

**GEOGRAPHICAL DIFFERENCES IN RISK-TAKING  
AMONG SYDNEY METHADONE MAINTENANCE  
PATIENTS: A COMPARISON OF INNER CITY AND  
OUTER SOUTH WESTERN CLINICS**

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## Introduction

Methadone maintenance (MM) is the largest modality for the treatment of opioid dependence in Australia, with approximately 11,000 patients currently in treatment<sup>1</sup>. Very little attention has been paid to social and demographic differences between opioid users in Australia, with most research and discussion proceeding as if MM patients were a relatively homogenous group.

Clinical lore among staff working in MM clinics has suggested that there may be geographic differences between MM patients in different areas of Sydney. One often suggested difference has been between patients residing in inner and outer Sydney suburbs. Such differences may be expected on the grounds of differences in social class, education and access to health and welfare services in the two areas<sup>2</sup>. There is, for example, a substantial literature on social class and educational differences in premature mortality and morbidity<sup>3,4</sup>. These differences are attributable, in part, to differences in behaviour that put health at risk such as smoking, alcohol use, diet, exercise and health care utilisation<sup>3,4</sup>.

There is emerging evidence of such differences in the patterns of use and health consequences of amphetamine use in Sydney among users from the inner city and the more economically depressed south western suburbs<sup>5</sup>. South western amphetamine users consumed more speed in an average episode, reported greater dependence, and had more health problems than inner city users. While a part of suburban Sydney, the south western suburbs are approximately 50 kilometres from inner Sydney. The south west is thus geographically remote from the inner city, and is more socially disadvantaged on indicators such as unemployment, education and income<sup>2</sup>.

Given the differences in locality and social status between the two areas, there may be clinically significant differences in the profiles and behaviours of MM patients from the inner city, and those from the south western suburbs. Differences in demographics and socioeconomic status may directly contribute to differences in the behaviours of groups of MM patients, with implications for their clinical management. Anecdotal evidence from clinic staff in these two areas indicated that they perceived the two groups of patients to be dissimilar, and to present different clinical problems.

The current study aimed to compare groups of inner city Sydney (ICS) and south western Sydney (SWS) MM patients. Specifically, the study aimed to ascertain whether there were differences in the socio-demographic profiles, treatment factors, current drug use and injecting behaviours, and psychological functioning of ICS and SWS patients. The study was conducted as part of a larger study on HIV risk-taking among MM patients<sup>6</sup>.

## **Method**

### *Subjects*

The subjects were 104 MM patients from two clinics in the inner city, and 118 MM patients from two clinics in the outer south western suburbs of Sydney. All subjects were volunteers who were paid A\$20 for participation in the study. Subjects were recruited in 1992 by means of notices placed in the waiting rooms of the clinics involved in the study. As such, this is not a random sample of Sydney MM patients. The mean age of the sample was 30.8 years (SD 5.9; range 18-45), with 59.9% of subjects being male. The sample had a mean of 9.6 years of education (SD 1.7; range 1-12), and only 3.6% of subjects were currently in full-time paid employment. The mean age of first injection was 18 years (SD 4.4; range 12-41). Ten patients (4.5%) reported being HIV anti-body positive. The age and sex of the sample were comparable to those of all New South Wales MM patients in 1992, who had a mean age of 32.3 years and of whom 62% were male (Drug and Alcohol Directorate). While this was not a random sample, the age, sex, employment and education profiles of the sample are comparable to other Australian studies of MM patients<sup>7,8</sup>.

### *Procedure*

Subjects were assured that all information provided was strictly confidential, and that the researchers were not in any way connected with the unit from which the subjects had been recruited. All interviews were conducted in private by one of the research team, and took between 45 and 60 minutes.

