



Pacini Editore & AU CNS

Brief Communication

Heroin Addict Relat Clin Probl 2009; 11(1): 23-30

HEROIN ADDICTION &  
RELATED CLINICAL  
PROBLEMS

www.europad.org

## Use and Abuse of High-Dose Buprenorphine (HDB) Obtained Without a Prescription: a French Survey

Pascal Courty

CSST SATIS, Clermont-Ferrand, France, EU

### Summary

**Objectives:** To gain information on the profile of patients using High-Dose Buprenorphine in France without a medical prescription. **Methods:** This was a naturalistic survey on 27 survey sites (n=298) comprising three different groups: people who had always obtained their HDB without a prescription, people who had obtained HDB both with and without a prescription over the previous month and an intermediary group who had previously obtained it on prescription, but not over the course of the previous month. **Results:** In terms of treatment and supervision objectives, significant differences were found between the group of patients who were under the supervision of a doctor and those who continued to obtain HDB without any prescription. **Discussion:** Medical supervision is a central factor in treatment. **Conclusion:** Treatment education for patients, medical training for prescribers, and pharmaceutical form appear to be means that need to be developed simultaneously to optimize the treatment.

*Key Words:* High-Dose Buprenorphine; Misuse

### 1. Introduction

High-Dose Buprenorphine (HDB) is considered safer to use than methadone, but it also brings with it the benefit of a more flexible prescription framework, as it is well suited to local GP practices; this makes it accessible to more people in France.

Moreover, restrictions on patients are minimized: it is dispensed via a pharmacy and not daily, and no urine checks are needed. Any doctor may prescribe it.

According to the circular of March 31 1995 of the DGS [5], the main objectives of substitution treatments may appear general: basically, beyond the sphere of HDB treatment itself, prevention factors and harm reduction are important, too.

Substitution treatments should contribute towards raising the levels of social integration of patients suffering from major opiate dependence.

Annexe 1 of circular DGS/DH No. 96/239 of April 3rd 1996 [6] sets out the objectives of HDB substitution treatment and provides recommendations for its prescription, which should optimize inclusion in a treatment

programme and the medical supervision of any disease associated with opiate dependence.

These circulars view substitution as a phase, the final objective being, ideally, that each user should build him- or herself a dependency-free life, which should include becoming independent of the treatment itself.

During the ANAES consensus conference (2004, www.has.fr), the "clearly positive" impact of opiate substitute treatment was described: broad access to treatment (over 100,000 patients), a reduction in the number of deaths due to heroin overdoses (3,500 lives saved), improved social integration for 50% of patients, 3 times fewer infringements of the drugs law between 1995 and 2003, and cost savings. But even substitution treatments have their limits: heterogeneous access to treatment, misuse of the medication (the injection and snorting of Buprenorphine, death due to methadone overdose and Buprenorphine-Benzodiazepine boosting, a black market for treatments, continuation of black-market use, little impact on hepatitis C virus contamination, and continuing stigma associated with dependency.

HDB is registered on list I. Previously available on

production of a prescription in the form of a counterfoil book for a 28-day supply, it is now dispensed on production of an authorized prescription (“ordonnance sécurisée”), which is prescribed and dispensed subject to the current regulations on addictive substances.

Subsequently, several legal restrictions have been applied in this area: in particular, Decree 20/09/1999 [10], whose main aim was to deal with the issue of certain Buprenorphine-based medicines, was introduced in the context of certain derivative uses; it restricts dispensing, which was initially unlimited, to a maximum period of 7 days, with the possibility of an extension to 28 days if that is specifically authorized by the consultant.

In France, according to SIAMOIS/InVS data and OFDT estimates [13], in 2003 the policy of HDB substitution applied to 84,500 people, according to a high estimate, and 71,800 patients according to a low estimate. Additionally, health-insurance data (OFDT estimate) provide an estimated figure of 79,000 for those who received an HDB prescription in the second half of 2002; those data allow the identification of several HDB-user population:

- Patients registered on a treatment programme under medical supervision (estimated at 52,000)
- Patients receiving prescriptions for substitute products in an irregular manner, the “substitution intermittents” (estimated at a minimum of 22,000)
- People responsible for significant resale activity (an estimated 5,000 “traffickers”).
- A fourth group comprising the “non-prescription” consumers, who are difficult to quantify but are estimated by the “low-threshold” structures to be in the region of 4,000.

