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Barriers to treatment for opioid use disorder in Colombia

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ABSTRACT

Background: In Colombia, the rapid rise of illicit opioid use has become a major public health concern. Medications for opioid use disorder (MOUD) are well established and effective. However, access to MOUD remains suboptimal in this country. This paper aims to understand barriers to accessing MOUD in Colombia to inform the integration of this treatment modality in health systems.

Methods: This study is a cross-sectional survey among persons with opioid use disorder (OUD) not enrolled in MMT in four Colombian cities with high known OUD prevalence. Survey domains consisted of the Barriers to Treatment Inventory, attitudes pertaining to MOUD treatments, and perceptions regarding interventions to ease access to Methadone.

Results: A total of 84 subjects completed the survey. The most commonly endorsed barriers were related to admission difficulties, including concerns with "too many steps to get into treatment" (84.3%), experiencing withdrawal symptoms (78.1%), being placed on waiting lists (48.2%), and cost (44.6%). Nearly all participants were receptive to Methadone dispensation in primary care (96.4%) or mobile vans (91.6%).

Conclusions: Findings from this study highlight persistent barriers to linking with MOUD among adults with OUD in Colombia requiring increased outpatient treatment programs, flexible methadone dosing, and administrative and financial support for patients.

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Opioids; Colombia; medications for opioid use disorder; methadone; heroin

Introduction

Substance use disorders (SUD) contribute substantially to the global burden of disease (Whiteford et al., 2013). In Colombia, the rapid rise of illicit opioid use during the past decade has become a major public health concern (Ministerio de Justicia y del Derecho – Observatorio de Drogas de Colombia, 2015). Between 2009 and 2013, the number of health-care visits per year due to opioid use disorder (OUD) increased from 362 to 7,548, and in the same period, saw an increase in opioid overdoses from 550 to over 1,500 events (Ministerio de Justicia y del Derecho – Observatorio de Drogas de Colombia, 2015). Recent surveys suggest that approximately 43,433 people have used heroin at least once in their lifetime and 9,652 adults have used this substance in the last year (Departamento Administrativo Nacional de Estadística DANE, 2019). Moreover, heroin is the most frequently injected drug in Colombia and nearly half of people who inject drugs are between the ages of 18–25 (38.3–60.5%) (Castaño & Calderón, 2012; Mateu-Gelabert et al., 2016; Ministerio de Justicia y del Derecho – Observatorio de Drogas de Colombia, 2015; Berbesi-Fernández et al., 2017). During a 10-year period (2004–-2014), demand for heroin treatment also increased in the country by more than 240% (Ministerio de Justicia y del Derecho – Observatorio de Drogas de Colombia, 2015).

Medications for opioid use disorder (MOUD; e.g., Buprenorphine-naloxone, Methadone, and Extended-release naltrexone) are well established and effective approaches for the treatment of OUD (Amass et al., 2004; Bart, 2012; Connery, 2015; Mattick et al., 2009). If properly implemented in low- and middle-income countries (LMICs), MOUD have the potential to reduce the harms of drug use and improve engagement in primary care (Feelemyer et al., 2014). Despite efforts by the World Health Organization, UNAIDS, and UNODC to increase access to MOUD among people who use opioids (PWUOs), adoption remains suboptimal in LMICs.

In Colombia, Methadone is the only available MOUD and was first introduced in 2004. Methadone is dispensed in fixed doses of 10 or 40 mg across 13 programs in Colombia and provides care for approximately 600 patients (González et al., 2019; Pereira & Ramírez, 2019). In addition to limited treatment slots, patients are required to present with negative urine drug screen results for non-opioid substances, including cannabis, during intake, further restricting access to OUD care (González et al., 2019; Pereira & Ramírez, 2019). In an effort to identify challenges to expanding and engaging in treatment for OUD in Colombia, we conducted a survey among PWUOs in harm reduction programs, inpatient detoxification, and initiating Methadone maintenance treatment (MMT) to characterize perceptions and experiences related to accessing MOUD.

Methods

Study design

A cross-sectional survey was conducted among a convenience sample of PWUOs from February to December of 2019.

