REPORT OF THE MID-TERM REVIEW OF THE HEALTH SECTOR MEDIUM TERM DEVELOPMENT PLAN (2022 – 2025)

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Contents

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EXECUTIVE SUMMARY

The Ministry of Health (MoH) commissioned the Mid-Term Review [MTR] of Ghana's Health Sector Medium-Term Development Plan 2022-2025 [HSMTDP]. The review was undertaken from March to June 2024 and involved a team of lead and thematic consultants, backed by an MoH Technical Working Group [TWG]. The process utilized document reviews, assessment of quantitative indicators and qualitative interviews with field visits to assess of the state of implementation of the HSMTDP.

The scope of the review was strictly defined to assess the HSMTDP's objectives and performance of its M&E indicators. Six (6) Administrative regions were purposively selected for field visits and key informant interviews as follows:

- **Northern Belt**: Northern Region; with RHA, Regional Hospital, 1 selected DHA & respective Sub-District, Community as well as the District Hospital
- **Middle Belt**: Ahafo Region, with RHA, Regional Hospital, 1 selected DHA & respective Sub-District, Community as well as the District Hospital
- **Southern belt**: Volta Region, with RHA, Regional Hospital, 1 selected DHA & respective Sub-District, Community as well as the District Hospital
- **Urban Regions**: GAR and Ashanti Regions: RHAs, Regional Hospitals. FGD included representatives for the district level.
- **National Level**: MOH, GHS HQ, CHAG, Other Agencies/Regulators, KBTH, KATH, DPs group, CSOs

Key limitations to the review were a **change in health ministers** and in the leadership of some MoH agencies around the review period. Relevant survey reports and data [National Health Accounts (NHA), STEPS] that would have informed the review were also not completed or not available at the end of the MTR and could therefore not be included.

Baselines were set for most of the indicators but some did not have any data available to review and in some cases targets were misaligned with the baseline data. Moreover, the sector had its annual review exercises at central and decentralized levels with resultant unavailability of some key respondents, however this gave an opportunity for MTR teams to listen in on somereviews' discussions.

The report starts with a set of "Key Messages" that summarises the consultants experiences. The main report then has 6 sections outlined as follows:

1. Background
2. Policy and Organizational Context
3. MTR Process and Methodology
4. Key Findings and Discussions
5. Overall Conclusions and Emerging issues
6. Overall Recommendations

The thematic sub-sections in the findings describe specific technical area reviews, conclusions and recommendations. A set of overarching strategic conclusions and recommendations of the MTR are provided in sections 5 and 6.

The summary of key findings found a fairly positive governance framework and resilience in the continuity of operations even with ongoing major challenges and difficulties. The legacy of COVID-19 investments was recognized as positive to the sector, along with a functional partnership and stakeholder engagement system, though this again had various challenges.

In general, the **performance on the HSMTDP's M&E indicators gave mixed results** with many indicators fluctuating, occasionally dipping below baseline levels. HSMTDP set targets were met or exceeded in only a few instances as summarized below.

Programme Area	Number of Indicators	Data provided for all three years	Data provided for one or two years	No data for three years
Management and Administration	52	29	10	13
8 indicators met set targets. 11 showed progress but did not meet set targets. 8 did not progress or even fell below the baseline				
Health Service Delivery	51	35	3	13
15 indicators met the set targets. 12 showed progress but did not meet set targets. 4 did not show progress and some fell below the baseline				
Human Resource	13	1	2	10
Only 2 had some data available. One showed significant increase [2021 to 2023] though no baseline data nor targets were available to compare. One had decreased in value by 2023				
Health Regulation	8	5	1	2
3 indicators met set targets and 1 did not progress or even fell below the baseline. Data was not fully available for other indicators.				
TOTAL	**124**	**70**	**16**	**38**
26 of 124 indicators [20%] met with the set targets for the mid-term 2023				

Summary Findings

An expanding number of MoH agencies may exacerbate inter-agency coordination difficulties and the sector may need to have system for rationalizing how new agencies are created with good cost-benefits and cost utility analyses.

Efforts of the Health Sector staff have been able to drive core services delivery in the face of many challenges. At operational levels, staff have sustained services by creating local solutions and utilizing the goodwill that exists with local government and traditional leaders.

The sector's partnerships work fairly well at all levels through technical assistance, logistic inputs and financing of activities. The Health Partners Forum, Health Summit, etc. remain important mechanisms but may require some future strengthening to be much more effective.

Future HSMTDPs shall need to be more explicit about resource redirections needed to ensure national priorities and objectives are met. The HSMTDP, an overarching strategic document, must focus on catalytic and strategic policy interventions to address critical sector challenges and avoid having an overly operational bent to it.

The health information system has grown extensively but is still hampered by issues with the various software tools, while interoperability with DHIMS2, for example is a challenge. The hardware at operational levels at times have issues with their specifications and utility. Internet availability, IT support and maintenance, are limited especially in rural areas and a national digital health policy is needed to relieve the sector of inadequacies observed.

The evolving HMIS systems [DHIMS2, GhILMIS, , LHIMS, SORMAS, e-tracker, NEPP, etc.,] could be a data trove that drives research collaboration with academia and an important learning resource that can help guide the sector's progress.

Almost all the health financing indicators reviewed were below set targets and standards and were not achieving the key milestones necessary to assure results. Employee compensation represented over 60% of total health expenditure and for GoG, above 95%. In 2022 and 2023, less than 20% of the approved budget for GoG goods and services was released. This has resulted in inadequate funds for operational equipment, commodities and medicines needed to address service challenges. Donor funding addresses some of the funding gaps but a strategy is needed for sustainable domestic financing of goods and services.

The Ghana Integrated Financial Management Information System (GIFMIS) is not used at all levels of the health system. Deploying GIFMIS to all subnational level facilities could accelerate provider payment reforms and the roadmap to financing PHC services.

The financial management systems use globally accepted milestones, indicators and tools but weaknesses identified include lack of clear resource allocation formulae and non-utilization of data for evidence-based decision-making. There remains a critical need to cover the costs of preventive and promotive services in order to reduce households out-of-pocket [OOP] expenditure especially for PHC services.

The current commodity supply chain faces significant challenges, including the absence of quality consumption data, fragmented procurement, inadequate warehousing and issues with the Logistics Management and Information System (LMIS). Closer alignment is needed between HSMTDP's M&E Framework and the Supply Chain Master Plan (2021 – 2025).

Prompt reimbursement to service providers by the NHIA would ensure timely payments to RMSs and other suppliers and reduce stockouts of medical products. The port clearance for program commodities was a topical issue during the review and needs to be addressed.

HSMTDP's range of service delivery activities are carried out at various levels but was seen by implementors as existing/routine activities not expressly linked to the HSMTDP.

The model of the MoH with its agencies of different service entities may be due for an institutional review to find new efficiencies and convergences even as the number of "independent" agencies and teaching hospitals continue to expand.

The objective to establish a Ghana CDC has changed though its expected functions shall be consolidated within the GHS to avoid duplication of efforts and avoid tasks fragmentation.

There have been increases in the production of nurses/midwives and medical/dental officers and in training specialist cadres. Between 2021 and 2023, the stock of nurses/midwives in the public health sector increased, averaging 9.67% per annum. The density of health workforce per population did increase but fell short of the SDG index of 4.45 per 1,000 population. Geographical and skill-mix imbalances still prevail across the country and increased migration of nursing and other cadres appears to impact on the skill mix found at the periphery.

About 10,968 doctors work in Ghana [Jan 2023], with 9.39% as specialists. However 87.80% of them are stationed in Greater Accra and Ashanti Regions. Recent decentralization of medical residency training to regional hospitals by the Ghana College of Physicians and Surgeons (GCPS) has expanded intake into medical specialization programs.

Efforts to build capacity to detect and manage Non-Communicable Diseases (NCDs), mental health, public health and medical emergency services are ongoing and some services such as Mental Health may require investment in mid-level cadres in order to improve access, distribution and retention in deprived areas.

The regulatory agencies face increasing sophistication and complexity of the sector and require better capacity and more funding to be effectvie. There is also a need to understand how their roles support new policies such as the "Networks of Practice" strategy and the prioritization of NCDs. They need to expand their capacity at decentralized levels.

Most regulators have expanded digital/ICT systems and many licensure processes are automated. Some concerns remain for inter-operability with other health sector systems.

Overall MTR Conclusions:

Our review of the indicator trends and qualitative findings paint a mixed picture with modest gains as many set targets have not met mid-term targets. Despite numerous challenges around infrastructure availability, standardized processes, financing, supply chain issues, and increasing migration of health workers, a key driver of sector sustainance is the **resilience of peripheral level staff and stakeholders** who keep routine services running despite the odds.

The foundations exist for good **governance coordination, evolving accountability and problem solving leadership at operational levels**, that could engage well with stakeholders and assure good resource utilization. The sector has retained some level of **public support** at national, sub-national level and within communities, an asset that should be actively sustained.

The **"legacy" bequeathed by COVID-19** has expanded some critical infrastructure, equipment, governance processes and emergency response "software" which must be sustained with an explicit set of strategies with measurable indicators.

The health sector's effectiveness is a function of the inputs of many of other sectors and **contextual factors including environmental damage**. Future HSMTDPs need to be more explicit on how other sectors' contributions assist the health sector to reach its objectives.

The **total health expenditure per capita** needs to increase to meet internationally estimated standards. There is the need to **more effectively capture the entire spectrum of resources** invested in the sector and to **address inefficiencies** and duplications.

The **scope, structure and M&E framework of the HSMTDP** as an "upstream" sector strategic document may need some more strategic components and reduce incorporated operational elements.

Two areas of the MTR's focus [a] Governance and [b] Service quality remain areas that require significant improvement in order for the sector to meet its UHC and SDG targets. While well-structured and utile **governance platforms and systems** exist, there is a feeling that they have become routine processes that do not serve their overall purposes fully.

Service delivery quality suffers from a budgeting and financing system that sustains staff compensation but leaves little for services delivery which is reliant on internally generated funds [IGF], including the often delayed NHIS reimbursements.

Overall Recommendations

Operational recommendations have been made under each technical section and thematic area but below are a set of upstream and overarching recommendations.

<u>Future HSMTDPs</u>.

1. The HSMTDP, while a very useful guidance document, could be restructured and developed in a multi-step way to engage more effectively, agencies, partners, and other stakeholders at national and sub-national levels. It should incorporate **a clear "theory of change"** for all its implementing stakeholders to assure better permeation beyond the national level to operational levels.
2. The HSMTDP should fully reflect its role as an overarching sector strategic document that focuses on new and catalytic strategic/policy interventions to resolve critical

bottlenecks. A process calendar could be established to converge agency strategy development timelines as a complementary tool to the process.

3. A key challenge of the HSMTDP was enhancing awareness and ownership of its practical intentions with agencies' and their operational arms. The HSMTDP communication strategy needs should effectively translate its priority national policies and strategies into rational operational interventions at all levels with indicators linked to each level's roles of implementation and to measure its operational impact.
4. This MTR provided a number of lessons for future reviews. A full review requires much preparation and in-depth assessments requiring a number of experts, tools and engagements. The reviews should be planned for, well in advance and be part of routine sector monitoring.
5. Reconciling agency specific plans with the overall HSMTDP objectives, activities and targets can be daunting and the development of an HSMTDP has to be done as a two-way alignment process, incorporating recently concluded agency objectives and indicators as well as proposing new ones.
6. A concern was expressed about the high numbers of varied surveys and assessments in the sector. We recommend that a framework should be established which will coordinate a set of agreed surveys/assessments to reduce disruption and duplication and reinforce their efficiency and utility.
7. A review of indicators and targets are needed to [a] establish good upstream policy and strategic measures. [b] clarify indicator definitions which were found difficult to quantify, define and measure, and ensure clear sources of the data.

<u>Governance and Financing</u>.

8. The sector has operated a number of partnership and stakeholder coordination platforms and processes over the years with significant success with some aspects and difficulties with others. Some stakeholders were concerned about whether the partnership forum discussions brought any actual change and reflected good accountability from both government and partners. It will help to commission an expert review of the partnership/stakeholder mechanisms and outcomes, with an aim of making them more effective, efficient and transparent, and to define what will be considered by all as concrete and measurable outcomes of the mechanisms.
9. Financing with its impact on efficiency, quality, equity and effectiveness of HSMTDP's implementation, requires particular focus in order to identify and minimize bottlenecks and ensure accountability. We recommend that the sector will benefit from aligning HSMTDP indicators more closely with National Health Financing Strategy's milestones and integrating more explicit equity indicators at even the decentralized levels.
10. Future plans should incorporate agreed frameworks to ensure that HSMTDPs drive resource allocation to the agreed priorities, with indicators for better assessment of trends in equity of allocations and financing. It must for example, track closely the difficult relationship between personnel emoluments and service delivery funding.

11. The sector requires a review and rationalization of the creation of new agencies based on cost-benefits and cost-utility analyses, functional overlaps etc., to minimize possible fragmentation and duplication of roles and to improve inter-agency coordination.
12. The sector should conduct regular critical analysis of donor funding trends [volume, programmes covered, economic outlook, implications of becoming a middle income country], and plan for the impact of fluctuations in donor funding and indicate how cost efficiencies can be created.

Health Information Systems and Research

13. An effective Health Information System is fundamental to the sector and was clearly an important element of the HSMTDP. The "plethora" of ICT systems in the sector, **requires a major review to address issues of utility, interoperability and cross-agency data convergence**. The digitization of health systems processes also requires **development of a cross-cutting sector digital strategy** to establish core specifications and standardization of tools and protocols across agencies and levels.
14. A number of "local" innovations were identified [eg., use of "Whatsapp" groups for referral communication]. We recommend that mechanisms are set up to regularly identify and encourage innovation and a database of innovations should be established with regular reviews and assessments for scaling them up.
15. Research efforts appear to be largely donor driven and opportunistic and future HSMTDPs should have an explicit **research engagement sub-strategy** to commission and direct studies on identified bottlenecks that help to resolve policy and operational issues. We recommend that formal MOUs and collaboration agreements be established between the sector and relevant research /academic institutions for continuing investigation of the sector's medium and long term policy objectives.

Supplies and Logistics Systems

16. The fairly sophisticated logistics and commodities supply system still encounters many stockouts at operational levels, and may have resulted in an impeded importation and clearance of critical commodities. A detailed review must be commissioned to establish a more seamless reimbursement and stockout management system.

HON. DR. BERNARD OKOE BOYE

MINISTER FOR HEALTH

KEY MESSAGES

The team of consultants, after their documents reviews and key informants interviews, and after internal team discussions agreed to highlight their general impressions as "Key Messages" to that illustrate the context and their perceptions of the HSMTDP's implementation. The "key messages" are not listed in any order of importance.

1. A fairly good level of health sector staff commitment and professionalism does exist and continues to drive delivery of services but with serious challenges. Staff at operational level were found to be quite motivated and do their best to sustain services and appear innovative in solving local problems.

2. Significant goodwill and support was identified from the leadership of local governments, traditional leaders and community members for sustaining health services delivery. Interactions between service providers and local stakeholders were generally strong and sustained.

3. The sector's development partners [DPs] and sector officials have a fairly effective partnership, with engagement at all levels of the health system based on technical assistance, logistic inputs and local financing of some activities. Various platforms exist to facilitate dialogue between partners and the sector's agencies despite various challenges.

4. Good agency leadership was found at all levels visited and was well motivated and focused on the critical needs. Platforms and mechanisms exist for dialogue across and between actors, which include the Health Partners Forum, Health Summit as well as various agency-specific management, planning and monitoring activities.

5. In general terms, the various health systems elements function relatively well but remain in need of capacity building for general management, supply chain management, human resources, health information systems, financial management and strategic and operational planning with regular monitoring systems.

6. The Holistic Assessment process and other monitoring mechanisms and tools have enabled a good focus on certain critical indicators and operational targets that guide MOH agencies' priority interventions.

7. The COVID-19 pandemic impact on the country's health sector, is mitigated by its inheritance of the investments made in infrastructure, equipment, software and operations capacity as positive legacies of the pandemic's response.

However

8. The HSMTDP, the primary strategic document of the sector, needs to find better resonance with Sector agencies and stakeholders, and especially must translate to operational levels. This reflects on the effectiveness of its stakeholder awareness building and ownership creation. Leadership turnover in some agencies have also undermined institutional memory and continuity, but better statutory mechanisms

may help translate and enhance the utility of the strategic and operational plans based on the HSMTDP at all levels.

9. The HSMTDP at times seemed uneven in the emphasis placed on different services, some with only few indicators/activities, while others had many. Some critical national concerns e.g. access to medicines, non-communicable diseases, mental health, may need more in-depth consideration in the development plans.

10. The timelines for when the HSMTDP and agency strategic plans occur meant that some plans were not aligned with the HSMTDP. Agency plans initiated after the HSMTDP's completion are usually well linked with the objectives. Future HSMTDP planning cycles could integrate ways to achieve a better coherence with agencies' plans for clearer linkages of their specific contributions to the overarching sector objectives.

11. The HSMTDP ideally, as an overarching sector strategic document, should focuses on new and catalytic interventions that resolve policy bottlenecks. It should not reiterate routine activities that will usually continue with or without a Development Plan.

12. Financial risk protection for PHC inpatient services was assessed at 17.6% and for outpatient care at 61.1%. Trends were not immediately available during this review but financial risk protection for basic services, the core of UHC, need to be much improved.

13. Financing of health operations [logistics, equipment, infrastructure, human resources] is a major challenge whose resolution is not fully tackled in the HSMTDP. Staff remuneration is usually covered but removing delays in National Health Insurance reimbursements for operational costs is a needed priority catalytic intervention.

14. The HSMTDP should be designed to drive revenue allocation towards critical sector priorities. The HSMTDP was costed and extensively utilized for program budgets, but did not well indicate where priority investments should go. Lack of funding for health operations [apart from personnel remunerations] was a major complaint.

15. Private and inter-sectoral actors roles in the HSMTDP were stated as implementation activities. Their strategic contribution to achieving the overall objectives was less well articulated. Future HSMTDPs should reflect on how the various sectors will contribute to national health results, with what roles each agency must play in order for the sector to reach its desired UHC and SDG outcomes.

16. The role of health research systems in health development is a strategic need. HSMTDPs must articulate fully how research should inform the sector's policy objectives, [eg.,. implications of the rapid urbanization, the epidemiologic and demographic transitions and priority setting].

