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Long-acting Injectable Antipsychotics in Nigeria: A Systematic Review of Utilization, Treatment Outcomes, and Barriers to Access

Evaristus Chino Ezema[1]*, Gideon Idoko[2], Ogochukwu Agazie[3], Nkem Nkwonta[4], Samuel Alao[5], Christabel A. Dike[6], Chinelo N. Onyeje[7], Linda Keke[8], Justus I. Ugwu[9], Uche M. Olisa[10]

[1]*Department of Public Health, Texila-American University, Guyana*
[2]*Deparment of Healthcare Admin, Faculty of Business & Hospitality, Fanshawe College Ontario, Canada*
[3]*Department of Medicine, College of Medicine, University of Lagos, Nigeria*
[4]*Department of Behavioral Health, Duke University, NC, USA*
[5]*Department of Clinical Service, PY Medical Group, NY, USA*
[6]*Department of Medicine, All Saints University School of Medicine, Dominica*
[7]*Department of Public Health, University of Colorado, Denver, CO, US*
[8]*Department of Internal Medicine, Abia State University, Abia, Nigeria*
[9]*Department of Emergency Medicine, ESUT Teaching Hospital, Parklane, Enugu State, Nigeria*
[10]*Department of Psychiatry, Federal Neuropsychiatric Center, New Haven, Enugu, Nigeria*

***Correspondence to be addressed:** E-mail - eva.ezema@yahoo.com

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Abstract *Long-acting injectable (LAI) antipsychotics can be an optimal solution for sustained treatment of severe mental illnesses, but the evidence on their use and accessibility in Nigeria is limited. The study aimed to undertake a systematic review of available literature on the use of LAI, its outcomes, acceptability, and barriers in treating severe mental illnesses in Nigeria. The research was conducted using databases, including PubMed, Google Scholar, Bielefeld Academic Search Engine, and CORE. The inclusion criteria were studies that assessed the use of LAI in treatment, their outcomes, acceptability, and barriers in Nigeria. Three articles were considered in the research, of which one study met the inclusion criteria, involving 128 psychiatrists and psychiatry trainees. According to the findings, the attitudes towards LAI were generally positive, with an estimated number of patients with psychotic disorders who actually received LAI treatment being 41.7%. The most commonly administered long-acting antipsychotics are fluphenazine and flupenthixol decanoate. However, there was no evidence on the benefits of LAI at the individual level, including reducing the risk of relapse, readmission, and the likelihood of adherence to treatment, and recovery process. Moreover, the study identified barriers to LAI treatment, including the cost of medication, availability, accessibility due to transportation and clinic visits, injection administration process, and a burden on patients' families. In conclusion, the results demonstrated that LAI treatment is used and accepted among medical professionals in Nigeria. However, the evidence based on their effectiveness and cost-benefit is insufficient, which requires further high-quality multi-center studies.*

Keywords *Antipsychotics, Injectable, Long-Acting, Nigeria, Utilization.*

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Introduction

Severe mental illnesses such as schizophrenia and other psychotic disorders are a significant burden since they cause disability, shortened lifespan, morbidity, and mortality [1]. A long-term course of antipsychotic drugs is often necessary to control the symptoms of these diseases, but adherence to treatment is frequently challenging [2]. In addition, there are negative consequences of non-adherence, such as recurrence of symptoms, hospital admission, functional outcomes, and an increase in healthcare service use [3]. Low-income and middle-income nations like Nigeria, where healthcare services may be unavailable or unaffordable, have particular risks for inadequate adherence to mental illness treatments [4, 5].

Schizophrenia and other psychotic disorders are mainly treated with antipsychotic drugs. Treatment with antipsychotics usually aims to reduce positive symptoms and prevent the development and progression of the disease [6]. The most common way of administration is oral, since this method is convenient for both doctors and patients, and the dose of the drug is individually selected. However, patient adherence to treatment is often difficult to maintain, especially in the context of a lack of insight into the disease [7]. In addition, the side effects of drugs, reduced adherence, and frequent exacerbations are factors that negatively affect the patient's quality of life and increase morbidity and mortality. For these reasons, long-acting injectable antipsychotics are increasingly used in clinical practice. Such drugs can help maintain constant concentrations of the drug in the body, simplify dosing, support the doctor's attitude to the patient, especially in the case of missed doses, and reduce the risk of relapse and rehospitalization. However, the use of long-acting injectable antipsychotics may be limited by high costs, lack of availability, resistance, and contraindications.

