

# Case study

## Using technology to improve access to medicines in Ghana

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November 2021



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Out-of-pocket payments are the main method of health care financing in low-income countries with out-of-pocket payment being the main means of accessing medicines in African countries. Consequently, availability and affordability of medicines need to be significantly improved for the achievement of Universal Health Coverage.



[Photo credit: [mPharma](#)]

Constrained access to affordable, quality, safe and effective medicines is leading to the proliferation of substandard and falsified medical products. Frequent stock outs interrupt medicine supply forcing people to opt for low-grade alternatives which are often cheaper. According to the WHO, the African region reported the highest cases of substandard and falsified medical products.

Founded in 2013, Ghana-based mPharma is **using technology to improve access to medicines by providing innovative financing and inventory management solutions** to hospitals, pharmacies, and patients.

Through a digital prescription and inventory management system deployed over a network of pharmacies, mPharma knows in real-time the exact location and availability of any

medicine of interest. With this analytical data, mPharma aggregates and predicts demand across its network of pharmacies. Through group purchasing, mPharma then negotiates lower prices with pharmaceutical manufacturers on behalf of its network, allowing the company to distribute genuine quality medicines at or below market prices.

mPharma has a disruptive business model whereby it stocks pharmacy shelves on a consignment basis. Instead of pharmacies buying stock, mPharma gives it to them and implements a revenue sharing model based on actual sales. **Empowered by predictive data models, mPharma can absorb the financial risk, manage expiry dates, and prevent stock outs** through a stock transfer tool that enables pharmacy managers to transfer stock between pharmacies in its network.

This **lowers the price of medicines for patients** through preventing fluctuations in the supply: demand dynamics of medicines caused by stock outs. mPharma also built a proprietary credit assessment system into their pharmacy operating software to offer patients interest-free payment plans at the point of sale. This offers patients an option to pay flexibly over the course of their treatment even through mobile money.

With the fuel of funding from foreign investors, mPharma's proprietary vendor management inventory system is being used in a network of over 850 pharmacies spanning across Ghana, Nigeria, Kenya, Zambia, Zimbabwe, Malawi and Ethiopia. According to mPharma they have helped 2 million patients make savings on high quality medicines through medium sized clinics and community pharmacies achieving price reductions of up to 30 per cent.

In addition to collecting anonymised analytical data for supply chain purposes, mPharma supplies drug companies and health ministries with data to improve pharmacovigilance and patient adherence to medication.

#### **Key lessons:**

- Data technology can be deployed to meet the crucial need for affordable, accessible and quality medicines across Africa through improving medicine supply chain efficiency.
- Digital data can disrupt the pharmaceutical industry with new business models that offer patients access to medicines at lower prices.
- Digital health technology effectively deployed over a wide network can counter the rise of counterfeit medicines.

## References:

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