

Opiate substitution prescribing in Belfast – two year follow up study

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Abstract

Objectives: The objectives of the study were to identify the characteristics of the patients who were commenced in a newly developed opiate substitute prescribing (OSP) programme, to determine their rate of retention and to ascertain the patients' opinions of the service. We also wished to determine rates of blood borne viruses in this population.

Methods: Data were collected from three sources: the Shaftesbury Square Hospital Substitute Prescribing Database, patient charts and an anonymous user views questionnaire. We also conducted viral screening. Inclusion criteria were opiate dependence according to ICD-10¹ for at least one year, in individuals who were 18 years of age or older. The sample comprised the first 80 patients who attended the service, who were followed up over two years.

Results: A total of 44% of our original cohort remained engaged with the service two years after commencement. Of the remainder, 18% engaged with OSP elsewhere and 13% completed a successful detoxification from all opiate drug use. Factors which were associated with continuation in the programme were prescription of methadone (as compared with buprenorphine), female sex and higher doses of OSP. Patients reported high levels of satisfaction with the service. Of those who were tested for blood borne viruses, more than half were positive for hepatitis C infection.

Conclusions: The response to the development of the opiate substitution programme demonstrated that there was a need in the community which had not been met in the past. Service users who attended the programme reported high levels of satisfaction.

Key words: Opiate dependence; Opiate services.

Introduction

Historically, the number of heroin users in Northern Ireland was relatively small and a widespread substitute-prescribing programme was considered unnecessary.² Local communities in Belfast frequently encouraged drug users to move out of their local area, which resulted in the problem being

driven deeper underground. With no substitution treatment available, users either continued using heroin or moved out of Northern Ireland in search of suitable treatment. It was clear that a balanced pragmatic response was needed.

Opiate substitute prescribing (OSP) was introduced in Northern Ireland in April 2004, by which methadone or buprenorphine are prescribed according to the Northern Ireland guidelines to individuals who are opiate dependent.² This led to the development of an opiate substitute prescribing programme in Shaftesbury Square Hospital, Belfast. Methadone is an opioid agonist available in tablet and liquid form, and buprenorphine is a partial opioid agonist which is given as a sublingual tablet. Either is given to the patient as an alternative to heroin or other illicit opiate consumption.

The aims of the study were to identify the characteristics of the patients who were commenced in the programme, to determine their rate of retention and to ascertain the patients' opinions of the service. We also wished to determine rates of blood borne viruses in this population.

In Northern Ireland substitute prescribing operates on the basis of shared care. This involves the addiction services, primary care, pharmacies and voluntary addiction services. All services work closely together. Once patients are stabilised the majority part of their care is then transferred to primary care.

Shaftesbury Square Hospital covers a catchment area of 370,000 and is involved in the treatment of all forms of drug and alcohol addictions. The substitute prescribing team consists of three senior nurses and a staff grade doctor working full time in substitute prescribing, with consultant psychiatrist supervision. The team maintains liaises closely with the drug outreach team (DOT) (a community based team focussed on identifying and engaging with drug users who are outside of mainstream services).

Method

The data were collected by the multidisciplinary team at Shaftesbury Square Hospital. Data were gathered during the period April 2004 to April 2006. Since its inception, the substitute prescribing team has kept a computerised database containing information on patient demographic details, patient drug history, treatment provided, blood borne virus status and hepatitis B vaccination details. Data were collected from three sources: the Shaftesbury Square Hospital Substitute Prescribing Database (as described above) patient charts and an anonymous user views questionnaire.

Inclusion criteria were opiate dependence according to ICD-10 for at least one year, in individuals who were 18 years of age or older.¹ The sample comprised the first 80 patients who attended the service, who were followed up over two years.

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All patients were admitted into Shaftsbury Square Hospital for commencement of opiate substitute prescribing. Initial engagement consisted of taking a full history and imparting information about treatment options and safe practises. Patients were offered screening for HIV, hepatitis B and hepatitis C; as well as advice on hepatitis B vaccination.

On discharge, review consisted of regular meetings with the key worker, initially twice weekly, then weekly. This would consist of face to face contact or, if not possible, phone contact. Once stabilised, the frequency of review was gradually decreased and patients were transferred over to the primary care team. Supervised urine screens were taken at regular intervals to identify any recent use of illicit substances.

All patients were asked to complete anonymous questionnaires regarding the service. All the questionnaires were completed and returned. Patients were asked to rate staff performance.

Results

Patient characteristics

A total of 22% of patients were female and 78% were male. The mean age of patients at assessment was 35 years old (range 21-53 years).

The mean duration of opiate use of any service user at the time of assessment was 13.6 years (range one year to 35 years). The mean duration from referral to assessment was 22 days, and the longest wait was 16 weeks.

