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Short report

The use of rapid assessment methodology to compliment existing national assessment and surveillance data: A study among injecting drug users in Penang, Malaysia

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Abstract

The study explores how data collated from rapid assessment can enhance those produced by national level surveillance systems, in this case the national drug information (NADI) system in Malaysia. Qualitative data were collected in keeping with internationally accepted guidance on rapid assessment methods in the field of substance use. An inductive research strategy was employed. The rapid assessment produced multiple data on local drug use practices and how these were influenced by the contexts of use. The assessment points to the importance of collecting data not only on patterns of drug use but also on the health and social consequences of drug use. We suggest that the current national drug information system places greater emphasis on behavioural and health-related variables in order to better understand the potential relationships between drug use and health-related risk, including HIV/AIDS.

Keywords: Rapid assessment; Surveillance; Injecting drug use; Malaysia

Introduction

The use of rapid assessment methodology in the field of substance use has been well documented (Rhodes, Stimson, Fitch, Ball, & Renton, 1999; Rhodes, Fitch, Stimson, & Kumar, 2000). Qualitative data from rapid assessments can compliment survey data to better understand the contexts in which drugs are used (Des Jarlais, Perlis, Stimson, & Poznyak, 2005; Fitch, Rhodes, Hope, Stimson, & Renton, 2002). For example, data from rapid assessments have been used to design locally relevant questions for large cross-sectional surveys, including the World Health Organization multi-city study of injecting drug use (Des Jarlais et al., 2005). Rapid assessment data may enhance routinely collected epidemiological data in multiple ways (Fitch et al., 2002), including: providing information in information-poor situations; informing ongoing monitoring and surveillance; encouraging community involvement; informing quantitative research; questioning quantitative research; and providing the data necessary to respond practically to emerging health problems.

This paper explores how qualitative data collected during a rapid assessment compliments routine monitoring data produced by the Malaysian national drug information system (NADI). NADI was developed in 1983 to obtain data about the prevalence and incidence of drug use at a national level. In Malaysia, estimated HIV prevalence among injecting drug users (IDUs) has risen from 0.1% in 1988 to 20% in 1994 (Ministry of Health Report, 2001). The rapid assessment aimed to gain a fuller understanding of risk behaviour and behaviour change among IDUs in response to HIV/AIDS.

Problem drug use in malaysia

Between 1988 and 2004, there were 274,420 registered substance misusers in Malaysia, constituting around 1% of the general population. Approximately two-thirds (65%) were from the Malay ethnic group, followed by Chinese (19%) and Indian (10%). The majority (80%) were aged

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between 20 and 39 years. The main drug of use of those registered was heroin (56%), followed by morphine (15%) and cannabis (22%) The primary route of administration for heroin was "chasing the dragon" followed by injecting (National Drug Information System, 2001). Between 1986 and 2004, 69,461 HIV cases were reported, with nearly three-quarters (74%) attributed to injecting drug use (Ministry of Health Report, 2005).

National drug information system

NADI is administered by the Malaysian National Anti-Narcotics Agency. The system incorporates three sub-systems: profile and information on addiction (MAPP); seizures and arrest (STAR); and treatment and rehabilitation (SPAR). The system uses a national registration card number to avoid double counting (National Narcotics Report, 2000). Various government agencies provide data to the NADI system, including: drug treatment services; the National Anti-Narcotics Agency; Prisons Departments; the police; Customs and Excise Department; Pharmacy Division; the Anti-Smuggling Unit; and the armed forces.

The data produced by NADI include information on: population demographics; new and repeat users; prevalence and incidence of different types of drug use; modes of administration; drug use by geographical location; reasons for drug use; and estimated rates of HIV infection. In many countries, epidemiological and routinely collected data trends are limited as a consequence of inherent biases resulting from data derived primarily from treatment or offender populations (Rhodes et al., 1999). This is the case with NADI. Additionally, the data produced by this system are quantitative and do not include information on the health and social consequences of drug use.

