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THE ROLE OF PATENT AND PROPRIETARY MEDICINE VENDORS IN NIGERIA: A NARRATIVE REVIEW OF ACCESS, QUALITY, REGULATION, AND HEALTH-SYSTEM INTEGRATION

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ABSTRACT

Patent and proprietary medicine vendors occupy a central but contested position in Nigeria's health system. They are often the first source of care for common illnesses, especially in low-income, peri-urban and rural communities, but variable practice quality and weak regulatory oversight create important patient-safety concerns. This narrative review synthesized peer-reviewed studies, systematic reviews, programme reports and official Nigerian regulatory and policy documents to examine their contribution to health-care access, associated quality and safety risks, the regulatory environment, and options for accountable health-system integration. Evidence was organized around access and service delivery, antimicrobial resistance, medicine quality, regulation, accreditation, training, referral and digital health. Patent and proprietary medicine vendors improve geographic and financial access to medicines, family-planning commodities, care for childhood illnesses and public-health referral opportunities. However, studies consistently identify gaps in clinical knowledge, irrational medicine use, non-prescription antibiotic sales, weak referral practices, and exposure to substandard or poorly handled medicines. Tiered accreditation, competency-based training, association-supported supervision, quality-assured supply chains and digital linkages offer more credible pathways than either prohibition or unregulated expansion. Nigeria should recognise their de facto role while maintaining clear distinctions from pharmacists and clinical providers. Risk-based scopes of practice, enforceable licensing, supportive supervision, referral integration, pharmacovigilance and alignment of public-health goals with vendor business incentives are needed to make services safer and more accountable.

Keywords: Nigeria; patent medicine vendors; primary health care; regulation; antimicrobial resistance; health-system integration

INTRODUCTION

Nigeria's health system is pluralistic. Households commonly move between public facilities, private clinics, community pharmacies, traditional providers, informal providers, and retail medicine outlets. Within this landscape, patent and proprietary medicine vendors (PPMVs) have become one of the most visible and frequently used sources of care. Although they are legally distinct from pharmacists, PPMVs sell orthodox medicines on a retail basis and are licensed to supply a limited range of pre-packaged, non-prescription products. In practice, many also provide informal diagnosis, advice, medication selection, counselling, referral, and sometimes services beyond their authorised scope.

The importance of PPMVs has been documented for more than two decades.

Beyeler et al. (2015) identified 50 studies on PPMVs in Nigeria and concluded that they are a major source of medicines for acute conditions, especially where formal care is geographically distant, costly, overcrowded, or perceived as inconvenient. The review reported wide variation in use by geography and illness type, but showed that PPMVs can serve as the first source of care for a substantial proportion of childhood illnesses and adult malaria treatment. More recent research continues to frame PPMVs as community-embedded providers whose role cannot be ignored in efforts to improve primary health care, family planning, digital health, and medicine safety (Agha et al., 2022; Iheoma et al., 2016; Liu et al., 2020; Okafor et al., 2024).

Although earlier reviews established the importance of PPMVs, a new synthesis is needed for three reasons: first, the policy context has changed, with the Pharmacy Council of Nigeria Act 2022, updated PPMV licensing guidance, online premises verification, and renewed attention to coordinated drug distribution, altering the regulatory landscape. Second, the evidence base has expanded beyond malaria and childhood illness to include tiered accreditation, family planning task-sharing, antibiotic stewardship, digital health adoption, tuberculosis referral, immunisation readiness, and emergency response. Third, Nigeria's primary health-care system is undergoing reform. At the same time, many formal facilities remain suboptimally functional, making it necessary to reassess PPMVs not only as informal medicine sellers but as a large, unevenly regulated, community-level access network. This review is therefore justified not by the absence of prior reviews, but by the need to update, integrate, and reinterpret the evidence in light of current health-system realities.

The scale of the sector is difficult to measure precisely because licensed and unlicensed outlets coexist. Approximately 58,000 patent and proprietary medicine vendor shops were reported as registered across Nigeria's 36 states and the Federal Capital Territory in 2019 (Ojoye, 2019). However, more recent programme reporting estimates that over 200,000 PPMV outlets operate nationwide, many of which lack adequate licensing or regulatory oversight (Promoting the Quality of Medicines Plus, 2024). As of July 2026, the Pharmacy Council of Nigeria maintains the official PPMV licensing database through its Registration and Licensing Department and provides online premises verification, but a current disaggregated national total of registered PPMVs is not displayed on its publicly accessible webpages (Pharmacy Council of Nigeria, 2026a; Pharmacy Council of Nigeria, 2026b).