Long-acting injectable (LAI) antipsychotics are depot designed to provide prolonged release of antipsychotic drugs for the management and maintenance treatment of severe mental disorders such as schizophrenia and other psychotic illnesses [8]. They are administered by intramuscular (IM) or subcutaneous (SC) injection on a regular schedule ranging from every 2 weeks to once every 6 months, depending on the specific medication. Unlike oral antipsychotics that need to be taken daily, LAI drugs maintain therapeutic levels of the medication in the body for an extended period, thus reducing the risk of missed doses [8]. The above advantages make LAIs ideal for patients with insight problems, cognitive impairment, treatment non-adherence, and frequent relapses.

The depot antipsychotic formulations can help manage treatment-resistant patients by improving treatment adherence and allowing more regular drug exposure, enabling early intervention in treatment failures. Moreover, they also minimize relapses and rehospitalization and prevent the development of irregular drug levels that might be associated with nonadherence [8]. However, LAIs are not superior to oral medications in all aspects; rather, their effectiveness depends on various factors, such as the choice of drug, treatment regimen, level of care, illness progression, incidence of adverse effects, and continuous care [9].

One of the most common features of LAIs is a relatively slow rate of absorption that often is slower than the rate of elimination from the body; this phenomenon is referred to as flip-flop kinetics [10]. Thus, the apparent half-life and the time needed to achieve steady-state concentrations are dictated primarily by the rate of absorption, not elimination [10]. Because of the slow absorption, therapeutic concentrations of the drug can be sustained for an extended period, allowing for dosing intervals as long as every two weeks to every six months. In addition, steady-state concentrations of LAIs are typically achieved within several half-lives,

but there is considerable variability between preparations [10].

The pharmacokinetic characteristics of individual LAIs differ significantly. Thus, the peak concentration of haloperidol decanoate after injection is achieved at 3–9 days and the apparent half-life of the drug is up to 3 weeks [11]. The peak plasma concentration of risperidone microspheres is not observed, while the initial dose of the drug is barely detectable, and significant amounts of it are detected in the blood three weeks after injection, which requires a start-up dose of oral medication [11]. The apparent half-life of paliperidone palmitate is relatively long, ranging from 25 to 49 days [12]. Moreover, it is eliminated mainly unchanged through the renal route, meaning that the function of the kidneys should be taken into account when selecting doses. On the other hand, aripiprazole formulations also possess a prolonged half-life, while for aripiprazole lauroxil, a very slow absorption and hence drug plasma concentration suggest itself.

Although LAI treatment offers many advantages over conventional antipsychotics, its optimal utilization in clinical practice is compromised by patient-, provider- and system-level barriers [13]. Patients may be reluctant to accept LAI treatment because of discomfort during injections, fear of needles, stigmatizing attitudes, invasiveness of the procedure, or a sense of loss of control [14]. Additionally, some patients report a more prolonged exposure to the medication that can increase the risk of side effects and require more frequent monitoring. From the provider's perspective, barriers to utilizing LAI drugs include high medication costs, cold storage requirements, IM administration technique, patient follow-up, and lack of treatment adherence. At a systemic level, the barriers include the availability of LAIs in the country or region and the extent to which coverage and reimbursement policies support the use of these medications. For example, in low- and middle-income countries like Nigeria, there is a high risk that patients will not be able to afford LAI drugs, and those who will not have consistent access to care. Overall, depot medications offer a useful approach to treating persons with psychotic illnesses, but their use requires addressing patient adherence and acceptance, affordability, availability, and the provision of continued care to patients.

The objective of this study is to examine the use of LAIs for treating severe mental illness, paying particular attention to their accessibility and impact on the delivery of mental health services in Nigeria. The use of antipsychotic drugs with long-acting injectables for the treatment of severe mental illnesses is an area of clinical practice that is both growing and vital. While LAIs have been extensively researched and reviewed in high-income countries, there is a lack of comparable studies in low-income and middle-income countries, such as Nigeria [15].