However, according to the TREND 2005 report, [1] among people familiar with treatment mechanisms, substitution treatments increasingly seem to be part of a medical programme that is supervised by a doctor. That was true of 94% of these patients in 2005.

The misuse of HDB (i.e. with the aim of getting high, or regulating the effects of other TREND5 products) would seem to be worsening in the front line structures, since, even though the number of HDB users for the previous month remained stable (44% in 2006, 43% in 2003), the percentage of users exclusively misusing HDB rose to 28% in 2006, compared to 11% in 2003.

In parallel, the percentage of users stating that they mix therapeutic use (i.e. with the aim of getting off heroin TREND) and abuse is on a downward trend (34% in 2003, 23% in 2006) [2, 3]. In addition, it seems that there is a diversification in the profiles of people who abuse HDB.

A projection performed on a regular evolution of the 2003 data leads to an estimate of 96,500 HDB users at the end of 2006. In the French context, with the widespread use of HDB and derivatives as mentioned in various reports, it seemed to us to be important to find out more

about the section of the population that continues to obtain this molecule without any prescription.

Our aim was to ascertain the actual use of a variety of medicines containing High-Dose Buprenorphine, in other words, the specific manner in which they are obtained and used by those ‘on the margins of treatment’, who may see a doctor regularly or occasionally, but who obtain it in parallel through means other than a pharmacy purchase.

## 2. Materials and methods

As the objective of the study was to collect information on the use of HDB by people who obtain it without a prescription, exclusively or otherwise, the type of study selected as being most appropriate was a naturalistic one.

### 2.1 Inclusion criteria

The inclusion criterion adopted was the use over the preceding month of HDB obtained by a means other than prescription.

### 2.2 Recruitment of the participants

The recruitment of subjects was carried out at 27 survey sites, distributed over 22 zones, organized around a target city and its metropolitan area, located in 12 of the 22 administrative regions of France

Participants were recruited using two successive approaches:

Initially, the researchers responsible for carrying out the interviews made contact with various centres and organizations operating at each site, so that they could facilitate their contact with people who were taking HDB and would be likely to meet the inclusion criteria.

Subsequently, ongoing recruitment proceeded using the ‘snowball’ technique, with each person surveyed being asked to put the researchers in contact with other people taking the medication.

The aim of this multiplication of survey sites and recruitment methods was to avoid the focus of the survey falling on a single centre or on only one specific population.

All of the interviews were carried out during the course of December 2006. They were all held in a neutral place.

### 2.3 Data collection

The interviews were carried out by a team of researchers trained in psychosociological interviewing methods. They were conducted with the help of a structured pen-and-paper-type questionnaire made up exclusively of closed questions, even if some of them did allow for the inclusion of non pre-coded answers. The expected duration

of an interview was 45 minutes. The questionnaire, which was devised specifically for the survey, had previously been tested on 6 people to check its comprehensibility, the relevance of its application in relation to the medical history of the interviewees, the range of different types of trajectories encountered and its acceptability.

This questionnaire included 47 items covering the associated consumption of psychoactive substances, the methods used for obtaining, using and administering HDB, the reasons for using it and taking a substitution treatment; 7 of the questions were dedicated to finding out the socio-demographic characteristics of the interviewees.

#### 2.4 Statistical analysis

Comparative analysis of the different groups described above was performed with the aid of the usual tests (Chi-square and Student's t-tests). The significance thresholds were set at 99% and 95%. The data were processed with the aid of COSI software.

##### 2.4.1 Analysis criteria

A systematic comparative analysis was performed on the different groups of people participating, defined according to whether or not they had obtained HDB exclusively without a prescription during the previous month.

Thus, 3 groups of people were defined as follows:

- The first group included those who had always obtained the HDB they use by methods other than medical prescription. This group was labelled: 'never with a prescription'.
- The second group was made up of people who, at earlier stages, had purchased HDB at pharmacies with a medical prescription, but who, during the previous month, had only obtained HDB without having any prescription. This group was called: "without prescription during previous month".
- The third group comprised people who, during the previous month, had obtained and used HDB both with and without a prescription. This group was defined as being: "with and without prescription during the previous month".