The size of the PPMV network is particularly striking when compared with the formal primary health-care platform. Nigeria has over 30,000 primary health-care facilities, according to the Federal Ministry of Health and Social Welfare (Federal Ministry of Health and Social Welfare, 2026). Using 30,000 facilities as an approximate benchmark, the previously reported 58,000 registered and properly licensed PPMV outlets represent about 1.9 PPMV outlets for every primary health-care facility (Ojoye, 2019). The broader estimate of more than 200,000 PPMV outlets would represent about 6.7 PPMV outlets for every primary health-care facility (Promoting the Quality of Medicines Plus, 2024).

Therefore, even the reported number of registered PPMVs is nearly twice the number of primary health-care facilities. At the same time, the estimated total PPMV network is approximately six to seven times larger. This numerical disparity is important because government assessments indicate that many of Nigeria's primary health care facilities are not functioning optimally (Federal Ministry of Health and Social Welfare, 2025). Consequently, PPMVs may constitute a substantially larger and more geographically accessible network of community-level medicine providers than formal primary health-care facilities. However, the two types of outlets differ considerably in professional capacity, regulatory requirements, and range of services. Table 1 summarises the comparative figures.

The public-health debate around PPMVs is therefore not simply whether they are useful or harmful. They are both useful because they close real access gaps, harmful when poorly regulated practices expose clients to ineffective treatment, avoidable adverse events, substandard medicines, delayed referral, and antimicrobial resistance. This review examines that tension and proposes ways to move from informal dependence toward accountable integration.

MATERIALS AND METHODS

This narrative review synthesised evidence on the role of Patent and Proprietary Medicine Vendors (PPMVs) in Nigeria, focusing on access to care, service quality, regulation, medicine safety, accreditation, training, referral systems, and health-system integration. Literature was identified through searches of PubMed, Scopus, Google Scholar, African Journals Online (AJOL), and relevant institutional websites, including those of the Pharmacy Council of Nigeria (PCN), the National Agency for Food and Drug Administration and Control (NAFDAC), the Federal Ministry of Health and Social Welfare, Population Council, and FHI 360.

Search terms included combinations of*"patent medicine vendors", "proprietary medicine vendors", "PPMVs", "Nigeria", "primary health care", "family planning", "antimicrobial resistance", "regulation", "accreditation", "digital health", "malaria", "tuberculosis",* and*"immunisation"*. We considered literature published between 2000 and 2026.

Eligible sources included peer-reviewed articles, systematic reviews, implementation studies, programme reports, policy documents, and official regulatory publications relevant to PPMVs in Nigeria. Publications lacking relevance to the Nigerian context, duplicate reports, and articles focused exclusively on other provider categories were excluded. Evidence was synthesised thematically rather than quantitatively because the objective was to provide an interpretive assessment of the evolving role of PPMVs within the Nigerian health system.

RESULTS AND DISCUSSION

WHO ARE PATENT AND PROPRIETARY MEDICINE VENDORS?

PPMVs are retail drug sellers licensed to sell patent and proprietary medicines. They differ from community pharmacists, who have formal pharmacy qualifications and

are authorized to dispense prescription medicines within the boundaries of pharmacy law and professional regulation. PPMVs generally do not require formal pharmacy or medical training before entry into practice. However, many acquire experiential knowledge through apprenticeships, mentorship, association meetings, supplier interactions, or donor-supported training programmes (Beyeler et al., 2015; Okafor et al., 2024). Field studies repeatedly show that apprenticeship is a common route into practice, while formal clinical training is variable. For example, FHI 360's study of injectable contraceptive provision in rural Oyo State reported that most PPMVs had learned through apprenticeship, although a subset had previous health-facility experience (FHI 360, 2013). This mixed background helps explain why some vendors operate strictly as medicine sellers while others behave more like informal primary-care providers.

The PPMV sector is heterogeneous. Vendors differ by education, gender, urban-rural location, years of experience, association membership, business size, and prior health training. Some operate small shops in villages or urban neighbourhoods; others are embedded in large medicine markets and distribution networks. Some are registered and licensed; others may operate beyond effective regulatory reach. This heterogeneity matters because a single regulatory or training approach is unlikely to fit all vendors. A vendor with no health background selling basic analgesics and oral rehydration salts is not equivalent to a health-trained vendor in a supervised accreditation scheme providing selected family planning services.