Methodology

While rapid assessments often combine quantitative and qualitative data (Fitch et al., 2002; Rhodes et al., 1999, 2000), we concentrated upon collecting qualitative data. Our objective was to use these data to better understand the quantitative data routinely generated by the NADI system. Using the World Health Organization (WHO) rapid assessment methods materials as a guide (WHO, 1998), we conducted a rapid assessment among IDUs using an inductive research strategy employing triangulation. The study was conducted in the Northern Seberang Perai (SPU), the largest populated district in Penang. The study location (Kepala Batas) has a population of 269, 288.

Data collection

Multiple qualitative methods were combined to obtain primary and secondary data. First, the research team reviewed existing data from government agencies. Second, informal interviews were conducted with local narcotics agency officers, local police and health care providers. Third, observations were conducted over the course of one full week, during which time a social mapping exercise was undertaken, and initial interviewee contacts made with IDUs from which a snowball interview sample was derived. Fourth, in-depth interviews were undertaken with key informants, including current IDUs ($n = 30$), former IDUs ($n = 4$), narcotics agency and police officers ($n = 3$), and health care providers ($n = 3$). Fifth, focus group discussions ($n = 7$) were held with current, including recently initiated, IDUs comprised from Malay, Chinese and Indian ethnic groups and including local factory workers and fisherman. The findings of observations were used to inform in-depth interviews with IDUs, which in turn were used to design focus group topic guides, while key informant interviews with non-drug using experts were cross-checked with observational and interview data with IDUs.

Community involvement

A community support group was established during the study, and members from the youth movement, local police, health department and anti-narcotics agency were invited to participate on the community advisory board.

Results

We summarise key findings of the rapid assessment in relation to patterns of drug use, health-related risk behaviour, and health consequences of drug use.

Drug use

All IDUs we interviewed ($n = 30$) reported that heroin was their primary drug of use. Other substances used included morphine, cannabis and alcohol. Nineteen IDUs reported injecting heroin with benzodiazepines. One IDU injected heroin with birth control pills. Interviewees reported that the drugs they used in combination with heroin depended upon availability, but that most often such "accompaniments" were purchased legally from local pharmacies. There was a reported preference for "Upjohn" (triazolam).

From our observations we estimate that about one third of the drug users in Kepala Batas were injecting, with 'chasing the dragon' the most common route of administration. During the focus group sessions all IDUs reported that they started using drugs by either smoking or chasing and progressed to injecting over a two to five year transition period. Common reasons for progressing to injecting included the influence of peers, the increase in the price of heroin, decrease in purity, shortage of heroin supply and the need to maximise euphoric effects.

There was consensus among the focus groups participants that the main reason for mixing heroin with other drugs was to increase the euphoric effects. In addition, 13 participants who had longer injecting careers (more than 10 years) reported that heroin obtained locally has declined in potency. This may relate to purity, as reported elsewhere in Malaysia (Vicknasingam & Navaratnam, 1999). It is significant that among focus group participants there were no reports of any case of heroin overdose in the past three years among focus. Secondary data from the National Narcotics Agency confirms this.

The price of heroin ranged from RM 10 for a 3 cm straw to RM 50 for 8 cm straw (USD 1 = RM 3.80). Approximately half of the IDUs we interviewed reported having to inject more frequently in recent years – between four and five times a day – which was associated with decreasing drug potency, but may also obviously reflect increasing tolerance. An IDU who injects about four to five times daily would require an 8 cm straw.

Risk behaviour

Observations revealed that bottle caps or spoons were used to cook the drugs. All IDUs we interviewed carried their own needle, but often shared other injecting paraphernalia, including the syringe. Observations confirmed that it was common practice to share cookers, drug solutions, rinsing water, as well as syringes. Interviews and focus group discussions suggested that this latter practice seemed to be linked to a perception that HIV was transmitted via contaminated needles rather than via the syringe or any other paraphernalia. While injectors tended not to share needles, observations and focus group discussions revealed that IDUs often allowed friends or others to insert their needle into the same cooker and drug solution. Only two (of 30) IDUs interviewed reported that they had purchased ready-filled syringes from an unknown source, and the practice of purchasing ready-filled syringes was not observed during the study.

Almost all ($n = 27$) IDUs we interviewed said that they injected in groups. Based on observations and focus group discussions, we estimate that the common size of 'sharing groups' (of paraphernalia, including syringes) is between three to four persons. These tended to be described as loosely connected and transitory networks. Sharing of injecting paraphernalia was reported as most likely when in withdrawal, as well as more common in particular public injecting sites (for example, near the fishing boats, abandoned houses by the beach, public toilets). Used syringes, including with traces of blood, were observed at commonly used injecting sites.

