

Drug shops as primary point of care—the case of Nigeria

Unlicensed medicine vendors, known as drug shops, are common practice in Nigeria, where primary health providers are scarce. Paul Webster reports.

Mustafa Muhammad, a 50-year-old father of ten living on the outskirts of Kano, Nigeria's second largest city, estimates he spends about US\$3 a month on medications for his family. "Mostly I buy paracetamol", he explains, "for malaria fevers and pain".

The medicines, Muhammad says, come from one of several unlicensed medicine vendors—known locally as drug shops—dotted along a nearby road. "I can also get medicines at a licensed pharmacy further away", he explains, "but there, they cost at least a third more than at the drug shops".

Aisha Idris, a 37-year-old mother of two from the same district, who works part-time for a local health-care unit, says she prefers to buy medicines from the licensed pharmacy, rather than from the drug shops patronised by Muhammad.

Although the drug shop owners are not required to be medically trained, she explains, pharmacists are. "Many people prefer the drug shops because they are cheaper and more convenient", she adds. "But I want accurate information about the medicines I buy."

A necessary alternate health infrastructure

Nigeria is the 13th poorest country in the world with 70% of the population of 182 million living in poverty. Malaria, pneumonia, and diarrhoea cause nearly 1 million children under 5 years of age to die annually. About half of Nigeria's population lives in rural areas, surviving on subsistence agriculture with limited access to functional health-care facilities. In a country with an estimated 200 000 unofficial drug shops and just 2600 licensed pharmacies, the debate over where to buy medicines poses a daily dilemma for tens of millions of Nigerians, says Chinwoke Isiguzo, manager of a programme to

expand public health-care access with the Society for Family Health, a non-governmental organisation in Abuja, Nigeria's capital city.

Isiguzo is part of an interdisciplinary team of Nigerian and American researchers investigating the part played by drug shops—or patent and proprietary drug vendors (PPMVs, see panel), as they are formally labelled by the Nigerian Government—in delivering primary health care.

"In a country with an estimated 200 000 unofficial drug shops and just 2600 licensed pharmacies...where to buy medicines poses a daily dilemma..."

By the government's own admission, the public health system is direly inadequate. In this setting, Isiguzo emphasises, the country's vast network of unofficial drug shops is a "dominant source of health care in the country".

Zaiyanu Musa Halliru, a 30-year-old manager of a shop in the village of Panisau, on the outskirts of Kano, in northern Nigeria, says his shop serves about 50 customers a day. "Analgesic painkillers are the top sellers", he says. But his shop stocks dozens of other medicines, including antibiotics such as amoxicillin. On the shelf behind him, a bottle containing a 7-day solution of generic amoxicillin sells for about \$5. "When a patient comes with frequent pain, I advise him on what to buy, but I also advise him to go to the hospital", Halliru says after explaining that he has a certificate in "environmental engineering", which included some basic health-care training, from a private college in Kano. "We have saved many lives by preventing conditions from getting worse."

A census of 20 624 drug shops in 16 Nigerian states conducted by the Society for Family Health and researchers from the University of California, San Francisco, published in the Bulletin of WHO in 2016, shows the central role played by drug shops.

In southern Nigeria, the census found, the density of drug shops was higher than the density of public and private health facilities, including health posts, dispensaries, clinics, and hospitals. In northern Nigeria, it revealed drug shops are concentrated in rural areas far more commonly than in the south of the country. The same research found that drug shops were "the first source of care for up to 55% of under-five child illnesses, and provide services for 35% to 55% of adults seeking malaria treatment".

Moreover, although drug shop owners are only legally required to have completed primary school, 47% of owners reported completing secondary school, and 37% had post-secondary education. 39% of the shop owners had received some form of health training, and of these, 19% were community health extension workers, 13% nurses and midwives, 3% pharmacists, 2% laboratory technicians or scientists, and 1% doctors.

Based on these findings, the Society for Family Health urged the Nigerian Government to bolster training and regulation to support the role of drug shops in primary health-care delivery.

"There is a large and distributed workforce of drug vendors, many of whom have formal health training, through which basic health services could be provided", the Society argues. "Although previous studies raise concerns about the poor knowledge, drug stocking, and drug dispensing practices of PPMVs, our findings point to the value of working with



Zaiyanu Musa Halliru in front of his shop in the village of Panisau, Nigeria

this sector to improve the provision of accessible essential health services and commodities.”