SECTION 1: BACKGROUND

The Ministry of Health and its Agencies, Development Partners, and other stakeholders, guided by the Medium-Term National Development Policy Framework [2022-2025], the revised National Health Policy (NHP, 2020), the Universal Health Coverage (UHC) Roadmap for Ghana (2020-2030), and other Global Policy declarations endorsed by the Government of Ghana, developed a Health Sector Medium-Term Development Plan (HSMTDP) to cover 2022 to 2025. Its goal was to increase access to quality essential health care and population-based services for all by 2030 through the following objectives:

- Universal access to better and efficiently managed quality healthcare services
- Reduce avoidable maternal, adolescent and child deaths and disabilities
- Increase access to responsive clinical and public health emergency services

These were to be achieved through priority Interventions in areas envisaged as follows:

- Essential services for the population
- Management of clinical and public health emergencies
- Improve quality of care and information management
- Enhance efficiency in human resource performance
- Institutionalize reforms for sector effectiveness
- Health policy, financing and system strengthening

The overall aim was to improve among other things, the following identified health system development issues:

- Inequitable distribution of **human resources** for health
- Inadequate health **infrastructure, logistics** and equipment
- Inequity in access to **essential health services** and variability in the quality of services
- Weak coordination and suboptimal harmonization between **public and private health service** providers, including traditional social support systems
- Weak institutionalized network to connect **academia and research** organizations to mainstream health policy
- Weak **referral and gatekeeper system**.

The Health Sector Medium-Term Development Plan (HSMTDP 2022-2025) was to assist implement the Universal Health Coverage (UHC) Roadmap, as a central coordinating strategy for partners and stakeholders to help synchronize health initiatives. It helps to identify health priorities and to direct investments. Its Monitoring and Evaluation Plan had proposed mid- and end-term evaluations in order to assess the progress towards achieving its objectives.

This MTR assessed the sector's performance against the HSMTDP's objectives and targets, and reviewed their continued relevance for achieving the country's health goals. It made key findings and derived lessons, with some recommendations to improve future implementation of the HSMTDP to sustain its positive outcomes. It also reviewed key

contextual influences e.g., COVID-19, and their implications for health development planning in Ghana.

Two fundamental areas of focus underpinned the review: [a] Service Delivery Quality, and [b] Health Sector Governance and Leadership. The findings and recommendations in this report shall hopefully serve to advise the MoH and its stakeholders on how to improve the HSMTDP's implementation over the remaining period and inform the structure and content of the future HSMTDPs.

SECTION 2: POLICY & ORGANIZATIONAL CONTEXT

The Ghana Ministry of Health provides policy direction and strategic guidance to the health sector on behalf of the government. The core functions of the Ministry of Health of Ghana are:

- Formulate, coordinate and monitor the implementation of sector policies and programmes.
- Provide public health and clinical services at primary, secondary and tertiary levels.
- Regulate registration and accreditation of health service delivery facilities as well as the training and practice of various health professions regarding standards and professional conduct.
- Regulate the manufacture, implementation, exportation, distribution, use and advertisement of all food, drugs, cosmetics, medical devices and household chemical substances as well as the marketing and utilization of traditional medicinal products in the country.
- Conduct and promote scientific research into plant and herbal medicine.
- Provide pre-hospital care during accidents, emergencies and disasters.

The MOH works through about 30 semi-independent agencies, and has a wide variety of partnerships with stakeholders and related sectors at strategic and operational levels in order to reach its goals.

Ghana's National Health Policy (NHP, 2020) "Ensuring Healthy lives for All" and the MOH's "Roadmap for Attaining Universal Health Coverage" (2020-2030) are the two overarching health sector governance documents and they emphasize equitable access to a well-defined and contextually appropriate package of health services. The MoH promotes a PHC approach with decentralization and community ownership.

The National Health Policy further emphasises health systems strengthening to improve service availability and an expansion of public health interventions. The UHC roadmap's vision, *"All people in Ghana have timely access to high-quality health services irrespective of ability to pay at the point of use"* is to be attained by expanding the reach and scope of critical interventions while improving access and the quality of services provided.

The MOH plans to achieve certain national medium-term policy objectives,

- Universal access to better and efficiently managed quality healthcare services
- Reduce avoidable maternal, adolescent and child deaths and disabilities
- Increase access to responsive clinical and public health emergency services

Ghana also made commitments to the Sustainable Development Goals, to the African Union Agenda 2063 principles, the Global Action Plan for Healthy Lives and Well Being, the Astana Declaration on Primary Health Care (2018), the UHC 2030 Compact, and the Political Declaration on UHC adopted at the UN High Level Meeting in September 2019.

The principles of human rights, equity, gender and people-centered approaches are core to all these commitments.

Ghana has a social health insurance scheme that aims to ameliorate catastrophic health expenditure for poor and vulnerable populations. The UHC roadmap aims to deepen this health insurance scheme's effectiveness by expanding the reach and scope of existing interventions, and improving access to quality services.

Ghana recognizes that choices have to be made to leverage its investments in essential services, with key interventions and systems to deliver value and catalyze change.

It focuses its PHC program as follows:

- *Target group*: Focusing on the poor and vulnerable; particularly children and adolescents, women, and the aged.
- *Financial risk protection*: Eliminating physical and financial barriers to accessing PHC services; especially those most at risk of incurring adverse health expenditure at the incidence of ill health.
- *Strategic Partnerships:* Build sustainable partnership and a harmonized agenda between government, private sector, non-state actors and development partners to upscale service delivery and secure predictable financing for long-term results.
- *Effective Decentralized Management:* Cement district level service governance with the district assemblies and improve intersectoral collaboration to synergize resource mobilization, efficient use and accountability particularly at the PHC levels of service delivery.
- *Domestic Financing Re-Prioritized:* Rationalize allocation and expenditure of domestic resources to focus on primary health care and manage existing and any new co-financing requirements within a realistic budgetary framework.

The MoH prepares a 4 yearly Health Sector Medium Term Development Plan (HSMTDP), as the central coordinating strategy for the sector's goals and planning systems. This context of commitments, policies, vision and goals have informed the Health Sector Medium Term Development Plan [HSMTDP] 2021-2025 and has guided this mid term review.

The current HSMTDP was prepared in 2021-22 as the **COVID-19 pandemic** was started to wane but had significantly disrupted health sector operations. But it has also created opportunities for the sector to invest in and improve some operational systems and processes.

The COVID-19 pandemic caused **economic difficulties and a fiscal crisis** that raised the level of poverty and disrupted the financing available to the health sector. Despite these negative effects on the country, COVID-19, caused significant investments to be made by donors and the government into public health emergency systems and established several isolation and treatment centres, infectious disease hospitals and

critical care units that are ready to cater for future epidemics. It has expanded and capacitated a network of public health laboratories, increased oxygen production and expanded the number of emergency response and basic life saving skills [BLS] teams with improved pre-hospital emergency care. These are the "COVID-19 Legacies" for an improved health system.

The HSMTDP was prepared after Ghana had transitioned from **a low income country into a lower middle income country** with certain macro-economic impact on the health sector and donor partnerships. The sector now have to cover major costs of childhood vaccines needs and medications for major communicable diseases such as HIV, TB and Malaria. Many past concessionary conditionalities were no longer available to the sector.

An ongoing **epidemiologic transition,** with a disease burden shift from communicable diseases, reproductive, maternal, child and adolescent health conditions to one of non-communicable diseases, mental health conditions and injuries is part of the context.

A major factor of the NCDs challenge is the increased importance of **environmental and climatic change, including air and water pollution** through illegal mining activity, and deforestation and poor sanitation in many areas.

Efforts had been made to streamline **planning, budgeting and monitoring** and to enhance **public financial management [PFM] systems** with better **use of ICT in governance**, management and in information systems. Internet penetration to districts or peripheral levels though improved, remain a problem.

The Ghana health sector has **good partnerships with external donors**, characterized by functional coordination platforms and policy forums to monitor and assess performance. These have major challenges, but remains a major positive of the sector. **Local partnerships,** especially at operational levels but also influential at national level remain a channel for engagement where government may not have the best capacity to be effective.

The sector retains **good technical capacity and staff competence** in its health system. However, a high turnover at policy and management levels, as well as an elevated brain drain of health professionals, occurs even as many remain unemployed due to budget constraints. These ongoing challenges cobtinue to undermine morale.

SECTION 3: MTR PROCESS AND METHODOLOGY

Scope and boundaries

The scope of the review was carefully defined by the TWG and the consultants to reflect strictly on the HSMTDP's objectives and its M&E framework. This was in order to avoid unwanted fungibility and to tighten its focus to the timeline available.

- The review focused on policy level/Upstream indicators supported by a limited set of well-targeted field level visits and clarifications
- Operational areas that are considered of utmost importance that could not be immediately covered are therefore recommended for later review or delegated to an end-term review.
- To reflect further on the overarching governance and in particular, the service delivery quality focus of the review, four thematic areas of emphasis had subject specific experts assigned for a more detailed exposition. These were [a] Supply Chain Management, [b] Health Information Systems [c] Human Resources development and [d] Regulation of the Sector .

These practical details were discussed and agreed with the TWG /reference group.

i. Data collection and collation/ Desk Reviews

The first part of the MTR was devoted to identifying the key sources of data relevant to the HSMTDP's M&E framework. This included collating the array of surveys and reports on the health sector which provided good information[e.g., The Harmonized Service Availability and Readiness Assessment HHFA), District Health System Functionality Assessment (DHSFA), The Holistic Assessment, the Ghana Demographic and Health Survey, etc]. The National Health Accounts and STEPS Surveys were howevernot available at the time of the MTR's conclusion.

The Ghana Health system's well-established data systems [DHIMS, GILMIS etc] that were important data sources for assessing indicators and determining if the targets set at inception of the plan were met.

ii. Quantitative Data analysis - Performance on indicators

The M&E framework for HSMTDP [2022-2025] set out baseline indicators and annual targets which were reviewed against data collected from the agreed sources to estimate the sector's performance over 2021 [baseline], 2022, and 2023. These were assessed based on [i] whether data was available for the period under review, [ii] the indicators that had stagnated or declined in value, [iii] indicators that indicated good progress or targets had been prematurely met.

iii. Qualitative assessments

A number of interviews were carried out to fully appreciate the factors influencing any changes observed in the HSMTDP's indicators as part of generating a full response to the core review questions. The interviews aimed to understand the plan's implementation

issues and to identify factors that may have facilitated or hindered the sector's ability to meet set targets.

A standard set of questionnaires were designed from the core review questions and then adapted to the type and level of identified key informants and stakeholders including [i] the National policy and strategic level, [ii] the Regional levels, District and Sub District Levels and [iii] Community levels. A stakeholder/key informant list is available in Annex 1.

The team carried out field visits aimed at [a] confirming reported performance indicators with field information [b] appreciating the facilitating or any other confounding contextual influences, utilizing key informant interviews and focus group type discussions.

The TWG purposively selected the following regions for the field visits using 5 assessor teams. Details of specific locations visited and key informants participating in the review in each of these areas can be found in the Annex 1.

Zone	Target for Visits
Northern Belt:	Northern Region; with RHA, Regional Hospital, Teaching Hospital, 1 selected DHA & respective Sub-District, Community as well as the District Hospital
Middle Belt:	Ahafo Region, with RHA, Regional Hospital, Teaching Hospital, 1 selected DHA & respective Sub-District, Community as well as the District Hospital
Southern belt:	Volta Region, with RHA, Regional Hospital,Teaching Hospital, 1 selected DHA & respective Sub-District, Community as well as the District Hospital
Urban Regions:	GAR and Ashanti Regions: RHAs, Regional Hospitals. FGD included representatives for the district level.
National Level:	MOH HQ, GHS HQ, CHAG, Other Agencies/Regulators, KBTH, DPs group, CSOs

LIMITATIONS

The MTR took place during a **change in Health Ministers** and recent changes in the leadership of some Agencies. This affected institutional memory on how Agencies had been involved with the HSMTDP's development and implementation. The review had a deadline proposed by the Minister of Health to have it concluded before the World Health Assembly of May 2024. This gave a rather stringent timeline and influenced the scope set for the review and the field areas covered.

A number of surveys and data [e.g., NHA, STEPS] that would have informed the review had not yet been completed by the end of the review and could not be fully included. As much as possible the most recent data was used to evaluate performance on the set indicators. While baselines were set for most indicators, some did not have mid-term readings available. Occasionally targets also seemed misaligned with the baseline data.

The sector's cascade of annual reviews kept many key respondents busy and unavailable. But our participation in some reviews helped to inform the MTR.

SECTION 4: KEY FINDINGS AND DISCUSSION

The findings discussed mostly result from a performance review of the indicators in the HSMTDP's M&E framework, and qualitative interviews that took place with sector stakeholders at national, regional, district and sub-district levels. The types of stakeholders interviewed included [a] Agencies of the MOH and their operational units at various levels, [b] the Health Sector Development Partners, [c] Private Sector providers [d] Civil society and Non-Governmental entities,

The HSMTDP M&E Indicators performance analyses

Programme	Number of Indicators	Data provided for all three years	Data provided for one or two years	No data for three years
Management and Administration	52	29	10	13
Health Service Delivery	51	35	3	13
Human Resource	13	1	2	10
Health Regulation	8	5	1	2
TOTAL	**124**	**70**	**16**	**38**
No. completed 86 Percent completed 69.4				

A total of 124 indicators are to be monitored as part of the implementation of the HSMTDP 2022-2025 classified under the recognized broad HSMTDP headings:

- Management & Administration
- Service delivery
- Human resource
- Regulation

The indicators were assessed as follows:

1. Comparison of Mid-term (end 2023) performance compared with set target
2. Assessment of performance trends from baseline to the mid-term figure.

Comparisons of the midterm performance to the mid-term targets were assessed according to the following parameters:

- **Target met**: Actual mid-term performance met the set target
- **Target not met**: Actual mid-term performance did not meet the set target
- **Performance worse than baseline**: Actual mid-term performance did not meet the target set and was actually **worse than the baseline** performance
- **Not Assessed**:
    - Mid-term performance data was not provided/available
    - No Mid-term target indicated.

The trends to the mid-term performance were positive for a moderate number of indicators in each of the areas. For example a number of indicators rose between 2021 and 2022 but declined at mid-term in 2023, and in a few cases actually fell below the original baseline. In a few cases also end-term targets were met by 2023. These COVID-19 and post COVID-19 period and its economic and health impact factors may have

affected the unstable performance on the indicators. It was also happening at a time when incidents like shortages of vaccines and ATM (Aids, TB, Malaria) medications had occurred.

Management & Administration

A total of 52 indicators were set out under the management and administration area. Mid-term (2023) performance data was provided for 39 (75%) indicators. For 13(25%) indicators there was no data available.

Of the 39 indicators available data, 8 had met the target set, 11 did not meet the target and 4 actually retrogressed and performed worse than the baseline figure. Only 15.4 % of 52 indicators had been measured to meet the mid-term targets[or 34.8% of indicators with data available].

Indicators that met the mid-term target	**The Indicators that did not meet the mid-term target**
1. Percentage of health facilities using electronic medical records 2. Percentage of scheduled Data Validation Feedback sent to regions) 3. Annual Holistic Assessment of the Health Sector conducted 4. Percentage of planned health policies developed 5. Proportion of scheduled stakeholder engagements organised to review essential services package 6. Percentage of regions with Emergency Command and Call Centres established 7. Percentage of facilities having GhILMIS installed and implemented 8. Nurse Population equity index (Geographical)	9. Percentage of Planned Preventive maintenance activities implemented 10. Proportion of primary health facilities reporting no stock-out of tracer medicines 11. Percentage of health facilities reporting service data to DHIM2 on time 12. Percentage of private health facilities reporting into the DHIMS2 13. Percentage of planned health policies reviewed 14. Percentage of the population with active NHIS coverage 15. Percentage of districts with at least one operational Network of service providers established 16. Percentage of districts with network of service providers established 17. Percentage of hospitals with ICU facilities 18. Percentage of facilities with basic medical equipment 19. Number of staff per Ambulance service station
Indicators that did not meet the mid-term target and performed worse than baseline 1. Percentage of ambulance service stations that are well-functioning (Ambulance, required number staff) 2. Percentage of facilities reporting complete data to DHIMS2 3. Percentage of CHPS zones with functional community emergencies transport system or ambulance 4. Percentage of public hospitals with established functional A&E Unit 5. Percentage of ambulance service stations that are well-functioning (Ambulance, required number staff) 6. Percentage of facilities reporting complete data to DHIMS2 7. Percentage of CHPS zones with functional community emergencies transport system or ambulance	

8. Percentage of public hospitals with established functional A&E Unit

Trends

Trends in indicators performance from baseline to midterm[for which multiyear data was available]:

1. **Percentage of scheduled Data Validation Feedback sent to regions**: no baseline data, has however remained steady at 100% meeting all yearly targets set.
2. **Proportion of scheduled stakeholder engagements organised to review essential services package**: no baseline data however, increased between 2021 and 2022 and remained steady at 100% till 2023.
3. Percentage of regions with Emergency Command and Call Centres established: Remained steady at 100%.
4. **Nurse Population equity index (Geographical):** decreased slightly from 2021and 2022 in 2023 but targets were exceeded for all three years
5. **Percentage of Planned Preventive maintenance activities implemented**: no baseline but sharp decrease in 2023 after increase between 2021 and 2022
6. **Percentage of health facilities reporting service data to DHIM2 on time**: an initial decrease from the baseline in 2021, increased in 2022 to meet set target and then decreased in 2023
7. **Percentage of private health facilities reporting into the DHIMS2**: though it did not meet the target set there has been an upward trend after an initial dip between the baseline and 2021.
8. **Percentage of the population with active NHIS coverage**: steady but marginal increase from baseline till 2023 but targets set **not met** for any of the years
9. **Percentage of hospitals with ICU facilities**: no baseline data but marginal increase indicated for 2021/2022 and then a decrease to 2023 but ***all below the annual targets*** set.
10. **Percentage of ambulance service stations that are well-functioning (Ambulance, required number staff**): Decrease from 100% in 2021 to 95% in 2022 and then increased to 98% in 2023)
11. **Percentage of facilities reporting complete data to DHIMS2**: decrease from baseline to 2021, increase in 2022 to meet target and then sharp decline in 2023 , to lower than baseline.
12. **Percentage of CHPS zones with functional community emergencies transport system or ambulance**: has consistently declined after a marginal increase between the baseline and 2021.
13. **Percentage of public hospitals with established functional A&E Un**it: decrease from baseline till 2021then marginal increase up until 2023 though still lower than the baseline

Service Delivery

A total of 51 indicators were set for the service delivery area. Mid-term (2023) performance data was available for 38 (74%) indicators. Data was not available for midterm assessment for **13 (26%) indicators.** However, three (3) indicators did not have mid-term targets indicated and therefore could not be assessed.

Of the 32 indicators with mid-term data, 15 met the set target and 13 did not. 4 indicators did not meet the set targets and also performed worse than at the baseline.

