

# From Nigeria to Benin: Applying a Vendor Awareness Initiative to Combat the Counterfeit Drug Trade



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*NIGERIA AND BENIN ARE BOTH COUNTRIES THAT HAVE FACED A WIDESPREAD EPIDEMIC OF COUNTERFEIT DRUGS. NIGERIA WITH THE USE OF AN AWARENESS PROGRAMS AND THE PATENT MEDICINE VENDORS PROTOCOL WAS ABLE TO CONTROL THE PROBLEM. BENIN ON THE OTHER HAND, STRUGGLED WITH THE APPLICATION OF THIS MODEL. THIS ARTICLE WILL PROVIDE A BRIEF INTRODUCTION INTO THE ISSUE OF COUNTERFEIT DRUGS AND THEN COMPARE NIGERIA AND BENIN'S STRATEGIES IN COMBATING THIS ISSUE.*

In 1995, Niger fell victim to a meningitis epidemic and one of the worst reported cases of counterfeit drugs. In an attempt to establish a vaccination campaign, Niger received 88,000 meningococcal vaccine donations from its neighbouring western African country, Nigeria. However, due to suspicious batch numbers and expiration dates that conflicted with those recorded, the vaccines were later identified as counterfeits. 2,500 deaths were reported as a result of this.

This problem is widespread globally with severe consequences, yet it remains one of the most under-reported global health issues today. A universal definition for the term "counterfeit drug" has not been formally developed. The World Health Organization (WHO) has offered the following as a starting point:

...one which is deliberately and fraudulently mislabelled with respect to identity and/or source. Counterfeiting can apply to both branded and generic products and counterfeit products may include products with the correct ingredients or with the wrong ingredients, without active ingredients, with insufficient (inadequate quantities of) active ingredient(s) or with fake packaging.

The vague definition of the term allows it to encompass the many different issues involved with counterfeit drugs, but at the same time, it acts as a hindrance to the formulation of much-needed laws and policies to mitigate the issue.

## **NIGERIA: A SUCCESS STORY**

Nigeria is the central hub of drug trade in Sub-Saharan Africa. While drug counterfeiting still exists there, Nigeria's

successful attempts to resolve this issue set a solid example for neighbouring countries. Much of this success is due to the newly reformed National Agency for Food and Drug Administration and Control (NAFDAC), initially established to regulate and control quality standards for foods, drugs, and other products imported, manufactured locally, and distributed in Nigeria. Since Dora Akunyili's induction as president in 2001, many changes have been made to combat the prevalence of corruption and counter the harmful effects of inadequate border surveillance, healthcare, and education system. However, the most effective solution against counterfeit drugs was the public awareness campaigns executed through a variety of media such as posters, radio broadcasts, billboards, fliers, and news articles. These campaigns worked to teach the poorly educated population how to recognize the differences between genuine and fake drugs (Akunyili, 2006). The success of NAFDAC's efforts became evident and widely acknowledged in 2005 when an estimated 16 million USD worth of counterfeit drugs were voluntarily handed over or confiscated via tip-offs (Raufau, 2006).

## **BENIN: A WORK IN PROGRESS**

Benin is another West African country that borders Nigeria to the east (Bernagou, 2008). Benin's characteristics are similar to those of Nigeria with its low literacy rate, poor healthcare infrastructure, and lack of regulation of the pharmaceutical sector. In its economic capital, Cotonou, is Adjegounle, the notorious "kingdom of street pharmacies" that spans more than 10,000 square feet (Vidjingninou, 2009). This illicit drug market has been linked to at least 250 deaths and 340 cases

of chronic illnesses between April 2007 and June 2008 (Vidjingninou, 2009). In a country where many struggle to make ends meet, people turn to the counterfeit drug market to purchase cheaper drugs (Vidjingninou, 2009), because of the opportunity for bargaining (Bernagou, 2008). The counterfeit drug situation is further exacerbated by street vendors who go door-to-door to sell less expensive, unregulated medications (Bernagou, 2008). Since 2003, public awareness campaigns concerning counterfeit drugs have been carried out in Benin, but the primary limitation of these campaigns is that they did not target the vendors along with the rest of the population (Bernagou, 2008). The result was that as the number of visits from travelling vendors decreased, the counterfeit drug situation in the market worsened (Bernagou, 2008). Therefore, awareness campaigns need to extend beyond the general public to target vendors as well.

