REPUBLIC OF ZAMBIA

MINISTRY OF HEALTH

HEALTH SECTOR SUPPLY CHAIN STRATEGY AND IMPLEMENTATION PLAN (2015 – 2017)

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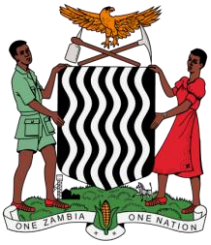
AND

IMPLEMENTATION PLAN

(2015 – 2017)



GOVERNMENT OF THE REPUBLIC OF ZAMBIA

MINISTRY OF HEALTH

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Acronyms

ARV/ART	Anti-retroviral (medicines)/Anti-retroviral Therapy
CHAZ	Churches Health Association of Zambia
CCDS	Clinical Care and Diagnostic Services
CPs	Cooperating Partners
DEC	Drug Enforcement Commission
DSBL	Drug Supply Budget Line
DTC	Drug & Therapeutics Committee
EDL/EML	Essential Drugs List/Essential Medicines List
EMLIP	Essential Medicines Logistics Implementation Program
FP	Family Planning
GRZ	Government of the Republic of Zambia
HCSC	Health Commodity Supply Chain
HMIS	Health Management Information System
HPCZ	Health Professionals Council of Zambia
"Hub"	Hub Warehouse
ICT	Information Communication Technology
JSI	John Snow, Inc.
KPI	Key Performance Indicators
LMIS	Logistics Management Information System
LMU	Logistics Management Unit at MSL
MCDMCH	Ministry of Community Development, Maternal and Child Health
MSL	Medical Stores Limited
MOH	Ministry of Health
NDQCL	National Drug Quality Control Laboratory
NHSP	National Health Sector Plan
NMCC	National Malaria Control Center
PS	Permanent Secretary
PSU	Procurement and Supplies Unit, MOH
PRA	Pharmaceutical Regulatory Authority (see ZMRA)
PTWG	Procurement Technical Working Group
QA/QC	Quality Assurance / Quality Control
SCSP	Supply Chain Strategic Plan
SCTWG	Supply Chain Technical Working Group
SOPs	Standard Operating Procedures
STGs	Standard Treatment Guidelines
TB	Tuberculosis
TOR	Terms of Reference
TWG	Technical Working Group
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
UTH	University Teaching Hospital
WHO	World Health Organization
ZEMA	Zambia Environment Management Agency
ZMRA	Zambia Medicines Regulatory Authority
ZPPA	Zambia Public Procurement Authority / Act

Foreword

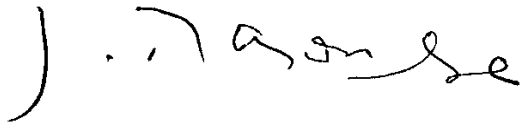
The Ministry of Health has been on a drive to improve access to essential medicines to the population of Zambia. In recent years, there have been a number of interventions by the Government of Zambia and Cooperating Partners to improve drug availability at health facility level. Despite all these efforts, health centres across Zambia continue to face difficulties accessing Drugs and Medical Supplies.

Medicine access has remained as one of the leading causes of poor health outcomes in Zambia. While many factors have influenced medicine access at all levels, the capacity of the in-country supply chain to accurately forecast, procure and deliver essential medicines and health supplies on time to the health centres remains a major constraint.

It is my hope that through this document all public hospitals, health centres and other health institutions will be adequately supplied with their full requirements up to the last mile.

This Sector Supply Chain Strategy and its Implementation Plan 2015-2017 is a national document and has been developed for the first time in Zambia through a consultative process and presents a significant change in the way the supply chain of essential medicines and medical supplies will be managed. This plan places emphasis on all elements of the public health supply chain cycle which include quantification, procurement and distribution up to the last mile. It is my wish that this new way of working is adequately supported by all the key stakeholders working in the sector and that it will bring about positive change in drug availability at all levels.

I therefor urge all the people involved in the implementation of this plan to fully dedicate themselves to this important national assignment. My Ministry will remain committed to ensuring the successful implementation of this plan.



Honourable Dr. Joseph Kasonde, MP
Minister of Health

Acknowledgements

This Sector Supply Chain Strategy and its Implementation Plan 2015-2017 has been developed through a participative and consultative process involving significant contributions and support from various individuals and institutions. I therefore wish to extend my sincere appreciation to all those that contributed to the process of developing this strategy and its implementation plan. I wish to pay special tribute to all members who participated in the development of this document, the technical review team, and technical working groups for their significant inputs and commitment to this process. On behalf of the Ministry of Health, I wish to acknowledge the financial and technical support rendered to us by our Cooperating Partners, through various support which contributed to the development of the final document.

I wish to thank all the members of staff at the Ministry of Health, Ministry of Community Development Mother and Child Health, Medical Stores Limited, representatives of statutory boards and NGOs for their participation, contributions and support to the process of formulating this supply chain strategy and the implementation plan.

Dr. Peter Mwaba
Permanent Secretary
Ministry of Health

SECTION A: SECTOR SUPPLY CHAIN STRATEGY

1. Background

1.1. Historical Background

The procurement and supply of essential medicines and medical supplies has been a key concern within the health sector in Zambia since the 1970s. During these last five decades, a number of significant interventions have been attempted to improve the availability of health commodities and enhance the performance of the supply chain within the Ministry of Health. These interventions have included reforms at the central level related to the management of the procurement, storage and distribution functions, the development and adoption of new commodity management systems, computerization at MSL and service delivery sites, better organized national quantification and forecasting processes, the development of HIV/AIDS and Reproductive Health Commodity Security strategies, and the installation of stores at the district level to improve district level storage capacity.

Another example was the development and adoption of the National Drug Policy in 1996 to provide, among other things, policy direction to the management of medicines and medical supplies. Appropriate legislation was also enacted to support the implementation of the new Policy through established regulatory institutions like the Zambia Medicines Regulatory Authority (ZMRA).

These interventions have been led by the Ministry of Health and commonly supported by Cooperating Partners. Some of the initiatives have made significant contributions to systems strengthening and/or product availability; e.g. - the implementation of viable supply management systems for ARVs, HIV tests, and laboratory commodities and the Prevention of Mother to Child Transmission-only (PMTCT) system.

Over the years, partners have played significant roles in support of the health commodity supply chain in Zambia. These roles include funding different supply chain support activities, the procurement and distribution of commodities, and the provision of support to the development of inventory and information management systems for different levels of the supply chain. Cooperating Partners continue to work closely with the Government in its efforts to improve the supply chain performance.

However, weak supply chain performance, as outlined in several recent assessments, have suggested that a focused "plan of action" is required to improve coordination, focus strategic directions and investments, and enhance decision-making. The Ministry of Health therefore made a decision to establish a National Supply Chain Strategy and its implementation plan to provide direction and consensus on the way forward and to harmonise actions.

1.2. Situation Analysis of the Supply Chain

A well-functioning and efficient supply chain is essential for the health care system to provide quality health care services to the population it is intended to serve. This is clearly demonstrated by the resources allocated to supply chain activities in any health budget.

The major players in the supply chain in Zambia include the Government and its agencies, public health facilities, faith-based organisations (mainly CHAZ), Non-Governmental Organizations (NGOs), communities, the private sector, and donors/Cooperating Partners.

For many years, the Ministry of Health has been mandated to provide supply chain leadership via policy direction, planning, and financial support, and it has had direct responsibility for guiding and implementing most supply chain activities.

Since 1976, the MOH has delegated the implementation of some of its supply chain activities to Medical Stores Limited (MSL), while maintaining responsibility for various others, particularly at the policy level. Medical Stores Limited is a parastatal company established under the Companies Act. The Ministry of Health and the Ministry of Finance are the only shareholders of this company, which was delegated responsibility for the storage and distribution of health commodities to public sector and other health facilities on behalf of the Ministry of Health.

2. Vision and Principles for the Supply Chain

The vision and principles are intended to set out the aspirations and priorities for the health commodity supply chain.

2.1. Vision Statement

To provide equitable access to affordable quality essential medicines and medical supplies to support the Zambian public health system.

2.2. Supply Chain Principles

Accountability: The supply chain should have defined measures of performance for accountability.

Commodity Availability, Accessibility and Equity: The supply chain aims to provide access to essential medicines and medical supplies for the nation.

Coordination: The supply chain will seek to coordinate inputs of all stake-holders to avoid redundancy of efforts, inefficient use of resources, and to promote synergies.

Efficiency, Effectiveness and Value for Money:

- Organizational and functional roles and responsibilities shall be clear and well-communicated.
- The supply chain shall ensure value for money and efficiency in planning, system design, and implementation.
- The supply chain should be designed to ensure ease of use at all levels.
- The supply chain should be able to adapt to changing conditions (e.g. -

the introduction of new systems/programs, and other unusual demands).

Laws and Policies: The supply chain should operate in accordance with existing laws and policies.

People and Community-centered: The system should earn and maintain the trust of the public through reliability, responsiveness and transparency.

Public Safety and Environmentally Friendly:

- The supply chain shall provide safe and efficacious medicines.
- The supply chain shall effectively manage waste in order to protect the public and the environment.

Sustainability: The supply chain shall emphasize sustainability in planning, system design, implementation and financing.

Transparency / Visibility of Data and Information:

- Supply chain data and information should be readily available to all supply chain stakeholders.
- The information systems supporting the supply chain should develop and maintain standard information sets for all stakeholders.

3. Thematic Areas: Key Issues and Challenges, Objectives and Best Practices, and Strategic Interventions

During the Strategy development process of the Workshop, participants worked in thematic areas to establish their priorities for supply chain improvements for the coming three year period. The process included agreement on the current issues and challenges, the establishment of objectives and best practices for improvement, and discussions on possible interventions, which were then converted to proposed strategic interventions. The eight thematic areas were as follows:

1. Procurement and Procurement Planning
2. Quantification and Product Selection
3. Commodity Distribution and Waste Management
4. Information Systems, Processes and Design
5. Quality Assurance and Rational Use
6. Commodity Security, Financing and Resource Mobilization
7. Performance Management, M&E, and Supply Chain Supervision
8. Capacity, Human Resources, Training, and Facility Stores

3.1. Thematic Group 1: Procurement and Procurement Planning

In response to following procurement and procurement planning issues and challenges:

1. **High level coordination / harmonization of partners / maximizing value for money**
    a. Lack of coordination and sharing of information on the status of MOH and partner contributions - current platforms (Procurement TWG and Drug Supply Budget Line) are not as effective as intended or desired
    b. Partner contributions are often product- or program-specific which limits how their contributions can contribute to the total gap
    c. Although a review of prices by suppliers has started for some product areas (e.g., antibiotics), this practice is not institutionalized across all program areas to maximize value for money.

2. **Stockouts and Overstocks**
    a. Delayed and under-funded procurements from GRZ funds result in stock outs of key essential medicines and medical supplies
    b. Untimely, delayed and uncoordinated procurement of medicines and medical supplies by cooperating partners also leads to stock outs and/or overstocks (timing of release of funds from partners is not coordinated and does not match country needs to ensure full supply throughout the year)

3. **Procurement procedures / emergency responsiveness**
    a. Low levels of transparency and accountability within current procurement practices (perceptions)

b. Procurement & Supplies Unit does not prioritize health commodity procurement over other activities/requirements/requests which impacts efficiencies and results in lack of responsibility for following stock outs
c. Emergency responsiveness to gaps in supply chain, due to poor planning, are not adequately addressed by MOH, cooperating partners, or suppliers

4. **Procurement planning problems / link between quantification and procurement planning**
   a. Procurement planning is not accurate due to poor quantification results
   b. Procurement planning is disconnected from warehouse inventory optimization (resulting in over and under stocks at warehouse)

The following **Objectives & Related Best Practices** were established:

1. **High level coordination / harmonization of partners / maximizing value for money**
   a. GRZ to take leadership role in coordinating and managing all MOH and partner procurements and procurement planning.
   b. MOH has adequate funding received on a timely basis to manage procurements appropriately.
   c. Procure medicines and medical supplies at the lowest possible price without compromising quality.

2. **Procurement procedures / emergency responsiveness**

a. All procurement procedures are in compliance with existing rules and regulations, including 'checks and balance' requirements such as regular procurement audits.
b. The procurement of medicines and medical supplies is handled by a dedicated, specialized unit.
c. All partners agree upon a defined system and procedures for addressing emergency procurement requirements.

3. Procurement planning

a. All partners (including warehousing entities) are included in procurement planning activities (development and quarterly monitoring) to secure one national procurement plan which is reviewed and updated regularly.
b. All partners commit to meeting agreed upon timelines in the shared national procurement plan.
c. Procurement planning is based on accurate information from nationally agreed upon methodology of quantification which is updated regularly.

The following **strategic interventions** were developed to address these issues and challenges:

Intervention 1: Strengthening procurement units at MOH, MCDMCH and MSL to procure essential medicines and medical supplies. UNICEF is working with MoH/MSL on this aspect.

Intervention 2: Procurement and Logistics Technical Working Group: Strengthen the existing Procurement & Logistics Technical Working

Group (PTWG) to provide greater leadership in coordinating MOH, MSL, and CP procurement and procurement planning activities; also proposed to rename this group the Supply Chain Technical Working Group.

Intervention 3: Procurement Coordination: MOH to create and maintain mechanisms for coordination and harmonisation of procurement processes with CPs and stakeholders.

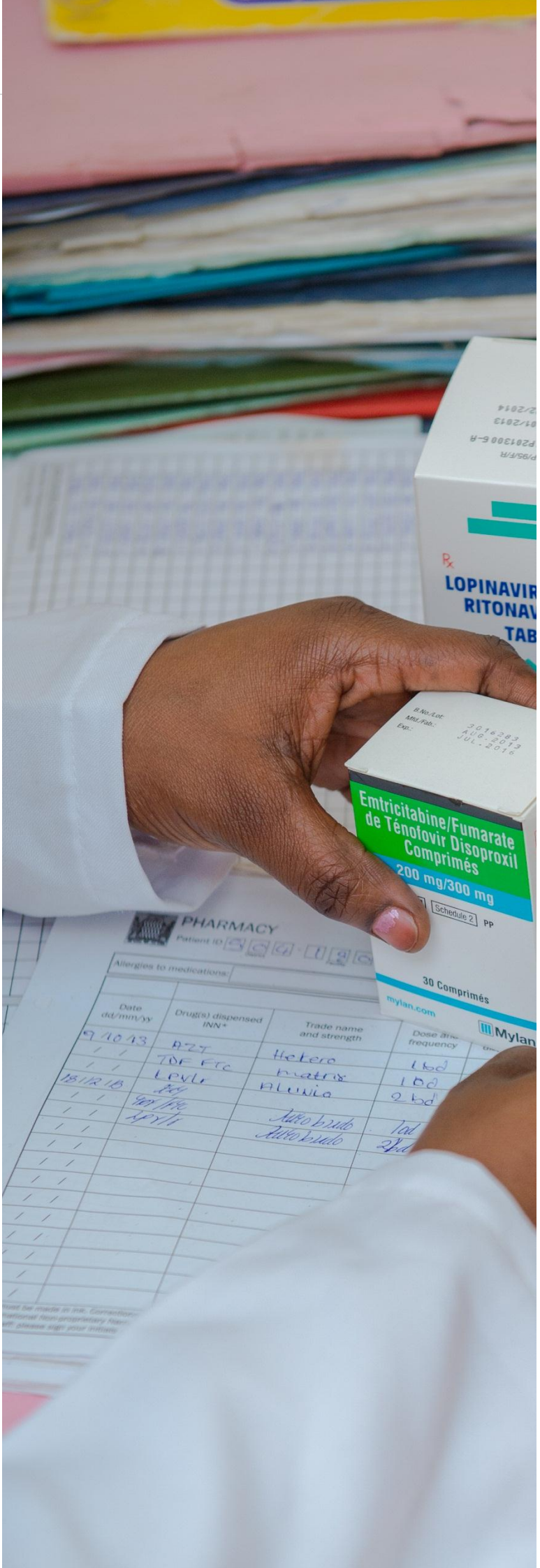
Intervention 4: Funding: Increase funding for essential medicines and medical supplies - in connection with other commodity security strategies (see also Thematic Area 6 - Commodity Security).

Intervention 5: Monitoring of Procurement Prices: The MOH shall monitor procurement prices by implementing mechanisms for the monitoring of procurement prices for essential medicine and medical supply procurements to ensure “value for money” (through annual forecasting and quantification exercises).

Intervention 6: Procurement Skills and Audits: All procurement staff shall be oriented and routinely updated on procurement rules, regulations, and best practices. MSL's procurement team shall also be monitored to ensure enforcement of current requirements and to ensure adequate checks and balances. Internal and external procurement audits are expected, so staff must also become familiar with audit processes.

Intervention 7: Emergency Procurement: All partners agree on a defined system and set of procedures for addressing emergency procurement requirements - through the Procurement and Logistics (SC) Technical Working Group.

Intervention 8: Procurement for continued roll-out of Essential Medicines Logistics Implementation Program: Procurement plan of MOH/MSL to prioritize commodities for ongoing



roll-out of EMLIP program (increasing bulk procurement and decreasing kit quantities). UNICEF is working with MoH/MSL on this and will continue to do so at least in 2015.

Intervention 9: Pipeline Monitoring: Develop/select national aggregated pipeline monitoring tool, which shall be managed by MSL, and hold discussions with procurement partners to actively engage them in pipeline monitoring.

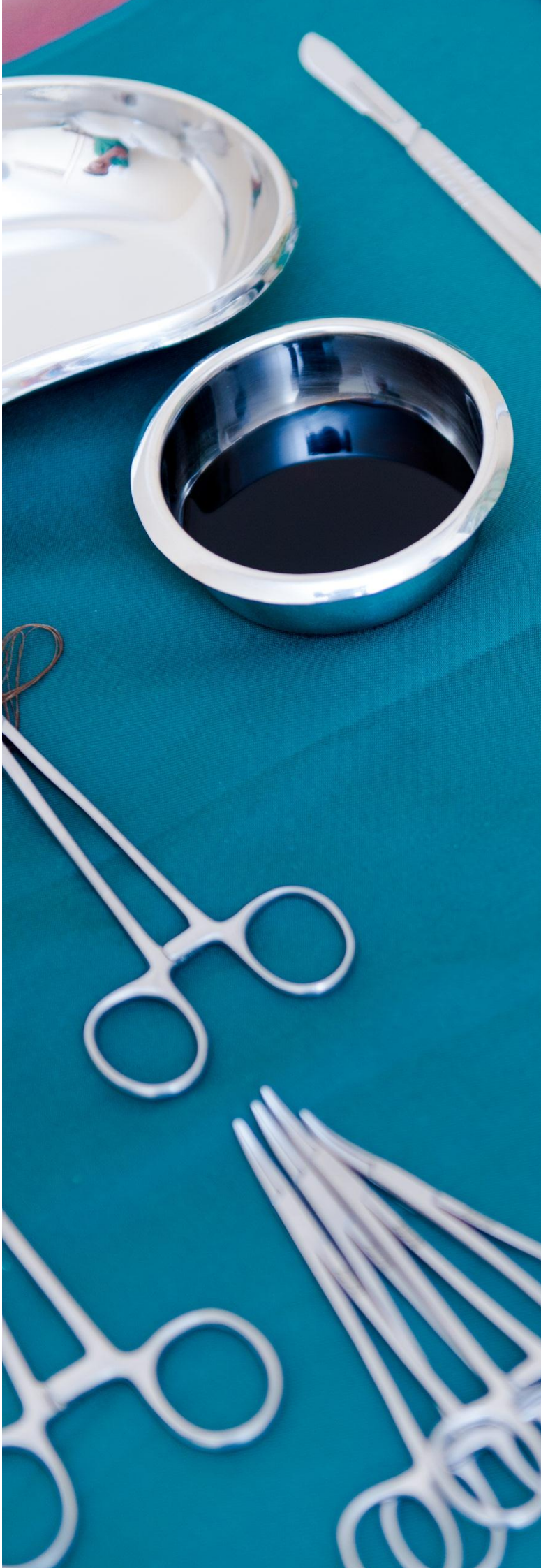
3.2. Thematic Group 2: Quantification and Product Selection

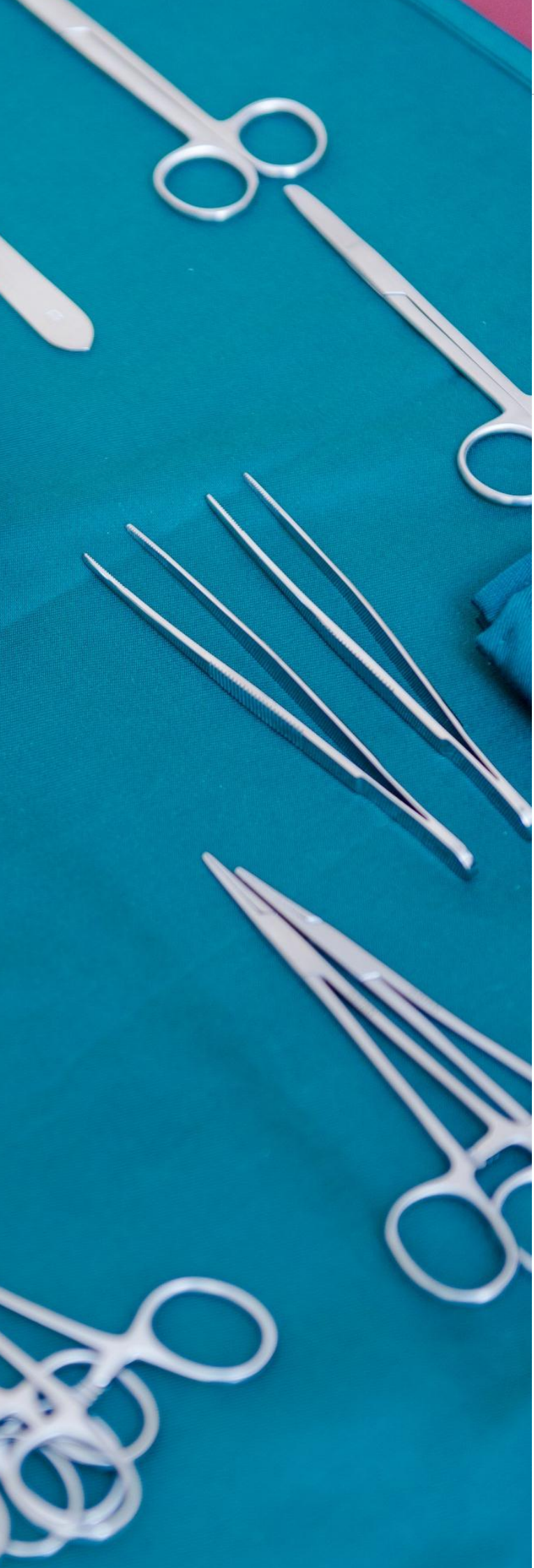
In response to a series of quantification and product selection issues and challenges, including the following:

- The product selection process is not clearly defined. Product selection is generally done at the national level rather than at the district or facility levels.
- Challenges of using Central Statistics Office vs. headcount population figures
- Quantification is largely a paper based exercise and use of data has been limited in past exercises
- Access to commodities differs depending on which program the facility is currently in (EMLIP vs. kits)
- Product specifications are not standardized
- Quantification is not based on accurate consumption or issues data for some product areas
- Some product groups are not quantified at all
- Quantification process is not well coordinated or owned by MOH
- Short lived assumptions are currently being used during quantifications.

