

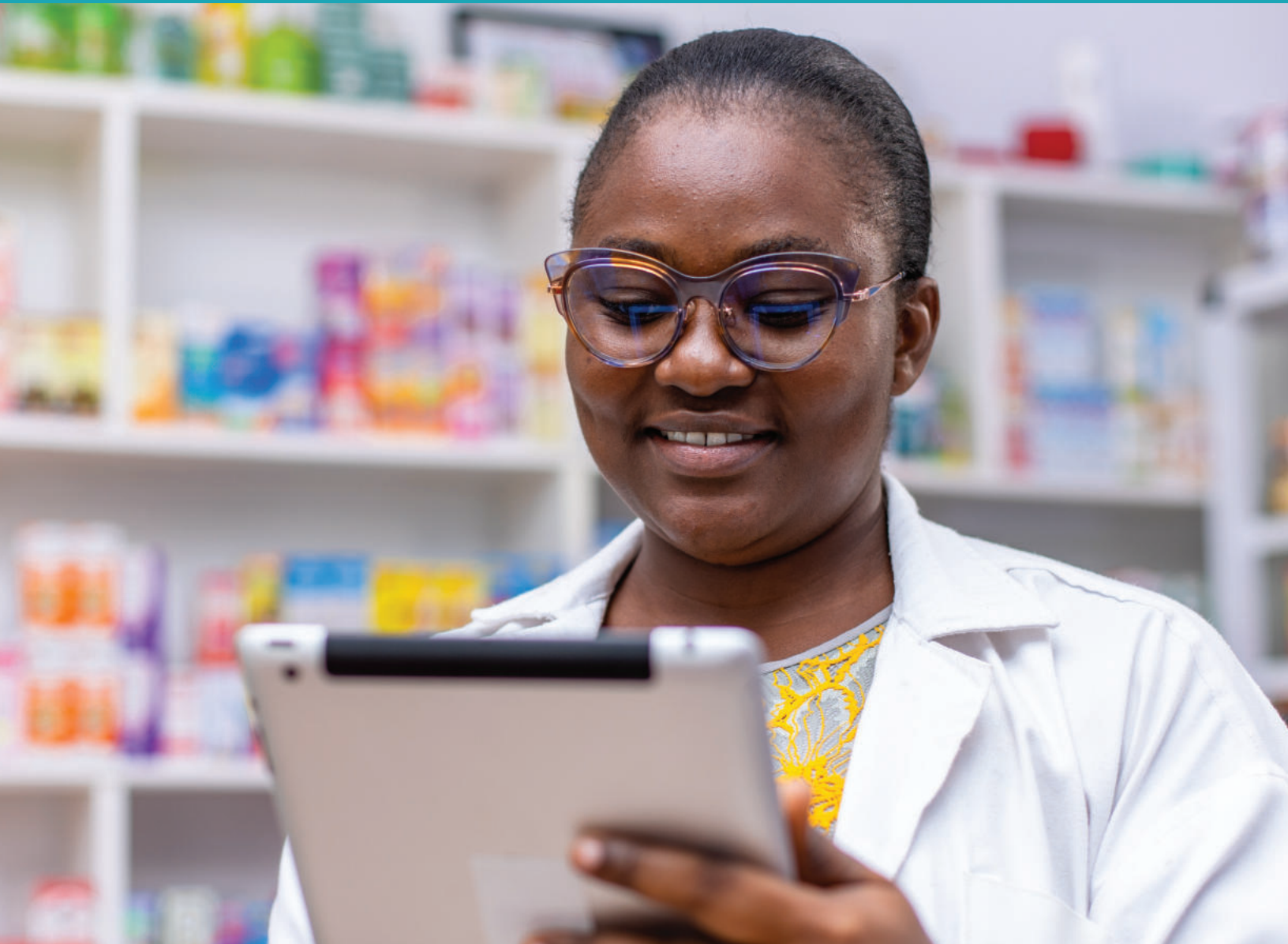


**RESULTS FOR  
DEVELOPMENT**

# **A mapping of domestic systems for financing essential medicines and other health products**

Opportunities to align supply chain, market shaping and health financing functions and policies

**ETHIOPIA, GHANA, NIGERIA, TANZANIA**



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# ACRONYMS

<b>ARC</b>	Africa Resource Center
<b>APTS</b>	Auditable Pharmaceutical Transactions and Services
<b>BHCPF</b>	Basic Health Care Provision Fund
<b>CGD</b>	Center for Global Development
<b>CBHI</b>	Community Based Health Insurance
<b>CHF</b>	Community Health Fund
<b>CHPS</b>	Community Health Planning Service
<b>CBMIS</b>	Central Budget Management Information System
<b>CDSS</b>	Committed Demand and Supply System
<b>DHIS</b>	District Health Information System
<b>DHIMS</b>	District Health Information Management System
<b>DRF</b>	Drug Revolving Fund
<b>DMA</b>	Drug Management Agency
<b>DHFF</b>	Direct Health Facility Financing
<b>EML</b>	Essential Medicines List
<b>EPSS</b>	Ethiopia Pharmaceuticals Supply Service
<b>eLMIS</b>	electronic Logistics Management Information System
<b>EMR</b>	Electronic Medical Records
<b>FW</b>	Frame Work Contract
<b>FFARS</b>	Facility Financial Accounting and Reporting System
<b>GhLMIS</b>	Ghana Logistics Management Information System
<b>GIFMIS</b>	Ghana Integrated Financial Management Information System

<b>HBF</b>	Health Basket Fund
<b>IFMIS</b>	Integrated Financial Management Information System
<b>LMIC</b>	Low- and Middle-Income Countries
<b>MOH</b>	Ministry of Health
<b>MSD</b>	Medical Stores Department
<b>MOF</b>	Ministry of Finance
<b>NHLMIS</b>	National Health Logistics Management Information System
<b>NHIA</b>	National Health Insurance Authority
<b>NHIF</b>	National Health Insurance Fund
<b>NPSCMP</b>	National Product Supply Chain Management Program
<b>NPHCDA</b>	National Primary Health Care Development Agency
<b>NQT</b>	National Quantification Tool
<b>OOP</b>	Out of Pocket
<b>PORALG</b>	President's Office Regional Authority for Local Government
<b>PBMIS</b>	Planning Budgeting Mangement Information System
<b>PHC</b>	Primary Health Care
<b>R4D</b>	Results for Development
<b>RMS</b>	Regional Medical Stores
<b>RMNCAH</b>	Reproductive Maternal Newborn Child Adolescent Health
<b>RHB</b>	Regional Health Bureau
<b>SMOH</b>	State Ministry of Health
<b>TB</b>	Tuberculosis
<b>UHC</b>	Univeral Health Coverage
<b>VAN</b>	Visibility and Analytics Network
<b>WoHO</b>	Wordea Health Office

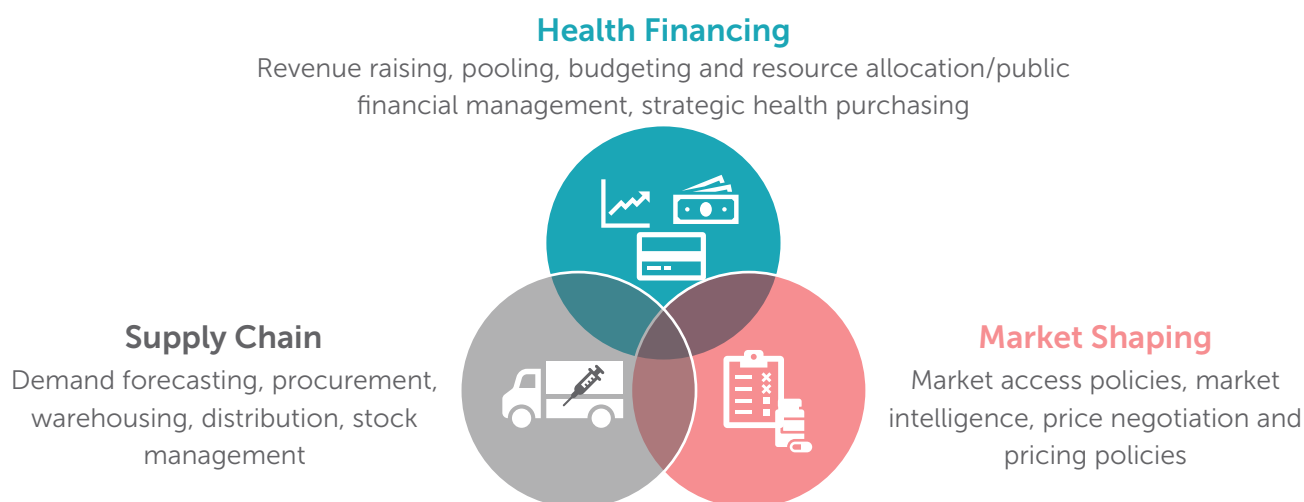
# INTRODUCTION

Access to essential medicines and other health products is fundamental to achieving Universal Health Coverage (UHC). The 2022 Lancet Global Health Commission on Financing Primary Health Care: Putting People at the Centre<sup>1</sup>, underscores that pooled public financing is vital to ensuring equitable and efficient access to primary health care (PHC), including essential medicines and health products. Publicly financing essential medicines and health products not only reduces heavy out-of-pocket burden but helps curb inappropriate antibiotic use and mitigate antimicrobial resistance. This approach strengthens health equity, promotes fiscal protection, and fortifies health security through sustained and cost-effective access. In many low- and middle-income countries (LMICs), health financing policies have traditionally been focused on health services with limited understanding of the drivers, impacts, and effective policy responses of integrating financing and supply chain policies to enable quality service delivery.