As regards reported sexual behaviour, three (of 30) IDUs interviewed were married, did not report any additional or concurrent sexual partners, and never used condoms with their spouse. Two reported having sex with a sex worker in the month before interview. Sex workers reportedly would not permit unprotected sex.

Health consequences

Existing surveillance data indicates that there were 245 reported cases of HIV in the district of Kepala Batas where the rapid assessment was conducted (Ministry of Health Report, 2003). In the state of Penang, about 55% of HIV cases are attributed to drug injecting. There are no estimates of HIV prevalence among IDUs in Kepala Batas, though key informant interviews with law enforcement officials and health providers suggested that reported surveillance cases were an under-estimate. All focus group participants said that they had at least one friend who had been infected by HIV. Sixteen participants also mentioned an increase in tuberculosis, hepatitis B and C infection among their peers who injected. In 2000, there were eight cases of hepatitis B, 27 cases of syphilis, and 159 cases of tuberculosis in Kepala Batas overall, though it is unknown how many were among IDUs, and there were no cases of reported hepatitis C (Ministry of Health Report, 2001).

Bacterial, fungal and parasitic infections resulting from tissue damage and from the use of unsterile injection equipment and contaminated injection materials were reportedly common. Both interviews and observations confirmed that infections at injection sites, such as abscesses and thrombosis, appeared prevalent, and observations indicated that injectors would commonly use the same needle until blunt, in part because of difficulties accessing local pharmacies for clean equipment. There are no local health data enabling us to determine the mortality of drug users and any relationship between mortality and infections resulting from injecting. Key informant interviews suggested that pulmonary tuberculosis, respiratory infections and malnutrition were common among local IDUs, but there is an absence of routinely collected data to estimate likely extent.

Discussion

While the Malaysian national drug information system (NADI) concurs with this rapid assessment that the primary drug of use is heroin it does not provide any indication on 'poly drug use' and the drugs commonly used in combination with heroin (such as benzodiazepines). Poly drug use in the region has been increasingly reported in Madras, Manila, Beijing and Dhaka (National Centre for Drug Research, 1999; Kumar, 1997). Findings suggested that frequency of daily injecting may be increasing as the perceived purity of heroin is decreasing. We found no reports of overdose in recent years. Previous rapid assessments in Malaysia also note no reports of overdose as a consequence, in part, of low purity (Reid, Kamarulzaman, & Sran, 2005).

Observations and interviews revealed that IDUs tended not to share needles but often shared other injecting paraphernalia, including syringes, with others. We posit whether

one factor influencing IDU perceptions of relative risk associated with needles and syringes is prevention messages in the local language (Malay) which literally recommend 'do not share *needles*'. Recent studies in the region show that sharing remains a common practice (Kumar et al., 2000; Yang, 2005; Anh Ngo, 2005).

While most common health problems experienced by IDUs (Donoghoe & Wodak, 1998), including in the south Asian region (Kumar et al., 2000), were also reported by this rapid assessment as common, we lack the appropriate routine or epidemiological data to establish any estimate of extent or causality in relation to risk behaviour. The current Malaysian national drug information system does not have the capacity to capture data on the extent and nature health and social consequences of drug use. In the absence of such routinely collected data, rapid assessment studies are an efficient means of providing such data, and in identifying emergent health problems or 'outbreaks' among local drug using populations.

Rapid assessments, and qualitative research more generally, are increasingly acknowledged as important in understanding, as well as questioning, the epidemiology of drug use and related health harm (Rhodes & Moore, 2002). In this respect, it has been argued that rapid assessment methods can help bridge rather than further entrench methodological, disciplinary and sectoral divides in approaches public health research and intervention (Rhodes et al., 2000). Our rapid assessment study has illustrated how current nationally adopted drug information systems may be lacking in some areas, including in relation to patterns of 'poly injecting drug use' and the specifics of risk behaviour (such as the sharing of syringes but not of needles), as well as providing an indication or estimate of health consequences associated with drug injecting. This emphasises the role that rapid assessments may play in improving the data collected by routine surveillance systems (Fitch et al., 2002), as well as to the role of rapid assessments in generating complimentary data alongside that of routine or epidemiological data in order to enhance local understandings of drug use situations.