Our study seeks to answer several research questions related to the use and application of long-acting injectable antipsychotics in Nigeria. First of all, the research will be aimed at identifying the extent to which this type of intervention is prescribed and applied in different settings and among different patients. Moreover, the study will be focused on analyzing the outcomes of such treatment, clarifying its impact on the symptoms, likelihood of relapse and rehospitalization, and the patients' overall functioning and quality of life. It will also be important to highlight adherence to the treatment, possible recurrence or relapse, and the occurrence of any side effects or adverse events.

Furthermore, the study will provide a basis for understanding the factors affecting the use of long-acting injectables for the treatment of severe mental illnesses. It will be important to highlight the patient-, provider-, and system-level factors associated with the use of long-acting injectables and identify barriers to their use and the reasons for such limitations. The analysis will be based on the evaluation of

cost-effectiveness, availability, and cultural acceptability of these interventions as well as clinicians' attitudes toward them and patients' access to continued care. Lastly, the study will identify the most pressing issues affecting mental health care delivery in Nigeria and evaluate how these issues affect the provision of treatment and the patient's access to it. The study has implications for clinical practice by examining existing practices in the treatment of severe mental illnesses with LAIs. It highlights areas of deficiency in terms of accessibility and use in order to inform mental health policy, treatment recommendations, pharmaceutical availability, and future research. A systematic evaluation of the literature regarding the use of LAIs for the treatment of severe mental illnesses in Nigeria will help to identify critical evidence gaps regarding their use, treatment outcomes, and barriers to their adoption.

Methods

We performed a systematic review following the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines 2020 [16].

Studies were considered for inclusion if they: (a) were carried out in Nigeria; (b) Studies with participants diagnosed with schizophrenia, schizoaffective disorder, bipolar illness or other serious mental illnesses who were administered antipsychotic medication in Nigeria; (c) Studies evaluating the use of long-acting injectable antipsychotics such as first- and second-generation antipsychotics including haloperidol decanoate, fluphenazine decanoate, risperidone LAI, paliperidone, aripiprazole, other LAIs approved for use in the treatment of mental illness; (d) Studies reporting the use, indication(s), acceptance (patient or clinician), cost or affordability issues, availability and accessibility, and patient-related or socioeconomic barriers to Long-acting injectable treatment; (e) Randomized controlled trials, cohort studies, cross-sectional studies, case-control studies, observational studies, qualitative studies and relevant case series/reports, which contribute data to the topic of LAI treatment in Nigeria.

We conducted a systematic search of the literature using the search terms "Long-Acting Injectable antipsychotic in Nigeria", "Long-Acting Injectable antipsychotic utilization in Nigeria", and "Acceptability of Long-Acting Injectable antipsychotic in Nigeria", in PubMed, Google scholar, Bielefeld Academic Search Engine, and CORE. No language or publication date restrictions were applied.

Results

We located three articles via the database search. After screening the titles and abstracts, the inclusion/exclusion criteria was applied to check the relevance of the articles. As a result, only one study was included in the final review, whereas the others were excluded due to the lack of the relevance to the research question.

Table 1. Articles on LAIs Utilization in Nigeria

Authors	Psychiatrists' Attitude	Patients' Acceptance (%)	Participants Enrolled	Methodology	Findings
James et al 2012 [7]	Positive	41.7	128	Cross sectional study	Different desirability due to perceived potency

As seen in the Table 1, above, the researchers reported that respondents estimated that, on average, 67.9% of their patients had a psychotic disorder (SD = 15.5%; range, 10-90%), of whom approximately 41.7% were prescribed a long-acting injectable (LAI) antipsychotic (SD = 21.8%; range, 5-100%) [14]. Fluphenazine decanoate was the most frequently prescribed LAI by 120 respondents (93.8%) during the past year, whereas

flupenthixol decanoate was the second most frequently prescribed LAI by 108 respondents (84.4%).