### 3. Results

#### 3.1 Number of questionnaires processed

298 questionnaires were gathered and processed

- 56 were given to people who had never received a prescription for high-dose Buprenorphine; these were classified as "never with a prescription" GR1;
- 68 were given to people who had not received any prescription for high-dose Buprenorphine over the course of the previous month; these patients were

defined as being "without prescription during previous month" GR2,

- 174 were given to people who had obtained the HDB both "with and without prescription during the previous month" GR3.

#### 3.2 Socio-demographic criteria (Figure 1)

There are no significant differences between the three groups in terms of indicators of sex, age and type of income. It should, however, be noted that the proportion of women (33.9%) and of those who were earning a salary (33.3%) was highest in the group who had obtained HDB both with and without prescription during the previous 2 months. Besides this, a higher proportion of the people in this same group were living as one of a couple (33.9%) and had stable accommodation (57.5%); these proportions were significantly different from those in the group who had not received a prescription for HDB over the course of the previous month (only 35.3% of these patients had stable accommodation, and the percentage for women patients was as low as 19.1% -  $p < 0.01$ ).

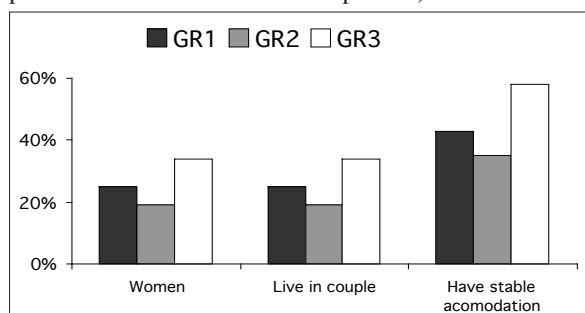


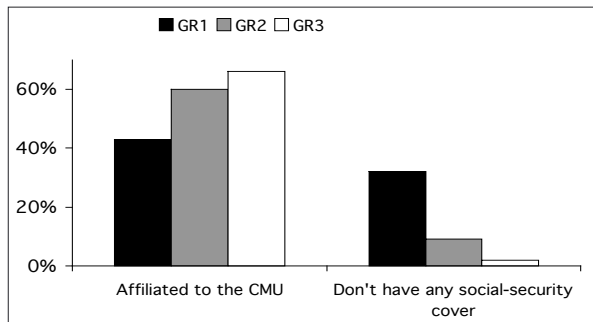
Fig 1 Socio-demographic characteristics. GR1=Never with a prescription; GR2=Without prescription during the previous 2 months; GR3=With and without prescription during the previous 2 months

#### 3.3 Social-welfare cover (Figure 2)

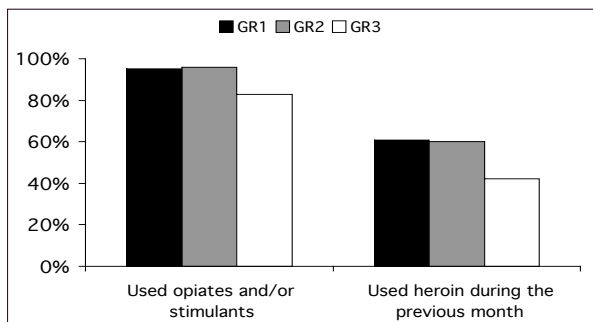
Those who had never received a prescription for HDB were the least likely to be affiliated to the CMU (universal medical cover) (42.9%) and those most likely to have no social security cover (32.1%). These proportions differ significantly from those of the group as a whole (total group) and from the group who had obtained HDB both with and without a prescription during the previous month ( $p < 0.05$ ).

#### 3.4 Associated uses (Figure 3)

The patients who had obtained HDB both with and without a prescription over the course of the previous month poly-consume less than the others: 82.8% also used opiates and/or stimulants over the course of the previous month, compared to 95.6% of the group who had



**Fig 2 Social Welfare Cover.**  
GR1=Never with a prescription; GR2=Without prescription during the previous month; GR3=With and without prescription during the previous month



**Fig 3 Associated Uses.**  
GR1=Never with a prescription; GR2=Without prescription during the previous month; GR3=With and without prescription during the previous month

an HDB prescription during the previous month, while 94.6% of those who had never received a prescription for HDB used opiates and/or stimulants ( $p < 0.01$ ). This difference is attributable to the lower proportion of people who stated that they had used heroin during the previous month (42% of the “with and without prescription during the previous month” versus 60.3% of the “without prescription during previous month” and 60.7% of the “never with a prescription” -  $p < 0.05$ ).