The Nigerian Government appears to be listening to this advice: in 2014, it issued a policy directive aimed at addressing health-worker shortages that called for drug shops to be included in efforts to provide treatment, counselling, and referral for reproductive and maternal and child health services. In 2015, the government allowed drug shops registered with the Pharmacy Council of Nigeria to provide rapid diagnostic tests for malaria—a step that Isiguzo describes as a crucial government endorsement.

The government has also committed to adding paediatric zinc and oral rehydration salts to the drug shops’ list of approved medications as part of the national Essential Medicines Scale-Up Plan, which also includes education for drug shop staff to improve care for common childhood illnesses.

The government, Isiguzo enthuses, is looking closely at the research into drug shops. “They’re starting to recognise that they could play a much bigger role in delivering local primary health-care services.”

Drug vendors are health providers worldwide

Nigeria is not the only resource-scarce country exploring the idea of integrating unlicensed drug shops

into primary health-care services, emphasises Catherine Goodman, a specialist in private sector health-care provision at the London School of Hygiene & Tropical Medicine. “Various innovations are being implemented across several countries to promote the roles played by drug shops”, she notes.

The role of drug shops was closely explored by the Global Fund to Fight AIDS, Malaria and Tuberculosis within its Affordable Medicines Facility-malaria (AFF-M) project in Ghana, Kenya, Madagascar, Niger, Nigeria, Tanzania, and Uganda between 2009 and 2012, Goodman notes. The project relied on existing drug supply chains, including drug shops, to deliver subsidised antimalarial drugs, she notes. “The AFF-M outcome report tells us that the drug shops are a potentially important avenue for primary health-care improvements.”

“[the government is] starting to recognise that [drug shops] could play a much bigger role in delivering local primary health-care services.”

In Tanzania over the past decade, Goodman says, at least 12 000 drug shops have been enrolled in accreditation and training programmes that allow them to distribute a wide range of prescription drugs used to treat maternal and child illnesses. Uganda and Ghana are also implementing similar policies. Experimental efforts are also underway in India, Pakistan, and Bangladesh to integrate informal drug vendors into health-care services, she adds. “The drug shops are where an awful lot of people seek care and medicines, especially antimalarials”, Goodman says. “If you ignore the drug shops, you’re ignoring the vast majority of the market.”

At a satellite session on the role of drug shops in health-care delivery during the Fourth Global Symposium on Health Systems Research in Vancouver, Canada, last November,

Caroline Quijada, an Associate with Abt Associates, a US-based contract research firm, presented the results of a study, funded by the US Agency for International Development, of drug shop regulation across 32 countries in Africa and Asia.

“Pharmacies are scarce in many of these countries”, Quijada explained before describing drug shops as “a key avenue for expanding access to health products and information”. But before that can happen, she emphasised, many countries will have to dramatically improve drug shop management and regulation.

Of the 32 countries studied, Quijada said, 17 allow over-the-counter sales of pharmaceuticals without supervision by pharmacists, and only seven of these countries require that drug sales be supervised by someone with any health-care training whatsoever. “Most of these countries are silent on referrals from drug shops”, she added, “and there really is very little enforcement of whatever rules may exist”.

In a presentation on the role of drug shops in health-care provision in Uganda, Phyllis Awor from Makerere University in Kampala said that although drug shops serve as the first point of care for half of all febrile children in Uganda, diagnostic quality is notoriously poor.

In one study, Awor found that only 10% of patients presenting at drug shops in eastern Uganda received appropriate treatment for malaria and almost none for pneumonia symptoms or diarrhoea. “Most of the drug shops are owned, but not staffed by clinicians”, Awor explained. However, after staff were trained in integrated community case management guidelines recommended by WHO and UNICEF, 90% of children were treated according to the guidelines. “Training subsidies for these private sector workers may be warranted”, Awor concluded.

The endorsements from Quijada and Awor for an expanded role for drug shops drew cautious support from

Bhupinder Aulakh, Secretary for Health and Family Welfare for the State of Uttarakhand, in northern India. “You can’t do things in a country if you are oblivious of the existing system, and drug shops and pharmacies are part of the existing system”, she observed. “But I think most often these shops are staffed by untrained people. So there’s a need for regulation.”

