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Utilization of opiate agonist therapy services by people who inject drugs in Northern Nigeria.

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Abstract

Nigeria has a high rate of drug abuse. Studies reveal that as high as 1% of its adult population are involved in injecting drug use, an activity which markedly increases risks of contracting and transmitting blood borne viruses.

Opiate Agonist Therapy (OAT) is the provision of an opioid agonist medication (e.g methadone) at an appropriate dose, for as long as a person requires it, by a trained healthcare provider. OAT is a harm reduction strategy for reducing various risks associated with injecting drug use among people who inject opioid drugs (PWID).

The objectives of the OAT program is to make oral methadone available for people who inject opioids as a substitute for the more harmful parenteral opiate which they are using. OAT is an essential public health intervention.

The numerous benefits of opiate agonist therapy include among other benefits thus: it reduces drug-related mortality by 50%; it reduces by half HIV and HCV related infection risks through reduced injecting frequency and needle-sharing. It also Improves HIV and HCV treatment outcomes and significantly reduces risk of overdose.

Methods:

As part of its response to the increasing cases of drug abuse in the country especially the rising rates of injecting drug use, The Federal Ministry of Health in Nigeria commenced a pilot program in a few centres to provide oral methadone as Opiate Agonist Therapy for people who inject opioids in 2024.

After obtaining ethical clearance for this study, data from hospital records of all people who enrolled in the OAT pilot program between January and October 2024 in the two centres in Northern Nigeria (Maiduguri and Jos) were collected and analyzed using SPSS 17.

Results:

A total of fourteen PWID received OAT in the two centers. 83.3% were males, median age of 33.5 with a range of 25 to 52 years. Majority were single and unemployed, 33% had tertiary education and 14.3% dropped out of treatment. HIV prevalence was 8.3%. The most common opiate of abuse was pentazocine.

Conclusion.

There is a gross underutilization of OAT services in Northern Nigeria despite a large population of people who inject drugs.

Recommendation.

This problem can be addressed by increasing government funding to scale up OAT services using strategies that would reach PWID with OAT services such as mobile outreaches.

Introduction

Opiate abuse continues to pose a major threat to public health in Nigeria, a country with a high rate of psychoactive substance use, and other countries of the world ¹⁻³. The National survey of drug use and health in Nigeria Conducted by National Bureau of Statistics; Centre for Research & Information on Substance Abuse with technical support from United Nations Office on Drugs and Crime estimated that 14.3 million people (aged 15 and 64 years) had used drugs, *excluding* alcohol & tobacco in the preceding year i.e about 14.4% of the population in Nigeria used drugs in 2016 whereas the global annual prevalence of drug use was estimated at 5.6 %⁴.

The above survey also found that among people with high- risk drug use, one in five inject drugs and 90% of those involved in injecting drug use inject opioids with the most common drugs injected in the past year being pharmaceutical opioids, followed by cocaine and heroin. More men injected drugs (78%), but women were more likely than men to inject heroin; also , women who inject drugs were more likely than men to engage in high-risk sexual behaviour.

Again, a recent survey, the Nigeria AIDS Indicator Impact Survey shows that people who inject drugs (PWID), female sex workers (FSW) and men who have sex with men (MSM) constitute only 3.4% of Nigeria's population but contribute 32% of new HIV infections. PWID constitute only 0.1% of Nigeria's population but account for 9% of new annual HIV infections in the country⁵.

Another study, the Integrated Biological and Behavioural Surveillance Survey (IBBSS, 2021) estimated the population of PWID in Nigeria to be about 80,000. This survey which was carried out by the Federal Ministry of Health and its partners (United Nations Office on Drugs and Crime (UNODC), and the European Union (EU) found that of the estimated 80, 000 PWID (0.1% of adult population), an overwhelming majority (61,000) were men while 18,000 were women and the most common drugs injected were pharmaceutical opioids – pentazocine, morphine, tramadol. The PWID prevalence for HIV – 9%, prevalence for Hep B – 7.8%, prevalence for Hep C – 3.3%, and prevalence for TB – 5.1%.⁶

The above survey identified active hot spots where people inject drugs to include open spaces, bushes, uncompleted buildings, trailer parks, hotels and lodges, bars /night clubs and homes. In addition, the UNODC World drug report 2022, shows that people who inject drugs are at 35 times greater risk of contracting HIV than those who do not inject drugs and almost 1 in two people who inject drugs are living with Hepatitis C ⁷. The need for urgent steps to reduce injecting drug use becomes more glaring from the outcome of the surveys above.

