



IFPW and IFPW Foundation Expand Reach In Kenya & Ghana

IFPW, through its Foundation, has been active with GAVI, the Vaccine Alliance since January 2016 when an agreement was signed to support Centers of Excellence in both East and West Africa. Since that time IFPW has funded graduate level scholarships for students in Supply Chain studies, and most recently sponsored and supported STEP Leadership classes for Ministry of Health public sector vaccine managers. STEP Leadership is a highly effective 5-day course in basic management and people skills ; it also requires 4 weeks of online pre-work, 2 weeks of post-work online, and 3 months of face-to-face mentoring by a private sector partner, in many cases an IFPW member company.



George Bray (IFPW), Ruby Headley (UPS Foundation), and Temi Adaramewa (Africa Resource Center)

The coordination of this program is complex, sophisticated, and involves close networking with companies providing sponsors, and in-country implementing partners, and requires high organizational and management skills to execute successfully. Having gained valuable experience through the implementation of courses in Rwanda, Uganda, and more recently Nigeria, as well as having seen the powerful impact that STEP graduates have had on vaccine supply chains, IFPW Foundation has committed more time and resources to STEP.

Success builds on success, so when the opportunity to lead the implementation of STEP Leadership courses in Nairobi, Kenya in March 2019 presented itself, IFPW Foundation raised its hand. George Bray, Vice President of Programs and Services, managed a successful implementation of two STEP Leadership courses in Nairobi, Kenya March 11th -15th. Twenty-eight mentors supported the STEP class led by IFPW members Imperial Logistics, GlaxoSmithKline, and Merck, African wholesaler Phillips Pharma, and Johnson & Johnson, a supporter and frequent collaborator with IFPW. All 47 counties in Kenya were represented and the Kenyan Ministry of Health was on hand to kick off the program, provide support throughout the week, and challenged the participants to travel back to their counties and implement lasting change. Similarly, two STEP Leadership courses were implemented in Accra, Ghana March 25th -29th utilizing the same IFPW members and supporters.

The Kenya and Ghana experiences prove that successful execution

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Around the Globe...

◆ The **World Health Organization** has issued a global alert warning to patients, doctors and pharmacies of a fake cancer drug circulating in Europe and the Americas. The fake medicine is packaged to mimic the cancer drug *Iclusig* used to treat adults with chronic myeloid leukemia and acute lymphoblastic leukemia. The labels are printed in English, while the falsified drugs contain only paracetamol. The boxes are in 15 mg and 45 mg pills. "There's an active ingredient so it's a really high value product," said Michael Deats, who leads the vigilance group on fake medicines at WHO in Geneva. "It's dangerous. We're concerned about this one." Deats said the market for these fake medicines would be people with cancer and their families in countries where the drug was not made available for free, or who did not have enough health insurance to pay for it.

■ **Walgreens Boots Alliance** published its 2018 Corporate Social Responsibility (CSR) Report, showcasing the company's global sustainability initiatives to prevent opioid abuse, support cancer patients and their families, and address malnutrition and other health issues in communities around the world. The company's CSR strategy is largely focused on health care initiatives, particularly access and affordability, due to the nature of the company's pharmacy and well-being business. Through partnerships with like-minded organizations, the company has helped provide life-changing vitamins and mineral to more than 160 million children and women, and more than 34 million lifesaving vaccines to children in developing countries. "As a pharmacy-led global company we have a tremendous opportunity to change the world for better. Through our health-centered initiatives, we have had a positive impact on millions of people in the communities we

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Using Blockchain in the Battle Against Fake Medicines

(Sources: An article by Akshay Makadiya for BitsOnline.com, and an article by Chioma Obinna for Vanguard Nigeria)

According to the World Health Organization (WHO), fake and counterfeit medicines remain a top public health concern, with one in ten drugs sold in Africa falling into the category of falsified or substandard. Many of these drugs are lethal and contain little or no active ingredients to combat the illnesses and diseases they are purported to treat, thus prolonging illness and frequently resulting in death. It has also caused a sincere and visible lack of public trust in the current healthcare system. Globally, the WHO estimates the global counterfeit drug trade is worth as much as US\$200 billion, and that falsified and counterfeit drugs account for as much as 30% of the African continent's total pharmaceutical supply. In 2018 alone, the National Agency for Food and Drug Administration and Control (NAFDAC) destroyed fake foods and drugs worth approximately US\$11.56 million through enforcement raids in Abuja, Shagamu, Ogun State and Gombe.

Despite these efforts, counterfeiting of drugs continues unchecked and unabated. Health observers worry that the efforts are failing through the loss of milestones attained when the continent saw a 40% reduction in counterfeit and falsified medicines in 2001, which fell to 16.7% in 2005 (according to a survey conducted by NAFDAC and WHO.)

But there is a concerted effort to employ blockchain technology to

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Kenya and Ghana (cont.)...

of a STEP class is challenging, and experience gained through previous implementations provides essential learning and leads to success if coordinated well. The work that GAVI, IFPW Foundation, and IFPW members and supporters have done demonstrates the scalability of the STEP Leadership class and is truly making a significant impact on supply chains in the developing world.

