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Substitution and reincarceration

Elements for an analysis of a complex relationship

Results of a prospective study involving 507 patients incarcerated in remand centres between 2003 and 2006

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The positive effects of opioid substitution treatment (OST) developed in France from the 1990s onwards are today widely acknowledged, including a significant reduction in morbidity, related in particular to the infectious risks associated with intravenous drug use, a decline in the number of overdoses, and a reduction in the sharing of injection equipment. Access to substitution treatment is accompanied by an improvement in access to the treatment system. It facilitates access to antiretroviral treatments and the medical tracking and follow-up of patients, thereby encouraging their social reintegration. Nevertheless, assessing the specific effects of the increasing spread of substitution treatment on the epidemiological dynamics of viral infections remains difficult: OST is part of an overall risk reduction policy introduced from the late 1980s onwards [Costes, 2003].

However, in France as in several other European countries [Turnbull, McSweeney, 2000], the availability of substitution treatment in prison environments is far from automatic [Michel, Maguet, 2003] even if it has been clearly demonstrated that the provision of such treatments can contribute to reducing risks during incarceration [Dolan, Hall, Wodak, 1996]. The cases of misuse and trafficking reported with high dose buprenorphine (HDB) partly explain the continuing resistance to substitution treatment among certain health professionals practising in prison environments [Obradovic, 2004]. However, the specific impact of methadone and HDB treatments has been scarcely assessed at all in prison environments [Levasseur et al, 2002][10], even though users of illegal drugs are over-represented here, with 10% of those placed in detention declaring prolonged and regular use of opioids during the 12 months preceding incarceration, a figure 7 times higher than in the non-penal population. Furthermore, the relationship between health care and reincarceration has hardly been studied, due among other things to the shortcomings of the existing statistical information system in France and elsewhere concerning the reincarceration of drug-using prisoners.

In 2003, an epidemiological study was launched by a research group including the RECAMS, the GIP (public interest group) Recherche Droit et Justice and the OFDT. The purpose of this research was to test the correlation between the administration of an opioid substitution treatment prescribed during the first week of incarceration, and the level of reincarceration over the following 24 months. The monitoring of this study, (carried out under the scientific supervision of Clinsearch and coordinated by the RECAMS network) was handled by a steering committee comprised of representatives from the research group and from the various health and legal authorities (the general department for health, the hospitalization and treatment department, and the penal administration department).

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2. Villepinte & Nanterre UCSA (Unité de Consultation et de Soins Ambulatoires, roughly equivalent to the British CARAT)

3. ClinSearch, Bagneux

4. Villeneuve-lès-Maguelone UCSA

5. Nantes UCSA

6. Dunkirk UCSA

7. Osny UCSA

8. Mulhouse UCSA

9. Réseau d'Etudes sur les Conduites Addictives, Médicament et Société (Network for the Study of Addictive Behaviour, Medicines and Society)

10. This retrospective study concerning 9 French remand centres was carried out from December to March 2000 (based on 3,606 medical files, collected between May and July 1997). It examined the relationship between substitution treatment prescribed in prison environments and reincarcerations during the three and a half years following incarceration in 1997. It demonstrated that receiving an OST during a period of incarceration reduces the number of subsequent reincarcerations compared to subjects having undergone withdrawal treatments: after more than three years, 19% of subjects having received a substitution treatment had been reincarcerated, compared to 39% of those having undergone withdrawal treatments. The scope of this study was nevertheless limited due to the small number of remand centres participating in the survey (raising questions concerning their representativeness) and the retrospective methods used, which implied recovering the files of patients corresponding to a given period of incarceration, therefore raising the problem of the exhaustiveness of the data collected. In fact, this work was presented as a simple study examining the prospects and feasibility of future prospective research.

The study was carried out in remand centres (please see the panel). The patients described in the survey are consequently prisoners awaiting trial and convicts whose remaining sentence is less than one year or who are awaiting a transfer to an établissement pour peine (penal institutions, detention centres, etc. for convicted prisoners). It has made it possible to describe the general profile of opioid-dependent prisoners but also to carry out a prospective study, the first of its kind in France, over a period of 24 months in order to assess the level of reincarceration among prisoners having received OST compared to a control group of prisoners who did not receive an OST when beginning their period of detention. This analysis made it possible to identify the various factors associated with reincarceration. Finally, the survey has sought to highlight the differences in profile between those people receiving an OST when their period in detention began (for the first time or otherwise) and those whose substitution was interrupted or not renewed when they were incarcerated, which are both useful factors as decision-making aids, when it comes to identifying the predictive signs and indicators that a subject is about to abandon treatment (or anticipating abandonment of treatment).