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Participants were recruited from harm reduction programs, inpatient detoxification, and MMT in cities with high known OUD prevalence, including Armenia, Pereira, Cali and Medellín (Berbesi et al., 2013; Berbesi-Fernández et al., 2015; Ministerio de Justicia y del Derecho – Observatorio de Drogas de Colombia, 2015; Berbesi-Fernández et al., 2017). Eligible subjects were 18 years of age or older who self-reported daily illicit opioid use but were not currently enrolled in MMT. Participants approached in detoxification units and MMT were interviewed upon admission and prior to initiating methadone treatment. Subjects with active psychotic symptoms or inability to provide written consent were excluded from the study.

The 76-item survey consisted of demographic characteristics, the Barriers to Treatment Inventory (BTI), attitudes pertaining to MOUD treatments, and perceptions regarding interventions to ease access to MMT. The survey was administered by trained research staff and lasted approximately 20 minutes. The study protocol was approved by the NYU School of Medicine, the Corporación Universitaria Empresarial Alexander von Humboldt, and the review boards of all of the participating harm reduction and treatment programs.

Barriers to treatment inventory (BTI)

The BTI assesses for barriers to treatment in people with SUD (Rapp et al., 2006). In the original instrument, a seven-factor model was found to have an adequate fit and was comprised of 25 of the initial 59 items (Rapp et al., 2006). The seven factors included: Absence of Problem (e.g., "I do not think I have a problem with drugs," "My drug use is not causing any problems"), Negative Social Support ("I will lose my friends if I go to treatment," "Someone in my family does not want me to go to treatment"), Fear of Treatment ("I have had a bad experience with treatment," "I am afraid of the people I might see in treatment"), Privacy Concerns ("I do not like to talk in groups," "I do not like to talk about my personal life with other people"), Time Conflict ("It will be hard for me to find a treatment program that fits my schedule"), Poor Treatment Availability ("I am moving too far away to get treatment," "I have difficulty getting to and from treatment"), and Admission Difficulty ("I have to go through too many steps to get into treatment").

Participant experiences affording MOUD were capture using the following responses: "I have no insurance or my insurance doesn't cover the treatment" and "I can't afford to pay for treatment." Study participants were asked to rate congruence to a particular element via 5-point Likert Scale that included: 1 = *strongly disagree*; 2 = *disagree*; 3 = *uncertain*; 4 = *agree*; and 5 = *strongly agree*. The BTI was translated and adapted using the World Health Organization translation protocol (WHO | Process of translation and adaptation of instruments, n.d.) followed by a re-translation into English by the study team (BT, JPB). Final modifications to the survey were made through a pilot and per the recommendation of national experts.

Attitudes toward medications for opioid use disorder (MOUD)

Three questions exploring negative beliefs about MOUD were adapted from the 12-item survey published by Makarenko and colleagues (Makarenko et al., 2016). These items elicited reasons for not initiating MOUD, including perceptions that MOUD was substituting "one addiction for another" and that individuals should try to discontinue MOUD as soon as they can.

Interventions aimed to eliminate the existing barriers

Two additional questions explored participants' preferences for interventions that may ease access to MMT (Hassamal et al., 2017; Ministerio de Salud y Protección Social, 2015; Schulte et al., 2013), including the use of mobile vans and primary care-based Methadone treatment.

Statistical analysis

Sample characteristics were described overall using mean and standard deviation for numerical values, as well as the absolute frequencies and percentage for categorical variables. The results of the BTI are presented in terms of mean scores and standard deviation (SD) for each item or domain, which were calculated by computing the values in the Likert scale from responses of all participants. A bivariate analysis between the seven main domains of the BTI and demographic variables including age, sex, city of residency, educational level, homelessness was performed using the non-parametric Kruskal–Wallis test after verifying the distribution of the sample, with a fixed level of statistical significance of 5%. No adjustments were made for multiple comparisons due to the exploratory nature of the study and the potentially smaller sample size.

