USAID GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

Assessment of Commodities for the Management of Hypertensive Disorders in Pregnancy

A brief focused on health facilities within Ghana's Public Health Sector

January 2023

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ACKNOWLEDGEMENT

The goal of USAID Global Health Supply Chain Program-Procurement and Supply Management (GHSC–PSM) project is to ensure uninterrupted supplies of health commodities to save lives and create a healthier future for all. In Ghana, GHSC-PSM through funding from USAID procures and delivers health commodities and provides technical assistance to the Ministry of Health and Ghana Health Service to strengthen the in-country supply chain and ensure better access to health commodities at the last mile. Part of this mandate focuses on maternal, newborn and child health commodities including those for hypertensive disorders in pregnancy (HDP). This assessment on the HDP commodity supply chain has been successfully completed through the input of the following contributors:

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The USAID Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM) project is funded under USAID Contract No. AID-OAA-I-15-0004. GHSC-PSM connects technical solutions and proven commercial processes to promote efficient and cost-effective health supply chains worldwide. Our goal is to ensure uninterrupted supplies of health commodities to save lives and create a healthier future for all. The project purchases and delivers health commodities, offers comprehensive technical assistance to strengthen national supply chain systems, and provides global supply chain leadership.

GHSC-PSM is implemented by Chemonics International, in collaboration with Arbola Inc., Axios International Inc., IDA Foundation, IBM, IntraHealth International, Kuehne + Nagel Inc., McKinsey & Company, Panagora Group, Population Services International, SGS Nederland B.V., and University Research Co., LLC. To learn more, visit ghsupplychain.org

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List of Acronyms

GHS	Ghana Health Service
GHSC-PSM	USAID Global Health Supply Chain Program-Procurement and Supply Management
HAN	Health Access Network
HDP	hypertensive disorders of pregnancy
MCGL	MOMENTUM Country and Global Leadership
MoH	Ministry of Health
NHIS	National Health Insurance Scheme
RMS	regional medical store
USAID	United States Agency for International Development

1.0 Background

The USAID Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM) project enhances the health care experience in communities through transformative supply chain solutions. GHSC-PSM purchases and delivers health commodities, strengthens national supply chain systems, and provides global supply chain leadership to ensure lifesaving health supplies reach those in need, when they need them. USAID MOMENTUM Country and Global Leadership (MCGL) project through USAID funding provides technical assistance to five regions (Upper East, Upper West, Northern, North East, and Savannah) to strengthen the provision of maternal and child health services in Ghana.

In 2021, GHSC-PSM conducted a desk review analysis of supply chain factors that affect commodity availability for managing hypertensive disorders in pregnancy (HDP) in Ghana. The report recommended collecting additional primary data to fill noted data gaps and make final recommendations for improving anti-hypertensive drugs for pregnant women. As part of this effort, GHSC-PSM together with the Ghana Health Service (GHS) and MCGL project partnered with Health Access Network (HAN) in leading the data collection exercise across the country to investigate supply chain factors that affect the availability and management of HDP drugs in Ghana's public health facilities. HAN is a not-for-profit, non-governmental organization established to promote health in Ghana by improving access to quality health care in a sustainable manner.

Access to HDP products and services is critical for protecting the lives of women with HDP conditions. The objective of the study was to develop a better understanding of how HDP commodities are prescribed as well as identify factors that influence the availability of these commodities within the public health sector. More specifically, this study examined data relative to case management and prescriber behavior in managing hypertension in pregnancy in Ghana, the availability of HDP commodities at Ghana's health service delivery points for managing hypertension in pregnancy, and the care provider behaviors, practices, and preferences for HDP commodities.

In conducting the study, 12 facilities made up of health centers and hospitals that were originally sampled in the Upper West region were substituted with an equal number of MCGL-supported facilities in the Northern and North East regions. The 12 MCGL-supported health facilities were purposively selected to achieve the full sample size of 135 facilities across the country. The collaboration with MCGL was to facilitate an understanding of which HDP commodities were used by care providers within the project coverage area and to help fill data gaps and understand the supply management of HDP products in MCGL-supported zones.

This summary report presents the key findings from MCGL-supported facilities that were purposively included in the study. Results have been aggregated across facility and prescriber types to enhance the representativeness of results. **The full report is available from the GHSC-PSM project here.**

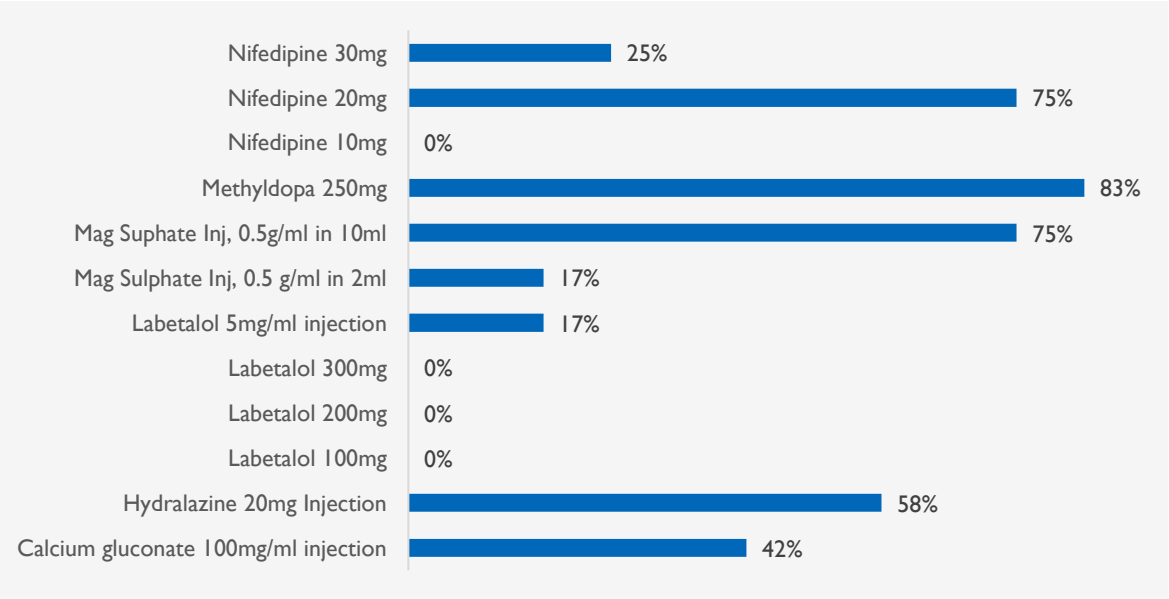
2.0 Study Findings

The results in this report cover product management, product availability, product quality, storage, prescriber preferences, and client-level factors in the 12 MCGL-supported health facilities.