Indicators that met the mid-term target	The Indicators that did not meet the mid-term target
1. ANC 4+ (%) 2. Percentage of children fully immunized (Using Penta 3 as proxy (%) 3. Proportion of maternal deaths audited 4. Mortality rates for (adult, elderly) 60+ years 5. Percentage of whole blood donations separated into components 6. TB Incidence per 100,000 Population 7. TB treatment success rate (%) 8. Prevalence of stunting among children under-five years 9. Under-five mortality rate (per 1000lb) 10. Infant Mortality Rate (per 1000lb) 11. Teenage pregnancy rate 12. Prevalence of hypertension 13. Modern contraceptive prevalence rate 14. Institutional Neonatal Mortality Rate 15. Stillbirth Rate	16. OPD per capita attendance 17. Percentage of health centres offering essential basic package 18. Percentage of women in WIFA covered with Cervical cancer screening 19. Percentage of facilities conducting deliveries that are equipped to provide basic EmONC services 20. Skilled birth attendance coverage (%) 21. Percentage of Health facilities offering Integrated Management of Newborn and Childhood Illness (IMNCI) services 22. Percentage of facility deaths that are medically certified 23. Percentage of voluntary unpaid blood donations 24. Blood collection index (BCI) per 1000 population 25. TB case detection rate 26. Institutional Under 5 Malaria Case Fatality Rate 27. IPT3 coverage 28. Average response time to emergencies

Indicators that did not meet the mid-term target and performed worse than baseline

1. Obesity in adult population ages 24-60years. (%)
2. Malaria Incidence per 1000 population
3. HIV Prevalence (15-49 years)
4. Average ambulance engaged time

Trends

An analysis of the trends in the indicators [baseline to midterm] for which multiyear data was available showed the following:

1. **OPD per capita attendance**: Marginal increase from baseline to 2022 but a slight decrease in 2023.
2. **Percentage of facilities conducting deliveries that are equipped to provide basic EmONC services**: no baseline data but there was an increase from 2021 to 2022 and a decline in 2023.
3. **ANC 4+ (%)**: Marked increase from 58.6% at baseline to 82.1% in 2021 then a gradual increase thereafter to 87.1% in 2023.
4. **Skilled birth attendance coverage (%)**: decreased from 2021 to 2023 after an initial increase from baseline to 2021.
5. **Proportion of maternal deaths audited**: decreased from 2021 to 2023 after an initial increase from baseline to 2021.
6. **Mortality rates for (adult, elderly) 60+ years**: no baseline data. A decrease from 2021 to 2022 and a slight increase in 2023.
7. **TB case detection rate**: increase from 2021 to 2023 after an initial decrease from baseline to 2021.
8. **Infant Mortality Rate (per 1000lb**): Sharp decrease from baseline to 2021 and has remained fairly steady after.

9. **Obesity in adult population ages 24-60 years. (%)**: Increased significantly from baseline to 2021 and slightly increased afterward.
10. **Prevalence of Anaemia among pregnant women (%)**: Significant decrease from baseline to 2021 and has remained steady afterward.
11. **Total estimated protection by contraceptive methods supplied (Couple Year Protection (CYP)**: Slight decrease from baseline to 2021 and increase thereafter.
12. **Institutional neonatal mortality rate**: steady decrease from 2021 after a small increase between baseline and 2021
13. **Mother to child HIV transmission rate at 18 months**: Sharp increase between 2021 and 2022 after a small decrease between baseline and 2021.
14. **Stillbirth rate**: Small but steady decline between 2021 and 2023.
15. **Percentage of children fully immunized (Using Penta 3 as proxy (%):** increase between 2021 and 2022 with no change between 2022 and 2023.
16. **Percentage of facility deaths that are medically certified**: marginal decrease between 2021 and 2023 after an initial significant increase between baseline and 2021
17. **Percentage of voluntary unpaid blood donations**: Unchanged between baseline and 2021, slight decrease between 2021 and 2022 and then increased by 5% between 2022 and 2023.
18. **Prevalence of stunting among children under five years**: Significant decrease between baseline and 2021 and then a small decline between 2021 and 2023
19. **Prevalence of diabetes**: No baseline data. Decline between 2021 and 2023
20. **Prevalence of Hypertension**: Significant decrease between baseline and 2021 and then a small decline between 2021 and 2023
21. **IPT3 Coverage**: Increase from baseline to 2022 then a small decrease in 2023.
22. **TB treatment success rate**: increase between baseline and 2023.
23. **TB incidence per 100,000 population**: Slight increase between 2021 and 2023 after a significant decrease between baseline and 2021.
24. **HIV Prevalence(15-19 years):** significant increase in 2023 after remaining steady between baseline and 2022.
25. **Malaria incidence per 1000 population**: decrease between baseline and 2021 and increased from 2021 to 2023.
26. **Percentage of whole blood donations separated into components**: remained unchanged from baseline to 2021. Increased between 2021 and 2023
27. **Blood collection index (BCI) per 1000 population**: remained unchanged from baseline to 2021. Small increase between 2021 and 2023
28. **Under-five mortality rate**: Remained steady from 2021 to 2023 after a significant drop from baseline to 2021.
29. **Teenage pregnancy rate**: Steady decline from baseline to 2023.
30. **Institutional Under 5 Malaria Case Fatality Rate**: Decrease between baseline and 2022 and marginal increase in 2023.
31. **Modern contraceptive prevalence rate:** initial increase from baseline to 2021. Not much change between 2021 and 2023.

Human Resource

Thirteen [13] indicators were to be monitored under the human resources theme area. Mid-term data was provided only for 3 indicators of which 1 had no mid-term target for comparison.there was no data available to assess the other 10. The indicator for which there was data available, "Practical exams pass rate", did not meet the mid-term target.

Trend Analysis

A trends analysis of performance of the indicators from baseline to midterm with multiyear data showed the following:

1. **Average Pass rate of midwifery schools**: No baseline data. Significant increase from 57.6% in 2021 to 91.10% in 2023.
2. **Practical exam pass rate**: fall from baseline to 2021, increased in 2022 and decreased again in 2023.

Regulation

Nine [9] indicators were set for M&E under the regulation area. Mid-term data was available for 6 (66.6%) of these indicators. Data was not available to assess the remaining 3 (35.4%) indicators of the 6 indicators for which mid-term data was available, 4 of them met their mid-term targets and 1 (proportion of encounters with antibiotics prescribed) had declined and performed worse than the set baseline.

Indicators that met the mid-term target

1. Average number of medicines per prescription
2. Percentage of samples analyzed
3. Percentage of licensing inspections conducted
4. Percentage of market surveillance outings conducted

Trend Analysis

An analysis of the trends in the performance of the indicators from the baseline to the mid-term for which multiyear data was available showed the following:

1. **Proportion of encounters with antibiotics prescribed**: Increased by 25% from the baseline (2021) to 2022 and only marginally decreased by 28.6% from then till 2023.
2. **Average number of medicines per prescription**: no change between the baseline and 2022. Slight decrease in 2022 and back to the baseline in 2023.
3. **Percentage of market surveillance outings conducted**: Slight decrease in 2022 but otherwise steady increase between the baseline and 2023.
4. **Percentage of licensing inspections conducted**: Declined from the baseline until 2022 and increased in 2023.
5. **Percentage of samples analysed**: No change from the baseline to 2022. Increased from 2022 to 2023.

Programme 1: Management and Administration

The HSMTDP was primarily a governance tool to develop an investment case for the health sector, and improve intra- and inter-sectoral coordination and coherence, using a “whole-of-government” and “whole of society” (one-health) approach. We looked for improved partnerships for better access to services, management capacity for improved performance, and equitable resource allocation to reflect geographic and other disparities.

Key Findings

The main respondents for management and administration as the core aspect of our governance focus came from interactions with the Sector Agencies at the National level, and some findings from the regional levels on how the HSMTDP addressed these issues.

The main issues arising from key informant and group interviews include

- Familiarity of the respondent/agency/partner/stakeholder with the HSMTDP and the process of its development, and its structure and content
- Partnership/Stakeholder systems engagement and functioning
- An appreciation of various Systems Contexts affecting governance, policy making and other health systems building blocks

These were examined with reference to key HSMTDP activities such as

- Applying the essential health services packages across the continuum of care
- Health Financing arrangements including NHIS effectiveness and equity
- Human Resources for health implications in HSMTDP
- Health systems research in support of sector objectives
- The key service delivery activities of the HSMTDP include [referral systems, emergency services, ICT use in health, NCDs, Mental Health and RMNCAH, LMD, and NOP development

These produced a rich concentration of information and opinions reflected and triangulated across different respondents and summarized below.

Sector Governance

Management and administration processes at the national policy level, involve policy dialogue, policy and strategic plan developments, using platforms and mechanisms for the coordination of internal and external stakeholders.

The key informant interviews discussed issues related to the effective coordination and alignment of the MOH Directorates, Agencies, other sector stakeholders, partners and inter-sectoral collaborators to the overall HSMTDP's objectives and activities. Informants noted the several coordination mechanisms that existed and which functioned fairly well.However, some partners did raise concerns as to whether this resulted in the appropriate outcomes for the sector.

The "Common Management Arrangements" document is currently under revision. This is expected to help drive improved partnerships and cohesion among stakeholders within the sector. Some partners [external] did express a need that the MOH should also demand better accountability from donors in the sector in order to make them more transparent, particularly regarding the flow of resources into the sector.. This will enable a more effective and equitable allocation of resources to the agreed priorities. Another issue raised mostly by partners was the further work needed to get all sector funding no matter the source, registered on the budget to allow for a better understanding of how sector investments [especially from donors] are changing with respect to the country's

newly acquired lower-middle income status and the attendant difficulties with the supply of certain critical commodities [vaccines, ARTs etc]. The Common Management Arrangement (CMA) issues are also expected to address the persistence of "*vertical*" financing, which will be best handled with improved fiscal and fiduciary capacity.

Direct funding and technical support by external partners to agencies and the sub-national levels was said to have elicited an MOH request to establish an accord to require all partner resources within the sector to be channelled through the MOH. The partners opined that this would be cumbersome and create more bottlenecks for the MOH, which is already inundated with multiple partner requests/missions, which escalate transaction costs and may reduce execution time for programmes and projects.

Another partner concern was the coordination and alignment of a large number of surveys, studies, assessments and information systems tools, which may at times generate conflicting data and undermine the sector's capacity to respond optimally to urgent needs.

Partners/stakeholders expressed their appreciation for their access to the MOH hierarchy and the frankness with which business is conducted. Despite this, a concern is that the engagements did not change things, and decision-making is not quick and responsive enough.

In terms of agencies, their' concerns focused on aspects of the HSMTDP were relevant to them. The team also examined their expected roles as implementors or contributors towards the implementation of the planned activities.

Generally, agencies, such as the GHS and CHAG, were fully conversant with the history and development of the HSMTDP and appeared to have been well involved in its development. This awareness and engagement appeared to diminish among interviewees at the district level and below. However, our finding was that core activities were often a reflection of HSMTDP objectives, even if not a direct consequence of the plan.

Some agencies, such as the regulatory agencies, while having activities often in consonance with the HSMTDP, plans of regulatory agencies did not reflect a close relationship with the plan's activities and objectives. This may be because of the changing leadership of a number of the regulators' or because CEOs were still evolving into their roles. Another issue was that several agencies' strategic plans were developed **before** the HSMTDP, thus the links to its objectives were not always explicit as timelines for plan development differed considerably. However, they all had clear objectives and work plans, and worked with various partnership arrangements, though mobilizing financial resources remained a challenge, and many had difficulty maintaining an effective operational presence at sub-national levels.

Respondents felt that intra-agency dialogues, coordination and cooperation had been reduced particularly at service delivery/operational levels [a frequent example that came up was the constraints in coordination between Teaching Hospitals and the Ghana

Health Services (GHS) on one hand, and then between the teaching hospitals on the other hand]. During the MTR, a new Teaching Hospital [Sunyani] was added.

A number of sub-sector investment cases have been made to cover sub-national service delivery, such as the supply chain management, infrastructure and equipment provision, primary health care networks, etc.

Inter-sectoral coordination and collaboration is a major factor for improving health sector's performance. It serves to leverage the link with relevantsectors [e.g., Education, Social Welfare, Agriculture and Veterinary Services, Local Government and Finance, etc.] to improve interventions such as school health services [including sexual, reproductive and adolescents services health]. The COVID-19 experience provided opportunities for inter-sectoral partnerships at different levels, such as the GHS and Veterinary Services for the use of laboratories, and with security agencies to enforce movement restrictions, and facilitate referral and communication systems.

The national COVID-19 response was said to have demonstrated effective "supra-sector" coordination from the Office of the President. Key informants gave examples of how this was beneficial across sectors with lessons that could continue to guide health operations. The supra-sector nature of the National Emergency Committee ensured that sectors collaborated better under the higher authority of the President's Office, and the feedback meetings ensured accountability for results.

- Community support (opinion leaders/traditional authorities
- Private Sector including corporate organisations e,g. Banks, philanthropists, telecommunications, etc.
- Religious bodies
- CSOs and NGOs

The Annual Health Summit reviews the entire health sector's performance and involves all stakeholders, including all MoH agencies and development partners. The MoH also convenes an inter-agency performance review meeting before the summit, and a "Holistic Assessment" is conducted annually to assess the health sector objectively. These reviews also happen at regional and agency levels.

The MoH in 2018, in partnership with academia, instituted the Annual Health Sector Policy Dialogue as an analytical hub of the Annual Health Summit incorporating a network of key stakeholders for policy dialogue to reflect on future developments of the health system. These dialogues aim to (1) respond to the current needs of policy-makers and urgent topics of national and regional interests in Africa, (2) discuss problems, identify possible solutions and make recommendations for strengthening health system components.

The sub-national levels

Regional-level respondents felt that the Ministry of Health's strategic roles and support are not fully felt and well expressed at their level. A need was expressed for ongoing strategic leadership and guidance to all agencies with frequent interactions that mimic the MTR[*this may however add to the concern about myriads of surveys*]. It was

suggested that the MOH needed platforms that facilitate agencies' sharing of experiences and solutions to improve their coordination towards common goals. Sub-national respondents were not very conversant with the HSMTDP and did not appreciate how it should guide their operations.

The HSMTDP should normally drive the government's resource allocation to identified priorities but it is unclear if this happens. Respondents at sub-national levels, indicated that there was no significant change in prioritization and resource allocation over the years and that they did not have additional resources for key priorities. The HSMTDP's function of guiding health sector partners on priority support areas was not seen to be happening. Partner support tended to follow their areas of technical interest. However, it always referenced the HSMTDP or other national policy documents such as the UHC roadmap and the National Health Policy, 2020. The MoH has had a limited effect in directing partners towards areas of resource gaps.

Conclusions:

Agency coordination

I. The number of MOH's agencies, especially teaching hospitals [6], may exacerbate fragmentation, and enhance difficulties with inter-agency coordination
II. The systems, structures and platforms that support health sector governance require strengthened leadership to align stakeholders towards common objectives.
III. Health Sector staff commitment and professionalism has driven services delivery even in the face of coordination challenges. Staff at operational level are still motivated and help to sustain services delivery by generating local solutions to problems.
IV. Significant goodwill exists with local government and traditional leadership as well as community members in support of services delivery. This translates into a generally strong interaction/relationship between service managers and local stakeholders.
V. The health sector's development partners [DPs] provide good partnership at all levels through technical assistance, logistic inputs and financing of activities. Various coordination platforms exist to facilitate dialogue but support is at times uneven between the sector's agencies.
VI. The existing policy dialogue platforms within, across and between actors and sectors, [e.g. Health Partners Forum; Health Summit] are important mechanisms that require additional strengthening retooling to be more effective and to produce urgently needed impact.

Recommendations

I. The MTR at subnational level suggested that periodic monitoring visits involving the MoH could promote insights into the service realities that should drive policy.
II. Future HSMTDPs should be more explicit on costs and explicitly propose resource reallocations to meet national priorities and objectives

III. A dissonance observed between HSMTDP and agencies' strategic plans timelines need to be streamlined for improved coherence through a planning cascade from MOH to the agencies levels. Though difficult, this may be achieved by redesigning an HSMTDP structure and process which is more directly aligned to agencies' strategies and contribution to the overarching sector objectives.

IV. The HSMTDP, as an overarching sector strategic document, should also have a focus on new and catalytic strategic policy interventions that resolve critical sector bottlenecks. It should guide health sector partners on the priority areas of support.

V. There is a need to critically rationalize the creation of additional independent agencies, with good cost-benefits and cost utility analyses before a new agency is created.

Health Research, Statistics and Information Management

Health Research

We examined health research in the national level interviews as an input that is expected to provide the evidence to drive sector policies and strategies and to refine service delivery innovations and approaches. Respondents cited a number of examples of how research has supported strategy and operations in the sector though there is agreement that these studies are often opportunistic and donor/funder driven. Respondents also felt a need for better coordination between the sector's key actors and research and academic institutions in generating research strategies as an effective problem solving tool. [e.g., in Mental health there are ongoing studies to determine the prevalence of common MH conditions, and enhance the extent to which MH is reported to DHIMS]. Following the COVID-19 pandemic, the GHS Public Health Directorate indicated that it had forged a closer interaction with research institutions in the country to make them become better aligned to the service's needs.

The well-evolving HIMS [GIFMIS, GhILMIS, LHIMS, etc.] can be a repository that can provide ample data to drive research collaboration and analyses of sector performance. Despite some challenges of converging data from various sources and inter-operability issues these remain a huge learning resource.

The GHS Health Research Directorate now provides a functional interface between services and research needs and researchers. Our information is that its staff are now better integrated in the system and can attain specialist grade, as well as hold part-time teaching engagements in academia. Decentralized research work was also noted to occur at some regional and district levels incorporating service delivery points [GAR districts]

Health Information Systems (HIS)

This thematic area is focused on the activities and indicators within the HIS. It specifically addresses service needs like non-communicable diseases (NCDs) and highlights the particular areas of HIS covered by the HSMTDP, rather than providing a comprehensive overview of HIS in the sector.

Field-work was undertaken over 10 days which included data collection and data transcription. Field work was conducted in the Ahafo Region, specifically in Hwidiem, Goaso (regional capital), Bechem, Brosankro and Mawaninso. Interviews were conducted with representatives from the Regional Health Directorate, Regional Hospital, CHAG facility, District Hospital, Municipal Health Directorate, Health Centre and CHPS Compound.

Key Findings

The section assesses the Health Information Systems in relation to HSMTDP objectives, identifying three (3) key HSMTDP M&E indicators used to assess progress on HIS in the health sector. These were:

1. Improve collection, entry, analysis, and utilization of data on NCDs in Ghana:
2. Improve the availability of data for adolescent health
3. Increase the use of Information and Communication Technology for Emergency Care and Surveillance

Improve the Collection, Entry, Analysis, and Utilization of NCD data in Ghana

NCDs are being addressed at all levels, with several health service delivery points establishing "Wellness Clinics" staffed by nutrition officers, Physician specialist, medical officers, physician assistants and nurses. These have become avenues for early NCD case detection, assessing blood pressure, blood glucose levels, BMI, dietary habits, etc. While specific guidelines were absent at the reviewed locations, the clinics generate data for decision-making and for planning of health promotion activities. Nationally designed NCD data collection forms are now available on the DHIMS2 platform which has improved the availability and quality of NCD data. The Research, Statistics and Information Management (RSIM) Directorate of MOH indicated that it is analysing this data to develop morbidity profiles, especially for Diabetes Mellitus and Hypertension for the country.