CONTRIBUTIONS TO ACCESS AND PRIMARY HEALTH CARE

First contact for common illnesses

PPMVs are commonly used because they are close to where people live and work. They often offer longer opening hours than public primary health-care facilities, require less waiting time, and provide medicines immediately. Clients may consult them for fever, malaria-like symptoms, cough, diarrhoea, pain, skin conditions, pregnancy-related concerns, contraception, and childhood illnesses. In many communities, the vendor is not viewed merely as a shopkeeper but as a familiar adviser who can suggest a medicine, explain dosage, and decide whether referral is needed.

This role is especially important for poor and rural households. Public facilities may be distant, understaffed, out of stock, or associated with informal payments. Private clinics may be unaffordable. Community pharmacies are more concentrated in urban areas. PPMVs, therefore, fill an access gap created by both health-system weakness and household constraints. Their value lies not only in the products they stock, but also in their ability to reduce the time, transport, and social costs of seeking care.

The strongest empirical evidence for this point comes from direct observation of customer interactions. In Kogi and Kwara states, Prach et al. (2015) surveyed 250 PPMV shop workers and 2,359 customers and observed each worker-customer interaction. Most customers sought care for headache, fever, cough or cold, or diarrhoea. Care-seeking varied by symptom and by whether the sick person was a child: fever cases involved more discussion and

examination, while clients with cough or cold were less likely to have had a formal diagnosis before visiting the shop. These findings support a more nuanced view of PPMVs as symptom-driven first-contact providers rather than simple retail outlets.

Medicine availability and continuity of supply

PPMVs are an important distribution channel for essential commodities. They commonly stock antimalarials, analgesics, oral rehydration salts, zinc, cough remedies, deworming medicines, pregnancy tests, condoms, oral contraceptive pills, and basic wound-care supplies. In contexts where public facilities experience stock-outs, retail outlets can become the most reliable source of commodities. For conditions such as malaria and diarrhoea, immediate availability can prevent progression to severe disease if the correct medicines are used promptly and appropriately.

Evidence from paediatric illness studies shows why commodity availability alone is not enough. Treleaven et al. (2015) found that many PPMVs lacked the knowledge and tools needed to treat common childhood illnesses properly, even though they stocked medicines used for malaria and diarrhoea. In Port Harcourt, Firima and Forsberg (2020) reported that only 47% of PPMVs had satisfactory knowledge of childhood diarrhoea; however, 86% consistently recommended oral rehydration solution and 63% consistently recommended zinc. Recommendation of oral rehydration solution was strongly associated with its availability, while recommendation of zinc was associated with awareness of oral rehydration solution and zinc guidelines. These findings indicate that supply, knowledge, and guideline awareness interact: stocking essential commodities can improve care only when vendors know when and how to recommend them.

Malaria rapid diagnostic tests (RDTs) illustrate the same access-quality tension. Correct diagnosis before antimalarial treatment is a national and global priority, yet the private retail market has historically made subsidised artemisinin-based combination therapy more available than affordable RDTs. A 2018 private-sector market survey found low RDT availability among PPMVs and pharmacies, with barriers including demand, supply, and price (Edwards et al., 2022). This matters because PPMVs may be the first source of fever treatment, but fever is not synonymous with malaria. Without feasible testing pathways, vendors and clients are pushed toward presumptive antimalarial treatment, missed diagnoses of non-malarial illnesses, and inefficient medication use.

Family planning and reproductive health

PPMVs also contribute to contraceptive access. Evidence from family planning programmes suggests that many women obtain modern contraceptives from PPMVs or community pharmacies, even when policy frameworks have historically been cautious about formally recognising them as family planning providers (Population Council, 2026). Their importance lies in privacy, convenience, discretion, and trust, especially for adolescents, unmarried women, and women facing social barriers to facility-based care.

Recent policy and implementation initiatives have explored whether trained and accredited PPMVs can safely expand access to selected family planning services. The IntegratE project and related tiered accreditation work sought to classify PPMVs by qualifications and to define appropriate scopes of practice, training, supervision, and referral expectations (Okafor et al., 2024; Population Council, n.d.). This approach is promising because it avoids treating all vendors as identical and instead links permitted services to competence and supervision.