2.1 Management of HDP products

- Proportion of facilities that were managing nifedipine 20 mg and nifedipine 30 mg sustained release (SR) tablet was 75 percent and 25 percent, respectively.
- Methyldopa, the first-line option for hypertension in pregnancy, was being managed in 83 percent of health facilities.
- 75 percent of facilities indicated they manage magnesium sulphate injection 0.5 g/ml in 10 ml, while 17 percent managed the 2 ml volume of the magnesium sulphate injection 0.5 g/ml.
- None of the facilities were managing labetalol oral tablets while only 17 percent managed labetalol injection.
- Management of hydralazine injection and calcium gluconate injection was 58 percent and 42 percent, respectively.

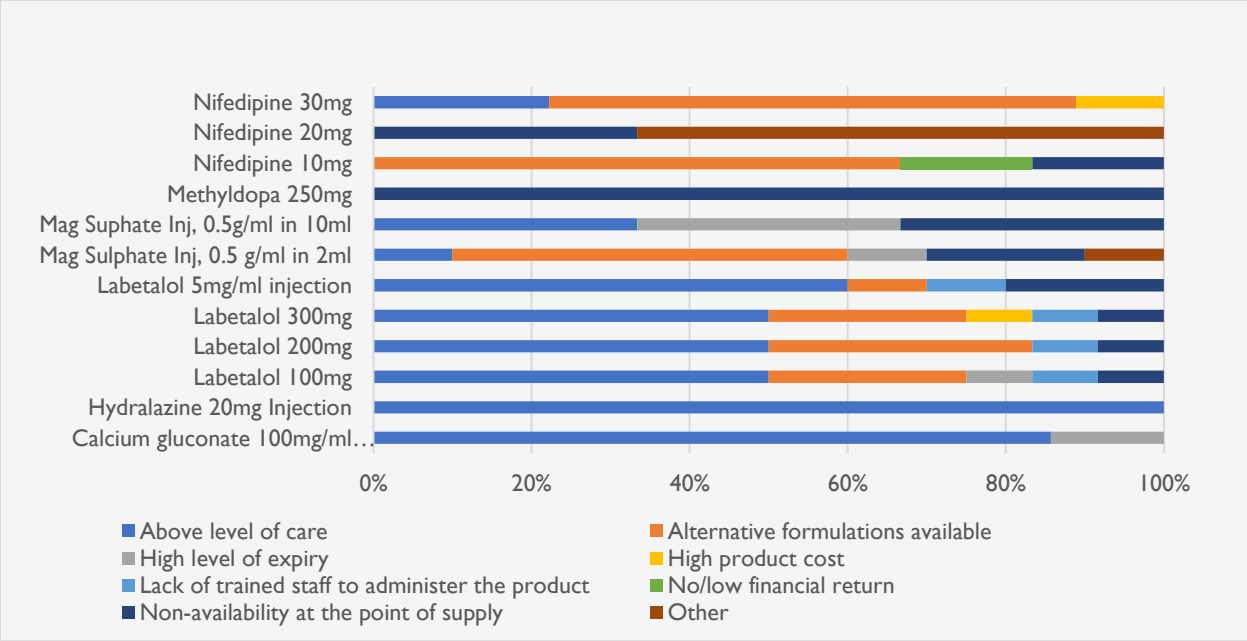
Figure 1 Percentage of facilities managing HDP products (n=12)



2.2 Reasons health facilities do not manage HDP products

- The main reason for the non-management of nifedipine 30 mg and nifedipine 10 mg was the availability of alternative formulations. Other reasons include above level of care and high product cost.
- Facilities that were not managing methyldopa attributed it to the non-availability at the supply point.
- Above level of care, high level of expiry, and non-availability at the supply point were cited as the main reasons for the non-management of magnesium sulphate injection 0.5 g/ml in 10 ml.
- Facilities that mentioned above level of care for nifedipine 30 mg and magnesium sulphate injection 0.5 g/ml in 10 ml may have inadequate knowledge about product management policies, since these commodities can be managed by health centers and hospitals (refer to National Essential Medicines List 2017).
- 86 percent of facilities that were not managing calcium gluconate (an antidote for magnesium sulphate injection toxicity) attributed it to above level of care, and this is consistent with the current Ghana Health Service policy (National Essential Medicines List 2017). Since magnesium sulphate injection can be managed in facilities with midwives, the policy for calcium gluconate injection needs to be reviewed to prevent missed opportunities for saving lives.
- Above level of care was the main reason why facilities were not managing labetalol injection, labetalol oral tablet, and hydralazine injection. Also, between 25 percent and 33 percent of facilities that were not managing labetalol oral tablets mentioned availability of alternative formulations as the reason why they do not stock these products.

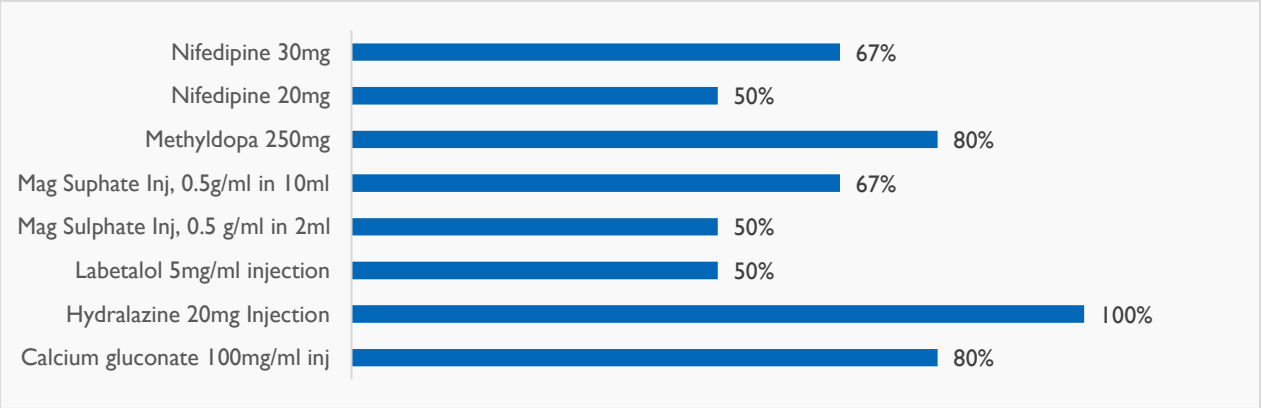
Figure 2 Factors affecting the management of HDP products in MCGL-supported facilities