The Lightwave Health Information Management System (LHIMS) is being implemented nationwide as an electronic medical record system, capturing both new cases and repeat clients and facilitates the continuum of care. The LHIMS diagnosis list includes NCDs such as hypertension, diabetes mellitus, various cancers etc. Monthly reports are submitted to DHIMS2 as statutory reporting requirements. The "KoboCollect" interface is used to collect nutrition data from facilities. The "KoboCollect" is an open-source tool used to collect, manage, analyse and visualize data for surveys, monitoring, evaluation and research and users can customize the interface to suit their reporting needs. Additional data generated is from the institutionalized Diabetes and Hypertension

Clinics in health facilities and this informs the facilities' ability to order commodities and medicaments for the management of some NCDs.

- Existence of electronic medical records system (Open EHR system) and databases
- Roll out of LHIMS
- Digital Interventions (GIFMIS, GhILMIS, National electronic Pharmacy Platform(NEPP), MyNHISApp, Claimit, SORMAS etc.)
- Limited interoperability of existing health information systems. HISSP developed to address this challenge.

Improve the Availability of Data for Adolescent Health

Interviews from field visits indicated that health data on adolescent were generated from "Adolescent Corners" and include biodata, counselling and family planning acceptance information. Some of the DHMTs visited have developed their own forms to collect adolescent services data. Age disaggregated ANC statistics, provides data on adolescent pregnancies and family planning acceptance rates. Although some secondary school infirmaries have Adolescent Corners, these facilities often do not report data regularly and lack specific standard operating procedures (SOPs).. The rsLog application, used specifically for family planning and comprehensive abortion care, also generates age disaggregated data which helps to identify adolescents' information for DHIMS2. It collects, manages and analyses FP and CAC service data from health facilities across the country, providing data on client demographics, diagnosis, treatments and outcomes. Overall, the data landscape for adolescent health is characterised by diverse sources and types without very clear guidelines and forms at the operational levels.

Increase the Use of Information and Communication Technology for Emergency Care and Surveillance

We examined ICT utility especially at sub-national levels and found that the "Pre-hospital services" [health centres and CHPS zones] in both urban and rural areas used some form of Information and Communication Technology (ICT) for service delivery activities. The was also the informal use of ICT tools such as "WhatsApp" at some facilities to manage emergency services and handle referrals to higher level facilities. Clinics etc in districts visited have formed groups enabling communication between lower-level facilities and doctors at the district hospitals to coordinate referrals.

The National Ambulance Service exemplifies operational ICT use, with an application for "Emergency Care Services" that has improved organizational management and service monitoring processes. The application consists of modules for Patient Care Records, Availability Reporting, Clinical auditing, Fleet Management and Human Resource Management. Respondents noted improvements in case handling quality, data quality, early detection of fleet/commodity availability challenges across the country and established dashboards for reporting key performance indicators. These ICT tools use have been supported by the Catholic Relief Services and USAID.

Regions and districts visited also utilised the Surveillance Outbreak Response Management & Analysis System (SORMAS) for contact tracing, case detection, and to manage disease outbreaks at all service levels. A Geographical Information Systems (GIS) is being deployed alongside SORMAS to provide spatial perspective for routine and active surveillance activities and to enable the tracking of field workers with real time data reporting and location. SORMAS is operated on tablets in the field and on laptops at supervisory levels for monitoring. SORMAS has improved reporting of laboratory results to supervisors who said they can view these results immediately and give feedback with bottlenecks largely eliminated.

Strengthen and Increase Coverage of Civil Registration

We examined the operations of Civil Registration [Births and Deaths Registration (BDR)] at operational levels. Efforts are underway to enhance coverage through the integration of data from LHIMS, eTracker, BDR and National Identification Authority (NIA) in particular, to ensure accuracy of births reporting from the multiple data sources.

It is noted that a sample registration system is being designed to capture deaths that occur outside of health facilities. A national health database to be housed at the MoH, is being designed to converge DHIMS, routine health data systems, surveys and census data with the aim of ensuring better convergence of the multiple data sources. These interventions are still work in-progress at this point.

HIMS Partnerships

The Key informants interviewed indicated that multi-lateral and technical cooperation agencies [e.g., USAID, JSI, WHO, PATH], are providing tablets, laptops and other computing systems for specific health programmmes. Support was also given for GIS training in collaboration with the Ghana Statistical Service.The Ministry of Local Government, Decentralisation and Rural Development (MLGDRD) and Birth & Deaths Registry (BDR) has supported the integration of the multiple data sources for birth registration/Sample Registration System, working in partnership with the Navrongo, Dodowa and Kintampo Health Research Centres, Vital Strategies and the Regional Institute for Population Studies at the University of Ghana.

Enablers of HIS

- There is a national HIS Strategy that provides the framework for the integration of the various systems
- The presence of IT support at all levels of the health system ensures relatively smooth running of systems and resolution of ICT use challenges.
- Staff are generally self-motivated and willing to ensure their set targets are met. The occasional support with ICT equipment such as laptops has helped to ensure smooth running of work activities.
- Health facility managers have created an enabling environment for health data management with staff motivation and managers' interest in utilizing generated data.
- The Office of the Vice President of Ghana has launched a major digitization drive which has benefited Civil Registration systems and stimulated local interagency partnerships.

Challenges

- HIS challenges primarily involve infrastructure. A key challenge raised from all facilities visited, was **poor network/internet connectivity** that hampers effective use of ICT tools. LHIMS, SORMAS and eTracker etc all require adequate internet connectivity to function fully. While they all can function in offline mode, the challenge limits staff ability to access records in real time when needed.

- The LHIMS platform relies on local servers at the health facilities. However, inaadequate technical support often results in unresolved issues for extended periods of time. LHIMS Server hardware support and maintenance have **frequent downtime** and at times historical clinical transactions may get lost. This can distort patient medical records and affect the filing of insurance claims for offline data.

- In some facilities, the **functional requirements** needed to implement LHIMS effectively were absent leading to poor user experiences with implications for clinical workflow and productivity. Staff reported instances where forms are updated without prior notice and with changes in data entry requirements which the staff were not privy to. There were also complaints about poor security features on LHIMS and its authorization mechanisms that could potentially lead to data breaches. Other challenges mentioned were with generating diagnosis reports, and the lack of integration of LHIMS with other health service platforms.

- **The hardware** [usually tablets] are supplied with the required applications, there are insufficient quantities and frequent break downs. As a result, staff have had to revert to paper registers to ensure continued data capture and reporting. Issues of hardware sustainaibility, software licensing and timely upgrades were identified.

- There are **not enough IT professionals** and support staff in the regions and below to support health service needs. For example, the Ahafo Region had only three (3) IT staff to support all health facilities. Some facilities rely on health information officers who are perceived to at least have some ICT skills but these do not have the requisite training.

Conclusions

We observed a health information system that has developed extensively, with diverse tools and processes for data collection and analysing data at all levels. However, challenges remain regarding the effectiveness of various software and their inter-operability with DHIMS2 and other systems.

The tablets and other hardware supplied at operational levels also have issues of not being enough to go round and having specifications that limited their usefulness.

Internet availability, IT support and maintenance systems were limited especially in the rural settings visited.

Improving use of ICT in service delivery was noted with nationwide deployment of disease surveillance and management tools, electronic medical record systems and

other service specific tools that have strengthened data collection in health facilities, but there is need to address the technology and infrastructural challenges for them to be of optimal functionality.

The absence of a national digital health policy to guide ICT integration into the health sector has led to inadequacies observed in coordinating health information systems and resources. Challenges persist in leadership and governance; workforce investment, utilization; legislation, policy and compliance, services and applications; infrastructure and interoperability standards.

The ICT Human resource capacity deficits undermine management of the deployed ICT infrastructure, necessitating efforts to recruit sufficient IT staff for the services, especially at the periphery [where staff with such skills refuse postings]. The use of Health Information Officers in IT roles without adequate training will not resolve the problems.

The proliferation of narrowly-focused service delivery ICT tools and a siloed health information systems leads to multiple reporting requirements and duplication of efforts, which creates an increased work load for already busy health workers.

Recommendations

- Efforts need to be made to ensure sustainability of both the software and hardware elements used by the system, with clear sets of polices and strategies established to guide operations. This requires working closely with private sector vendors, stakeholders and other relevant parties to generate common interests and results.
- Procurement of ICT tools and equipment should be through a system that assures quality specifications and manufacturing standards, and should be procured in optimal quantities to ensure effective use.
- The Government should provide incentives for telecommunications companies to improve network/internet quality in critical rural areas to facilitate ICT use in the health services.
- Conduct an assessment of IT staffing needs in the sector to fully realise the potential of digital tools to fully achieve the expected goals.
- IT staff could also be rotated across the regions to reduce concentration in Accra while longer term staffing measures are considered.
- The RSIM at MOH should be included in data governance and data use Steering Committees meetings and decisions making. This is necessary to ensure the focus on data needs for the health sector decision making are addressed adequately.
- The evolving HMIS system with its various components [GIFMIS, GhILMIS, LMD, LHMIS, etc.] could serve as a valuable data resource to drive research collaboration with academia and serve as an important learning resource and an effective problem solving tool.
- The MoH and regulators must have data coherence to ensure sector wide coverage of all health information.

Finance and Budget Thematic Area

The MOH's Programme-based budget is structured around the functions of the health sector. Subprogram 1.3 deals with health policy formulation, planning, budget, monitoring and evaluation. It has four key objectives.

1 To mobilize and allocate resources for the sector
2 To coordinate health sector policies coherence and development
3 To ensure effective infrastructural planning in the health service
4 To monitor and evaluate the health sector

The review of HSMTDP performance on these objectives involved [a] a qualitative review of the strategic and operation documents of the MoH [the HSMTDP, Health Financing Strategy, Annual Programme-Based Budget and the Annual programme of Work] to determine the coherence of the health financing policy, strategies and activities. [b] a second stage reviewed the performance on health financing objectives and strategies during the HSMTDP period using qualitative and quantitative approaches, including analysis of agency annual and budget performance reports, data from the holistic assessment, and the operational context and environment of government and its development partners. [c] The third stage was quantitative analysis of financial data from budget, disbursement and expenditure reports to assess the extent of implementation of proposed financial commitments against planned expenses.

The goal of the **Health Financing Strategy**, is to establish equitable, efficient, effective, transparent, and sustainable health financing mechanisms that contribute to achieving improved health outcomes, financial risk protection, consumer responsiveness, and access to quality essential health care and population-based services for all by 2030. The findings come from a review of the Health Financing Strategy and related documents as well as the Health Sector Medium-Term Development Plan (HSMTDP) and the Programmes of Work (PoW) for 2022 and 2023, to determine the key financing milestones in the PoWs achieved and how these relate to relevant HSMTP indicators. The sector's performance on the seven HFS objectives is reviewed along with an assessment of the health financing indicators over the review period. [EHS/NHIS benefits package alignment report**]

Key Findings

Attain 100% health insurance coverage for primary level services

The MoH working with its agencies, private sector, and development partners developed the Essential Health Service (EHS) package. As part of this package, the technical working group (TWG) identified which services to be delivered under the Universal Health Coverage (UHC) roadmap, identified the services within the EHSP that are covered by the NHIS benefit package and those that are not. This essential step set the stage to measure this milestone. According to a report released by the MoH[1] on the development of Health Promotion and Preventive Benefit Package (HPPBP), about half (50%) of all primary care

[1] MoH, HPPBP, November 2023

services are not covered by the NHIS. Whilst 42% of the EHSP are fully covered, the remaining 8% are partially covered by the NHIS benefit package. Over the past three years (2021-2023), NHIA has expanded the benefits package to include Family Planning coverage (Injectables, Intrauterine devices, Implants, Tubal ligation, Vasectomy) and coverage for four Childhood cancers (aged 0-19 years). It has now been proposed to introduce coverage for selected mental health conditions, prostate cancer and renal dialysis. Data from the Holistic Assessment [2023] reports an increase in NHIS coverage from 54.5% (17.2 million) in 2022 to 55.5% (17.8 million) in 2023.

Improve financial risk protection and access to quality essential health-care services

This milestone measures financial risk protection for the EHSP [i.e. households access to healthcare services and the services package, without experiencing undue financial hardship]. WHO estimates give Ghana an overall score of 44.8%[WHO global health observatory (2023),]. Financial risk protection for PHC level inpatient services is 17.6% whilst that of outpatient care services is 61.1%. Though trends data was not available for this review it is clear that the levels of financial risk protection need to be improved.

The MoH indicator for financial risk protection using Out-of-Pocket payment for healthcare services was not available at the time of drafting this report as the National Health Accounts survey for 2018-2022 was still being finalized. However, data from the WHO Health Expenditure database showed an increase in Out-of-Pocket payment from 23.8% to 25% between 2020 to 2022. With access to quality health services, as a complement to financial risk protection, our brief review from some assessed indicators showed a mixed set of trends with many indicators falling and rising or vice versa over the period reviewed[*see Indicators performance under "Service delivery" area and indicators annex*]. For example, NHIS coverage showed steady marginal increases but below the targets set for each year. CHPS Zones with emergency transport systems declined, and **OPD per capita attendance** after an initial marginal increase declined in 2023. Similarly s**killed birth attendance coverage** decreased from 2021 to 2023 and **IPT3 Coverage** showed a slight decrease in 2023.

Increase health financing and the recruitment, development, training and retention of the health workforce.

Milestone three focuses on increasing resources available to the sector based on following indicators that assess the resource mobilization efforts of the MoH;

- Government health expenditure as % of total government expenditure
- Percentage of current Health expenditure devoted to PHC
- NHIA receipts against budget
- Out-of-pocket as a % of current health expenditure (CHE) –[*waiting for NHA data*]

Government health expenditure as % of total government expenditure

There is the Abuja commitment that required African countries to target a minimum of 15% of the total government budget for health. The 2022 holistic assessment report

showed that government had increased the proportion of expenditure on health by 0.8 percentage points from 6.6% in 2021 to 7.4% in 2022. Per capita expenditure on health increased from GHS 275.68 to GHS 341.58 during the same period. In 2021 the percentage of claims payment to total NHIA expenditure was 60.5%. The percentage reduced to 60% in 2022 and increased to 73.4% in 2023.

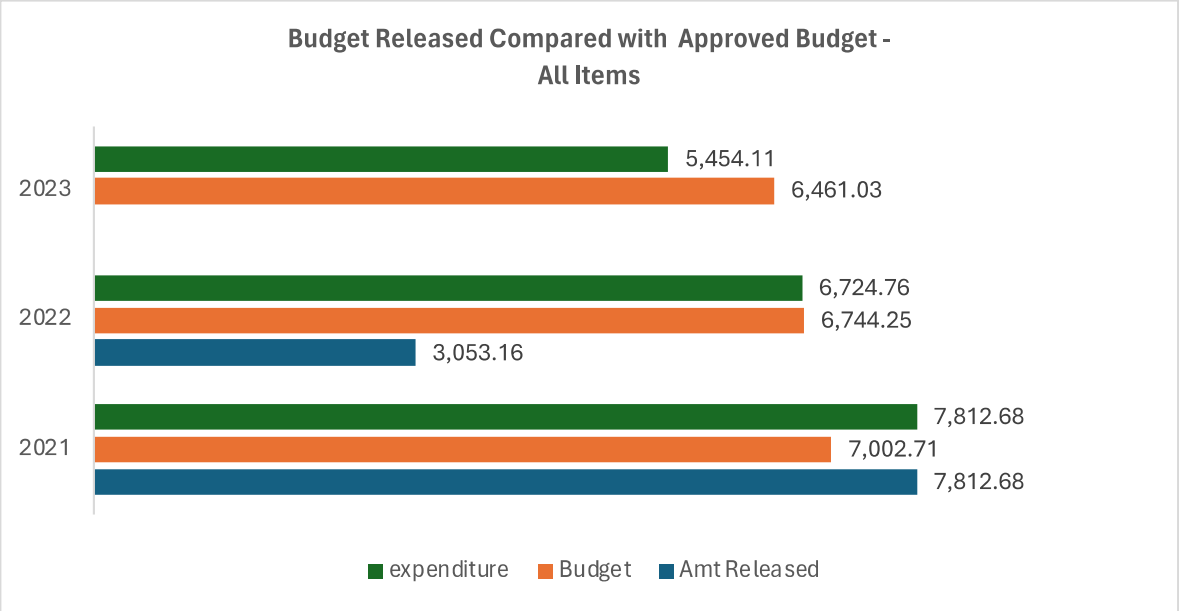
Percentage of current Health expenditure devoted to PHC

How much of government recurrent expenditure is spent on PHC is fundamental to the UHC principle. The percentage of current health expenditure on PHC was 50% against a target of 85% in 2022. A WHO survey, however gave an overall PHC financing score rating in Ghana at 47.5% in 2022.

Budget Implementation (GoG Discretionary Funds)

This section is an analysis of the trends in health budget, amount of approved budget released and actual expenditure for GoG discretionary funds (excludes IGF). The analysis is for the period 2021, 2022 and 2023. Full year financial statement for the year 2023 was not ready as at the time of drafting this report. The third quarter interim financial statement was used. Figure i below shows the total budget implementation for all items for Government of Ghana.

Figure i: Budget Approve, Released & Spent for all Items – 2021, 2022 & 2023

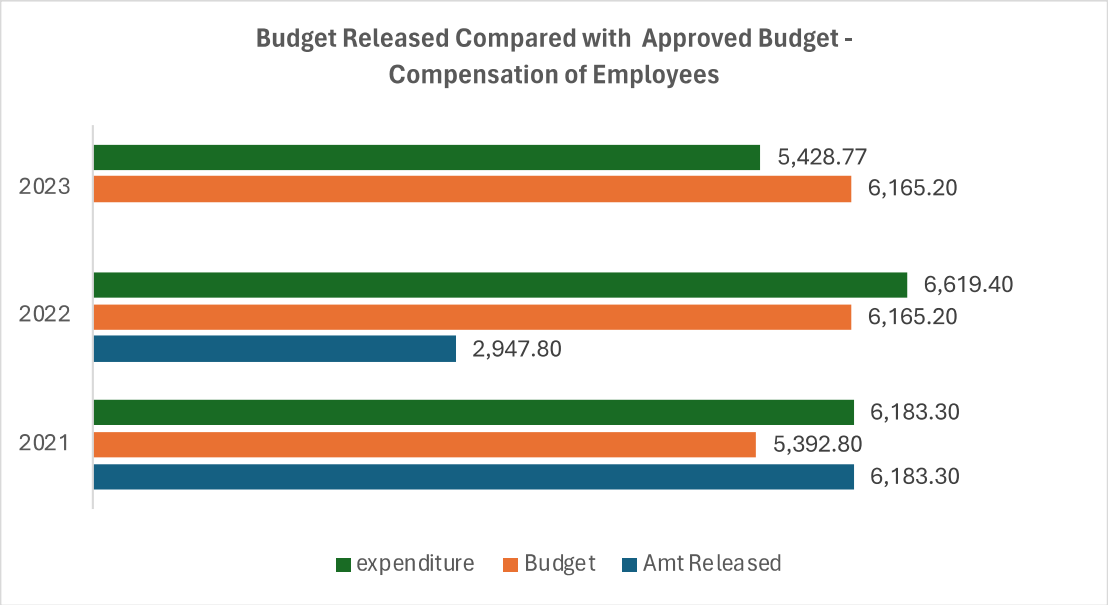


In 2021, the amount spent equalled the amount released though the Approved budget was lower than both. In 2022, the amount released was less than the approved budget and actual expenditure. Obviously, there may be a reconciliation issue as, funds spent

cannot be more than what has been released in the GIFMIS system. About 84.4% of budget was spent as at September 2023.

