ORIGINAL RESEARCH

The current status of opioid maintenance treatment in France: a survey of physicians, patients, and out-of-treatment opioid users

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Methods: The views of physicians (n=100), patients (n=130), and out-of-treatment opioid users (n=33) were collected via interviews and questionnaires.

Results: Physicians reported being moderately satisfied with treatment programs in their area (rating 6.9 out of 10). Most physicians (82%) reported being concerned about misuse and diversion of medication-assisted treatment (MAT) medications and 50% identified psychosocial/ behavioral counseling as the key change that would most improve patient care. Among patients, the mean number of previous MAT episodes was low (1.5); 78% reported that it was easy to access a doctor to undergo MAT; 14% reported regularly or sometimes using heroin; misuse and diversion were reported in 15% and 39% of patients, respectively; and 57% of patients were not receiving psychosocial help. Out-of-treatment opioid users reported using drugs on a regular basis (42% regularly used heroin) and cited 'not wanting to give up drugs completely' as the most frequent reason for staying out of MAT.

Conclusion: This survey highlights a number of positive features of the open-access, GP-based treatment model for opioid dependence in France. Challenges remain with regard to continued misuse/diversion of MAT medications and limited patient access to psychosocial support.

Keywords: opioid maintenance treatment, medication-assisted treatment, buprenorphine, methadone, buprenorphine–naloxone, France

Introduction

Medication-assisted treatment (MAT; sometimes known as opioid substitution therapy or opioid replacement therapy) is widely accepted as one of the most effective interventions for opioid dependence.¹ However, variations in treatment access and provision exist across countries. The French treatment system can be characterized as 'openaccess', whereby treatment is predominantly delivered in primary-care settings rather than specialist addiction clinics. This approach has several advantages, including good accessibility, lower costs, reduced stigma, less contact with drug-using peers, and enhanced social integration.

Methadone was introduced in France in 1995, and 1 year later France became the first country in Europe to introduce buprenorphine.² Since then there has been a rapid growth in the number of people receiving MAT in France; an estimated 138,000 people received MAT in 2009, of whom 73% received buprenorphine and 27% received methadone.³ A unique feature of the French treatment system is that all registered medical doctors are allowed to prescribe buprenorphine without any special education

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or licensing; once prescribed by a doctor, buprenorphine can be dispensed by the pharmacy chosen by the patient and named on the prescription.4,5 Regulations allow buprenorphine prescriptions of up to 28 days with seven take-home doses, although physicians have the authority to request daily, supervised dosing by pharmacists or up to 28 days of take-home doses.⁵ In contrast, treatment with methadone still requires mandatory initiation within a specialized center or health care facility, and management of the patient can only be transferred to a nonspecialist physician once the patient has been stabilized.5 Urine testing is compulsory in France when treating with methadone, but is not compulsory with buprenorphine.⁵ Another important feature of the French model is that costs are fully covered by the social security system and psychosocial support is provided free of charge by local authorities.5

In 2008, the French Governmental Plan to Fight Drugs and Drug Addiction (2008–2011) was launched.⁶ Harm reduction was a central component of this plan, which aimed to reduce deaths by overdose, the spread of infectious diseases, and the social and psychological damage caused by the use of illicit drugs.⁶ Widespread use of MAT, primarily buprenorphine, has been associated with a significant decrease in heroin use and improvement in social conditions of those in treatment,^{7–9} a decrease in overdose deaths,¹⁰ and a decrease in human immunodeficiency virus (HIV) prevalence among injection drug users.¹⁰

However, several studies have demonstrated misuse (ie, snorting or injecting) of buprenorphine by patients, which can involve crushing or dissolving their medication. Snorting of buprenorphine was reported in 30% (n=33) of 111 stabilized patients receiving office-based buprenorphine in south-eastern France.¹¹ A cross-sectional survey of 404 subjects receiving buprenorphine in various treatment settings found that 47% reported that they previously injected buprenorphine.¹² More recently, 9%–10% of respondents reported intravenous or inhaled misuse of buprenorphine in the nationwide Observation of Illicit or Misused Psychotropic Drugs (OPPIDUM) survey.¹³