The general profile of opioid-dependent prisoners in remand centres

The 507 prisoners included in the survey were 30 years old on average [18-49]. They were chiefly men (96%), convicts (60%, vs 40% remand prisoners), without children (54%) with an educational level equivalent to the BEP or CAP secondary school vocational training certificates (57% vs 16% with an educational level equivalent to the BEPC certificate, 13% equivalent to the baccalauréat or higher, 11% equivalent to primary school level and 3% others). Approximately a third had a professional activity before being incarcerated (35%), 28% received RMI allowances, 24% received welfare benefits, were dependent upon a third party or covered by other situations or categories, while 13% were unemployed. Most of the patients had individual accommodation prior to incarceration or lived with their parents (36% and 37%). Approximately 10% were homeless.

Regarding their penal situation, 78% of the opioid-dependent prisoners had already been incarcerated once or several times (four times on average). The average age when first incarcerated was 20.

At the time of incarceration, 79% of opioid-dependent arrivals declared that they were receiving substitute treatment (a total of 394 people). Among these, the majority (82%) were already receiving OST prior to incarceration and 18% received such treatments for the first time when incarcerated, this corresponding to the national figures collected for all of the penal institutions[11] [Morfini, Feuillerat, 2004]. The percentage of HDB among the OST prescriptions in the month preceding incarceration was around 63%.

The majority of dependent prisoners also benefited from health cover (54%) and had already received medical treatment for a drug problem (84%), which in most cases was initiated by a private practitioner (54%). Approximately 37% were prescribed an anxiolytic during the months preceding incarceration, 22% a hypnotic, 12% antidepressants and 9% neuroleptics.

The mental and physical health indicators for this population group demonstrate a level of fragility intrinsically related to drug use practices. At the time of inclusion, 23% declared a previous history of overdoses and approximately a quarter have undergone hospitalization for psychiatric care other than for drug withdrawal (24%). Additionally, 37% had already attempted suicide. Moreover, the age of the opioid-dependent prisoners when they first injected heroin was 20 on average.

Factors associated with reincarceration

Three years after being included, 94% of these patients had been released (n=472) and 6% (n=29) were still incarcerated (convicts serving the rest of their sentence or remand prisoners awaiting judgment at the time of inclusion, incarcerated as convicts two years later). Among the 472 opioid-dependent people released from detention for the offence for which they were originally incarcerated, half had been reincarcerated at least once (n=238)[12].

Patients receiving an OST at inclusion more often feature profiles characterised by multiple criminal convictions. Indeed, the percentage of patients reincarcerated at least once appears slightly higher among those prisoners who were on OST during the first week of incarceration (52% vs 41%, p=ns).

This observation does not make it possible to establish a causal link between the administration of an OST and reincarceration during the two following years. Nevertheless, it raises

I Methodological information I

The initial purpose of the survey was to study the impact of substitute treatment using buprenorphine or methadone upon the reincarceration levels of opioid-dependent prisoners, in a prospective exercise spanning a period of two years (from June 2003 to September 2006). However, for feasibility reasons in remand centres, this study was not randomised. Consequently, it cannot claim to be a case-control study, and is more concerned with accurately describing the opioid-dependent arrivals in these remand centres, observing the public health measures put in place to deal with such persons before and during incarceration, and their possible impact upon the medical and penal future of those patients receiving OST.

The study involved volunteer doctors practising in the medical facilities of 47 remand centres (out of a total of 117 in mainland France), with no distinction made concerning practices with regard to the substitution treatment. This made it possible to cover 507 patients based on the following criteria: remand prisoners or convicts, during the first week of incarceration and dependent on opioids (regardless of the manner in which the opioids are taken), benefiting or otherwise from a substitution treatment (prescribed before or during the present period of detention), volunteering to take part in the survey and accordingly signing a letter of consent. Underage prisoners, those transferred from other establishments or those refusing to participate were not included in the survey.