All of the 80 patients reported using other recreational drugs regularly, in addition to opiates, at the time of assessment. A total of 54% reported using cannabis, 86% benzodiazepines, 5% alcohol, 4% amphetamines and 1% cocaine.

At the time of assessment over half of the patients reported intravenous use of heroin and 60% stated that they had shared needles in the past.

A total of 29% had a partner who was a drug user and 12% were living in hostel accommodation. Patients were offered the choice of either methadone or buprenorphine. A total of 85% chose and were prescribed methadone and the other 15% were commenced on buprenorphine.

Patient outcomes

Two years after the service began, 35(44%) of the first 80 patients remained engaged with the service. *Table 1* describes the outcome for those who did not commence or continue OSP. The overall attrition rate (ie. those who dropped out or our programme and did not detoxify or engage with another programme) was 39%.

Table 2 compares the rates of continuation for methadone and buprenorphine. *Table 3* compares continuation rates for gender. *Table 4* compares OSP doses with continuation rates.

Of the 80 individuals, 73 had supervised urine screens and of those 43 were clear of opiates (other than those prescribed).

Viral screening

Of the sample, 54% underwent viral screening. The remainder declined testing or came with an already positive viral result. A total of 51% were tested for HIV and 54% were tested for hepatitis B and hepatitis C. Of those tested, 2%

Table 1: Patients who did not commence/continue opiate substitute prescribing (OSP)

Did not commence/continue OSP	%
Not suitable for OSP	2
Failed to present for OSP	25
Continuing OSP elsewhere in N. Ireland	11
Continued OSP outside N. Ireland	7
Detoxification	13
Discontinuation of OSP with clinical supervision	27
Discontinuation of OSP without clinical supervision	13
Deceased	2

Table 2: Comparison of methadone and buprenorphine continuation/discontinuation rates

	Methadone	Buprenorphine	Total
Continued OSP	54%	30%	51%
Discontinued OSP	46%	70%	49%

Table 3: Comparison of rates of continued/discontinued OSP with gender

	Females %	Males %
Continued OSP	75	43
Discontinued OSP	25	57

Table 4: Comparison of OSP dosages between continued/discontinued OSP

	Mean dose mg (Range)	
	Methadone	Buprenorphine
Discontinued OSP	56.0 (1-120)	8.3 (4-16)
Continued OSP	73.3 (10-200)	11.3 (10-12)

were found to be positive for HIV, 56% for hepatitis C and 7% for hepatitis B. A total of 36% received hepatitis B vaccination from the team. Half of the sample reported continued injecting but denied sharing needles.

User views questionnaire

The response rate to the patient anonymous user views questionnaire was 100%. Of the respondents, 84% said that they were satisfied with both the level of knowledge and expertise in Shaftsbury Square Hospital. Of those surveyed 80% felt adequately informed about the limits of confidentiality at the outset of treatment and 78% felt that their referral was handled with minimum delay. A total of 53% felt that their GP was best placed to look after their prescribing needs, after completing the initial inpatient programme. A total of 39% preferred to be seen in an alternative venue to a hospital setting and 79% felt that increased patient involvement would enhance future service provision.

Regarding harm reduction, 2% stated that they had not been offered or advised on viral testing. A total of 74% were aware of local needle exchange programmes. A total of 75% felt that they had been advised on harm reduction strategies; however many felt that they required further education to help them address their substance misuse problems. Of service users 66% had contact with the Drug Outreach Team (DOT) and most reported very positively on their support.

Discussion

This study describes the patient characteristics and outcome in an opiate substitution prescribing (OSP) programme developed in Northern Ireland in response to an unmet need in the community. Of our original cohort 44% remained engaged with the service two years after commencement. Of the remainder 18% engaged with OSP elsewhere and 13% completed a successful detoxification from all opiate drug use.

Factors which were associated with continuation in the programme were prescription of methadone (as compared with buprenorphine), female sex and higher doses of OSP. Our response rate of 100% to the questionnaire was unusually high. The findings indicated high levels of satisfaction with the service. Of those who were tested for blood borne viruses, more than half were positive for Hepatitis infection.

