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Policy Brief

Getting Products to People Without a Traditional Central Medical Store

USAID | DELIVER PROJECT 2009

A logistics worker moves boxes of condoms at a Central Medical Store in Uganda.

Some partners have taken alternative approaches to strengthening the healthcare supply chain, by either de-emphasizing the CMS or enacting a more radical shift in its role.

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Central Medical Stores (CMSs) usually form the backbone of public health procurement and distribution models in low-income countries (Vogel and Stephens 1989; Yadav, Tata, and Babaley 2011). Traditionally, CMSs have been government-owned enterprises; but, in more recent years, they have been allowed autonomous management, with government oversight (MSH 1997). The role of the CMSs have usually included the national procurement of healthcare commodities, storage and handling of inventory commodities, and distribution of commodities to various sections of the national public health system; and, in some cases, even to the private-sector health system. Although these institutions should have all the components necessary for a supportive supply chain role for healthcare delivery; in practice, many CMSs have had inadequate performance in procurement, financial and logistical management, security, and storage (Govindaraj and Herbst 2010).

To combat inadequate performance, partners have strengthened the CMS capacity and capabilities. However, some partners have considered alternative approaches to strengthening the healthcare supply chain, by either de-emphasizing the CMS or enacting a more radical shift in its role. While partners may still prefer to strengthen the CMS in order to maintain public-sector capacity, partners should also consider allowing commodities to bypass the CMS, establishing institutions that compete with the CMS; or establishing parallel, complementary institutions.

This brief describes these approaches and makes basic recommendations for selecting and implementing them. Figure 1 graphically compares the role of the CMS under the alternative approaches presented in this brief.

Bypassing the CMS

Health commodities no longer move through the CMS; instead, they are directly delivered to lower-level facilities from the private suppliers, thereby

avoiding the CMS's storage and distribution processes. The CMS may continue to operate with a reduced product or service mandate, or it may be entirely privatized. This solution can be executed in numerous ways, including empowering lower-level facilities to procure commodities for themselves, having central-level health programs and partners procure orders and contract delivery directly to lower-level facilities, or using a vendor managed inventory (VMI) approach with the private suppliers determining resupply quantities for facilities (Watson, Serumaga, and McCord 2012). See case 1.

While allowing facilities to obtain certain commodities directly from suppliers may effectively privatize some of the CMS's scope, full privatization of the CMS is also a theoretical possibility. Currently, little research has been done on how this affects the public health supply chain.

Under a CMS-bypassing approach, public funding for commodities can be channeled through health insurance schemes directly to facilities, or they can go to private suppliers that operate VMI mechanisms.

Case 1: HIV/AIDS Laboratory Commodities in Nigeria

Qualified local suppliers and the dependency of laboratory services on specialized equipment create an opportunity to improve the storage and distribution capacity of private suppliers. In Nigeria, the National Agency for the Control of AIDS (NACA) used Global Funds to contract several local suppliers of testing equipment and commodities to provide vendor managed inventory services directly to public testing sites. After visiting the testing sites to determine inventory requirements and to provide commodities stored at their warehouses, the private suppliers invoiced NACA for the services and commodities. While the country has several Central Medical Stores, this approach allows NACA to shorten the pipeline and reduce inventory holdings of expensive laboratory testing commodities.

The health commodities that make sense for this approach include products with a short shelf life, products that are expensive, or products that are service-mission critical—these models tend to shorten overall storage and distribution time, and reduce the opportunity for leakage of product from the supply chain. If downstream facilities procure their own commodities, they will probably need local producers and distributors. These models also increase responsiveness to downstream facilities, but it may be difficult to guarantee drug quality and pricing.

Establishing Parallel Institutions with Competition

Additional entities are introduced into the supply chain that can mimic the roles and responsibilities of the existing CMS; customers of logistics services can choose between the entities. Tiers above and below the existing CMS can now select the institution they want to patronize. The institutions essentially compete with each other for business from the lower-level health system tiers, and also compete for support from suppliers and strengthening partners (see case 2). Commodity purchasing could continue under the previous mechanisms, with funding partners selecting their central storage and distribution partners. This approach empowers lower-level facilities, encourages service and efficiency improvements, and adds a level of redundancy to reduce the frequency of country stockouts.

Case 2: Uganda

In the face of ongoing Central Medical Stores (CMS) dysfunction, including frequent and prolonged stockouts; two faith-based organizations, Uganda Catholic Medical Bureau and Uganda Protestant Medical Bureau, formed the Joint Medical Stores (JMS) in 1979 to procure and distribute health commodities to their service delivery points (SDPs). Originally, the JMS was to only supply health units belonging to the two bureaus; but it evolved into an institution that now also supplies public SDPs in the country that could not depend on the CMS's service.