### **DESIGN OF THE PATENT MEDICINE VENDORS (PMV) AWARENESS CAMPAIGN: APPLYING NIGERIA'S INTERVENTIONS TO BENIN**

In light of the severity of the counterfeit drug trade in Benin and its similarity to the pre-2001 circumstances in Nigeria, a promising solution would be to borrow elements from one successful awareness campaign targeting PMVs launched in Nigeria and apply it to Benin. While local NAFDAC awareness campaigns have been reported to be more efficacious than improvements in government regulatory control, similar public initiatives in Benin have not been successful in raising awareness among medicine vendors in conjunction with targeting the public (Bernagou, 2008).

Furthermore, a cross-sectional survey conducted in Benin regarding citizens' drug purchase patterns reported geographic and financial barriers to access genuine medications from government-

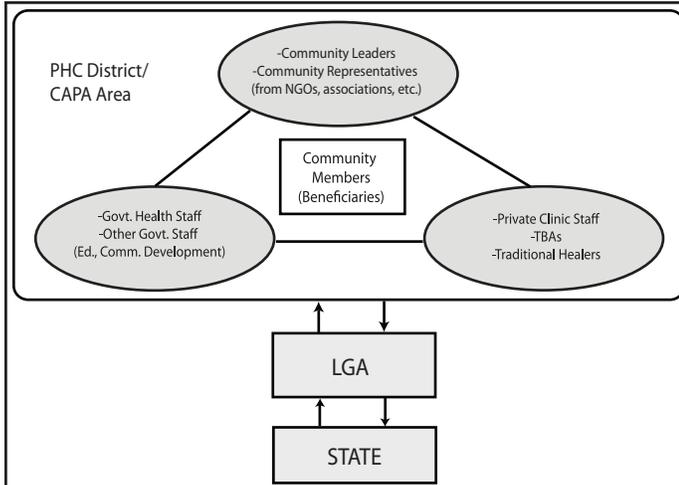


Courtesy of the McMaster Photography Club

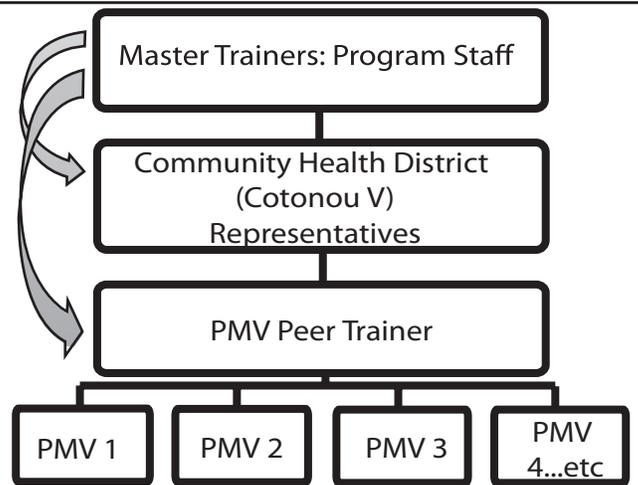
owned health centres, placing PMVs as a first point of contact for both unofficial primary health care consultation and prescription of medicine (Abdoulaye et al., 2006). The majority of those surveyed do not commonly visit a physician prior to purchasing prescription medications due to high costs (Abdoulaye et al., 2006). Therefore, a novel approach would be to target PMVs in an extensive awareness campaign using peer-directed, participatory education to improve their knowledge of current treatment protocols, as well as to strengthen their commitment to providing quality medicines to their communities. The idea for this initiative primarily stems from a successful 2003 PMV awareness campaign which improved PMV knowledge of malaria symptoms and the responsible prescription of appropriate malaria drugs in the Nigerian communities of Aba North and Aba South (Greer et al., 2004). Given the reported positive outcomes of this intervention - including a three-fold increase in PMV knowledge about malarial prophylactic measures and a nearly six-fold increase in PMVs recommending the correct dose in treatment regimen - there is convincing evidence to support the application of the Nigerian malaria

awareness intervention as a model to combat the counterfeit drug trade in Benin (Greer et al., 2004).

This intervention aims to target PMVs practicing in the community health district in which Adjegounle is found. The cascade peer training approach excels in resource-limited settings due to lowered costs and reduced time interval for the intervention to reach all PMVs in the community (Greer et al., 2004). Moreover, the cornerstone of such a model is its intimate small-community setting, which capitalizes on the established relationships of PMVs with neighbouring clients. Furthermore, a comprehensive review of 16 PMV interventions in sub-Saharan Africa concluded that features of the most efficacious campaigns involved participation of the entire community, material incentives for PMVs, and continued monitoring of performance - all of which are key components in this adapted model (Goodman et al., 2007). From the Nigerian PMV malaria awareness campaign (Greer et al., 2004), we seek to borrow and apply the following elements: 1) partnership coordination and baseline census; 2) peer-directed cascade training model; and 3) supplementary media, materials, and monitoring.