The following **Objectives & Related Best Practices** were established:

- Increased ownership and coordination of quantification activities by MOH with MSL / LMU as central repository of all national logistics information
- Provide an electronic networked system at health facility levels and DHOs to transmit consumption / issues data to be used for ordering and national level forecasting and quantification
- Improve capacity of health facility staff to accurately capture and report data to the next level on a timely basis
- Ensure quantification outputs are the basis of MOH procurement planning and budgeting
- Review forecast and quantification accuracy to match use over time
- Finalize re-classification of health facilities depending on level of health care services
- Increase capacity for clinical staff in rational drug use through Drug and Therapeutic Committees
- Increase provincial and district level capacity to facilitate forecasting and quantification exercises and oversee accuracy
- Revise procurement plan to account more towards bulk procurements to support EMLIP rollout
- Standardize product specifications and pack sizes.





3.3. Thematic Group 3: Commodity Distribution (Distribution Network, Warehouse Infrastructure, Inventory Management, Transport, Waste Management, Physical Capacity at Facilities)

In response to a number of commodity distribution, facility storage, and waste management issues and challenges, including the following:

- Inadequate storage space at districts, hospitals, and health centres
- Inadequate storage space at MSL
- Inadequate distribution fleet at MSL to match anticipated increase in fill rate (current 44%)
- Stock levels not matching demand
- Inadequate distribution capacity at district level
- Inadequate facilities and systems for collection and disposal of sharps and other pharmaceutical waste
- Bad road terrains in some districts (e.g. - Kalabo, Chilubi)
- Non-inclusion of pharmaceuticals/medical supplies storage plans in new hospitals under construction
- Lack of emphasis on commodity accountability by custodians throughout the supply chain

The following **Objectives & Related Best Practices** were established:

- To increase storage capacity in a proportion of identified service delivery points within the period of the plan
- To establish regional hubs
- To ensure availability of dedicated fleet for distribution
- To increase capital expenditure funding to facilitate procurement of additional and replacement of obsolete trucks, and to agree on the balance between short-term needs at the districts and short- and longer term needs of MSL
- To engage local transporters in facilitating last mile distribution
- To strengthen quantification using aggregated LMIS data and programme information
- To re-enforce adherence to Essential Medicines List and other mechanisms intended to manage access
- To establish appropriate waste disposal facilities for use by MSL
- To ensure participation of technical personnel at planning stage
- To design and improve integrated information management for health commodities
- To introduce e-based inventory management and reporting systems to improve visibility on health commodities for all levels of the supply chain
- To strengthen and coordinate supply chain audits

3.4. Thematic Group 4: Information Systems and Processes, including LMIS, LMIS Design, and Communication of Information

In response to a series of information system, LMIS, and communication issues and challenges including the following:

- MSL receiving multiple orders from facilities that are currently picked & packed separately
- Information systems for programmes are generally managed separately
- Human resource constraints hinder LMIS; i.e. - turnover rate affects training efforts; level of supply chain personnel is weak; restructuring in some cases removed people and in other cases did not create the positions needed
- Lack of clear policy decision on way forward for development of electronic information systems
- Lack of real time information at all levels in the systems (data visibility)
- Multiple ordering mechanisms at the same facilities (CHAZ/MSL)
- Data accuracy at SDPs is still poor
- Inadequate ICT Infrastructure
- Lack of clarity regarding the capture of consumption vs. issues data at the facility level, and the reporting up of this data [consumption provides more accurate picture but is harder to collect; estimated consumption (issues from the store to dispensing units) is easier to collect]
- Computerized Reports &Requisitions (R&Rs) are not being sent from LMU/MSL to health facilities

- Lack of a clear and transparent rationing policy/system; one that will be understood by the personnel in the field.
- MOH needs to review and revise the Essential Medicines List and the Standard Treatment Guidelines in order to better determine which products are to go to which type of facility. This includes the need to better categorize the facilities.

The following **Objectives & Related Best Practices** were established:

- Electronic orders shall be consolidated into one pick and pack list per health facility at MSL
- LMIS integration shall be considered on case by case basis
- All new supply chain IT-related activities / initiatives should fit into the agreed upon system.
- Human resource plans shall be aligned to support the needs of the supply chain
- Performance management for supply chain shall be increased
- Need for clear policy decisions on way forward for the development of electronic information systems
- Within the period of this strategic plan, the computerization of sites shall be introduced
- Best practice is to have all orders (R&Rs) go through the LMU and then commodities can be distributed through the two mechanisms (MSL and CHAZ).
- The mandates for CHAZ and MSL moving to one information system shall be reviewed and clearly outlined
- There is a need for Human Resource improvements: i.e. - proper cadres, more training, performance management audits

- There is a need for significant funding for IT staffing and support, including infrastructure
- Clarification of policy guidance should be given as it pertains to the capture and reporting of consumption vs. issues data.
- There is a need for interfacing of the warehouse management system used at MSL and the central database for commodity information
- There is a need for a clear and transparent rationing policy/system; one that will be understood by the personnel in the field.
- Computerized systems centrally have to regulate the ability of facilities to order commodities that are not allowed according to their assigned designation/classification.

The following **strategic interventions** were developed to address these issues and challenges:

Intervention 1: MOH ICT Policy: MOH should update ICT policy to include supply chain needs and support.

- Primary Responsibility: MOH ICT Unit, MOH CCDS, MSL

Intervention 2: Integration of orders between SDPs and MSL: A plan is needed to identify ways to consolidate facility orders before arrival at MSL, using computerization at facilities and districts to facilitate one delivery per month. As an interim measure, the various orders should be electronically consolidated prior to delivery to MSL/LMU. All future projects (including immunisation, TB, etc.) should fit into consolidated ordering framework; i.e. - no separate reporting/ordering mechanisms. The desired goal is to have one consolidated order per month (order interval) per facility which

results in one delivery per month (order interval) per facility and/or district for all health commodities which are managed by MSL.

- Primary Responsibility: MOH CCDS and ICT Unit, MSL
- Other Participants: UNICEF and World Bank has supported the introduction of the eZICS and will continue the support in 2015.

Intervention 3: Policy Guidance for Development of Electronic Information Systems for SC Management: Policy decisions are required for guiding the direction of current and future integrated supply chain electronic information systems to ensure needs are met and duplication is avoided, then clear plans for implementation, including roles and responsibilities, need to be established. Existing systems need to be linked and fully interfaced if they continue to be utilized. Resources need to be found for system-wide implementation.

- Primary Responsibility: MOH CCDS and ICT Unit
- Other Participants: UNICEF

Intervention 4: Funding for automation of warehouse management, facility-level inventory management and supply chain information systems: The MOH shall lobby GRZ and CPs to increase funding for the support of the automation of commodity management functions, including LMIS and inventory management, at all levels of the system.

- Primary Responsibility: MOH, MSL
- Other Participants: UNICEF

Intervention 5: Improved Ability to Track Commodities: Further integration between Supply Chain Manager and MSL Warehouse Management System is required in the short-

term so that computerized Reports and Requisitions / REMMS (report and order summary forms) can be sent to facilities by MSL/LMU.

- Primary Responsibility: MOH ICT Unit, MOH, Directorate of CCDS, MSL

Intervention 6: Data Visibility: Any current or new computerized information systems shall emphasize data visibility for all levels, as well as for program staff, CPs, and other recognized users.

- Primary Responsibility: MOH ICT Unit, MSL, Communications Authority
- Other Participants: MOH Directorate of CCDS, Ministry of Works and Supply

Intervention 7: Rationing Mechanisms Put in Place: All future systems developments should incorporate a fair rationing policy (and guidelines) in the event of low stock levels at the central level. Policy implementation shall be incorporated into future systems design.

- Primary Responsibility: MOH, MSL

Intervention 8: Real Time Stock and Consumption (or Estimated Consumption) Data / Information Visible at All Levels of the SC: Development of future systems should incorporate the added-value of real time (electronic) access to stock-on-hand and consumption (or estimated consumption) information from the facility level. Future systems design/development also needs to clarify whether consumption or estimated consumption (issues data from the facility store to the various dispensing units) data is required at the facility level for each/all product groups.

- Primary Responsibility: MOH ICT Unit
- Other Participants: MSL

Intervention 9: Supervision of Data Accuracy Strengthened: Extend independent, consistent

systems for supervision of recording and reporting of commodity information to all levels of the supply chain. Ensure that supervisory roles and responsibilities are clearly defined.

- Primary Responsibility: MOH Directorate of CCDS, Provincial Health Offices, District Health Offices
- Other Participants: MSL, Health Facilities

Intervention 10: Improved ICT Infrastructure and Internet Access: Develop sustainable capital replacement and maintenance policies and guidelines for essential ICT equipment required throughout the supply chain. MOH should facilitate a national electronic networking system needs assessment to determine which Districts and facilities still lack access to regular internet (for data transfer). Develop and implement e-based communication system at health facilities, Districts, Provinces, and all levels of MSL.

- Primary Responsibility: MOH ICT Unit, MOH Policy and Planning Unit, MOH CCDS; MSL; ZMRA
- Other Participants: Ministry of Communications, Provincial Health Offices, District Health Offices

3.5. Thematic Group 5: Quality Assurance and Rational Use

In response to various quality assurance and rational use issues and challenges, including the following:

- Systems: Weak post-marketing surveillance
- Systems: Lack of capacity for lot release of vaccines
- Systems: Lack of a full-fledged National Drug Quality Control Laboratory (NDQCL)

- Poor adherence to standard operating procedures (SOPs) at service delivery points
    - Storage: Poor storage conditions in most facilities
    - Rational use: Limited funding for rational drug use (RDU) programmes – no specific budget line to support this activity
    - Rational use: Weak enforcement of standards of practice (dispensing & prescribing)
    - Rational use: Lack of prescription pads at facilities

The following **Objectives & Related Best Practices** were established:

- To strengthen performance management systems/activities at all levels
- To establish mechanisms for lot release of vaccines
- To establish a fully functional NDQCL
- To ensure enforcement of SOPs at service delivery points
- To establish proper stores and storage conditions at facility level
- To lobby for funds for rational drug use programme
- To strengthen drug and therapeutic committees at facilities
- To improve accountability and control of medicine use and inventory management

The following **strategic interventions** were developed to address these issues and challenges:

Intervention 1: Systems for Quality Assurance: Pharmaceutical Regulatory Authority strategic plan is in place and includes strengthening of post-marketing surveillance at all levels.

- Primary Responsibility: ZMRA

- Other Participants: MOH Directorate of CCDS, MSL

Intervention 2: Standard Operating Procedures for Quality Assurance within the MOH:

a. Coordinate all existing SOPs for quality assurance, and revise/update for all levels in the supply chain
b. Clarify roles and responsibilities for all levels in relation to QA and rational use
c. Promote usage of SOPs at all levels

- Primary Responsibility: MOH Directorate of CCDS, MSL
- Other Participants: HPCZ

Intervention 3: National Drug Quality Control Laboratory (NDQCL): MOH shall provide support to the implementation of Zambia Medicines Regulatory Authority's strategy for the establishment and operation of a fully functional NDQCL.

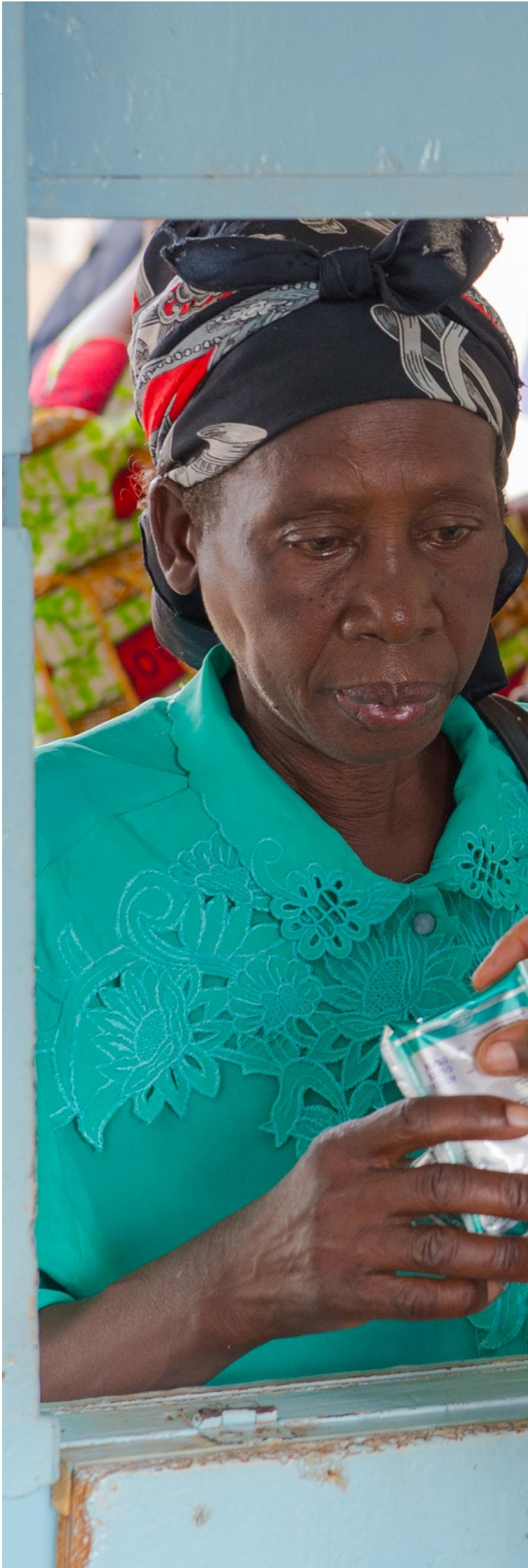
- Primary Responsibility: Pharmaceutical Regulatory Authority
- Other Participants: MOH DPP

Intervention 4: Rational Drug Use: Develop a plan of action for strengthening the MOH's rational drug use program.

a. Complete a comprehensive review of the MOH's rational drug use program.
b. Increase funding to support rational drug activities at the central, district, and SDP level.

- Primary Responsibility: MOH Directorate of CCDS
- Other Participants: MSL

Intervention 5: Drug & Therapeutic Committees at Facilities: Regular training and supervision at different levels of the health care system is required, in addition to enhanced sensitization regarding DTC activities and regular review of prescribing patterns by health facility staff.



- Primary Responsibility: MOH Directorate of CCDS, ZMRA
- Other Participants: Provincial Health Offices, District Health Offices, MSL, Zambian National Formulary Committee, HPCZ

Intervention 6: Regular Budget for Prescription Pads and LMIS forms and cards: MOH shall ensure that there is adequate budget for the printing of prescription pads, and forms, cards and documents needed for the management of health commodities at health facilities.

- Primary Responsibility: MOH District Health Offices, and hospitals
- Other Participants: MOH Directorate of CCDS

3.6. Thematic Group 6: Commodity Security - Financing, Resource Mobilization, Cost Recovery, Sustainability, Service Fees and High Level Coordination

In response to the following **commodity security, financing, resource mobilization, and coordination issues and challenges**:

Financing:

- Commodity funding needs to match demand at all times
- Inadequate funding available for essential medicines and medical supplies
- Current shortage of funds to ensure availability of all needed products
- Lack of pooled funding

- Implementation of pull (ordering) systems vs. limited financing for drugs producing shortages in short-term

Resource Mobilization:

- Lack of effective and timely resource mobilization for medicines and supply chain support, particularly in the absence of the SWAp mechanism

Service Fees:

- Lack of resources for operation of efficient and effective supply chain

Sustainability:

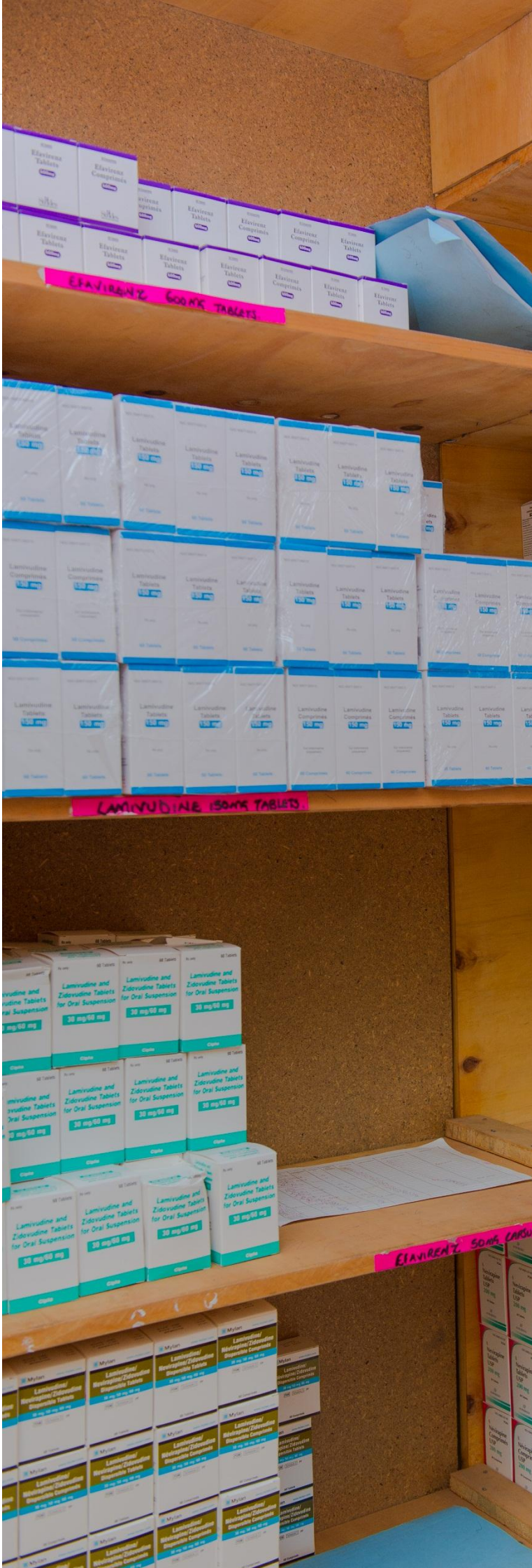
- Lack of a sustainability plan
- Health systems are too donor dependant
- Lack of adequate domestic funding mechanisms
- Lack of strategies to address sustainability of commodities which are currently supported by donors

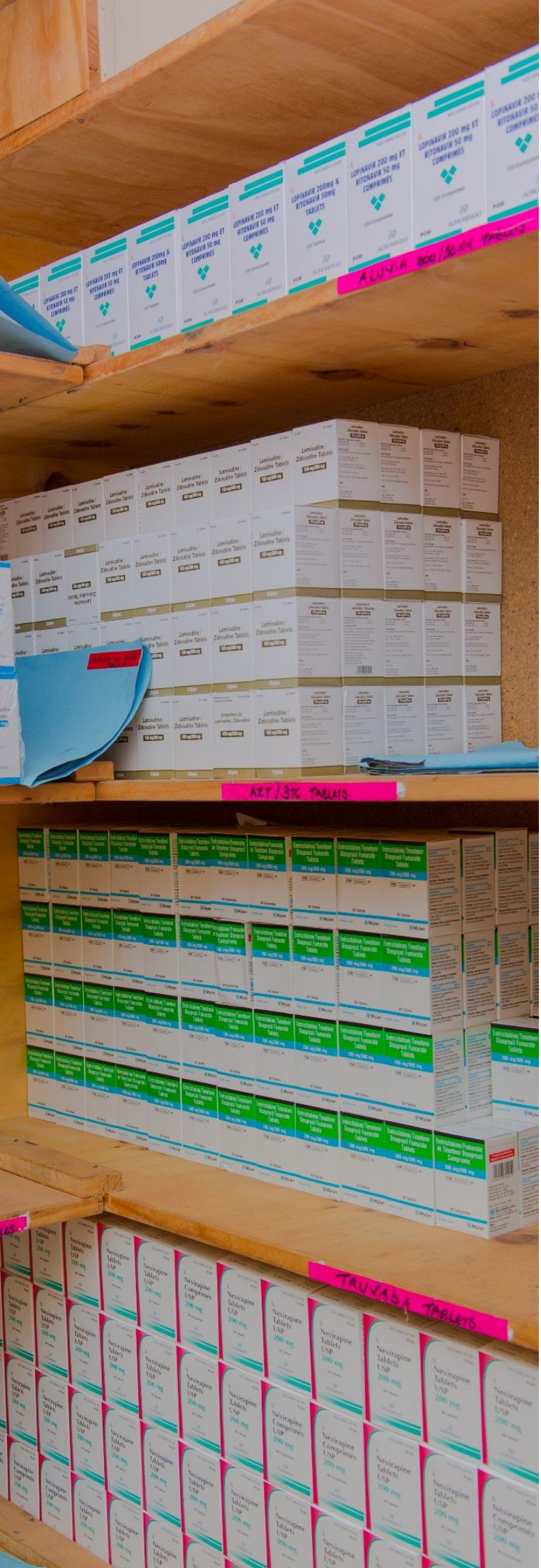
High Level Coordination:

- Lack of effective high level coordination, particularly in the absence of coordination mechanism in form of the SWAp
- Wastage of resources

The following **Objectives & Related Best Practices** were established:

- To make available adequate and accessible financing for health commodities and for the operation of an efficient and effective supply chain
- To develop a commodity security plan that is supported by highest levels of authority
- To mobilize resources for implementation of the commodity security plan





- To make available supplementary financing mechanisms
- MOH to take leadership in coordinating the development and implementation of the annual quantification process and the annual procurement plan
- To mobilize adequate resources to meet the targets of the Abuja Declaration (15% of total Government budget allocated to health)

The following **strategic interventions** were developed to address these issues and challenges:

Intervention 1: Financing and Resource Mobilization:

a. Increase proportion of GRZ funding to the health sector (target of 15% per Abuja Declaration)
b. Institute improved mechanisms for sharing information on funds available, budgets, and procurement plans.