Below are further analysis by items.

Figure ii: Budget Approve, Released & Spent for Compensation of Employers – 2021, 2022 and 2023



Note: 2023 is Jan-Sept

Figure ii, above, shows approved budget, amount released and actual expenditure for employee compensation for 2021, 2022 and 2023 (Jan-Sept). In 2021, the amount released was equal to the amount spent though the approved budget was lower. This is a usual occurrence as salaries reflect actual staff available. The lower budget figure is perhaps an underestimation of the budget. In 2022, the amount released was far lower than the actual expenditure and the approved budget. Again this may be a data reconciliation issue as budgets should be revised to reflect actual expenditure. The data for 2023 (Jan-Sept) shows a slightly lower expenditure (88%) than approved budget.

Figure iii: Budget Approved, Released & Spent for Goods & Services – 2021, 2022 & 2023

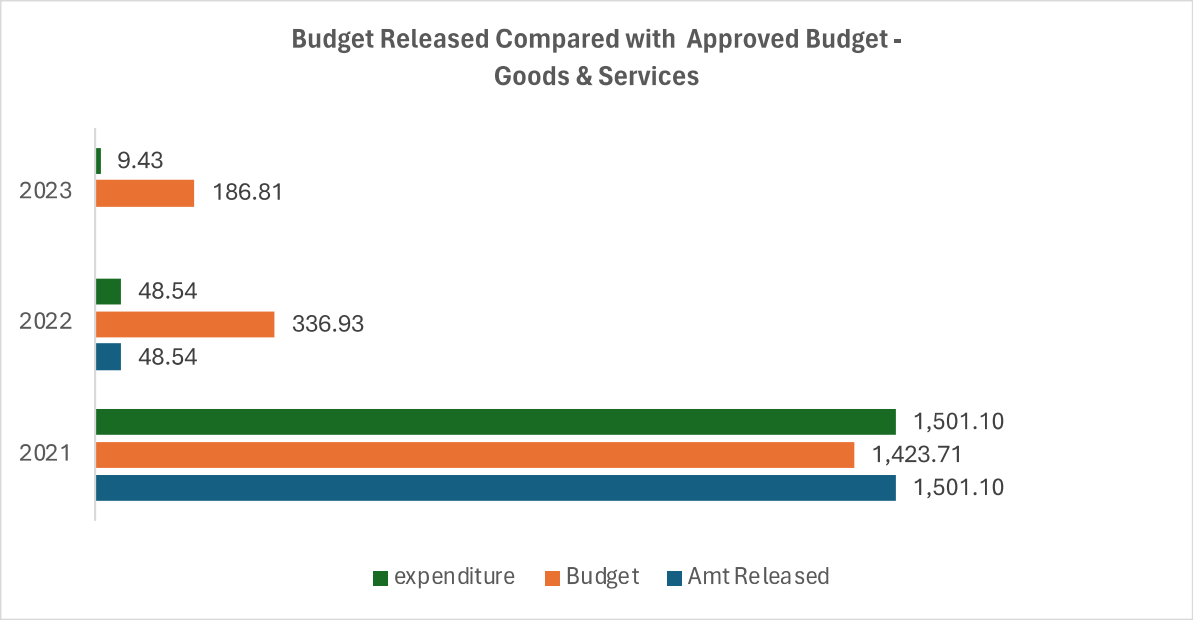


Figure iii above shows the budget approved, amount released and actual expenditure for Goods and Services for the period 2021, 2022 and 2023. In 2021, the amount spent was the same as amount released though the approved budget was lower. A more important issue in 2022 is that the amount released was 14% of the approved budget. In 2023, a far less amount (5%) for GoG was released as of September 2023.

Budget Implementation by Programmes (GoG Discretionary)

Figure iv shows the 2021 budget allocation by programme for all source of funds. Figure v provides same information for 2022. Health service delivery received the largest of resources representing 66% and 67% in 2021 and 2022 respectively. For both years, management and administration received the second highest allocation with 27% and 21% in 2021 and 2022 respectively. In 2021, HRHD proportion of the budget was 4% and in 2022 increased to 10%. Health sector regulation received the lowest allocation with 3% and 2% in 2021 and 2022 respectively.

Figure iv: 2021 Budget by Programme-All Sources

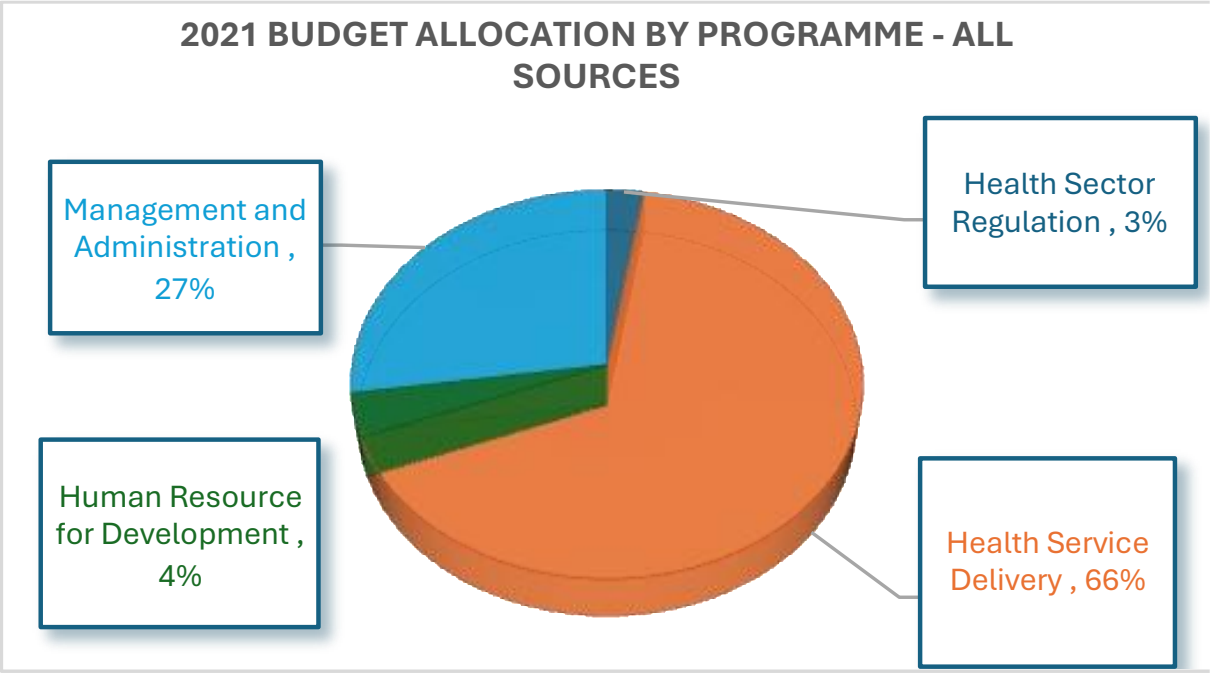


Figure v: 2022 Budget by Programme-All Sources

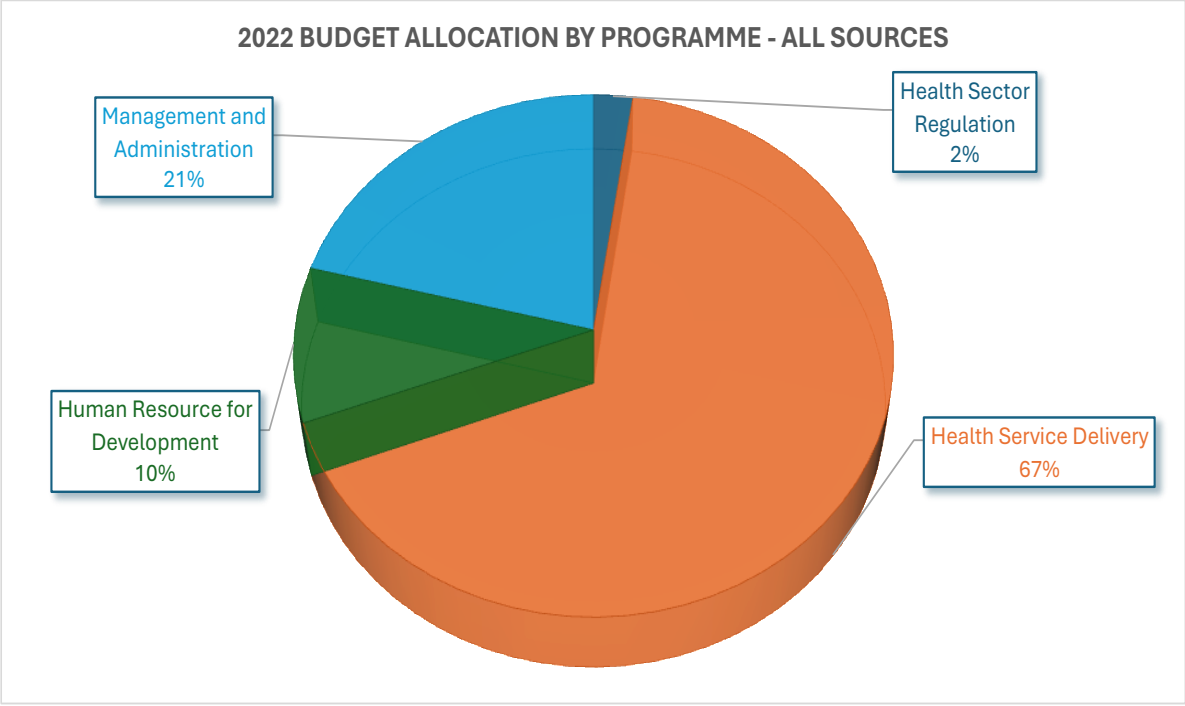


Figure vi and vii below compare budget with expenditure in 2021 and 2022 for all sources of funds. With the exception of health sector regulation which received and spent about five times the approved budget, the rest of the programmes utilized over 90% of the approved budget in 2021. In 2022, Human Resource programme utilized 43% of the approved budget whilst Management and Administration spent 77% of their approved

budget. Health service delivery fully utilized their approved budget (100%) and Health Sector Regulation about four times the approved budget.

Figure vi: 2021Budget & Expenditure, All sources

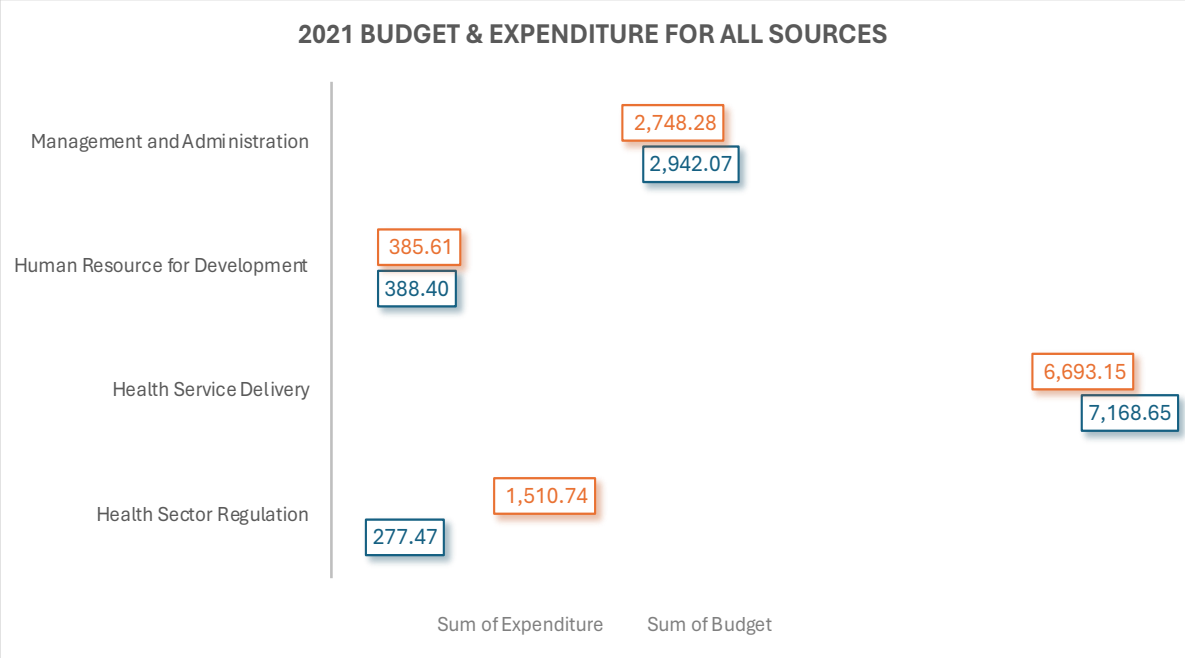
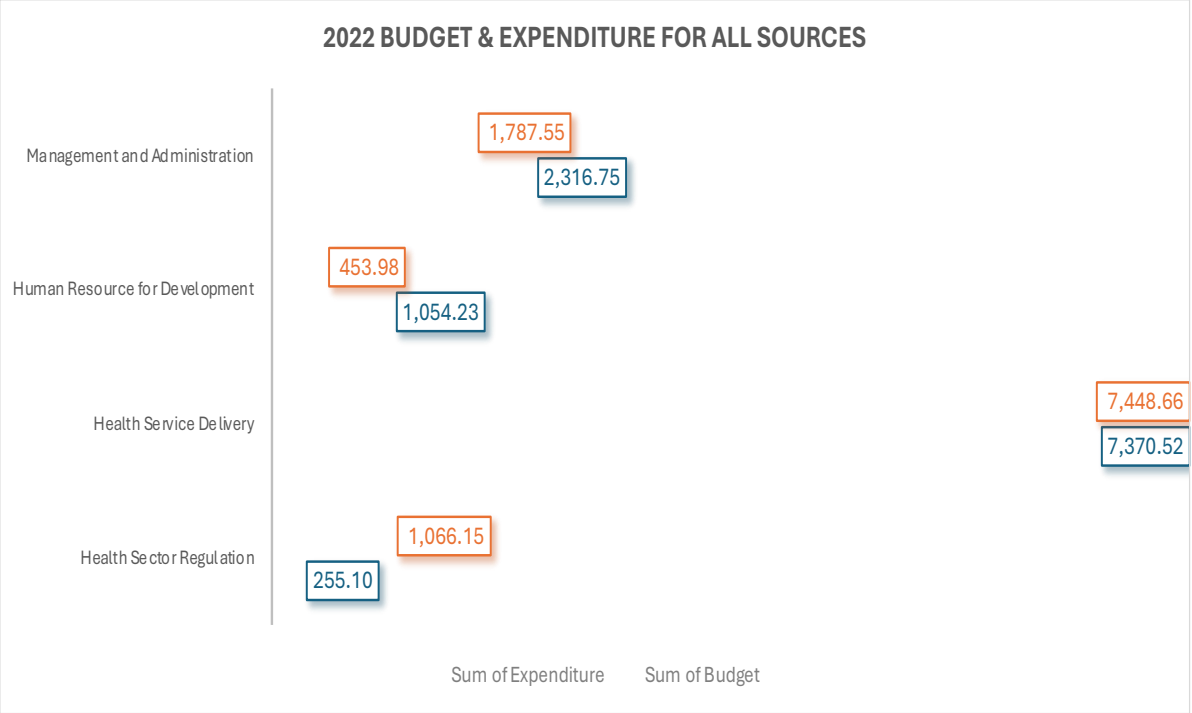


Figure vii: 2022 Budget & Expenditure, All sources



Policy formulation, planning and budgeting has been institutionalised within the sector and strictly adhered to as legislated in the Public Financial Management Act [*2016*] and follows prescribed legislative timelines.

Conclusions

Almost all of the health financing indicators are below targets or global standards and are therefore off-track and not achieving the three key milestones signifying under performance.

Employee Compensation represents over 60% of total health expenditure for all sources and for GoG it is above 95%. This indicates the lack of funding for equipment, commodities and medicines needed to address service challenges. In 2022 and 2023, less than 20% of the approved budget for GoG goods and services was released. Most donor funding is spent on goods and services to address some GoG funding gaps. This however calls for a sustainable strategic domestic financing of goods and services.

Analysis by programmes shows that allocation to the Human Resource Programmes is low, in a sector where the workforce budget represents over 65% of total budget. This may be due to the fact that expenditure on training from other programmes are not reflected in the Human Resource for Health budget or expenditure reports. There is a need for more detailed data to enhance multi-dimensional analysis by programme and item.

The Ghana Integrated Financial Management Information System (GIFMIS) is not used at subnational levels of the health system. Deploying GIFMIS to all subnational level facilities could accelerate provider payment reforms and the roadmap to financing PHC services.

There is no clarity as to how resource allocation are linked to the HSMTDP objectives. The costed HSMTDP (HSMTDP 2022-2025) did not reflect in annual performance analysis and was not used for advocacy to mobilize resources.

The main financial systems strengths are derived from the globally accepted milestones and indicators that Ghana uses, along with good stakeholder support and use of effective tools. The weaknesses include a lack of clear resource allocation formulae, and availability and utilization of analytic data for evidence based decision making. Opportunities exist to leverage partner and stakeholder support for greater accountability platforms, and also to improve efficiencies whiles reducing duplications across programmes and activities.

The relatively low levels of GOG budget allocation, and disbursement particularly for operational goods and services remain threats to the sectors goals

Recommendations

1. The MoH should advocate for and increase its efforts to meet the three main health financing milestones
    a. Advance the work on covering preventive and promotive services
    b. Reducing OOP expenditure of households
    c. Increasing non-wage recurrent (Goods & Services) budget
2. More health financing milestones should be included in the regional performance indicators to address inequity in the health financing

3. There should a clear formular for resource allocation to enable future trends assessment of allocation and financing
4. Accelerate efforts towards achieving full financing coverage of PHC services
5. Strengthen provider payment systems to address funding overlaps and to reduce efficiency funding healthcare services
6. Address the wide disparity between funding for employees compensation and for operations, goods and services with improved allocative efficiency
7. Accelerate deployment of GIFMIS at the subnational level

Supply Chain Management and Logistics

Ghana's policy priorities include achieving Universal Health Coverage (UHC) and strengthening Primary Healthcare (PHC) services, which depend on a reliable health commodity supply chain. A well-functioning supply chain ensures the timely availability of high-quality essential health commodities to enhance service delivery. However, the current supply chain faces data reliability issues, fragmented procurement, NHIS reimbursement delays, inadequate warehousing, and poor logistics management. This section summarises the key challenges identified during the review process and presents recommendations aimed at improving efficiency, reliability, and responsiveness in the Health Commodity Supply Chain.