Diversion (ie, selling or giving away medication) of buprenorphine to the illicit market is also a major concern and has contributed to an extensive black market in some European countries. Doctor-shopping, involving patients obtaining prescriptions for the same medication from several physicians at the same time, is thought to be a major route of diversion of buprenorphine to the illicit drug market,^{14,15} and has recently been estimated to account for 12.5%–16.9% of reimbursed buprenorphine in France.^{13,14,16} The recent introduction of buprenorphine–naloxone to France in January 2012 may help to counter these problems as it has reduced abuse liability compared with mono-buprenorphine.¹⁷

Beyond misuse and diversion, ensuring that treatment is uniformly of a high standard remains an important need. However, national guidelines in France lack clarity, and a lack of standardized mandatory training of physicians in the treatment of drug dependence may lead to variations in the quality of treatment.

Given the unique history and treatment model for MAT in France, collection of real-world data on the status of treatment provision is of potential value to treatment providers and policymakers alike, in seeking to highlight where current policies or treatment approaches could be improved. We report the results of Project Access France, a national survey of patients in MAT, out-of-treatment opioid users, and treating physicians, which was conducted in 2011 and formed part of a larger European initiative, the European Quality Audit of Opioid Treatment (EQUATOR).^{18,19}

Methods

The methodology and questionnaire instruments in this study were adapted from a survey (project [IMPROVE] Poverty Reduction in Europe: Social Policy and Innovation) which was designed to examine the barriers to OST access, entry and retention in Germany,²⁰ and to date have been applied in ten national surveys in Europe.²¹ The English versions of the questionnaires have been published previously in full.¹⁸

The present survey was conducted between 2011 and 2012. Physicians treating opioid-dependent patients were identified by research collaborators or from official lists, and contacted. Those who agreed to participate in the study were selected until the number of recruited physicians reached 100. This included 90 general practitioners (GPs) in public practice, two specialist physicians in public practice, five physicians practicing at hospitals, and three physicians whose place of work was not clarified. Physicians were interviewed face-to-face. Each physician received €70 for participating in the interview and support centers received €20 per recruited physician. Physicians were asked to comment on a number of issues including patient awareness/ knowledge of treatment options, psychosocial interventions, patient mental and physical health, drug-use outcomes, barriers to treatment entry and retention, and their attitudes and practices. Questionnaires were sent out to participating drug support centers and physicians.

Patients in MAT and out-of-treatment opioid users were recruited by physicians using a snowball method. Physicians

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(both those who consented to take part in the physician sample and others from the list of treating physicians) were contacted to ask for assistance in recruiting patients. Physicians who responded positively were requested to recruit three to four patients in a week and provide them with the self-completion questionnaire. As such, patient selection was influenced by physicians' availability and their choice of patient. Both patients and out-of-treatment opioid users received a €40 grocery voucher to take part in the survey. Patients currently in MAT (n=130) and out-of-treatment opioid users (n=33) were either interviewed or completed questionnaires. Briefly, patients and out-of-treatment users answered questions on demographics, details of current MAT (for current MAT patients only), use of psychosocial counseling, current and past illegal drug use, sharing of injecting equipment, past misuse and diversion of prescribed medications, satisfaction with treatment, previous treatment experience, self-reported stability, past imprisonment, and access to treatment in prison.

Information was gathered anonymously and kept confidential. Participation was voluntary and all participants were informed about the study and provided consent prior to participating. A research agency (GfK HealthCare), in Lyon, France, was responsible for the enrollment of participants and data collection was undertaken in accordance with the European Pharmaceutical Market Research Association code of conduct. As part of the wider European (EQUATOR) project, local ethical approval of the study and questionnaires were obtained in Switzerland.