In Bangladesh, where drug shops are estimated to be the first point of health-care contact for 70% of the poor, Ramesh Govindaraj, a lead health specialist in the South Asia Human Development Department of the World Bank, described a “massive, often unregulated, growth in the private sector” during one session on the role of drug shops and other private sector health providers in Bangladesh. “It’s something we ignore at our peril”, he warned. “The question is how to engage with them to build resilient health systems.”

The main debate about the drug shops, Goodman emphasises, is “what should be the scope of their role? Do we want them doing diagnostic tests? Safely taking blood samples? Measuring respiratory rates for pneumonia? Distributing what kinds of contraceptives?”

In pursuing the idea that better-regulated drug shops operated by better-trained staff could bolster the delivery of primary health care in numerous countries, Goodman warns that this should not lead to diminished investment in public health services. “There are many people who feel working with the private sector is anti-equity because it may exclude the poorest who can’t pay”, she notes. “You need to strengthen the public sector anyhow you can.”

Improving health outcomes with training

With support from the Global Fund and the Gates Foundation, Family Health Services (FHS) has trained 60 000 Nigerian drug shop employees in the fundamentals of integrated

management of family health care. Partly as a result, says Jennifer Anyanti, the Chief Strategic Technical Officer at FHS, “there has been a marked drop in malaria prevalence”.

The training scheme offers three tiers of instruction, explains Anyanti, the most basic of which is similar in rank to a junior community health extension worker. “It’s similar to what has been done in Tanzania”, she said, describing the effort as part of a “strong push” to promote the role of drug shops that included an unsuccessful legal attempt last year by the National Association of Patent and Proprietary Medicine Dealers to wrest regulatory control from the Pharmaceutical Council of Nigeria, which is primarily dedicated to serving the interests of pharmacists.

If the role of the drug shops is to expand, said Anyanti, “it has to be done in concert with the federal government”, which faces increasing criticism for faltering on a pledge last year to refurbish 10 000 primary health clinics.

Magdalene Okolo, director of the Maternal, Newborn and Child Health Project at Family Health Services, which trains community health workers to use live-saving drugs, including misoprostol to stop postpartum bleeding, decries the lack of action to expand the role of drug shops. “They should be encouraged to stock life-saving commodities such as misoprostol because people are dying”, she urges. “People are getting their drugs directly from the drug shops to save their lives because most of the primary health-care centres are not functioning. The government cannot handle the demand.”

“The government is interested in the idea of expanding the role of the drug shops because they have helped decrease malaria prevalence, and because these are community businesses with responsibility to the community, and because they operate with very low overheads”, Anyanti explains.

Panel: drug shops—some key points

- Drug shops are lower-tier retail outlets, with no pharmacist on staff, that sell over-the-counter drugs, chemical products, and household remedies in scores of countries in Asia and Africa.
- In sub-Saharan Africa, drug vendors provide between 15% and 83% of all child health services.
- Drug shops account for as much as 75% of the total family planning market in Benin, the Democratic Republic of the Congo, Côte d’Ivoire, Guinea, and Nigeria.
- Regulations in most countries emphasise rules for products (eg prohibiting sales of counterfeit medicines), not services. There are seldom rules related to patient screening, counselling, or referrals to clinical providers.
- Most regulations make no mention of the duty of drug sellers to assess eligibility and appropriateness for particular medicines.

In Makoko, a sprawling waterfront slum community of 85 000 in Lagos, Chief Erejuwa Samuel Adebowae, a 57-year-old local political leader, said that government health officials actively deter patients from relying on the numerous nearby drug shops even though the local government clinic is non-operational. “We have ministry people coming here telling us only to get drugs from approved pharmacies, and from the health centre”, he complains. “But our nearest health centre is too far away, we need to bring it closer.”

Akinterinwa Tematore, a health education officer for the Lagos Mainland Local Government in Makoko, says government efforts to continue to limit the role of the drug shops and encourage patients to use pharmacies and clinics are largely futile. “I leave Makoko to go home at four in the afternoon”, she said, “but the drug shops are always here, they’re always open, and there’s no one to check on them”. The solution, says Tematore, is to regulate the shops and train their staff so they are far more closely aligned with public health clinics.

“Patients shouldn’t have to choose between the two”, she says. “We need both.”

Paul Webster