2.3 Availability of HDP products in health facilities

- Availability of nifedipine 20 mg and nifedipine 30 mg was 50 percent and 67 percent, respectively.
- 80 percent of facilities that manage methyldopa had the product in stock.
- Magnesium sulphate injection 0.5 mg/ml in 10 ml was available in 67 percent of facilities while the 2 ml was available in 50 percent of facilities.
- Calcium gluconate injection was found in 80 percent of facilities.
- Hydralazine injection recorded 100 percent availability in facilities that manage the product while labetalol injection was available in 50 percent of facilities.

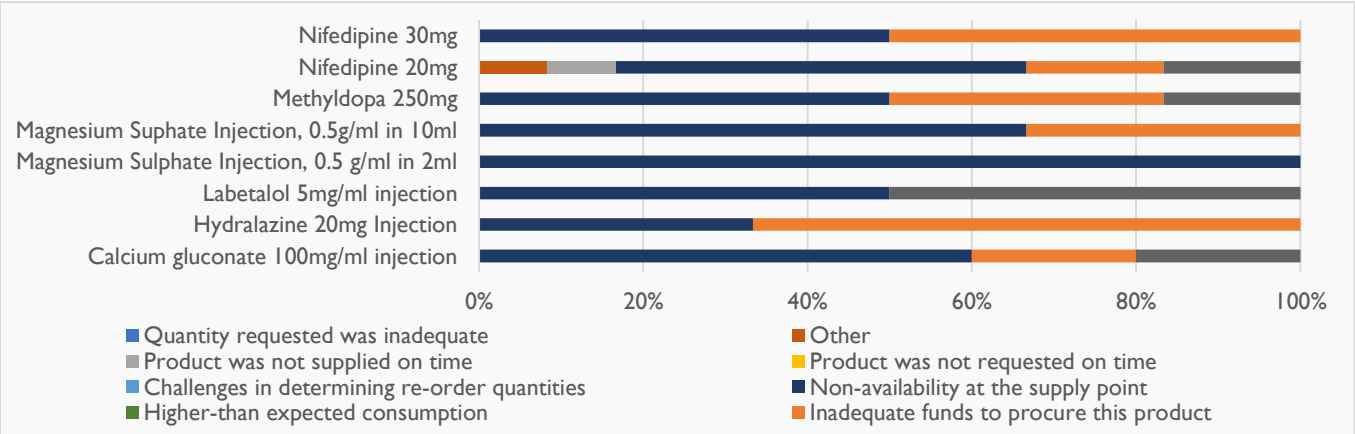
Figure 3 Availability of HDP products in MCGL-supported facilities



2.4 Reported reasons for stockouts of HDP products

- The top three reasons for reported stockouts in the past three months were non-availability at the supply point, inadequate funds to procure products, and product rationing at the supply point.
- Key informants also mentioned framework contract implementation challenges and delayed payment of National Health Insurance Scheme (NHIS) claims as key issues affecting the availability of HDP products.

Figure 4 Reported reasons for stockouts of HDP products in MCGL-supported facilities



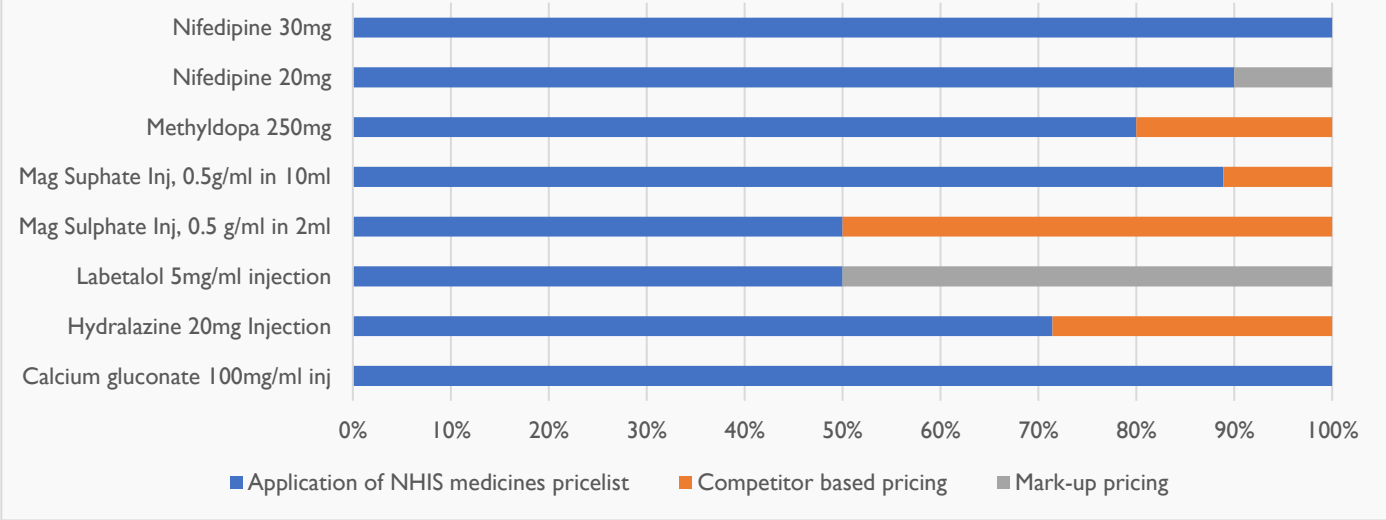
2.5 Pricing of HDP products

- Median selling prices for five out of eight products were consistent with NHIS prices. This demonstrates that most health facilities have adopted NHIS prices as the selling prices for HDP products managed.
- The NHIS price for labetalol injection was about 77 percent higher than the median selling price in health facilities.
- The cost price of nifedipine 20 mg was higher than the NHIS price. This means that facilities may make losses when they offer the product to NHIS clients.
- The predominant pricing method is the application of NHIS pricing.