- Primary Responsibility: MOH Senior Management (MOH Directorate of Policy and Planning to take the lead)
- Other Participants: MOF

Intervention 2: Sustainability: Create and implement a commodity security (CS) plan for health commodities and supply chain support which addresses:

a. Increased financing for infrastructure, especially storage at all levels, vehicles, and IT systems, as well as human resources.
b. Operationalisation of Social Health Insurance Scheme
c. Gradual increase in GRZ contributions for underfunded but essential medicines and medical supplies.

d. Promote/build capacity of local manufacturers to support specific products (e.g. south to south cooperation).
e. Implement the Strategic Plan for the supply chain for 2015-2017 as a top priority.
f. Joint planning and budgeting between MOH and CPs on systems strengthening and capacity building programs and activities.

- Primary Responsibility: MOH
- Other Participants: MSL, UNICEF, Swedish Embassy

Intervention 3: Service Fees and Supply Chain Financing:

a. MOH should recognize operational requirements of the supply chain and provide for them.
b. MSL shall implement fees for services (procurement and distribution) rendered and work with MOH to determine how service fees might be paid.
c. MOH should give consideration to the introduction of other levies for support of the supply chain, and/or innovative ways for financing these ongoing costs.

Intervention 4: High Level Coordination: MOH to revise TOR for Procurement and Logistics Technical Working Group to guide MOH/MSL/CP planning and coordination on Supply Chain Strategic Plan implementation and related supply chain support. It was also proposed that the Procurement & Logistics TWG be renamed the Supply Chain TWG.

- Primary Responsibility: MOH Senior Management, MSL

3.7. Thematic Group 7: Performance Management, Monitoring and Evaluation, and Supply Chain Supervision

In response to a range of performance management, M&E, and supervision issues and challenges including the following:

- MOH central monitoring and evaluation (M&E) plan/framework for supply chain performance does not exist, including development of key performance indicators in functional areas (from MSL to service delivery points), and therefore performance indicators are not shared with provincial, district and facility levels
- Limited funding for provincial or district staff to travel to sites for supervision and M&E
- Too many partners visiting the sites and requesting too many reports, which requires time that takes away from servicing clients at service delivery points
- No current mechanisms for sharing information gathered through M&E between MOH and cooperating partners
- No visibility of facility level (MSL to service delivery point) data for performance management monitoring at central MOH
- No routine audits of complete supply chain from MSL to site level
- Clarity of job descriptions - people doing supply chain tasks do not know their job description, and people supervising are clear on what to expect from the supervisee's job performance

- Provincial, district, and facility staff have reasonable technical skills but not always strong supervisory and performance management skills; many lack capacity to provide required supervision.

The following **Objectives & Related Best Practices** were established:

- MOH central monitoring and evaluation (M&E) plan/framework for supply chain exists, including development of key performance indicators in functional areas (from MSL to SDPs), which are shared and reviewed regularly with provincial, district and facility levels. This must include M&E officers at all levels of the system.
- All partners agree on a harmonized set of tools to use for supply chain M&E. All partners requiring additional information will identify if these requirements fit in with current tools and provide a justification for gathering additional information.
- MOH provincial staff takes leadership in coordinating M&E activities among partners in the field on a monthly basis.
- A central repository (or use existing resources) is developed for supply chain data gathered from site visits.
- Electronic system with all facility level data (dashboard for MSL to service delivery point to programmes) available for use by supervisors throughout the system to monitor performance and monitor stock status.
- Extend current annual audit (which is only for MSL) to include entire supply chain

- Further define details of job
- descriptions to outline clear supply chain responsibilities and defined areas of accountability against KPIs for staff in the supply chain
- Provide continuous development of supervisory and management skills (pre-service and in-service) for supply chain activities.

The following **strategic interventions** were developed to address these issues and challenges:

Intervention 1: MOH Central Supply Chain Monitoring & Evaluation: M&E Unit of MOH shall develop a supply chain M&E plan for the central level (and other levels), including development of M&E tools and indicators, and data/information required for monitoring (from MSL and others).

a. M&E Plan shall include supply chain KPIs, and all levels shall agree on mechanisms for data collection, analysis and communications (dashboards, etc.)
b. MOH to determine whether KPIs might be included in the HMIS.
c. MOH and MCDMCH shall hold ownership and provide funding support for supply chain focused monitoring & evaluation efforts at Central, Provincial and District levels.

- Primary Responsibility: Central: M&E Unit/CCDS; Provincial: M&E/Clinical Care Expert; District: DMO/District Pharmacist
- Other Participants: MSL

Intervention 2: Job Descriptions, Accountability, Staff Key Performance Indicators:

a. At Districts and health facilities, relevant job descriptions (JD) need to outline specific supply chain responsibilities and defined areas of accountability against key performance indicators.
b. Job descriptions shall be linked directly with supply chain standard operating procedures (SOPs).
c. MOH, and other supply chain advocates, shall have high level discussions to promote/develop a supply chain 'cadre' within health services (professionalization of key supply chain roles as distinct from current health care provider job descriptions).

- Primary Responsibility: MOH M&E Unit (MOH Human Resources (HR), MOH Directorate of CCDS, PMOs, DMOs, Hospital Executive Officers / Medical Superintendents
- Other Participants: MSL

Intervention 3: Standard Operating Procedures (SOPs) for Performance Management and Monitoring & Evaluation: Existing SOPs are to be updated to include guidelines and procedures for all supply chain roles and responsibilities - by level. SOPs shall be aligned with changes developed throughout this strategy.

- Primary Responsibility: MSL, MOH CCDS, PMOs, DMOs
- Other Participants: MOH Human Resources

Intervention 4: Supply Chain Audits and Audit Committee: Policy direction on Supply Chain and Health Commodity audits shall be provided by the MOH.

a. MOH to establish an external and independent annual Supply Chain Audit Committee.
b. Consolidation of supply chain audits proposed

c. External and independent annual audit for entire supply chain proposed.

- Primary Responsibility: MOH Directorate of CCDS, MSL, MOH Office of Auditor General

3.8. Thematic Group 8: Capacity - Capacity Building and Training, Human Resources, Human Capacity for Warehousing, Transport and Facility Stores Management

In response to various capacity and human resource issues and challenges, including the following:

Human Resources:

- Inadequate skilled human resources
- Current establishment structure does not meet demands of supply chain / no dedicated job titles for supply chain roles
- Monitoring and evaluation of MOH supply chain is dependent on partner support
- Lack of MOH ownership of supply chain training database
- Poor retention of trained human resources
- Inappropriate attitude towards work by skilled personnel
- Staff regularly redeployed to other duties
- Unstructured task shifting of trained supply chain personnel to other duties thus affecting performance of supply chain activities
- Inadequate funding for supply chain related capacity building

Physical Infrastructure at Facilities:

- Inadequate storage capacity in health facilities
- Storage requirements at facilities may increase under hub warehouse distribution model
- Poor communications infrastructure

The following **Objectives & Related Best Practices** were established:

Human Resources:

- Expand pre-service training for supply chain curricula in pharmacy and nursing schools and maintain at biomedical science schools
- Establish in-service supply chain training centre at MSL
- MOH to lobby Cabinet to create positions for supply chain roles in the establishment to meet demand
- Empower staff working in supply chain management with requisite tools and resources to perform their duties
- Create a budget line for supply chain training
- Extend the existing retention scheme to include other cadres trained in supply chain
- Implement, monitor and evaluate the Annual Performance Appraisal System (APAS)
- Increase workforce to provide time for staff to attend to their primary function in addition to supply chain responsibilities (if separate job titles for supply chain cannot be created)
- Increased funding allocation for MOH supply chain monitoring and evaluation tasks
- Coordinate with partners to support MOH supply chain M&E activities

- Improve MOH capacity to use and manage a supply chain training / skills database

Physical Infrastructure at Facilities:

- Resource mobilization from GRZ and donors aligned with MOH's strategy to address storage challenges at all health facilities (upgrading of stores in terms of physical space and warehouse equipment)
- Development and implement e-based communication system at all levels of the system

The following **strategic interventions** were developed to address these issues and challenges:

Intervention 1: Improved Performance Management Systems for Supply Chain:

a. MOH needs to develop performance management systems and tools for monitoring all aspects and functions of the expanded capacity of the supply chain, including indicators.

- Primary Responsibility: MOH Human Resources Unit, MOH Directorate of CCDS, MSL, District Health Offices and Provincial Health Offices

Intervention 2: Supply Chain Human Resource Skills Strengthened: Empower staff working in supply chain management with requisite tools and resources to perform their duties (building a caring, competent and responsible logistics work force) through in-service training and support in areas such as performance management, supervisory management, technical skills (e.g. - inventory control), and information technology. Supporting strategies include:

a. Establish in-service supply chain training centre at MSL.

b. Develop formal guidance/SOPs on deployment of skilled staff to ensure that supply chain tasks are performed by skilled personnel.
c. Develop strategies to keep staff in positions for which they are trained for a reasonable period following the training.
d. SOP's for supply chain tasks should be introduced / modified for all levels.
e. Implement, monitor and evaluate the Annual Performance Appraisal System (APAS)

- Primary Responsibility: MOH (DCCDS/DPP); MSL

Intervention 3: New Positions/Structures in Healthcare Supply Chain: MOH proposes to Cabinet for creation of structures to increase supply chain workforce in order to meet increased demand (see also TA7, Intervention 2) and to enhance recognition of SC roles and requirements in terms of HR. The MOH shall define an acceptable HR structure for districts and each health facility level in terms of supply chain needs, and shall recruit staff to fill the posts.

- Primary Responsibility: MOH (DCCDS/DPP); MSL

Intervention 4: Supply Chain Skills in New Graduates: Expand pre-service training for supply chain curricula in pharmacy and nursing schools and ensure maintenance of coursework at biomedical science schools.

a. Include pharmacists, pharmacy technicians, lab technicians, and nurses (the latter only until they can be phased out of supply chain activities).

- Primary Responsibility: Ministry of Education/Science & Tech; MOH CCDS

- Other Participants: Ministry of Education/Science and Technology, MSL, General Nursing Council

Intervention 5: Budget Line for Supply Chain Training: Inclusion of a budget line under MOH Human Resources for supply chain training.

- Primary Responsibility: MOH (DCCDS, HRA, DPP); MSL

Intervention 6: Training Database for Supply Chain Skills: Increase actual input of data into supply chain training database, which shall be managed by MSL. MOH/MSL shall ensure that an adequate number of SC staff are trained in the management and use of the supply chain training database.

- Primary Responsibility: MOH Human Resources, MSL
- Other Participants: MOH CCDS

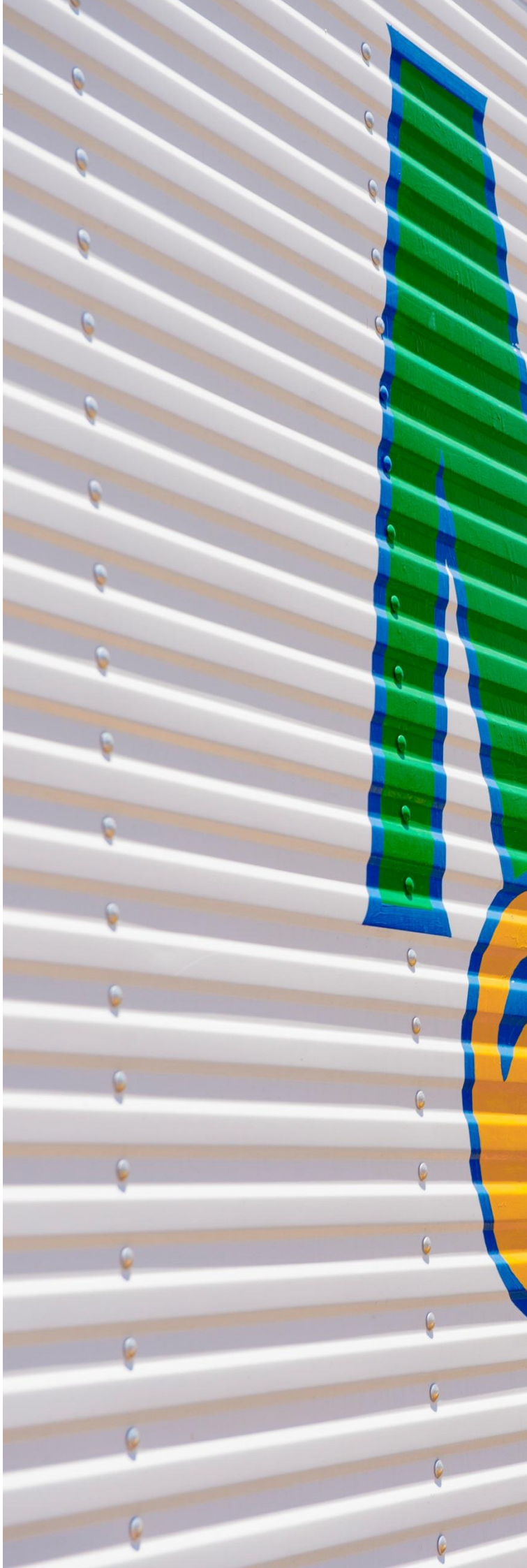
4. Implementation Framework

4.1. Legal and Regulatory Framework

The Supply Chain Strategic Plan has been developed with due consideration of the existing legal and regulatory prerequisites that relate to the procurement, storage, distribution and use of medicines and medical supplies in Zambia. The primary statute for these areas is the Medicines and Allied Substances Act of 2013. The Health Professions Act is also significant, as it regulates the practice of most categories of health practitioners including those who have responsibilities in the management of medicines and medical supplies in health facilities.

The 6th National Health Strategic Plan and the National Drug Policy provide the vision and the goals of the Government in relation to the provision of health care services. These are supported by various disease-specific policies and guidelines. Standard Treatment Guidelines (STGs) and the Essential Medicines List (EML) have been developed to serve as tools to facilitate the provision of health care services.

Finally, the National Drug Quality Control Laboratory, established through the Medicines and Allied Substances Act, has the primary function of facilitating the regulation of medicines and allied substances by ensuring that health commodities available in Zambia meet stipulated minimum standards for safety, efficacy and quality.



4.2. Institutional Framework

The Ministry of Health, Ministry of Community Development, Mother and Child Health and Medical Stores Limited will form the primary institutional framework of the National Supply Chain Strategy.

4.3. Other Implementation and Support Partners

Government line Ministries and Departments: The Ministry of Community Development Maternal and Child Health will take responsibility for operating health facilities in the districts and below (community level). Close collaboration with MOH and MSL will be cardinal for the effective performance of the supply chain at this level of the system.

Ministry of Finance: The MOF has responsibility for managing the national budget and allocating funding to the various government Ministries and agencies like MOH and MSL.

Defence Forces, ZNS and Zambia Police provide health services to their personnel and families through health facilities located in different parts of the country. Although supplies to these facilities go through parallel chains, there is a need for cooperation with the main public sector supply chain to be sure that roles and relationships are clearly defined and national resources optimised.

Private Sector: Private hospitals and pharmacies and pharmaceutical manufacturers and wholesalers are involved in a “parallel supply chain”. Some of the supplies from the private sector are sold for use in public sector facilities through DHOs and hospitals.

Churches Health Association of Zambia (CHAZ): CHAZ provides health services to a substantial portion of Zambia’s population, particularly in rural areas. Supplies to these health facilities are fully managed by CHAZ. However, CHAZ, in the

main, follows the same treatment guidelines as for the public sector. Collaboration with MOH (MSL) on management of supplies, training of personnel etc. in districts where both CHAZ and MOH facilities are found would benefit the supply chain.

Civil Society: Civil society represents the interests of the beneficiaries of supply chain activities and should actively continue to advocate for a well-functioning supply chain for medicines and medical supplies as a contribution to the provision of quality health services to communities and residents of Zambia.

Cooperating Partners (CPs): "The CPs are expected to play an important role in the implementation of the NHSP 2011-15, through provision of financial and technical support to the sector and specific programmes. The Government will work towards strengthening partnerships with the CPs, and harmonisation of their support efforts, for high impact. This will be structured and agreed upon in the Memorandum of Understanding (MOU) which will be signed between the MOH, CPs and CSOs." Similarly, the Supply Chain Strategic Plan will look to the support of the CPs for its successful implementation.

Sector Advisory Group: The SAG is the high level consultative forum for the health sector with membership that includes the MOH, many of the cooperating partners, selected government Ministries and departments, and representatives of the private sector and civil society. The SAG's primary role is to provide advice to the MOH on various aspects of health sector governance. The SAG is also responsible for oversight of the implementation of the 6th National Health Sector Plan (NHSP) and other plans which support the operationalisation of the 6th NHSP, such as the National Supply Chain Strategic Plan.

Zambia Medicines Regulatory Authority (ZMRA): ZMRA has statutory responsibility for regulation of the quality and use of medicines and medical supplies, setting standards of practice and

implementation, providing post marketing surveillance, and regulating important aspects of the promotion of rational drug use (RDU) such as prescribing and dispensing, and improving access to accurate and appropriate product information.

Zambian National Formulary Committee (ZNFC): The ZNFC has responsibility for producing and regularly reviewing the Standard Treatment Guidelines, the Essential Medicines List, and the Essential Laboratory Supplies List, and the Zambia National Formulary. The Committee receives submissions, requests, and reports from health care practitioners and Drug and Therapeutic Committees for use in their review of the above mentioned reference documents.