Goals of opiate substitute prescribing (OSP) treatment range from total abstinence to reduction of risk directly related to drug use. Rates of abstinence increase after treatment,^{3,4} but even where total abstinence is not achieved, treatment is effective in reducing drug misuse,^{5,6} criminal activity,⁷⁻⁹ and the rate of blood borne infections.^{10,11} Patients who continue to use heroin are found to use less frequently and in smaller amounts; in addition the use of other illicit drugs is diminished.¹²

Factors which improve successful OSP

Factors which have been found to be associated with successful outcomes in OSP include: high retention/engagement rates in the programme,¹³ increased or titrated doses of the substitution drug,¹⁴ good relationships between the team and the individual patient;^{15,16} and high rates of user satisfaction with the service.¹⁷ Longer duration of treatment also improves outcome,¹⁸ with three months being the minimum period required in most cases to effect an improvement.¹⁹

OSP is effective in reducing needle sharing²⁰ and the transmission of blood borne viruses, specifically HIV, hepatitis B and hepatitis C.^{21,22} Furthermore, a higher dose of the substituted drug is associated with decreased rates of these risk taking behaviours and subsequent viral transmission.^{23,24}

The use of methadone as an opiate substitute is well established.²⁵ More recently buprenorphine has been used as an alternative due to its less severe withdrawal syndrome and lower potential for abuse.²⁶ However; it appears to be less effective than methadone at higher dosage.²⁷

Northern Ireland studies

Heroin use is a significant problem in Northern Ireland. According to the Northern Ireland Drug Misuse Database,²⁸ 10% of those who sought help for drug use reported that heroin was their main drug of misuse. This is from a voluntary database of 1,464 individuals who presented for treatment of

problem drug misuse and allowed their details to be recorded for research purposes in 2007. As this is a very highly selected group, it is likely to be a significant under estimation of the extent of drug misuse in the jurisdiction.

An alternative source of information is the Northern Ireland drug addicts index²⁹ which registers patients who are addicted to controlled drugs. There were 257 people registered in this in 2007, of whom 75% reported heroin use. Again, this database is very restricted in the information it can capture, as it does not include those who have not come forward for treatment from the general population.

Information is limited on the rates of blood borne viral infections resulting from intravenous (IV) drug use in Northern Ireland, as again, it depends on voluntary disclosure and self-presentation. In Northern Ireland, 21% of IV drug users reported direct sharing of needles and syringes. In 2006 there were 78 reports of hepatitis B infections in Northern Ireland (it is unknown what percentage was attributed to injecting behaviour). Of IV drug users 76% reported that they had been vaccinated for hepatitis B. HIV diagnosis, where infection was thought to be acquired through injecting drug use, accounted for 2.1% of all HIV diagnoses. There were 140 new cases of hepatitis C, all of which were associated with injecting drug use.³⁰

Comparison of our findings with other studies

The attrition rate (ie. those who dropped out of our programme and did not detoxify or engage with another programme) of 39% is similar to those in the UK.⁹ The mean referral to assessment period of three weeks compares reasonably well with other services.³¹

It was unsurprising that all the users were using other recreational drugs, in addition to opiates, as polydrug use is a common finding for this population.^{32,33} Nearly a third of our sample had a partner who was a drug user, which is in line with other studies.¹² A total of 12% lived in homeless hostel accommodation, reflecting the housing problems often found in such populations.⁹

We found that using methadone as the substituted drug (as compared to buprenorphine) and using higher doses of substituted drug were associated with higher retention rates. This has been found in previous randomised controlled clinical trials.²⁷ The association of female gender with higher rates of retention has not been supported in the literature.³⁴

Harm produced by injecting behaviour continues to cause significant physical health problems.³⁵ Of our sample 60% had shared injecting equipment in the past and the effect of this could be seen with high rates of hepatitis C, as well as transmission of hepatitis B and HIV infection. Despite increasing knowledge and education in the intravenous drug using population hepatitis B vaccination is not universal,³⁰ as we found in our study.

Strengthening the educational component of treatment programmes has been shown to be beneficial in reducing physical harm reduction, as have needle exchange and vaccination programmes.³⁶ We were pleased to find that most of our patients were very satisfied with the level of education and information they received. Indeed, overall the rates of patient satisfaction were high, which is of practical importance – as high rates of satisfaction have been found to increase retention rates and improve outcomes.³⁷

Methodological considerations

As this study is observational in nature, only limited conclusions can be drawn from our findings. For practical and ethical reasons a randomised controlled trial was not possible. Our sample size was limited, as this is a service development in a relatively small geographical area. The use of a standardised instrument to measure patient satisfaction would have improved the reliability of our findings. Our response rate was 100%, which meant we were ascertaining the opinions of all our patients, rather than a select few.

Conclusion

The development of an opiate substitution programme in Northern Ireland resulted in engagement with a significant number of users and demonstrated a need in the community which had not been met in the past. Patients who attended the programme reported high levels of satisfaction, which is a crucial factor in engagement and improving future outcome. Our findings will help us to refine our programme, increase benefits to the user and inform service development in Northern Ireland. Future expansion is needed and services must be evaluated to ensure optimal benefits.

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