To successfully ensure that people receive the medicines and health products they need as part of essential health services, governments need to take a complex set of actions that span health financing, supply chain and market shaping policy.

To successfully ensure that people receive the medicines and health products they need as part of essential health services, governments need to take a complex set of actions that span health financing, supply chain and market shaping policy (Figure 1). They must set priorities about which services and products they will fund, forecast the amount of products to buy based on population health needs, and use market shaping tools to promote adequate supply of quality products at the best prices. They must ensure that enough resources are allocated in budgets and that funds flow effectively through the various health financing arrangements to cover the costs of medicines and products. They must make sure that the procurement and distribution of commodities functions well and the products reach the end users. The flow of funds, pricing and payment to providers have to align with the flow of products through supply chains. Therefore, strengthening alignment between health financing, supply chain, and market shaping functions and policies is vital to ensure that the flow of financing aligns with the flow of products for reliable and affordable access to quality primary health care (PHC)

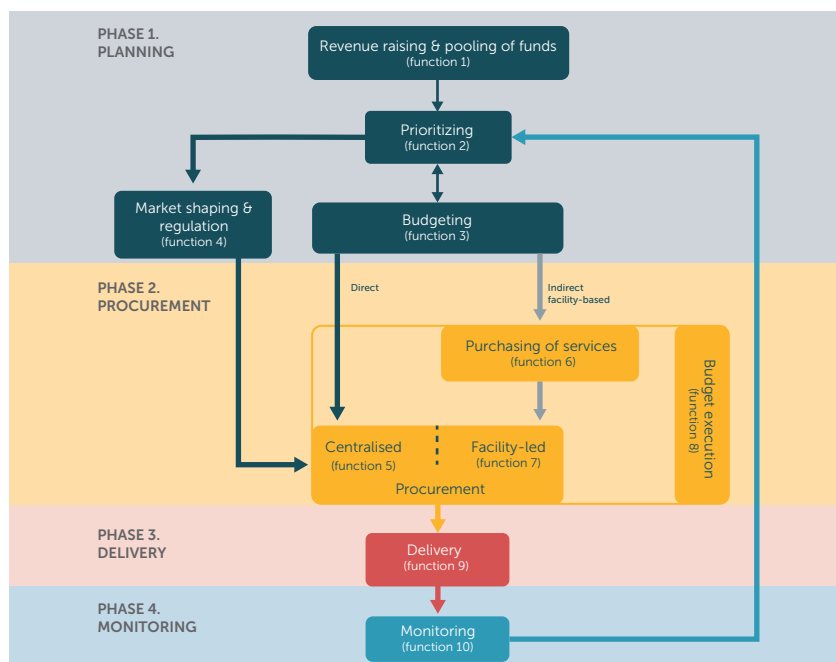
Figure 1. Health financing, market shaping, and supply chain policy domains



The Nexus Working Group, convened in April 2025 by the Center for Global Development (CGD) and the Africa Resource Centre (ARC), was established to foster dialogue on bridging health financing, supply chain, and market-shaping functions, and to strengthen integration among them.

Its first meeting laid a strong foundation and highlighted the growing complexity of financing arrangements in LMICs, along with their implications for how funds, essential medicines, and health products flow through domestic systems. Building on these insights, the Working Group went on to develop a generalizable framework that maps these flows across system archetypes, identifies the key nexus points between financing, supply chain, and market shaping policies, and informs tailored policy responses to strengthen supply chain financing (Figure 2)<sup>2</sup>.

Figure 2. Nexus Working Group Proposed Conceptual Framework



Results for Development (R4D), with support from the Gates Foundation, conducted a multi-country rapid assessment in Ethiopia, Ghana, Nigeria, Tanzania to examine existing linkages between supply chain, health financing, and market shaping practices, generating early evidence to further inform the Nexus Working Group’s agenda and develop concrete recommendations on some short-medium term next steps. In particular, the assessment focuses on the pillars of supply chain, health financing, and market shaping to highlight their interdependencies — financing determines the resources available for essential medicines and how they are allocated and flow, supply chains ensure their reliable delivery, and market shaping influences price, quality, and availability. The assessment recognized from the onset, that when financing, supply chain pillars and market shaping strategies are treated in isolation, inefficiencies and gaps emerge, driving up costs and undermining access. By bringing these domains together, systems can better align funding with demand, leverage markets for value, and strengthen last-mile delivery — critical steps for advancing commodity security and UHC.

This report presents highlights from R4D’s multi-country assessment and offers recommendations to guide next steps. It underscores the need for deeper, country-specific analyses and early actions engaging key domestic stakeholders; structured cross-country learning; and collaborative co-creation of solutions to strengthen the integration of health financing, supply chain, and market shaping policies — an essential step toward ensuring sustainable access to essential medicines and health products.

# METHODOLOGY

An opportunistic qualitative analysis was conducted in Ethiopia, Ghana, Nigeria, Tanzania, guided by a set of analytical questions focused on the following themes: forecasting and budget formulation, budget execution, pricing, funds flow and provider payments, and data systems (Annex 1). Additionally, an analytical framework, co-created by members of the Nexus Working Group and led by CGD, was also used to guide the analysis and write up (Figure 2). Data was gathered through document reviews and key informant interviews with technical staff from relevant Ministry of Health (MOH) departments, national/regional/state public pooled procurement entities, regulatory authorities, health financing agencies, and health care facilities.

## GOVERNANCE

The conceptual framework proposed by the Nexus Working Group specifies functions across supply chain and health financing domains that need to be in place and working well to ensure resources are available and allocated effectively to enable access to essential medicines and health products. Governance mechanisms are needed to make sure these functions are carried out by appropriate institutions and that the functions align with each other across different parts of the system. Across all four countries, there is a lack of an overarching medicines and health products governance or policy framework that fully incorporates financing. Historically, the efforts of both governments and donors to strengthen health product supply chains have concentrated on resolving operational and logistics bottlenecks, and investing in system-strengthening initiatives such as warehousing, distribution, and information systems. At the same time, much of the support has remained siloed, with parallel supply chain strategies for HIV, tuberculosis (TB), malaria, family planning, nutrition, and vaccines, rather than developing holistic, country-owned systems that cover all essential medicines and health products including for Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCAH) commodities.

This rapid analysis highlights two critical gaps that remain largely absent from existing supply chain strategies and master plans: financing and market shaping<sup>3,4,5,6</sup>. Without explicit attention to how commodities are financed, priced, and procured across programs, countries are unable to ensure sustainability, equity, and efficiency. Similarly, the absence of market shaping policies and tools limits the ability to leverage pooled demand, manage price variability, and foster greater value for money. Closing these gaps through an integrated framework would help countries move beyond fragmented, donor-driven approaches and toward comprehensive, sustainable systems that secure access to essential medicines and health products for all.

Health financing policies in all of the countries incorporate medicines and supplies through different mechanisms, but these do not always match supply chain policies. In particular when new schemes are launched or new coverage commitments are made, the way essential medicines and other health products are financed may change as prioritizing, planning, and costing requirements become more complex and gaps between utilization and availability of commodities can emerge<sup>7</sup>. An integrated financing and supply chain framework would help planning for the commodity requirements of new health service commitments from the start.

## Priority Setting

Priority setting is a key opportunity to bring together health financing, supply chain, and market shaping considerations and policy tools. Defining an essential services package or health benefits package is an opportunity to jointly prioritize health services and the essential medicines and other health products needed to deliver them effectively. Harmonizing across essential service/benefits packages, essential medicines lists (EMLs), and procurement lists is an opportunity to ensure alignment. In Ethiopia, for example, when the Essential Health Services was defined and costed, the medicines, commodities, and supplies required to deliver the interventions were identified through clinical guidelines and quantified, and unit price information was added from the Ethiopian Pharmaceuticals Supply Service (EPSS) and the Logistics Department of the Ministry of Health<sup>8</sup>. In Ghana, the EML explicitly aims for “harmony in treatment, procurement and reimbursements,” and NHIS publishes its own medicines list for reimbursement. The lists are coordinated but do not match exactly.

Throughout the year as actual budget releases may be lower than expected and actual utilization of medicines and supplies may be higher than expected, none of the countries have mechanisms to reprioritize, especially across different funding sources and schemes.



# SOURCES OF FINANCING FOR ESSENTIAL MEDICINES

## Multiple Sources of Financing for Essential Medicines and Health Products

Each country has several sources of financing, mostly siloed, for essential medicines and health products. In general, across all countries there is a mix of government budgets, facility own-source revenues (national, state and/or community health insurance payments and user fees), and donor contributions<sup>9,10,11,12</sup>. Donor funds are typically earmarked for specific programs like HIV, TB, malaria, family planning, vaccines, maternal and child health, and nutrition and are often managed through special co-financing arrangements with national budgets. There is weak integration with domestic essential medicines and health products financing processes, fragmentation of health benefit packages, and financial reporting systems and donor engagement in country.