Section B: Costed Budget for Implementation Plan

	BUDGET YEAR	IMPLEMENTATION PERIOD (TIMELINE)												2015	2016	2017	TOTAL BUDGET
		2015				2016				2017							
1	**THEMATIC AREA 1: Procurement and Procurement Planning**													**3,214,339**	**3,902,879**	**5,038,635**	**12,155,853**
1.1	**Intervention 1. 1: Strengthening of Procurement Units at MSL/MOH/MCDMCH by recruiting additional staff**													**1,181,300**	**1,846,630**	**2,808,893**	**5,836,823**
1.1.1	Recruitment of 15 procurement staff for an effective procurement team at MSL/MOH/MCDMCH		X				X				X			288,000	864,000	1,728,000	2,920,000
1.1.2	Operational interaction meetings for capacity building to coordinate transfer of procurement functions		X			X			X			X		32,490	35,739	39,313	107,542
1.1.3	Joint budgeting meetings for procurement of medicines and medical supplies among stakeholders held		X	X			X	X			X	X		221,660	243,826	268,209	733,695
1.1.4	Preparatory meetings held to prepare the MOH's procurement plan	X				X				X				327,490	360,239	396,263	1,083,992
1.1.5	Meetings held to review actual activities undertaken in the procurement plan for the sector				X				X				X	311,660	342,826	377,109	1,031,595
1.2	**Intervention 1. 2: Procurement and Logistics Technical Working Group: Strengthen the existing Procurement & Logistics Technical Working Group (PTWG) to provide greater leadership in coordination and procurement and planning activities. Also proposed to rename this group as the Supply Chain Technical Working Group.**													**55,490**	**60,073**	**65,114**	**180,677**
1.2.1	Review, amend and adopt the TORs and operationalise the PTWG	X				X				X				45,830	50,413	55,454	151,697
1.2.2	Hold quarterly (at minimum) PTWG meetings			X			X			X			X	9,660	9,660	9,660	28,980
1.3	**Intervention 1.3: Procurement Coordination: To create and maintain mechanisms for coordination and harmonisation of procurement processes with CPs and stakeholders.**													**601,275**	**801,275**	**850,237**	**2,403,825**
1.3.1	Continuous capacity development in Procurement to procurement staff for improved competencies	X				X				X				289,615	489,615	538,577	1,468,845
1.3.2	Review procurement SOPs to reflect changes in the law and international best practices and to meet the objectives of procurement			X				X				X		311,660	311,660	311,660	934,980
1.4	**Intervention 1. 4: Monitoring of Procurement Prices: To monitor procurement prices by implementing mechanisms for the monitoring of procurement prices for essential medicine and medical supply procurements to ensure "value for money" (through annual forecasting and quantification exercises).**													**311,660**	**342,826**	**377,109**	**934,980**
1.4.1	Develop and ensure access of key players to price intelligence databases including the SADC and international price indices on essential medicines and medical supplies including the ZPPA website	X	X		X	X	X	X	X	X	X	X	X				No Cost

	BUDGET YEAR	IMPLEMENTATION PERIOD (TIMELINE)												2015	2016	2017	TOTAL BUDGET
		2015				2016				2017							
1.4.2	Adopt competitive and transparent procurement methods to obtain competitive prices, as provided for under the Public Procurement Act (PPA) 2008	X	X		X	X	X	X	X	X	X	X	X				No Cost
1.4.3	Adopt use of multi-year framework contracts		X		X	X	X		X	X		X					No Cost
1.4.4	Host the review of multi-year framework contracts on half year basis		X		X		X		X		X			311,660	342,826	377,109	934,980
1.5	**Intervention 1.5: Procurement Skills and Audits: All procurement staff shall be oriented and routinely updated on procurement rules, regulations, and best practices. Procurement team shall also be monitored to ensure enforcement of current requirements and to ensure adequate checks and balances. Internal and external procurement audits are expected, so staff must also become familiar with audit processes.**													**855,254**	**656,979**	**722,677**	**2,186,603**
1.5.1	Conduct a procurement skills assessment and the required capacity to undertake procurement and to determine requirements and gaps	X	X	X										258,000			258,000
1.5.2	Exchange visit to institutions with similar business objectives in the region to interact on best practice related issues.		X	X			X	X			X	X		441,424	485,566	534,123	1,461,113
1.5.3	Orientation/training in contract management and governance		X				X				X			155,830	171,413	188,554	467,490
1.6	**Intervention 1.6: Procurement & Supply Chain Management (PSM) Performance Tool - Develop/select national aggregated monitoring tool, which shall be used to manage and hold discussions with procurement & supply partners to engage them in procurement and supply chain monitoring.**													**209,360**	**195,096**	**214,606**	**619,062**
1.6.1	Present the PSM monitoring tool to MOH management for review and approval	X															No Cost
1.6.2	Adopt and use the approved PSM monitoring tool		X														No Costs
1.6.3	Collect actual data for the monitoring tool from SDPs		X		X		X		X		X		X	177,360	195,096	214,606	587,062
1.6.4	Engage Consultant to review the developed PSM monitoring tool				X									32,000			32,000
2	**THEMATIC AREA 2: Quantification and Product Selection**													**1,811,241,458**	**2,175,692,224**	**2,577,118,268**	**6,564,051,950**
2.1	**Intervention 2.1 - Capacity build MOH, MCDMCH, MSL and stakeholder staffs with necessary knowledge and skills necessary to undertake forecasting and quantification processes**													**987,378**	**1,086,116**	**1,194,727**	**3,268,221**
2.1.2	Establishment of National F&Q core group	X															No Cost
2.1.3	Formally train the national core group members, PMO and DCMO supervisors in basic forecasting & quantification processes					X		X		X		X		369,598	406,557.80	447,214	1,223,369

	BUDGET YEAR	IMPLEMENTATION PERIOD (TIMELINE)												2015	2016	2017	TOTAL BUDGET
		2015				2016				2017							
2.1.4	Train PMO and DCMO supervisors in basic supply chain management to enable them attain skills necessary in supervision of health facilities thereby improving timely submission of reports as well as address logistics challenges through interventions and support, including on-the-job training.	X				X				X				617,780	679,558	747,514	2,044,852
2.2	**Intervention 2.2 - National level quantification to utilize a bottom up approach for the collection and reporting of commodity data / information.**													**488,000**	**536,800**	**590,480**	**1,615,280**
2.2.1	Rollout of a tested and MOH approved electronic networked system at health facility levels and DHOs to transmit consumption / issues data to be used for ordering and national level forecasting and quantification	X	X		X	X	X	X	X	X				198,000	217,800	239,580	655,380
2.2.2	Improve capacity for health facility staff to accurately capture and report data to the next level on a timely basis for use in decision making during F&Q through training in logistics management information system	X	X	X	X	X	X	X	X	X	X	X	X	290,000	319,000	350,900	959,900
2.3	**Intervention 2.3 - MSL under the delegation of MOH, to conduct annual and quarterly forecasting and quantification meetings for all essential medicines and medical supplies in collaboration with MOH programmes and cooperating partners and stakeholders.**													**447,667**	**492,433**	**541,677**	**1,481,777**
2.3.1	Annual forecasting and quantification meetings and Workshops		X											670,000	737,000	810,700	2,217,700
2.3.2	Conduct a pre-quantification data analysis with key staff from MOH/MCDMCH/MSL/PMO/DCMO/hospitals to review data required during the annual quantification meetings and to enable (including data input)	X												297,667	327,433	360,177	985,277
2.3.3	Increase involvement in actual inputting, transfer and receipt of data in preparation for F&Q meetings by MOH central level, PMO, DCMO and MSL in close collaboration with stakeholders.	X	X											150,000	165,000	181,500	496,500
2.3.4	MOH facilitates the annual forecasting and quantification meeting for each technical area thereby ensuring increased ownership and coordination of quantification activities the LMU as central repository of all national logistics information		X				X				X						No costs
2.3.5	Submit final individual quantification reports from each technical program to the MOH led National F&Q core group for consideration		X				X				X						No Costs
2.3.6	Submission of consolidated National F&Q report to MOH (Directorate of Policy and Planning) for inclusion in national annual budget		X				X				X						No Costs
2.3.7	Dissemination of MOH quarterly F&Q review outputs to all stakeholders detailing specific commitments by each stakeholder and funding gaps where identified to TWG			X			X			X			X				No Costs
2.4	**Intervention 2.4 - Approval and timely dissemination of quantification results to partners and stakeholders**																

	BUDGET YEAR	IMPLEMENTATION PERIOD (TIMELINE)												2015	2016	2017	TOTAL BUDGET
		2015				2016				2017							
2.4.1	MOH to review, approve and disseminate the annual and quarterly F&Q outputs to stakeholders detailing specific commitments by each stakeholder and funding gaps where identified on a timely basis				X				X				X				No Costs
2.5	**Intervention 2.5 - MOH policy/guidelines for quantification and forecasting to ensure harmonization, timeliness, and comprehensiveness**													**730,000**	**797,700**		**1,527,700**
2.5.1	Develop standardized quantification guidelines for all commodity areas	X	X	X										350,000			350,000
2.5.2	Undertake review of various logistics systems' quantification methodologies based on LMIS data captured and reported	X	X	X	X									380,000			380,000
2.5.3	Develop through general consensus, standardized quantification guidelines for all commodity areas where feasible (review of systems to capture as close as possible to consumption data).				X	X	X	X							332,700		332,700
2.5.4	Printing and dissemination of MOH approved quantification guidelines to all stakeholders				X	X	X	X							465,000		465,000
2.5.5	Incorporation of standardised F&Q curriculum in pre-service training				X	X	X										No Costs
2.5.6	Initiate discussions with higher learning institutions i.e. Pharmacy, Nursing, Laboratory schools.	X	X														No Costs
2.6	**Intervention 2.6 Product Selection**													**2,626,686**	**678,274**	**692,519**	**3,997,479**
2.6.1	Review of national essential commodity lists	X	X	X	X	X	X	X	X	X	X	X	X	19,700	21,670	23,837	65,207
2.6.2	Undertake training of DTCs on rational drug use and STGs	X	X	X	X	X	X	X	X	X	X	X	X	535,824	535,824	535,824	1,607,472
2.6.3	Zambia National Formulary Committee to send out call for submissions from all sectors of the health system on recommendations for addition, deletion or amendments	X				X				X							No Costs
2.6.4	Zambia National Formulary Committee reviews, updates and disseminates approved recommendations	X				X				X				109,800	120,780	132,858	363,438
2.6.5	Drugs and therapeutics committee submit quarterly reports to provincial level and subsequently to the Zambia National Formulary Committee for consideration during product selection	X	X	X	X	X	X	X	X	X	X	X	X				No Costs
2.6.6	Technical areas to submit quarterly STG update reports to Zambia National Formulary Committee for consideration during product selection	X		X		X		X		X		X					No Costs
2.6.7	Pharmacovigilance refresher trainings		X											367,912			367,912
2.6.8	Revision of medicines and medical supplies list (Bi-annual)		X											231,650			231,650
2.6.9	Review facility classification to limit or allow access to specific medicines and/or medical supplies	X	X	X	X									79,450			79,450

	BUDGET YEAR	IMPLEMENTATION PERIOD (TIMELINE)												2015	2016	2017	TOTAL BUDGET
		2015				2016				2017							
2.6.10	Review of emergency preparedness essential commodities list	X	X	X	X									86650			86,650
2.6.11	Printing and dissemination of revised essential commodity list to all levels of the health sector in line with any changes in the STGs	X	X	X	X									996,000			996,000
2.6.12	Standardization of product specifications and pack sizes for commodities earmarked for public sector	X	X	X	X									199,700			199,700
2.7	**Intervention 2.7 : Purchase of Drugs and other Medical Supplies**													**1,805,961,727**	**2,172,100,901**	**2,574,098,865**	**6,552,161,493**
2.7.1	Drugs and Medical Supplies for Districts	X	X	X	X	X	X	X	X	X	X	X	X	148,527,210	207,938,094	291,113,332	647,578,636
2.7.2	Drugs and Medical Supplies for Hospitals	X	X	X	X	X	X	X	X	X	X	X	X	130,300,311	182,420,435	255,388,610	568,109,356
2.7.3	Procurement of Anti Retroviral Drugs	X	X	X	X	X	X	X	X	X	X	X	X	726,210,430	798,831,473	798,831,473	2,323,873,376
2.7.4	Vaccines and Immunization Supplies	X	X	X	X	X	X	X	X	X	X	X	X	137,150,000	142,636,000	148,341,440	428,127,440
2.7.5	Procurement of Tuberculosis Drugs	X	X	X	X	X	X	X	X	X	X	X	X	34,075,316	47,705,442	66,787,619	148,568,378
2.7.6	Procurement of RH Commodities	X	X	X	X	X	X	X	X	X	X	X	X	32,064,556	44,890,378	62,846,530	139,801,464
2.7.7	Procurement of Cancer Drugs	X	X	X	X	X	X	X	X	X	X	X	X	62,118,353	86,965,694	121,751,972	270,836,019
2.7.8	Procurement of Medical and Surgical Supplies	X	X	X	X	X	X	X	X	X	X	X	X	60,268,984	84,376,578	118,127,209	262,772,770
2.7.9	Blood Transfusion Commodities	X	X	X	X	X	X	X	X	X	X	X	X	65,107,594	91,150,632	127,610,884	283,869,110
2.7.10	Procurement of Malaria Drugs	X	X	X	X	X	X	X	X	X	X	X	X	140,699,360	196,979,104	275,770,746	613,449,210
2.7.11	Procurement of Lab Reagents	X	X	X	X	X	X	X	X	X	X	X	X	225,161,391	234,167,847	243,534,561	702,863,798
2.7.12	Procurement of Specialised Medical Imaging and Consumable Supplies	X	X	X	X	X	X	X	X	X	X	X	X	17,777,264	24,888,170	34,843,437	77,508,871
2.7.13	Procurement of Specialised Medical Commodities and Supplies	X	X	X	X	X	X	X	X	X	X	X	X	26,500,958	29,151,054	29,151,054	84,803,066
3	**THEMATIC AREA 3: Commodity Distribution (Distribution network, warehouse, infrastructure, inventory management, transport, waste management)**													**447,214,543**	**714,366,805**	**787,552,768**	**1,949,094,116**
3.1	**Intervention 3.1: Distribution**													**321,585,200**	**536,900,607**	**682,155,008**	**1,540,640,816**

	BUDGET YEAR	IMPLEMENTATION PERIOD (TIMELINE)												2015	2016	2017	TOTAL BUDGET
		2015				2016				2017							
3.1.1	Extension of MSL central warehouse				X									10,880,000			10,880,000
3.1.2	Operationlisation of regional hubs	X	X	X	X	X	X	X	X	X	X	X	X	15,600,000	21,600,000	24,000,000	61,200,000
3.1.3	Operationlisation of regional staging post	X	X	X	X	X	X	X	X	X	X	X	X	292,380,540	511,665,945	657,856,216	1,461,902,701
3.1.4	Review the hub and staging posts establishment				X				X				X		358,000		358,000
3.1.5	Review and develop plan for integrating programme commodities into the supply chain (e.g. - TB, nutrition and vaccines)						X							246,936	271,630	298,793	817,358
3.1.6	Implement plan for integrating programme commodities					X	X	X	X						1,349,832		1,349,832
3.1.7	Harmonise ordering processes and systems (One order per facility from all sections to MSL)	X	X	X	X	X	X	X	X					342,936	377,230		720,166
3.1.8	Develop Standard Operating Procedures (SOPs) for all commodity management activities (done)	X												244,000			244,000
3.1.9	Printing of revised SOPs in logistics management for health facilities (5 facilities)			X	X									250,000			250,000
3.1.10	Develop training manuals for SOPs				X	X	X	X						174,000	535,563		709,563
3.1.11	TOT training in SOPs for Provincial Pharmacist plus 2 others per province					X	X								198,936		198,936
3.1.12	Conduct an on the job training for facilities by Provincial Team				X	X	X	X	X					674,916	742,408		1,417,324
3.1.13	Define roles and responsibilities of staff and supervisors expected to support supply chain activities (Operation Manual)		X											592,936			592,936
3.2	**Strategic Intervention3.2: MSL to implement distribution using a series of cross-docking hubs/ warehouses and staging posts to the last mile depending on the sector needs.**													**117,595,870.00**	**169,999,270.00**	**98,139,160.00**	**385,694,301.00**
3.2.1	Develop and agree on concept note for central level		X											184,000			144,000
3.2.2	Develop and agree on concept note for peripheral level			X										144,000			144,000
3.2.3	Setup distribution network systems				X									358,000			358,000
3.2.4	Route scheduling and modelling				X									358,000			358,000
3.2.5	Acquire hub infrastructure and related equipment		X	X	X	X	X	X	X	X	X	X	X	32,159,000	35,374,900	38,912,390	106,446,290
3.2.6	Land acquisition		X	X	X	X	X	X	X	X	X	X	X	900,000	900,000	1,200,000	3,000,000

	BUDGET YEAR	IMPLEMENTATION PERIOD (TIMELINE)												2015	2016	2017	TOTAL BUDGET
		2015				2016				2017							
3.2.7	Communication campaigns		X	X	X	X	X	X	X	X	X	X	X	397,870	397,870	397,870	1,193,611
3.2.8	Training of selected staff		X	X	X	X	X	X	X	X	X	X	X	340,000	374,000	411,400	1,125,400
3.2.9	Construction of Luanshya hub with office space and proposed floor area of 6,000 square meter class extra large		X	X	X	X	X	X	X	X	X	X	X	10,500,000	17,500,000	7,000,000	35,000,000
3.2.10	Construction of Kasama hub with office space and proposed floor area of 2,000 square meter class large		X	X	X	X	X	X	X	X	X	X	X	3,510,000	5,850,000	2,340,000	11,700,000
3.2.11	Construction of Choma hub (operational) with office space and proposed floor area of 1,500 square meter class small		X	X	X	X	X	X	X	X	X	X	X	2,632,500	4,387,500	1,755,000	8,775,000
3.2.12	Construction of Livingstone hub with office space and proposed floor area of 1,000 square meter class small		X	X	X	X	X	X	X	X	X	X	X	1,755,000	2,925,000	1,170,000	5,850,000
3.2.13	Construction of Chipata hub (Operational) with office space and proposed floor area of 2,000 square meter class large		X	X	X	X	X	X	X	X	X	X	X	3,510,000	5,850,000	2,340,000	11,700,000
3.2.14	Construction of Chama hub with office space and proposed floor area of 500 square meter class extra large		X	X	X	X	X	X	X	X	X	X	X	877,500	1,462,500	585,000	2,925,000
3.2.15	Construction of Solwezi hub with office space and proposed floor area of 1,500 square meter class medium		X	X	X	X	X	X	X	X	X	X	X	4,387,500	2,632,500	1,755,000	8,775,000
3.2.16	Construction of Mongu hub (Operational) with office space and proposed floor area of 1,500 square meter class medium		X	X	X	X	X	X	X	X	X	X	X	1,755,000	2,632,500	4,387,500	8,775,000
3.2.17	Construction of Mansa hub with office space and proposed floor area of 1,500 square meter class medium		X	X	X	X	X	X	X	X	X	X	X	2,632,500	4,387,500	1,755,000	8,775,000
3.2.18	Construction of Mkushi hub with office space and proposed floor area of 1,000 square meter class small		X	X	X	X	X	X	X	X	X	X	X	1,755,000	2,925,000	1,170,000	5,850,000
3.2.19	6 Lusaka District Storage Hubs with office space		X	X	X	X	X	X	X	X	X	X	X	2,340,000	3,900,000	1,560,000	7,800,000
3.2.20	Health Centre Storage@520,000 each x 100 health centres with office space		X	X	X	X	X	X	X	X	X	X	X	15,600,000	26,000,000	10,400,000	52,000,000
3.2.21	10 provincial hubs with office space		X	X	X	X	X	X	X	X	X	X	X	31,500,000	52,500,000	21,000,000	105,000,000
3.3	**Strategic Intervention 3.3: Optimize transport resources and routing for distribution. a) MOH shall be responsible for resource mobilization to support vehicle procurement and fleet management needs, including GRZ funds.**													**5,588,843**	**6,147,727**	**6,762,500**	**18,499,070**
3.3.1	Conduct need assessment / establish transport requirements for support of new delivery mandate, including fuel and per diem estimates		X	X										358,843	394,727	434,200	1,187,770

	BUDGET YEAR	IMPLEMENTATION PERIOD (TIMELINE)												2015	2016	2017	TOTAL BUDGET
		2015				2016				2017							
3.3.2	Procurement of vehicles		X	X	X	X	X	X	X	X	X	X	X	5,230,000	5,753,000	6,328,300	17,311,300
3.4	**Intervention 3.4: Improve storage capacity at existing and future health facilities, and districts: MOH shall actively seek to improve physical storage conditions in existing facilities, to standardize the health facility design so that health facilities built in the future include adequate stores, and to re-enforce adherence to construction plans if/when revised.**													**784,787**	**165,000**	**181,500**	**1,131,287**
3.4.1	Conduct a needs assessment of storage capacity for health facilities and Districts.	X	X	X	X									358,843			358,843
3.4.2	Develop a plan of action for upgrading storage facilities which seeks to address deficiencies in existing facilities and design of new facilities				X									137,972			137,972
3.4.3	Hold consultative meeting to review action for MOH and determine feasibility for addressing storage capacity challenges over time with key stakeholders	X												137,972			137,972
3.4.4	MOH improves storage facilities and conditions over time	X	X	X	X	X	X	X	X	X	X	X	X	150,000	165,000	181,500	496,500
3.5	**Intervention 3.5: Ensure correct disposal of pharmaceutical wastes from all levels of the supply chain: Design system-wide approach, develop Implementation Plan (IP), and seek funding.**													**1,659,843**	**1,154,200**	**314,600**	**3,128,643**
3.5.1	Preparation of a waste management plan for supplies and other essential drugs						X								129,000		129,000
3.5.2	Development/Adapt SOP for waste collection and disposal at central level			X										205,000			205,000
3.5.3	Preparation of detailed action plans and budgets to deal with existing back log		X				X				X			197,000	216,700	238,370	652,070
3.5.4	Agree on a long term option for disposal/incineration of drug waste	X												164,000			164,000
3.5.5	Identity causes of expiry, presence of obsolete and damaged drugs and lab supplies as well as actions to avoid the same in the future	X												358,843			358,843
3.5.6	Procure and install an incinerator for pharmaceutical waste at central level				X	X	X							672,000	739,200		1,411,200
3.5.7	Regular disposal of expired, obsolete and damaged drugs and lab supplies	X	X	X	X	X	X	X	X	X	X	X	X	63,000	69,300	76,230	208,530
4	**THEMATIC AREA 4: Information Systems and processes, including LMIS, LMIS design and communication of information**													**8,067,490**	**17,053,220**	**9,961,936**	**35,082,646**
4.1	**Intervention 4.1: MOH ICT Policy: MOH should update ICT policy to include supply chain needs and support.**													**195,899**	**581,294**		**777,193**

	BUDGET YEAR	IMPLEMENTATION PERIOD (TIMELINE)												2015	2016	2017	TOTAL BUDGET
		2015				2016				2017							
4.1.1	Revision of ICT policy (in line with SCM ICT Policy)		X											41,200			41,200
4.1.2	Hold ICT policy Consensus Meetings with key stakeholders			X										106,884			106,884
4.1.3	Finalisation of Updated ICT Policy				X									47,815			47,815
4.1.4	Printing of the Approved ICT policy (1000 copies)						X	X							519,000		519,000
4.1.5	Dissemination of approved ICT Policy								X						62,294		62,294
4.2	**Intervention 4.2: Integration of orders between SDPs and MSL: A plan is needed to identify ways to consolidate facility orders before arrival at MSL, using computerization at facilities and Districts to facilitate one delivery per month. As an interim measure, the various orders should be electronically consolidated prior to delivery to MSL/LMU. All future projects (including immunisation, TB, etc.) should fit into consolidated ordering framework; i.e. - no separate reporting/ordering mechanisms. The desired goal is to have one consolidated order per month (order interval) per facility which results in one delivery per month (order interval) per facility and/or District for all health commodities which are managed by MSL.**													**7,681,787**	**15,981,669**	**9,938,014**	**35,090,969**
4.2.1	Procure/ develop computerised LMIS for all levels of the supply chain	X	X			X	X			X	X			798,205	878,025	965,827	2,642,057
4.2.2	Pilot Computerised LMIS (at least 2 institution per level)	X	X											250,740			250,740
4.2.3	Post Pilot Evaluation of Computerised LMIS			X	X									252,245			252,245
4.2.4	Institutional ICT Capacity Assessment of Hospitals & Districts Countrywide	X	X	X	X									399,140			399,140
4.2.5	Printing LMIS tools					X	X	X	X						150,000		150,000
4.2.6	Phased national roll-out of Computerised LMIS - Procurement of ICT hardware and installation(networking) - TOT Computerised LMIS - Training of users - System back stopping	X	X	X	X	X	X	X	X	X	X	X	X	5,981,458	14,953,644	8,972,186	29,907,288
4.2.7	Undertake tours in countries implementing eLMIS		X		X			X				X	X	450,000	495,000	544,500	1,489,500
4.3	**Intervention 4.3: Guidance for use of Electronic Information Systems for Supply Chain Management: The current and future supply chain electronic information systems are integrated and will be based on the outcome of 2.4 and will ensure needs are met and duplication is avoided. Existing systems need to be linked and fully interfaced if they continue to be utilized. Resources need to be found for system-wide implementation.**														**468,510**		**468,510**
4.3.1	Develop SC ICT implementation guidelines					X									218,510		218,510
4.3.2	Dissemination of guidelines to the users - Printing of 1000 copies					X	X								250,000		250,000
4.4	**Intervention 4.4: Improved ICT Infrastructure and Internet Access: Develop sustainable capital replacement and maintenance policies and guidelines for essential ICT equipment required throughout the supply chain. MOH should facilitate a national electronic networking system needs assessment to determine which Districts and facilities still lack access to regular internet (for data transfer). Develop and implement e-based communication system at health facilities, Districts, Provinces, and all levels of MSL.**													**189,805**	**21,748**	**23,922**	**235,474**