For the maintenance treatment of schizophrenia, second-generation antipsychotics (SGAs) in oral formulation were the preferred first-choice therapy by 60.2% of participants, followed by first-generation antipsychotics (FGAs) in oral formulation (21.9%), FGA-LAIs (7.8%), and risperidone LAI (5.5%). Moreover, 4.6% of respondents had no preferred first-choice treatment. Oral FGAs were selected as the preferred second-choice treatment by 41.4% of respondents, followed by FGA-LAIs (36.7%), oral SGAs (17.9%), and SGA-LAIs (2.3%). In addition, two respondents had no preferred second-choice treatment.

Discussion

In general, the systematic review revealed a substantial lack of evidence supporting LAI utilization in Nigeria. Indeed, only three articles were identified via database screening, and only one study was eligible for inclusion. The study by James et al. was conducted among 128 psychiatrists and psychiatry trainees, who provided insights into the perspectives and attitudes of these professionals towards LAI treatment. The findings of James et al. as seen in the table 1 above, cannot be used to confirm the effectiveness of LAIs in terms of reducing relapse rates, hospitalization, functional recovery, or adherence since the study aimed to explore healthcare providers' experiences and did not attempt to evaluate the clinical outcomes of LAI utilization in Nigeria. Thus, the reviewed evidence is insufficient to draw any final conclusions on the effectiveness and barriers to LAI use in the country. Moreover, it is evident that there are very few studies on LAI utilization in Nigeria.

The identified study provides some evidence on the use of LAIs in Nigerian hospitals. According to the findings by James et al., 41.7% of psychiatrists' psychotic patients were prescribed LAI, but it should be noted that this figure was probably overestimated since it was based on clinicians' declarations rather than patient records [14]. In South Africa, LAIs are prescribed mainly for noncompliance to medications [17]. The study by James et al., revealed that the most commonly administered long-acting antipsychotics were fluphenazine decanoate and flupenthixol decanoate, which are first-generation antipsychotics [14]. This finding might suggest that there is no significant preference for newer generations of LAIs in Nigeria. Indeed, it is reasonable to assume that the observed prescribing pattern is guided by cost-effectiveness since first-generation antipsychotics are significantly cheaper than their second- and third-generation alternatives. However, there are recently approved LAIs by Food and Drug Administration (FDA) in the US [18]. These include olanzapine, paliperidone, and risperidone which are very potent according to research [19]. They are relatively expensive, but they have lower risk of side effects including abnormal movement disorder [20]. Thus, there is a need for advocacy for the availability, accessibility, and insurance coverage of newer LAIs in Nigeria to ensure the provision of high-quality psychiatric care and treatment for patients with psychotic disorders. Medication price, transportation, clinic visits' frequency and cost, injection administration, and the family's capacity to cope with the treatment burden are all potential disruptors of treatment continuity [21]. Reducing these barriers could lessen the burden on patients and families and improve continuity of treatment and long-term outcomes [22, 23].

The identified study also revealed that Nigerian psychiatrists have generally positive attitudes towards LAIs [14]. The participants had a positive attitude towards the use of injectable treatment, and those who prescribed LAIs to more than 40% of their patients were more likely to report positive patient-centered attitudes. Since clinician attitudes are important

predictors of the likelihood of injectable treatment being discussed and incorporated into shared treatment planning, this finding is critical. In Kwazulu-Natal, South Africa, (94.3%) reported a positive drug attitude towards their antipsychotic medication, including LAIs [24]. However, the reported level of knowledge on LAIs and their adverse effect was only fair, meaning that positive clinician attitudes towards long-acting antipsychotics do not necessarily coincide with a comprehensive understanding by the patient [25]. Patients' understanding of medication profile is a key factor influencing their choices [26]. Thus, it is imperative that continuing medical education is essential for ensuring that clinicians can provide evidence-based care and obtain informed consents from their patients.