*Table 1. Sources of Financing for Essential Medicines and Other Health Products*

Ethiopia	Ghana	Nigeria	Tanzania
Sources of facility financing include line-item allocations for essential medicines (government budget), own-source (Community Based Health Insurance (CBHI), out-of-pocket payments, and donor contributions. Health facilities maintain a drug revolving fund (DRF) in which essential medicines funding is maintained. Donor co-financed program commodities are managed nationally through the MOH without full engagement of the sub-national level.	Sources of facility financing are National Health Insurance Authority (NHIA) claim payments, user fees, and donor contributions. Health facilities maintain a DRF into which NHIA and user fees payments are deposited. Facilities submit their forecasted needs to the District and Regional Health Management Teams and the Regional Medical Stores (RMS – public pooled procurer) applies NHIA tariffs to the forecasted need to estimate the budget. Donor co-financed program commodities are managed nationally at the MOH level without full engagement of the sub-national level.	Sources of facility financing include state health budget allocations for essential medicines directly sent to the Drug Management Agency (DMA – public pooled procurer), Basic Healthcare Provision Fund (BHCPF), user fees, state health insurance, donor contributions. Health facilities have a DRF into which BHCPF, user fees and state health insurance funds are maintained. The DMA keeps a price list used to determine the budget per the forecasted needs.	Sources of facility financing include MOH budget allocations directly sent to the Medical Store Department (MSD – public pooled procurer), donor-supported Health Basket Fund (HBF) allocated through Direct Health Facility Financing (DHFF) arrangements, National Health Insurance Fund (NHIF), Community Health Fund (CHF), user fees, and donor contributions. The MOH budget aims to cover the gap between the total forecasted cost (based on MSD e-catalog prices) and the facilities' expected revenue (HBF-DHFF, NHIF, CHF, user fees). The MOH allocation is divided into RMNCAH medicines and "sellable commodities." There is currently no specific rationale informing the split.

## Box 1. Sources of Financing Snapshot

- All countries have multiple sources of domestic financing for essential medicines and health products in addition to donor financing for program commodities. There is limited visibility or coordination across different financing sources and schemes.
- Fragmented financing flows make it difficult to get a full picture of available resources and to allocate them most effectively.
- Fragmentation in financing sources also introduces fragmentation in the other functions (e.g. forecasting, procurement, pricing, provider payment). This increases administrative burden and limits flexibility to maneuver and make dynamic adjustments throughout the year.

# FORECASTING AND BUDGETING

## Forecasting

All four countries conduct bottom-up forecasting with health facilities submitting their data to higher levels for compilation. In all countries the public pooled procurer (national/regional/state levels) plays a big role in supporting and consolidating forecasting. Forecasting is largely driven primarily by historical consumption. Some examples are below in Table 2.

*Table 2. Forecasting and Quantification Processes*

Ethiopia	Ghana	Nigeria	Tanzania
Through bottom-up quantification, PHC facilities use past consumption, population size, patient load, and disease burden to forecast essential medicine needs. The Ethiopia Pharmaceutical Supply Service (EPSS – public pooled procurer) issues a costing guideline with price estimations used by health facilities to determine the budget per the forecasted need. Regional Health Bureaus (RHB) and Woreda Health Offices (WoHO) compile the information, working in close coordination with the EPSS.	Bottom-up quantification starts at the PHC facility level and is driven by rate of consumption, losses and adjustment, stock-outs, and stock on hand. Together with the Regional and District Health Management Teams, the RMS cross checks forecasted estimates with the Ghana Logistics Management Information System (GhLMIS). Forecasts are sent on to the MOH for ~70 essential medicines included in the national framework (FW) contracting process. Essential medicine forecasts outside of the ~70 FW products are maintained at the regional level.	Bottom-up quantification starts at the PHC facility level and is driven by historical consumption, morbidity profiles, and population estimates. Final quantification and supply planning is done by the State Ministry of Health (SMOH) with the DMA in the lead.	Bottom-up quantification starts with the PHC facility pulling historical consumption data from the electronic Logistics Management Information System (eLMIS), validating it based on actual consumption data from dispensing registers, considering services needed and establishing forecasts for the following year. Consolidation is done at the Council and Regional Health Management Team levels after which it is sent to the President's Office Regional Administration and Local Government (PORALG) and MOH. Consolidated forecast from PORALG and MOH is reviewed and aggregated to form the National annual forecast by the National Quantification Team (NQT) before being submitted for approval by MOH and budget request from MOF. Approved annual forecast is submitted to MSD for supply planning and procurement.

A common concern across the board is the lack of standardized forecasting frameworks, quality data and local capacity to ensure forecasting is done reliably. Electronic logistics management information system rollout, down to the facility level, is not complete in any country. Standardized application of a defined forecasting process is a concern.

Forecasting for essential medicines and program commodities (HIV, TB, malaria, family planning, nutrition, maternal and child health, and vaccines) are parallel processes, with program commodity forecasting historically being donor supported and run at the national level.

## Budgeting

The budgeting process also follows a bottom-up approach where facilities are asked to first estimate potential revenues across all own-source financing flows – national/state/community insurance, user fees – generally consolidated at the sub-national and national levels depending on the centralized or decentralized structure of the country. Ideally, this information is then used to identify the gap between available facility financing/own-source revenues and the forecasted need to then be filled by government budgets. However, for the most part, the health sector budget is constrained by MOF’s macro fiscal framework, and within constrained budget environments, funds are allocated using historical data and pushed into rigid line items for essential medicines and health products.

Domestic co-financing allocations for donor-supported program commodities (vaccines, HIV, TB, malaria, family planning, nutrition, and maternal and child health) is a parallel process that is often managed at the national level through the MOH and does not interact with essential medicines and Universal Health Coverage systems.

Table 3. Budget Formulation

Ethiopia	Ghana	Nigeria	Tanzania
Regional and Woreda entities allocate budget for facilities through rigid line items and public financial management rules, providing little flexibility at the facility level. Funds allocated to the medicines line item are 100% for medicines. Regulations require over 60% of internally generated revenue (CBHI, user fees) be allocated to essential medicines.	Majority of health facility revenues are own-source and come from NHIA payments and user fees. Facilities are required to maintain a DRF into which 100% of NHIA payments for medicines and user fees are to be deposited. Similarly, RMS is required to maintain a DRF into which all funds from health facility purchases are meant to be deposited. These funds are 100% earmarked for medicines and associated operational costs.	State health budget for MNCH is allocated to DMA, 100% for essential medicines. BHCPF – 20% of facility allocation through National Primary Health Care Development Agency (NPHCDA) gateway and no specification for allocation through NHIA gateway. BHCPF, user fees and other national and state health insurance funds are meant to be deposited in the DRF. However, DRF is not ring-fenced and governance of the DRF is weak.	Bottom-up quantification starts with the PHC facility pulling historical consumption data from the eLMIS, validating it based on actual consumption data from dispensing registers and establishing forecasts for the following year. Consolidation is done at the Council and Regional Health Management Team levels after which it is sent to PORALG and MOH to be reviewed and aggregated to form the National annual forecast by the National Quantification Team (NQT). The approved annual forecast is also provided to MSD for supply planning and procurement.

## Alignment Between Forecasting and Budgeting

At the health facility level, managers are tracking their expenditures on essential medicines and health products; however, at the higher levels of the health system, these data are not being used to guide national/regional/state budget allocations, or in the case of national/state/community-based insurance, the schemes are not deliberately tracking utilization and expenditures.

Across all countries, facility-level forecasting is not incorporated into government budget estimates. This is mainly driven by the fact that the MOF budget release is almost always lower than the MOH ask. Ultimately, MOH budget allocations to essential medicines are not driven by the forecast but rather a more generic, lump-sum allocation using historical budget numbers.

In all cases, national/state budget release and own-source revenues from insurance and user fees do not match the forecasted need, leading to stock outs, fragmented and inefficient procurement practices, and user fees or out of pocket payments (OOP)<sup>13, 14, 15</sup>.

At the national/regional/state level, the funding gap for domestically financed essential medicines and health products is often not clearly identified or articulated. Donor funds are almost always managed centrally through co-financing arrangements for vaccines, HIV, TB, malaria, nutrition, maternal and child health, and family planning. These donor co-financed activities tend to have a better grasp on needs, budget, and gaps.

### Box 2. Forecasting & Budgeting Snapshot

- Countries use bottom-up forecasting, but poor data quality and limited capacity weaken accuracy.
- Historically, parallel processes have existed for essential medicines and donor-funded programs with forecasts conducted separately.
- Facility budgets depend on fragmented revenue streams and lack visibility on national/state allocations.
- Forecasts rarely shape national budgets; allocations remain disconnected, creating gaps and stock-outs.
- Financing gaps are not well known; most interventions focus on supply chain, not sustainable financing solutions.
- With shifts in the global health financing landscape, donor support for program commodities (HIV, TB, malaria, family planning, vaccines, and nutrition) is likely to vary.



## Bright Spot



Ethiopia has recently introduced the Committed Demand and Supply System (CDSS), a government-led approach that directly links demand forecasting, financing, and procurement to ensure supplies match committed budgets. By reconciling facility-level forecasts with available funding and integrating tools like forlab+ (electronic forecasting and supply planning tool) and the national eLMIS (“Dagu”), CDSS creates binding commitments that drive procurement, reduce stockouts, and enhance transparency. This reform represents a major step toward a more efficient, data-driven, and sustainable supply system that strengthens access to essential medicines.

## BUDGET EXECUTION

### All Countries Earmark Domestic Funding for Essential Medicines

Each country has a set of rules that govern the use of various funding or revenue sources. All countries earmark domestic funding releases for essential medicines and health products, acknowledging the need to ensure commodity security (Table 3). However, there is little evidence of comprehensive planning using data to inform the optimal allocation of limited funding across each revenue stream to essential medicines and how to finance the gap. Donor funds for program commodities and subsequent country co-financing agreements and funds flow are almost always managed at the national level through the MOH without much engagement of the sub-national stakeholders and outside or parallel to the essential medicines public financial management system processes.