### 3.5 Ways of taking HDB (Figures 4, 5 and 6)

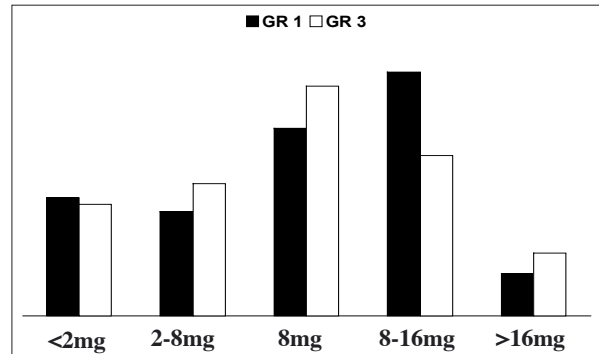
The average amount of the most recent quantity of HDB consumed for the group as a whole was 10.2 mg, ranging from 9.46 mg in the group of people who had obtained it both with and without prescription to 12.25 mg in the group that had never obtained it on prescription; these differences were not significant. Was this daily amount taken in one or several quantities over the course of the day? The questionnaire does not permit a response to this question.

The injection of HDB is a factor in all the groups, including the group that obtained it with and without prescription during the previous month; this practice

was, however, significantly less frequent ( $p < 0.05$ ) in this group (33.9%) than in the group who had never obtained HDB on prescription (50%).

There is, however, no difference between the groups as far as the snorting of HDB is concerned: this practice affected between 24.5% and 33.9% of the interviewees.

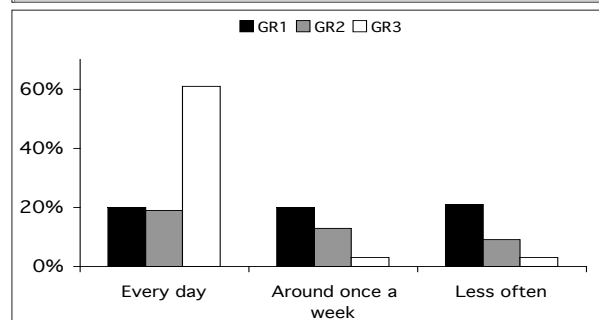
60.9% of those who also had HDB on prescription



**Fig 4 Last value of HDB dose.**  
GR1=Never with a prescription; GR3=With and without prescription during the previous month



**Fig 5 Ways of taking HDB**  
GR1=Never with a prescription; GR2=Without prescription during the previous month; GR3=With and without prescription during the previous month



**Fig 6 Frequency of use for HDB over the course of the previous month.**  
GR1=Never with a prescription; GR2=Without prescription during the previous month; GR3=With and without prescription during the previous month

over the previous month were taking HDB every day, which significantly differentiates this group ( $p < 0,01$ ) from the total group (43.6%), from the group who had never received a prescription for HDB (19.6%) and from the “without prescription during previous month” group (19.1%).

In parallel, the highest proportion of people using HDB about once per week (19.6%) or less frequently (21.4%) was found in the group who had never been given a prescription for HDB. These patients showed a notable difference with respect to the group who had obtained HDB with and without a prescription (2.9% for each of these frequencies -  $p < 0.05$ ) and with the total group (8.4% and 7.7%).

### 3.6 Reasons for obtaining HDB without a prescription. (Figures 7 and 8)

The main reasons why the interviewees needed to obtain HDB by another means during the previous month are, for those who obtained it exclusively without a prescription over the course of the previous month, not wanting to go and see a doctor (65.3% of the group). For those who had seen a doctor during the preceding month or previously, the main reason given was that the quantity prescribed to them was insufficient (68.2% for the total