Key Findings

The procurement function analysis revealed a lack of baseline, mid-year, and achieved targets, complicating objective assessment. Additionally, unclear KPIs such as "*% of planned essential medical equipment procured and distributed*" found in the HSMTDP M&E Framework hindered measurement accuracy. Furthermore, misalignment between KPIs, procurement objectives, and SCMP provisions highlights a necessity for corrective action to align with strategic procurement goals and KPIs such as procurement lead time and supplier fill rates which impact commodity stock outs rates.

The Ministry of Health (MOH) and its Service Delivery Agencies have successfully implemented a Framework Contract Agreement (FWC) for 55 key medicines, procurement of other medicines and medical products remain fragmented across the National, Regional, and District Levels leading to non-competitive pricing due to loss of economies of scale and inadequate mechanisms to establish product quality, particularly at the facility level. Despite this, field visits to Regional Health Administrations, Teaching Hospitals, Regional Hospitals, and District Hospitals reported general compliance with the legal framework, including adherence to the procurement guidelines and SOPs. Challenges do persist, including high levels of indebtedness (Suppliers – RMSs – Health Facilities), delayed reimbursement incurred costs by NHIA to health facilities, and unsatisfactory supplier fill rates. Documents reviewed and

interviews with key national level informants revealed delays in obtaining port waivers for program commodities that result in commodity stock-outs at various levels of the supply chain.

The assessment of warehouse infrastructure performance highlighted issues with key performance indicators (KPIs) related to medicine supply chain management in primary healthcare facilities. The selected KPI, measuring "*the percentage of facilities re-stocked with essential tracer medicines*", is unclear and difficult to measure due to the lack of baseline data and targets. Moreover, the KPI assessing the "*proportion of healthcare facilities reporting no stock-out of tracer medicines*" fell short of its mid-term target, with only 51% achievement compared to the desired 80%. This indicates a high medicine stock-out rate of 49% at healthcare facilities, suggesting the need for prioritized investments in supply chain activities and warehouse optimization initiatives.

The assessment revealed that the Regional Medical Stores (RMSs) warehousing infrastructure standards vary, with some meeting FDA accreditation standards. Notably,tThe Ashanti, Eastern, and Bono RMSs had achieved FDA accreditation from 2019 - 2021 by implementing key measures such as decongestion, temperature monitoring, and quality management systems, aligning with WHO and FDA standards. Unfortunately, there were no KPIs in the HSMTDP M&E framework that align with strategic objectives on product quality metrics such as the FDA accreditation status of Regional and Central warehouses.

The field visits revealed persistent challenges with infrastructure and personnel shortages at some lower-level facilities. Inadequate availability of basic equipment such as air-conditioners, refrigerators, shelving units, and racks to optimize commodity storage may compromise the quality and efficacy of stored medicines. Teaching hospitals, Regional and District facilities (hospitals) did show improvements in warehousing infrastructure, however, specialized storage capabilities and measures are needed to mitigate risks and to enhance supply chain efficiency and resilience. Commodity stockouts and wastage due to expiry were reported across all levels which indicates gaps in warehousing and inventory management requiring urgent remedy.

The Last Mile Distribution (LMD) assessment revealed a mid-term coverage rate of 81.7%, falling short of both the baseline and mid-term targets of 90% and 100% respectively. This indicates a suboptimal distribution of commodities from Regional Medical Stores (RMSs) to the healthcare facilities, suggesting significant gaps in the distribution system. The field visit revealed an overall adherence to the delivery schedules by RMS, despite occasional lapses affected the timeliness of deliveries to some facilities. All facilities visited were fully covered under the LMD, even though overall, the combination of suboptimal commodity delivery rates, low order fill rates, and high

indebtedness of health facilities to RMSs may have contributed to the high medicine stockout rate of 49%. Notably, teaching hospitals which operate independently from Regional Health Administration RMSs, are not covered under the LMD arrangements

Logistics Management Information System (LMIS) optimization assessment demonstrated high mid-term coverage (94.2%) of "health facilities having GhiLMIS installed and implemented" exceeding the target (70.0%). Reports from the field visits confirmed the effective use of GhiLMIS for requisitions, ordering, and receiving health commodities (issued through GhILMIS) from the Regional Medical Stores.

However, a significant issue was the lack of interoperability between various management information systems used in the sector. This lack of integration between systems such as DHIMS2, LHIMS, and GhiLMIS hampers the seamless sharing and consolidation of data and stakeholders struggle to access comprehensive and real-time information, impeding decision-making processes and reducing the overall efficiency of the supply chain.

At the Regional Medical Stores (RMSs), quantification processes rely primarily on issue data due to the lack of consumption data at service delivery points (SDPs) which makes it difficult to accurately forecast demand and allocate resources efficiently. This leads to potential stockouts or in some cases, overstocking of health commodities.

Optimizing forecasting and supply planning with strategic KPIs is essential, as the Health Sector Medium-Term Development Plan (HSMTDP) lack options for assessing this aspect. Incorporating strategic indicators like Mean Absolute Percentage Error (MAPE) from the Health Commodity Supply Chain Master Plan (HCSCMP) can improve forecasting processes and enable comprehensive monitoring for an efficient supply chain performance.

The Quantification Analytic Tool (QAT) has been successfully deployed and utilized for forecasting and supply planning in public health programs like NACP, NTP, NMEP, and FHD. However, teaching hospitals and subnational teams do not always have the requisite skills and resources to effectively utilize the QAT. This leads to inaccuracies in predicting demands for health commodities, resulting in overstocking of some commodities and stockouts of others. These inefficiencies compromise the effectiveness of the health supply chain.

A major partner concern during the MTR was a year long retention of donated GFATM medicines at the port due to a demand to make tax payments.

Conclusion

- Ghana's current Health Commodity Supply Chain faces significant challenges, including the absence of consumption data, fragmented procurement processes, delayed NHIA reimbursements, unsatisfactory lead time and supplier fill rates,

inadequate warehousing infrastructure, suboptimal distribution, and issues with the Logistics Management and Information System (LMIS). These challenges lead to observed stockouts and wastage, negatively impacting service delivery.

- To address these issues, strategic investments and urgent corrective measures are necessary to improve procurement processes, optimize warehousing capabilities, enhance the Last Mile Distribution (LMD) system, ensure the Ghana Logistics Management Information System (GhiLMIS) interoperability, and improve NHIA reimbursement. The specified supply chain and logistics Key Performance Indicators (KPIs) outlined in the Health Sector Medium-Term Development Plan (HSMTDP) Monitoring and Evaluation Framework require urgent review and alignment with the Supply Chain Master Plan (SCMP 2021 – 2025).
- These actions are critical for optimizing Ghana's Health Commodity Supply Chain performance and improving healthcare service delivery nationwide.

Recommendations

1. The MOH and GHS should enhance the HSMTDP's Supply Chain Management (SCM) Key Performance Indicators (KPIs), to ensure its alignment with the Supply Chain Master Plan. The focus should be on selecting prioritized KPIs across the key areas of forecasting, procurement, warehousing, Logistics Management and Distribution, and Logistics Management Information Systems (LMIS), to ensure that these KPIs are not only comprehensive but also strategically integrated to enhance the overall effectiveness of the supply chain operations.
2. The KPI assessing the "*proportion of healthcare facilities reporting no stock-out of tracer medicines*" needs to be revised to reflect a more achievable target, such as the proportion of facilities with less than 10% tracer medicine stock-out, aligning with the requirement of at least 90% tracer medicine availability outlined in the National Supply Chain Strategic Plan.
3. Prompt reimbursement to Service Delivery Points (SDPs) should be a priority for NHIA priority and should ensure timely payments to RMSs and private suppliers and thus improve financing of health sector operations and sustain availability of medical producs.
4. The MOH/GHS must streamline import waiver acquisition processes and expedite port clearance for key commodities (Malaria, HIV, TB, FP, RDTs, contraceptives, etc.), to ensure timely availability at all service levels and reduce demurrage costs.
5. The MOH/GHS should support Regions, Teaching Hospitals, and CHAG Facilities to scale up FDA accreditation of their warehouses and make needed investments to improve warehousing and specialized storage capabilities at key district and subdistrict levels.

6. GHS should facilitate the scaling up of last-mile distribution by providing enhanced distribution management support to Regional Medical Stores (RMSs), coupled with sustained investments to improve distribution capabilities.
7. MOH/GHS must make efforts to ensure interoperability between existing software like GhiLMIS and LHIMS and maximize their use at all levels to assist with supply chain data visualization, procurement support, budgeting, and inventory management.
8. Regions should leverage GhiLMIS for generation of consumption data and other advanced forecasting tools like MAPE. There is a need for improved capacity building to implement Forecasting and Supply Planning (FASP) tools like QAT to improve efficiency.

Programme 2: Health Service Delivery

Fifty-one HSMTDP indicators covered the Service Delivery Programme area with Thirty-Three (51.6%) of the HSMTDP's broad activities in seven main intervention areas. These are [a] provision of Essential Health Service Packages (EHSP) [b] Emergency Preparedness and Response (EPR) [c] Health Systems Research (HSR) [d] Mental Health (MH) [e] Non-communicable diseases (NCD) [f] Primary Health Care (PHC) and [g] Reproductive Maternal Neonatal and Child Health (RMNCH). These services are provided at Primary, Secondary and Tertiary/ Specialized levels. The HSMTDP also recognized pre-hospital services and acknowledged the need for research as an important service component.

Key Findings

Pre-hospital services are predominantly provided at the primary care level and includes health promotion and prevention. In addition, pre-hospital care covered clinical emergencies and ambulance services. Many services are provided at various levels of care, and depending on the level, offer a continuum of care and a relevant level of sophistication.

Essential Health Service Package (EHSP)

This involves increasing the availability of the nationally defined essential health service packages across the continuum of care at all levels with each level having its defined package. The care package covers prevention, promotion, curative, rehabilitation, and palliative care and District, Regional, and Teaching hospitals are making efforts to expand the range of available curative and rehabilitation services in the major disciplines.

"Wellness clinics" have been established at all service levels, to facilitate the early detection of health conditions in the population being mindful of age and gender needs and non-communicable diseases.

Emergency Preparedness and Response (EPR)

The HSMTDP included establishment and strengthening of institutions such as the Ghana Centres for Disease Control, for responsive public health emergency services and preparing existing facilities to be responsive to pre-hospital and clinical emergency needs. Other activities include strengthening and ensuring compliance with referral

processes between levels of care; improving the management and quality assurance of national public health laboratories and infectious disease and isolation centres.

The infrastructure, equipment and staff training investments made during the COVID-19 pandemic are still evident and are being expanded at all levels. These investments and systems are the foundation of the national response system for detecting, managing and controlling public health emergencies, and incorporate governance structures such as the EOCs and PH Emergency Response Teams. Disease surveillance response mechanisms are enhanced and actively functional at all levels of service delivery. Emergency simulations are increasingly being carried out to improve facilities' readiness to manage emergencies. Dedicated emergency areas have been established and are being staffed by BLS trained staff and appropriately equipped.

The National Ambulance Service is a vital partner in providing pre-hospital emergency care services particularly at district level and above. Private transportation or commercial transport is often what is used at the sub-district and community levels. The services have become increasingly sophisticated and complex as one moves from clinics/health centres to district, regional, and teaching hospitals. A referral system is operational and facilitates the timely and efficient movement of patients in both directions. Facility telemedicine centres, use of WhatsApp groups, and the establishment of direct communication protocols and contact lists with facilities, are innovations that ensure better preparedness and care for referred patients.

Mental Health (MH)

HSMTDP proposed to scale up integration of mental health services into regular service delivery systems with financing under the NHIS. Secondly, it aimed to generate better nationally representative data on mental health, and thirdly to increase the national mental health services HR capacity.

We note that all the levels of service delivery recognize mental health as an essential service and are therefore integrating mental health services into their routine services. Outpatient and inpatient services are provided at primary, secondary, tertiary, and teaching hospital levels and efforts are being made by training institutions and the specialist colleges to increase the number of mental health professionals. Data on mental health is still not nationally representative, and mental health registers were not customized to Mental Health Authority's needs. However, the Authority indicated that 67% of facilities with registers feed into DHIMS, but this excludes private sector data.

The MHA has revised data collection forms to meet with international standards to include data on psychotropics availability, prevalence of MH conditions, loss to follow up and defaulters etc. The revised forms are in the process of being included in DHIMS (60% done).

Partners supporting the expansion of mental health services include the GHS [CHIM], CHAG and the teaching hospitals. UK FCDO and WHO are external partners supporting a results based program and a Ghanaian NGO "Somubi Dwumadi" works with the MHA.

The NHIA has recently agreed to provide coverage for 4 essential conditions – Bipolar disorders; Schizophrenia; Anxiety disorders and Depression. The main challenges include generating funding for an area with very low IGF possibility, low staff numbers at all levels with a continuing emigration leading to deficits in the numbers of psychologists, occupational therapists, speech therapists, and social workers. Stigma remains a problem even within the health services staff as well as with the general population.

Non-Communicable Diseases (NCD)

The HSMTDP planned to establish sustainable programmes for screening, preventing and early detection of NCDs, including cancers, and to reduce the growing burden of overweight and obesity.

Public education campaigns on NCDs are being carried out at various service delivery levels, utilizing community outreaches, durbars, radio talks and health education at outpatient departments. "Wellness Clinics" have been established at all service delivery points for early detection of NCDs. The concept *covers BP, Weight/BMI, Sugar/RBS checks* for well-clients at GHS and in CHAG facilities visited and needs to be integrated into the Health Service Delivery System .

Specialist NCD clinics for Hypertension and Diabetes Mellitus are being introduced at secondary and tertiary care levels, and aim to include cervical cancer screening. The nutrition services provide public education on nutrition-linked NCDs, including diabetes, hypertension, cardio-vascular disease etc.

Collection, management and use of NCD data remains a challenge that needs to be coordinated across various care levels and digitized. GHS in partnership with Medtronics Foundation have initiated a programme to establish and link patients' data more effectively across multiple facilities and care levels.

A STEP [NCD Risks] survey was being concluded during the MTR but its data was not available to the team at the end of this review. At the national level, "Sin" taxes have been proposed but income from these are currently not ringfenced for the health sector and NCDs.

Primary Health Care (PHC)

HSMTDP activities include improving collaboration with communities, civil society, and other stakeholders in adolescent health; improving EPI coverage in urban centres; scaling up the establishment of a Network of Practice (NoP) of Service Providers in all Districts; strengthening community engagement and Risk Communication for health promotion.

Collaboration platforms are available at all service levels and include community committees, quarterly community-facility meetings, and meetings of the facilities with the district/municipal assemblies. Community engagement is also strengthened through scheduled radio programs covering various topics on health.

The MoH is spearheading the introduction of the "Networks of Practice" [NOP] concept as a sector-wide program that should include both public and private stakeholders in coordinated primary care services delivery. The GHS has started NOP implementation in selected communities as a new model for delivering Primary Health Care services. While national-level stakeholders were aware of the concept, this is less so at the regional level and below. The CHAG has also indicated that despite the volume of services it provides in the country, it had not been adequately consulted on the concept and felt its incorporation of the private sector will be difficult without adequate engagement. The NOP concept requires further piloting and testing to resolve issues such as the credentialing of the networks[instead of the individual units] by NHIA, as this will transform the system of individualized facility reimbursements into one that is for the entire network.

Immunisation continues to be a regular intervention using innovative schedules to meet the needs and availability of urban populations and utilizing community outreaches to provide relevant health education and risk communication interventions.

Reproductive, Maternal, Newborn and Child Adolescent Health (RMNCAH)

Activities assessed from the HSMTDP, includes ensuring the provision of quality essential maternal health services and improving access to the specified package of adolescent and youth services; eliminating mother-to-child transmission of HIV; improving accountability for the lives of women and children; improving school health and nutrition services; improving the quality of adolescent and youth-friendly services; improving the quality of care to babies delivered outside health facilities; improving the quality-of-service delivery at all levels for ANC, intrapartum care, PNC, and newborn care; and increasing the quality and coverage of perinatal death audits.

The review showed that all levels of service delivery provide the full range of comprehensive RMNCAH services (ANC, PNC, CWC, immunisation). Adolescent services are also being provided with efforts made to schedule them for the convenient of the adolescents (mostly held in the afternoon) and at sites within facilities that provide more privacy. Comprehensive Abortion Care (CAC) is also generally available. Pregnant adolescents are referred to the Wellness Clinic for counselling. In fact RMNCH activities dominated the broad activities and indicators of the HSMTDP.

Partnerships for Service Delivery

Different partnerships drive local service delivery, including local community organisations, traditional rulers, local government (assemblies), and individual benefactors and philanthropists. The role of health sector's development partners have been mentioned in the governance section of this report. Many of service delivery operations rely on partners funding and a risk of duplicated funding requests made to different partners has been identified. Partner resources for services delivery can be captured transparently in order to achieve improved coherence and fair distribution.

General Service Delivery Issues

We found a number of issues impacting service delivery across all levels and broadly categorised them as follows:

1. Human Resources numbers, distribution and skills:
2. Service delivery inputs, including consistent stock-outs of drug and non-drug consumables, the national shortages of vaccines and ART medication,
3. Infrastructure and equipment are generally old, inadequate and no longer fit for purpose. The government's flagship intervention, "Agenda 111" has commenced with several hospitals at various stages of construction. This effort is outside the HSMTDP and is coordinated and implemented from the Office of the President.
4. Financing of services delivery is a significant challenge [most GOG budget is taken up by personnel emoluments]. Utilization of internally generated funds [IGF] are capped by the Ministry of Finance limiting how much of funds generated could be used. National Health Insurance reimbursements tariffs are considered inadequate to meet current costs with reimbursements delayed by an average of 5-6 months. The funds from the NHI levy is also capped by the MOF, and with the delays, cash-strapped facilities are not considered credit-worthy enough by their suppliers which undermines continued supply of logistics.

Conclusions

The broad range of HSMTDP service delivery programme activities are seen to be carried out at the various service delivery levels and were said to be existing/routine activities that the service delivery agencies carry out anyway. Indeed, even though awareness of the HSMTDP is low at sub-national levels, services continue to be delivered with little evidence to definitively conclude that the implementation of these activities is driven by the HSMTDP or that implementing agencies were intentionally aligned with it.