### Delays in Financing Flows are Common

Financing delays occur across all countries<sup>16,17,18,19</sup>. Late budget releases and/or delayed health insurance reimbursements due to immature claims management systems create cash flow gaps. At the public pooled procurement agencies — RMS, DMA, MSD, EPSS — these delays lead to fragmented procurement, late payments to suppliers, unpaid arrears, strained relationships, and make future procurement costlier and less predictable, eventually leading to stockouts. Health facilities resort to the open (private) market when the public procurer is stocked out and are often in debt and running arrears to private suppliers. However, as this report will elaborate in subsequent sections, prices from the open (private) market vary significantly from those set by the public pooled procurer or other public price setters like national or state health insurance schemes, ultimately weakening procurement efficiency, value for money and eroding purchasing power, while draining already limited health budgets.

## Box 3. Budget Execution Snapshot

- Commodity security is well recognized with all countries earmarking domestic funds for essential medicines procurement to ensure commodity security, but comprehensive, data-driven planning for optimal allocation and gap financing across revenue sources is weak or not happening at all.
- Delays in budget release and insurance reimbursements are widespread, causing stockouts, higher-cost purchases, supplier debts, and financial strain that undermines procurement efficiency and service continuity.
- Donor funds are earmarked for specific program commodities (HIV, TB, malaria, vaccines, family planning, maternal and child health, and nutrition) and often managed through parallel procurement or co-financing; weak integration with domestic systems and fragmented financial reporting limit efficiency, coordination, and sustainable transition.

## PROCUREMENT

### Public Pooled Procurement is Well Established

Once funds are released, procurement takes place at multiple levels with all countries having a national/state/regional public pooled procurement platform in place. However, procurement continues to be fragmented with health facilities also having the autonomy to procure from the open (private) market. In general, the rules require “certificates of non-availability” from the public pooled procurer before facilities can procure from the open market.

Table 4. Central and Facility Procurement Processes

Ethiopia	Ghana	Nigeria	Tanzania
<p>Procurer – EPSS (pooled nationally) and health facilities, national level/MOH for donor co-financed program commodities</p> <p>Procurement is conducted by EPSS and health facilities (from the private sector) when EPSS is out of stock after receiving a certificate of non-availability.</p>	<p>Procurer – RMS (pooled at the regional level) and health facilities, national level/MOH for donor co-financed program commodities</p> <p>Procurement is conducted by RMS with MOH running a framework contracting process to set prices for ~70 essential medicines. RMS procures all other essential medicines and health products at the regional level. Framework negotiations are guided by NHIA tariffs. Health facilities procure from RMS and from the open (private) market after receiving certificate of non-availability from RMS.</p>	<p>Procurer – DMA (pooled at the state level) and health facilities, national level/MOH for donor co-financed program commodities</p> <p>Procurement is conducted by the state DMA that uses a push system to allocate medicines to health facilities based on forecasting exercises. Ideally, health facilities can only procure from the open (private) market after receiving a certificate of non-availability from the DMA.</p>	<p>Procurer - MSD (pooled nationally) and health facilities, national level/MOH for donor co-financed program commodities</p> <p>Procurement is conducted by MSD using the MOH RMNCAH allocation. There are no specific guidelines or limits applied to facilities for drawing down on this pot of funds. Health facilities may turn to a set of Prime Vendors (private sector), pre-selected by PORALG with negotiated prices, or procure from the open market if MSD is out of stock.</p>

## Provider Procurement Function

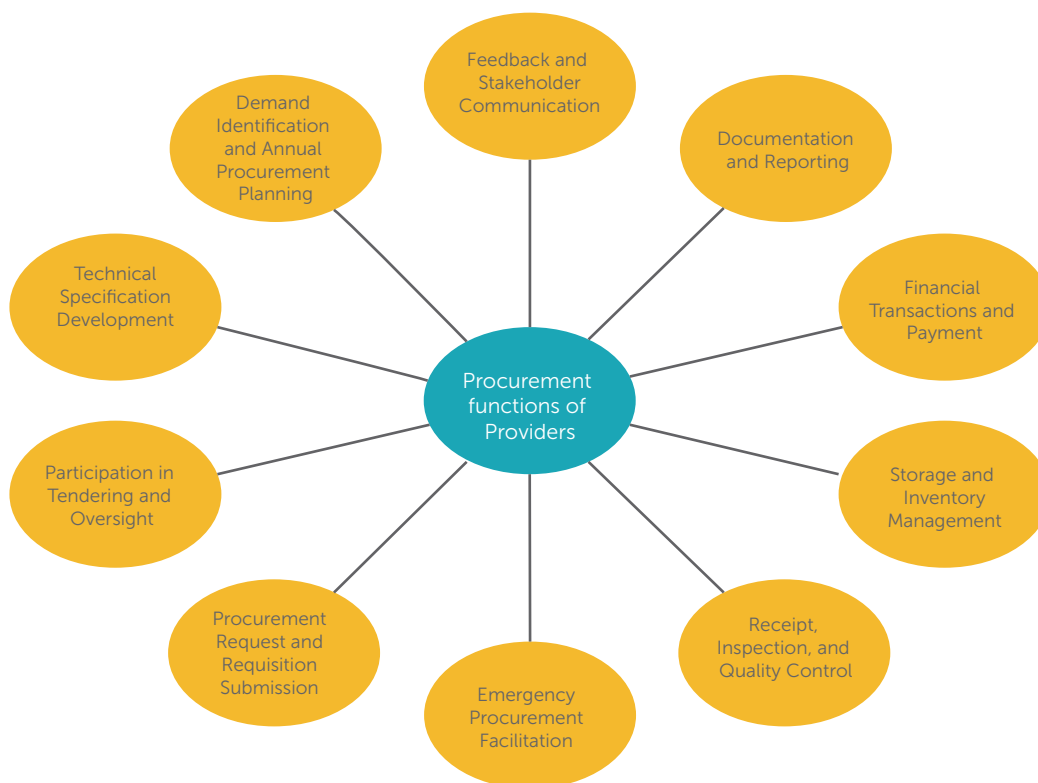
Across Ethiopia, Ghana, Nigeria, Tanzania, health facilities maintain drug revolving funds and directly procure from the public pooled procurer. Health facilities also procure from the open (private) market with certificate of non-availability from the public procurement agency. In most cases health facilities negotiate prices when procuring on the open market outside of framework agreements

Health facilities at different levels of the health system have varying levels of procurement authorities and autonomy spelled out in the respective country's Public Procurement Act. For example, in Ghana, teaching, regional, and district hospitals can generate their own tenders as they are independent Budget Management Units, while health centers and community health compounds (CHPS) are not and must procure under the RMS authority guided by their respective district and regional health management teams. Anything below 100,000 cedis (approximately \$10,000, July 2025) can be managed at the facility level, anything above that amount must follow the National Competitive Tendering process<sup>20</sup>, and anything above 400,000 cedis (approximately \$40,000, July 2025) must go to the Central Review Board and be approved by the Public Procurement Authority at the national level.

In Ethiopia, health providers perform several procurement-related functions that ensure availability and accountability in the pharmaceutical supply chain. See Figure 3 below. Historically, donors have engaged in this space, more through the national and regional health management entities, with limited capacity building at the facility level.

Health facilities play a big role in procurement and ensuring value for money and efficiency. However, capacity at the provider level to manage maturing health financing systems, larger budgets, and key supply chain functions, including procurement, is limited and should be reviewed in-depth to determine the right balance between prudent provider autonomy and system efficiencies.

Figure 3: Provider Procurement Functions in Ethiopia



# PRICING

## Pricing Policy is Uncoordinated

Central or regional/state agencies set standard or benchmark prices through public pooled procurement, framework contracts<sup>21</sup>, annual catalogs, and essential medicine tariffs (for national/state health insurance schemes), but fragmented procurement and limited to no price regulation has led to price variations across the public sector<sup>22</sup>.

Table 5. Pricing Policies for Essential Medicines and Other Health Products

Ethiopia	Ghana	Nigeria	Tanzania
<p>EPSS sets prices through bulk procurement with a standard 10% mark-up on locally manufactured products and 30% on foreign products. The national average mark-up for essential medicines is 27%. EPSS prices are generally lower than private suppliers in the open market and act as a reference point for the public system, including for CBHI reimbursements. Private suppliers set prices based on market demand, foreign exchange conditions, and logistics costs, with little regulation or transparency, leading to mark-ups from 20–40% and steep price hikes during emergencies. Retail pharmacies add unregulated retail mark-ups. Prices vary greatly by location and competition, often 100%+ higher than EPSS-sourced prices. Facilities follow EPSS prices when supplied by EPSS but shift to higher rates when restocking from private suppliers during EPSS stock-outs.</p>	<p>Essential medicines prices are guided by the NHIA tariff, which sets the maximum reimbursable prices for health commodities, typically comprising a base price, an inflation factor, and a 25–30% operational cost mark-up. The MOH runs a framework contracting process to negotiate prices with suppliers for ~70 essential medicines, using the NHIA tariff as the starting point. MOH takes the median price from the top ranked bids submitted by potential suppliers and consults with NHIA to finalize them; if the agreed price differs from the current tariff, NHIA must adjust the tariff accordingly. In general, when RMS and facilities procure from the open (private) market, they also use the NHIA tariff as the benchmark price.</p>	<p>The DMA, at the state level, sets prices by collecting bids from a pre-qualified supplier list, using market surveys and past procurement prices. DMA maintains a price list for health facility reference and adds a 16.5 - 20% mark-up to cover operational costs. Mark-ups and prices vary by state. Health facilities also buy directly from the open (private) market, often at lower prices than DMA rates — raising concerns about quality control, as HFs typically lack the standardized checks and oversight that DMAs apply.</p>	<p>NHIF, MSD, and PORALG act as price setters, while facilities also negotiate directly with private suppliers. MSD sets annual e-catalog prices, sometimes aligned with NHIF tariffs. NHIF uses market research, applying an average mark-up of 30–50% (20–30% admin + 10–20% profit) based on commodity type – cost and volume. However, there is friction between NHIF and MSD, with MSD sometimes setting e-catalog prices higher than the NHIF tariff. PORALG negotiates prices at the regional level. Pre-selected Prime Vendor prices are sometimes comparable with MSD but vary by region. Health facilities negotiate directly with private suppliers when procuring outside MSD/Prime Vendors. Prices are set locally, leading to wide price variation.</p>

Table 6 below demonstrates the price variation for Oxytocin in Tanzania.