Older family planning evidence helps explain the rationale for accreditation. In a study of 396 PPMVs in four rural local government areas in Oyo State, FHI 360 found high awareness of injectable contraception but limited formal family planning training; 12.6% of PPMVs reported selling injectables and 14.9% reported administering them, despite pharmacy-law restrictions (FHI 360, 2013). Later, evidence showed that 22% of modern contraceptive users obtained their last method from a PPMV and 12% from a private pharmacy (Population Council, 2026). Client-quality studies from Lagos and Kaduna further suggest that quality can improve under structured training and supervision, although gains may differ by state and implementation context (Akomolafe et al., 2022). Stakeholder research on the three-tier accreditation system found generally positive perceptions of stratifying PPMVs by qualification and scope of practice, while also identifying implementation challenges around supervision, financing, and regulatory alignment (OlaOlorun et al., 2022).

Tuberculosis, immunisation, and emergency response

PPMVs have also been studied as potential partners in broader public-health programmes. Onyeneho and Chukwu (2010) examined whether patent medicine vendors could play a role in tuberculosis control in southern Nigeria and found that many were willing to participate, although their capacity would require training, referral linkages, and supervision. A later qualitative study in Ebonyi State similarly explored the role of patent medicine dealers in tuberculosis control, highlighting the potential for early identification and referral while warning against inappropriate anti-tuberculosis medication practices (Onah et al., 2021). In Kano, Adamu et al. (2020a) reported high readiness among PPMVs to support routine immunisation, with readiness associated with knowledge of immunisation and prior engagement with public-health programmes. During the COVID-19 pandemic, a drug-shop intervention in south-eastern Nigeria improved patent medicine vendors' knowledge, attitudes, and practices for pandemic control, suggesting that vendors can be mobilised rapidly when interventions are structured and targeted (Chukwuocha et al., 2021).

These studies do not mean that PPMVs should provide all public health services. Rather, they show that the sector can serve as a community-facing platform for health education, risk recognition, referral, commodity distribution, and surveillance when the scope of practice is clear, and the programme design includes training, supervision, and accountability.

QUALITY-OF-CARE CONCERNS

Knowledge and competency gaps

The central concern in the literature is that PPMVs often provide variable or poor-quality care. The 2015 systematic review found low health knowledge and weak treatment practices across many studies, including poor adherence to recommended malaria treatment and limited evidence on care for children beyond malaria (Beyeler et al., 2015). Common problems include inaccurate symptom assessment, dispensing incomplete doses, poor counselling, delayed referral for danger signs, and stocking or recommending medicines that do not align with clinical guidelines.

Disease-specific studies reinforce this concern. In rural south-eastern Nigeria, Okeke et al. (2006) found poor knowledge and dispensing behaviour for childhood malaria, even though medicine sellers recognised malaria as a major community problem and commonly referred severe cases. Lot quality assurance sampling in Jigawa similarly raised concerns about the quality of malaria practice among patent medicine vendors (Berendes et al., 2012). In Enugu, Uzochukwu et al. (2014) observed irrational dispensing for childhood malaria, acute respiratory infection, and diarrhoea among 395 caregivers exiting patent medicine dealer outlets; the average number of medicines dispensed per child was 6.8, 72.5% of patients received injections, 59.7% received one or more antibiotics, and 45.9% received non-essential medicines. These data show that poor quality is not merely a theoretical regulatory concern but a measurable contributor to polypharmacy, unnecessary injections, antibiotic exposure, and household cost.

Quality problems should be understood structurally, not only as individual negligence. PPMVs work in a commercial environment where clients may demand cheap medicines, partial doses of antibiotics, injections, or rapid relief. Vendors may fear losing customers if they refuse. Suppliers and wholesalers may shape what is available. Public-sector shortages and weak referral networks also push clients toward retail solutions for illnesses that require clinical evaluation. Improving practice, therefore, requires more than one-off training.

At the same time, training can help when it is practical, repeated, and linked to referral. A malaria intervention in rural south-east Nigeria trained 16 drug vendors and monitored them for eight months, demonstrating that vendor training was feasible and could improve aspects of malaria treatment and referral practice (Okeke and Uzochukwu, 2009). The implication is not that training alone is sufficient, but that PPMVs can change practice when they receive clear protocols, supportive monitoring, and community legitimacy for referral.