As the main objective of this study was to characterize the state of treatment provision, results were analyzed and are presented here using descriptive statistics (means and frequencies). Accordingly, formal hypothesis and significance testing was not undertaken or required to meet these study aims. Additionally, this decision accounted for the relatively large number of parameters being assessed on a relatively modest sample size, which would have resulted in low statistical power after adjustments (eg, Bonferroni) for multiple comparisons.

Results

Profile of respondents

Tables 1 and 2 provide an overview of respondents. Physicians (n=100) were predominantly male (82%) and GPs (93%) with a mean duration of 14.7 years' experience prescribing MAT. Patients (n=130) were predominantly male (78%) with a mean age of 34.9 years; most had not been in MAT previously (64%; mean number of previous MAT episodes =1.5). Prior to their current MAT

Table I Survey population: physicians

	Physicians
Total sample size, n	100
Male/female, n/n (% male)	82/18 (82)
Mean age \pm SD (years)	53.2±6.3
Specialty	
GPs, n (%)	93 (93%)
Psychiatrists, n (%)	7 (7%)
Regions in France, n (%)	
• Paris	(%)
North	7 (7%)
• South	51 (51%)
• East	14 (14%)
• West	5 (5%)
Center	12 (12%)
Years practicing in current specialty, mean \pm SD	22.6±7.7
Years prescribing MAT, mean \pm SD	14.7±5.7
Number of patients currently being treated with MAT per physician, mean $\pm\text{SD}$	19.0±35.1

Abbreviations: n, number; SD, standard deviation; GPs, general practitioners; MAT, medication-assisted treatment.

Table 2 Profile of patients and out-of-treatment opioid users

	Patients	Out-of-treatment opioid users
Total sample size, n	130	33
Male/female, n/n (% male)	101/29 (78)	24/9 (73)
Mean age \pm SD (years)	34.9±9.2	32.8±8.1
Regions in France, n (%)		
• Paris	16 (12%)	5 (15%)
North	11 (8%)	4 (12%)
• South	59 (45%)	7 (21%)
• East	24 (18%)	6 (18%)
• West	11 (8%)	4 (12%)
Center	9 (7%)	7 (21%)
Marital status, n (%)		
Single	65 (50%)	11 (33%)
 Living with someone 	42 (32%)	14 (42%)
Married	4 (%)	3 (9%)
Divorced	9 (7%)	5 (15%)
Employment status, n (%)		
 Working/training 	82 (63%)	17 (52%)
 Not working 	25 (19%)	13 (39%)
Seeking work	21 (16%)	3 (9%)
Education status, n (%)		
• No school finishing certificate	38 (29%)	(33%)
High school	39 (30%)	14 (42%)
College	34 (26%)	7 (21%)
 High/secondary school 	14 (11%)	Not reported
University	4 (3%)	l (3%)
Treatment setting, n (%)		
Private practice	101 (78%)	n/a
• Private practice specialized in addiction medicine	20 (15%)	n/a
Outpatient clinic	8 (6%)	n/a
Ever been in prison, n (%)	29 (22%)	5 (15%)

Abbreviations: n, number; n/a, not applicable; SD, standard deviation.

episode, 25% of patients had received buprenorphine or buprenorphine–naloxone and 12% had received methadone. Among surveyed out-of-treatment opioid users (n=33) the mean age was 32.8 years and 73% were male; most (73%) had never been in a MAT program.

Physicians

On a scale of 1 to 10, where 1 was 'not at all satisfied' and 10 was 'totally satisfied', physicians had an average satisfaction rating with treatment programs in their area of 6.9. Physicians cited 'strict rules of treatment' (61%), a 'lack of education of different treatment options and therapies available' (47%), and a 'lack of awareness of how to get treatment' (35%) as barriers to patients entering treatment in their regions. The treatment rules that most physicians considered important for patients to meet to receive treatment were 'stopping all illegal drug use' (60%) and 'having to attend all appointments' (60%) (Table 3).