Table 1 Median prices of HDP commodities in MCGL-supported facilities

Product	Median cost price (GHC)	Median selling price (GHC)	Percent mark- up	NHIS price (GHC)
Calcium gluconate 100 mg/ml injection	7.9	14.3	81%	14.3
Hydralazine 20 mg Injection	15.9	26	64%	26
Labetalol 5 mg/ml injection	33	44	33%	78
Magnesium sulphate injection, 0.5 g/ml in 2 ml	10.1	12.61	25%	N/A
Magnesium sulphate injection, 0.5g/ml in 10 ml	8	12.48	56%	12.48
Methyldopa 250 mg	0.3545	0.52	47%	0.52
Nifedipine 20 mg	0.135	0.305	126%	0.11

Figure 5 Pricing methods for HDP products



2.6 Product registration

- About 44 percent of HDP products found in health facilities had not been registered; highlighting the need for pharmaceutical manufacturers and importers to take needed steps to register their products.

Table 2 Brands and registration status of HDP products found in MCGL-supported facilities

Product	Brands of HDP products found in health facilities	Registration status
Calcium gluconate 100 mg/ml injection		
Calcium gluconate injection, Sanderson Laboratories	100%	Not Registered
Hydralazine 20 mg Injection		
Apredin injection	14%	Not Registered
Apresoline	29%	Registered
Hydralazine injection, SG Pharma PVT Ltd	29%	Registered
Zidral 20 mg injection	29%	Registered
Labetalol 5mg/ml injection		
Empracon	100%	Registered
Magnesium sulphate injection, 0.5 g/ml in 2 ml		
Blumagsul Injection	100%	Not Registered
Magnesium sulphate injection, 0.5 g/ml in 10 ml		

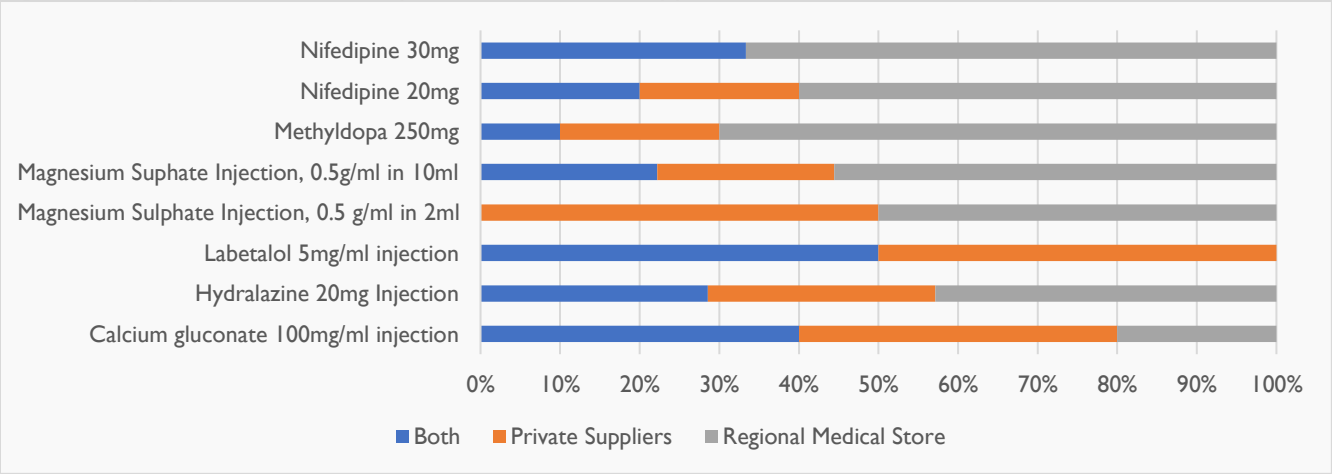
Product	Brands of HDP products found in health facilities	Registration status
Blumagsul Injection	33%	Not Registered
Intramag 50 percent injection	67%	Registered
Methyldopa 250 mg		
MDP 250	50%	Registered
Methyl Dopa, Jiangsu Pengyao Pharm Ltd	25%	Not Registered
Novadopa 250 mg	13%	Registered
Skydopa 250	13%	Registered
Nifedipine 20 mg		
Carditab-Retard	25%	Registered
N-DIP 20	25%	Not Registered
Skydipin 20 SR	50%	Registered
Nifedipine 30 mg		
Nifedipine, Goldaim Ltd UK	50%	Not Registered
Vynif-30	50%	Not Registered

2.7 Source of HDP products

- Most health facilities (20 percent to 70 percent) obtain HDP products from the regional medical stores only.
- Between 20 percent and 50 percent of health facilities rely solely on the private sector for the supply of various HDP products. This demonstrates that health facilities tend to purchase from the open market when regional medical stores (RMSs) run out of HDP products.

Figure 6 shows supply sources for HDP products. The supply dynamics highlight the critical role of both RMS and private sector suppliers in maintaining adequate supply of HDP products in health facilities.

Figure 6 Supply sources for HDP products of MCGL-supported facilities



2.8 Capacity-building interventions

- Percentage of commodity managers that had received logistics management training was found to be low at 27 percent.
- Also, about half (45 percent) of facilities had not benefitted from supportive supervision on HDP case management within the past year.

Regions need to target logistics management training and HDP supportive supervision to the facilities with capacity gaps.