Antibiotic sales and antimicrobial resistance

PPMVs are generally not authorised to sell prescription-only medicines such as antibiotics. However, PPMVs have repeatedly been documented selling non-prescription antibiotics, which is a major concern for antimicrobial resistance (Adamu et al., 2020b; Uzochukwu et al., 2014). Drivers include customer demand, competition, weak enforcement, profit

incentives, limited awareness of resistance, and the absence of accessible diagnostic and prescribing alternatives. When antibiotics are sold without appropriate diagnosis, dosage, duration, or follow-up, the risks include treatment failure, adverse events, masking of serious illness, and selection for resistant organisms.

Antimicrobial stewardship efforts in Nigeria have often focused on hospitals, clinicians, and pharmacists. Yet PPMVs are closer to the everyday points where antibiotics are requested and purchased. In Kano metropolis, Adamu et al. (2020b) surveyed 453 PPMVs and found that 66.7% reported selling antibiotics without a prescription; vendors who had never received training on antibiotic use and resistance had higher odds of non-prescription sales. The authors also used causal-loop diagrams to show that interdependent factors, including client demand, business competition, awareness of resistance, and training exposure, shape antibiotic sales. Any serious national antimicrobial-resistance strategy must therefore include retail medicine outlets through enforcement, education, referral pathways, consumer campaigns, and supply-chain controls.

Medicine quality risks

Medicine quality is another major risk. PPMVs may obtain stock from informal wholesalers or open drug markets where regulatory control has historically been difficult. Poor storage, repackaging, partial dispensing, expired products, and substandard or falsified medicines can undermine treatment effectiveness and public confidence. NAFDAC and PCN have emphasised the importance of controlling drug distribution, including relocating open drug-market actors into coordinated wholesale centres to improve monitoring and reduce the presence of substandard and falsified products (National Agency for Food and Drug Administration and Control, 2024).

The PCN's reviewed guidelines for PPMV licensing state that patent and proprietary medicines should be sold in original, secured containers and that vendors should not repackage medicines (Pharmacy Council of Nigeria, 2024). These requirements matter because repackaging can obscure expiry dates, batch numbers, manufacturer information, dosage instructions, and pharmacovigilance traceability.

Referral practices

PPMVs are often the first contact, but they are not equipped to manage severe illness. Their public-health value depends partly on timely referral. In practice, referral may be weak because vendors lack clear protocols, clients resist facility care, or shops and nearby facilities have no functional relationship. Delayed referral can be dangerous for severe malaria, pneumonia, dehydration, pregnancy complications, neonatal illness, and suspected sepsis. Strengthened integration should therefore include simple referral tools, danger-sign algorithms, feedback loops with primary health-care facilities, and recognition for appropriate referral rather than only for sales volume.

Referral should be treated as a core quality indicator. Malaria and paediatric illness studies show that vendors may recognise some severe symptoms but still dispense medicines before referral. At the same time,

customers may prefer to try retail treatment first because it is cheaper or more convenient (Okeke and Uzochukwu, 2009; Okeke et al., 2006; Prach et al., 2015). Programmes that integrate PPMVs should therefore measure whether danger signs are identified, whether referral is made before inappropriate treatment, whether clients reach the referred facility, and whether facilities provide feedback to vendors.

TB and immunisation studies broaden the referral agenda beyond acute childhood illness. If PPMVs are to support TB case finding, for example, they need simple symptom-screening prompts, sputum or diagnostic referral pathways, and strict limits against stocking or initiating anti-TB medicines outside national programme protocols (Onah et al., 2021; Onyeneho and Chukwu, 2010). To promote immunisation, they need accurate counselling scripts, referral information, and mechanisms to avoid misinformation or missed contraindication advice (Adamu et al., 2020a). In each case, the vendor's role should be designed as an entry point into formal care, not an unsupervised substitute.

REGULATION AND GOVERNANCE

The Pharmacy Council of Nigeria primarily regulates PPMV practice, while NAFDAC regulates medicines and related products. Recent NAFDAC-PCN statements emphasise complementary mandates: NAFDAC regulates the quality, distribution, sale, and use of regulated products, while PCN regulates pharmacy practice sites and practitioners, including PPMVs (National Agency for Food and Drug Administration and Control, 2024). The regulatory framework includes licensing, inspection, renewal, sanctions, and limits on the scope of practice.

