RESULTS FOR DEVELOPMENT

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

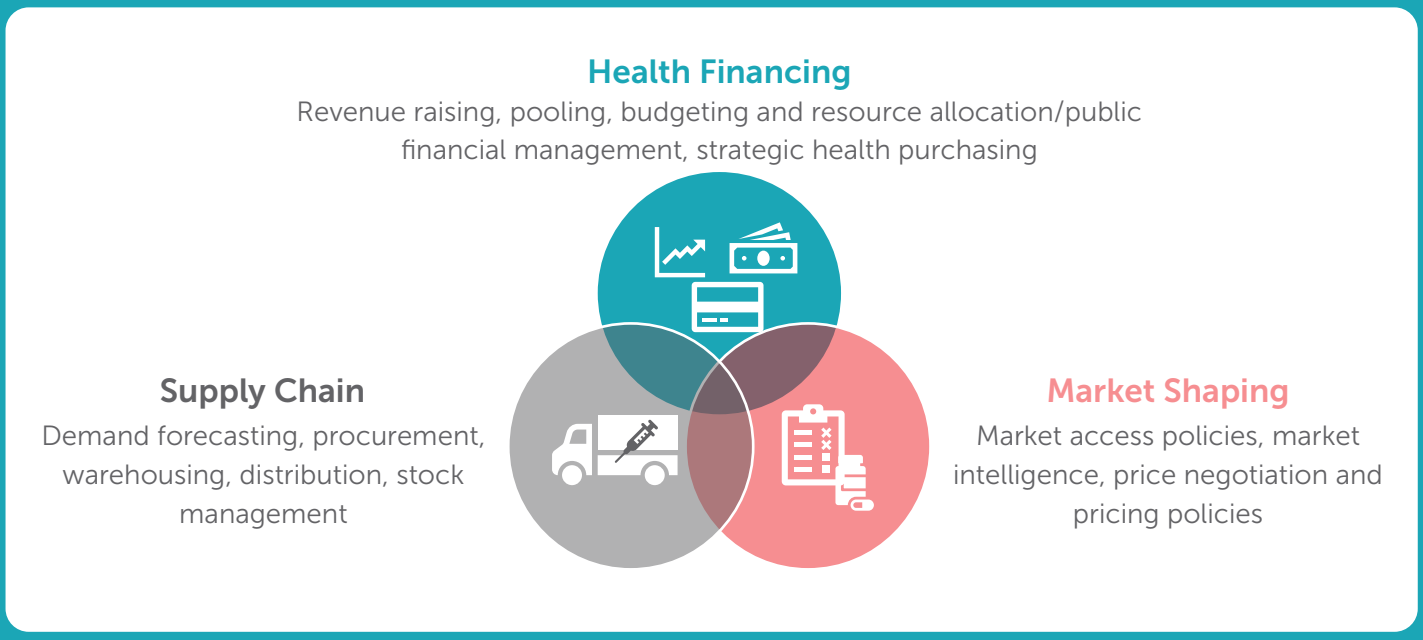
GHANA

This brief examines how Ghana's health financing, supply chain, and market shaping functions align and intersect — and where they fall short in reinforcing each other and working together — to inform strategies, policies, and learning aimed at ensuring more reliable, better-financed access to essential medicines and health products.

Access to essential medicines and other health products is fundamental to achieving Universal Health Coverage (UHC) and improving population health[1]. To successfully ensure that people receive the medicines and health products they need, governments must take a complex set of actions that span health financing, supply chain and market shaping policy. They must:

- Set priorities about which services and products they will fund
- Forecast the amount of products to buy based on population health needs
- Use market shaping tools to promote adequate supply of quality products at the best prices
- Ensure that enough resources are allocated in budgets
- Ensure that funds flow effectively through the various health financing arrangements to cover the costs of medicines and products
- Ensure that the procurement and distribution of commodities functions well and the products reach the end users
- Ensure the flow of funds, pricing and payment to providers align with the flow of products through supply chains

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).

