

Approaches and Tools for Strengthening Pharmaceutical Systems

Pharmaceutical Procurement and Supply Chain Management

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Why are strong procurement and supply chain management important?

The pharmaceutical system is a subset of the broader health system and aims to ensure access to and appropriate use of safe, effective, quality-assured, and affordable medical products and related services to improve health. Low- and middle-income countries (LMICs) face key challenges in their pharmaceutical systems, including substandard and falsified products; inappropriate use of medicines; and limited access to medicines and other medical products, in part because of problems of availability due to supply chain management challenges.

As countries strive to achieve universal health coverage—ensuring that “all people have access to the full range of quality health services they need, when and where they need them, without financial hardship”¹—they must address issues of access, engaging both the public and private sectors. Strong procurement and supply chain management (PSCM) systems are essential to ensuring an uninterrupted supply of safe, effective, quality-assured, and affordable medical products for health care professionals and patients. Yet, these systems are weak in some LMICs, leading to frequent stock-outs of quality-assured products, wastage, and distribution of substandard products.

What does strong PSCM look like?

Good **procurement** in pharmaceutical systems is characterized by transparent, impartial, and accountable processes; integrity and fair and open competition; value for money; and optimized use of available resources for quality-assured medical products.

Implementing an effective and efficient **supply chain management** system involves putting in place good supply chain governance mechanisms with clear structures; strategically planning, designing, and implementing all functions and related processes; investing in human resources and institutional capacity; developing and implementing comprehensive information systems; and establishing and implementing effective monitoring and evaluation systems for continuous improvement.

In this document, we present approaches and tools that MTaPS has found effective to strengthen PSCM and describe how other organizations can apply them in their context.

Approaches and tools to strengthen PSCM

The USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program uses a wide range of approaches to support countries to strengthen PSCM in their pharmaceutical systems. These approaches include:

¹ WHO (n.d.). Universal health coverage. https://www.who.int/health-topics/universal-health-coverage#tab=tab_1

- Assessing supply chain system inefficiencies and proposing alternative solutions
- Developing strategies to address root causes and implement risk mitigation measures
- Strengthening supply chain governance to set clear rules and structures and disseminate information
- Identifying inefficiencies in the procurement process to optimize resources and promote timely procurement and distribution
- Building capacity on public procurement
- Leveraging best-practice third- (3PL) and fourth-party logistics (4PL) providers' capabilities to support the public health supply chain through evidence-based outsourcing
- Supporting improvements in data analysis and use and dispensing and product management practices at the point of care, including using electronic dispensing, stock management, and transaction management tools

We briefly highlight two MTaPS tools below.

Supply chain outsourcing decision framework:

MTaPS has been assessing the potential for implementing best-practice 3PL and 4PL service provider relationships in LMICs, focusing on leveraging providers' capabilities to support the public health supply chain through evidence-based outsourcing. As part of this work, MTaPS developed a [supply chain outsourcing decision framework](#) that outlines the process for evaluating whether 3PL and/or 4PL providers could be beneficial for government.

Forecasting tools to improve the procurement of reproductive, maternal, newborn, and child health (RMNCH) medical products:

Increasing access to and appropriate use of RMNCH medical products could save the lives of more than 6 million women and children a year. A major component of access is availability, which requires accurate and timely quantification of supply requirements. Yet, systematic and rigorous quantification of RMNCH medical products is often overlooked or data is lacking or of poor quality. MTaPS developed a [forecasting supplement](#) that provides practical guidance on estimating the future consumption quantities of priority RMNCH medical products needed by programs as part of national quantification exercises, using the demographic/morbidity method and service data.

Forecasting algorithms and forecasting calculation tools are also available to users.

Case studies on PSCM strengthening

Assessing the potential for implementing best-practice 3PL and 4PL service provider relationships in the Philippines

Although the Philippines has used outsourcing strategies, these have been traditional fee-for-service contracts, which do not reflect global best-practice relationships. MTaPS assessed the potential for implementing best-practice 3PL and 4PL service provider relationships, including assessing providers' ability to deliver the services required by public sector health systems. As part of the study, MTaPS developed and used tools to carry out three types of analyses:

- **Rapid political economy analysis** to understand the major political, economic, social, and cultural incentives, motivations, and constraints that impact decision making in both sectors
- **Operational capability assessment** to identify strengths and gaps in the public sector supply chain and assess the ability of the private sector to provide required services
- **Cost-benefit analysis** to measure current supply chain spending and service levels

A key finding of the study was a lack of experience managing best-practice 3PL and 4PL relationships in the country. Effective management of these relationships requires various skills, including having a detailed understanding of current cost levels and the required levels of service; managing logistics service providers by holding regular review meetings; and presenting future strategy objectives to logistics providers' contract managers.