A major limitation of the evidence presented is the lack of relevant Nigerian studies assessing patient-level outcome. The only included study evaluated the knowledge, attitude, and self-reported practice of Nigerian psychiatrists rather than objective measures such as incidence of relapse or rehospitalization, persistence with treatment, quality of life, functional recovery, or adverse events. Therefore, it remains unknown whether the relatively high prevalence of LAI use among Nigerian psychiatrists identified in this review is associated with better patient outcomes. Although international evidence suggests that LAIs may be beneficial for selected patients, including those who fail to adhere to oral antipsychotics, the magnitude of effect can vary depending on the study population, design, active control, and treatment setting [27, 28]. Therefore, further research in Nigerian settings is needed before firm conclusions regarding the comparative effectiveness and appropriateness of LAIs for improving health outcomes can be drawn.

Conclusion

In general, the obtained results demonstrate that long-acting injectable antipsychotics (LAIs) were accepted and used within the framework of Nigerian psychiatric practice; psychiatrists have a positive attitude towards their use. However, the evidence is insufficient to determine their effectiveness, comparative clinical outcome, long-term adherence to treatment, and cost-effectiveness in Nigeria. The data obtained underline the need to improve the knowledge of clinicians and the importance of developing patient-oriented approaches and reducing financial and availability barriers. Most importantly, the identified evidence gap related to the absence of contemporary studies conducted in Nigeria was revealed, which can be addressed through a multicenter, patient-centered, and prospective study aiming to ensure rational use of LAI antipsychotics in the country.

Conflict of Interest

The authors affirm that they do not have any financial affiliations presently or within the preceding three years with any organizations that could potentially influence the submitted work. They further assert that no other associations or engagements might give rise to perceived influences on the submitted work. The authors confirm the absence of any conflicts of interest. All authors provide their consent for the publication of this manuscript.

Ethical Approval

This is a systematic review; ethical approval is not needed.

Authors' Contributions

All authors contributed to the project's conception and design, as well as the development of the project. All authors participated in the literature review, data analysis, and manuscript preparation. All authors approve the final version of the manuscript for submission.

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Data Availability

The data set related to this study was from the only paper that met the inclusion criteria.

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References

[1]. Peritogiannis V, Ninou A, Samakouri M. Mortality in schizophrenia-spectrum disorders: recent advances in understanding and management. Healthcare (Basel). 2022;10(12):2366.

[2]. Rubio JM, Taipale H, Tanskanen A, Correll CU, Kane JM, Tiihonen J. Long-term continuity of antipsychotic treatment for schizophrenia: a nationwide study. Schizophr Bull. 2021;47(6):1611-20.

[3]. Tadesse G, Geremew GW, Alemayehu TT, Getachew D, Demelash D, Fentahun S. Psychotropic medication non-adherence and its determinants among people living with mental illnesses in Ethiopia: systematic review and meta-analysis study. BMC Public Health. 2025;25(1):1333.

[4]. Rameez S, Nasir A. Barriers to mental health treatment in primary care practice in low- and middle-income countries in a post-COVID era: a systematic review. J Family Med Prim Care. 2023;12(8):1485-1504.

[5]. Eze P, Aniebo CL, Ilechukwu S, Lawani LO. Understanding unmet healthcare needs in Nigeria: implications for universal health coverage. Health Serv Insights. 2025; 18:11786329251330032.

[6]. Keepers GA, Freese TE, Harter JG, et al. The American Psychiatric Association practice guideline for the treatment of patients with schizophrenia. Am J Psychiatry. 2020;177(9):868-72.

[7]. Guo J, Lv X, Liu Y, Kong L, Qu H, Yue W, et al. Influencing factors of medication adherence in schizophrenic patients: a meta-analysis. Schizophrenia (Heidelb). 2023;9:31.

[8]. Kurt-Tunagur EM, Tunagur MT. Clinical effectiveness of long-acting injectable antipsychotics in schizophrenia spectrum disorders: real-world mirror-image evidence. BMC Psychiatry. 2026;26(1):143.

[9]. Kishimoto T, Hagi K, Kurokawa S, Kane JM, Correll CU. Long-acting injectable versus oral antipsychotics for the maintenance treatment of schizophrenia: a systematic review and comparative meta-analysis of randomized, cohort, and pre-post studies. Lancet Psychiatry. 2021;8(5):387-404

[10]. Correll CU, Kim E, Sliwa JK, Hamm W, Gopal S, Mathews M, et al. Pharmacokinetic characteristics of long-acting injectable antipsychotics for schizophrenia: an overview. CNS Drugs. 2021;35(1):39-59.