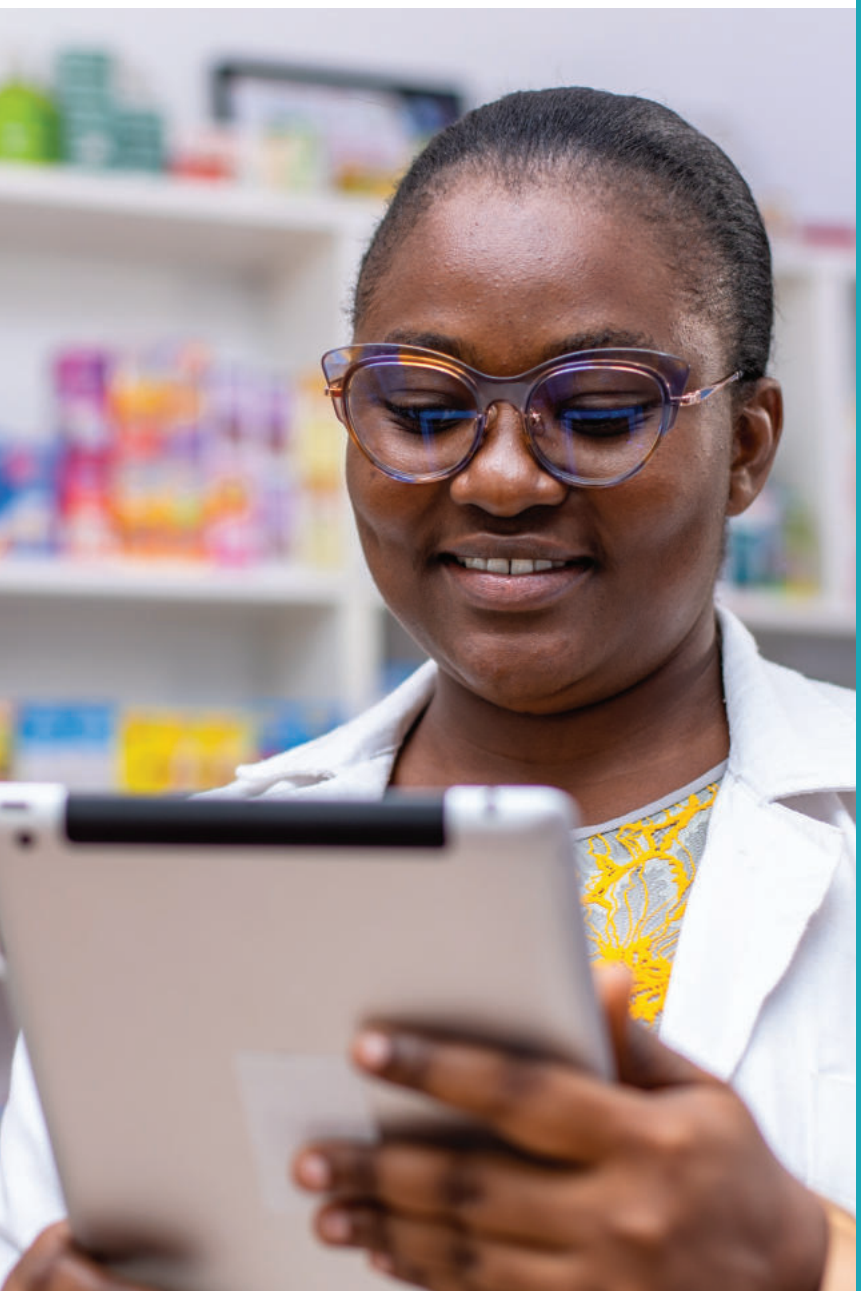


GOVERNANCE

Ghana's Health Commodity Supply Chain Master Plan (2025–2029)[2] sets out a strong vision for strengthening supply chain performance and improving coordination across the health system. While financing has often been treated as an afterthought, there is growing recognition of its importance, and recent policies have begun to address this gap. The Plan rightly calls for improved coordination among central, regional, and district levels, including a mapping of financial flows and expenditure tracking to build a coherent, transparent system that supports commodity availability. The recent launch of the National Pricing Strategy for Pharmaceuticals and Other Health Technologies is a positive step toward aligning prices, procurement costs, and National Health Insurance Scheme (NHIS) payment rates[3]. However, development of a concrete operational work plan and implementation has been slow, and translating these policy intentions into practice will require stronger follow-through — ensuring that the National Medicines Pricing Committee meets regularly, uniform financial tracking tools are deployed, and financing is fully integrated into supply chain operations. The next iteration, in the form of a midterm review, of the Supply Chain Master Plan offers an important opportunity to build on these foundations and place even greater emphasis on financing alignment as a core pillar of Ghana's supply chain strengthening agenda.

ESSENTIAL MEDICINES FINANCING SOURCES

Ghana's essential medicines financing system relies on a mix of NHIS payments, government budget allocations for donor co-financed commodities, out-of-pocket payments, and donor funding.



Methods

Results for Development (R4D), with support from the Gates Foundation, conducted a multi-country rapid analysis in Ghana, Ethiopia, Nigeria, and Tanzania to examine existing linkages between supply chain, health financing, and market shaping functions and policies. An opportunistic qualitative analysis was conducted 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. Data was gathered through document reviews and key informant interviews with technical staff from relevant Ministry of Health (MOH) and Ghana Health Service departments, Ghana's regional public pooled procurement entities, regulatory authorities, health financing agencies, regional and district health management teams, and health care facilities.

ESSENTIAL MEDICINES FINANCING SOURCES