The survey included three separate phases:

- The inclusion of the patients during the first week of incarceration, from June 2003 to September 2004. If the patient met the inclusion criteria, the investigating physician filled out 4 questionnaires in his presence: a medical questionnaire (socio-demographic characteristics, dependency on opioids and history of drug addiction, state of health and medical history), a so called "pharmaceutical" questionnaire examining the treatments prescribed to the patient at the time he arrived at the remand centre (related in particular to opioid dependency and the consumption of psychotropic substances), a so called "reincarceration" questionnaire and a "mortality" questionnaire, of which only the part concerning the patient's identity was filled out, for later use. These last two questionnaires were completed during the following phases of the survey.
- The collection of reincarceration data obtained from the national offenders register (FND) from the penitentiary administration department, consulted over three successive years (October 2004, September 2005 and October 2006). This data concerned the successive periods of detention, release dates and penal status of the patients (whether remand prisoners, convicts or both).
- The data concerning the dates and causes of any possible deaths was systematically sought out via the National Institute for Statistics and Economic Studies (INSEE), INSERM and the medical-legal institutes. An analysis of the mortality factors is not statistically significant between the two groups due to the low number of deaths 24 months following inclusion (10 deaths, i.e. an annual gross mortality rate of 1%).

The individual data for each patient is therefore derived from three different sources: the investigating physician, the Ministry of Justice and INSEE-INSERM.

The participating remand centres represent 46% of the total reception capacity for the country. These are chiefly small in size (77% of them had room for between 1 and 400 people); 19% were medium-sized (with room for 400 to 1,000 people) and 4% had a capacity of over 1,000 persons. The remand centres in Ile-de-France and the Languedoc-Roussillon regions accounted for almost half of the patients surveyed, while those located in the centre of France and in Burgundy accounted for only one inclusion.

11. The most recent survey into substitution treatment in prison environments (February 2004) reported 85% continued treatments and 15% new treatments. It also revealed that the percentage of new treatments initiated is higher in établissements pour peine (42%) than in remand centres (21%) although remand prisoners are proportionally more numerous when it comes to receiving such treatments.

12. The reincarceration levels were calculated for each patient, taking account of the total monitoring period in months, and removing from this sample the 29 patients still incarcerated three years after inclusion (making a total sample of 478 patients).

a series of questions concerning the link between substitution and reincarceration.

The differential noted between the number of patients receiving an OST according to their criminal status cannot be interpreted as such. It may reflect a difference in structure among the penal profiles of patients. In other words, this comparison between the figures for substitution and those for reincarceration simply allow us to appreciate the complexity of the relationship between these two notions and to grasp the importance of exogenous explanatory variables-not all of which have been included (and which may be difficult to include) in the survey. This may concern social and family-related variables (marital status for example) or penal variables, recognized in numerous surveys as "repeat offence factors". Indeed, even if the repeat offence frequency is dependent upon the nature of the offence concerned, it also varies according to the size of the sentence handed down, and these factors are statistically dependent [Kensey, 2007]. Additionally, we know that a positive correlation exists between the amount of time spent in detention and reincarceration levels. In other words, the presentation of the reincarceration levels thus shown is ambivalent in as far as the risk of a new jail sentence rises in line with the length of a patient's criminal record. We should also remember that when calculating the reincarceration rates, the survey has not taken account of the period during which the patient was exposed to the risks of reincarceration. In other words, as the reincarceration date was not recorded during the successive consultations of the national offenders register, it was not possible to introduce a weighting for the reincarceration level in order to take full account of the average time spent outside of jail before being jailed once again (or otherwise).

The patient's status vis-à-vis substitution therefore clearly appears to be a factor leading to some confusion, and casts a doubt over the legitimacy of an analysis based on the hypothesis that substitution itself has an influence on the probability of an individual returning to prison.

In short, this survey highlights two types of factors which are significantly related to reincarceration. The most visible of these stems from the fact that a patient has already experienced several periods of incarceration and the early age at which he/she was put behind bars for the first time: 87% of opioid-dependent patients reincarcerated after two years had already spent time behind bars (vs 73% among free, non-reincarcerated patients), an average of five times (vs. 4 times) and had been incarcerated for the first time at the age of 19 on average (vs 21). The second significant factor concerns the past history of drug abuse of opioid-dependent convicts. The fact that the patient may have already experienced one or several overdose incidents is related to a higher risk of reincarceration. Among these, 30% have experienced at least one overdose incident (vs 20% among free, non-reincarcerated patients).

Although this prospective study does not propose results concerning the decisive factors establishing a relationship between substitution and reincarceration, it nevertheless makes it possible to more accurately distinguish the profile of opioid users with a higher risk of reincarceration on the one hand, but also those opioid users receiving an OST during their incarceration.

A comparison of opioid-user profiles depending on whether or not they received an OST.