Most physicians (51%) reported that patients expressly request a specific MAT preparation either always or often (Table 4); 93% of physicians reported that buprenorphine was the most commonly requested MAT. Most patients (77%) were treated with buprenorphine, whereas 20% were treated with methadone and 3% with buprenorphine–naloxone; 53% of patients receiving buprenorphine (n=88) were receiving daily doses lower than 12 mg, and 44% of patients receiving methadone (n=42) were receiving daily doses \leq 80 mg.

Most physicians (82%) stated that they were concerned about misuse and diversion of MAT medication, and a significant proportion considered that misuse (74%) and diversion (77%) were a 'huge problem' or a 'significant problem' in their area. When asked 'what factors most urgently need to be changed in order to encourage more patients to seek MAT', physicians selected 'greater awareness among users that treatment is effective' (34%), 'a greater number of treatment centers' (33%), a 'greater acceptance that addiction is a disease rather than just a criminal act' (31%), and 'improved support and links between physicians and treatment services' (30%). Key changes that physicians considered were needed to improve patient care were 'more counseling and behavioral therapeutic intervention' (50%), 'improved education and training of physicians' (29%), 'individualized treatment plans' (25%), and 'easier access to therapy' (23%).

Patients

The majority of patients (n=130) were fairly or very satisfied with their MAT (88%) and the success of their MAT program (86%). When asked why they decided to begin MAT, the most common reasons given by patients were that they 'wanted to improve their health' (61%) and 'wanted to end their dependence [on illegal drugs] for good' (49%) (Figure 1). Most patients (78%) reported that it was 'very easy' or 'fairly easy' to find a doctor to provide MAT.

The treatment rules with most impact on the provision of MAT as judged by patients are shown in Table 3. 'Stopping all illegal drug use' was the treatment rule most frequently cited by patients as a requirement for starting treatment, the hardest rule for them to meet, and the rule with the most impact on daily life once in treatment. Patients reported that 'greater flexibility in the rules' (34%), 'better availability of treatment' (33%), 'more information about treatment options' (31%), and 'fewer conditions to start treatment' (30%)

Supervision and treatment rules	Number of patients, n (%)			Number of physicians, n (%)*	
	Rules patients had to meet before therapy	Rule considered by patients as hardest to meet	Rule considered by patients as having the most impact on daily life	Rules considered by physicians as those that patients have to meet to receive treatment	
Stopping all illegal drug use	81 (62%)	45 (35%)	29 (22%)	60 (60%)	
Achieving a drug-free state in the long-term	68 (52%)	12 (9%)	16 (12%)	48 (48%)	
Having dose supervised every day	64 (49%)	30 (23%)	16 (12%)	10 (10%)	
Reducing the daily dose over time	53 (41%)	14 (11%)	17 (13%)	39 (39%)	
Having to attend all appointments	71 (55%)	14 (11%)	24 (18%)	60 (60%)	
Having to go to psychosocial counseling	41 (32%)	6 (5%)	12 (9%)	27 (27%)	
Urine testing	4 (3%)	Not reported	2 (2%)	17 (17%)	
Other	7 (5%)	5 (4%)	6 (5%)	Not reported	
No answer	l (1%)	4 (3%)	8 (6%)	Not reported	

Table 3 Treatment rules associated with the provision of MAT

Note: *Most frequent only listed.

Abbreviations: MAT, medication-assisted treatment; n, number.