	BUDGET YEAR	IMPLEMENTATION PERIOD (TIMELINE)												2015	2016	2017	TOTAL BUDGET
		2015				2016				2017							
4.4.1	Hold bi-annual advocacy Meetings with key stakeholders in the ICT industry - 1 day meeting (40 participants)		X		X		X		X		X		X	19,771	21,748	23,922	65,440
4.2.2	Develop an e-based communication system plan for health facilities, Districts, Provinces, and all levels of service delivery.	X												70,870			70,870
4.4.3	Develop ICT equipment maintenance and replacement plan				X									99,164			99,164
5	**THEMATIC AREA 5: Quality Assurance and Rational Drug Use**													**7,801,597**	**5,253,757**	**8,153,030**	**21,208,384**
5.1	**Intervention 5.1 - Establishment and strengthening technical capacity of a National Drug Quality Control Laboratory (NDQCL)**														**329,000**	**4,799,078**	**5,128,078**
5.1.1	Procurement of reference standards, reagents, supplies and equipment					X	X	X	X							532,843	532,843
5.1.2	Procurement of Equipment					X	X	X	X							3,732,840	3,732,840
5.1.3	Training of NDQCL staff i.e. laboratory equipment use, quality control etc					X	X	X	X						329,000		329,000
5.1.4	Develop and implement Standard operating procedure manuals for the NDQCL inline with WHO guidelines					X	X	X	X							389,000	389,000
5.1.5	Activities towards attainment of WHO pre-qualification		X	X	X	X	X	X	X							144,395	144,395
5.2	**Intervention 5.2 - NDQCL Quality control and quality assurance function**													**1,339,864**	**1,275,850**	**513,854**	**3,129,569**
5.2.1	Undertake QC for medicines and medical supplies for Zambian market	X	X	X	X	X	X	X	X	X	X	X	X	214,844	236,328	259,961	711,133
5.2.2	Review storage and warehousing QA SOPs for health facilities			X	X	X	X	X						735,191	808,710		1,543,901
5.2.3	Inspect storage and warehousing conditions at health facilities	X	X	X	X	X	X	X	X	X	X	X	X	60,000	66,000	72,600	198,600
5.2.4	Undertake QC for medicines and medical supplies sampled at all levels of the supply chain (Pharmacovigilance)	X	X	X	X	X	X	X	X	X	X	X	X	149,829	164,812	181,293	495,935
5.2.5	ZAMRA GMP inspection in close collaboration with procurement unit and MSL		X	X										180,000			180,000
5.3	**Intervention 5.3 - Quality Control for medicines and medical supplies received at MSL**													**2,264,733**	**2,552,207**	**2,777,177**	**7,594,117**
5.3.1	Review storage and warehousing QA SOPs	X				X								25,000	27,500		52,500
5.3.2	MSL laboratory QC capacity	X				X	X			X				2,239,733	2,463,707	2,710,077	7,413,517

	BUDGET YEAR	IMPLEMENTATION PERIOD (TIMELINE)												2015	2016	2017	TOTAL BUDGET
		2015				2016				2017							
5.3.3	MSL to undertake QC for medicines and medical supplies received	X	X	X	X	X	X	X	X	X	X	X	X				No costs
5.3.4	Increased funding to undertake timely disposal of medicines and medical supplies waste at MSL				X				X				X				No costs
5.3.5	Institute measures to mitigate pharmaceutical waste i.e. monthly supply monitoring versus program implementation, forecasting review meetings to inform procurement processes, prescribing trends monitored and in cooperated into quantification process, advance notice for change of regimen, operational research in supply chain at different levels of the system.				X				X				X				No costs
5.3.6	Timely disposal of unusable medicines and medical supplies at Health facilities	X	X	X	X	X	X	X	X	X	X	X	X				No costs
5.3.7	Strengthening and stringent implementation of guidelines for donations					X	X	X	X	X	X	X	X		61,000	67,100	128,100
5.4	**Intervention 5.4- Improved inter-Agency collaboration**																
5.4.1	Regular supply chain and QA consultative meetings between MOH, MCDMCH, ZAMRA & MSL to address cross cutting issues.			X	X	X	X	X	X	X	X	X	X				No costs
5.5	**Intervention 5.5 - Rational Drug Use: Increase capacity for clinical staff in rational drug use**													**4,197,000**	**1,096,700**	**62,920**	**5,356,620**
5.5.1	Advocate for funding for RDU activities at provincial and district level		X	X	X	X	X	X	X	X	X	X	X				No costs
5.5.2	Conduct quarterly provincial Action Plan review meetings		X			X				X		X		52,000	57,200	62,920	172,120
5.5.3	Build capacity in rational drug use (RDU) programmes at all levels of the system through training, comprehensive drug use programme and support rational drug use activities at the central, district and SDP levels		X	X	X	X	X	X	X					945,000	1,039,500		1,984,500
5.5.4	Undertake National Drug use survey.			X	X	X								1,500,000			1,500,000
5.5.5	Mentorship programmes for clinicians in adherence to STGs and SOPs				X									350,000			350,000
5.5.6	Pricing availability study of medicines and medical supplies				X									1,350,000			1,350,000
6	**THEMATIC AREA 6: Commodity Security, Financing and Resource Mobilisation**													**2,964,015**	**1,432,175**		**4,396,190**
6.1	**Intervention 6.1: Resource Mobilization & Sustainability**													**327,020**			**327,020**
6.1.1	Prioritise financing of the national supply chain programs			X	X	X											No costs

	BUDGET YEAR	IMPLEMENTATION PERIOD (TIMELINE)												2015	2016	2017	TOTAL BUDGET
		2015				2016				2017							
6.1.2	Develop an information package for drugs and medical supplies to be used for lobbying for increased resources from MoF		X	X	X									75,135			75,135
6.1.3	Lobby for partners to support the drug supply budget line in order to reduce the funding gap.				X	X											No costs
6.1.4	Formulate and implement business plan for MSL aimed at self-financing			X										75,135			75,135
6.1.5	Develop proposal for charging of fees to MOH/MOF and other clients for SC services provided by MSL			X										176,750			176,750
6.1.6	Submit proposal for charging of fees for review and approval by MOH & MOF	X	X	X	X	X	X	X	X	X	X	X	X				No costs
6.2	**Intervention 6.2: Budgeting & Supply Chain Financing**													**2,636,995**	**1,432,175**		**4,069,170**
6.2.1	Assess full cost of supply chain from central functions to end users for use in budgetary allocation to support supply chain functions.	X	X	X										280,000			280,000
6.2.2	Coordinate monthly SC TWG meetings to share and address challenges as well as successes		X					X				X					No costs
6.2.3	Create and implement a commodity security (CS) plan	X	X	X	X									1,244,585			1,244,585
6.2.4	Formulate a commodity security policy for health commodities					X	X	X	X	X	X	X	X		1,176,750		1,176,750
6.2.5	Undertake baseline national assessment of storage infrastructure in all health facilities (This issue is address in TA3, Intervention 5; it is included here only to indicate its importance as a long-term sustainability challenge.)				X									261,250			261,250
6.2.6	Develop plan of action for building relationships with, and roles of, local and/or regional manufacturers of essential medicines and medical supplies					X	X	X	X						255,425		255,425
6.2.7	Train health workers in SC tasks and responsibilities, as required	X	X	X	X									851,160			851,160
7	**THEMATIC AREA 7: Performance Management, M&E and Supply Chain Supervision**													**4,903,443**	**2,248,695**	**805,966**	**7,958,104**
7.1	**Intervention 7.1: MOH Central Supply Chain Monitoring & Evaluation Planning: M&E Unit of MOH shall develop a supply chain M&E plan for the central level (and other levels), including development of M&E tools and indicators, and data/information required for monitoring.**													**2,076,457**	**1,515,999**		**3,592,456**
7.1.1	Develop M&E Framework for the monitoring of various SC activities and functions				X									576,768			576,768
7.1.2	Develop M&E tools for collecting information required for adequate monitoring						X								137,972		137,972
7.1.3	Develop M&E program from central level to SDP level, and assign responsibilities through JDs and SOPs	X	X	X	X	X	X							246,937			246,937

	BUDGET YEAR	IMPLEMENTATION PERIOD (TIMELINE)												2015	2016	2017	TOTAL BUDGET
		2015				2016				2017							
7.1.4	Disseminate M&E Framework and SOPs, and provide training as required				X	X								1,252,752	1,378,027		2,630,779
7.2	**Intervention 7.2: Standard Operating Procedures (SOPs) for Performance Management and Monitoring & Evaluation: Existing SOPs are updated to include guidelines and procedures for all supply chain roles and responsibilities - by level. SOPs shall be aligned with changes developed throughout this strategy.**													**1,013,211**			**1,013,211**
7.2.1	Develop SC M&E framework Standard Operating Procedures (SOPs)		X											264,884			264,884
7.2.2	Printing of SC M&E framework SOPs			X										300,000			300,000
7.2.3	Develop a training manuals for SOPs		X											149,540			149,540
7.2.4	SC M&E framework TOT training/ dissemination for Provincial Pharmacist plus 2 others per province				X									298,787			298,787
7.3	**Intervention 7.3: Supply Chain Audit Committee: Policy direction on Supply Chain and Health Commodity audits shall be provided by MOH.**													**1,813,775**	**732,696**	**805,966**	**3,352,437**
7.3.1	Establish Product Destination Audit Committees (including all key stakeholders)		X											1,058,257			1,058,257
7.3.2	Develop SC auditing tools and procedures		X											89,430			89,430
7.3.3	Undertake quarterly Supply Chain Audits from central to SDP level that are coordinated and serve as many purposes as possible		X	X	X	X	X	X	X	X	X	X	X	166,087	182,696	200,966	549,749
7.3.4	Annual Third Party Monitoring of SC (Demand side governance)				X				X				X	500,000	550,000	605,000	1,655,000
8	**THEMATIC AREA 8: Capacity, Human Resources, Training and Facility Stores HR**													**4,005,192**	**8,044,989**	**4,181,300**	**66,845,554**
8.1	**Intervention 8.1: Performance management**													**4,005,192**	**8,044,989**	**4,181,300**	**66,845,554**
8.1.1	Training of Trainer on Performance Management (PMP)	X	X											576,768			1,357,300
8.1.2	Orient staff in the Performance Management Package(PMP)	X	X	X	X									137,972			47,889,450
8.1.3	Monitoring and Evaluation for the implementation of the PMP					X	X	X							246,937		549,000
8.1.4	Stakeholder Consensus meetings on the revision of key curricula(Training Institutions, MoH, Partners & others)						X	X						1,252,752	1,252,752		2,505,504
8.1.5	Review curriculum for: Nursing, Pharmacy, Laboratory, COG and other curricula					X	X	X	X	X					580,000		2,360,000
8.1.6	Finalisation and printing of the Curricula					X	X	X	X	X					300,000		300,000
8.1.7	Mid-term review of the implementation of the revised curricula											X	X			438,500	438,500

	BUDGET YEAR	IMPLEMENTATION PERIOD (TIMELINE)												2015	2016	2017	TOTAL BUDGET
		2015				2016				2017							
8.1.8	Monitoring and Evaluation of the implementation of the revised curricula									X	X	X	X			549,000	549,000
8.1.9	Develop in-service training curricula for supply chain		X	X	X									691,700			691,700
8.1.10	Develop in-service training manuals					X	X	X							691,700		691,700
8.1.11	Printing of Training Materials	X	X	X	X	X	X	X	X	X	X	X	X	250,000	275,000	302,500	827,500
8.1.12	Training of Trainers at National and Provincial level					X	X	X	X						1,357,300		1,357,300
8.1.13	Taylor made trainings (short term trainings)					X	X	X	X	X	X	X	X		2,340,950	2,340,950	4,681,900
8.1.14	Mentorship programs					X	X	X	X	X	X	X	X		550,350	550,350	1,100,700
8.1.15	Review the existing structures		X	X	X									746,000			746,000
8.1.17	Conduct Job Analysis		X	X	X									350,000			350,000
8.1.18	Consolidate the revised structure					X	X	X	X						450,000		450,000
8.1.19	Seek approval for the revised structure from Cabinet Office					X	X	X	X								No costs
8.1.20	Seek Treasury Authority to fund approved structure	X	X	X	X	X	X	X	X	X	X	X	X				No costs
													TOTAL	**2,289,412,078**	**2,896,994,744**	**3,392,811,904**	**8,660,798,915**

SECTION C: RESOURCE MOBILISATION, PLEDGES AND GAP

	BUDGET YEAR	SOURCE OF FUNDS 2015	SOURCE OF FUNDS 2016	SOURCE OF FUNDS 2017	TOTAL MOBILISED	TOTAL BUDGET	GAP
1	**THEMATIC AREA 1: Procurement and procurement planning**					**12,155,853**	
1.1	**Intervention 1.1: Procurement Unit: Establish a procurement unit (PU) within MSL to procure essential medicines and medical supplies.**					**3,916,823**	
1.1.1	Recruitment of 5 procurement staff for an effective procurement team at MSL					960,000	
1.1.2	Operational interaction meetings for capacity building to coordinate transfer of procurement functions					107,542	
1.1.3	Joint budgeting meetings for procurement of medicines and medical supplies among stakeholders held					733,695	
1.1.4	Preparatory meetings held to prepare the MOH's procurement plan					1,083,992	
1.1.5	Meetings held to review actual activities undertaken in the procurement plan for the sector					1,031,595	
1.2	**Intervention 1.2: Procurement and Logistics Technical Working Group: Strengthen the existing Procurement & Logistics Technical Working Group (PTWG) to provide greater leadership in coordination and procurement and planning activities. Also proposed to rename this group as the Supply Chain Technical Working Group.**					**180,677**	
1.2.1	Review, amend and adopt the TORs and operationalise the PTWG					151,697	
1.2.2	Hold quarterly (at minimum) PTWG meetings					28,980	
1.3	**Intervention 1.3: Procurement Coordination: To create and maintain mechanisms for coordination and harmonisation of procurement processes with CPs and stakeholders.**					**2,403,825**	
1.3.1	Continuous capacity development in Procurement to procurement staff for improved competencies					1,468,845	
1.3.2	Review procurement SOPs to reflect changes in the law and international best practices and to meet the objectives of procurement					934,980	
1.4	**Intervention 1.4: Monitoring of Procurement Prices: To monitor procurement prices by implementing mechanisms for the monitoring of procurement prices for essential medicine and medical supply procurements to ensure "value for money" (through annual forecasting and quantification exercises).**					**934,980**	

	BUDGET YEAR	SOURCE OF FUNDS 2015	SOURCE OF FUNDS 2016	SOURCE OF FUNDS 2017	TOTAL MOBILISED	TOTAL BUDGET	GAP
1.4.1	Develop and ensure access of key players to price intelligence databases including the SADC and international price indices on essential medicines and medical supplies including the ZPPA website					No Cost	
1.4.2	Adopt competitive and transparent procurement methods to obtain competitive prices, as provided for under the Public Procurement Act (PPA) 2008					No Cost	
1.4.3	Adopt use of multi-year framework contracts					No Cost	
1.4.4	Host the review of multi-year framework contracts on half year basis					934,980	
1.5	**Intervention 1.5: Procurement Skills and Audits: All procurement staff shall be oriented and routinely updated on procurement rules, regulations, and best practices. Procurement team shall also be monitored to ensure enforcement of current requirements and to ensure adequate checks and balances. Internal and external procurement audits are expected, so staff must also become familiar with audit processes.**					**2,186,603**	
1.5.1	Conduct a procurement skills assessment and the required capacity to undertake procurement and to determine requirements and gaps					258,000	
1.5.2	Exchange visit to institutions with similar business objectives in the region to interact on best practice related issues.					1,461,113	
1.5.3	Orientation/training in contract management and governance					467,490	
1.6	**Intervention 1.6: Procurement & Supply Chain Management (PSM) Performance Tool - Develop/select national aggregated monitoring tool, which shall be used to manage and hold discussions with procurement & supply partners to engage them in procurement and supply chain monitoring.**					**32,587,062**	
1.6.1	Present the PSM monitoring tool to MOH management for review and approval					No Cost	
1.6.2	Adopt and use the approved PSM monitoring tool					No Costs	
1.6.3	Collect actual data for the monitoring tool from SDPs					587,062	
1.6.4	Engage Consultant to review the developed PSM monitoring tool					32,000	
1.6.5	Present monitoring reports to the PTWG					No Costs	
2	**THEMATIC AREA 2: Quantification and Product Selection**					**6,564,051,950**	
2.1	**Intervention 2.1 - Capacity build MOH, MCDMCH, MSL and stakeholder staffs with necessary knowledge and skills necessary to undertake forecasting and quantification processes**					**3,268,221**	
2.1.2	Establishment of National F&Q core group					No Cost	

	BUDGET YEAR	SOURCE OF FUNDS 2015	SOURCE OF FUNDS 2016	SOURCE OF FUNDS 2017	TOTAL MOBILISED	TOTAL BUDGET	GAP
2.1.3	Formally train the national core group members, PMO and DCMO supervisors in basic forecasting & quantification processes					1,223,369	
2.1.4	Train PMO and DCMO supervisors in basic supply chain management to enable them attain skills necessary in supervision of health facilities thereby improving timely submission of reports as well as address logistics challenges through interventions and support, including on-the-job training.					2,044,852	
2.2	**Intervention 2.2 - National level quantification to utilize a bottom up approach for the collection and reporting of commodity data / information.**					**1,615,280**	
2.2.1	Rollout of a tested and MOH approved electronic networked system at health facility levels and DHOs to transmit consumption / issues data to be used for ordering and national level forecasting and quantification					655,380	
2.2.2	Improve capacity for health facility staff to accurately capture and report data to the next level on a timely basis for use in decision making during F&Q through training in logistics management information system					959,900	
2.3	**Intervention 2.3 - MSL under the delegation of MOH, to conduct annual and quarterly forecasting and quantification meetings for all essential medicines and medical supplies in collaboration with MOH programmes and cooperating partners and stakeholders.**					**1,481,777**	
2.3.1	Annual forecasting and quantification meetings					2,217,700	
2.3.2	Conduct a pre-quantification data analysis with key staff from MOH/MCDMCH/MSL/PMO/DCMO/hospitals to review data required during the annual quantification meetings and to enable (including data input)					985,277	
2.3.3	Increase involvement in actual inputting, transfer and receipt of data in preparation for F&Q meetings by MOH central level, PMO, DCMO and MSL in close collaboration with stakeholders.					496,500	
2.3.4	MOH facilitates the annual forecasting and quantification meeting for each technical area thereby ensuring increased ownership and coordination of quantification activities the LMU as central repository of all national logistics information					No costs	
2.3.5	Submit final individual quantification reports from each technical program to the MOH led National F&Q core group for consideration					No Costs	
2.3.6	Submission of consolidated National F&Q report to MOH (Directorate of Policy and Planning) for inclusion in national annual budget					No Costs	
2.3.7	Dissemination of MOH quarterly F&Q review outputs to all stakeholders detailing specific commitments by each stakeholder and funding gaps where identified to TWG					No Costs	
2.4	**Intervention 2.4 - Approval and timely dissemination of quantification results to partners and stakeholders**						
2.4.1	MOH to review, approve and disseminate the annual and quarterly F&Q outputs to stakeholders detailing specific commitments by each stakeholder and funding gaps where identified on a timely basis					No Costs	