Recommendations

1. It may be helpful to commission an expert review of partnership mechanisms and outcomes at the key levels with the aim of making them more effective, efficient and transparent, and in support of national priorities.
2. The MOH and agency model of services has operated for a few decades now and could benefit from a thorough institutional and governance review to look for efficiencies and convergences as the number of "independent" agencies and teaching hospitals expand.
3. There will be benefits in consolidating the "COVID Legacy" around Emergency services, emergency care skills, infrastructure including isolation and infectious Diseases [ID] hospitals as well as retaining useful public health measures like hand washing and masking. The next pandemic may happen quickly and simulations and investments in preparedness and response should be continuous.
4. The HSMTDP activity to establish a Ghana CDC agency has not ocurred but there is clear understanding that its expected functions would be consolidated within the GHS and around multi-sector coordinating platforms to avoid fragmentation

and duplication of roles in the sector. This activity and indicator should be revised to reflect the current reality.

Programme 3: Human Resource Development

The human resource development section of the HSMTDP sought to ensure the production of adequate and skilled health professionals and the provision of adequate resources to support their training under the sub-programmatic areas of Pre-Service Training, Post-Basic Training and Specialized Training.

These sub-programmatic areas supported an expansionary health workforce production policy, with increases in the production/training of pre-service, post-basic and specialised health workforce cadres. This section reviews several policy documents on reports supplemented with some field visit interviews.

Key Findings

With 2021 as the baseline year, increases in the production of nurses/midwives and medical/dental officers were 20.30% and 96.30% in 2022 respectively (MDC, 2023; NMC, 2023). A policy shift supporting the training of specialist cadres of all categories of health professionals was also implemented (MoH, 2020).

Between 2021 and 2023, the total stock of nurses/midwives in the public health sector increased, averaging 9.67% per annum, from 111,554 in 2021 through 122,205 in 2022 to 122,479 in 2023. Medical/dental officers (excluding house officers) numbers showed an uptrend of 4,152 in 2021, then 4,345 in 2022 and again increasing to 5,022 in 2023. (CAGD, 2022, 2023).

As an attendant effect, the density of health workforce per population mimicked the total health workforce stocks patterns, with cumulative density of doctors, nurses and midwives of 3.40, 3.84 and 3.74 per 1,000 population in 2021, 2022 and 2023 respectively, falling short of the SDG index of 4.45 per 1,000 population (CAGD, 2022, 2023; WHO, 2021). However, these improved health workforce densities hide persistent geographical and skill-mix imbalances over the same period.

Recent evidence from the Ghana Health Labour Market Analysis [HMLA 2023-24], however, showed the sector was gradually de-prioritising the training of auxiliary (non-professional) nurses (i.e. community and enrolled nurses) albeit this was yet to fully reflect in the skill mix trends of the practising nursing workforce of which 54.62% [2022] and 57.14% [2023] of the public sector nursing workforce were non-professional nurses, with wide variations across the country. This 2023 increase may be due to an increased emigration of professional nursing cadres following the COVID-19 pandemic[2]
Some 10,968 doctors are licensed to practice in the country as at January 2023, of which 9.39% were specialists. Of these specialists, 87.80% were stationed in the Greater Accra

[2] Nyande etal (2024): Migration of Nursing and Midwifery Workforce in Ghana: A Descriptive Study of Push and Pull Factors, BMC Nursing (Pre-print)

and Ashanti Regions [e.g., **5 of the 16 regions had no dental specialist at all]** (MDC, 2023). The distribution of registered medical specialists is skewed towards obstetrics and gynaecology, averaging 18.2% of the total and higher than other key specialties. Decentralization of medical residency training to regional hospitals by the GCPS has expanded residency intake and boosted the numbers currently in specialist training.

The MTR observed that the sector had innovative strategies to increase important areas of workforce capacity, such as staffs' capacity to detect and manage non-communicable diseases (NCDs) and to deliver mental health, public health and medical emergency services. Primary health care workers, especially nurses, had received in-service training to screen, detect and manage NCDs. Another critical area of training was to improve staff digital competencies to enhance use of IT tools such as SORMAS and e-IDSR.

Certain service areas shall require mid-level cadres such as mental health [community mental health officers, mental health nurses], to improve access to core mental health services and public health technical officers to improve district level public health emergency response.

Review of health workforce deployment and retention: The Health Sector Staffing Norms were used to guide equitable deployment across agencies. However, retention strategies have varied between agencies with no clear health workforce policy to guide this. The Ghana Health Service, on its part had used non-monetary incentives for deprived areas [e.g., early promotion, early study leave approvals] to attract and retain staff in hard-to-reach areas.

Conclusions

Since the implementation of the current HSMTDP improvements have occurred in the health workforce stock and density, with a number of new competencies upgraded to enhance delivery of priority services [mental health and public health emergencies]. Distribution and retention of needed skills in deprived areas remained a difficulty with continuing shartages and poor skill mixes that needs new strategies to resolve.

Recommendations

- In nursing in particular, a high proportion of non-professional nurses still characterizes the workforce which could be improved through expanding the opportunities for upgrade of non-professional nurses to professional status.

- Retention and distribution incentives, including financial and non-monetary interventions should have a standardized cross-agency approach to avoid silos in the attraction and retention of staff to deprived areas.

- There is a need to determine and establish norms and standards for specialist staff complements at all levels in other to determine needs more accurately.

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Programme 4: Health Sector Regulation

The health sector's regulatory institutions are agencies of the Ministry of Health, carrying out roles related to regulation of [a] health professionals and their practice,(MDC, NMC, AHP, PC, Psychology Council, TMPC, MoFFA) [b] Health facility and services (HEFRA) [c] health products, logistics and medications, food,(FDA) [d] Health insurance (NHIA). There is also a proposed authority to oversee Ambulance and emergency services.

Key informant interviews showed that these agencies were in place, accommodated and carrying out their mandates, but with certain challenges that are summarized in this section.

Key Findings

The Minister/MOH is represented on all regulatory agency boards, to provide engagement with the ministry. In operational terms, some regulators liaise directly with MOH Directorates whose functions link with theirs while others had no such "parent" units. All regulators are involved with various stakeholders and partners to assist them to implement their mandates.

All regulators indicated participation and engagement at various levels with the MOH structure and leadership and its processes. Each has or is in the process of developing strategic and annual plans though these have not always been fully aligned and synchronized with the HSMTDP's objectives. The HSMTDP activities and indicators listing regulators as collaborators is operational and are not easy actions with which to assign direct regulatory accountability to [e.g. pass rate of licensure examinations – Training responsibility rests with MOH training institutions who prepare trainees for licensure]. Regulatory links to improve quality of care at operational levels, however seemed removed from the daily roles of regulators, though inspections, sanctions etc do take place but are limited by the resources and capacity available to some regulators. Respondents indicated that this is exacerbated by rapidly increasing numbers of professionals, service delivery facilities and types but with limited expansion in regulator capacity and financing.

Agency leadership and staff turnover was a major issue with some regulators and this may impact continuity in implementing strategies in a sustained way. Some regulators have an arrangement/MOU with GHS and have staff seconded to assist them to carry out activities. Salary costs are covered by MOH budget subventions but operational costs came from internally generated revenues [*license fees, Accreditation fees, renewal fees, CPD fees, etc*] and where these are insubstantial, financing is a challenge. A number of donors also supported specific program activities of some regulators.

A key activity on regulation articulated in the HSMTDP was simply to "improve the efficiency of regulators". This is not broken down into specific strategic or catalytic activities with clear indicators and so most agencies continue with their routine activities whether complementing the HSMTDP objectives or not. Another activity of assessing the "efficiency" of regulation needed better clarity [e.g., passing more licensure candidates may indicate "efficiency" as well as failing increasing numbers]. Regulatory activities were generally limited by staff shortages, lack of transport, low operational financial resources, lack of decentralized offices and staff capacity outside Accra for newer and less endowed regulators. Regulators are challenged by increasing sophistication and complexity of scope of work including for example FDA's expansion of its mandate to cover natural and traditional herbal medicines and foods, and for HEFRA the capacity needed to deal with a rapidly expanding presence of new services including palliative and geriatric care, in sophisticated NCD tests and imaging and other sophisticated diagnostic and treatment systems introduced into the country especially in the private sector.

All regulators have ICT systems as part of regulatory processes though there are some concerns about their interoperability with other MOH and agencies systems.

While regulatory function is expanding and covering a wide range of growing needs related to standards setting, accreditation and licensure, the "theory of change" linking actions to HSMTDP's objectives and expected outcomes is not clear.

There are some MOH policy developments that regulators have felt inadequately consulted or engaged on, for example, the design and implementation of the "Networks of Practice" strategy and the important focus on NCDs, have advanced significantly but some councils feel that their regulatory roles and contribution to these objectives are not well clarified.

With advancing numbers of service delivery systems, professions etc and the issues of equity and geographical access, with decentralization of regulatory actions have become important. This is complicated by the relatively recent addition of six new regions. Regulators therefore require significant investment to support their work at sub-national levels.

Conclusions

- Regulatory agencies are well integrated within the sector governance platforms and systems but require better linkages of their strategic plans with MOH's development plan and its expected outcomes
- Regulatory capacity seemed to vary widely between different regulators with bigger ones with well staffed and equipped capacity, while others are still operating on more limited basis.
- All/Most regulators have expanded their digital/ICT systems significantly with many licensure processes largely automated. Some concerns of integration/inter-operability exist though.

Recommendations

- Improved inter-regulator platforms are needed to foster coherence, efficiency and resource sharing in order to better achieve HSMTDP's objectives.
- The expanding decentralized roles of regulators need to be well coordinated to build efficiency and effectiveness.
- Regulators need to have a way of responding to new national policy initiatives [e.g., with Networks of Practice and private sector engagement] in a coordinated and strategic way.
- Improved planning with a clear "theory of change" should link regulatory actions more clearly to HSMTDP's objectives on good governance, good quality services and digitalization.

Programme 5: Communication

The communication strategy of the HSMTDP includes engaging with community-level Opinion Leaders and traditional authorities utilizing various community events and opportunities; convening seminars/workshops at the national, regional and district levels for stakeholders; engaging the media through press conferences, press releases, feature articles, pull-out centre spreads, policy briefs, brochures, etc.

The Websites of MoH and its agencies were to be expanded and made more user friendly, to provide more publicly available information. It was also planned at national level to consolidate and expand the utility of coordinating platforms such as the Health Sector Working Group, its Technical Working Groups, and the Health Partners' meetings and summits.

Key Findings

Community-level engagements with opinion leaders, traditional authorities, and local government officials are held frequently at the community and primary care level of service delivery. Similar interactions are held at regional level between the regional health directorates and regional ministers. These interactions are mostly on ad hoc and need-be basis.

Media engagement with the health sector happens at all levels of service delivery with wide coverage given on various health sector events such as performance reviews, outreach and public health education campaigns and risk communication. The health sector makes themselves available to the media for interviews and clarification on health matters.

The Ministry of Health's website as well as that of its agencies are adequately structured and provide appropriate information on services and other relevant information.

Partnership stakeholders indicated that they had good access to MOH officials and the Ministry of Health engaged its health development partners as a group and on individual bases even for this MTR. Annual health summits are routinely held along with periodic

ad-hoc meetings. Unfortunately, some respondents felt these interactions have not added much value in terms of improved outcomes, better sector alignment and convergence of stakeholders.

The sector maintains internal communications between the Ministry and its agencies, through the national performance reviews and/or health summits. However, difficulty in intra-sector agencies coordination was again cited by some informants as being problematic. Inter-sector relationships did not feature much in the HSMTDP and when it happens [e.g. with MOF] was not seen to achieve the desired impact e.g., in the facilitation of payments for health commodities stuck at the ports; or the timely transfer of funds to the NHIA for reimbursements. The Health Sector convenes annual and quarterly performance review meetings at all levels which provide information that feeds into the Ministry of Health's national performance reviews of all agencies.

Communication however needs to be stratified according to the needs of different stakeholders, levels of care, and sector strategic interests and directions conveyed accordingly.

SECTION 5: OVERALL CONCLUSIONS AND EMERGING ISSUES

Our review of the indicator trends and findings from our qualitative data is a mixed picture of moderate gains with many targets not being met by the mid-term. However, despite numerous challenges around infrastructure availability, standardized processes, financing, supply chain issues, and an increasing migration of health workers, a key driver of health sector sustainance included the many **resilience of peripheral level staff and stakeholders** who keep routine services running despite all odds.

The foundations for maintaining sector progress exist in the mechanisms for **governance coordination, evolving accountability and problem solving leadership at operational levels**, that should mobilize and engage stakeholders and assure good utilization of available resources. The sector continues to strive for these qualities through a number of the HSMTDP interventions. It has retained some **public support** at national, sub-national level and within communities, an asset that should be actively mobilized and further invested in.

The **"legacy" bequeathed by COVID-19** has expanded some critical infrastructure, equipment, governance processes and emergency response "software" and sustaining this legacy will require an explicit set of strategies with measurable indicators.

The health sector's effectiveness is also a function of the inputs of many of other sectors and **contextual factors including environmental damage**. Future HSMTDPs need to be designed to be more explicit on the contributions of sectors external to the health sector that converge with it to produce success.

The **total health expenditure per capita** needs to increase to meet WHO/internationally estimated standards. There is also a strong need to **capture more effectively, the entire**

spectrum of resources invested in the sector, and even more critically to **address major inefficiencies** and duplications that occur.

The **scope, structure and M&E framework of the HSMTDP** as an "upstream" sector strategic document may be missing some strategic level components while incorporating a number of operational elements, making it difficult to rationally tie in agencies and sub-national contributions to the overall sector goals.

Two requested areas of the MTR's focus [a] Governance and [b] Service quality remain areas of concern that require significant improvement in order to meet national UHC and SDG targets. For example while well-structured and utile **governance platforms and systems** exist, there is a however a feeling that they have become routine processes that do not fully serve their overall purpose of assuring sector progress.

Service delivery quality suffers from a budget and financing system that has sustained staff compensation but leaves little for actual services delivery which then relies on IGF[including often delayed NHIS reimbursements], and partner support which may not be fully stable and sustainable.

SECTION 6: OVERALL RECOMMENDATIONS

A number of more operational recommendations have been made under each section and thematic area but the recommendations below focus on the MTR's overarching strategic recommendations. They are aimed at improving the strategic intent and focus of the HSMTDP, and to improve implementation management and leadership; to point out contextual and strategic implications for the next sector development plan and suggest any specific reviews needed to further appreciate the sector's performance.

The Consutants team shall work with the TWG to clarify the specific actions and responsibilities that will be needed to ensure these recommendations are reviewed and operationalized with clear interventions that can be regularly monitored by the Health Sector Working Group and the various technical working groups .

<u>Future HSMTDPs</u>.

1. The HSMTDP, while a very useful guidance document, could be restructured and developed in a multi-step way to engage more effectively, agencies, partners, and other stakeholders at national and sub-national levels. It should incorporate **a clear "theory of change"** for all its implementing stakeholders to assure better permeation beyond the national level to operational levels.
2. The HSMTDP should fully reflect its role as an overarching sector strategic document that focuses on new and catalytic strategic/policy interventions to resolve critical bottlenecks. A process calendar could be established to converge agency strategy development timelines as a complementary tool to the process.
3. A key challenge of the HSMTDP was enhancing awareness and ownership of its practical intentions with agencies' and their operational arms. The HSMTDP

communication strategy needs should effectively translate its priority national policies and strategies into rational operational interventions at all levels with indicators linked to each level's roles of implementation and to measure its operational impact.

4. This MTR provided a number of lessons for future reviews. A full review requires much preparation and in-depth assessments requiring a number of experts, tools and engagements. The reviews should be planned for well in advance and be part of routine sector monitoring.
5. Reconciling agency specific plans with the overall HSMTDP objectives, activities and targets can be daunting and the development of an HSMTDP has to be done as a two-way alignment process, incorporating recently concluded agency objectives and indicators as well as proposing new ones.
6. A concern was expressed about the high numbers of varied surveys and assessments in the sector. We recommend that a framework should be established which will coordinate a set of agreed surveys/assessments to reduce disruption and duplication and reinforce their efficiency and utility.
7. A review of indicators and targets are needed to [a] establish good upstream policy and strategic measures. [b] clarify indicator definitions which were found difficult to quantify, define and measure, and ensure clear sources of the data.

Governance and financing.

8. The sector has operated a number of partnership and stakeholder coordination platforms and processes over the years with significant success with some aspects and some difficulties with others. Some stakeholders wre concerned about whether the partnership forums discussions brought any actual change and reflected good accountability from both government and partners. It will help to commission an expert review of the partnership/stakeholder mechanisms and outcomes, with an aim of making them more effective, efficient and transparent, and to define what will be considered by all as concrete and measurable outcomes of the mechanisms.
9. Financing with its impact on efficiency, quality, equity and effectiveness of HSMTDP's implementation, requires particular focus in order to identify and minimize bottlenecks and ensure accountability. We recommend that the sector will benefit from aligning HSMTDP indicators more closely with National Health Financing Strategy's milestones and integrating more explicit equity indicators at even the decentralized levels.
10. Future plans should incorporate agreed frameworks to ensure that HSMTDPs drive resource allocation to the agreed priorities, with indicators for better assessment of trends in equity of allocations and financing. It must for example, track closely the difficult relationship between personnel emoluments and service delivery funding.
11. The sector shall require a review and rationalization of the creation of new agencies and there should be established criteria based on cost-benefits and cost-utility analyses, functional overlaps etc., to minimize possible fragmentation and duplication of roles and to improve inter-agency coordination.

12. The sector should conduct regular critical analysis of donor funding trends [volume, programmes covered, economic outlook, implications of becoming a middle income country], and plan for the impact of fluctuations in donor funding and indicate how cost efficiencies can be created.

Health Information systems and Research

13. An effective Health Information System is fundamental to the sector and was clearly an important element of the HSMTDP. The "plethora" of ICT systems in the sector, requires a major review to address issues of utility, interoperability and cross-agency data convergence. The digitization of health systems processes also requires development of a cross-cutting sector digital strategy to establish core specifications and standardization of tools and protocols across agencies and levels.
14. A number of "local" innovations were identified [eg., use of "Whatsapp" groups for referral communication]. We recommended that a mechanisms is set up to regularly identify and encourage innovation and a database of innovations should be established with regular reviews and assessments for scaling them up.
15. Research efforts appear to be largely donor driven and opportunistic and future HSMTDPs should have an explicit research engagement sub-strategy to commission and direct studies on identified bottlenecks that help to resolve policy and operational issues. We recommend that formal MOUs and collaboration agreements be established between the sector and relevant research /academic institutions for continuing investigation of the sector's medium and long term policy objectives.

Supplies and Logistics Systems

16. The fairly sophisticated logistics and commodities supply system still encounters many stockouts at operational levels, and may have resulted in an impeded importation and clearance of critical commodities. A detailed review must be commissioned to establish a more seamless reimbursement and stockout management system.