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References

Agar, M. (2002). How the drug field turned my beard grey. *International Journal of Drug Policy*, *13*, 249–258.

Anh Ngo, D. (2005). Rapid Need Assessment of Drug Users in Minority Ethnic Communities and HIV/AIDS in a Vietnam-Laos Border District. Paper presented in the 16th International Conference on the Reduction of Drug Related Harm. 20–24 March. Belfast, Ireland.

Bourgois, P. (2002). Anthropology and epidemiology on drugs: The challenge of cross methodological and theoretical dialogue. *International Journal of Drug Policy*, *13*, 259–269.

Des Jarlais, D. C., Perlis, T., Stimson, G. V, & Poznyak, V. (2005). Using Standardized Methods for research on HIV and Injecting Drug Use in Developing/Transitional Countries (draft unpublished report).

Donoghoe, M. C., & Wodak, A. (1998). Health and social consequences of injecting drug use. In G. V. Stimson, D. C. Des Jarlais, & A. L. Ball (Eds.), *Drug injecting and HIV infection: Global dimensions and local responses. World Health Organization*. UK: UCL Press.

Fitch, C., Rhodes, T., Hope, V., Stimson, G. V., & Renton, A. (2002). The role of rapid assessment methods in drug use epidemiology. *Bulletin of Narcotics*, *vol. LIV*(Nos. 1 and 2), 61–72.

Kumar, M. S., Mudaliar, S., Thyaragan, S. P., Kumar, S., Selvanayagam, A., & Daniels, D. (2000). Rapid assessment and response to injecting drug use in Madras, South India. *International Journal of Drug Policy*, *11*, 83–98.

Kumar, S. (1997). A study of buprenorphine abuse in Madras City, India. In S. Kumar, S. Mudaliar, & D. Daniels (Eds.), *Research monograph on drug abuse and HIV/AIDS* (pp. 19–37). Chennai: Sahai Trust.

Ministry of Health Report (2005). HIV Infection, AIDS Cases and Death Report in Malaysia.

Ministry of Health Report (2003). HIV Infection, AIDS Cases and Death Report in Malaysia.

Ministry of Health Report (2001). HIV Infection, AIDS Cases and Death Report in Malaysia.

National Centre for Drug Research (1999). A Comparison of Drug Abuse Patterns of Selected East Asian and South Asian Cities. In V. Navaratnam, & A. Abu Bakar (Eds.), *Report of the Asian Multicity Epidemiology Workgroup. International Monograph Series 15*. Penang: University Sains Malaysia.

National Drug Information System (June 2001). Ministry of Home Affairs, Malaysia.

National Narcotics Report (2000). Ministry of Home Affairs, Malaysia.

Reid, G., Kamarulzaman, A., & Sran, S. K. (2004). *Rapid situation assessment of Malaysia 2004. Centre for harm reduction, Melbourne and infectious disease unit*. University Malaya.

Rhodes, T., & Moore, D. (2002). On the qualitative in drugs research. *Addiction Research and Theory*, *9*(4), 1–19.

Rhodes, T., Fitch, C., Stimson, G. V., & Kumar, M. S. (2000). Rapid assessment in the drugs field. *International Journal for Drug Policy*, *11*, 1–11.

Rhodes, T., Stimson, G. V., Fitch, C., Ball, A., & Renton, A. (1999). Rapid assessment, injecting drug use, and public health. *Lancet*, *354*, 65–68.

Vicknasingam, B., & Navaratnam, V. (1999). A behavioral study on intravenous drug use and HIV/AIDS Knowledge in Malaysia. *International Medical Research Journal.*, *3*(1), 45–49.

World Health Organization – SubStance Abuse Department (1998). In G. V. Stimson, C. Fitch, & T. Rhodes (Eds.), *The Rapid Assessment and Response Guide on Injecting Drug Use*.

Yang, Y. (2005). Rapid Need Assessment of Drug Users in Four Counties of Yunnan Province. Paper presented in the 16th International Conference on the Reduction of Drug Related Harm. 20–24 March. Belfast, Ireland.