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USAID GLOBAL HEALTH SUPPLY CHAIN PROGRAM
Procurement and Supply Management

PROTECTING PATIENTS FROM MALARIA USING A DATA ANALYTICS APPLICATION TO REDISTRIBUTE HEALTH COMMODITIES IN ZAMBIA

In Zambia, COVID-19 restrictions limited direct oversight at health facilities as well as access to supply chain data. At the same time, global disruptions caused by COVID-19 increased the need for quality data to identify supply chain gaps and make quick decisions.

AUTHORS: DARWIN CHIMENGE, MWICHE TREVOR LUNGWE, CHITI NSELUKA, USAID GLOBAL HEALTH SUPPLY CHAIN PROGRAM-PROCUREMENT AND SUPPLY MANAGEMENT PROJECT, LUSAKA, ZAMBIA
CHRISTOPHER MPUNDU, CHONGWE DISTRICT HEALTH OFFICE, MINISTRY OF HEALTH, LUSAKA, ZAMBIA

CHALLENGE

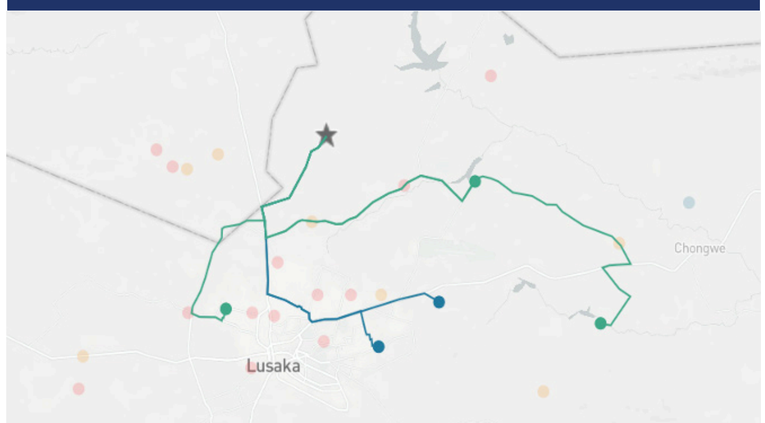
Zambia's Ministry of Health oversees 2,900 health facilities and hundreds of different commodities. Previously, when the facilities required redistribution of supplies to mitigate stockout risk—including supplies needed to prevent and treat malaria—it was done manually. This was a time-intensive and error-prone process, and facilities often missed stock redistribution opportunities, leaving some patients without malaria tests and medicines.

Pharmacist Christopher Mpundu monitors health commodity stock at Chongwe District Health Office; the SRT allowed him to avert malaria treatment stockouts by connecting with another district hospital that had an overstock of the commodity. Photo credit : GHSC-PSM

APPROACH

In April 2019, the USAID Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM) project introduced the Stock Redistribution Tool (SRT), an advanced analytics tool to support monthly redistribution of supplies from overstocked, to stocked-out and under-stocked health facilities. The tool uses logistics management information system (LMIS) data from facilities to automatically identify stock transfer options.

STOCK REDISTRIBUTION TOOL SNAPSHOT



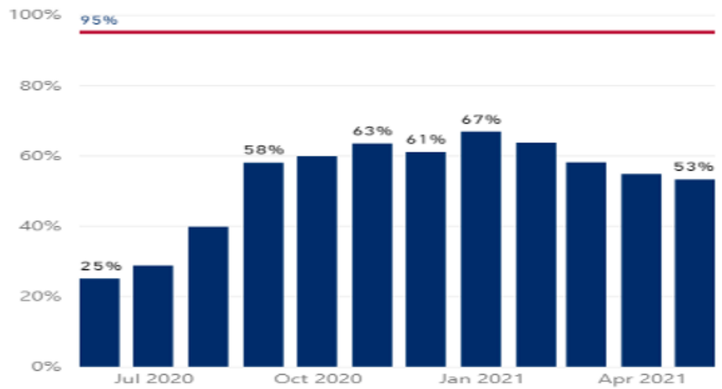
Key: Yellow - Understocked Red - Stocked out Blue - Overstocked Green - Adequately stocked

The tool has an intuitive interface that allows users throughout the supply chain to examine the stock status of an entire province or a single facility. Visual cues, like a map and color-coding, recommend transfers and mitigate stockouts and expiries—reducing instances of clients not receiving treatment.

RESULTS

GHSC-PSM trained central level Ministry of Health staff to use the SRT over 4 months and then supported the Ministry to roll out SRT to district- and local-level users nationwide in late 2020. Since July 2020, many stockout risks were addressed using the SRT. For example, the tool helped avert 42 stockouts of the malaria treatment sulphadoxine/pyrimethamine in one district in April 2021 and 124 stockouts across four health programs between February and May 2021. In one case, a pharmacist in the Chongwe District Health Office used the tool to connect with another district hospital and restock the malaria treatment artemether-lumefantrine.

SULPHADOXINE/PYRIMETHAMINE STOCK AVAILABILITY



The SRT has helped reduce stockouts for sulphadoxine/pyrimethamine (SP) in Chongwe district. After redistributing SP stock in July 2020, SP availability improved from 25% in June 2020 to 67% in Jan 2021. The district has since avoided stockouts through monitoring using the SRT.

CONCLUSION

The SRT replaced an ineffective manual process for stock redistribution, allowing swift action to prevent stockout risks and demonstrating that using appropriate information systems helps protect patients.

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