	BUDGET YEAR	SOURCE OF FUNDS 2015	SOURCE OF FUNDS 2016	SOURCE OF FUNDS 2017	TOTAL MOBILISED	TOTAL BUDGET	GAP
2.5	**Intervention 2.5 - MOH policy/guidelines for quantification and forecasting to ensure harmonization, timeliness, and comprehensiveness.**					**1,527,700**	
2.5.1	Develop standardized quantification guidelines for all commodity areas					350,000	
2.5.2	Undertake review of various logistics systems' quantification methodologies based on LMIS data captured and reported					380,000	
2.5.3	Develop through general consensus, standardized quantification guidelines for all commodity areas where feasible (review of systems to capture as close as possible to consumption data).					332,700	
2.5.4	Printing and dissemination of MOH approved quantification guidelines to all stakeholders					465,000	
2.5.5	In corporation of standardised F&Q curriculum in pre-service training					No Costs	
2.5.6	Initiate discussions with higher learning institutions i.e. Pharmacy, Nursing, Laboratory schools.					No Costs	
2.6	**Intervention 2.6 : Product Selection**					**3,997,479**	
2.6.1	Review of national essential commodity lists					65,207	
2.6.2	Undertake training of DTCs on rational drug use and STGs					1,607,472	
2.6.3	Zambia National Formulary Committee to send out call for submissions from all sectors of the health system on recommendations for addition, deletion or amendments					No Costs	
2.6.4	Zambia National Formulary Committee reviews, updates and disseminates approved recommendations					363,438	
2.6.5	Drugs and therapeutics committee submit quarterly reports to provincial level and subsequently to the Zambia National Formulary Committee for consideration during product selection					No Costs	
2.6.6	Technical areas to submit quarterly STG update reports to Zambia National Formulary Committee for consideration during product selection					No Costs	
2.6.7	Pharmacovigilance refresher trainings					367,912	
2.6.8	Revision of medicines and medical supplies list (Bi-annual)					231,650	
2.6.9	Review facility classification to limit or allow access to specific medicines and/or medical supplies					79,450	
2.6.10	Review of emergency preparedness essential commodities list					86,650	
2.6.11	Printing and dissemination of revised essential commodity list to all levels of the health sector in line with any changes in the STGs					996,000	
2.6.12	Standardization of product specifications and pack sizes for commodities earmarked for public sector					199,700	
2.7	**Intervention 2.7: Purchase of Drugs and other Medical Supplies**					**6,552,161,493**	

	BUDGET YEAR	SOURCE OF FUNDS 2015	SOURCE OF FUNDS 2016	SOURCE OF FUNDS 2017	TOTAL MOBILISED	TOTAL BUDGET	GAP
2.7.1	Drugs and Medical Supplies for Districts					647,578,636	
2.7.2	Drugs and Medical Supplies for Hospitals					568,109,356	
2.7.3	Procurement of Anti Retroviral Drugs					2,323,873,376	
2.7.4	Vaccines and Immunization Supplies					428,127,440	
2.7.5	Procurement of Tuberculosis Drugs					148,568,378	
2.7.6	Procurement of RH Commodities					139,801,464	
2.7.7	Procurement of Cancer Drugs					270,836,019	
2.7.8	Procurement of Medical and Surgical Supplies					262,772,770	
2.7.9	Blood Transfusion Commodities					283,869,110	
2.7.10	Procurement of Malaria Drugs					613,449,210	
2.7.11	Procurement of Lab Reagents					702,863,798	
2.7.12	Procurement of Specialised Medical Imaging and Consumable Supplies					77,508,871	
2.7.13	Procurement of Specialised Medical Commodities and Supplies					84,803,066	
3	**THEMATIC AREA 3: Commodity Distribution (Distribution Network, Warehouse Infrastructure, Inventory Management, Transport, Waste Management)**					**1,902,294,116**	
3.1	**Intervention 3.1: Distribution**					**1,540,640,816**	
3.1.1	Extension of MSL central warehouse					10,880,000	
3.1.2	Operationlisation of regional hubs					61,200,000	
3.1.3	Operationlisation of regional staging post					1,461,902,701	
3.1.4	Review the hub and staging posts establishment					358,000	
3.1.5	Review and develop plan for integrating programme commodities into the supply chain (e.g. - TB, nutrition and vaccines)					817,358	
3.1.6	Implement plan for integrating programme commodities					1,349,832	
3.1.7	Harmonise ordering processes and systems (One order per facility from all sections to MSL)					720,166	

	BUDGET YEAR	SOURCE OF FUNDS 2015	SOURCE OF FUNDS 2016	SOURCE OF FUNDS 2017	TOTAL MOBILISED	TOTAL BUDGET	GAP
3.1.8	Develop Standard Operating Procedures (SOPs) for all commodity management activities (done)					244,000	
3.1.9	Printing of revised SOPs in logistics management for health facilities (5 facilities)					250,000	
3.1.10	Develop training manuals for SOPs					709,563	
3.1.11	TOT training in SOPs for Provincial Pharmacist plus 2 others per province					198,936	
3.1.12	Conduct an on the job training for facilities by Provincial Team					1,417,324	
3.1.13	Define roles and responsibilities of staff and supervisors expected to support supply chain activities (Operation Manual)					592,936	
3.2	**Strategic Intervention 3.2: MSL to implement distribution using a series of cross-docking hubs/ warehouses and staging posts to the last mile depending on the sector needs.**					**385,694,301**	
3.2.1	Develop and agree on concept note for central level					144,000	
3.2.2	Develop and agree on concept note for peripheral level					144,000	
3.2.3	Setup distribution network systems					358,000	
3.2.4	Route scheduling and modelling					358,000	
3.2.5	Acquire hub infrastructure and related equipment					106,446,290	
3.2.6	Land acquisition					3,000,000	
3.2.7	Communication campaigns					1,193,611	
3.2.8	Training of selected staff					1,125,400	
3.2.9	Construction of Luanshya hub with proposed floor area of 6,000 square meter class extra large					35,000,000	
3.2.10	Construction of Kasama hub with proposed floor area of 2,000 square meter class large					11,700,000	
3.2.11	Construction of Choma hub (operational) with proposed floor area of 1,500 square meter class small					8,775,000	
3.2.12	Construction of Livingstone hub with proposed floor area of 1,000 square meter class small					5,850,000	
3.2.13	Construction of Chipata hub (Operational) with proposed floor area of 2,000 square meter class large					11,700,000	
3.2.14	Construction of Chama hub with proposed floor area of 500 square meter class extra large					2,925,000	
3.2.15	Construction of Solwezi hub with proposed floor area of 1,500 square meter class medium					8,775,000	
3.2.16	**Construction of Mongu hub (Operational) with proposed floor area of 1,500 square meter class medium**					**8,775,000**	

	BUDGET YEAR	SOURCE OF FUNDS 2015	SOURCE OF FUNDS 2016	SOURCE OF FUNDS 2017	TOTAL MOBILISED	TOTAL BUDGET	GAP
3.2.17	Construction of Mansa hub with proposed floor area of 1,500 square meter class medium					8,775,000	
3.2.18	Construction of Mkushi hub with proposed floor area of 1,000 square meter class small					5,850,000	
3.2.1.9	6 District Storage Hubs					7,800,000	
3.2.1.10	Health Centre Storage@520,000 each x 100 health centres					52,000,000	
3.2.1.11	10 provincial hubs					105,000,000	
3.3	**Intervention 3.3: Optimize transport resources and routing for distribution. a) MOH shall be responsible for resource mobilization to support vehicle procurement and fleet management needs, including GRZ funds.**					**18,499,070**	
3.3.1	Conduct need assessment / establish transport requirements for support of new delivery mandate, including fuel and per diem estimates					1,187,770	
3.3.3	Procurement of vehicles					17,311,300	
3.4	**Intervention 3.4: Improve storage capacity at existing and future health facilities, and districts:** MOH shall actively seek to improve physical storage conditions in existing facilities, to standardize the health facility design so that health facilities built in the future include adequate stores, and to re-enforce adherence to construction plans if/when revised.					**1,131,287**	
3.4.1	Conduct a needs assessment of storage capacity for health facilities and Districts.					358,843	
3.4.2	Develop a plan of action for upgrading storage facilities which seeks to address deficiencies in existing facilities and design of new facilities					137,972	
3.4.3	Hold consultative meeting to review action for MOH and determine feasibility for addressing storage capacity challenges over time with key stakeholders					137,972	
3.4.4	MOH improves storage facilities and conditions over time					496,500	
3.5	**Intervention 3.5: Ensure correct disposal of pharmaceutical wastes from all levels of the supply chain: Design system-wide approach, develop Implementation Plan (IP), and seek funding.**					**3,128,643**	
3.5.1	Preparation of a waste management plan for supplies and other essential drugs					129,000	
3.5.2	Development/Adapt SOP for waste collection and disposal at central level					205,000	
3.5.3	Preparation of detailed action plans and budgets to deal with existing back log					652,070	
3.5.4	Agree on a long term option for disposal/incineration of drug waste					164,000	
3.5.5	Identity causes of expiry, presence of obsolete and damaged drugs and lab supplies as well as actions to avoid the same in the future					358,843	
3.5.6	Procure and install an incinerator for pharmaceutical waste at central level					1,411,200	
3.5.7	Regular disposal of expired, obsolete and damaged drugs and lab supplies					208,530	

	BUDGET YEAR	SOURCE OF FUNDS 2015	SOURCE OF FUNDS 2016	SOURCE OF FUNDS 2017	TOTAL MOBILISED	TOTAL BUDGET	GAP
4	**THEMATIC AREA 4: Information Systems and Processes, Including LMIS, LMIS Design and Communication of Information**					**35,082,646**	
4.1	Intervention 4.1: MOH ICT Policy: MOH should update ICT policy to include supply chain needs and support.					777,193	
4.1.1	Revision of ICT policy (in line with SCM ICT Policy)					41,200	
4.1.2	Hold ICT policy Consensus Meetings with key stakeholders					106,884	
4.1.3	Finalisation of Updated ICT Policy					47,815	
4.1.4	Printing of the Approved ICT policy (1000 copies)					519,000	
4.1.5	Dissemination of approved ICT Policy					62,294	
4.2	**Intervention 4.2: Integration of orders between SDPs and MSL:** A plan is needed to identify ways to consolidate facility orders before arrival at MSL, using computerization at facilities and Districts to facilitate one delivery per month. As an interim measure, the various orders should be electronically consolidated prior to delivery to MSL/LMU. All future projects (including immunisation, TB, etc.) should fit into consolidated ordering framework; i.e. - no separate reporting/ordering mechanisms. The desired goal is to have one consolidated order per month (order interval) per facility which results in one delivery per month (order interval) per facility and/or District for all health commodities which are managed by MSL.					**35,090,969**	
4.2.1	Procure/ develop computerised LMIS for all levels of the supply chain					2,642,057	
4.2.2	Pilot Computerised LMIS (at least 2 institution per level)					250,740	
4.2.3	Post Pilot Evaluation of Computerised LMIS					252,245	
4.2.4	Institutional ICT Capacity Assessment of Hospitals & Districts Countrywide					399,140	
4.2.5	Printing LMIS tools					150,000	
4.2.6	Phased national roll-out of Computerised LMIS - Procurement of ICT hardware and installation(networking) - TOT Computerised LMIS - Training of users - System back stopping					29,907,288	

	BUDGET YEAR	SOURCE OF FUNDS 2015	SOURCE OF FUNDS 2016	SOURCE OF FUNDS 2017	TOTAL MOBILISED	TOTAL BUDGET	GAP
4.2.7	Undertake tours in countries implementing eLMIS					1,489,500	
4.3	**Intervention 4.3: Guidance for use of Electronic Information Systems for SC Mgmt: The** current and future supply chain electronic information systems are integrated and will be based on the outcome of 2.4 and will ensure needs are met and duplication is avoided. Existing systems need to be linked and fully interfaced if they continue to be utilized. Resources need to be found for system-wide implementation.					**468,510**	
4.3.1	Develop SC ICT implementation guidelines					218,510	
4.3.2	Dissemination of guidelines to the users - Printing of 1000 copies					250,000	
4.4.	**Intervention 4.4: Improved ICT Infrastructure and Internet Access:** Develop sustainable capital replacement and maintenance policies and guidelines for essential ICT equipment required throughout the supply chain. MOH should facilitate a national electronic networking system needs assessment to determine which Districts and facilities still lack access to regular internet (for data transfer). Develop and implement e-based communication system at health facilities, Districts, Provinces, and all levels of MSL.					**235,474**	
4.4.1	Hold bi-annual advocacy Meetings with key stakeholders in the ICT industry - 1 day meeting (40 participants)					65,440	
4.4.2	Develop an e-based communication system plan for health facilities, Districts, Provinces, and all levels of service delivery.					70,870	
4.4.3	Develop ICT equipment maintenance and replacement plan					99,164	
5	**THEMATIC AREA 5: Quality Assurance and Rational Drug Use**					**21,208,384**	
5.1	**Intervention 5.1 - Establishment and strengthening technical capacity of a National Drug Quality Control Laboratory (NDQCL)**					**5,128,078**	
5.1.1	Procurement of reference standards, reagents, supplies and equipment					532,843	
5.1.2	Procurement of Equipment					3,732,840	
5.1.3	Training of NDQCL staff i.e. laboratory equipment use, quality control etc					329,000	
5.1.4	Develop and implement Standard operating procedure manuals for the NDQCL in line with WHO guidelines					389,000	
5.1.5	Activities towards attainment of WHO pre-qualification					144,395	
5.2	**Intervention 5.2 - NDQCL Quality control and quality assurance function**					**3,129,569**	

	BUDGET YEAR	SOURCE OF FUNDS 2015	SOURCE OF FUNDS 2016	SOURCE OF FUNDS 2017	TOTAL MOBILISED	TOTAL BUDGET	GAP
5.2.1	Undertake QC for medicines and medical supplies for Zambian market					711,133	
5.2.2	Review storage and warehousing QA SOPs for health facilities					1,543,901	
5.2.3	Inspect storage and warehousing conditions at health facilities					198,600	
5.2.4	Undertake QC for medicines and medical supplies sampled at all levels of the supply chain (Pharmacovigilance)					495,935	
5.2.5	ZAMRA GMP inspection in close collaboration with procurement unit and MSL					180,000	
5.3	**Intervention 5.3 - Quality Control for medicines and medical supplies received at MSL**					**7,594,117**	
5.3.1	Review storage and warehousing QA SOPs					52,500	
5.3.2	MSL laboratory QC capacity					7,413,517	
5.3.3	MSL to undertake QC for medicines and medical supplies received					No costs	
5.3.4	Increased funding to undertake timely disposal of medicines and medical supplies waste at MSL					No costs	
5.3.5	Institute measures to mitigate pharmaceutical waste i.e. monthly supply monitoring versus program implementation, forecasting review meetings to inform procurement processes, prescribing trends monitored and incorporated into quantification process, advance notice for change of regimen, operational research in supply chain at different levels of the system.					No costs	
5.3.6	Timely disposal of unusable medicines and medical supplies at Health facilities					No costs	
5.3.7	Strengthening and stringent implementation of guidelines for donations					128,100	
5.4	**Intervention 5.4- Improved inter-Agency collaboration**						
5.4.1	Regular supply chain and QA consultative meetings between MOH, MCDMCH, ZAMRA & MSL to address cross cutting issues.					No costs	
5.5	**Intervention 5. 5 - Rational Drug Use: Increase capacity for clinical staff in rational drug use**					**5,356,620**	
5.5.1	Advocate for funding for RDU activities at provincial and district level					No costs	
5.5.2	Conduct quarterly provincial Action Plan review meetings					172,120	
5.5.3	Build capacity in rational drug use (RDU) programmes at all levels of the system through training, comprehensive drug use programme and support rational drug use activities at the central, district and SDP levels					1,984,500	
5.5.4	Undertake National Drug use survey.					1,500,000	
5.5.5	Mentorship programmes for clinicians in adherence to STGs and SOPs					350,000	
5.5.6	Pricing availability study of medicines and medical supplies					1,350,000	

	BUDGET YEAR	SOURCE OF FUNDS 2015	SOURCE OF FUNDS 2016	SOURCE OF FUNDS 2017	TOTAL MOBILISED	TOTAL BUDGET	GAP
6	**THEMATIC AREA 6: Commodity Security, Financing and Resource Mobilisation**					**4,396,190**	
6.1	**Intervention 6.1 Resource Mobilization & Sustainability**					**327,020**	
6.1.1	Prioritise financing of the national supply chain programs					No costs	
6.1.2	Develop a information package for drugs and medical supplies to be used for lobbying for increased resource from MoF					75,135	
6.1.3	Lobby for partners to support the drug supply budget line in order to reduce the funding gap.					No costs	
6.1.4	Formulate and implement business plan for MSL aimed at self-financing					75,135	
6.1.5	Develop proposal for charging of fees to MOH/MOF and other clients for SC services provided by MSL					176,750	
6.1.6	Submit proposal for charging of fees for review and approval by MOH & MOF					No costs	
6.2	**Intervention 6.2: Budgeting & Supply Chain Financing**					**4,069,170**	
6.2.1	Assess full cost of supply chain from central functions to end users for use in budgetary allocation to support supply chain functions.					280,000	
6.2.2	Coordinate monthly SC TWG meetings to share and address challenges as well as successes					No costs	
6.2.3	Create and implement a commodity security (CS) plan					1,244,585	
6.2.4	Formulate a commodity security policy for health commodities					1,176,750	
6.2.5	Undertake baseline national assessment of storage infrastructure in all health facilities (This issue is address in TA3, Intervention 5; it is included here only to indicate its importance as a long-term sustainability challenge.)					261,250	
6.2.6	Develop plan of action for building relationships with, and roles of, local and/or regional manufacturers of essential medicines and medical supplies					255,425	
6.2.7	Train health workers in SC tasks and responsibilities, as required					851,160	

	BUDGET YEAR	SOURCE OF FUNDS 2015	SOURCE OF FUNDS 2016	SOURCE OF FUNDS 2017	TOTAL MOBILISED	TOTAL BUDGET	GAP
7	**THEMATIC AREA 7: Performance Management, Monitoring and Evaluation and Supply Chain Supervision**					**7,958,104**	
7.1	**Intervention 7.1: MOH Central Supply Chain Monitoring & Evaluation Planning:** M&E Unit of MOH shall develop a supply chain M&E plan for the central level (and other levels), including development of M&E tools and indicators, and data/information required for monitoring.					**3,592,456**	
7.1.1	Develop M&E Framework for the monitoring of various SC activities and functions					576,768	
7.1.2	Develop M&E tools for collecting information required for adequate monitoring					137,972	
7.1.3	Develop M&E program from central level to SDP level, and assign responsibilities through JDs and SOPs					246,937	
7.1.4	Disseminate M&E Framework and SOPs, and provide training as required					2,630,779	
7.2	**Intervention 7.3: Standard Operating Procedures (SOPs) for Performance Management and Monitoring & Evaluation:** Existing SOPs are updated to include guidelines and procedures for all supply chain roles and responsibilities - by level. SOPs shall be aligned with changes developed throughout this strategy.					**1,013,211**	
7.2.1	Develop SC M&E framework Standard Operating Procedures (SOPs)					264,884	
7.2.2	Printing of SC M&E framework SOPs					300,000	
7.2.3	Develop a training manuals for SOPs					149,540	
7.2.4	SC M&E framework TOT training/ dissemination for Provincial Pharmacist plus 2 others per province					298,787	
7.3	**Intervention 7.4: Supply Chain Audit Committee: Policy direction on Supply Chain and Health Commodity audits shall be provided by MOH.**					**3,352,437**	
7.3.1	Establish Product Destination Audit Committees (includding all key stakeholders)					1,058,257	
7.3.2	Develop SC auditing tools and procedures					89,430	
7.3.3	Undertake quarterly Supply Chain Audits from central to SDP level that are coordinated and serve as many purposes as possible					549,749	
7.3.4	Annual Third Party Monitoring of SC (Demand side governance)					1,655,000	

	BUDGET YEAR	SOURCE OF FUNDS 2015	SOURCE OF FUNDS 2016	SOURCE OF FUNDS 2017	TOTAL MOBILISED	TOTAL BUDGET	GAP
8	**THEMATIC AREA 8: Capacity, Human Resources, Training and Facility Stores Human Resources**					**66,845,554**	
8.1	**Intervention 8.1: Performance management**					**66,845,554**	
8.1.1	Training of Trainer on Performance Management (PMP)					1,357,300	
8.1.2	Orient staff in the Performance Management Package(PMP)					47,889,450	
8.1.3	Monitoring and Evaluation for the implementation of the PMP					549,000	
8.1.4	Stakeholder Consensus meetings on the revision of key curricula(Training Institutions, MoH, Partners & others)					2,505,504	
8.1.5	Review curriculum for: Nursing, Pharmacy, Laboratory, COG and other curricula					2,360,000	
8.1.6	Finalisation and printing of the Curricula					300,000	
8.1.7	Mid-term review of the implementation of the revised curricula					438,500	
8.1.8	Monitoring and Evaluation of the implementation of the revised curricula					549,000	
8.1.9	Develop in-service training curricula for supply chain					691,700	
8.1.10	Develop in-service training manuals					691,700	
8.1.11	Printing of Training Materials					827,500	
8.1.12	Training of Trainers at National and Provincial level					1,357,300	
8.1.13	Taylor made trainings (short term trainings)					4,681,900	
8.1.14	Mentorship programs					1,100,700	
8.1.20	Review the existing structures					746,000	
8.1.21	Conduct Job Analysis					350,000	
8.1.22	Consolidate the revised structure					450,000	
8.1.23	Seek approval for the revised structure from Cabinet Office					No costs	
8.1.24	Seek Treasury Authority to fund approved structure					No costs	
	TOTAL					**8,660,798,915**	

Annex 1: Improving Supply Chain Performance - Summary of Challenges, Strategic Interventions and Anticipated Benefits

THEMATIC AREA	SUPPLY CHAIN CHALLENGES	PROPOSED STRATEGIC INTERVENTIONS	ANTICIPATED BENEFITS
Procurement and Procurement Planning	Delayed procurement of medicines & medical supplies.	MOH to revitalize and rename the Procurement & Logistics Technical Working Group (PLTWG) to provide greater leadership in coordinating MOH, MSL & CPs with procurement & procurement planning. MSL designated by MOH as secretariat.	Effective coordination of procurements minimises duplication, reduces incidence of poorly planned procurements, and optimises utilisation of resources.
	Quantification & procurement planning are not adequately linked, & procurement planning is disconnected from central warehouse inventory optimization, resulting inventory challenges.	MOH to create and maintain mechanisms for coordination and harmonisation of procurement processes with CPs and partners, and improve pipeline monitoring and quantification processes.	Placing procurement and distribution under one roof shall facilitate integrated planning, minimising inventory imbalances and stock outs, overstocking and expiry.
	The procurement of health commodities is not prioritised over other health sector needs which negatively impacts availability & results in stock outs.	Increase funding for essential medicines & medical supplies, aiming to achieve the Abuja Declaration target of 15% of the health budget.	Improved availability of essential medicines and medical supplies at service delivery points.
	Low levels of transparency & accountability within current procurement practices.	Adoption of procurement procedures that are in compliance with existing rules and regulations, while ensuring adequate 'checks and balances', including transparent and well-coordinated procurement audits.	Best value for money attained, reduction in product quality problems, increased timeliness of deliveries to the central warehouse, and improved product availability.
Quantification & Product Selection	Quantification process is not well coordinated or owned by MOH.	MOH Dir. CCDS shall provide leadership and oversight to the annual quantification process and shall ensure that it is inclusive, harmonized, timely, and comprehensive, and MSL is delegated to serve as the coordinator.	Quantification results shall be more accurate, have greater degree of consensus, and shall inform procurement planning more meaningfully.
	Quantification is not based on accurate consumption and issues data for some product areas, and some products are not quantified at all.	Increase MOH central level, Provincial & District Health Office, MSL, and facility level capacity to capture, input, transfer, and receive data in preparation for transparent forecasting meetings - in close collaboration with partners.	Quantification based on more comprehensive data is more accurate and will better inform procurement planning process.