Although there was consensus among key stakeholders that implementing 3PL or 4PL relationships has the potential to overcome shortcomings in public sector health supply chains, doing so will require significant education, mentoring, and guidance to ensure that the benefits are realized.

Improving local procurement practices in Nepal

Following federalization in Nepal, local-level governments (LLGs) were given the necessary authority to procure most maternal, newborn, and child health (MNCH) medical products and essential medicines. However, the LLGs did not have experience with procurement, and studies have shown wide variations in their prices and procurement methods. To better understand procurement practices at the subnational level and ensure the quality and availability of MNCH products, MTaPS conducted a [mapping study](#) that examined the roles and responsibilities of various stakeholders in procurement; procurement mechanisms and the procurement process; training; infrastructure; and financing.

After completing the study, MTaPS collaborated with Nepal's government to hold a workshop to raise awareness on the need for solid subnational procurement practices to ensure the quality of MNCH products and define actionable recommendations to improve current practices. During the workshop, MTaPS shared the study findings, and participants learned about best practices for subnational procurement practices in other countries and about approaches, such as framework agreements, electronic procurement systems, and using a prime vendor to procure quality goods at a low cost. The participants, including provincial and municipal health representatives, then produced a set of actionable recommendations that focused on procurement, quantification, quality assurance, budgeting, and financial management. The government has proposed high-level follow-up meetings to discuss key recommendations from the workshop and is working to integrate recommendations into national and local work plans and budgets. These actions will contribute to improved procurement practices, enabling sustained access to quality MNCH products.

How can organizations apply these approaches?

Below are resources that can equip organizations with the knowledge and tools to put these approaches into action to strengthen PSCM and improve product availability in local contexts.

Tools

- [Forecasting Consumption of Select Reproductive, Maternal, Newborn, and Child Health Medical Products](#) (MTaPS 2022): This resource complements the Quantification of Health Commodities below.
- [Quantification of Health Commodities: A Guide to Forecasting and Supply Planning for Procurement](#) (John Snow, Inc. 2017): This guide provides users with a step-by-step approach to quantification and product-specific companion pieces for forecasting consumption.
- [Outsourcing Toolkit](#) (Africa Resource Centre 2020): This toolkit serves as a resource to support public health decision making for those who may be considering outsourcing as an option for improving supply chain performance.

Additional readings and resources

- [Subnational Procurement Practices of Maternal, Newborn, and Child Health Medicines in Nepal](#) (July 2022)
- [Procurement and Supply Chain Management Roadmap Helps Implement Universal Health Coverage Law in the Philippines](#) (July 2022)
- [Modernizing Vaccine Procurement in Jordan](#) (April 2022)
- [Creating Sex/Gender-Responsive Health Supply Chains: COVID-19 Reminds Us Again](#) (December 2021)
- [Strengthening Family Planning Supply Chain through Improved Data Usage in Bangladesh](#) (July 2021)
- [Building Resilient Health Systems: What Has COVID-19 Taught Us About Infection Prevention and Emergency Supply Chains?](#) (June 2021)
- [Addressing Workforce Gaps in the Philippines for Efficient Supply Chain Management](#) (January 2021)
- [A Guide to Best Practices in Subnational Procurement of Maternal, Newborn, and Child Health Commodities in the Public Sector](#) (MTaPS, forthcoming)

e-Learning resources

- Pharmaceutical Systems Strengthening 101 (available in [English](#) and in [French](#)): This course introduces learners to the basic principles of PSS, including how addressing pharmaceutical system problems advances universal health coverage; combats AMR, HIV and AIDS, malaria, tuberculosis, and other public health threats; and promotes maternal and child health.
- [Use of Retail Pharmacies for Public Sector Procurement in Low- and Middle-Income Countries](#): This MTaPS webinar discusses the pros and cons and promising policies and strategies of using retail pharmacies to provide medicines and contraceptives to public sector clients in LMICs.

Contact

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About USAID MTaPS:

The USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program (2018–2023) enables low- and middle-income countries to strengthen their pharmaceutical systems, which is pivotal to better health outcomes and higher-performing health systems. The program is implemented by a consortium of global and local partners, led by Management Sciences for Health (MSH), a global health nonprofit.



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