**Figure 1** Essential components of the community health district committee which would coordinate logistics during the intervention and provide ongoing support to trained patent medicine vendors following the training.



**Figure 2** Overview of the PMV cascade training model that will be followed throughout the intervention process

**1) Preparation: Partner Coordination and Census**

Consistent with the Nigerian PMV awareness campaign, coordination of various agencies is crucial to the campaign's success in Benin. Development agencies - including BASICS (Basic Support for Institutionalizing Child Survival) and the Chirac Anti-Counterfeit Drug Initiative - would provide medical staff to act as master trainers as well as logistical and financial support. Benin's National PMV Association is another key stakeholder as they would serve to mobilize and persuade PMVs in communities to attend awareness campaign sessions. Furthermore, another important preparatory step instituted in the Nigeria campaign that is also applicable to the Beninese context is the baseline census, assessing geographic distribution, pre-intervention practice patterns, and potential interest in participating in the prescribed awareness campaign.

**2) Intervention: Peer-Directed Cascade Training**

As seen in Figure 3, a peer-directed cascade training model was adapted from the original Nigerian campaign. First, master trainers (medical staff) from partner development agencies would conduct a

workshop for the CHD committee (Greer et al., 2004). Each district's committee - comprised of community leaders, NGO representatives, traditional health practitioners, and physicians, among others - subsequently select four PMVs as a core group of peer trainers for the community, depending on criteria such as literacy, possession of the secondary school certificate, and residence in the community for more than two years (Greer et al., 2004). Master trainers would then deliver an educational workshop to the group of peer trainers, who would each host awareness campaigns in their respective regions to small groups of local PMVs (Greer et al., 2004). This community-based PMV training aims to teach each PMV to effectively identify genuine versus counterfeit packaging, understand standard treatment regimens for common region-specific diseases in Benin, and to recognize symptoms severe enough to require referral to a physician.

**3) Supplementation: Materials, Media, and Monitoring**

One of the primary incentives for PMVs to attend the awareness campaign is the provision of a certificate upon completion. Trained PMVs must sign a pledge of accountability to sell only

genuine medications in their community. Importantly, a key incentive is the provision of logos for PMVs to present on the walls of their shops to identify them as trained professionals, upon completion of the intervention program (Greer et al., 2004). As adapted from the Nigeria PMV intervention model, media promotion is an important adjunct to the central awareness component. Specifically, radio programs can serve to mobilize and encourage local PMVs to attend the peer-lead awareness sessions outlined above. Thus, representatives from all sectors of the healthcare system in the community jointly ensure that each PMV is responsible for guaranteeing the safe provision of medications to local districts.

**UNDERLYING ASSUMPTIONS AND CONCLUSION**

Careful consideration has been put into re-designing Nigeria's program for Benin in the hopes of combating the counterfeit drug industry. By applying many of the program's components to the Benin model including the structure of the training course and the evaluation criteria, the model can be expected to experience similar success. This is based on the assumption that Benin is comparable

to Nigeria with regards to a low education level among PMVs and a reliance on PMVs due to poor accessibility to Primary Health Centers (Goodman et al., 2007). The proposed program is also likely to perform well in Benin due to its time and cost efficiency (Greer et al., 2004), thus reducing strain on the nation's limited budget. In addition, it is believed that this community-centered program will increase the strength and awareness of community groups, leading to a more effective and collective framework in which problems can be dealt with (BASICS II, 2004).

Ultimately, if evidence suggests that a vendor-targeted training model such as the one proposed above is effective in reducing

the distribution of counterfeit medications in Benin, there is potential to tailor the program to other countries plagued with counterfeit drugs. It is important to remember that PMVs only comprise a small portion of the counterfeit drug industry. Thus, interventions exclusively targeting PMVs will not completely resolve the problem as they are necessary but insufficient determinants to the suppression of such illicit activities. Moving forward, it would be important to implement regulatory protocols such as anti-corruption and border surveillance initiatives, along with stricter law enforcement, to further the potential progress of this PMV awareness campaign. 

## POSTGRADUATE EDITOR IN FOCUS

**Dr. Ryan Wiley** Please refer to page 7 for Dr. Wiley's biography.

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For a full list of references, please refer to [www.meducator.org](http://www.meducator.org)