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Transportation: The Key to Effective Last-Mile Distribution in Zambia

Gareth Bentley 2013

All-terrain vehicles help MSL maintain commodity delivery even in difficult conditions.

To deliver health commodities to all facilities nationwide, distribution schedules must be well-planned and take into consideration weather and geographic conditions at certain times of year.

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An effective health service comprises many components, including a well-functioning supply chain; the availability of commodities at the health facility is one key part of the logistics system that ensures the end user can receive the health service they need.

Delivering health commodities to the last mile, the point of service delivery, involves many processes and several modes of transportation. Commodities must come from manufacturers—often in foreign countries—to national warehouses, then to local storage units, and finally to the local health facility. In the countries where the USAID | DELIVER PROJECT implements supply chain programs, logisticians employ several models for the delivery of health supplies to service delivery points.

In Zambia, commodities can be distributed to health facilities by the Ministry of Health at the district level or by the central medical store. Regardless of the delivery mode, the transport required helps to complete the supply chain and ensure commodities are available for those needing health services. In Zambia, the last mile often involves going off road or through swampy or sandy terrain that is difficult for larger delivery trucks to maneuver.

Medical Stores Limited (MSL), the central medical store, has the mandate to deliver medical commodities and supplies to all facilities nationwide, with a fleet of delivery vehicles suited to the task. To effectively do this, distribution schedules must be well-planned and take into consideration weather and geographical conditions at certain times of year. Parts of Zambia become difficult to access during the wet season because torrential rains often flood roads or wash away bridges. Health facilities that are cut off during the rains must plan their supplies for several months in advance to ensure that they can continue dispensing to patients even when the facility cannot be reached by the delivery trucks.

By using all-terrain vehicles, MSL is likely to maintain a supply of commodities to facilities despite difficult road conditions, thus enabling health workers to continue providing uninterrupted health services.

For example, in Southern and Western Provinces, almost 56 health facilities in five districts cannot be accessed by truck, but will be better-serviced by all-terrain vehicles.

The last-mile distribution vehicles have a carrying capacity of 18.9m³ each. Although this volume may not equal the volumes of the larger distribution trucks, the efficiency of the smaller vehicles in transporting commodities directly to the service delivery point makes them invaluable. The entire fleet is able to leverage this capability to enhance the distribution of medical commodities.

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A robust fleet of delivery vehicles means increased commodity availability for Zambia.

As MSL scales up the volumes of products to be delivered to health facilities, greater demand is placed on the distribution vehicles, meaning fleet vehicles spend a longer time on the road and must cover greater distances. With more vehicles available, the strain on the fleet can be eased because vehicles are rotated more frequently, or some routes can be serviced by vehicles that are better suited to the road conditions. This prolongs the lifespan of vehicles and reduces the maintenance required, so that resources spared on maintaining the fleet can be spent on other operations.

Having a larger, more robust fleet of delivery vehicles means commodity availability is enhanced. The new vehicles will improve MSL's capacity to transport health commodities to all provinces, thereby increasing public confidence in the country's medical facilities. This will lead, in turn, to a healthier Zambia.

The authors' views expressed in this publication do not necessarily reflect the views of the U.S. Agency for International Development or the United States Government.

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