the clinic.

All costs were measured in Rupiah, and converted to US$ using the 2007 exchange rate [11]. Both the MMT service utilization and cost data were entered into and analysed with Microsoft Excel 2007 (Table 1).

Finally, total costs from the societal perspective are the summation of the total costs from the health system and patient perspectives. We omitted the service charge to avoid double counting.