NHIS Payments	▪ Facilities submit claims to the National Health Insurance Authority (NHIA) for medicines covered by the NHIS dispensed to patients with insurance coverage; the NHIA makes payments on a fee-for-service basis, using tariffs that define maximum reimbursable prices for medicines. ▪ 100% of NHIS payments for medicines are supposed to flow into Drug Revolving Funds (DRFs) at health facilities.
Government Budget Allocations	▪ MOH budget allocations for essential medicines primarily cover donor co-financed program commodities (vaccines, HIV, malaria, tuberculosis (TB), nutrition, family planning, maternal and child health). ▪ These allocations flow through the national MOH budget and are not integrated into broader country financing systems for essential medicines.
Out-of-Pocket Payments (OOP)	▪ Facilities collect out-of-pocket payments from patients for essential medicines not covered by the NHIS benefits package and for patients not enrolled with the NHIA. These fees are expected to be deposited into DRFs alongside NHIS payments . ▪ Reliance on user fees raises equity concerns, as even NHIA-covered clients often pay out of pocket when NHIA reimbursements are delayed.
Donor Funding	▪ Development partners finance a large share of program commodities under co-financing agreements with MOH. ▪ These funds flow outside the DRF and NHIS systems and are managed centrally by the MOH, creating parallel financing and procurement tracks.

Estimates of the total funding envelope or the share of funding across these sources are not available. Although Ghana earmarks domestic funding for essential medicines — NHIS payments and patient out-of-pocket payments must be deposited into DRFs, and government allocations for program commodities are earmarked at the national level — fragmentation undermines visibility into the total financing envelope. Each financing stream flows through parallel processes with different governance rules. This fragmentation weakens Ghana's ability to assess total financing available for essential medicines, align financing with forecasted needs and identify gaps and strategically allocate resources. The result is arrears, stockouts, higher OOP costs, and weakened market-shaping power of the public sector.

FORECASTING AND BUDGETING

Forecasting

Forecasting for essential medicines in Ghana is conducted through a bottom-up process. Primary health care facilities, district health teams, and regional health management teams provide data on historical consumption, stock on hand, losses, and stock-outs. This information is cross-checked against the Ghana Logistics Management Information System (GhLMIS) by the Regional Medical Stores (RMS), which lead the development of final estimates. Forecasts for approximately 70 prioritized medicines are submitted to the MOH as part of the national framework (FW) contracting process.