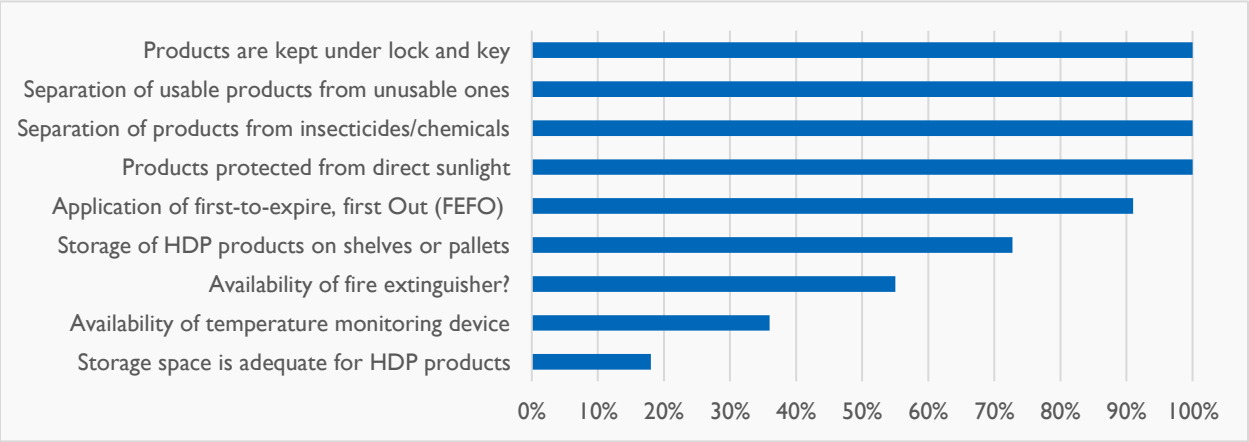
Table 3 Percentage of facility managers and officers receiving training

Table 3 Capacity-building intervention/training	Percentage
Percent of personnel trained in logistics management	27%
Percent of facilities receiving supportive supervision on HDP case management	55%
Percent of facilities receiving training on the management of hypertension in pregnancy	82%
Percent of facilities receiving training on eclampsia management	100%
Percent of facilities receiving training on pre-eclampsia management	78%

2.9 Adherence to storage best practices

- Health facilities recorded 100 percent adherence to storage best practices for four out of nine storage indicators monitored.
- Low performance areas include adequacy of storage space (18 percent), availability of storeroom thermometer (36 percent), and availability of fire extinguisher (55 percent). This can be attributed to inadequate funds for storage space expansion and acquisition of fire extinguishers and storeroom thermometers.

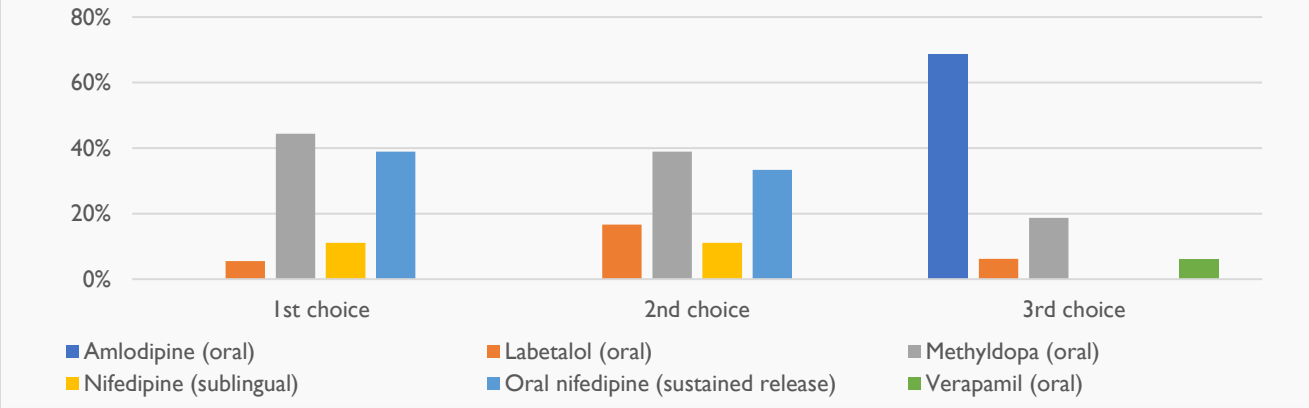
Figure 7 Percentage of health facilities adhering to storage best practices



2.10 Prescriber preference for HDP products in mild hypertension in pregnancy

- Most prescribers prefer methyldopa and nifedipine for the management of mild hypertension in pregnancy.
- This aligns with the Standard Treatment Guideline that prescribes the use of methyldopa and nifedipine SR tablets as first- and second-line options for managing hypertension in pregnancy.

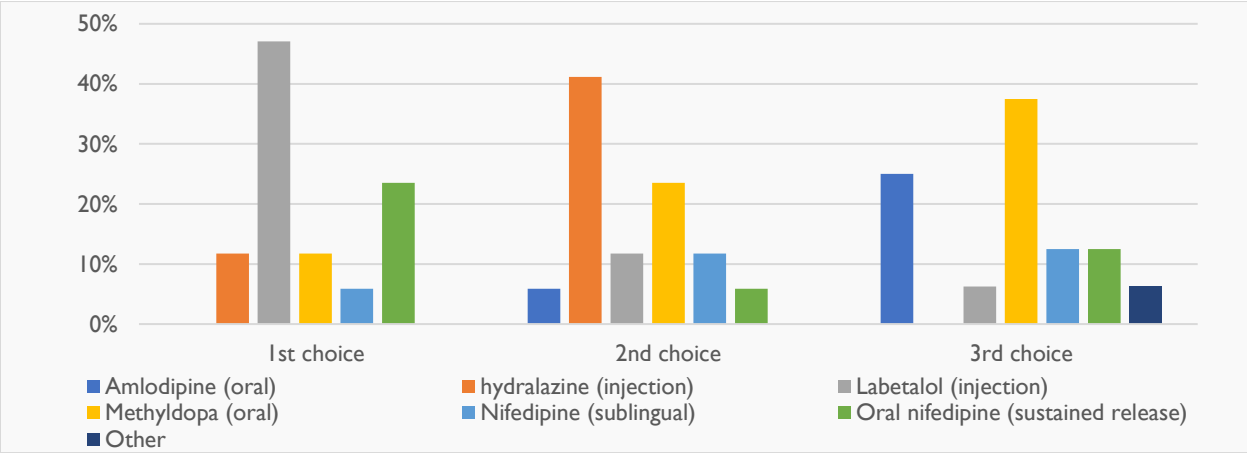
Figure 8 Prescriber preference for HDP products in mild hypertension in pregnancy



2.11 Prescriber preference for HDP products in severe hypertension in pregnancy

- Labetalol injection and hydralazine injection are preferred as first- and second-line options for managing hypertension in pregnancy.