Establishing Parallel, Complementary Mechanisms

Additional public entities are introduced into the supply chain that mimic some of the roles and responsibilities of the existing CMS; the entities actively coordinate and work together to support the supply chain. This can occur temporarily or permanently for a set of health commodities that is removed from the CMS portfolio. Permanent parallel

entities are introduced to complement the CMS capacity, with long-term coordination in place to reduce waste and unnecessary duplication of effort. Both temporary and permanent parallel approaches effectively segment the supply chain by strategically creating separately managed channels for storage and distribution; they are suited to specific categories of commodities. This reduces the storage and distribution burden on the CMS, which improves service for all sets of commodities and tailors operations to better handle product requirements, while increasing the total storage and distribution capacity for the system. In several settings, such as Chile (see case 3) and Indonesia, this complementary mechanism becomes a set of commodity procurement contracts established at the central level for most public health commodities. In Indonesia, a CMS continues to store and distribute safety stock for emergency orders, while most drug deliveries go directly from private suppliers to provincial and district stores. Although similar to a CMS—bypassing it, in some cases—these examples require the establishment of a central public procurement mechanism, rather than direct procurements by individual health facilities, programs, or external funding partners.

Case 3: Chile

During the 2000's, while Chile's Central Medical Store (CMS) optimized its performance to better serve the health sector, a parallel electonic or e-government and procurement reform process was taking place outside the health sector. These reforms helped launch the e-procurement department, *ChileCompra*, which is under the Department of Treasury. This e-platform serviced all government agencies. Throughout this reform process, the Department of Treasury reformed the regulatory environment, and ChileCompra developed its capacity to set up and manage framework agreements. By signing framework agreements with suppliers of frequently demanded products—such as computers, vehicles, and insurance policies—ChileCompra gradually developed an electronic catalog from which government agencies could make purchases without the expense and delays of inviting bids. The e-catalog has more than one supplier pre-approved for any given product, for an extended period of time. The supplier must compete in a competitive bidding process. After the agreement is set up, the supplier's goods are offered in the catalog. The customer can use this catalog to shop for products.

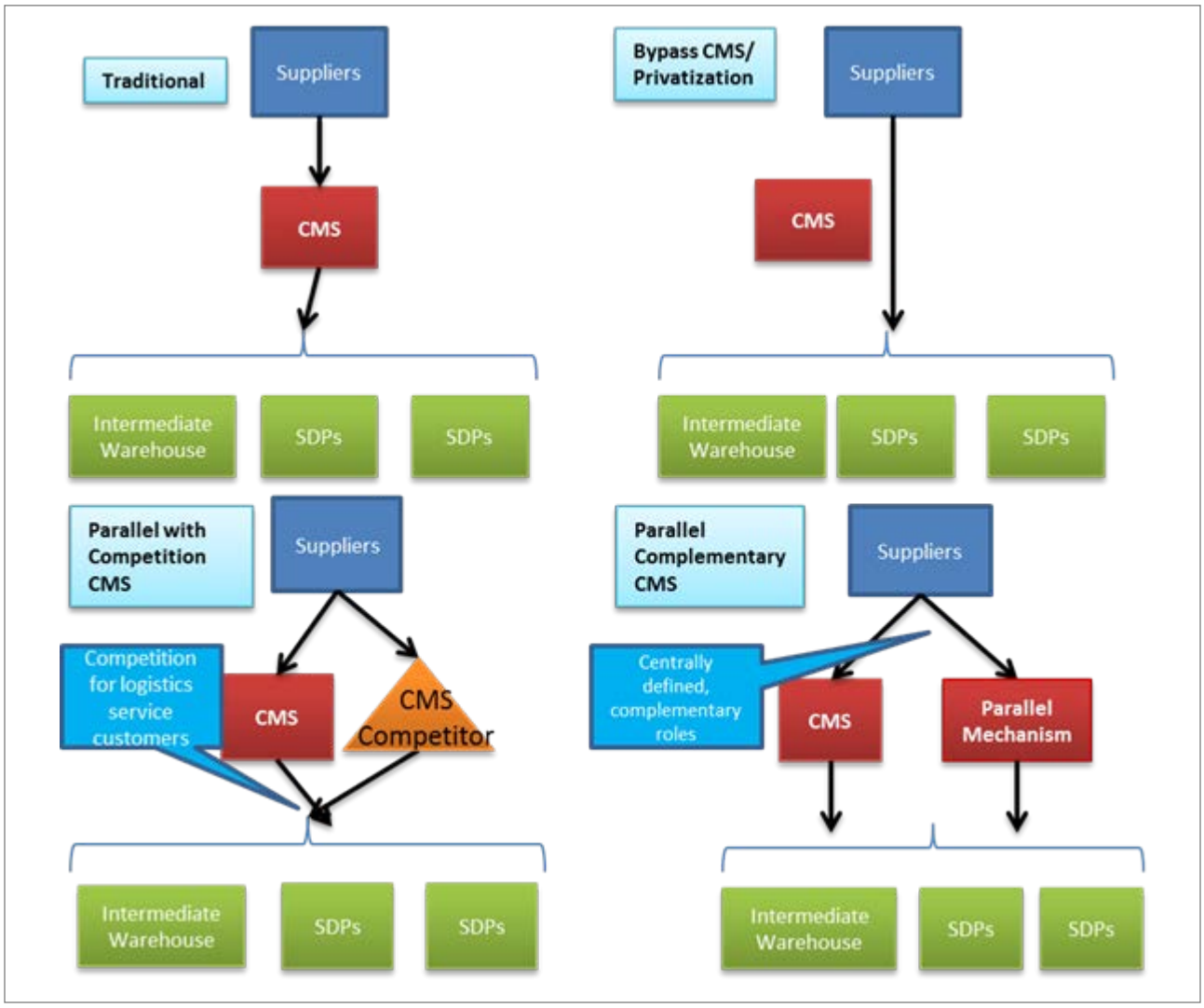
The Ministry of Health intends to transition more and more procurement to ChileCompra in the coming years, except for strategic commodities that cannot be procured through framework agreements (e.g., oncologicals that are often in shortage) or small quantity procurements. Many commodities will continue to be procured and distributed by Chile's CMS, on behalf of the health regions. This is expected to be a long-term solution for procuring many commodities. This transition, for many essential health commodities, has resulted in the government establishing a permanent, complementary CMS mechanism.