The objectives and rationale of Opiate Agonist Therapy.

Opiate Agonist Therapy (OAT) is the provision of an opioid agonist medication at an appropriate dose, for as long as a person requires it, by a trained healthcare provider. The OAT as harm reduction is a strategy for reducing the risks associated with injecting opiates among people who inject drugs (PWID). This program aims to provide an oral, long- acting opiate (methadone) as a replacement for people who are dependent on injectable opiates eg heroin . This substitution therapy often brings stability in the patients' life. A harm reduction program such as the OAT targeting PWID has the capacity to reduce the risks associated with injecting drug use.

The objectives of the OAT program is to make oral methadone available for people who inject opioids as a substitute for the more harmful parenteral opiate which they are using.

OAT is also known as Opioid Agonist Maintenance Therapy (OAMT), Opioid Substitution Therapy (OST), Medication Assisted Treatment (MAT) or Methadone Maintenance Therapy (MMT).

OAT has been shown to be very effective in reducing illicit opioid use⁸. It is also known to reduce by 50% drug-related mortality as well as HIV and HCV related infection risks through reduced injecting frequency and needle-sharing. Research shows that it improves HIV and HCV treatment outcomes and also reduces risk of overdose. OAT improves overall physical and mental health and wellbeing, it reduces crime and enhances social integration & functioning.

OAT is the gold standard for the treatment of opioid dependence & a core component of the harm reduction programs worldwide. It maximizes the quality of life of people dependent on opioids and minimizes the harms to the community.

This study aims to assess the rate of utilization of the OAT services by PWID in the two pilot centres in Northern Nigeria.

Methods.

A few UNODC certified model drug treatment centres were selected for Nigeria's OAT pilot program in January 2024. Two centres located in the North are Federal Neuropsychiatric Hospital, Maiduguri located in the Northeastern part of the country and Jos University Teaching Hospital, Jos in the North Central region. Each pilot program was led by a Senior Consultant Psychiatrist who has earlier undergone a special training on the OAT program. The pilot program was designed strictly for PWID who meet the criteria for eligibility for the OAT program as contained in the Nigeria national guidelines for medication assisted therapy for opioids dependence which is a part of the existing National guidelines for the treatment of substance use disorders in Nigeria ⁹. Each patient who desires to be enrolled in the program underwent a screening by the team to ascertain if he/she is eligible. Those eligible were enrolled

into the OAT program and placed on various doses of oral Methadone while those who did not meet the criteria commenced detoxification and other alternative forms of treatment.

This study is an analysis of the pilot program in the two centres in Northern Nigeria. Socio-demographic data, opiate use history, other drug use history, doses of methadone received and other relevant information on all people who enrolled in the OAT pilot program between January and October 2024 in the two centres in Northern Nigeria (Jos University Teaching Hospital and Federal Neuropsychiatric Hospital Maiduguri) were collected and analyzed using SPSS version 17.

Results

A total of fourteen (14) PWID were enrolled in the OAT program in the two centres, 8 in Maiduguri and 6 patients in Jos. Their ages range from 25 to 52 years with a mean age of 35.79 ± 4.2 years.

A 25 % dropout rate was recorded at the Maiduguri center and none at the Jos Center.

Among the patients in the 2 pilot centres, 21.4 % were females while 78.6 % were males. Majority were young males with high education. 8% had comorbid HIV and the commonest opiate of abuse was pentazocine.

14.3% of the patients had co-morbid depression while the commonest adverse reaction recorded during treatment was vomiting.

The average daily dose of methadone consumed by each patient was 13.5 mg/person /day..

Failed previous detoxification was the most common eligibility criterion for enrollment in OAT.

Table 1. Socio-demographic characteristics of patients enrolled into Maiduguri OAT pilot program.

S/N	SEX	AGE	Occupation	Education	Marriage	RX status	Reason for drop out
1	F	31	Civil servant	Tertiary	Single	Completed	
2	M	26	unemployed	Secondary	Single	Drop out	No reason
3	M	43	unemployed	Secondary	Married	Completed	
4	M	25	unemployed	Primary	Single	"	
5	M	41	Petty trader	Secondary	Single	"	
6	M	35	unemployed	Secondary	Single	"	
7	M	40	Civil servant	Tertiary	Married	"	
8	F	38	Petty trader	Primary	Divorcee	Drop out	Adverse drug reactions

Table 2. Methadone dosage at Maiduguri OAT pilot site.