Results

A total of 84 subjects completed the survey and were interviewed in harm reduction programs (59.5%, n = 50), MMT programs (32.1%, n = 27), and in inpatient detoxification (8.3%, n = 7). The study sample was predominately male (74.4%), heterosexual (95.8%), unemployed (45.8%), and with a mean age of 30 years old (SD 6 years). The majority of the subjects had public insurance (59.5%), 23.7% had no insurance and 16.8% had a private insurance (Table 1).

Findings from the BTI are provided in Table 2. The most commonly endorsed barriers to treatment were related to admission difficulties, including having to "go through too many steps to get into treatment" (84.3%) and having "to be on a waiting list for treatment" (48.2). Most respondents expressed fear "about going through withdrawal" from heroin (78.1%) following entry into treatment and approximately half of respondents (44.6%) endorsed that they "can't afford to pay for treatment."

In the bivariate analysis between sociodemographic variables and the mean score of the domains of the BTI (Table 3), the city of residence demonstrated statistically significant associations

Table 1. Sociodemographic characteristics of the sample.

Variable	% (n)
City	
Armenia	44.1% (37)
Pereira	17.9% (15)
Medellín	3.6% (3)
Cali	34.5% (29)
Age	
18–24 years	22.6% (19)
25–34 years	50.0% (42)
35 or more years	27.4% (23)
Gender (masculine)	77.4% (65)
Sexual Orientation	
Heterosexual	95.8% (182)
Bisexual	3.2% (6)
Homosexual	1% (2)
Homeless	41.5% (34)
Living without spouse/partner	85.7% (72)
Insurance status	
No insurance	23.7% (20)
Public	59.5% (50)
Private	16.8% (14)
Education	
Primary school	16.7% (14)
High school	60.7% (51)
Higher education	22.6% (19)
Employment	
Unemployed	45.8% (38)
Student	1.2% (1)
Informal job	25.3% (21)
Formal job	27.7% (23)

with barriers to care. Overall, absence of treatment availability (p = .002), admissions difficulties (p = .049) and financial problems (p = .000) were more frequently reported in the cities of Cali and Pereira. In contrast, barriers of the domain "absence of problem" were more frequently reported from subjects living in Medellín and Cali (p = .004). Participants recruited in the city of Armenia reported fewer barriers than those recruited in the rest of the country.

Homeless participants were more likely to report "negative social support" (p = .032), "poor treatment availability" (p = .044) and "financial problems" (p = .001). Uninsured subjects expressed more barriers and elicited higher mean scores in scheduling conflicts (p = .008) and "admission difficulty" (p = .020) when compared to participants with private and public insurance. Lastly, subjects with irregular employment or unemployment were more likely to express "fear of treatment" (p = .046). Gender, age and education were not statistically associated with the score of the BTI domains.

Table 4 presents participant perceptions toward Methadone. Approximately half of the respondents perceived that discontinuing Methadone would be difficult (51.2%) and that Methadone was replacing one addiction for another (47.6%). However, nearly all participants were amenable to receiving Methadone in primary care (96.4%) or accessing mobile van-based MMT (91.6%).

Table 2. Descriptive information from the BTI.