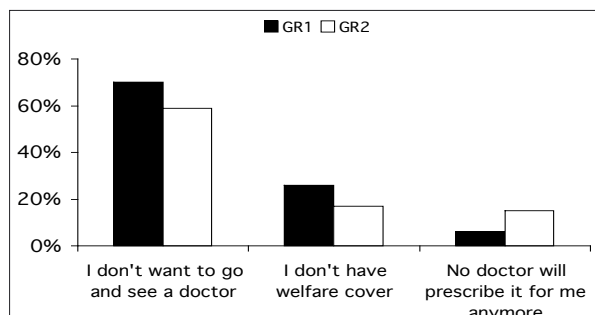


Fig 7 Interviewees having obtained HDB solely without prescription. 54 GR1 patients (never with a prescription) vs 41 GR2 patients (without prescription during the previous month)

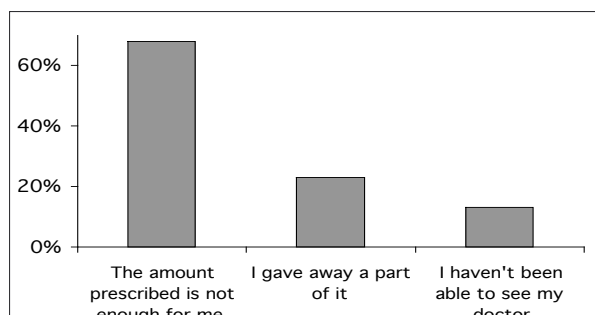


Fig 8 Interviewees having obtained HDB without prescription as well as with prescription – 201 respondents

group and 67.2% for those who had also obtained it on prescription over the preceding month).

### 3.7 Reasons for using HDB (Figure 9)

Half of the patients (50%) stated that they had been using HDB in order to stop taking heroin permanently, and this reason was the one most commonly given (63.2%) among those who had obtained HDB both with and without prescription over the previous month (a significant difference ( $p < 0,01$ ) with respect to the two other groups).

The story is very different for those who had not been given a prescription for HDB over the course of the previous month and those who had never been given an HDB prescription. Of these groups, 61.8% and 57.1%, respectively, stated they had used HDB only when they were unable to use heroin. These proportions were significantly different from the group that also obtained HDB on prescription during the previous month (31% -  $p < 0,01$ ) and the total group (42.9%).

### 3.8 Number of doctors consulted

Those who obtained HDB both with and without prescription during the previous month state that they have one doctor only in 71.8% of cases and, when they have several doctors, the average is 2.47.

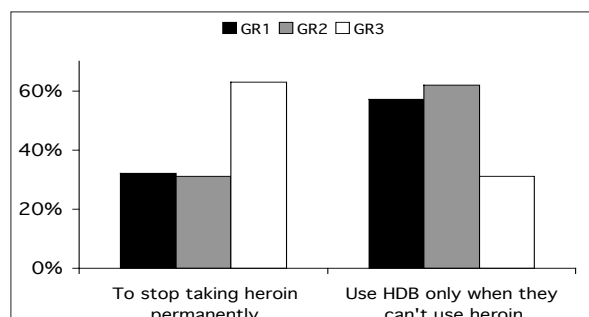


Fig 9 Reasons for using HDB. GR1=Never with a prescription; GR2=Without prescription during the previous month; GR3=With and without prescription during the previous month

## 4. Discussion

The aim of our survey was to describe the population groups on the basis of the way in which they accessed HDB. The three groups showed different initial characteristics according to whether they had received a prescription for HDB during the previous month or had never been given one, while the third group was located between these two positions.

There were more people who were employed with a salary, had stable accommodation, were living as a

couple, and also more women, in the group that had a prescription for HDB during the previous month.

Despite its lower incidence than in the other groups, the injection of HDB among those who had received a prescription during the previous month was not negligible. However, the fact of having had a prescription in the previous month did result in better observance of treatment, since the treatment substance was taken every day in a very large majority of cases.

For the group of patients who had HDB on prescription during the previous month, HDB was mainly being taken as a means for permanently getting off heroin, whereas in the other two groups most patients used it when they were unable to obtain heroin.

Despite these differences, things are not so clear-cut, because the groups show many similar characteristics, in terms of associated uses, the HDB doses being used and recourse to snorting.

The impression given is, rather, that of a continuum, a progressive approach in which regular visits to a doctor will gradually modify the attitude of patients towards more regular supervision. The role of the prescribing doctor is also central, because, in 71.8% of cases, those who are currently supervised (or who had been given a prescription during the previous month?), have only one doctor.