Outside of these FW medicines, each RMS maintains separate forecasts for other essential medicines, mainly those included in the NHIS benefit package. Donor-supported program commodities (vaccines, HIV, malaria, TB, nutrition, family planning, maternal and child health) follow a separate forecasting process that is centrally led and not integrated with domestic essential medicines quantification. NHIA claims for essential medicines is not integrated into the country's forecasting and quantification processes, despite being a potentially rich source of data to improve planning and resource alignment.

Overall, Ghana's forecasting occurs in four parallel streams:

1. RMS-led FW medicines submitted to MOH for FW contract price setting;
2. Donor-supported program commodities, forecasted nationally;
3. RMS-led non-FW medicines included in the NHIS benefit package; and
4. MOH "push" medicines not included in NHIS.

Budgeting

Budgeting for essential medicines in Ghana is primarily driven by projected facility-level revenue streams: NHIS payments and patient out-of-pocket payments. Facilities are required to maintain a DRF into which 100% of NHIS medicine reimbursements and patient out-of-pocket payments are deposited. Similarly, RMS are required to maintain their own DRFs, pooling funds from facility purchases, which are 100% earmarked for essential medicines and related operational costs.

The costing of forecasted needs depends on the source: NHIS-covered medicines are costed using NHIA tariffs, while non-NHIS covered medicines use MOH and RMS costing and negotiated prices. Parallel budgeting processes exist for donor-funded program commodities primarily negotiated at the national level through co-financing arrangements that are not integrated into domestic funds flows for essential medicines and health products and lie outside of the NHIA benefit package.

Misalignments Between Forecasting and Budgeting

- Forecasts do not drive budget allocations due to politically driven budget related decisions and macroeconomic constraints.
- Financing gaps are poorly understood; no unified estimate of national essential medicine needs exists.
- NHIA tariffs are often outdated and not systematically revised (e.g., no full revision from 2019 – 2024, although by policy there is meant to be an annual review and revision).
- Inflation and currency devaluation are pervasive.
- Donor-funded program commodity processes continue to be parallel, even though the Gavi transition is scheduled for 2030 and Global Fund commodity co-financing requirements are increasing year on year and budgets are expected to be cut under the Grant Cycle 8 (GC8 –2027-2029) given the current Global Health geo-political context.

BUDGET EXECUTION

Delays in the release of funds for essential medicines and other health products from all financing sources are systemic:

- NHIA reimbursements are frequently delayed for months due to fiscal constraints and delayed MOF releases, and slow claims processing.
- MOF budget releases for co-financed program commodities are unpredictable.
- Donor procurement cycles are often out of sync with domestic timelines.

These delays force facilities and RMS to operate in arrears, deplete DRFs, and shift procurement to the open (private) market at higher prices, undermining value for money.

Source	Key Constraints
NHIA Reimbursements	Claims payments are often delayed for several months due to MOF cash flow bottlenecks and weak claims processing; arrears weaken DRFs and push facilities into debt.
Government Allocations (Program Commodities)	Focused mainly on donor co-financed commodities; siloed from NHIA and DRF flows; releases subject to fiscal ceilings and delayed MOF approvals
User Fees / OOP	Regressive and inequitable; supposed to be deposited into DRFs but often diverted to cover operational costs.
Donor Funding	Parallel flows not integrated into domestic financial management systems.

Table 1: Sources of essential medicine financing in Ghana and budget execution delays

POOLED PROCUREMENT: REGIONAL MEDICAL STORES

In Ghana, the RMS plays a central role in the public sector procurement and distribution of essential medicines. Although the MOH leads price negotiations through national FW contracts for ~70 essential medicines, the RMS is responsible for executing pooled procurement and ensuring distribution to health facilities. Additionally, RMS independently procures non-FW drugs, again playing a market shaping role.