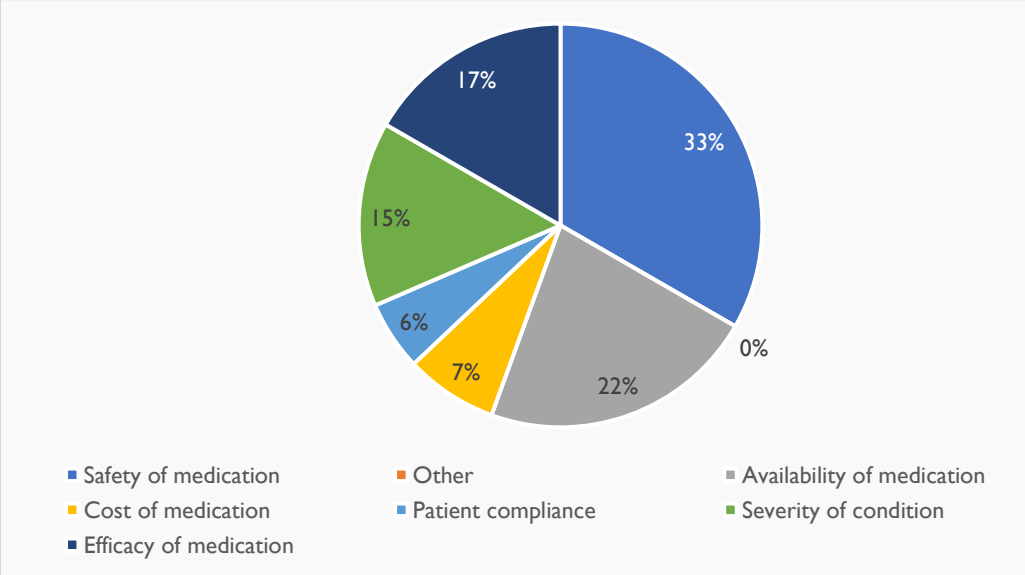
Figure 9 Prescriber preference for HDP products in severe hypertension in pregnancy



2.12 Factors influencing the choice of HDP products at the prescriber level

- Safety of medication was the main factor that influenced the choice of HDP products by prescribers.
- Other key factors include availability of medication (22 percent), efficacy of medication (17 percent), and severity of condition (25 percent).

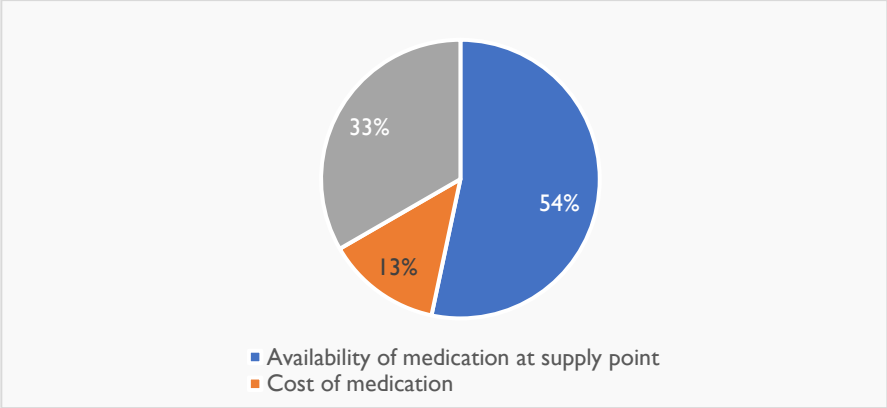
Figure 10 Factors influencing the choice of HDP products at the prescriber level



2.13 Factors influencing access to HDP products by clients

- The main issue impacting access to HDP products by clients is availability at the supply point (54 percent).
- Coverage on NHIS and cost of medication accounted for 33 percent and 13 percent, respectively, of respondents' feedback.

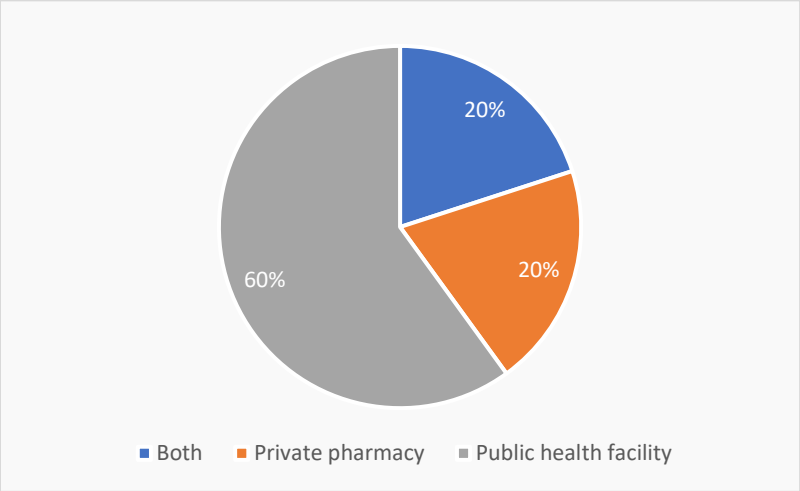
Figure 11 Factors influencing access to HDP products by clients



2.14 Source of HDP products for clients

- Clients rely mainly on public health facilities (60 percent) for their supply of HDP products.
- 20 percent of clients indicated they obtain their HDP products from private pharmacies.

Figure 12 Source of HDP products for clients



3.0 Summary of Key Findings

Management of HDP Products

- National Essential Medicines List (2017) recommends management of nifedipine and magnesium sulphate products at facilities with midwives and above. However, some health facilities indicated they do not manage nifedipine 30 mg, magnesium sulphate injection 0.5 g/ml because they were above their level of care. This points to inadequate knowledge about product management policies.
- Calcium gluconate injection, an antidote for magnesium sulphate injection, was not being managed in most of the health facilities surveyed because it was above their level of care. Since magnesium sulphate injection can be managed in facilities with midwives, the policy for calcium gluconate injection needs to be reviewed to prevent missed opportunities for saving lives.