BTI items and domains	Desagree % (n)	Uncertain % (n)	Agree % (n)
Absence of Problem			
I do not think I have a problem with drugs	85.2% (69)	0.0% (0)	14.8% (12)
No one has told me I have a problem with drugs	98.8% (78)	1.2% (1)	4.8% (4)
My drug use is not causing any problems	93.9% (77)	0.0% (0)	3.7% (5)
I do not think treatment will make my life better	96.4% (80)	2.4% (2)	1.2% (1)
I can handle my drug use on my own	75.9% (63)	6.0% (5)	18.1% (15)
I do not think I need treatment	95.2% (79)	0.0% (0)	4.8% (4)
Negative Social Support			
I will lose my friends if I go to treatment	89.0% (73)	7.2% (6)	24.1% (20)
Friends tell me not to go to treatment	84.3% (70)	4,8% (4)	10.8% (9)
People will think badly of me if I go to treatment	88.0% (73)	4.8% (4)	7.2% (6)
Someone in my family does not want me to go to treatment	98.8% (82)	0.0% (0)	1.2% (1)
My family will be embarrassed or ashamed if I go to treatment	97.6% (80)	1.2% (1)	1.2% (1)
Fear of Treatment			
I have had a bad experience with treatment	68.3% (56)	0.0% (0)	31.7% (26)
I am afraid what might happen in treatment	54.3% (45)	7.3% (6)	38.6% (32)
I am afraid of the people I might see in treatment	83.1% (69)	0.0% (0)	16.9% (14)
I am too embarrassed or ashamed to go to treatment	97.6% (81)	1.2% (1)	1.2% (1)
Privacy Concerns			
I do not like to talk in groups	64.6% (53)	4.9% (4)	30.5% (25)
I hate being asked personal questions	68.7% (57)	7,2% (6)	24.1% (20)
I do not like to talk about my personal life with other people	53.0% (44)	8.4% (7)	38.6% (32)
Time Conflict			
I have things to do at home that make it hard for me to get to treatment	86.6% (71)	0.0% (0)	13.4% (11)
It will be hard for me to find a treatment program that fits my schedule	59.0% (49)	6.0% (5)	34.9% (29)
Poor Treatment Availability			
I am moving too far away to get treatment	85.5% (71)	0.0% (0)	14.5% (12)
I do not know where to go for treatment	70.7% (58)	1.2% (1)	28.1% (23)
I have difficulty getting to and from treatment	55.4% (46)	6.0% (5)	38.6% (32)
Admission Difficulty			
I will have to be on a waiting list for treatment	42.2% (35)	9.6% (8)	48.2% (40)
I have to go through too many steps to get into treatment	15.7% (13)	0.0% (0)	84.3% (70)
Financial Problems			
I have no insurance or my insurance doesn't cover the treatment	74.7% (62)	1.2% (1)	24.1% (20)
I can't afford to pay for treatment	55.4% (46)	0.0% (0)	44.6% (37)
Others			
I'm afraid about going through withdrawal from drugs	20.7% (17)	1.2% (1)	78.1% (64)
I 'm afraid I will be put into hospital	58.5% (48)	7.3% (6)	34.1% (28)

Table 3. Bivariate analysis between sociodemographic variables and the mean score of the domains of the BTI.