Table 6. Tanzania Oxytocin Price Variation Example (July 2025)

Prices paid by health facilities can vary depending on whether they buy from MSD, a regional Prime Vendor, or directly from the open (private) market – often not aligning with provider payment (NHIF) tariffs.			
MSD	Private Supplier to Facility in Public Sector	Prime Vendor	NHIF Tariff
\$0.46	Min - \$0.69 Max - \$0.96	Min - \$0.42 Max - \$0.69	\$0.58

Across Ethiopia, Ghana, Nigeria, Tanzania, public procurement agencies use centralized tenders to secure cost efficiencies. Ghana intentionally uses health insurance pharmaceutical tariffs to guide bulk purchasing, leveraging the strategic purchaser role, while Ethiopia’s EPSS and Nigeria’s DMAs lead this role directly. Tanzania understands the importance of aligning MSD prices with NHIF tariffs but has not yet put into place a coordination mechanism. All countries lack routine, independent market research, robust cost analysis capacity, and adequate operational budgets to keep price-setting aligned with real market dynamics like forex availability, local interest rates, inflation and currency fluctuations. When public supply breaks down, facilities often turn to the open (private) market, where prices vary widely – in Nigeria, direct procurement can be cheaper but risks weaker quality control; in Ethiopia, medicines outside EPSS channels can cost two to five times more than public prices due to foreign exchange rates, opportunistic mark-ups, and inflation.

### The Total Cost of Delivery is Not Well Understood

The total cost of delivering medicines – including last-mile distribution, facility-level handling, and true supplier mark-ups – remains poorly understood and largely untracked due to fragmented data, absence of a national price registry and opaque private-sector pricing. Operational mark-ups (RMS 25–30% in Ghana, DMA 16.5–20% in Nigeria, EPSS average of 27% in Ethiopia, MSD 30–50% in Tanzania) cover some transport and handling but rarely reflect the true end-to-end cost to deliver medicines to patients. In many cases donor interventions like support for warehousing and last-mile delivery are not costed and included in essential medicines markup estimates, leaving countries vulnerable when donor support fluctuates or reduces.

Donors often support last-mile delivery for program commodities and sometimes extend to domestically financed essential medicines but have invested little in building national price intelligence systems.

### Weak Price Governance is Pervasive

Weak capacity to negotiate and set prices by the public pooled procurer and/or health insurance entity, lack of price regulation, fragmented procurement, and limited oversight across supplier types allow hidden mark-ups and speculative pricing that inflate costs, especially in

remote areas with low competition. Lack of cost transparency and weak price governance undermine affordability, strain facility budgets, and make enforcing fair, evidence-based pricing for essential medicines difficult. In the absence of a standardized pricing framework and national coordination, wide disparities persist — undermining efficiency, complicating reimbursement, and raising concerns about equity. Without stronger market intelligence, routine price tracking, and regulatory mechanisms, public health systems miss critical opportunities to shape pharmaceutical and other health product markets, push back on unjustified mark-ups, secure value for money, and expand equitable access to essential medicines. From a sustainability perspective, Ethiopia is beginning to explore pricing strategies to encourage local manufacturing, while Nigeria and Ghana’s pharmaceutical industries are expanding, yet there is still limited dialogue on a comprehensive market-shaping strategy that leverages local consumption and pricing data to align procurement, financing, and industrial policy objectives.

## Bright Spot



Ghana has strengthened alignment between NHIA tariffs and procurement costs by applying framework contracts for high-volume essential medicines, which contributed to a 35% reduction in average prices between 2016 and 2022. Recent reforms, including the creation of the National Medicines Price Committee (2019) and the 2024 tariff revision, demonstrate Ghana’s commitment to improving affordability, transparency, and sustainability in essential medicine financing.

### Box 4. Pricing Snapshot

- Central or regional agencies set prices through bulk procurement, framework contracts, and annual catalogs.
- Across all countries the concept of market shaping for essential medicines is not defined, with no entity assigned the mandate.
- Health insurance tariffs in Ghana and to some extent in Tanzania anchor bulk procurement prices but often rely on median supplier bids instead of robust, independent market research and negotiation — countries do not maintain a national price registry or conduct routine price audits.
- Operational mark-ups cover basic costs like transport and handling, but true delivery costs — especially last mile — are inconsistently tracked and rarely transparent.
- When public supply fails, facilities turn to the open (private) market where prices vary widely; direct buying can be cheaper (e.g., Nigeria), but raises quality risks, or much higher (e.g., Ethiopia and Tanzania), revealing gaps in price regulation and oversight.
- Weak market intelligence, fragmented procurement, limited capacity and price controls create hidden costs, inflated mark-ups, and affordability challenges.
- Historically, donor support focuses on supply delivery, but not in-country price governance.

# FUNDS FLOW AND PROVIDER PAYMENT

## Provider Payment and Essential Medicines Allocations

Across Ethiopia, Ghana, Nigeria, Tanzania, in addition to budget lines for medicines, at least some portion of revenue that providers have to purchase medicines and other health products comes from national and community health insurance reimbursements (NHIA, BHCPF, NHIF, CHF, CBHI). In Ghana, the NHIA pays providers a defined tariff for each medicine dispensed, with 100% of funds supposed to flow into facility-level drug revolving funds. Nigeria’s BHCPF provides direct capitation payments to facilities, allocating about 20% to essential medicines. In Tanzania health facility payments for medicines come from mixed insurance and donor pools (NHIF, CHF, HBF) are paid by capitation (HBF and CHF) with essential medicines allocations ranging from 35% to 50%, or fee-for-service with the medicine payment bundled into the fee (50%). Ethiopia blends community-based health insurance and government budget transfers to facilities using historical line-item budgeting, typically dedicating 50 to 60% of these funds to medicines. User fees are pervasive across all countries.

*Table 7. Provider Payment Policy and How Essential Medicines are Incorporated*

Ethiopia	Ghana	Nigeria	Tanzania
Regional and Woreda essential medicine allocations through line-item budgeting using historical spending.	NHIA – fee for service retrospective payment of tariff for dispensed medicines, 100% allocated to essential medicines.	State health budget – funds sent to DMA prospectively, 100% allocated to essential medicines.	National health budget – funds sent to MSD prospectively, 100% allocated to essential medicines.
CBHI – fee for service (retrospective reimbursement – currently running a capitation pilot), 60% of the service fee allocated to essential medicines.	User fees – fee for service, 100% allocated to essential medicines.	BHCPF – direct facility financing, capitation, (bundled, per person prospective payment), via the NPHCDA gateway, 20% for essential medicines; no specific allocation for essential medicines under BHCPF channeled through NHIA gateway.	HBF – donor backed direct facility financing, 35% allocated to essential medicines.
SGD Pooled Fund – donor backed fund.		User fees – fee for service, 100% allocated to essential medicines.	NHIF – fee for service (retrospective reimbursement), 50% to essential medicines.
User fees – fee for service, 60% allocated to essential medicines.			CHF – capitation, (bundled, per person, prospective payment), 50% to essential medicines.
			User fees – fee for service, 50% to essential medicines.

No country is looking across provider payment flows and essential medicine allocations to understand the total need and estimate the gap, while actively assessing the optimal resource allocation for essential medicines across budget and revenue streams. There is also limited visibility into current investments and expenditures on essential medicines and health products across the system. For instance, an estimate from the NHIA in Ghana indicates that 60% of total claims expenditure is attributable to essential medicines. However, this figure is neither actively calculated nor systematically monitored, and no assessment has been conducted to determine whether this level of spending is appropriate to ensure desired health outcomes.

There is significant administrative burden at the provider level to budget and account for various funding flows, with unique rules attached to each, and to juggle a variety of provider payment mechanisms, including the highly prevalent, high transactional cost, fee-for-service system.

There are several specific challenges aligning provider payment systems and rates with the revenue required for health facilities to meet the needs of their populations for essential medicines and other health products. First, the procurement prices for medicines does not always align with provider payment rates (e.g., MSD and NHIF in Tanzania). When payment for medicines is bundled into service payments, the percentage of service payments that must be allocated to purchasing medicines seems to be arbitrary (ranging from 20% to 60%).

The provider payment methods (fee-for-service or capitation) and whether medicines are bundled into service payments create strong incentives, but it is unclear whether this leads to over-use or under-use in any given context. And finally, the provider payment methods themselves affect provider revenue flows and timely payment. Whereas fee-for-service payment typically requires claims submission and processing, which can lead to significant administrative burden and payment delays, capitation provides primary health care facilities with predictable, upfront payment per person enrolled, encouraging efficient use of resources and higher value for money. The CBHI scheme in Ethiopia, which was initially launched as a fee-for-service reimbursement scheme, is currently piloting capitation and is finding that a predictable, timely, prospective payment system is leading to improved availability of essential medicines at the health facility level.