George also toured both the Imperial and Phillips operations while in Nairobi and will bring market-driven learning and experiences to other IFPW members as both companies will attend IFPW's 2019 CEO Roundtable at the Corinthia Hotel in London on May 9th and 10th.



STEP- Kenya Class Participants, Mentors, and Facilitators

Blockchain (cont.)...

thwart counterfeiters. IBM's Haifa facility – the largest IBM lab division outside the U.S. – is creating a permissioned blockchain network that aims to track and restrict the constant flow of counterfeit medications into the African continent. IBM is also working towards partnership with various African enterprises. The tracking system will enable all participants in the value chain to track and authenticate the efficacy and provenance of all medicines, allowing drug wholesalers and distributors to track them all the way back to the manufacturers.

While this solution is backed by a permissioned distributed ledger, it will employ a simple user mobile interface that will allow participants to validate all transactions on the shared ledger. Africa is an excellent test ground for the technology, as the drug supply chains are much more complex than many parts of the world. It is not unusual for drugs to move through up to 30 participants before reaching the destination pharmacy.

The need for drastic improvement in the African drug supply chain has been in the crosshairs of drug companies and the drug distribution supply chain for many years; however, to date, existing solutions have failed. It is possible that an immutable, transparent and distributed ledger may find success where other solutions have not.

One of the primary sources for Africa's counterfeit and falsified medicines problem revolves around pharmaceutical importers, who import the drugs from manufacturers in China and India. Interestingly, the Indian government has already begun to address the counterfeit drug problem through blockchain technology. In 2018, Indian policy think tank Niti Aayog partnered with American software giant Oracle to conduct trials using a real drug distribution chain that employed blockchain technology.

Other governments around the world are also considering the blockchain as a solution to counterfeit medications. In February of 2019 U.S. Food and Drug Commissioner, Scott Gottlieb, recommended using blockchain for improving existing pharmaceutical supply chains. Gottlieb stated, "We're invested in exploring new ways to improve traceability, in

some cases using the same technologies that can enhance drug supply chain security, like use of blockchain."

Others, such as European software giant SAP also launched a blockchain-powered drug distribution tracking system that allows supply chain participants to authenticate medical packages returned by pharmacies, with the primary aim of eliminating counterfeit drugs from the global market.

Around the Globe (cont.)...

serve and in underserved areas across the planet," said *Ornella Barra*, Walgreens Boots Alliance co-chief operating officer and chairman of the Corporate Social Responsibility Committee.

- ◆ **FabRx**, a spin-off of the **UCL School of Pharmacy** in London, has been awarded funding from Innovate UK to advance 3D printing into clinical pharmacy practice. The aim is to overcome the challenges of establishing a good manufacturing practice and regulatory requirements, both integral parts of the pharmaceutical production. The grant, totaling more than US\$751,000 will develop a GMP 3D printing platform that is safe and fit-for-purpose for the production of printed tablets, otherwise known as printlets, at the point-of-care, such as within hospital pharmacies or special manufacturing units, allowing for more accurate dosing. Concept medications will also have personalized options such as shape or flavor, making it more enjoyable for children to take their prescribed medications.

- ◆ A **Europol**-coordinated operation **MISMED 2** (led by the French Gendarmerie Nationale and Finnish Tulli) resulted in 435 arrests and yielded as many as 13 million units and 1.8 tons of medicines. Twenty-four organized crime units were disrupted and criminal assets totaling US\$3.6 million were recovered. The joint actions were carried out over a period of seven months (April to October of 2018) and details of which are only now being released due to operational reasons.

- ◆ Researchers of the **University of Notre Dame** are developing a paper test used to spot fake and degraded medicines. The test card, named "paper analytical device" or PAD, can be used to quickly "read" the authenticity and efficacy of a pill, much like a barcode. The user simply swipes a sample across the card then dips it into water to activate the test. The PAD test will enable doctors, pharmacists and regular individuals to quickly test whether a medication being sold is actually what it is being marketed as to the public.

- ◆ The African continent is now one step closer to its first medicine and health super-regulator. The planned treaty will establish the **African Medicine Agency (AMA)** and will provide government oversight and regulation on medical products for the entire continent. It has been endorsed by the **African Union Heads of State and Government** on February 11, 2019, according to a press release following the 32nd African Union Summit in Addis Ababa, Ethiopia.

- ◆ **Merck** continues to spearhead efforts to combat the world's second-largest Ebola outbreak in the sub-Saharan Republic of Congo. The vaccine maker prepared another 120,000 doses to aid officials in stopping the virus, according to a company representative speaking at the World Economic Forum in Switzerland. Merck is also seeking approval from the U.S. FDA for the vaccine. Under an FDA breakthrough tag, Merck began the process for a rolling submission for its shot last November and expects to finish the process in 2019. The vaccine has yet to receive international approvals, but vaccine advisers for WHO have recommended its use to combat outbreaks when no licensed vaccines are available. Merck's vaccine was used in a smaller outbreak in Congo last year, and in July WHO reported that the outbreak "had largely been contained." However, days later another outbreak was reported in a war-torn region. Rebel attacks and poor infrastructure make it difficult for officials to combat the deadly disease.

(Sources: AP, FiercePharma, Medical Express, Press Releases, R&D Magazine, The Guardian and The Telegraph)