### *Measures*

A structured interview covered seven major domains: demographics, treatment history, drug use/dependence, psychological status, drug related lifestyle, risk perception/knowledge and risk-taking behaviour. Specific instruments employed were the Opiate Treatment Index (OTI)<sup>9</sup>, Short Dependence Scale (SDS)<sup>10</sup>, Beck Depression Inventory (BDI)<sup>11</sup>, State-Trait Anxiety Inventory (STAI)<sup>12</sup>, General Health Questionnaire-28 (GHQ)<sup>13</sup>, the anti-social personality disorder (ASPD) module from the Diagnostic Interview Schedule<sup>14</sup>, and the HIV Risk-taking Behaviour Scale (HRBS)<sup>15</sup>.

### *Analyses*

For continuous variables t-tests were employed. Categorical variables were analysed using chi<sup>2</sup>, with corresponding odds ratios (O.R.) and 95% confidence intervals (C.I.). Highly skewed continuous data were categorised for the purpose of analysis. Bonferroni adjustments were used to correct for multiple comparisons, with family-wise error rate set at .05. All analyses were conducted using SYSTAT<sup>16</sup>.

## Results

### *Treatment characteristics*

Subjects had been enrolled in their current MM program for a median of 18 months. Approximately 80% (79.7%) of subjects had previously been in some form of treatment for opiate dependence, with 50% having previously been maintained on methadone. The median methadone dose was 55 mg, which is slightly below the 63.3 mg median dose for New South Wales MM patients in 1992 (Drug and Alcohol Directorate).

### *Comparisons of ICS and SWS patients*

SWS subjects were younger (29.7 v 32.2 yrs,  $t=3.2$ ,  $df=220$ ) than ICS patients, more likely to be married or living in a defacto relationship (O.R.=4.87, 95% C.I. 2.76-8.61), to have a regular sexual partner who was an injecting drug user (O.R.=2.96, 95% C.I. 1.59-5.50,) and to have children in their care (O.R. 4.79, 95% C.I. 2.66-8.64) (Table 1). Fewer than 4% of both groups were in full time paid employment. SWS patients did not differ from ICS patients in either the mean number of years of school education (9.3 v 9.8) or in the probability of having completed technical or university education (45% v 42%).

Table 1  
Significant differences in comparisons between SWS and ICS methadone maintenance patients

Variable	SWS	ICS
Age	29.7	32.2

Married/Defacto	66.4%	28.8%
Regular partner IDU	39.8%	18.3%
Children in care	57.6%	22.2%
Shared needle (in last month)	19.5%	9.6%
HIV knowledge	4.2	4.5
Sex (in last month)	75.2%	59.6%
>1 Partner (in last month)	2.5%	13.5%
OTI Social	17.3	14.9
ASPD	32.2%	18.3%
ASPD Symptoms	3.1	2.4

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There were no significant differences between the two groups in time on current MM current program, current methadone dose, or having been previously in MM treatment.

There were no significant differences in the use of heroin or other drugs in the preceding month between SWS and ICS patients, and no significant difference in the probability of having injected in the preceding month.

While SWS patients were not significantly more likely to have recently injected, they were more likely to have recently shared injecting equipment, with 19.5% of SWS patients having shared equipment in the preceding month compared to 9.6% of ICS patients (O.R.=2.28, 95% C.I. 1.03-5.04). Thus, SWS patients were more likely to have injected in an unsafe manner in relation to the spread of HIV and other blood borne viruses. The majority of SWS patients (23/25) who had borrowed a needle had done so only with their sexual partner, compared to 2/6 of ICS patients. For both groups, borrowing needles was described as safe or very safe (SWS v ICS). The HIV knowledge scores of SWS patients were significantly lower than ICS patients (4.2 v 4.5,  $t=3.4$ ,  $df=220$ ). While SWS patients were more at risk of HIV transmission, there were no

significant differences between groups in perception of risk among seronegative needle sharers.

As would be expected from the prevalence of married/defacto SWS patients, this group was more likely to have had sex in the preceding month (O.R. 2.08, 95% C.I. 1.17-3.69). ICS patients, however, were more likely to have had more than one sexual partner in that period (O.R. 5.96, 95% C.I. 1.66-21.38). Consistent condom use with regular partners was low for both the SWS and ICS groups (6.7% v 12.8%), but higher for casual partners (30.7% v 57.8%). These differences were not significant.