Survey question (to physicians)	Physician response, n (%)
'How often do your patients expressly	Always – 10 (10%)
request a specific substitution therapy	Often – 41 (41%)
preparation?"	Occasionally – 20 (20%)
	Rarely – 13 (13%)
	Never – 16 (16%)
'In what percentage of these cases,	70%
when a patient requests a specific	
preparation, do you follow the	
request?'	
Which preparation do your patients	Buprenorphine – 66 (93%)
request most often?' (n=71)	Methadone liquid – 2 (3%)
	Methadone tablets – I (I%)
	Codeine – I (I%)
	No answer – 1 (1%)
Survey question (to patients)	Patient response, n (%)
'Did you explicitly ask your substituting	Yes – 58 (45%)
doctor for a certain drug?'	No – 67 (52%)
	No answer – 5 (4%)
'Did the physician give you what you	Yes – 57 (98%)
asked for?'	No – I (2%)
'Were you given the option to choose	Yes – 34 (26%)
between different substitution drugs?'	No – 94 (72%)
	No answer – 2 (2%)

Table 4 Patient requests for specific MAT medications

Abbreviations: MAT, medication-assisted treatment; n, number.

would have encouraged them to start treatment earlier; furthermore, they reported that 'greater flexibility' (47%), 'less rules' (38%), and 'more personal responsibility' (28%) would have made it easier to stay in treatment.

Most patients (70%) considered that they were 'well informed' or 'very well informed' about treatment options prior to beginning treatment. When asked 'which of the following MAT medications had you heard of prior to beginning your therapy?', 82% were aware of buprenorphine, 74% were aware of methadone, and 5% were aware of buprenorphine–naloxone; the timing of the survey was close to the time of introduction of the latter option in France. Of patients answering the question, 62% had a 'good' or 'very good' impression of buprenorphine compared with methadone (35% for liquid methadone, 19% for methadone tablets, 2% for levomethadone) and 13% for buprenorphine–naloxone.

The frequency of patients requesting and receiving specific MAT medications (according to patients or physicians) is shown in Table 4. When patients were asked if they were 'currently receiving psychosocial counseling of any kind', 57% reported that they were not. However, of those who had received psychosocial therapy, 74% found it helpful.

According to patients, 'abstinence from all drugs' (29%) and 'long-term MAT' (19%) were the most common goals set by their physicians during their current treatment. In 19% of cases, patients reported that their physician 'did not set a goal'. Most patients were permitted unsupervised dosing, with 15% reporting being 'allowed take-home doses at weekends and/or holidays' and 58% being 'allowed take-home doses not only at weekends and/or holidays but more often'. Only a quarter of patients stated that they were required to take every dose 'under a doctor's supervision' or 'under a pharmacist's supervision'.

Nearly half of patients (48%) reported taking illegal drugs in addition to their MAT at least twice a month (Figure 2).

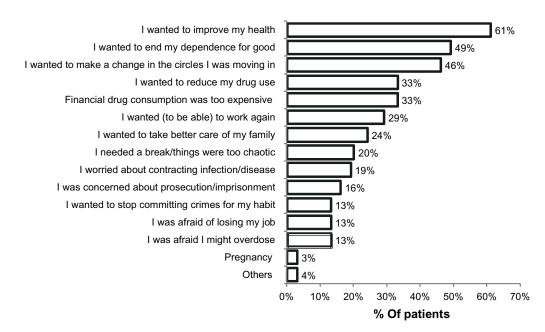
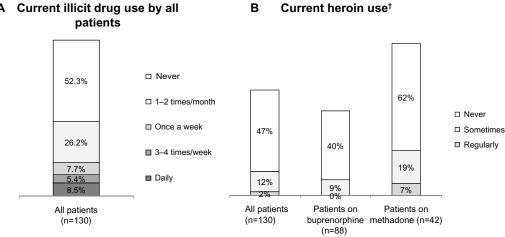


Figure I Reasons given by patients for choosing to start medication-assisted treatment.



Current illicit drug use by all Α

Figure 2 Rates of on-top illicit drug use: overall and heroin use. Notes: Patients were asked (A) 'how often do you take illegal drugs in addition to or instead of your MAT?' and (B) 'which drugs or substances are you still currently taking in addition to your prescribed MAT?'; ¹⁵⁰ patients in the 'all patients' group, 45 patients on buprenorphine, and five patients on methadone did not tick any option.