Moving Forwards

The MTR team considered the various factors. Some health issues shall need further and better particulars and these include the following:

i. Give more prominence to the NCD challenge [45% of disease burdens] and its linked environmental and intersectoral implications and the vast potential of expanded actions on health promotion and prevention to gain significant dividends to the sector. This means an HSMTDP containing a concerted inter-sectoral engagement focus on the health implications of illegal mining and heavy metal pollution and its impact on the health sector.
ii. Conduct critical analysis of donor funding trends[volume, programmes covered, implications for becoming a middle income country, economic outlook and

impacts to understand and plan for the impact of reducing donor funds and what cost efficiencies can be created.

Next Steps

iii. Disseminate this report to all stakeholders utilizing summarized policy briefs and presentations that are translated for utility and implementatioin feasibility at all levels.

iv. MoH-HQ should lead and with contribution of agencies and partners, create an action plan with timelines for implementation and monitoring from which the MoH and agencies etc should also derive specific plans to address the HSMTDP recommendations.

v. The action and timelines should be monitored by sector working group and integrated into the quarterly and annual reviews system.

Annexes & Attachments

Annex 1. Stakeholders lists & Key Informant Groups

MINISTRY OF HEALTH

1. Minister for Health *
2. Chief Director *
3. Director, PPME
4. Financial Controller
5. Director Procurement & Supplies [LV]
6. Director Human Resource
7. Director RSIMD
8. Director TAMD
9. Director Administration
10. Director Internal Audit
11. Director Technical Coordination
12. Director Infrastructure

As a group 13, 14 & 15 below

13. Director Pharmacy
14. Director Nursing
15. Director Allied Health
16. PPMED Unit Heads

HEADS OF AGENCIES

1. Director General, Ghana Health Service
2. CEO, National Health Insurance Authority
3. CEO, Komfo Anokye Teaching Hospital
4. CEO, Korle Bu Teaching Hospital
5. CEO, Tamale Teaching Hospital
6. CEO, Cape Coast Teaching Hospital
7. CEO, Ho Teaching Hospital
8. CEO, Food and Drugs Authority
9. CEO, National Ambulance Service
10. CEO, ST. John Ambulance Service
11. CEO, National Blood Services *
12. CEO, Centre for Plant Medicine Research
13. CEO, Mental Health Authority
14. CEO Mortuary and Funeral Facilities Agency
15. Executive Director, CHAG
16. Registrar, Pharmacy Council
17. Registrar, Health Facilities Regulatory Agency
18. Registrar, Traditional Medicine Practice Council
19. Registrar, Ghana Psychology Council
20. Registrar, Allied Health Profession Council
21. Registrar, Medical and Dental Council
22. Registrar, Nurses and Midwives Council
23. Executive Director, Quasi Health Institutions
24. President, Society of Private Medical and Dental Practitioners
25. President, Ghana Association of Quasi Health Institutions
26. Rector, Ghana College of Physicians and Surgeons
27. Rector, Ghana College of Nurses and Midwives Council
28. Rector, College of Pharmacists
29. CEO, National Vaccine Institute

DEVELOPMENT PARTNERS

Country Representative, WHO
Country Representative, JICA
Country Director, KOICA
Country Representative, DFID
Country Representative, UNICEF
Country Representative, WFP
Country Representative, KOFIH
Country Representative, UNFPA
Country Representative, World Bank
Country Representative, USAID
Country Representative, UNAIDS
Country Representative,
GAVI Country Representative, Global Fun

Field Visits

Zone	Target for Visits
Northern Belt:	Northern Region; with RHA, Regional Hospital, 1 selected DHA & respective Sub-District, Community as well as the District Hospital
Operational Level	**Key Informants**
Northern Regional Health Management Team	1. Regional Director of Health Service – Dr. Abdulai Abukari 2. Deputy Director Of Public Health – Dr. Hilarius Abiwu 3. Deputy Director of Administration – Mr. Mohammed Yakubu 4. Deputy Director (Clinical Care) – Dr. Mahamadu Mbinwaya 5. Ag. Deputy Director (Human Resources) – Abibata Alabama 6. Regional Public Health Nurse 7. Regional EPI Coordinator 8. Regional In-Service Training Coordinator 9. Other Unit Heads
Tamale Teaching Hospital	1. Chief Executive – Dr. Atiku Adam 2. Medical Director – Prof Mumuni Alhassan 3. Director (Human Resources) - Mr. Abukari Yakubu 4. Director (General Services) – Mr. Felix Gandaa 5. Director (Allied Health Services) – Dr. Alabira 6. Deputy Director (Administration) – Mr. Tanko
Northern Regional Hospital	1. Ag. Medical Director – Dr. Shahadu Shembla 2. Hospital Administrator – Alice Tengfah 3. Hospital Matron – Madam Ewuntomah 4. Head of Human Resources 5. Unit Head, Adolescent and School Health 6. Hospital Pharmacist 7. Unit Head, Maternity
Savelugu Municipal Health Directorate	1. District Director of Health Service 2. District Public Health Nurse 3. District Disease Control Officer 4. District Human Resource Manager 5. District Health Information Officer 6. District Nutrition Officer
Savelugu Municipal Hospital	1. Medical Director Dr. Ousman 2. Hospital Administrator 3. Nurse Manager 4. Head of Reproductive and Child Health services 5. Head of Adolescent and youth services 6. Head of Mental Health 7. Head of Health Information 8. Other staff were present for the discussion
Middle Belt:	**Ahafo Region, with RHA, Regional Hospital, 1 selected DHA & respective Sub-District, Community as well as the District Hospital**

Facility & Description	Persons Interviewed
Ahafo Regional Health Directorate	1. Deputy Director Public Health 2. Deputy Director Administration 3. Deputy Director Finance 4. Accountant 5. Internal Auditor 6. Deputy Director of Nursing Services 7. Human Resource Manager
Goaso Regional Hospital	1. Medical Superintendent

The "Acting" Regional Hospital	2. Hospital Administrator 3. Clinical Auditor 4. Chief Nursing Officer 5. Health Information Officer
St Elisabeth Catholic Hospital CHAG facility at Hwidiem. Referral facility specialised services.	1. Hospital Administrator 2. Medical Director 3. Health Information Officer
Bechem Government Hospital Municipal Hospital and referral hospital	1. Medical Superintendent 2. Administrator 3. Deputy Director of Nursing 4. Pharmacist 5. Nutrition Officer 6. Health Information Officer 7. HR Manager 8. Nutrition Officer
Tano South Municipal Health Directorate Municipal health management	16 staff with varying roles including disease control, health promotion, Public Health nurses, accounting, supply chain and stores management, nutrition officer
Brosankro Health Centre. managed by a Physician Assistant with a total staff strength of 65.	There were nine staff available for the interview. Their roles were disease control, nutrition, midwife, accounts, and registered nurses.
Mawaninso CHPS Compound/in a deprived community 1 hour off Bechem.	The staff interviewed - one midwife, 3 CHNs & 1 EN
Southern belt:	Volta Region, with RHA, Regional Hospital, 1 selected DHA & respective Sub-District, Community as well as the District Hospital
Urban Regions:	**GAR and Ashanti Regions: RHAs, Regional Hospitals. FGD included representatives for the district level.**

NAME & DESIGNATION	**ORGANIZATION**
1. Dr. Kwadwo Serebour, Medical Director	Komfo Anokye Teaching Hospital [KATH]
2. Emmanuel Owusu Bempah Dep. Director, Supply Chain Management	KATH
3. Dr. Ruth Owusu, Director for Public Health	KATH
4. Faith Boakye Oto, For: Director, HR	KATH
5. Ebo Jackson, For: Deputy Director, Quality Assurance	KATH
6. Rita Owusu Donkor, Chief Pharmacist	Ashanti Regional Health Administration
7. Charles Ebo, Quality and Safety Manager	Regional Health Administration
8. Dr. Emmanuel Tinkorang Regional Director of Health Services	Regional Health Administration
9. Festus Asante	Regional Hospital Kumasi South

Supply Chain Manager	
10. Dr. Andrews Opoku Deputy Chief Pharmacist	Regional Hospital Kumasi South
11. Louisa Boakye Yiadom, Ag. Head HR	Regional Hospital Kumasi South
12. Linda Gyedu, Ag. Head of Clinical Care	Regional Hospital Kumasi South
13. Elsie Kissi Appiah, Ag. Municipal Director of Health Services	Kwabre East Municipal Health Directorate
14. Theodore Borbi, HIO/QA Focal person	Kwabre East Municipal Health Directorate
15. Dr. Eric Nii Oku-Aryee, Medical Superintendent	Kwabre East District Hospital (Mampongteng)
16. Dr. Yaw Adjei Mensah. Clinical Care Coordinator	Kwabre East District Hospital (Mampongteng)
17. Elizabeth Frimpomaa, Head of Pharmacy	Kwabre East District Hospital (Mampongteng)
18. Kwasi Sarfo Agyemang, Procurement Focal Person	Kwabre East District Hospital (Mampongteng)
19. Andrew Kwakye-Atta, Physician Assistant	Aboaso Health Centre
20. Ameyaw Kyeremeh Pius, Accountant	Aboaso Health Centre
21. Linda Narkie Mensah, Midwifery Officer	Kasiaam CHPS
22. Vivian Anokye, Enrolled Nurse	Kasiaam CHPS
23. Angela Tannor, Community Health Nurse	Kasiaam CHPS

National Level:	**MOH, GHS HQ, CHAG, Other Agencies/Regulators, KBTH, KATH, DPs group, CSOs**

Greater Accra Regional Health Administration/RD and RHMT members

- RD Dr Akosua Owusu-Sarpong and team

Ningo Prampram DHMT, plus subdistrict. DDHS and DHMT members, District Health Centre, Prampram.

- DDHS Dr.

Development Partners group

- Dr F. Kasolo, Former WR Ghana
- Dr Frank Lule, OIC, WHO Ghana Office
-

DPs' group coordinators

GHS HQ

- DG, Dr Patrick Aboagye
- D-PHD Dr Franklyn Asiedu Bekoe

NHIA CEO and team

- Dr Aboagye-Dacosta and team, CEO, DCEO – Finance, DCEO – Admin., Director – Claim Processing

CHAG CEO and DCEO

- Mr Peter Yeboah
- Dr James Duah

National Ambulance Service CEO and Team

- Prof. Ahmed Nuhu Zakariah and team

Regulators –

- FDA: Dr Kwame Deh [FDA Business Development Director]
- Ms. Anna Plange Psychology Council
    - Cynthia Yeboah
    - Regina Ataaya
    - Brenda Opong
    - Samuel Kwakwa
- HEFRA,
- MHC,
- Pharmacy Council,
- Psychology Council,
- AHP Council etc

SCM

Dr. Kwadwo Koduah, Head, PSM Unit/Clinical Care	National AIDS/STI Control Program
Dr. Catherine Amah,Head, LMU	SSDM-GHS
Mr. Paul Gawu, Procurement Manager	SSDM-GHS
Mr. Oswald Owusu Afranie, Technical Director	GHSC-PSM
Mr. Sefa Boateng, Sen Supply Chain Techn Advisor/System Strengthening Team Lead	GHSC-PSM
Mr. Adolf Antwi, LMIS Supply Chain Expert	S4D
Dr. Solomon Obiri, RMS Manager/Supply Chain Expert	ERMS

Annex 2. List of Core Documents Reviewed

1. Health Commodity Supply Chain Master Plan (HCSCMP) 2021 – 2025
2. Ghana National Healthcare supply chain M&E Guidance
3. Health Sector Medium Term Development Plan (HSMTDP) 2022 – 2025 [Dec 2021-MOH]
4. HSMTDP M&E Framework 2022 - 2025
5. Ghana National Supply Chain Assessment (NSCA) Report -2022
6. Holistic Assessment Reports 2020 – 2022
7. Ghana Harmonized Health Facility Assessment 2022-2023
8. Ghana Demographic and Health Survey 2022[Jan 2024] Ghana Statistical Service
9. Primary health care measurement framework and indicators: monitoring health systems through a primary health care lens. Geneva: World Health Organization and the United Nations Children's Fund (UNICEF), 2022. Licence: CC BY-NC-SA 3.0 IGO
10. Integrated Africa Health Observatory. Ghana Profile [April 2023] WHO-AFR
11. Ghana's Roadmap for attaining Universal Health Coverage, 2020 to 2030 [MOH Dec 2019]
12. Ministry of Health, Medium Term Expenditure Framework (MTEF) For 2023-2026, Programme based budget estimates for 2023
13. National Implementation Guidelines for Networks of Practice. Ghana Health Service, 2024.
14. MEDIUM-TERM NATIONAL DEVELOPMENT POLICY FRAMEWORK, National Medium-Term Development Policy Framework 2022-2025. National Development Planning Commission, 2021.
15. Grey Literature – Various Powerpoint Presentations by various agencies and sector entities
16. CAGD. (2022). December 2022 Health Sector Payroll Data [Payroll Data].
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19. MoH. (2020). National Human Resource Policy and Strategies for Health. Accra
20. NMC. (2023). 2023 Mid-Year Performance Review. Paper presented at the 2023 MOH INTER-AGENCY AND PARTNERS' MEETING, Accra.
21. WHO. (2021). The State of the Health Workforce in the WHO Africa Region (Survey Report). Retrieved from

Annex 3: The MTR Team

Consultants

- Delanyo Dovlo (Lead)
- Gilbert Buckle
- Daniel Osei
- Leslie Vanderpuye
- Frances Baaba Da Costa Vroom
- Hamza Ismaili
- Dr. Daniel Opoku

Technical Working Group

Ministry of Health

1.	Emma Ofori-Agyemang	Director, PPME, MoH
2.	Dr. Eric Nsiah-Boateng	Head, Monitoring and Evaluation, MoH
3.	Mr. Kwakye Kontor	Head, Planning and Budgeting, MoH
4.	Mr. Benjamin Nyakutsey	Head, Policy Coordination
5.	Dr. Maureen Martey	Head, Resource Mobilisation (Bilaterial)
6.	Selena Dussey	Head, Quality Management Unit
7.	Emmanuel Mwini	Principal Public Health Officer, MoH
8.	Thelma Jennifer Jakalia	Principal Administrative Manager, MoH

Agencies of the Ministry of Health

9.	Dr. Anthony Ofosu	Deputy Director General, GHS
10.	Thomas Ankomah	Deputy Chief Statistician, GHS
11.	Atsu Ayi	Deputy Chief Statistician, GHS
12.	Dr. Francis Asenso-Boadi	Director, Research, Policy, M&E, NHIA
13.	Dr. James Duah	Deputy Executive Director, CHAG
14.	Dr. Benard Agyei Kwanin	Deputy Director, Licensing, HeFRA

Other Agencies

15.	Dr. Ernest Asiedu	National Centre for Coordination of Early Warning & Response Mechanism

Development Partners

16.	Dr. Stephen Duku	Health Financing Specialist, USAID
17.	Dr. Felix Sarpong	Health Specialist, UNICEF
18.	Sofonias Getachew	Health Advisor, WHO Ghana Office
19.	Dominic Kwabena Atweam	National Professonal Officer, Strategic Health infor. WHO

Annex 4: HSMTDP M&E Indicators spreadsheets

[Attached as separate document]

Annex 5: Generic Review Questions

The following guiding questions helped to standardize information collection across various levels and stakeholder/informant types.

a. Have the planned strategies/activities been carried out? [Successfully or otherwise]
b. Have they contributed/resulted in advancing indicators towards targets and objectives?
c. What partnerships contributed to the results and how?
d. What were the factors facilitating positive changes and results
e. What were the factors mitigating against the reaching of targets and making progress?
f. What should change in order for the HSMTDP to better meet its objectives?
g. Do any of the HSMTDP elements [*goals, objectives, strategies*] need to be revised given the implementation experiences and changes in local, re gional and international situations?
h. How has the sector/unit performed against these benchmarks?

Annex 6: List of acronyms and abbreviations

AIDS	Acquired Immunodeficiency Syndrome
ANC	Antenatal Care
ARMS	Ashanti Regional Medical Store
BDR	Birth and Death Registry
BMI	Body Mass Index
CAC	Comprehensive Abortion Care
CCTV	Closed-Circuit Television
CHAG	Christian Health Association of Ghana
CHPS	Community-based Health and Planning and Services
CMS	Central Medical Stores
COD	Cause of Death
CRVS	Civil Registration and Vital Statistics
DHIMS	District Health Information Management System
DHIMS2	District Health Information Management System version 2
DHMT	District Health Management Team
ERMS	Eastern Regional Medical Store
FASP	Forecasting and Supply Planning
FDA	Food and Drug Authority
FHD	Family Health Division
FP	Family Planning
GFF	Global Financing Facility
GhiLMIS	Ghana Integrated Logistics Management Information System
GHS	Ghana Health Service
GHSC	Global Health Supply Chain
GIS	Geographical Information Systems
GSS	Ghana Statistical Service

HCP	Health Care Provider
HCSCMP	Health Commodity Supply Chain Master Plan
HCW	Health Care Worker
HF	Health Facility
HIMS	Health Information Management System
HIS	Health Information System
HISSP	Health Information System Strategic Plan
HSMTDP	Health Sector Medium-Term Development Plan
ICT	Information and Communication Technology
JSI	John Snow Institute
KPI	Key Performance Indicator
LHIMS	Light-Wave Health Information Management System
LHIMS	Lightwave Health Information Management System
LMD	Last-Mile Distribution
LMIS	Logistics Management Information System
LMU	Logistics Management Unit
M&E	Monitoring and Evaluation
MAPE	Mean Absolute Percentage Error
MIS	Management Information System
MOH	Ministry of Health
MTR	Mid-Term Review
NACP	National Aids Control Program
NCD	Non-communicable Diseases
NHIS	National Health Insurance Scheme
NHP	National Health Policy
NMEP	National Malaria Eradication Program
NTP	National Tuberculosis Program
PSM	Procurement and Supply Management
QAT	Quantification Analytic Tool
RHA	Regional Health Administration
RMS	Regional Medical Store
RSIM	Research, Statistics and Information Management
RSIM	Research Statistics Information Management
S4D	Systems for Development
SCM	Supply Chain Management
SDG	Sustainable Development Goal
SDP	Service Delivery Point
SOP	Standard Operating Procedure
SORMAS	Surveillance Outbreak Response Management & Analysis System
STI	Sexually Transmitted Infection
TCMS	Temporary Central Medical Store
UHC	Universal Health Coverage
USAID	United States Agency for International Aid
WAPCP	West African Postgraduate College of Pharmacists
WHO	World Health Organization

Annex 7: Photos

Consultants and MTR Team at a reprot writing session in Akosombo in the Eastern region

Urban and National Level Team with CHAG Executives in Accra

Urban and National Level Team with Allied Health Professionals Council in Accra

Middle Belt Team in an interveiw session at Nkaseim CHPS in the Ahafo region

Middle Belt Team with Staff of Brosankro Health Centre in the Ahafo region

Southern Belt Team with staff of Adidome Health Centre in the Volta region

Northern Belt Team with staff of Tamale Teaching Hospital in the Northern region