Variable	Absence of Problem [mean (SD)]	p	Negative Social Support [mean (SD)]	p	Fear of Treatment [mean (SD)]	p	Privacy Concerns [mean (SD)]	p	Time Conflict [mean (SD)]	p	Poor Treatment Availability [mean (SD)]	p	Admission Difficulty [mean (SD)]	p	Financial Problems [mean (SD)]	p
City																
Armenia	1.56 (0.43)	**0.004**	1.64 (0.46)	0.053	1.99 (0.61)	**0.032**	2.56 (0.92)	0.541	1.97 (0.61)	**0.000**	2.05 (0.81)	**0.002**	3.15 (1.24)	**0.049**	2.30 (1.25)	**0.000**
Medellín	1.41 (0.45)		1.48 (0.47)		2.52 (0.62)		2.96 (1.28)		3.33 (0.94)		2.22 (0.47)		2.63 (0.79)		1.37 (0.90)	
Pereira	1.89 (0.92)		1.60 (0.20)		2.50 (0.50)		2.33 (1.20)		2.50 (2.18)		1.89 (1.54)		3.50 (0.50)		2.33 (2.31)	
Cali	1.98 (0.60)		1.91 (0.53)		2.36 (0.65)		2.31 (0.90)		2.09 (0.81)		2.82 (1.00)		3.38 (1.12)		**3.22 (1.15)**	
Homeless																
No	1.60 (0.52)	0.160	1.59 (0.49)	**0.032**	2.15 (0.69)	0.147	2.43 (0.99)	0.284	2.44 (1.03)	0.071	2.18 (0.84)	**0.044**	2.96 (1.09)	0.096	2.02 (1.18)	**0.001**
Yes	1.80 (0.60)		1.84 (0.50)		2.33 (0.59)		2.60 (0.98)		2.00 (0.78)		2.56 (1.01)		3.34 (1.13)		2.94 (1.34)	
Insurance																
Uninsured	1.62 (0.38)	0.375	1.73 (0.43)	0.429	2.25 (0.50)	0.819	2.75 (1.04)	0.720	2.76 (0.84)	**0.008**	2.32 (0.66)	0.987	3.82 (0.95)	**0.020**	2.66 (1.58)	0.763
Public	1.74 (0.56)		1.61 (0.72)		2.19 (0.59)		2.43 (0.91)		2.05 (0.90)		2.30 (0.87)		2.94 (1.08)		2.42 (1.23)	
Private	1.58 (0.74)		1.68 (0.44)		2.36 (0.95)		2.64 (1.23)		2.39 (1.15)		2.50 (1.41)		2.96 (1.34)		2.32 (1.49)	
Stable partner																
No	1.74 (0.58)	**0.035**	1.71 (0.50)	0.637	2.22 (0.62)	0.818	2.57 (1.01)	0.401	2.24 (0.96)	0.401	2.32 (0.91)	0.799	3.07 (1.12)	0.081	2.48 (1.34)	0.552
Yes	1.38 (0.28)		1.62 (0.53)		2.29 (0.84)		2.31 (0.93)		2.46 (0.94)		2.44 (1.00)		3.63 (1.11)		2.29 (1.45)	
Employment																
Unemployed	1.63 (0.60)	0.078	1.67 (0.53)	0.167	2.18 (0.53)	**0.046**	2.76 (0.99)	0.192	2.27 (1.00)	0.473	2.31 (0.94)	0.886	3.09 (1.16)	0.825	2.27 (1.40)	0.220
Student	1.50 (0.00)		1.60 (0.85)		1.88 (0.18)		2.33 (0.04)		3.00 (1.41)		2.83 (1.18)		3.75 (0.35)		1.50 (0.71)	
Informal job	1.82 (0.54)		1.81 (0.45)		2.41 (0.67)		2.39 (0.90)		2.14 (0.85)		2.30 (0.88)		3.20 (1.11)		2.72 (1.43)	
Formal job	1.28 (0.20)		1.37 (0.45)		1.71 (0.90)		2.06 (1.56)		2.83 (1.17)		2.17 (0.18)		3.33 (1.08)		2.08 (1.43)	

Table 4. Negative attitudes toward methadone and its association with the city of residency.

		Discriminated by city of residence [agree % (n)]				
Negative attitute	General [agree % (n)]	Armenia	Pereira	Medellín	Cali	p.
Methadone only replaces one addiction for another	47.6% (39)	43.2% (16)	80% (12)	66.7% (2)	33.3% (9)	0.026
It will be difficult to decrease or taper methadone	51.2% (42)	62.2% (23)	78.6% (11)	66.7% (2)	21.4% (6)	0.001
I can stop using heroin without taking methadone	12.1% (10)	5.4% (2)	6.7% (1)	66.7% (2)	17.9% (5)	0.010

Discussion

This cross-sectional survey among PWOUs in Colombia highlights major concerns regarding often arduous administrative tasks and prolonged waiting periods to enter MMT. Incertitude regarding how individuals could secure payment for OUD treatment was also a common barrier despite subsidized Methadone in public and private treatment programs. This perception is probably related to the multi-step prior authorization process required by patients in Colombia to secure insurance coverage for MMT. Our findings are particularly concerning due to the high rates of homelessness and unemployment among a young sample of respondents that heightens their risk of experiencing OUD related sequelae (e.g., HIV-HCV serotransmission, overdose). Therefore, a multipronged approach is required by Colombia's government, private and public payors, and health-care providers to address barriers to methadone treatment.

Another critical barrier reported by participants was the fear of experiencing withdrawal symptoms during treatment initiation and may be attributed to: a) the lower-than-recommended doses of Methadone dispensed in Colombia; and b) requirements among some MMT programs to initiate Methadone only among patients in inpatient detoxification centers(González et al., 2019; Pereira & Ramírez, 2019). In response, Colombia should improve training among addiction medicine providers around low-threshold initiation of Methadone treatment for patients that may present with poly-substance use. Provider training must also address stigma and misinformation pertaining to OUD and MOUD (Pereira & Ramírez, 2019) by emphasizing patient-centered approaches to chronic disease management, including among individuals with SUDs, increase addiction medicine education in medical schools and post-graduate programs, and providing continuing medical education for practicing clinicians. Lastly, incorporating low-threshold MMT in primary care and community settings (e.g., mobile van dispensing) may expand the reach and availability of treatment while curtailing stigma experiences in traditional health-care settings. The dispensing of liquid Methadone in specialty, primary care, and community settings via computerized systems enhances medication safety while mitigating diversion, two frequent concerns reported by Colombian health providers (González et al., 2019).