Availability of HDP Products in Health Facilities

- The main reasons reported for HDP commodity stockouts include non-availability at the supply point, inadequate funds to procure products, and product rationing.
- Framework contract implementation challenges and NHIS payment delays were cited by key informants as contributing to stockouts at regional and facility levels.
- Health facilities tend to rely on the private sector whenever RMS does not have stock of HDP products.

Pricing of HDP Products

- Most health facilities have adopted NHIS prices as the selling prices for HDP products managed.

Product Registration

- About 44 percent of HDP products found in health facilities had not been registered. This finding highlights the need for pharmaceutical manufacturers and importers to take needed steps to register their products and for facilities to adopt mechanisms to ensure products purchased are registered.

Capacity Building Interventions

- Most commodity managers had not been trained in logistics management. Also, about half of health facilities did not receive supportive supervision in HDP case management in the past year.

Adherence to storage best practices

- Adequacy of storage space and availability of fire extinguishers and storeroom thermometers were the low performance areas under storage conditions for HDP products.

Recommendations

- GHS should leverage supportive supervision and training programs on HDP case management to sensitize health facilities to product management policies.

- GHS should review and align product management policies for calcium gluconate injection and magnesium sulphate injection. This will help prevent missed opportunities for managing magnesium sulphate injection toxicity, thereby helping to save lives.

- Regions should address challenges impacting the availability of health commodities in regional warehouses to ensure consistent supply to health facilities. Also, health facilities and regional warehouses should prioritize funding allocation and procurement of HDP products to improve supply and availability at all levels.

- GHS should continue to advocate with NHIS to improve the turnaround time for claims payment. Also, the Ministry of Health (MoH) and GHS should take the needed steps, including introducing a price adjustment formula to strengthen implementation of the framework contract arrangement. This will go a long way to improve availability of HDP products at the RMS.

- The private sector must be encouraged to ensure optimal stocking of HDP products since health facilities turn to them when RMS runs out of HDP products.

- The Food and Drugs Authority must continue to advocate with pharmaceutical importers and manufacturers to register their products while strengthening market surveillance activities to improve the availability of quality-assured HDP products.

- GHS should identify and target capacity-building interventions (e.g., supportive supervision and workshops) to facilities with commodity management and HDP case management gaps to help improve overall service delivery and health outcomes.

- Health facilities with support from regions should improve resource allocation for providing storage equipment. Also, storage space for health commodities (including HDP products) should be made a priority during the construction of health facilities.

Annex 1 List of 12 MCGL facilities purposively selected for the study

Name of facility	Region Name	District Name
Adibo Heath Center	Northern	Yendi Municipality
Bumbong Health Center	Northern	Yendi
Kalpohin Health Center	Northern	Sagnerigu
Kanvelli Health Center	Northern	Sagnarigu
Kubori Health Center	North East	Mamprugu Moaduri
Langbinsi Health Center	North East	East Mamprusi
Sandema Hospital	Upper East	Builsa North
St. Lucy Catholic Hospital	Northern	Sagnerigu
Tamale Central Hospital	Northern	Tamale Metro
Walewale Municipal Hospital	North East	West Mamprusi
Yendi Hospital	Northern	Yendi Municipal
Yizesi Health Center	North East	Mamprugu Moaduri

Annex 2 Quantitative questionnaire

Product Management and Availability

1. Name of region

2. District name

3. Name of health facility

4. Type of health facility

5. Date of visit

6. Does this facility manage this anti-hypertensive product (Hint: Management means that the facility stocked or tried stocking the product in the past one year)?

7. If this product is not managed by the facility, what are the reasons accounting for non-management (select all reasons that apply in this case)?

   i. High product cost

   ii. Non-availability at the point of supply

   iii. No or low incidence of hypertensive disorders in pregnancy

   iv. Above level of care

   v. Lack of trained staff to administer the product

   vi. Alternative formulations available

   vii. High level of expiry

   viii. Price is above NHIS price

   ix. No/low financial return

   x. Other

8. If this product is managed, how many units are currently available in the store?

9. If the product is managed, what is the price you purchase per unit?

10. If the product is managed, what is the price you sell per unit?

11. If the product is managed, how do you determine the selling price?

12. Is this product available in any of the dispensing points?

13. Are there expired products on the shelf?

14. If yes, how many expired units of the product are on the shelf?

15. What inventory system does the facility use to manage this product?

    i. A stock card

    ii. GHILMIS

    iii. Other electronic systems

    iv. N/A

16. What is the ending balance on the stock card/electronic inventory system being used?

17. Looking at the stock card/electronic inventory system, was there an instance where the facility was stocked out of this product in the three months before the month of the survey?

18. If yes, how many stockouts occurred within this period?

19. What was the total number of stockout days for this period?

20. What are the reasons that led to the stockouts for this product (select all that apply)?

    i. Non-availability at the supply point

    ii. Product rationing by the supply point

    iii. Inadequate funds to procure this product

    iv. Higher-than expected consumption

    v. Quantity requested was inadequate

    vi. Challenges in determining re-order quantities

    vii. Product was not requested on time

    viii. Product was not supplied on time

    ix. Other

21. How many units of the product was issued in the three months prior to the survey?

22. What is the main source of supply for this product?

    i. Regional medical store

    ii. Private suppliers

    iii. Both

23. How often does this facility request for this product?

    i. Monthly

    ii. Bimonthly

iii. Quarterly

iv. Every four months or above

24. How many people are responsible for managing medication for hypertensive disorders in pregnancy (HDP)?

25. Out of this number, how many have been trained in logistics management?

Section 2: Case Management

1. Does this facility manage hypertension in pregnancy?

2. If no, what are the reasons for not managing hypertension in pregnancy?

i. Above level of care

ii. No trained staff to manage condition

iii. Logistics not normally available

iv. Prefer to refer to higher-level facility

v. Other

3. Does this facility manage pre-eclampsia?

4. If no, what are the reasons for not managing pre-eclampsia?

i. Above level of care

ii. No trained staff to manage condition

iii. Logistics not normally available

iv. Prefer to refer to higher-level facility

v. Other

5. Does this facility manage eclampsia?

6. If no, what are the reasons for not managing eclampsia?

i. Above level of care

ii. No trained staff to manage condition

iii. Logistics not normally available

iv. Prefer to refer to higher level facility

v. Other

7. Does this facility have a protocol or guideline on the management of hypertensive disorders

in pregnancy (HDP)?