S/N	Patient ID	Dose per month (mg)				Total dose consumed (mg)	No. of tablets dispensed
		Jan	Feb	March	April		
1	Maid 001	20	680	1385	625	2710	542
2	“ 002	Nil	nil	nil	nil	Nil	Nil
3	“ 003	130	770	1710	560	3170	634
4	“ 004	70	630	1375	425	2500	500
5	“ 005	100	945	1685	645	3375	675
6	“ 006	40	Nil	Nil	Nil	40	8
7	“ 007	30	625	1370	540	2575	513
8	“ 008	10	800	1735	640	3185	637
	Total	400	4,450	9,260	3,435	17,545 mg	3509 tablets

Table 3. Characteristics of Patients enrolled into Jos OAT pilot program.

S/N	SEX	AGE	Occupation	Education	Marriage	Eligibility	Comorbidites
1	M	36	Pharmacist	Tertiary	Single	Suicidal	Depression
2	F	41	Trader	Secondary	Widow	abscess	Injection abscess
3	M	29	unemployed	Secondary	Single	Failed detox	
4	M	52	Unemployed	Tertiary	Married	Failed detox	Depression
5	M	34	Unemployed	Secondary	Single	Failed detox	
6	M	30	Civil servant	Tertiary	Single		Bipolar disorder

Table 4. Methadone dosage (mg/month) at Jos OAT pilot site.

S/N	ID	May	June	July	August	Sept	Oct	Total	Total no. of tablets consumed
1	J001	1000	410	150	155	75	-	1,790	358
2	J002	-	550	620	310	150	-	1,530	306
3	J003	-	120	310	310	-	-	740	148
4	J004	-	-	640	1240	720	200	2,800	560
5	J005	-	-	-	120	800	310	1,230	246
6	J006	-	-	-	60	150	-	210	42
Total		1000	1080	1720	2195	1895	510	8,300 mg	1620 tablets

Discussion.

Males outnumbered females in the use of OAT services by a wide margin. Perhaps, this is an indication that more males are involved in injecting opioids than females. Only fourteen people who inject drugs received OAT in the two centers which is less than 0.001% of the estimated population of PWID in the northern region. Majority of our patients had at least a secondary education and most of them were young (age range 25 to 52 years). This is in keeping with the general trend of drug abuse which is a predominantly young male affair. Our results are similar to those of a qualitative study in Kenya which studied clients at a methadone clinic in Nairobi county and found only Seventeen (17) participants were enrolled comprising 70% males, with age range from 23 to 49 years and more than half had secondary education¹⁰.