Abbreviations: MAT, medication-assisted treatment; n, number.

The most common reasons stated by patients for on-top drug use were because they 'wanted to get high occasionally' (50%) and their 'drug treatment was not controlling their cravings very well' (21%). On-top drug use was reported by 62% of patients on methadone and 42% of patients on buprenorphine. Of patients receiving buprenorphine, 7% and 9% reported using cocaine and heroin, respectively, whilst 29% and 26% of patients receiving methadone reported using these drugs. When patients were asked why they took illegal drugs in addition to or instead of their MAT, 25% of patients receiving buprenorphine and 15% of patients on methadone said this was because 'drug treatment was not controlling their cravings very well'.

Past misuse (snorting or injection) of MAT medications was reported by 15% of patients, while past diversion (selling or giving away MAT medication) was reported by 39% of patients (Figure 3). The most common reasons for misuse were to 'get high occasionally' (37%) or because their medication 'doesn't control cravings very well' when taken at the prescribed dose (32%). For patients reporting past diversion, 70% said that they diverted medication 'to help others to treat themselves'.

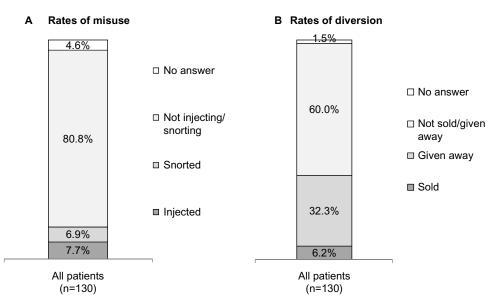


Figure 3 Rates of misuse and diversion of MAT by patients.

Notes: Patients were asked (A) 'have you ever injected or snorted your MAT?' and (B) 'have you ever sold or given your MAT to someone else?'. Abbreviations: MAT, medication-assisted treatment; n, number.

Over half (60%) of patients judged their physical health as 'good' or 'very good', whereas a lower proportion of patients (48%) judged their mental health as 'good' or 'very good' (Figure 4).

Out-of-treatment opioid users

Out-of-treatment opioid users (n=33) reported that they used drugs on a 'regular basis'; 42% reported using heroin, 21% used benzodiazepines (not prescribed to them), and 18% used crack. Some out-of-treatment opioid users reported sharing needles (18%), syringes (21%), spoons (33%), or water (36%). A majority (51%) said they were 'well informed' or 'very well informed' about treatment options, with most being aware of buprenorphine (91%) and methadone (82%) but only 3% being aware of buprenorphine–naloxone.

The most frequent reasons given by out-of-treatment opioid users for staying out of MAT were because they 'would like to still use drugs sometimes' (52%), they 'did not wish to stop/were happy with their lifestyle' (30%), or they 'didn't like what they heard about treatment programs' (30%). Almost a third (31%) of out-of-treatment opioid users perceived the rules of 'going to the dispensing points regularly' and 'always at the same time' as a negative aspect of treatment. Most (88%) stated that they are registered with a physician and have been in contact with a medical service (59% with GPs; 45% with free clinics) within the last 12 months. Despite not currently receiving MAT, more than half of out-of-treatment opioid users reported receiving psychological help (58%) or help with reduction of drug consumption (52%).

Discussion

Responding to the acquired immunodeficiency syndrome (AIDS) epidemic and the significant costs of opioid

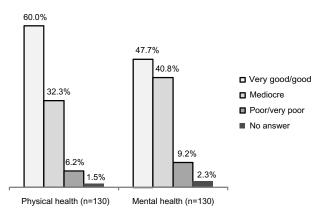


Figure 4 General state of health reported by patients.

Note: Patients were asked 'how would you describe your general state of health at present?'.