## Financial Relationships and Processes between Procurers, Price Setters, Providers and Private Market Actors

Each pooled public procurer sets the price at which they will sell to the health facility, which may or may not be aligned with facility revenues whether it be from user fees, insurance reimbursements, or government budget allocations. Given budget flow delays, inadequate facility level financing to fulfill essential medicines needs, and price variations, user fees are prevalent, and indebtedness persists across all levels of the health system in all countries.

Table 8. Financing Flows Summary for Ethiopia, Ghana, Nigeria and Tanzania

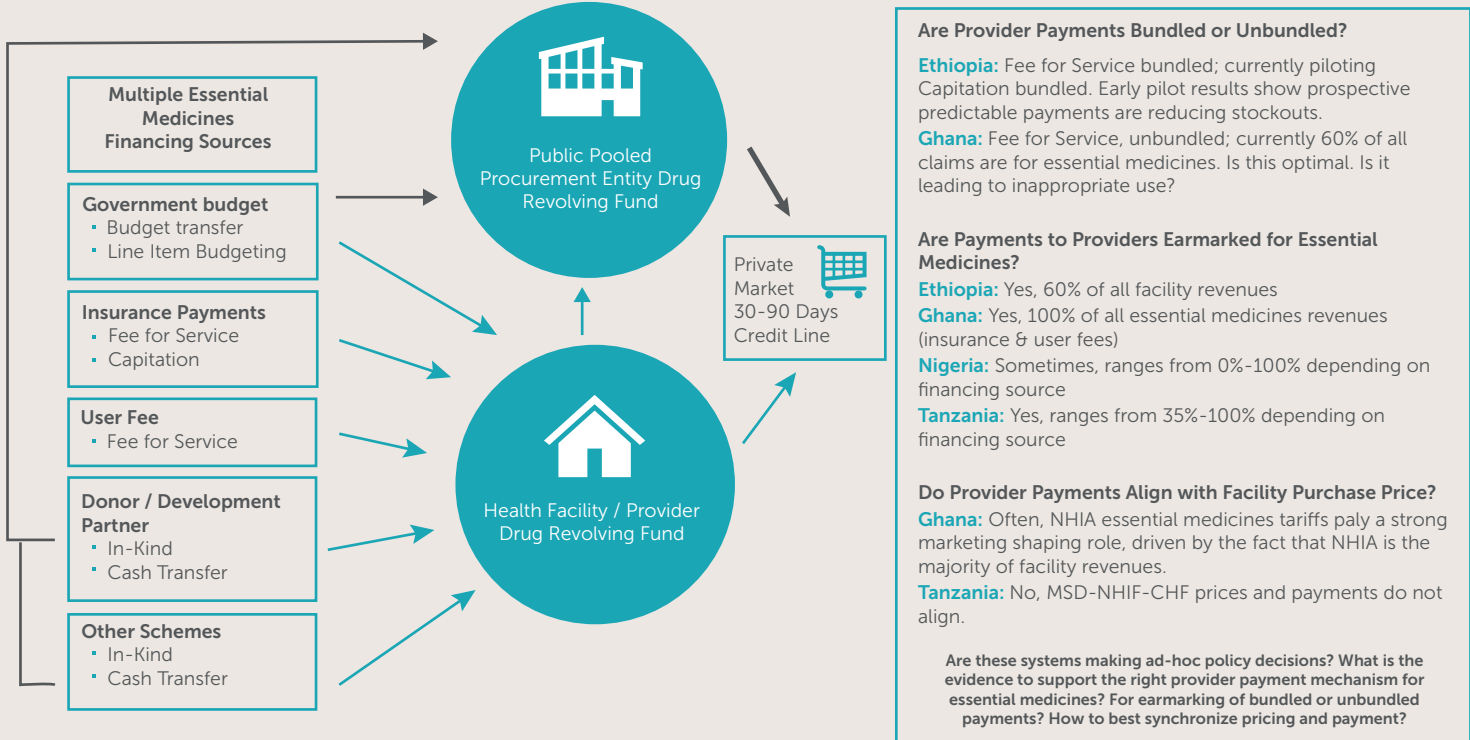
Country	Financing Flows Summary
<b>Ethiopia</b>	<p>Providers are financed through lump-sum allocations via line-item budgeting, special donor funds like SDG pooled fund, CBHI reimbursements, and user fees. Facilities primarily procure from EPSS but turn to the open private market when EPSS is out of stock, where prices are unregulated and significantly higher, especially in remote areas. Inflation, forex shortages, and varied transport costs further amplify regional price variation, making open market purchases unaffordable. Delayed budget releases, misalignment between CBHI reimbursements and actual procurement costs, and limited governance of DRFs cause deficits, leading to stockouts, price variation, and reliance on user fees. Facilities maintain DRFs to pay EPSS and private suppliers, who both provide commodities on credit; facilities are chronically indebted, worsening sustainability.</p>
<b>Ghana</b>	<p>Provider payments primarily flow through NHIA reimbursements determined by tariffs and user fees. RMS procures framework medicines (prices set by MOH and aligned to NHIA tariffs), but non-framework medicines are negotiated individually at the regional level. Infrequent NHIA tariff updates mean they lag behind real market prices, particularly during inflationary periods and currency depreciation. Misalignment forces facilities to cover gaps through user fees or by paying above tariff when buying from private suppliers. Delayed NHIA reimbursements and rising operational costs further strain DRFs, leading to stockouts and higher user fees. Facilities use DRFs (funded by NHIA reimbursements and user fees) to pay RMS and private suppliers on 90-day credit; facilities and RMS accumulate debt to suppliers, depending on the timeliness of NHIA reimbursements and DRF governance practices like using DRF fund for other operational expenses outside of essential medicine purchases.</p>
<b>Nigeria</b>	<p>Financing combines lump-sum DMA allocations, BHCPF capitation, state health insurance capitation, and user fees. DMA supplies are free to facilities under state allocation but rarely adequate; facilities then use revenues to buy from DMA under the DRF scheme or the open market when the DMA is out of stock, where prices can sometimes be lower than DMA but with quality risks. Inflation, forex volatility, and high interest rates drive open-market price fluctuations and worsen budget shortfalls. Misalignment between BHCPF and state allocations and actual need results in DRF deficits, stockouts, and increased user fees. Facilities pay DMAs directly (no credit terms), but DMAs are themselves indebted to suppliers/wholesalers, who extend 30–90 day credit. When DMA is out of stock, facilities also rely on DRFs to pay private suppliers; and are frequently indebted to these suppliers, leaving DRFs structurally weak under inflationary pressure.</p>
<b>Tanzania</b>	<p>Provider financing is through lump-sum allocations via MSD, NHIF reimbursements, CHF capitation, user fees, and the Health Basket Fund (HBF). NHIF tariffs, set via market surveys, do not always align with MSD or Prime Vendor prices, particularly during periods of inflation and forex fluctuations. When MSD is out of stock, facilities buy from private suppliers at high, regionally variable prices — especially burdensome for remote facilities with high transport costs. Delayed funds flow to facilities results in DRF deficits, stockouts, and reliance on user fees. MSD operates cash-and-carry with no credit, while private suppliers extend 30–90 day credit. Facilities face DRF liquidity problems due to delayed reimbursements (NHIF, CHF, HBF), rising procurement costs from inflation, weak stock management and governance issues.</p>

Across all four countries, financing flows for essential medicines are marked by misalignment between reimbursement tariffs, procurement prices, and facility revenues, compounded by delays in budget disbursement and rising market costs. Drug Revolving Funds are intended to bridge these gaps, but chronic deficits and indebtedness undermine their sustainability. The result is recurring stockouts, dependence on user fees, and persistent financial strain across the health system.

### Box 5. Funds Flow and Provider Payment Snapshot

- Across Ethiopia, Ghana, Nigeria, Tanzania, funding for essential medicines comes from a mix of national and community health insurance reimbursements, user fees, direct government budget allocations, and donor-backed facility financing (HBF in Tanzania, SDG Pooled Fund in Ethiopia) with a deliberate recognition of the importance of commodity security.
- All countries have a bulk purchasing function with some effort to align provider payments and prices, but no systematic price setting and regulatory processes are in place for the public sector that apply across all procurement agents.
- Incentives in current payment methods may be leading to under/over use of medicines, but currently this is not well understood or tracked.
- Essential medicines tariffs and budget allocations inconsistently adjust for real-time market costs, forex shocks, or inflation; DRFs often run deficits; stockouts at the public pooled procurer level push facilities to the open (private) market where prices are unregulated.
- The misalignments between medicines pricing and provider payment means the system across the board is chronically indebt leading to stock-outs.

Figure 4. Are Countries Making the Right Policy Decisions on Financing Flows and Provider Payment Mechanisms?



# DATA SYSTEMS

Each country has a variety of information systems that are used to track and report on the functions of financing, supply chain and service delivery. Table 9 lists some of the information systems but is not comprehensive.