Analyses of drug-related problem areas of the OTI indicated that SWS patients had poorer social functioning (17.3 v 14.9,  $t=2.4$ ,  $df=220$ ) than ICS patients. (higher scores indicate greater problem severity). There were no significant differences in the frequency of reported current criminal behaviour or health between the groups.

There were no significant differences between groups in current psychological distress, as reflected in GHQ, BDI or STAI scores. SWS patients were, however, significantly more likely to receive a current diagnosis of ASPD (O.R.=2.12, 95% C.I. 1.13-3.99) and to report significantly more current symptoms of ASPD (3.1 v 2.4,  $t=2.9$ ,  $df=220$ ).

## **Discussion**

In discussing the results of this study it must be borne in mind that the sample is not a random sample of inner city and south western Sydney MM patients. As such, caution must be exercised in extrapolating the results to all Sydney MM patients. However, it should be noted that the demographic make-up of the sample is similar to other studies of Sydney MM patients recruited in a similar fashion<sup>17</sup>.

The major difference in the demographic profiles of the SWS and ICS groups was the greater probability of SWS patients being married or in a defacto relationship. Not only were SWS patients more likely to be in a long-term relationship, their sexual partners were much more likely to be a current injecting drug user.

The differences in the probability of being in relationships appears to be related to differences in injecting practices between the groups. Previous research has shown that having a regular partner who is an injecting drug user (IDU) is predictive of needle sharing<sup>6,18</sup>. In order to determine whether this was the case, area of residence and having a regular partner who is an IDU were entered into a multiple logistic regression predicting needle sharing. Only having a regular IDU partner was predictive of sharing (O.R. 13.0, 95% C.I. 5.2-32.8), indicating that it is not area of residence per se that is responsible for the difference, but the higher prevalence of IDU partners in the south west. The higher proportion of SWS patients who are in such relationships

would thus appear to increase their probability of unsafe injecting. As such, it would appear to be particularly relevant for SWS staff to emphasise that no needle sharing is safe, and to discuss the issues this raises within a relationship. The lower HIV knowledge of SWS patients, despite the extent of education campaigns in this area, also indicates a special clinical need among these patients.

The finding that SWS patients were nearly five times more likely to have children in their care indicates that issues relating to parenting, and the practicalities of child care are of much greater salience in the south western MM clinics. In terms of the everyday operation of the clinic, dealing with children while ancillary services, such as counselling, are being provided places an added stress on clinic staff.

SWS patients were twice as likely to have had sex in the last month, but ICS patients were six times more likely to have had sex with more than one person. While low condom usage is a relevant issue for both groups, the greater number of sexual partners of ICS patients makes the spread of sexually transmissible diseases a more pertinent issue for this group.

While there were no differences in personal distress between the groups, twice as many SWS patients met the criteria for a current diagnosis of ASPD. While there are difficulties in the diagnosis of ASPD among drug users, the anti-social behaviours that define the disorder appear to be more prevalent among SWS patients. Not surprisingly, given the greater level of anti-social personality disorder in the south west, the social functioning of SWS patients was significantly worse than ICS patients. One reason why this is not surprising is that the OTI social functioning scale contains items on inter-personal conflict. While no formal analyses were conducted, the three symptoms of ASPD in which SWS patients exceeded their peers in the inner city were violent behaviour, recklessness and lack of remorse. Given the well known difficulties in dealing with people with ASPD, issues relating to anti-social behaviours may be more relevant in MM clinics in the south west.

In summary, there do appear to be clinically relevant differences between SWS and ICS MM patients that have implications for MM units in these areas. The differences in profiles noted here indicate that the problems that clinics will face may vary markedly depending on location, and that different clinical issues, such as HIV education and parenting issues, arise.

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