Abbreviation: n, number.

dependence, France adopted a unique treatment model for opioid dependence based primarily on open access to buprenorphine-based treatment in primary care settings. Previous evidence indicates that this approach has been effective in reducing drug-related deaths, blood-borne virus transmission, and other harms associated with illicit opioid abuse.^{7,9,10}

Findings from the Project Access France survey provide further evidence to support the French model for opioid dependence treatment. Most patients reported it was easy to access a doctor who could provide treatment and few were still using heroin. A majority of patients were in employment and a minority had been to prison. In fact, compared with other European Union (EU) countries in EQUATOR, including some that have invested heavily in specialist clinic-led treatment models, French patients compared favorably on outcomes relating to abstinence from heroin use, employment, avoidance of imprisonment, and number of past treatment episodes.^{19,22} These findings could translate into lower costs if reflective of real-world outcomes at a national level. Notably, unsupervised dosing is also less costly than supervised dosing.²³

Despite these positives, it is also important to consider the potential for variable, or even suboptimal, treatment provision with this strategy. This includes the involvement of physicians who are often GPs, not addiction specialists or psychiatrists, without formal training in prescribing MAT. Project Access France reveals that 38% of patients have diverted their MAT medication at some point – one of the highest proportions across all countries in EQUATOR.²⁴ Although buprenorphine–naloxone has been developed as an effective abuse-deterrent formulation of buprenorphine (the most common form of MAT in France)^{17,25,26} it was not widely used in France at the time of the survey and awareness remained low.

Notably, where patients reported past misuse of their own medication or continued use of illicit drugs, this was often to 'get high' or because their medication had 'failed to suppress cravings' adequately. Just over half of 88 patients receiving buprenorphine were receiving daily doses lower than 12 mg and just under half of 42 patients receiving methadone were receiving daily doses ≤ 80 mg. Under-dosing may be an important issue in France. In a previous study of GPs from south-eastern France (n=345), many untrained GPs and a significant minority of trained GPs were shown to be prescribing an ineffective dosage of buprenorphine or a potentially dangerous combination of buprenorphine and benzodiazepines.²⁷ A previous EU survey revealed a pattern of under-dosing for both buprenorphine and methadone across four major EU countries, including France.²⁸

In the current study, less than half of patients were participating in psychosocial counseling and similarly less than half rated their mental health as good or very good. Moreover, physicians most commonly cited more psychological/ behavioral counseling and improved education/training for physicians as steps that would help to improve treatment provision. In addition, they often reported that lack of patient knowledge of different treatment options was a barrier to patients entering treatment. Patients in France are often able to make good progress in terms of reducing their drug use and maintaining employment, but further benefits may be possible with improved training of physicians, optimized dosing, and appropriate adjunctive support to target wider health needs.

Project Access France provides new insights regarding the access to and provision of treatment associated with current systems of MAT in France from the perspective of physicians, patients, and out-of-treatment opioid users, and differs from other surveys conducted in France. For example, the annual OPPIDUM survey draws respondents from specialty treatment centers.⁵ These patients tend to be referred from GPs and may therefore represent a more challenging or treatment-resistant population.⁵ Similarly, the European Monitoring Centre for Drugs and Drug Addiction collects data from national monitoring centers in Europe but does not collect data at the individual patient level.²⁹

Project Access France has a number of limitations that may impact on the interpretation of findings. These include the observational, nonrandomized nature of the study and the small sample sizes. These factors expose the study to potential biases and limit the feasibility of more sophisticated statistical analyses. The data are selfreported and sometimes retrospective. Selection bias may have occurred with regard to the convenience sampling of patients, selection of participating sites/regions, and selfselection (participants could decline to take part). Finally, the questionnaire was completed with patients at different stages in MAT.

Conclusion

The predominantly open-access, GP-based MAT model in France is unique in Europe and offers the potential to widen access to MAT for patients with opioid dependence. However, real-world evidence from physicians, patients, and out-oftreatment opioid users in France suggests that challenges persist with regard to reducing misuse and diversion of MAT medications and in appropriate provision of psychosocial support.

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Disclosure

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