Key Functions of RMS

- Aggregate regional commodity demand for both FW and non-FW medicines.
- Conduct public pooled procurement on behalf of facilities, sourcing medicines at nationally negotiated framework prices for FW medicines and negotiating directly with private wholesalers for non-FW medicines, using NHIA tariffs as a pricing anchor.
- Store and distribute commodities to public health facilities, acting as the main warehousing and logistics intermediary between suppliers and public sector health care providers.
- Maintain a DRF into which facility payments are deposited, fully earmarked for the procurement and restocking of essential medicines.

Challenges

- Chronic financing delays and arrears: RMS rely on DRFs replenished by facility payments, but delayed NHIA reimbursements and diversion of user fees mean DRFs are frequently underfunded, leaving RMS unable to restock consistently.
- Fragmented and parallel financing flows: Donor-financed program commodities are procured and distributed outside the RMS system, reducing visibility into total financing for medicines and weakening RMS role as the central pooled procurer.
- Procurement inefficiencies from outdated tariffs: RMS procurement is anchored to NHIA tariffs, which are often outdated and misaligned with real market prices. This results in frequent renegotiations, strained supplier relationships, and stockouts when suppliers refuse to supply at below-market rates.
- Dependence on open (private) market procurement: When RMS is stocked out, facilities may procure directly from private wholesalers with a certificate of non-availability. This policy is meant to ensure supply continuity but undermines pooled procurement, exposes facilities to higher and more volatile prices, and weakens regulatory oversight and quality assurance compared to RMS contracts.

Ultimately, the combination of chronic financing gaps, tariff misalignment, and dependence on open (private) market procurement at health facility level, erodes the effectiveness of RMS as Ghana's regional pooled procurer, weakening its ability to guarantee equitable access, fair pricing, and reliable quality of essential medicines.

PRICING

Price Setting

Price setting in Ghana's public health system is anchored in the NHIA tariff, which serves as the maximum reimbursable price for essential medicines. The MOH uses FW contracting for about 70 prioritized medicines, negotiating supplier prices based on median bids and anchoring them to the NHIA tariff. RMS and facilities also use these tariffs as procurement references, whether under FW contracts or for independent purchases. The NHIA tariff incorporates a 25–30% operational cost mark-up intended to cover warehousing, distribution, and facility-level logistics. Additionally, tariff updates are not systematic — while NHIA is mandated to revise tariffs annually, in practice adjustments are irregular, lagging inflation, currency depreciation, and rising transport costs.

When RMS is stocked out, facilities are permitted to turn to the open (private) market with a certificate of non-availability. Prices in the open (private) market, are often higher, more volatile, and not regulated, and procurement occurs with limited quality oversight. These stock-out driven shifts to facility-led ad hoc purchasing expose facilities and patients to higher costs and increase the share of out-of-pocket spending[4].

Drivers of Price Variation

Several structural and operational factors continue to drive variation in essential medicine prices across Ghana's public and private procurement channels, as summarized in Table 2 below.

Challenge	Description
Tariff misalignment	Outdated NHIA tariffs fail to reflect inflation, exchange rate volatility, or supplier cost structures, leading to supplier refusals, renegotiations, and procurement delays.
Weak price governance	Ghana lacks a national pharmaceutical price registry and routine price intelligence mechanisms, limiting the ability of MOH, NHIA, or RMS to enforce fair or standardized prices across suppliers.
Weak regulation and reliance on private market procurement	When public procurement fails, facilities turn to the open (private) market, where prices are often higher, volatile, and subject to limited oversight. With no effective mechanism to regulate or enforce uniform prices across public or private channels, significant price variation persists even for basic essential medicines.
Untracked delivery costs	Mark-ups applied by NHIA (25–30%) cover some distribution expenses but rarely capture the full cost of last-mile delivery. With no national price registry or systematic cost analysis, total delivery costs remain opaque.