The amounts taken do, in fact, correspond to the treatment dosages recommended by the AMM (from 9.46 to 12.25 mg/day), and one might well ask whether patients who say they take heroin because the dosage prescribed for them is too low do in fact have a legitimate point, which, if acted on, could permit a significant reduction in abuse.

The benefits of medical supervision have been referred to in previous publications [4, 7-9, 11, 12, 14] but the reasons for abuse are also at issue here, in particular the potential benefits to be won by modifying the HDB dosage.

Even if it is difficult to achieve, the long-term supervision of a cohort group would be appropriate for the study of behavioural modifications among the different groups.

## 5. Conclusion

Some positive characteristics have emerged from our study but it remains true that further progress can be made.

Substitution with HDB necessarily involves 3 main actors: the patient, the prescriber (but the pharmacist needs to be considered, too) and HDB itself. Potentially, improvement seems to be feasible on the following conditions:

- The patient: regular medical supervision, a sufficient dose and an appropriate way of taking the treatment. A higher dose is both desired and feared by patients
- The prescriber: finding the right dose is an issue that

requires the education of GPs about treatment and global take-home care

- The medication: one might consider ways to improve the pharmaceutical form and the addition of an antagonist to HDB treatment, with the aim of improving the correct use of the medicine.

## Role of funding source

Survey carried out with the support of Schering Plough France

## Conflict of Interest

The authors has no relevant conflict of interest to report in relation to the present study.

## References

1. BELLO P. Y., CADET-TAIROU A. (2004): Les mésusages de HDB, les traitements de substitution en France, résultats récents 2004. *Tendances*. 37 4-7.
2. BELLO P. Y., TOUFIK A. (2004): Phénomènes émergents liés aux drogues en 2003. Cinquième rapport national du dispositif TREND. Saint-Denis. *OFDT*.
3. BELLO P. Y., TOUFIK A. (2005): Phénomènes émergents liés aux drogues en 2004. Sixième rapport national du dispositif TREND. Saint-Denis. *OFDT*. 13.
4. BRONNER C., SORBE S., TOUZEAU D., MAAREK R. (2007) Actualités et bonnes pratiques de prise en charge des pharmacodépendances aux opiacés. Paper presented at the Training document written for the IRMG.
5. CENTRAL DIRECTION OF HEALTH SERVICES IN FRANCE (1995): March 31, Circular. DGS, Paris.
6. CENTRAL DIRECTION OF HEALTH SERVICES IN FRANCE (1996): April 3rd Circular no. 96/239. DGS/DH, Paris.
7. COURTY P. (2003): Buprénorphine haut dosage (Subutex®) et pratique d'injection: A propos d'une enquête auprès de 303 personnes. *Ann Med Interne (Suppl Médecine des Addictions)*. Series I IS46-IS50.
8. COURTY P. (2006): Qu'est-ce que le mésusage? *Le Courrier des Addictions*. 8:(2) 73-74.
9. FONTAA V., BRONNER C. (2001): Persistance de la pratique d'injection chez les patients substitués par méthadone ou buprénorphine haut dosage: Etude sur 600 cas. *Ann Med Interne*. 152:(Suppl. n°7) 2S59-69.
10. FRENCH GOVERNMENT (1999): December 20, Decree. Official Journal of French Republic (September 24, 1999), Paris.

11. MOATTI J. P., SOUVILLE M., ESCAFFRE N., OBADIA Y. (1998): French general practitioners' attitude toward maintenance drug abuse treatment with buprenorphine. *Addiction*. 93 1567-1575.
12. OBADIA Y., PERRIN V., FERONI I., VLAHOV D., MOATTI J. P. (2001): Injecting misuse of buprenorphine amongst French drug users. *Addiction*. 96 267-272.
13. OBSERVATOIRE FRANÇAIS DES DROGUES ET DES TOXICOMANIES (2006): Policy of HDB substitution. *Tendances*. 52 [www.ofdt.fr](http://www.ofdt.fr).
14. VIDAL-TRECAN P., BOISSONAS G. (2001): Usagers de drogues injectables et buprénorphine haut dosage: Analyse des déviations de son utilisation. OFDT, Paris.

*Received July 4, 2008 - Accepted November 10, 2008*