

## PIH's abstract presentation at the 23rd International AIDS Conference, 6-10 July 2020

HIV and strengthening of supply chain systems: implementing an open-source supply chain management software system to maximize access to health commodities.

### Background

Partners In Health (PIH) works in 11 countries to build capacity and strengthen health systems in the public sector. While HIV scale-up has necessitated robust supply chain systems and morbidity-based procurement and distribution of ART, the same has not been true of other health commodities in many countries. HIV programs depend on strong health systems, and access to medications, medical supplies, diagnostics, and equipment is a cornerstone of those systems. Because of this need, PIH developed a software system to improve the public supply of health commodities required for comprehensive HIV prevention and care. PIH uses this tool, OpenBoxes, to support ministries of health in Haiti, Liberia, Malawi, Rwanda, and Sierra Leone.

### Description

Like many global health organizations, PIH historically had limited visibility of supply chain data to inform inventory management, forecasting, budgeting, and procurement. PIH largely based purchasing decisions on historical spend, adding safety stock across product categories to absorb consumption increases. In 2012, PIH began a phased implementation of OpenBoxes, a free, open-source supply chain management software designed for global health implementers. OpenBoxes has minimal hardware requirements, flexible implementation options, an intuitive user interface, and functionality to enable coordination across multiple supply chains (i.e. public sector, non-governmental organizations).

### Lessons learned

With the development and implementation of OpenBoxes, PIH has increased visibility across the HIV prevention and care supply chain, enabling real-time monitoring of inventory levels, expiry dates, and incoming and outgoing quantities of health commodities. These data inform decisions regarding order frequency, safety stock, and in-country distribution. OpenBoxes also transforms consumption and request data into a demand signal, facilitating purchasing decisions that are based on real need and correct for observed gaps in availability, thereby preventing stock outs. Since PIH began using demand data for forecasting, fill rates (the percentage of demand met from available stock) have consistently reached 90%.

### Conclusion and next steps

Implementing purpose-built software can facilitate supply chain improvements in resource-limited settings by increasing data visibility, highlighting opportunities for process improvements, informing budgets, and increasing forecast accuracy. OpenBoxes is one example of such software—a free, open-source option for ministries of health and healthcare implementers globally to use and to contribute to.