From a socio-demographic point of view, there is no difference in profiles between opioid users benefiting or not from an OST. The distinctive characteristics concern their penal situation, their medical history and their consumption pattern for psychotropic substances.

A more extensive record of incarceration among those prisoners receiving OST

Those patients receiving OST at the time of incarceration more often declare a previous judiciary history: 81% of them have already been incarcerated (compared to 68% of patients who do not receive OST) and the average number of declared periods in detention is also higher (6 on average, compared to 4.6). Additionally, they also tend to be younger the first time they were placed in detention with an average age of 20.7 years old vs 22.4 years old. It therefore appears that opioid-dependent inmates receiving OST during their first week of incarceration tend to be jailed more frequently, and have a detention record which is older, and which begins earlier.

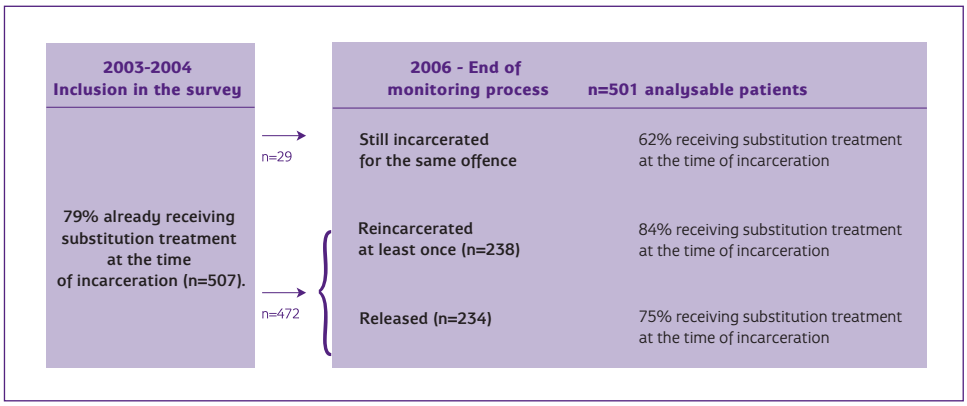
It is certainly necessary to interpret this data (which appears to suggest a link between substitution and the penal profile) with caution. The survey does not make it possible for us to discover the nature of the penal offence which led to incarceration at the time the patient was included in the programme (or previous periods behind bars). And most importantly it does not tell us the percentage accounted for by drug-related offences among these sentences. We are equally badly informed concerning the time lapse before reincarceration (for those inmates who already have a history of detention) or the length of the sentence, which would make it possible to distinguish patients according to the seriousness of the crime committed.

Additionally, from the medical-penal viewpoint, we have no precise data concerning the length of time for which the patient's opioid dependency has been treated, in relationship with his criminal record. For example, how do his periods behind bars (when these are repetitive) fit in with the patient's overall medical history? As an example, one may believe that the "start of substitute treatment" is associated with a certain profile of opioid user (those who began consuming these products early on or who have the highest consumption frequencies), who also tend to be the most active delinquents, i.e. easier to spot by the police and authorities. We can also imagine that the "weight" of the person's criminal record contributes to explaining a higher frequency of OST. In particular, we know that the start of OST administration is particularly common in établissements pour peine (which chiefly welcome prisoners with sentences of more than one year) [Morfini, Feuillerat, 2004, Obradovic, 2004). Finally, medical practices themselves may influence the chances of having access or otherwise to an OST quite apart from the patient's individual characteristics. At the same time, we can consider the criteria which stipulate that in reality an opioid-dependent drug user is considered suitable for a prescription of methadone or HDB. Is substitution more often prescribed, for example, to those prisoners who already have a history of incarceration? Did they receive a prescription for an OST during a previous period behind bars?

A longer medical case history and improved health cover among patients receiving OST

Inmates receiving OST stand out due to a higher prevalence of certain psychiatric co-morbidities. They twice as often declare a period of psychiatric hospitalization during their lives, other than hospitalization for withdrawal (27% vs 13%). They are also significantly more likely to have attempted suicide (40% vs 26% of patients not receiving OST), and to report overdose incidents (27% vs 13%). Almost a fifth of inmates receiving OST (16%) have experienced more than just a single overdose during their lives.

Retrospective graph showing the penal situation at the end of the monitoring process for those patients included in the study at the time of their incarceration in 2003-2004



Similarly, inmates receiving OST more frequently declare the use of at least one psychotropic substance during the month prior to incarceration (55% of patients receiving OST vs 35% of patients not receiving an OST) which in most cases takes the form of an anxiolytic or a hypnotic (52% of patients receiving OST vs 29% of patients not taking OST on inclusion).