[11]. Gelders Y. Pharmacology, pharmacokinetics and clinical development of haloperidol decanoate. Int Clin Psychopharmacol. 1986;1 Suppl 1:1-11. PMID:3559159.

[12]. Gopal S, Gassmann-Mayer C, Palumbo JM, Hough D, Remmerie B, Eerdekens M. Practical considerations for managing patients with schizophrenia receiving long-acting injectable antipsychotics. CNS Drugs. 2011;25(8):641-54.

[13]. Haddad PM, Correll CU, McEvoy J, Kane JM. Long-acting antipsychotics in the treatment of schizophrenia: opportunities and challenges. Expert Opin Pharmacother. 2023;24(4):455-68.

[14]. James BO, Omoaregba JO, Okonoda KM, Otefe EU, Patel MX. The knowledge and attitudes of psychiatrists towards antipsychotic long-acting injections in Nigeria. Ther Adv Psychopharmacol. 2012;2(5):169-77.

[15]. Ostuzzi G, Gastaldon C, Papola D, Barbui C. Calling for policy actions to increase access to long-acting antipsychotics in low-income and middle-income countries. Epidemiol Psychiatr Sci. 2022;31:e34.

[16]. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ. 2021;372: n71.

[17]. Veyej N, Moosa MYH. Prescribing patterns of long-acting injectable antipsychotics in a community setting in South Africa. S Afr J Psychiatr. 2022; 28:1809.

[18]. VandenBerg AM. An update on recently approved long-acting injectable second-generation antipsychotics: knowns and unknowns regarding their use. Ment Health Clin. 2022;12(5):270-81.
[19]. Hamina A, Taipale H, Lieslehto J, et al. Comparative effectiveness of antipsychotics in patients with schizophrenia spectrum disorder. JAMA Netw Open. 2024;7(10): e2438358.
[20]. Citrome L. Choosing among the long-acting injectable antipsychotics: an evidence-based pragmatic guide. CNS Spectr. 2025;30(1):e73.
[21]. Mariere UI, Ogaji DS, Obikeze OO, Adesina AD, Babatunde S. Payment methods and coping strategies for health care costs by patients with chronic diseases in a low-middle income country. West Afr J Med. 2025;42(6):457-65.
[22]. Cole OK, Abubakar MM, Isah A, Sule SH, Ukoha-Kalu BO. Barriers and facilitators of provision of telemedicine in Nigeria: a systematic review. PLOS Digit Health. 2025;4(7):e0000934.
[23]. Omoge AO, Omoge MO, Erinsakin OB, et al. A system-oriented narrative review of an integrated public health approach on the impact of health promotion programmes on reducing lifestyle-related diseases in Nigeria. Discov Public Health. 2026; 23:1358.
[24]. Roopun Krishanand R, Tomita A, Paruk S. Attitude and preferences towards oral and long-acting injectable antipsychotics in patients with psychosis in KwaZulu-Natal, South Africa. S Afr J Psychiatr. 2020; 26:1-9.
[25]. Potkin S, Bera R, Zubek D, Lau G. Patient and prescriber perspectives on long-acting injectable (LAI) antipsychotics and analysis of in-office discussion regarding LAI treatment for schizophrenia. BMC Psychiatry. 2013; 13:261.
[26]. Mondesir FL, Levitan EB, Malla G, Mukerji R, Carson AP, Safford MM, et al. Patient perspectives on factors influencing medication adherence among people with coronary heart disease (CHD) and CHD risk factors. Patient Prefer Adherence. 2019; 13:2017-27.
[27]. Kane JM, Agid O, Castle DJ, Citrome L, Fagiolini A, Kishimoto T, et al. The use of long-acting injectables for people with schizophrenia: consensus panel recommendations for overcoming barriers and implementing treatment. Neurol Ther. 2025;14(6):2551-81.
[28]. Etienne M, Verdoux H. Impact of long-acting injectable antipsychotics in early psychosis: an umbrella review. Schizophr Res. 2025; 277:140-50.