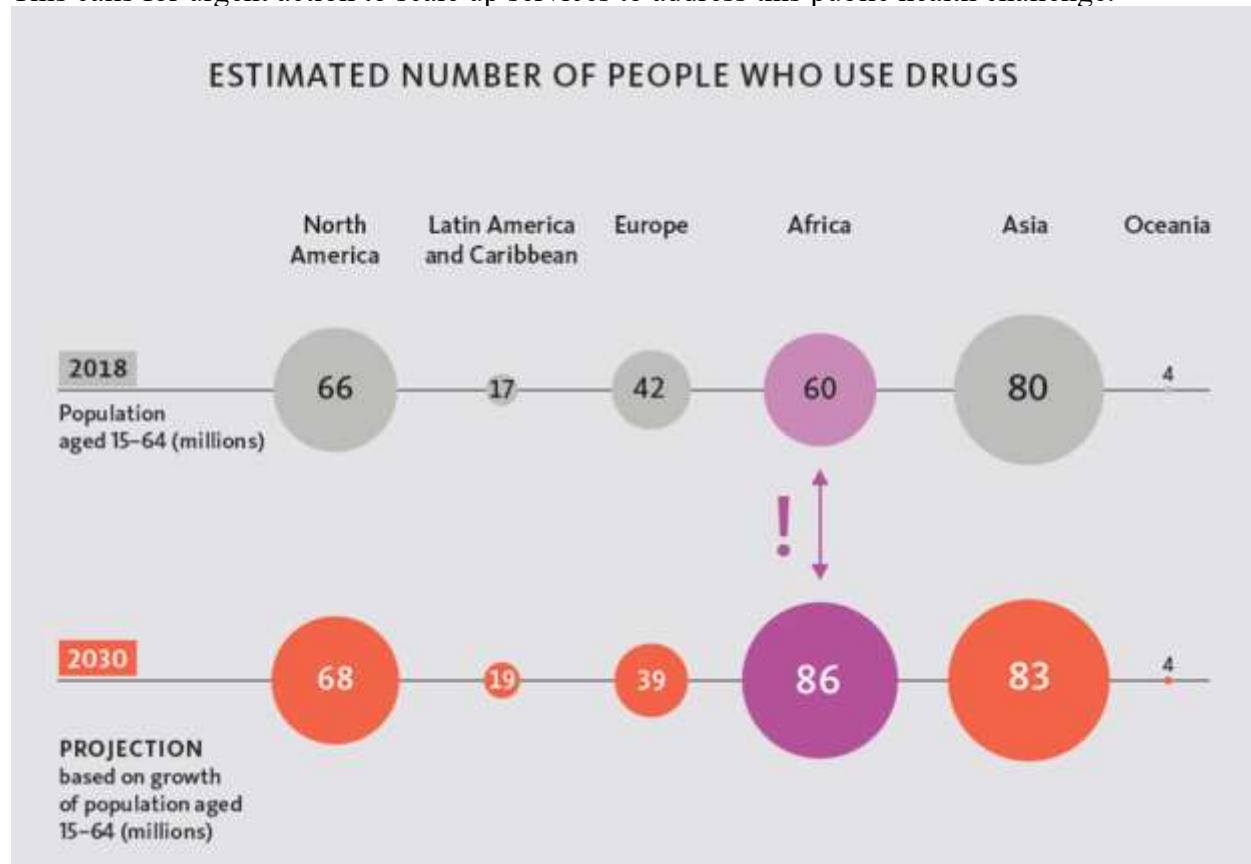
Currently, out of the estimated 80,000 PWIDs in Nigeria only about 22% have access to OAT services which are available only at a few facilities in the country⁴. This is below WHO's recommendations of a minimum of 50% for OAT coverage. Even the few sites available are not being patronized (especially in the North) despite the large population of PWID which previous surveys estimated to be 1% of the entire adult population.

Despite the relatively low prevalence of opioid dependence in Nigeria, the health, economic and social cost of opioid use is high because of several reasons such as the loss of life through fatal

overdose and opioids related deaths which occur at younger age than deaths associated with alcohol and cannabis which are the most common drugs of abuse in Nigeria¹¹.

Harm reduction continues to depend heavily on international donors in Nigeria¹². This does not favour program expansion to improve access. The federal allocation of funding to key populations and in particular harm reduction, is also very low. On the contrary, In Canada, for example, the number of OAT claims (methadone, buprenorphine, and naloxone consumed) steadily increased from about 2.5 million claims in 2018 to 8.5million in 2020 and 14 million in 2022 with a public expenditure of 10million USD in 2018 and 80 million USD in 2022¹³.

According to expert projections, the drug abuse situation is likely to get worse in future, especially in Africa where the population of people who use drugs is expected to reach about 86 million by year 2030, the highest compared to other continents as shown in the figure below. This calls for urgent action to scale up services to address this public health challenge.



Conclusion.

There is a gross underutilization of OAT services in Northern Nigeria, despite a large population of PWID. The current scope of harm reduction services is quite small compared to the total needs of PWIDS in the country.

Recommendations.

Strategies for improving utilization of harm reduction services in Nigeria.

Several techniques that have been successful in other countries¹³ can be adopted in Nigeria, for example, community mobilization to reduce stigma on substance abuse to promote community acceptance of harm reduction services such as needle exchanges program and opiate replacement therapy programs, all of which have faced rejection due to negative religious and cultural perception of the entire harm reduction program.

It is important that Nigeria invests in strategies that would reach PWID with harm reduction services including mobile outreaches. Scaling up of harm reduction services will contribute to the reduction of new HIV infections in Nigeria.

The above problem can be addressed by increased government funding to scale up OAT services using strategies that would reach PWID with harm reduction services including mobile outreaches. This will ensure safe, high -quality opioid agonist maintenance treatment to be available, affordable and accessible for medical use to people who are dependent on opioids in a way that maximizes the quality of life of people dependent on opioids and minimizes the harms to the community.

Authors' contributions.

All the authors listed contributed sufficiently in the various activities viz: Concept, Literature review, Data collection, Manuscript writing , Review.

Declaration.

There is no conflict of interest

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