Table 9. Data Systems

Budget Activity	Ethiopia	Ghana	Nigeria	Tanzania
Financing	Integrated Financial Management Information System (IFMIS); Auditable Pharmaceutical Transactions and Services (APTS)	Ghana Integrated Financial Management Information System (GIFMIS); Ghana Health Service Planning, Budgeting, Management Information System (PBMIS); Tally; commercial bank accounts; financial e-tracker.	State Integrated Financial Management System (IFMIS); DRF tools (excel based)	Mfumo wa Ulipaji Serikalini (MUSE, to monitor LGA and central government spending from the budget); Central Budget Management Information System (CBMIS) for developing regional referral hospitals own-source commodity budget, Facility Financial Accounting and Reporting System (FFARS) to manage and monitor facility spending, Planning, Budgeting and Reporting System (PlanRep) to develop own-source commodity budget for PHC, Zonal and National referral hospitals
Supply Chain	Health Commodity Management Information System (e-HCMIS) /DAGU; Quantimed;/ Model 19 (record the receipt of health commodities from suppliers); limited to no routine tracking of OOP for essential medicines and health products	Ghana Logistics Management Information System (GhLMIS); limited to no routine tracking of OOP for essential medicines and health products  Global Family Planning Visibility and Analytics Network (VAN) is integrated with GhLMIS to monitor contraceptive supply chain management	Nigeria Health Logistics Management Information System (NHLMIS) and QAT; State LIMS (used to report into NHLMIS); Open LMIS (vaccine supply chain); mSupply (warehouse inventory management); limited to no routine tracking of OOP for essential medicines and health products	Electronic Logistics Management Information System (eLMIS at health facility level); MSD Epicor 10 (Logistics and inventory management system at public pooled procurer); limited to no routine tracking of OOP for essential medicines and health products
Service Delivery	District Health Information System, population level (DHIS2)	District Health information Management System (DHIMS); e-tracker electronic medical record at PHC level, Lightwave electronic medical record at hospital level; CLAIM-it (all NHIA contracted health facilities)	DHIS2	DHIS2, EMR at PHC and hospital levels

The lack of visibility across information systems tracking the functions of health financing, supply chain, and service delivery prevents decision-makers from accessing a comprehensive picture of essential medicines and health product needs, funding flows, procurement, stock levels, and service delivery gaps.

At the same time each country is actively engaged in some form of data consolidation and system improvement but lacks a comprehensive picture and plan and/or political will and technical capacity to do so. For example, in Ethiopia, EPSS is piloting interoperability between the Health Commodity Management Information System (HCMIS) and the Auditable Pharmaceutical Transactions and Services (APTS) platform to better align consumption, revenue, and procurement data. In parallel, the rollout of the electronic Logistics Management Information System (e-LMIS) is intended to improve end-to-end visibility across the supply chain, though coverage and functionality remain limited at this stage. There is also growing momentum to link forecasting tools more systematically with government budgeting cycles, with the goal of narrowing the persistent planning – execution gap and ensuring that resource allocation keeps pace with actual commodity needs. In Ghana, there is robust discussion since 2019 to cross walk and make interoperable electronic medical records, CLAIM-it, District Health Information System, and GhLMIS. However, this has not materialized.

## POSITIVE DEVELOPMENTS

While this country mapping identifies several challenges and provides preliminary recommendations on a way forward, it would be a missed opportunity to not acknowledge some of the advances that are currently being made across the four countries.

**Ethiopia** recently developed a systematic approach called the Committed Demand and Supply System (CDSS). This is a government-led mechanism that aligns demand forecasting, financing, and procurement to ensure supplies match committed funding. Under CDSS, health facilities forecast their needs and reconcile them with available budgets, producing binding commitments that direct procurement and delivery.

Key features:

- Operates as a budget-supported quantification system, linking supply contracts to forecasted demand and financing.
- Integrated with forlab+ forecasting and Ethiopia's electronic Logistics Management Information System (eLMIS, "Dagu") to strengthen visibility across financing and supply.
- Aims to reduce fragmentation, minimize stockouts, better balance financial risks between health facilities and EPSS, and improve transparency and accountability in procurement and supply chains.
- Supports broader reforms to harmonize funding flows and reinforce local pharmaceutical manufacturing by creating stable demand assurances.

By institutionalizing CDSS, Ethiopia seeks a more data-driven, efficient, and sustainable pharmaceutical supply system that secures access to essential medicines and health products while reducing reliance on parallel donor processes.

**Ghana** has made notable progress in aligning NHIA essential medicine tariffs with procurement realities. Since 2018, the MOH has applied framework contracts for high-volume essential medicines, enabling pooled demand and reference pricing. NHIA benchmarks its reimbursement rates against these contracts, driving a 35% reduction in average prices between 2016 and 2022. The creation of the National Medicines Price Committee (2019) and the 2022 Pricing Strategy for Pharmaceuticals<sup>23</sup> further strengthened governance by recommending NHIA tariffs reflect framework outcomes, including the setting of a maximum sales price for public and private sectors. In 2024, NHIA updated its tariffs with a 50% increase plus a 30% top-up, explicitly referencing framework medicines to better match real costs. Together, these reforms demonstrate Ghana's commitment to improving affordability, transparency, and sustainability in essential medicine financing.

**Tanzania's** MSD and the NHIF have begun exploring ways to align procurement and financing, though collaboration remains limited and mostly policy-driven. Reviews of MSD reforms recommend channeling a portion of NHIF and CHF resources directly to MSD to strengthen its financial base and cash sales, while the Prime Vendor model already allows facilities to use NHIF funds when MSD cannot fully supply. In 2020, NHIF and MSD held joint discussions that resulted in adding 71 drugs to the NHIF benefits package, with the government urging both entities to deepen cooperation. While these examples show progress, there is not yet a fully institutionalized mechanism — such as tariff alignment — between MSD and NHIF, and most interactions remain complementary or ad hoc rather than systematically integrated.

**Nigeria's** health financing and procurement systems are demonstrating promising momentum, with emerging bright spots that signal a shift toward greater coherence and efficiency. The National Health Insurance Authority (NHIA) Act (2022) established a mandatory insurance framework, creating a pathway to pool financing streams and send clearer demand signals to the supply chain. The BHCPF is channeling federal resources into state-level primary care with earmarks for essential medicines, while new State Health Insurance Schemes (SHIS) are beginning to shape procurement through facility contracts under NHIA oversight. Donor-funded programs for HIV, TB, malaria, and vaccines are also transitioning into the National Product Supply Chain Management Program (NPSCMP) to reduce parallel systems. Finally, a pilot digital consignment model in tertiary hospitals directly links procurement, supply, and financing through automated orders, verified deliveries, and weekly reimbursements — demonstrating how financing reforms can be embedded into supply chain operations. Although insurance coverage in Nigeria remains very low, these system improvements are laying the groundwork for strategic purchasing — including for essential medicines — in the near future.

Together, these countries' experiences show that even amid persistent challenges, important innovations are taking hold. Ethiopia's CDSS, Ghana's tariff alignment, Tanzania's MSD – NHIF engagement, and Nigeria's financing and digital pilots each represent steps toward more integrated, transparent, and sustainable systems. While still early and uneven, these bright spots provide proof of concept that financing, supply chains and market shaping functions can be aligned to strengthen access to essential medicines.

# CROSSCUTTING RECOMMENDATIONS

This rapid assessment of Ethiopia, Ghana, Nigeria, Tanzania, highlights that while each country's health financing, supply chain, and market-shaping systems are shaped by distinct institutional and political contexts, several common features and challenges emerge. All four countries maintain a pooled public procurement entity and earmark domestic funds for essential medicines. Yet, none have fully aligned pricing with provider payment mechanisms, nor established robust pricing strategies to leverage market-shaping opportunities. Financing for essential medicines is drawn from a varied and often fragmented mix of sources — government budgets, insurance schemes, user fees, and donor programs — but the total available financing is rarely consolidated or assessed against actual needs, and explicit quantification of the financing gap is largely absent.

Importantly, each of these countries is already thinking about and actively working on many of these issues, as documented in this report. This creates a significant opportunity to bring them together to share experiences, leverage existing innovations, and learn from one another's successes and challenges. By harnessing their collective knowledge and curiosity to do better, these countries can design financing and procurement systems that are both context-specific and responsive to shared goals of access, efficiency, and sustainability.

The following recommendations (and Table 10) build on these insights and are intended to provide a set of cross-cutting actions that are universally applicable across all four countries.



- 1. Establish an integrated essential medicines and health products financing framework and plan:** As medium- and long-term policy efforts evolve, countries should develop integrated supply chain financing plans that cover both commodities and program/operational needs within their specific contexts. These plans should be supported by country stakeholders and aligned under a unified essential medicines and health products financing framework that consolidates all funding flows into a cohesive planning and budgeting process, aligned procurement procedures and standards, consistent provider payment rules and digital tracking across sources. Multilateral financiers (e.g., Gavi, Global Fund), development finance institutions (e.g., World Bank, African and Asian Development Banks), and regional bodies (e.g., Africa CDC, African Union, African Medicines Agency, ASEAN Pharmaceutical and Regulatory Harmonization Platforms, Asia Pacific Observatory on Health Systems and Policies) can play a key role by supporting country efforts and developing regional frameworks, maturity models, and analytics to guide progress.

Short- to medium-term actions could include:

- **Institutionalize forecast–budget linkage:** Formalize the link between forecasting and budgeting, requiring reconciliation between quantification outputs and essential medicines and health products budget allocations, actively identifying financing gaps.
- **Establish an integrated essential medicines and health products financing tracker:** Consolidate all funding sources under a unified planning and budgeting process and develop a dashboard to track financing, supply chain and service delivery data.

- **Consider comprehensive provider payment mapping:** All countries use a mix of government budget transfers, capitation, and fee-for-service payment mechanisms. Map provider payment systems across countries to assess the impact of provider incentives and behaviors under current mechanisms on prescribing practices and cost, document efficiency gaps and potential gains, including on access.

Note: Linking annual forecasts to budgets is essential, but it does not guarantee that countries will have sufficient funds to cover their full quantified need. Even after all financing sources are combined and aligned, a gap will mostly likely remain. Every country must therefore go through a prioritization process — typically expressed through an Essential Medicines List and Benefit Package — that rationalizes what can realistically be financed and delivered. This ensures that alignment of forecasts and budgets is coupled with explicit prioritization and recognition of the gap.