8. If yes, which protocol or guideline does the facility use in managing HDP?

9. Did this facility benefit from supportive supervision in HDP case management in the past year?

10. Have you received training in managing hypertension in pregnancy?

11. If yes, what type of training did you benefit from (check all that apply)?

    i. On-the-job training

    ii. Workshop/participation in a seminar or conference

    iii. University/diploma training

    iv. Other (Kindly specify)

12. Have you received training on the management of pre-eclampsia?

13. If yes, what type of training did you benefit from (check all that apply)?

    i. On-the-job training

    ii. Workshop/participation in a seminar or conference

    iii. University/diploma training

    iv. Other (kindly specify)

14. Have you received training on the management of eclampsia?

15. If yes, what type of training did you benefit from (check all that apply)?

    i. On-the-job training

    ii. Workshop/participation in a seminar or conference

    iii. University/diploma training

    iv. Other (kindly specify)

Prescriber/Midwife Specific Questions

16. Rate from 1 to 6 your preferred medication/formulation for managing mild hypertension in pregnancy. (1 means most preferred). Note: Use 'not applicable' (N/A) if it does not apply.

    i. Oral nifedipine (sustained release)

ii. Nifedipine (sublingual)

iii. Methyl Dopa (Oral)

iv. Amlodipine (Oral)

v. Labetalol (Oral)

vi. Verapamil (Oral)

vii. Other (kindly indicate medication and rate)

17. Kindly rate from 1 to 6 your preferred medication/formulation for managing severe hypertension in pregnancy. (1 means most preferred). Note: Use 'not applicable' (N/A) if it does not apply.

i. Oral nifedipine (sustained release)

ii. Nifedipine (sublingual)

iii. Methyl Dopa (Oral)

iv. Amlodipine (Oral)

v. Labetalol (Oral)

vi. Verapamil (Oral)

vii. Hydralazine IV

viii. Other (Kindly indicate medication and ranking)

18. What are the top three factors that influence the choice of anti-hypertensive products for pregnant women?

i. Safety of medication

ii. Efficacy of medication

iii. Severity of condition

iv. Patient compliance

v. Cost of medication

vi. Availability of medication

vii. Other

Assessment of Patient Folders

Select 2 HDP folders and complete the following:

19. Patient age (enter number)

20. Type of HDP

    i. Hypertension in pregnancy (not associated with eclampsia or preeclampsia)

    ii. Pre-eclampsia

    iii. Eclampsia

21. Treatment given

    i. Oral nifedipine (sustained release)

    ii. Nifedipine (sublingual)

    iii. Methyl Dopa (Oral)

    iv. Amlodipine (Oral)

    v. Labetalol (Oral)

    vi. Verapamil (Oral)

    vii. Hydralazine IV

    viii. Other (Kindly indicate)

Section 3: Client Feedback on HDP Management

Demographic Data

1. Age

2. Educational Level

    i. No formal education

    ii. Primary

    iii. JHS

    iv. Secondary

    v. Tertiary

3. Marital Status

4. Occupation

    i. Farmer

    ii. Trader

    iii. Government Worker

iv. Private Sector Worker

v. Student

vi. Housewife

vii. Unemployed

viii. Other (please specify……)

5. Do you have hypertension in pregnancy?

6. If yes, are you currently on any antihypertensive medication?

7. Which anti-hypertensive medication are you taking?

8. Where do you normally get this product (select one option)?

i. Public health facility

ii. Private health facility

iii. Private Pharmacy

iv. Other (kindly indicate)

9. How will you describe the level of availability of this product in your main supply point?

i. Never available

ii. Sometimes available

iii. Often available

iv. Always available

10. To what extent are you able to access your medication

i. Not at all

ii. To some extent

iii. To a great extent

11. What is the single most important factor that influence your ability to access HDP medication?

i. Cost of medication

ii. Availability of medication at supply point

iii. Transport cost

iv. Coverage on NHIS

v. Other

Section 4: Storage Conditions

1. To what extent are HDP commodities kept on shelves or pallets?

i. None of the products are kept on shelves and pallets

ii. Some of the products are kept on shelves and pallets

iii. Most of the products are kept on shelves/pallets

iv. All products are kept on shelves/pallets

2. To what extent does this facility apply first-to-expire, first out (FEFO) in managing HDP products?

i. FEFO has not been applied to any of the products

ii. FEFO has been applied to some products

iii. FEFO has been applied to most products

iv. FEFO has been applied to all products

3. To what extent have HDP products been protected from direct sunlight?

i. None of the products has been protected from direct sunlight

ii. Some of the products have been protected from direct sunlight

iii. Most of the products have been protected from direct sunlight

iv. All products have been protected from direct sunlight

4. To what extent have HDP products been separated from chemicals/insecticides?

i. None of the products has been separated from chemicals/insecticides

ii. Some of the products have been separated from chemicals/insecticides

iii. Most of the products have been separated from chemicals/insecticides

iv. All products have been separated from chemicals/insecticides

5. To what extent have expired HDP products been separated from usable commodities?

i. None of the expired products has been separated from usable commodities

ii. Some of the expired products have been separated from usable commodities

iii. Most of the expired products have been separated from usable commodities

iv. All expired products have been separated from usable commodities

6. Does this facility have a storeroom thermometer?

7. To what extent does this facility monitor storeroom temperature

i. Not at all

ii. Storeroom temperature is sometimes recorded

iii. Storeroom temperature is often recorded

iv. Storeroom temperature is recorded daily

8. Does this facility have a fire extinguisher?

i. Yes

ii. No

9. How would you describe the storage space for HDP products?

i. Inadequate

ii. Somewhat adequate

iii. Adequate

10. Is there a lock on the storeroom to ensure security for HDP products?

i. Yes

ii. No