Table 2: Drivers of price variation

Ghana's pricing system continues to suffer from weak governance, outdated tariffs, and limited pricing intelligence, creating persistent misalignments between set prices and market realities. Without a national price registry, routine cost analysis, and timely tariff updates, these gaps will continue to drive inefficiencies, stockouts, and higher out-of-pocket costs, undermining equity and value for money in essential medicines procurement.

However, Ghana has made notable policy progress in aligning NHIA essential medicine tariffs with procurement realities. Since 2018, the MOH has applied framework contracts for 70 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[5]. The creation of the National Medicines Price Committee (2019) and the 2022 Pricing Strategy for Pharmaceuticals[6] 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.

FUNDS FLOW AND PROVIDER PAYMENT

In Ghana, health facilities rely on a combination of NHIS payments, patient out-of-pocket payments, direct government procurement, and donor support to fund essential medicines and program commodities. Each of these revenue streams flows to providers through a different payment mechanism, with commodities "unbundled" and reimbursed separately from service payments (Table 3).

Funding Source	Payment Mechanism	Are payments for medicines bundled into service payments?	Notes
NHIA	Fee-for-service	No	Facilities are paid a fixed tariff for each essential medicine dispensed after submitting a claim to the NHIA. 100% of claims payments for medicines must go into the DRF
Out-of-pocket	Fee-for-service	No	Facilities collect a payment for each medicine or product dispensed from patients who do not have NHIS coverage or for medicines and products that are not covered. The revenue from out-of-pocket payments must be fully allocated to the DRF and varies widely by facility.
Government budget	MOH Direct Procurement	No	MOH procures and distributes donor co-financed commodities via RMS
Donors	Donor-Funded Program Support	No	Donor co-financed commodities are procured outside domestic processes but delivered through the RMS

Table 3: Provider payment mechanisms for essential medicines in Ghana

While multiple financing streams are intended to ensure commodity availability at the provider level, poor integration, delayed payments, and misaligned pricing continue to undermine effective and timely procurement, ultimately constraining access. Ghana is not actively assessing the optimal payment mechanism or resource allocation for essential medicines within the NHIS. For example, Ghana's NHIA has estimated that 60% of total claims expenditure goes to essential medicines, yet this figure is neither actively calculated nor systematically monitored, and no assessment has been conducted to determine whether such spending levels are appropriate to achieve desired health outcomes. Furthermore, it would be strategic for Ghana to use its claims data to study provider behavior and determine if the current fee for service provider payment model for essential medicines, unbundled from service payments, is achieving its intended outcome of ensuring access while not creating incentives for inappropriate use of medicines.

The NHIA medicines tariff plays a de facto price-benchmarking role, as the MOH, RMS, and health facilities are aware that if they procure above tariff levels, patients will face out-of-pocket charges—an outcome stakeholders have clearly expressed as undesirable. This helps keep alignment between NHIS payments and the procurement prices health facilities face, although disparities can arise when tariffs are not updated in accordance with inflation, currency fluctuations, etc (see Case Example).

Case Example: Oxytocin Stockout Crisis in Ghana

Ghana's essential medicines — like oxytocin — are primarily financed through NHIS payments and patient out-of-pocket payments, with procurement and price setting guided by NHIA tariffs. MOH uses a framework contracting process to negotiate national prices for ~70 essential medicines, targeting prices 25–30% below NHIA tariffs to allow for operational mark-ups by RMS and facilities.

Between 2019 and 2024, NHIA did not systematically revise tariffs, although annual revisions are part of its policy. In 2022, inflation spiked over 50% and the Ghanaian cedi sharply devalued (from 5.9 to 16 per USD), causing the market price of oxytocin to more than double. NHIS payments were delayed up to 11 months due to macro-fiscal constraints, suppliers refused to honor outdated framework prices, and oxytocin delivery was suspended. DRFs at facilities were depleted, causing delays in payments to the RMS and resulting in cascading arrears across the MOF, NHIA, health facilities, RMS, and suppliers.