THEMATIC AREA	SUPPLY CHAIN CHALLENGES	PROPOSED STRATEGIC INTERVENTIONS	ANTICIPATED BENEFITS
	Product selection process is not clearly defined and is generally done at national level rather than at the District or facility level.	National Drug & Therapeutics Committee shall ensure that feedback reports from DTCs are considered during revision process of the Essential Medicines List, and that PHO oversight of DTC activities is increased to ensure that regular meetings are held, action plans are implemented, and feedback reports are submitted by DTCs.	Treatment guidelines & product selection are based on practices informed by all levels of the health care network.
	Essential Medicines List needs to be revised so that it is suitable for each health facility level.	MOH to clearly outline the process for re-classification of the levels of health care facilities, and shall expedite completion of this process (Note: MOH will need to introduce a new category for satellite health posts). A further comprehensive review of the suitability of commodities for each level will be required.	Essential Medicines list for MOH / MCDMCH health facilities should fully reflect the services that are to be provided at each 'type' of health facility according to MOG policy.
Commodity Distribution & Waste Management	Inadequate storage space at MSL, Districts, hospitals, and health centres. Storage requirements at health facilities expected to increase under hub warehouse distribution model.	1) MSL to implement distribution through a series of cross-dock hub warehouses and staging posts to the last mile, and as needed, MSL shall address storage capacity & improvements at central level. 2) MOH shall actively seek to improve physical storage conditions in existing facilities (& Districts, depending on the roles defined for them going forward).	More effective distribution, and enhanced storage capacity and conditions, leading to improved management of supplies and fewer stock losses, expiries, etc.
	Inadequate distribution capacity at MSL, district & health facilities.	MSL has been delegated by the MOH to distribute essential medicines and medical supplies to all SDPs, and MOH shall support MSL through the mobilisation of resources to support vehicle procurement & fleet management needs and new oversight mechanisms.	Reduced pressure on DHOs to deliver medicines and supplies to health centres. Funding available to procure more vehicles for all levels of supply chain.
	Adequate stores for pharmaceuticals/medical supplies are not included in new hospitals being planned / constructed.	MOH shall actively seek to influence health facility design process to include stores & to reinforce adherence to construction plans if/when revised.	Health commodities are poorly managed when storage is inadequate. Losses and expiries decreased when storage of medicines and medical supplies at health facilities is appropriate.
	Inadequate facilities and systems for collection and disposal of sharps / other pharmaceutical waste.	Conduct a feasibility study, design system-wide approach, develop Implementation Plan (IP), and seek funding for disposing medical waste at all levels of the supply chain.	Safe disposal of medical waste provided for at all levels of supply chain.

THEMATIC AREA	SUPPLY CHAIN CHALLENGES	PROPOSED STRATEGIC INTERVENTIONS	ANTICIPATED BENEFITS
Information Systems, Processes & Design	MSL receives multiple orders from facilities that are currently picked & packed separately.	A plan is needed to identify ways to consolidate facility orders before arrival at MSL, using computerization at facilities and Districts to facilitate one delivery per month. Goal is to have one consolidated order per month (order interval) per facility which results in one delivery per month (order interval) per facility and/or District for all health commodities which are managed by MSL.	Manageable order fulfillment process at MSL. Notes from the IP: As an interim measure, the various orders should be electronically consolidated prior to delivery to MSL/LMU. All future projects (including immunisation, TB, etc.) should fit into consolidated ordering framework; i.e. - no separate reporting/ordering mechanisms
	Lack of clear policy decisions on 'way forward' for development of electronic information systems. MOH ICT policy does not address supply chain issues and requirements.	1) MOH should update ICT policy to include supply chain needs and support. 2) Policy decisions are required for guiding the direction of current and future integrated supply chain electronic information systems to ensure needs are met and duplication is avoided, then clear plans for implementation, including roles / responsibilities, need to be established. Existing systems need to be linked and fully interfaced if they continue to be utilized. Resources need to be found for system-wide implementation.	Integrated information systems are needed to support supply chain performance.
	Lack of real time information at all levels in the systems (data visibility).	Any current or new computerized information systems shall emphasize data visibility for all levels, as well as for program staff, CPs, and other recognized users.	Improved data visibility shall improve the management and planning of health commodities and allow users to access important information. Note from the IP: Future systems design also needs to clarify whether consumption or estimated consumption (issues data from the facility store to the various dispensing units) data is required at the facility level for each/all product groups.
	Human resource constraints hinder LMIS, and data accuracy at SDPs is poor.	MOH shall extend independent, consistent systems for supervision of recording and reporting of commodity information to all levels of the supply chain, and ensure that supervisory roles and responsibilities are clearly defined.	Human resources are adequate for commodity management tasks at each level. Data quality is improved for better planning and control of supplies and improved data visibility.

THEMATIC AREA	SUPPLY CHAIN CHALLENGES	PROPOSED STRATEGIC INTERVENTIONS	ANTICIPATED BENEFITS
	Inadequate ICT Infrastructure and funding for automation.	1) Development of sustainable capital replacement and maintenance policies / guidelines for essential ICT equipment is required throughout the SC. MOH should facilitate a national electronic networking system needs assessment to determine which Districts and facilities still lack internet access, and then develop / implement e-based communication system at facilities, Districts, Provinces, and all levels of MSL. 2) MOH shall lobby GRZ and CPs to increase funding for the support of the automation of commodity management functions, including LMIS and inventory management, at all levels of the system.	Improved data quality and ability to transfer commodity information quickly and accurately up and down the SC.
Quality Assurance & Rational Use	Weak post-marketing surveillance.	Systems for Quality Assurance: Pharmaceutical Regulatory Authority strategic plan is in place and includes strengthening of post-marketing surveillance at all levels.	Effective post-marketing surveillance improves quality assurance.
	Lack of a full-fledged National Drug Quality Control Laboratory (NDQCL).	MOH shall provide support to the implementation of Pharmaceutical Regulatory Authority's new strategy for establishment and operation of a fully functional NDQCL.	Reduces risk of substandard medicines in health facilities.
	Poor adherence to standard operating procedures (SOPs) at service delivery points. Weak enforcement of standards of practice for dispensing and prescribing.	1) MOH shall coordinate all existing SOPs for QA, revise/update for all levels in the supply chain; clarify roles and responsibilities for all levels in relation to QA and rational use, and promote usage of SOPs at all levels. 2) Regular training and supervision at different levels of the health care system is required, in addition to enhanced sensitization regarding DTC activities and regular review of prescribing patterns by health facility staff.	Adherence to SOPs improves that quality is a high priority at the facility level and that RDU is practiced by all providers in public sector facilities.

THEMATIC AREA	SUPPLY CHAIN CHALLENGES	PROPOSED STRATEGIC INTERVENTIONS	ANTICIPATED BENEFITS
	Limited funding for rational drug use (RDU) activities – lack of specific budgets (budget line) to support RDU activities.	1) Develop a plan of action for strengthening the MOH's rational drug use program, starting with a comprehensive review of the MOH's rational drug use program. 2) Increase funding to support rational drug activities at the central, District, and SDP level.	RDU improves management of medicines and supplies and saves resources.
Commodity Security, Financing & Resource Mobilization	Inadequate funding available for essential medicines & medical supplies; available funds do not match demand at facilities.	Increase proportion of GRZ funding to the health sector (target of 15% per Abuja agreements), and institute improved mechanisms for sharing information on funds available, budgets, and procurement plans.	Improved availability of supplies, reduction in stock outs, greater sharing of information of funding.
	Lack of resources for operation of efficient & effective supply chain.	1) MOH should recognize operational requirements of the supply chain and provide for them. 2) MSL shall implement fees for services rendered (procurement and distribution) and work with MOH to determine how such fees might be paid. 3) MOH should give consideration to the introduction of other levies for support of the supply chain, and/or innovative ways for financing these ongoing costs.	More funds available for support of supply chain services, and increased ability of SC to meet performance expectations.
	Lack of strategies to address sustainability of commodities which are currently supported by donors; lack of adequate domestic funding mechanisms; lack of effective and timely resource mobilization for health commodities and supply chain support, particularly in the absence of the SWAp mechanism.	Create and implement a commodity security (CS) plan for health commodities and supply chain support which addresses: a) increased financing for infrastructure, especially storage at all levels, vehicles, and IT systems, as well as human resources, b) operationalisation of National Health Fund (NHF), and c) gradual increase in GRZ contributions for underfunded but essential medicines and medical supplies.	More funds / resources available for health commodities and supply chain services.
	Lack of effective high level coordination, particularly in the absence of coordination mechanism in form of the SWAp.	MOH to revitalize and rename the Procurement & Logistics Technical Working Group (PLTWG) to provide greater leadership in coordinating MOH, MSL & CPs with procurement, procurement planning, and coordination on Supply Chain Strategic Plan implementation and related supply chain support. MSL designated by MOH as the secretariat.	Better coordination of supply chain activities resulting in optimisation of available resources.

THEMATIC AREA	SUPPLY CHAIN CHALLENGES	PROPOSED STRATEGIC INTERVENTIONS	ANTICIPATED BENEFITS
Performance Management, M&E, & Supply Chain Supervision	MOH central monitoring & evaluation (M&E) plan / framework for supply chain performance does not currently exist, including development of key performance indicators (KPIs) in functional areas (from MSL to service delivery points); performance expectations are not shared with Provincial, District & facility levels. No mechanisms for sharing information gathered through M&E activities exist between MOH & cooperating partners.	1) M&E Unit of MOH shall develop a supply chain M&E plan for the central level (and other levels), including development of M&E tools, indicators (KPIs), and data/information requirements (from MSL and others) to perform M&E tasks. All levels, including partners, shall agree on mechanisms for data collection, data sharing, analysis, access, and communication (dashboards, etc.) 2) MOH and MCDMCH shall hold ownership and provide funding support for supply chain focused monitoring & evaluation efforts at Central, Provincial and District levels. 3) Existing SOPs for Performance Management and Monitoring & Evaluation shall be updated to include guidelines and procedures for all supply chain roles and responsibilities - by level. SOPs shall be aligned with changes developed throughout this strategy.	Improved monitoring and evaluation of supply chain performance and increased awareness of performance expectations.
	Lack of clarity of job descriptions - people doing supply chain tasks do not know their job descriptions, and supervisors are not clear on what to expect from the supervisee's job performance.	1) At Districts and health facilities, relevant job descriptions (JD) need to outline specific supply chain responsibilities and defined areas of accountability against key performance indicators. Job descriptions also need to be linked directly with SC standard operating procedures (SOPs). 2) MOH, and other supply chain advocates, shall have high level discussions to promote/develop a supply chain 'cadre' within health services (professionalization of key supply chain roles as distinct from current health care provider job descriptions).	Improved accountability for performance of supply chain responsibilities.
	No routine audits of complete supply chain - from MSL to site level.	Policy direction on Supply Chain and Health Commodity audits shall be provided by the MOH, including establishment of an external and independent Supply Chain Audit Committee, with attention being given to consolidating supply chain audits to the degree possible, & consideration of an external and independent annual audit for the entire supply chain.	Comprehensive & more efficient auditing to meet various needs and purposes - for the entire supply chain.

THEMATIC AREA	SUPPLY CHAIN CHALLENGES	PROPOSED STRATEGIC INTERVENTIONS	ANTICIPATED BENEFITS
Capacity, Human Resources, Training, & Facility Stores	Current establishment structure does not meet demands of supply chain / no dedicated job titles for supply chain roles; poor retention of trained human resources.	1) Develop formal guidance/SOPs on deployment of skilled staff to ensure that supply chain tasks are performed by skilled personnel. 2) Develop strategies to keep staff in positions for which they are trained for a reasonable period following the training. 3) MOH to propose to Cabinet the creation of new structures and job descriptions to increase SC workforce in order to meet increased demand.	Professionally managed supply chain expected to be more cost effective and efficient, thus minimising stock outs reducing losses and expiries.
	Inadequate skilled human resources.	1) Empower staff working in supply chain management with requisite tools and resources to perform their duties (building a caring, competent and responsible logistics work force) through in-service training and support in areas such as performance management, supervisory management, technical skills (e.g. - inventory control), and information technology. 2) MOH shall define an acceptable HR structure for Districts and for health facilities in terms of supply chain needs, and shall recruit staff to fill the posts. 3) Establish in-service supply chain training centre at MSL. 4) Expand pre-service training for supply chain curricula in pharmacy and nursing schools and ensure maintenance of coursework at biomedical science schools.	More efficient supply chain due to 'right staff with right skills'.
	Inadequate funding for supply chain related capacity building.	Inclusion of a budget line under Ministry of Health Human Resources for supply chain training.	Improvement of skills for supply chain personnel.

Annex 2: List of Strategic Interventions, Risks and Assumptions

Thematic Group 1: Procurement and Procurement Planning

Strategic Interventions	Assumptions	Risks
Strategic Intervention 1: Procurement Unit Strengthen procurement unit at MOH MCDMCH and MSL • These units will also manage the coordination and updating of the MOH procurement plan with the MOH and cooperating partners. • MOH PSU provides oversight and audits to Medical Stores Limited procurement, as outlined in ZPP Act. • New procurement unit at MSL needs to be linked with the comprehensive quantification process. • MOH-MSL memorandum of understanding (MOU) and contract shall be reviewed to accommodate proposed responsibilities in procurement	• This process requires an appropriate operational plan with a time table • MSL/MOH/MCDMCH will require many additional resources (HR, infrastructure, etc.) • This movement is cost effective • MSL is autonomous so board decisions are respected • MSL follows all rules and regulations from ZPPA and other government entities • Clarity of roles and responsibilities between MSL and MOH on exact procurement responsibilities (MSL: essential medicines and medical supplies, but not equipment) • The MOU and other legal/contractual relationship between MOH and MSL are transitioned to include the new functions of MSL 31 December 2013.	• Need leadership clearly identified for quantification activities • MSL receives timely and regular updated information on pending shipments • Model of drug budget transfer to MSL could cause delays
Strategic Intervention 2: Procurement Technical Working Group Strengthen the existing Procurement Technical Working Group (PTWG) to provide greater leadership in coordinating Ministry of Health, Medical Stores Limited, and cooperating partner procurement and procurement planning. The following are suggested actions/interventions: • Review Terms of Reference, include expectation for monthly meetings • Fully implement proposals in Governance and Management Capacity Strengthening Plan • Secretariat to be dedicated to managing the functioning and follow up of this PTWG • Partner commitments for annual procurement	• MOH will provide oversight for all SC management activities • SWAP mechanism, with exception of pooled funding, is fully functional at MOH (dialogue) • Procurement TWG input feeds into the monthly MOH Policy Meetings which provides input into the bi-annual SAG	• Procurement TWG will only work if SWAP mechanisms are upheld • Concern about number of mandates that are falling within this group and need to ensure that adequate time is allocated to each of these mandates • Lack of a functional secretariat in MOH may hinder progress of this TWG
Strategic Intervention 3: Procurement Coordination Ministry of Health to collaborate with partners and stakeholders on how best their procurement processes can fit the Zambian national objectives and standards	• MOH improves management of Procurement TWG	• Some cooperating partners are not willing/able to change procurement procedures

Strategic Interventions	Assumptions	Risks
Strategic Intervention 4: Increase Funding for Medicines and Medical Supplies In connection with commodity security strategies (from CS thematic area): • Ministry of Health continues to advocate to have the Ministry of Health's budget increase to 15% of the total GRZ budget • Ministry of Health investigates alternative financing mechanisms (public health fund/insurance/cost recovery) • Ministry of Health develops and implements commodity security strategies as a platform for resource mobilization	• Economy is growing and government is able to increase revenue base	• Acceptance of public health fund/insurance by MOH and civil service • There are not enough resources to meet the needs
Strategic Intervention 5: Monitoring of Procurement Prices Implement mechanisms, through annual forecasting and quantification exercises, for price monitoring between all partners to ensure "value for money"	• Have transparent mechanisms to compare pricing by partner	• Some partners may not want to share their prices (possibly outdated)
Strategic Intervention 6: Procurement Skills and Audits Orient all procurement staff on existing rules and regulations, including enforcement of current requirements - for checks and balance - such as internal and external procurement audits. • Include review of regular audits in the TOR of the Procurement Technical Working Group	• These rules and regulations are up-to-date and appropriate	• High staff turnover
Strategic Intervention 7: Emergency Procurement All partners agree on a defined system and procedures for addressing emergency procurement requirements - through the Procurement Technical Working Group.	• This is included in the TOR of PTWG	• Difficult to get all partners to agree on one approach • One approach may not suit all situations here
Strategic Intervention 8: Procurement for Roll-out of Essential Medicines Logistics Implementation Program Align procurement plan to cater for ongoing roll-out of EMLIP program (increasing bulk procurement and decreasing number of kits)	• Funds are available for "full supply" of EMLIP commodities • Kit quantities can be reduced in short-term • Rollout of EMLIP to increase to two districts per month • Increased funding towards procurement of essential commodities	• Lack of adequate quantities affects perceptions of the EMLIP system • Donor dependent • Need for increased MOH funding • Delays in procurement of bulk essential commodities is a risk to the success of EMLIP implementation
Strategic Intervention 9: Pipeline Monitoring a) Develop/select national aggregated pipeline monitoring tool, which shall be managed by Medical Stores Limited. b) Hold discussions with procurement partners to involve them in pipeline monitoring.	• Appropriate pipeline monitoring tool selected and resourced • Partner actively participate in sharing of shipment data	• Ineffective Procurement TWG • Lack of leadership • Weak collaboration among procuring entities with regards to information sharing

Thematic Group 2: Quantification and Product Selection

Strategic Interventions	Assumptions	Risks
Strategic Intervention 1: Quantification Process a) Ministry of Health Directorate of Clinical Care and Diagnostic Services will provide leadership and coordinate the annual quantification process and will seek to ensure that it is inclusive, harmonized, timely, and comprehensive. b) National level quantification will utilize a bottom up approach for reporting of commodity data / information. c) Ministry of Health to approve and disseminate quantification results to partners and stakeholders on a timely manner. d) Ministry of Health to provide policy/guidelines for quantification and forecasting to improve harmonization, timeliness, and comprehensiveness	• This is in the short term as MSL expands to create additional staffing to handle logistics • All stakeholders are agreed on the processes to be undertaken during quantification from the beginning • Health facility staff will capture consumption / issues data necessary for determining order quantities and use during forecasting and quantification exercises • Transparency of all activities being undertaken by from the beginning of the process	• Lack of leadership throughout the supply Chain • Lack of available funding • Lack on MOH commitment • Lack of qualified staffing at lowest level to capture accurate consumption data
Strategic Intervention 2: Capacity a) Increase Ministry of Health central level, Provincial Health Office, District Health Office and MSL capacity to input, transfer and receive data in preparation for transparent, forecasting and quantification meetings - in close collaboration with stakeholders. b) Increase Provincial Health Office and District Health Office capacity to ensure that facility level logistics information is reported to MSL according to accepted schedule. c) Enhance facility level capacity to capture and report data for MSL, PHOs, and DHOs. d) Provincial Health Offices and District Health Offices shall supervise facilities facing logistics challenges by providing timely interventions and on-the-job training. e) Provincial and District staff shall be trained in basic forecasting and quantification methods	• Selected staff at all levels of the system are trained in various SC activities / systems	• Availability of funds • Turnover of staff
Strategic Intervention 3: Supply Chain Skills in Quantification a) District Health Office to provide regular update to central level on supply chain trained staffing in the Districts. b) Increased onsite mentorship activities at all levels of the system	• Updates can be used as basis to lobby for increased staff • Role for management of training database is clear	• Staff don't make effort to provide data
Strategic Intervention 4: Coordination a) Ministry of Health central level to ensure that all key stakeholders are	• MOH and partners are committed to coordinated, comprehensive process	• Integrated quantification process takes considerable time and level of effort

Strategic Interventions	Assumptions	Risks
involved in the entire quantification process. b) Ministry of Health to ensure all cooperating partners and stakeholders involved in the supply chain participate in the annual quantification / forecasting process. c) Quantification and Procurement teams to increase coordination to ensure that procurements are implemented as planned (procurement plan which derives from Quantification process)	• Quantification process held at appropriate time for budgeting and procurement planning	
Strategic Intervention 5: Planning and Budgeting The quantification outputs shall inform Ministry of Health and MSL planning and budgeting activities	• MOH to move from quantification based on ceiling to adopt the basis of national need • MOH to disseminate the funding gap based on a transparent quantification process	• Quality of data • Skills of data collectors
Strategic Intervention 6: Resource Mobilization Ministry of Health to use the documented gap between forecasts and funding for resource mobilization from central government and potential donors.	• MOH and donors meet at right time for review of quantification results	• Limited funds available for quantification outputs • Dependence on donor funding for national programs • Lack of financing to meet national requirements • Lack of trust in quantification results
Strategic Intervention 7: Drug and Therapeutic Committees (DTCs) a) National Drug & Therapeutics Committee shall ensure that feedback reports from DTCs are considered during revision process of the Essential Medicines List. b) Increase Provincial Health Office oversight on DTC activities to ensure regular meetings are held, action plans are implemented, and feedback reports are submitted to Provincial Health Office	• DTCs provide drug selection information “up” the supply chain / feedback reports • ZNFC meets regularly • DTCs meet regularly	• Funds and time available for Provincial supervision visits • Feedback reports are not aggregated • Funds available for producing, publishing and disseminating revised EDL
Strategic Intervention 8: Essential Medicines List Revised and Suitable for the Various Health Facility Levels a) Ministry of Health to clearly outline the process for re-classification of the levels of health care facilities, and shall expedite completion of this process. • Will need to introduce a new category for satellite health posts b) A further comprehensive review of the suitability of commodities for each level will be required. This will need to be consistently applied across the country while there are two systems (EMLIP and kits). c) Regular review of the medicines and medical supplies lists to ensure specifications are relevant for each level of service (type of facility)	• MSL will update their records to recognize facilities based on the services offered. This is planned to be done by mid-2013. • MOH and cooperating partners to conform to revised regulations based on well-defined product specifications • MOH to communicate the outcomes early enough to all partners to being the process of requesting suppliers to adapt	• Stockout of commodities that are needed for use in provision of services to clients • Some suppliers will not change unless additional funds are paid. This may result in fewer commodities available for the client. • Expiry, pilferage and waste.