Additionally, inmates receiving OST more often know their hepatitis C status (88% vs 74%) and their HIV status (88% vs 78%). Among these, 44% are hepatitis C positive, i.e. twice the level seen among those not receiving OST.

Finally, inmates receiving substitution treatment are more often covered by the CMU free health insurance programme (59% vs 44% of patients not receiving OST), and are less likely to have no health cover whatsoever (5% vs 17%). This better level of health coverage can be explained by the fact that patients receiving substitution treatment more often consider their state of health as being poor, with 34% describing their state of health as "poor" or "very poor" vs 22% of inmates not receiving any OST.

Prescriptions of anxiolytics, neuroleptics and hypnotics are more frequent among opioid-dependent patients not receiving OST.

The data collected from pharmacies confirm that prisoners who do not receive OST are much more frequently prescribed anxiolytics (47% vs 34%), neuroleptics (46% vs 14%) and hypnotics (45% vs 30%) than individuals receiving OST. We may surmise that the relative overconsumption among non-OST patients of neuroleptics, which are generally reserved for patients suffering from serious disorders and which are not recommended for heroin users, is in response to the needs expressed by this type of patient in order to quell bouts of agitation.

Antidepressants seem to be the exception to the rule of over-consumption of psychotropic substances by patients not receiving OST, as there are more patients receiving substitution treatment taking them (12% vs 6% of patients who are not receiving OST) even if the difference is slightly less significant than for the other psychotropic medicines.

Conclusion

The survey confirms that access to opioid dependency treatment resources has made major progress in prison environments and that the stoppage of treatments already underway when a person enters a penal institution is now rare. The study also highlights the fact that HDB is most commonly used[13]. The chief contribution of this survey lies in the fact that, on the one hand, it demonstrates the reincarceration frequency of inmates and secondly, that it describes the differences in profiles between those opioid-dependent inmates receiving OST and those who do not. Patients receiving substitution treatment are characterised by a more intensive criminal history and a heavier prior incarceration record, the reflection of more turbulent lives. They more often consider their condition worrying. Their access to health care and their health cover tend to be better and they are less often prescribed psychotropic drugs during their spell in detention. Consequently, membership of an OST programme appears to be a sign of fragility from both a legal and psychiatric standpoint, in particular. Nevertheless, patients receiving OST tend to show a greater willingness to embark upon a treatment programme. Although the results of the study are inconclusive concerning the relationship between substitution and reincarceration, this is partly due to the differences noted with the profiles of OST recipients in terms of their future criminal path. In view of the limitations of this survey, which is not a study into the impact of substitution treatment (a randomised study is not possible in a prison environment), the most salient points concern "vulnerability" factors identifiable among patients receiving OST. Although we are fully aware of the individual benefits of substitution treatment, it appears that the fact that a patient has received an OST during a previous period behind bars does not appear to offer any protection against future reincarceration. One of the factors behind this is the presence of "unequal reintegration opportunities" at the time the person enters prison.

Existing studies demonstrate that following an OST programme throughout the period of incarceration reduces the number of subsequent reincarcerations compared to those subjects having undergone withdrawal treatment [Levasseur, 2002]. Nevertheless, the substitution treatment does not have a specific influence on the likelihood of a person being reincarcerated. The success of the dependency treatment therefore appears to be related to the need to provide ongoing support for these patients. These are patients characterised by a combination of heavier social problems and a longer-standing dependency problem. This fragility therefore places a new emphasis on the question of their supervision as part of health care during detention, with the goal of ensuring reintegration after their release and avoiding repeat offences. The prospects for future research arising from this study are therefore partly related to the problem of socio-educational management and monitoring prior to incarceration, during the detention period and also after the patient has been released. The study additionally shows that this psychosocial and educational support is also desired by the detainees themselves.

This study was carried out with the financial support of the Schering-Plough laboratory, the OFDT and the GIP Recherche Droit et Justice.

13. These two aspects of the study into substitution treatment in prison environments will be considered in greater depth in a future issue of Tendances devoted to the question of the initiation of methadone treatments in prison environments and the analysis of medical practices where OST prescriptions are concerned. The final survey report describing application of the circular dated 30 January 2002 concerning the first-time prescription of methadone by doctors practising in health care establishments will be available online shortly [Canarelli, Obradovic, 2008).

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