Enforcement challenges

However, the scale and dispersion of the PPMV sector make enforcement difficult. Nigeria has many vendors distributed across urban, peri-urban, and rural areas. Many are small businesses; some are unregistered; and some are embedded in informal distribution networks. PCN's 2024 reviewed PPMV licensing guidelines provide for state PPMV licensing committees, original-container sale, restrictions on repackaging, penalties for unlicensed practice, and the power to seal defaulting shops (Pharmacy Council of Nigeria, 2024). These provisions create a legal basis for enforcement, but regulatory effectiveness depends on resources, political support, data systems, inspector capacity, vendor trust, and collaboration with state and local authorities.

Towards balanced governance

One lesson from the literature is that punitive enforcement alone may drive vendors underground. A balanced governance approach should combine credible sanctions for dangerous practices with feasible pathways to registration, training, accreditation, and business compliance. Vendors need to see value in formalisation: access to quality-assured supply chains, recognition, training, referral partnerships, digital tools, and reduced harassment from multiple authorities.

ASSOCIATIONS, ACCREDITATION, AND TRAINING

Vendor associations are an underused governance resource. PPMV associations can convene members, collect dues, disseminate information, mediate with regulators, and create peer pressure around acceptable practice. Studies of PPMV

associations in Nigerian states suggest that such associations may support quality improvement if linked to regulatory agencies and public health programmes (Liu et al., 2020). Association-based strategies are attractive because regulators cannot frequently inspect every shop, but associations may have local knowledge and routine contact with members.

Training has been the most common intervention to improve PPMV practice. Training can increase knowledge, especially for malaria, diarrhoea, family planning, and referral. Yet knowledge gains do not always translate into sustained behaviour change because practice is shaped by profit, customer demand, competition, medicine availability, and weak supervision. The newer tiered accreditation model is therefore more sophisticated than training alone. It links vendor characteristics and qualifications to defined service packages, standards, supervision, and a differentiated scope of practice (Okafor et al., 2024). In family planning, such models may expand access while preserving safety by limiting higher-risk procedures to providers with relevant health training and competency assessment.

The evidence base suggests that the most credible model is a bundle: selection of eligible vendors, competency-based training, job aids, commodity security, supportive supervision, visible accreditation, referral linkage, and enforcement against out-of-scope services. The IntegratE experience is important because it placed PCN in a regulatory leadership role and tested tiered accreditation across Lagos and Kaduna before wider scale-up (Okafor et al., 2024; OlaOlorun et al., 2022). This addresses a major weakness in earlier interventions, in which training sometimes occurred without a durable regulatory architecture.

DIGITAL HEALTH AND FUTURE INTEGRATION

Digital adoption

Digital tools may improve PPMV integration, but only if designed around vendors' real incentives and workflows. A study of digital service adoption among PPMVs in Lagos found that adoption was linked to business motivations and prior on-the-job training, suggesting that digital platforms should solve practical business problems while improving care quality (Agha et al., 2022). Potential uses include stock management, decision support, referral, teleconsultation links, e-learning, licensing renewal, pharmacovigilance reporting, and alerts on substandard products.

Opportunities for integration

Digital integration could be especially useful for areas where paper-based regulation is weak: verifying licence status, documenting referrals, recording adverse drug reactions, flagging restricted medicines, and linking accredited vendors to quality-assured suppliers. However, digital tools should not be designed only as data-extraction systems for government or donors. Evidence on adoption suggests vendors are more likely to use platforms that also improve business performance, stock reliability, customer trust, or access to services that competitors lack (Agha et al., 2022).

Governance considerations

However, digital health is not a substitute for regulation. A poorly governed digital platform can make unsafe retail care more

efficient. Digital interventions should therefore be tied to licensing status, accreditation tier, audit trails, quality-assured supply chains, and referral networks. The most promising model is not the direct replacement of clinicians by vendors. Still, a connected pathway in which PPMVs identify common, low-risk conditions, provide approved commodities, report potential danger signs, and connect clients to trained providers when needed.

POLICY IMPLICATIONS

First, Nigeria should formally acknowledge PPMVs as part of the community-level health ecosystem while maintaining clear distinctions between PPMVs, community pharmacists, and clinical providers. Denying their role does not reduce household dependence on them; it merely weakens oversight.