Stock-outs of oxytocin at RMS peaked at 70% in 2023, and over 70% of insured patients reported paying out of pocket for essential medicines.

In response, Ghana implemented emergency tariff increases and renegotiated framework prices. A full tariff revision was only completed in 2025. This case illustrates how outdated tariffs, currency and inflationary market shocks, and delayed provider payments can destabilize procurement systems, leading to stockouts and higher out-of-pocket spending.

DATA SYSTEMS

Multiple Data Systems for Financing, Supply Chain and Service Delivery

Ghana has multiple data systems supporting financing, supply chain and service delivery for essential medicines. Below is a listing of a select few. In general, these systems operate in silos, are often poorly implemented, and their data use protocols are not developed with the aim of looking across the three essential functions of financing, supply chain and service delivery.

- Financial Management: Ghana uses the Ghana Integrated Financial Management Information System (GIFMIS) for national-level financial transactions, including procurement. RMS and health facilities maintain separate procurement and financial tracking and budget management systems, some of which are Excel-based and developed internally at the Ghana Health Service.
- Supply Chain: Electronic logistics management system for end-to-end visibility is called the Ghana Logistics Management Information System (GhLMIS). GhLMIS is well established at national and regional levels, with limited penetration and appropriate utilization at primary care levels.
- Service Delivery: Ghana has adapted for its context the District Health Information System (DHIS2), locally called Ghana District Information Management System (DIMS). This monitors population health. The Ghana e-tracker (PHC) and Lightwave (hospital) Electronic Medical Records are being deployed across the country through the Ghana Health Service.
- Health Insurance: The National Health Insurance System has developed the CLAIM-it information management system that is a digital insurance claims filing platform.

Gaps

- No unified database or dashboard tracking key financing, supply chain, and service delivery performance indicators.
- Inadequate compilation of market data and intelligence for regular and timely or dynamic tariff updates and financing needs estimation.
- Inadequate data use from the CLAIM-it system to assess provider behavior and estimate optimal essential medicines utilization and budget impact.

Without integrated digital systems that connect financing, logistics and service delivery data, Ghana will continue to face inefficiencies in resource allocation and supply planning.

RECOMMENDATIONS

Ghana now has an opportunity to better leverage its financing architecture — anchored in the single-purchaser system of the NHIS — to translate this design into its intended outcomes of expanded access to essential medicines and stronger financial protection for all Ghanaians. Doing so will require integrating NHIA expenditure data into national and regional planning, aligning tariffs with real procurement costs, ensuring that financing flows are predictable and timely, and gaps are well documented, understood and system adjustments are made to address the same, so that the promise of equity and efficiency is fully realized.

Establish an integrated essential medicines and health products financing framework: Consolidate NHIA provider payments, MOH budget allocations, user fees, and donor funding into a unified essential medicines and health products planning and budgeting process, with aligned provider payment rules and digital tracking across all sources.

Institutionalize forecast-to-budget linkages: Ensure that quantified needs, developed through GhLMIS and facility-level forecasting, directly inform MOH budget proposals and NHIA budget allocations. Establish routine identification of commodity financing gaps to guide resource mobilization and policy engagement with MOF and Parliament.

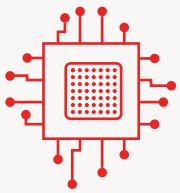
Fully integrate donor-supported program commodities forecasting and budgeting processes into government systems: With shifts in the global health financing landscape, donor support for program commodities (HIV, TB, malaria, family planning, vaccines, nutrition, maternal and child health) is likely to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

Establish a national price governance mechanism: Create a coordinated essential medicines and health products pricing and market intelligence platform to manage a national price registry, conduct regular cost and market analyses, 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.

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 NHIA reimbursements and MOF/MOH budget releases. Develop tools to systematically monitor disbursement timelines and associated opportunity costs.