When Should Partners Consider these Options?

Partners should consider these options when they want to achieve more medium- and long-term supply chain improvements. External partner-managed solutions that bypass or duplicate the role of the CMS cannot always answer the question of how commodities will reach the service delivery level when the partner no longer provides support. If direct support to the CMS does not solve this concern in the long run, partners could consider options that introduce a level of operational redundancy or multiplicity into the supply chain (USAID | DELIVER PROJECT, forthcoming). By supporting a permanent parallel institution, or government-supported bypass mechanism, the system can benefit from complementary and reinforced capabilities by minimizing the impact of the CMS's poor performance. However, when implemented, these approaches require a significant effort.

Partners can also consider these options when they are working to meet short-term performance goals for urgent public health needs. Temporary parallel mechanisms, or other forms of supply chain augmentation, often develop to fill a pressing need for a funding partner that can ensure product availability when the CMS cannot reliably do so (USAID | DELIVER PROJECT 2012). When a CMS has security issues that cannot be quickly addressed, or if the CMS does not have the storage and distribution or contracting capacity, to manage a high-priority commodity; partners can, on short notice, establish mechanisms that minimize or avoid the role of the CMS.

Figure 1. Comparative Diagrams of Alternative Supply Chain Models



How can Partners Best Leverage these Approaches to Improve Supply Chain Performance?

Consider these alternative supply chain models based on their ability to respond to specific factors

- *The primary causes of CMS performance deficiency* can include the CMS's capability for assigned roles and responsibilities, quality of infrastructure and control approaches, or *fit* between infrastructure and capabilities. Certain alternative CMS approaches respond more directly to the specific causes of the CMS dysfunction.
- *Product characteristics* determine whether the products in question have a short shelf life, are mission-critical, are relatively expensive, or have special handling requirements. These factors might indicate that performance can be improved by using a system that shortens the in-country pipeline, provides added security, or manages special products with dedicated operating procedures or infrastructure.

- *Supply chain partner capability* is the ability of current partners to assume new and expanded supply chain roles in procurement, storage, distribution, contract management, and coordination. Certain alternative CMS models require that partners in the supply chain have the necessary capabilities.
- *Current strategic direction for the overall health system* includes (1) the type and scale of service the decisionmakers want their health system to provide, (2) current health reform directions, such as privatization, decentralization and service integration, and (3) the partners' desire for sustainability. Partners should pursue alternative CMS models that align with and support these strategic directions.
- *Cost* of implementation and continual execution of potential models should be over the short- and long-term.

Consider these model options as part of a broader supply chain strengthening approach

Consideration and selection of one of these approaches should follow a formal assessment of the CMS and the total supply chain strengths and deficiencies; it should complement discussions on CMS strengthening possibilities. More than likely, adopting any one of the models presented here will not solve all the supply chain problems. Continued strengthening of the CMS, use of alternative models as transition phases, and a combination of these models to address identified deficiencies may be required to provide a more comprehensive supply chain strengthening solution. Ultimately, implementation and operation of these alternative models, if appropriate, should form part of a holistic supply chain master plan—a long-term roadmap for reaching partners' goals.

Promote an environment that supports and enables these options

Even if none of these alternative models seem appropriate at this time, strengthening the environment for these options can, over the long term, make them more feasible and more effective. Partners can improve the prospects for these models by conducting assessments of third party capabilities, strengthening central management and coordination capacities, addressing policy constraints to private and non-profit involvement in the public health supply chain, and improving the procurement and product receipt flexibility at facilities below the CMS level.

Do you want to learn more about these topics?

Visit deliver.jsi.com and scms.pfscm.org to access additional resources on supply chain assessments, system design, supply chain integration, and master planning.

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