Second, regulation should be risk-based. Low-risk products and health education can be permitted broadly; higher-risk medicines and services should require accreditation, health qualifications, competency assessment, and supervision. Prescription antibiotics should remain outside routine PPMV sales, with enforcement paired with improved access to legitimate consultation and diagnostics.

Third, PPMV integration should be linked to primary health care. Vendors can be trained to recognise danger signs, refer clients, promote immunisation and antenatal care, support malaria testing pathways where authorised, distribute oral rehydration salts and zinc, provide approved family planning commodities, and report medicine safety concerns.

Fourth, medicine supply chains must be cleaned up. PPMVs should be encouraged or required to source from registered wholesalers and quality-assured channels. NAFDAC-PCN efforts to improve distribution oversight are essential because safe dispensing is impossible when the supply chain itself is compromised.

Fifth, public-health programmes should align with vendor incentives. PPMVs are small businesses. Interventions that ignore profit, stock turnover, customer loyalty, and competition are unlikely to last. Quality improvement can be made more attractive through accreditation branding, access to better suppliers, digital tools, supportive supervision, and reduced regulatory friction for compliant vendors.

RESEARCH GAPS

Several gaps remain. Evidence remains concentrated on malaria, family planning, and selected dispensing practices, with less research on neonatal illness, chronic disease screening, mental health, pharmacovigilance, disability-inclusive access, and the practical economics of regulated retail medicine. More implementation research is needed on how tiered accreditation performs at scale across diverse Nigerian states. There is also a need for rigorous studies on antibiotic stewardship interventions in PPMV shops, the effects of digital decision support, consumer demand-side interventions, and the cost-effectiveness of association-based supervision. Finally, research should distinguish among types of PPMVs rather than treating the sector as homogeneous.

Future studies should also use stronger designs. Much of the literature is cross-sectional, based on vendor self-report, or

limited to selected states. More direct observation, mystery-client studies, longitudinal evaluations, and implementation trials are needed to measure real dispensing behaviour, not only stated knowledge. Economic studies should examine both household savings from convenient access and the hidden costs of irrational dispensing, repeat treatment, adverse events, and delayed referral (Uzochukwu et al., 2014). More research is also needed on how PPMVs perform as referral partners for TB, immunisation, and outbreak response once pilot enthusiasm fades, and routine supervision costs emerge (Adamu et al., 2020a; Chukwuocha et al., 2021; Onah et al., 2021; Onyeneho and Chukwu, 2010). In addition, studies should examine gender and social norms within the PPMV workforce, as women constitute a large share of vendors in some settings and may play distinctive roles in reproductive health access (Agha et al., 2022; FHI 360, 2013).

LIMITATIONS

This review has several limitations. As a narrative review, it is more susceptible to selection bias than a systematic review despite the use of explicit search criteria. The included evidence varies in methodological quality and comprises peer-reviewed studies, programme reports, and policy documents. Much of the literature originates from selected states, limiting national generalisability. In addition, many studies relied on cross-sectional designs and self-reported data, which may not accurately reflect actual practice. Finally, ongoing regulatory reforms and implementation initiatives in the PPMV sector may evolve faster than the published evidence base.

CONCLUSION

Patent and proprietary medicine vendors are not peripheral to Nigerian health care; they are one of its everyday front doors. Their role has emerged from unmet needs: distance, cost, weak public-sector supply, urban-rural inequities, and household preference for quick, familiar, and flexible care. They improve access, increase commodity availability, and provide community-level advice, but they also create risks when dispensing exceeds their competence or legal scope. The policy task is therefore not to choose between prohibition and laissez-faire acceptance. Nigeria needs a middle path of accountable integration: clear licensing, tiered accreditation, quality-assured supply chains, association-supported supervision, stronger referral links, digital tools, and firm enforcement against unsafe practices. With these safeguards, PPMVs can become safer contributors to primary health care rather than unregulated substitutes for it.

DECLARATION OF INTEREST

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Table 1: Comparison of reported patent and proprietary medicine vendor outlets and primary health-care facilities in Nigeria

Service-delivery outlet	Reported or estimated number	Approximate ratio to 30,000 primary health-care facilities
Primary health-care facilities	More than 30,000	1.0
Registered/licensed patent and proprietary medicine vendor outlets	58,000	1.9:1
Estimated total patent and proprietary medicine vendor outlets	More than 200,000	6.7:1

Note: Figures are reported or programme estimates and should not be interpreted as directly equivalent measures of service capacity.

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