Participants from the cities of Cali and Pereira reported more barriers to OUD care and may be due to insufficient and geographically distant MMT programs in these cities (Pereira & Ramírez, 2019). Conversely, participants recruited in Armenia reported significantly fewer barriers to accessing Methadone and may be attributed to the higher number of MMT programs (n = 3), its availability in primary care, and support from harm reduction program staff to facilitate administrative requirements to initiating MMT.

Negative beliefs about MOUD, including that Methadone only replaces one addiction for another and that it would be difficult to stop its use in the future, are significant given how such misinformation and perceptions reduce access to care and/or lead to premature discontinuation of treatment (Bagley et al., 2017; Hadland et al., 2018; Olsen & Sharfstein, 2014; Wakeman & Rich, 2018; Yarborough et al., 2016). Therefore, strategies to expand access to medications should include public education campaigns, peer navigators, and increased education among health-care professionals about the benefits of MOUD.

Our results are similar to those presented in previous international studies reporting major shortages in MOUD despite increased demand for treatment, the fear to experience withdrawal associated with the use of low doses and the high threshold modalities of services, the negative beliefs about MOUD, and incertitude about insurance coverage for treatment (Haffajee et al., 2018; Mendoza, 2015; Oliva et al., 2011; Stöver, 2011; Tran et al., 2018). However, the challenges with insurance prior authorization requirements appear to be unique to Colombia and align with prior studies on this topic in Colombia (González et al., 2019; Pereira & Ramírez, 2019).

Recent efforts to scale access to MMT by the Colombian government (Ministerio de Salud y Protección Social, 2019; Ministerio de Salud y Protección Social, Organización Internacional para las Migraciones OIM, MAYU of New England, 2013) must also consider United Nation Office on Drugs and Crime (UNODC) recommendations to ease administrative and clinical requirements to treatment and offer flexible medication dosing protocols to meet the increasing demand for OUD treatment in Colombia (González et al., 2019; Pereira & Ramírez, 2019). Moreover, integrating MMT in primary care or its dispensation with a mobile unit should be highly considered since these strategies were endorsed by most participants to overcome some of the structural barriers evidenced in this study. Finally, the adoption in Colombia of other MOUD (e.g., buprenorphine-naloxone and extended-release naltrexone) should be strongly considered since these medications are equally effective and more easily prescribed in primary care (Amass et al., 2004; Bart, 2012; Connery, 2015; Feelemyer et al., 2014; Mattick et al., 2009).

Limitations in this study include the lack of generalizability due to the relatively small sample size, the use of convenience sampling in health centers and harm reduction programs which may exclude underserved people with OUD in community settings, and response bias given that interviews were conducted in health-care settings. However, given the limited information

available about factors influencing access to treatment for OUD in Latin America and Colombia, the authors consider the value of the information presented in this study balances limitations in generalizability and those related to sample characteristics.

Conclusion

This study identified barriers to accessing SUD treatment among PWUOs in Colombia, including rigid administrative and clinical admission requirements to initiating MMT, concerns of experiencing withdrawal following initiation of MMT, and rigid methadone dosing protocols limited lower-than-recommended doses. Strategies to improving access to MMT include the provision of methadone in primary care or mobile vans, improved clinician education pertaining to MOUD and OUD, and public health campaigns addressing stigma and misinformation regarding OUD.

Declarations

All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2000. All patients received complete information regarding the process and purpose of the interview and voluntarily provided a written and verbal consent to participate in this study and publish relevant information in scientific journals for academic purposes.

The datasets used during the current study are available from the corresponding author on reasonable request. The authors declare that they have no financial or non-financial competing interests.

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