Harmonize pooled public procurement costs with provider payment rates: Ensure NHIA tariffs reflect actual health facility procurement costs, especially from RMS, to avoid provider losses and maintain supply chain sustainability

Assess capitation for PHC financing: Ghana should explore the feasibility of introducing population-based payments for primary health care, with an estimated appropriate allocation for essential medicines and health products. This would require an assessment of current utilization patterns, identification of areas of overprescribing or inefficiency, and development of a bundled payment costing structure that adequately covers essential medicine and health product needs. A well-designed model could reduce administrative burden, improve predictability of financing flows, and promote rational use at the facility level.



Integrate data systems across the supply chain: 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.

Leverage Peer Learning Platforms: While each recommendation will require country-specific dialogue and stakeholder engagement, there is also a unique opportunity for countries such as Ghana 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.

Theme	Key Finding	Recommendation	Intended Outcome
Essential Medicines Financing Framework	Fragmented financing across NHIA, MOH, user fees, and donors	Establish an integrated framework consolidating all funding streams with harmonized rules, planning, reporting, and procurement	Improve efficiency, reduce duplication, and enable unified, transparent pharmaceutical financing
Forecast-to-Budget Linkages	Forecasting through GhLMIS and facility inputs not systematically linked to MOH or NHIA budget allocations	Institutionalize structured forecast reviews during budget planning and explicitly identify commodity financing gaps	Ensure MOH and NHIA budgets reflect quantified needs, highlight shortfalls, and strengthen advocacy with MOF and Parliament
Donor Integration	Program commodities managed in parallel donor-driven processes.	Fully integrate donor-supported forecasting and budgeting into national systems	Harmonize donor and domestic financing, improve sustainability, and align with national priorities
Pricing & Market Governance	Significant price variation across RMS, framework contracts, and private market	Establish a national price governance mechanism with a benchmark price registry and market intelligence platform	Reduce price variability, improve equity, and shape pharmaceutical markets for efficiency and access
Budget Execution	Delayed NHIA reimbursements and MOF/MOH budget releases disrupt procurement and service delivery	Use evidence on stockouts and opportunity costs to advocate for timely disbursements; systematically track timelines	Enhance predictability, accountability, and timeliness of financing flows
Insurance Tariffs & Provider Payments	NHIA tariffs often lag behind real procurement costs, especially during inflation and depreciation	Institutionalize a dynamic tariff review process and align MOH framework/RMS prices with NHIA tariffs	Reduce arrears, strengthen DRF sustainability, and improve value for money
Capitation for PHC Financing	Current NHIA financing relies heavily on reimbursements; no structured capitation for essential medicines	Assess feasibility of introducing population-based payments with appropriate allocation for essential medicines	Improve predictability of financing flows, reduce administrative burden, and promote rational use at facility level
Digital Systems	Fragmented data across financing, supply chain, and service delivery platforms	Develop a unified dashboard linking all data sources for real-time monitoring	Improve transparency, accountability, and responsiveness across the system
Peer Learning Platforms	Limited structured opportunities for cross-country exchange	Leverage forums such as the Joint Learning Network for peer exchange and co-creation	Foster evidence-based reform, accelerate adoption of best practices

Table 4: Recommendations summary

ENDNOTES

1 *The Lancet Global Health Commission on financing primary health care:* putting people at the center. Hanson, Kara et al. The Lancet Global Health, Volume 10, Issue 5, e715 - e772

2 GHANA HEALTH SUPPLY CHAIN MASTER PLAN (2025-2029)

3 Ministry of Health. Pricing Strategy for Pharmaceuticals and other health technologies in Ghana. Ghana National Medicines Price Committee 1st Edition 2022.

4 Ministry of Health Republic of Ghana. National Health Accounts 2018-2022. September 2024.

5 Assessment of Framework Contract Implementation and Financial Sustainability in Ghana's Public Health Commodity Supply Chain. USAID Global Health Supply Chain Program Procurement and Supply Management.

6 Ministry of Health. Pricing Strategy for Pharmaceuticals and other health technologies in Ghana. Ghana National Medicines Price Committee 1st Edition 2022.

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