- 2. Fully integrate donor supported program commodity forecasting, budgeting, financing and supply chain processes into government systems:** With shifts in the global health financing landscape, donor support for program commodities (HIV, TB, malaria, family planning, vaccines, maternal and child health, and nutrition) is likely to vary. This creates an opportunity to harmonize donor-funded support with country systems working toward sustainable financing and supply chains for essential medicines and health products.

Short-to medium-term actions could include:

- **Map donor-funded program commodity financing flows:** Harmonize Gavi and Global Fund commodity financing negotiations with country governments by mapping current program commodity financing flows with domestic systems for essential medicines and health products, ultimately developing pathways and timelines for integration. This dialogue could extend to UNFPA, UNICEF, and other commodity funding streams for nutrition and RNMCH commodities.
- **Map donor-funded program commodity supply chain processes:** Map donor-funded program commodity supply chain processes to domestically financed essential medicines and health products systems. Build stakeholder consensus and develop pathways, timelines, and costing for integration.



- 3. Advocate for timely budget and provider payment disbursements:** Use evidence on stockouts, price volatility, and service delivery gaps to raise awareness of the financial and health costs of delayed budget release and provider payments. Develop tools to systematically monitor disbursement timelines and associated opportunity costs.

Short- to medium-term actions could include:

- **Mapping budget release delays:** Map and document current delays in budget release and provider payments to health facilities, including understanding the varied dynamics between releases to tertiary, secondary, and primary care levels. Similarly, map budget release delays to public pooled procurers.
- **Documenting stock-outs:** Document stock-out status at all levels of the health system and assess the cost of inaction on service delivery and price volatility.
- **Measuring availability:** USAID-funded End User Verification surveys tracking last-mile availability of essential medicines and health products have ended. With eLMIS not fully deployed in any country, rapid measurement remains critical to monitor stockouts and availability.



4. **Harmonize public procurement costs with provider payment rates:** Ensure provider payment rates reflect actual health facility procurement costs, especially from the public pooled procurer, to avoid provider losses and maintain supply chain sustainability.

Short- to medium-term actions could include

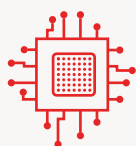
- **Map in-country price variations:** Working with country stakeholders document price variations within the public sector as a result of fragmented procurement.
- **Document barriers and opportunities to harmonizing procurement costs and provider payments:** Facilitate a dialogue across country stakeholders to document barriers and opportunities to harmonizing procurement costs and provider payments.



5. **Establish a national price governance and market shaping strategy and implementation mechanism:** Create a coordinated essential medicines and health products pricing and market intelligence platform to manage a national price registry (price observatory, price monitoring strategies, price data visibility and data sharing), conduct regular cost and market analysis, and publish benchmark pricing and markup guidelines. This would reduce price variability and support more equitable, cost-effective procurement practices. A market shaping strategy implemented through demand aggregation, supply planning, transparent pricing, and coordination with key financing and procurement actors can unlock system-wide savings and improve access.

Short- to medium-term actions could include

- **Document current efforts across countries like Ethiopia and Ghana that are actively thinking about pricing governance:** Understanding where countries are and the efforts being made to develop solutions to improved price governance can help develop case studies for sharing.
- **Establish a peer learning platform to share experiences and co-create solutions:** Since no country currently has a pricing framework — though all recognize its importance — assessing country demand and willingness to collaborate would be a valuable first step. This should evolve into a learning collaborative to co-create sustainable, country-owned solutions that ensure both political and technical ownership.



6. **Integrate data systems:** Link siloed information systems to enable end-to-end visibility of financing, supply chain, and service delivery data. A unified dashboard should enable real-time monitoring of commodity needs, financing flows, stock levels, and service delivery gaps — improving transparency, accountability, and timely decision-making.

Short- to medium-term actions could include

- **Pilot in two to three countries to develop an integrated dashboard:** Work with selected countries to identify indicators, compile data, and create a comprehensive picture of essential medicines financing, supply chain, and service delivery. Document data gaps and facilitate dialogue on what a complete and useful dashboard should include.
- **Map current interoperability efforts and assess catalytic actions to hasten progress:** Some countries, like Tanzania, Ethiopia, and Ghana, have recognized the need to crosswalk and make interoperable service delivery and supply chain information systems. Most countries have not accounted for the integration of financing systems or assessed bottlenecks and opportunities to advance this dialogue.



7. **Leverage peer learning platforms:** While each recommendation will require country-specific dialogue and stakeholder engagement, there is also a unique opportunity for countries to share experiences, assess effective practices, and co-create solutions through forums like the Joint Learning Network, fostering evidence-based learning and best practice development.

Table 10. Cross-Country recommendations from Ethiopia, Ghana, Nigeria, Tanzania

Recommendation	Short-/Medium-Term Actions
<p><b>1. Establish an integrated financing framework and plan:</b> Develop unified plans covering commodities and operational needs; consolidate all funding flows with aligned procurement, provider payment rules, and digital tracking. Regional/multilateral partners (Gavi, GF, WB, AfDB, ASEAN, AU, Africa CDC, AMA, APO) to support.</p>	<ul style="list-style-type: none"> <li>• Institutionalize forecast–budget linkage (reconcile quantification with budget allocations).</li> <li>• Develop an integrated financing tracker/dashboard to monitor financing, supply chain, and service delivery.</li> <li>• Map provider payment systems across two to three countries to assess incentives, efficiency, and access impact.</li> </ul>
<p><b>2. Fully integrate donor-supported program commodities into country systems:</b> Harmonize donor commodity financing and supply chain processes (HIV, TB, malaria, family planning, vaccines, maternal and child health, nutrition) with national systems.</p>	<ul style="list-style-type: none"> <li>• Map existing donor commodity financing flows (GF, Gavi, UNFPA, UNICEF, others) and align with domestic systems for essential medicines and health products.</li> <li>• Map donor-funded supply chain processes and develop pathways/timelines for integration into country systems.</li> </ul>
<p><b>3. Advocate for timely budget and provider payment disbursements:</b> Use evidence to highlight costs of delays and monitor execution.</p>	<ul style="list-style-type: none"> <li>• Map/document budget release delays across levels of care.</li> <li>• Document stock-out status and opportunity costs.</li> <li>• Establish rapid last-mile availability measurement (post-End User Verification, with eLMIS gaps).</li> </ul>
<p><b>4. Harmonize procurement costs with provider payment rates:</b> Align reimbursement tariffs with actual procurement costs to avoid provider losses and sustain supply chain.</p>	<ul style="list-style-type: none"> <li>• Map in-country price variations from fragmented procurement.</li> <li>• Document barriers/opportunities to harmonizing procurement costs and payments.</li> </ul>
<p><b>5. Establish national price governance and market shaping strategy:</b> Create coordinated platform for pricing intelligence, benchmark pricing, demand aggregation, and transparent procurement.</p>	<ul style="list-style-type: none"> <li>• Document ongoing country efforts (e.g., Ethiopia, Ghana) in pricing governance.</li> <li>• Establish peer learning platform - evolve into collaborative to co-create sustainable, country-owned solutions with political/technical ownership.</li> </ul>
<p><b>6. Integrate data systems:</b> Link financing, supply chain, and service delivery data for end-to-end visibility.</p>	<ul style="list-style-type: none"> <li>• Pilot dashboards in two to three countries (select indicators, compile data, document gaps).</li> <li>• Map interoperability efforts and identify catalytic actions to accelerate progress.</li> </ul>
<p><b>7. Leverage peer learning platforms</b> Foster cross-country exchange to co-create solutions and share best practices.</p>	<ul style="list-style-type: none"> <li>• Facilitate Joint Learning Network peer exchanges on two priority areas: (1) price governance and (2) data systems.</li> </ul>

# ANNEX 1: ANALYTICAL QUESTIONS

## Forecasting and budget formulation

- Describe the process for projecting need and allocating budget for PHC commodities in each health financing scheme [if available; document if forecasting is not done].
  - Identify any gaps or misalignment across financing arrangements.
- 

## Budget execution

- Describe the conditions of release of funds from each budget-holder to the entities responsible for procurement of commodities (procurement agency, sub-national health agencies, and/or health care providers).
  - Are delays common? If yes, what are the typical consequences?
- 

## Pricing

- Describe how prices are determined for drugs procured from each type of supplier (private wholesalers; central/regional medical store or other government wholesaler; private pharmacies) [if available].
  - Is total cost of delivery known (or knowable)?
- 

## Funds flow and provider payment

- Estimate the absolute and relative share of spending on PHC commodities through each relevant budget and health financing scheme [if available; document if data are not available].
- For the funds sent directly to health care providers to procure medicines, describe:
  - What is the form of provider payment?
  - Are funds for medicines paid separately or are they bundled in provider payments?
  - Are there any restrictions on how/how much of the provider payment can or must be allocated to medicines?
  - What procurement functions are carried out by the providers?
  - How are payment rates to providers for commodities determined?

- Are these typically in alignment with the prices paid by providers to procure commodities? If not, what are the typical consequences?
- What is the financial mechanism/relationship between providers and the public procurement agency, central/regional medical stores, private market?
- Are providers typically in arrears to these suppliers? If yes, what are the typical consequences?

## Data systems

- What data systems are used to track (for each health budget holder/financing cheme, public and private suppliers, local government actors, health care providers).
- Projected need for different commodities.
- Budgets formulated and released.
- Supply stocks, flows, stock-outs.
- Financial transactions between health providers and suppliers.
- Unmet need or commodities obtained directly by patients in private pharmacies/drug shops.



# ENDNOTES

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