Thematic Group 3: Commodity Distribution

Strategic Interventions	Assumptions	Risks
Strategic Intervention 1: Regional Hub Warehouses a) MOH shall review hub warehouse proposal from Medical Stores Limited, especially staffing and operational and capital resource requirements b) MOH shall engage stakeholders in review process. c) MSL shall implement final hub warehouse design as a new distribution mechanism	• Approval by MOH of the recommendations from MSL study • Pilot idea of hubs by MSL	• Conflicting priorities between stakeholders and MOH • Failure of proof of concept • Non-availability of resources
Strategic Intervention 2: Vehicles MSL to develop and submit a distribution fleet improvement proposal in relation to future hub design requirements	• Fill rate increases • Improved funding • Political will • Stakeholders involvement	• Inadequate funding to meet budget requirements • Stakeholders may not buy in • Non-approval by MOH
Strategic Intervention 3: Vehicles for Districts (Alternative to hub model or short-term) a) Conduct a transport situational analysis for all Districts. b) Develop a detailed Implementation Plan for Districts based on priority needs. c) Mobilize funds for new vehicles	• Stakeholders buy in to completion of an assessment • MOH shares findings and recommendations • Approval of recommendations by MOH • Stakeholder consensus • Funds available for vehicles, operations, and maintenance	• Investment in this option not practical if hub warehouse model is to be implemented soon
Strategic Intervention 4: Rural Areas, and Areas with Poor Roads MOH shall consider public-private partnership MOUs with local transporters / third party delivering agents (small and medium enterprises or SMEs) for last mile transport, where feasible	• Availability of reputable transporters • Funds available • Availability of reputable transporters • Funds available	• Non-availability of reputable transporters • Lack of MOU • Non-availability of funds
Strategic Intervention 5: New Hospitals Designed without Stores MOH shall actively seek to influence facility design process to include stores and to re-enforce adherence to construction plans if/when revised	• Plans reviewed and approved	• Non-inclusion of technical personnel
Strategic Intervention 6: Disposal Facility for Sharps and Pharmaceutical Waste at MSL a) Conduct a feasibility study b) Develop Implementation Plan and design c) Seek funding	• Approval by MOH,ZEMA • Avaiability of funds	• Non-approval by ZEMA/ZMRA • Non-availability of funds

Thematic Group 4: Information Systems

Strategic Interventions	Assumptions	Risks
Strategic Intervention 1: Integration of order processes at SDP and Medical Stores Limited a) A plan should be developed to identify ways to consolidate facility orders before arrival at MSL, using computerization at facilities and Districts to facilitate one delivery per month. b) As an interim measure, the various orders should be electronically consolidated prior to delivery to MSL/LMU. c) All future projects (including immunisation, TB, etc.) should fit into existing ordering mechanisms; i.e. - no separate reporting/ordering mechanisms. The goal is to have one consolidated order per month per facility which results in one delivery per month per facility and/or District for all health commodities	• Agreements can be reached on how the consolidation of orders will be managed • Capacity for consolidation task is adequate	• Breakdown in communication infrastructure • Backlog of data entry • Systems maintenance • Timeliness of order submission – calendar month vs. delivery schedule should be aligned • DHO order approval process inconsistent with Hubs • Will require adequate communication technology between hub and DHO • New programs may require non-standard data order entry Integration Risks • Cold chain capacity • Capacity to include new programmes at MSL • Disaster recovery plan – all programmes fail if the system fails. • Supply Chain Manager may not be scalable • Storage capacity at SDP, e.g. Lusaka province • Management of emergency stock outages
Strategic Intervention 2: Policy Guidance for Development of Electronic Information Systems for Supply Chain Management a) Policy decisions are required for guiding the direction of current and future integrated supply chain electronic information systems to ensure needs are met and duplication is avoided. b) Clear plans for implementation then need to be established. c) Existing systems need to be linked and fully interfaced if they continue to be utilized. d) Resources need to be found for system-wide implementation	• Availability of IT and supply chain capacity to make "informed" policy decision • If more than one system is selected, interfacing can be achieved in reasonable manner • Resources can be obtained for system-wide implementation	• Duplicate systems • Confusion for staff being trained (duplicity of) • Cannot reach the very extremities of the supply chain • Funding / sustainability • Huge capital investment which requires GRZ include it in future budgetary plans for maintenance and replacement IT equipment after a few years
Strategic Intervention 3: Automation for Inventory Management and LMIS The MOH shall lobby GRZ and Cooperating Partners to increase funding for the support of computerization of the supply chain at all levels of the system	• MOH agrees on one strategy / one system	• Funds available – requires substantial investment
Strategic Intervention 4: Improved Ability to Track Commodities Further integration between Supply Chain Manager and Medical Stores Limited Warehouse Management System is required in the short-term so that computerized REMMS (report and order summary forms) can be sent to facilities by MSL/LMU.	• Compatibility of all software / applications • Stakeholder consensus • Successfully piloted • Funds availability	• Turnover • MOH staff continue to be relocated often • Systems interfacing proves difficult

Strategic Interventions	Assumptions	Risks
Strategic Intervention 5: Data Visibility Any current or new computerized information systems shall emphasize data visibility for all levels, as well as for program staff and cooperating partners	• Resources can be obtained for system-wide information system implementation • Levels of access can be sorted out/agreed • IT capacity available to support this objective • MOH to advocate to have communication network (cell phone network) improved in the country	• Funding for programming changes • Confidentiality of commodity data limited to appropriate users • Delays in communication network improvement
Strategic Intervention 6: Rationing Mechanisms Put in Place a) All future systems developments should incorporate a fair rationing policy (and guidelines) in the event of low stock levels at the central level. b) Policy implementation shall be incorporated into future systems design	• Political willingness to develop policy and guidelines	• Political interference following policy adoption • Rationing process not decided at the appropriate level – MOH senior level
Strategic Intervention 7: Real Time Stock and Consumption (or Estimated Consumption) Data / Information Visible at All Levels of the Supply Chain a) Future systems development should incorporate the requirement for real time (electronic) stock-on-hand and consumption (estimated consumption) information at facility level. b) Future systems development also needs to clarify whether consumption or estimated consumption (issues data from the facility store to the various dispensing units) data is required at the facility level for each/all product groups	• Availability of internet access and/or mobile phone access • Decision based on technical issues and value added to management of commodities	• Depends on human beings who can delay data entry • System / infrastructure failure • Policy decision forthcoming • A full system operating at consumption level covering all products will be extremely complex • How to deal with ward consumption issues • How to deal with 1 aspirin distributed from a pack of 1000 • Are we satisfying donor requirements? • Current requirement of MOH to record pill by pill consumption vis a vis, Drug Log Book
Strategic Intervention 8: Supervision of Data Accuracy Strengthened a) Extend independent, consistent systems for supervision of recording and reporting of commodity information to all levels of the supply chain b) Ensure that supervisory roles and responsibilities are clearly defined	• Successfully piloted • Funds availability	• Non-availability of funds for regular visits
Strategic Intervention 9: Improved ICT Infrastructure and Internet Access a) Develop sustainable capital replacement and maintenance policies and guidelines for essential ICT equipment required throughout the supply chain. b) Ministry of Health should facilitate a national electronic networking system needs assessment to determine which Districts and facilities still lack access to regular internet (for data transfer). c) Develop and implement e-based communication system at health facilities, Districts, Provinces, and all levels of MSL	• Resources available to ensure replacement procedures can be followed • Staff with appropriate skills available for maintenance (or consideration of PPP) • Available and updated asset register of all IT equipment • MOH and donors fund the needs assessment • Access to internet at facilities completed in reasonable period of time	• Sustainability • Capital replacement policies • Maintenance policies • Training capacities • Funds not available for connections and ongoing monthly service • Expected to involve other Ministries

Thematic Group 5: Quality Assurance and Rational Use

Strategic Interventions	Assumptions	Risks
Strategic Intervention 1: Systems for Medicines Regulation Pharmaceutical Regulatory Authority strategic plan is in place including strengthening of post-marketing surveillance at all levels	• ZMRA strategy document covering this	• Lack of funding • Inadequate staff
Strategic Intervention 2: Standard Operating Procedures for Quality Assurance a) Determine the existence of SOPs for quality assurance at all levels in the supply chain b) Promote usage of SOPs at all levels	• Availability of SOPs at all levels • HR capacity in place, supervisory skills • MOH leadership • Stakeholder involvement • Staff commitment	• Non-adherence to SOPs • Staff attitudes
Strategic Intervention 3: National Drug Quality Control Laboratory (NDQCL) Pharmaceutical Regulatory Authority strategy in place for establishment of a fully functional NDQCL	• Funding availability	• Non-availability of funds • Non –accreditation of Labs • Limited HR capacity
Strategic Intervention 4: Lot Release for Vaccines Develop a system for lot release of vaccines	• HR capacity built • Funding availability	• Lack of funding • Inadequate staff
Strategic Intervention 5: Rational Drug Use Introduce funding / budget line item to support rational drug use throughout the supply chain	• Funding being made available • MOH support • RDU roles clarified and accepted • Stakeholder involvement	• MOH does not prioritize RDU programming
Strategic Intervention 6: Drug & Therapeutic Committees at Facilities a) Regular training and supervision at different levels of health care b) Sensitization of DTC activities c) Regular review of prescribing patterns by health facility staff d) Strengthen Health Professionals Council of Zambia inspections of standards of practice	• MOH leadership • Stakeholder involvement • Staff commitment	• Non-availability of funds • Lack of support • Conflict of interest amongst stakeholders • High attrition of HR
Strategic Intervention 7: Budget for Prescription Pads a) Increase the budget allocation for the printing of pads b) Regular documentation of dispensed commodities	• Availability of funds for printing • MOH commitment • Political will	• Non-availability of funds • Lack of adherence to professional ethics • Lack of MOH leadership

Thematic Group 6: Resource Mobilisation

Strategic Interventions	Assumptions	Risks
Strategic Intervention 1: Financing and Resource Mobilization a) Increase proportion of GRZ funding to the health sector (target of 15%) b) Institute transparent financing, procurement & budgeting mechanisms	• Political will • Collaboration with Ministry of Finance for efficient flow of finances • MOH to take leadership, and stakeholder buy-in	• Health is not prioritized by Government • Inadequate sources of revenue • Competing priorities • Needs based budget does not match the funding available • Non implementation of the Governance action plan • Lack of sufficient IT infrastructure to enhance visibility of Financing, procurement and budgeting activities • Absence of political will • Regulatory environment for ZPPA is too rigid/ • Non-compliance to GRZ Financial regulations • Political pressure to make fast decisions
Strategic Intervention 2: Sustainability a) Create a commodity security plan for health commodities and supply chain support b) Increase financing for infrastructure, especially storage, human resources, and distribution c) Operationalisation of National Health Fund d) Gradual increase in GRZ contributions for specific products e) Promote/build capacity of local manufacturers for specific products (e.g. south to south cooperation) f) Implement strategic plan for supply chain for 2013-2015 g) Joint planning and budgeting between Ministry of Health and Cooperating Partners on capacity building programs and activities	• Political will • Transparency and willingness to collaborate among partnerships • Zambia economy continues to grow	• Lack of political will • No transparency between Govt and its partners on inputs into the commodity security plan • Inadequate funds • Acceptance by stakeholders • Unavailability of funds by the Government • Lack of prioritizing by Government • Lack of skilled manpower to support South to South cooperation • Absence of deliberate Government policy to promote local production • Absence of market guarantee • Absence of funding to implement the strategic plan for supply chain • Unforeseen natural disasters • Lack of trust among stakeholders • Absence of coordination in leadership
Strategic Intervention 3: Service Fees and Supply Chain Financing a) Medical Stores Limited shall implement fees for services rendered (procurement and distribution) and work with MOH to determine how these might be paid b) Consideration of introduction of other levies for support of the supply chain c) Consideration of innovative ways for financing (i.e. talk time levy)	• Desire for MSL to operate independently • Political will • Government policy continues to be favourable towards parastatals	• MOH doesn't support fees for MSL • Absence of acceptance by stakeholders on MSL service fees • No transparency regarding utilization of service fees • Absence of clarity on responsibility for payment of fees • Low service level by MSL to justify fees

Strategic Interventions	Assumptions	Risks
Strategic Intervention 4: High Level Coordination a) MOH to develop Supply Chain Technical Working Group to guide MOH/MSL/cooperating partner planning and coordination on Supply Chain Strategic Plan implementation and related supply chain support. It was also proposed that the Procurement TWG and the coordination of supply chain related auditing be set up as working groups of this TWG. b) Advocate by stakeholders for Ministry of Health high level involvement and commitment to commodity security and improving the supply chain	• Political will to develop and participate in new TWG • TWG is inclusive	• Absence of adequate secretariat to manage the activities of the TWG • Presence of too many "competing" Technical Working Groups • Apathy among members of the Technical Working Group due to many meetings • Absence of shared understanding on goals of TWG

Thematic Group 7: Performance Management, M&E and Supervision

Strategic Interventions	Assumptions	Risks
Strategic Intervention 1: Job Descriptions, Accountability, Staff Key Performance Indicators a) Further define job description (JD) details that outline clear supply chain responsibilities and defined areas of accountability against key performance indicators for staff involved in the supply chain. b) Link job description details with existing supply chain standard operating procedures (SOPs). c) Have high level discussions within Ministry of Health HR Unit to promote supply chain cadre within health services (professionalization of supply chain roles distinct from current health care provider job descriptions)	• Job descriptions exist and are disseminated • Revisions are completed in reasonable period of time • Supply chain SOPs exist at all levels • HR supportive of new supply chain cadres	• Bureaucratic process • To narrow down the JD to a particular sector • Stakeholders consensus • Lack of compatibility • Conflicting interests • SOPs are not used regularly by staff throughout the supply chain
Strategic Intervention 2: Standard Operating Procedures (SOPs) for Performance Management and Monitoring & Evaluation a) Update existing SOPs to include clear guidelines for all supply chain roles and responsibilities by level. b) Align SOPs with changes developed throughout this strategy	• Lead agency/unit established • Resources available • Supply chain SOPs exist at all levels	• No human and/or financial resources to complete task • Lack of ownership of SOPs
Strategic Intervention 3: Provide Continuous Development on Supervisory & Management Skills a) Incorporate supervisory and management skills training of health professionals in pre-service curricula (pharmacists, pharmacy technicians, and lab technicians, and nurses until they can be phased out of supply chain activities). b) Continue routine in-service training in supervision skills and techniques for all supervisors in the supply chain (PMO, DMO, technical and procurement staff, etc.)	• It is possible to incorporate changes into pre-service curriculum at health professional schools • This is compulsory within curriculum • Linked with Capacity Thematic Group	• Unless made compulsory, trainees may not see this as a primary interest • People trained outside of Zambia will not have the same curriculum requirements • Some new supervisors may not be interested in/prepared for the supervisory role

Strategic Interventions	Assumptions	Risks
Strategic Intervention 4: Ministry of Health Central Supply Chain Monitoring & Evaluation Planning a) M&E Unit of MOH shall develop a central supply chain M&E plan • Including development of joint M&E tools b) M&E Plan shall include supply chain KPIs, and all levels shall agree on analysis and communication plan (dashboard) • Groups suggested that KPIs might be included in HMIS? c) Increased ownership and funding support for supply chain focused Monitoring & Evaluation at Central, Provincial and District levels.	• M&E Unit has the capacity to develop the supply chain M&E plan • All partners will participate to secure alignment with joint M&E tools • Proposed supply chain M&E plan fits into the current health M&E system • Linked with information systems thematic group • Increased budgetary allocation towards SC M&E • Increased capacity at PHO and DHO to be able to successfully conduct SC M&E • Continue coordination with partners to support MOH supply chain M&E system	• Current requirements of some partners may not allow for this integration • Plan may fail to fit into the existing health M&E system • Budgeting and approval of funding to support these activities • Skills and human resource capacity
Strategic Intervention 5: Harmonization of Monitoring & Evaluation Tools and Activities Develop mechanisms at Central, Provincial, and District levels to coordinate and harmonize MOH and cooperating partner standards and requirements for supervisory/M&E activities	• More coordinated supervisory/M&E trips between partners and MOH will maximize funding for transport and lessen burden on site level staff • Stakeholder involvement • Existence, in MOH, of an established M&E in Supply Chain	• Current requirements of some partners may not allow for this harmonization
Strategic Intervention 6: Supply Chain Audits and Audit Committee a) Policy direction on Supply Chain and Health Commodity audits shall be provided by Ministry of Health. b) MOH to establish an external and independent annual Supply Chain Audit Committee with cooperating partners. c) Consolidation of supply chain audits proposed (from top to bottom of supply chain and for as many purposes as possible). d) External and independent annual audit for entire supply chain proposed. e) Audits to be coordinated with cooperating partners and managed by the newly proposed Supply Chain Technical Working Group	• Reduce the need for separate partner and programmatic audits • Effective MOH leadership • Successful negotiations about timing and process • Stakeholder involvement • Approval • Funding	• Continued funding for this annual activity • Validity, credibility of audit firm • Donor buy-in to joint independent audit • Manpower to provide audit capability • Efficiency of the coordination / design and contract (if donors involved) • Lack of political will • Inadequate MOH leadership • Conflict of interests

Thematic Group 8: Capacity

Strategic Interventions	Assumptions	Risks
Strategic Intervention 1: Supply Chain Human Resource Skills Strengthened a) Empower staff working in supply chain management with requisite tools and resources to perform their duties (building a caring, competent and responsible logistics work force) through training and support in areas such as performance management, supervisory management, technical skills (e.g. - inventory control), and information technology. b) Implement the provisions of the health policy to create and maintain a work environment that is conducive for supply chain staff (ensure a physically clean working environment). c) Extend the existing retention scheme to include staff at each level of the supply chain. d) Establish in-service supply chain training centre at MSL. e) Develop formal guidance/SOPs on deployment of skilled staff to ensure that supply chain tasks are performed by skilled personnel and that staff stay in positions for which they are trained for a reasonable period following the training. f) SOP's for supply chain tasks should be introduced / modified for all levels. g) Implement, monitor and evaluate the Annual Performance Appraisal System (APAS)	• Effective MOH leadership on retention and support of supply chain in HR • Availability of funds • Political will • Compliance of work force • Effective supervision • Learning institutions agree to participate in pre-service programs • Implement the MSL business plan component on establishment of a training center • MSL to recruit logisticians to undertake training	• Availability of funds • MOH leadership commitment • Political will • Compliance by work force • Effective supervision • Ineffective communications • Irregular and/or ineffective supervisory visits • Staff available and recruited • No consequences for poor performance • Will take time to build new skills • Turnover rates • Funding / Budget • Continuous approach being applied • SOP's not enforced
Strategic Intervention 2: New Positions/Structures in Healthcare Supply Chain a) Ministry of Health proposes to Cabinet for creation of structures to increase supply chain workforce in order to meet increased demand (see also TG7, Intervention 1). b) The MOH shall define acceptable HR structure for each health facility level in terms of supply chain needs, and shall recruit staff to fill the posts	• Leadership provided by MOH • MOH senior management to approve and lead lobbying process of the proposed structure(s) with Cabinet office	• None approval by cabinet • Availability of funding to support this approach
Strategic Intervention 3: Supply Chain Skills in New Graduates Expand pre-service training for supply chain curricula in pharmacy and nursing schools and maintain at biomedical science schools	• Willingness to participle by Universities / Colleges • Effective MOH Leadership to facilitate learning	• Training facilities not consenting to inclusion of the supply chain module in their curriculum • Availability of funds to support this activity in the learning institutions
Strategic Intervention 4: Budget Line for Supply Chain Training Inclusion of a budget line under Ministry of Health Human Resources for supply chain training.	• Leadership commitment	• Funds will not be made available due to other priorities

Strategic Interventions	Assumptions	Risks
Strategic Intervention 5: Training Database for Supply Chain Skills a) Increase actual input of data into supply chain training database to be managed by MSL b) Conduct targeted training in the management and use of the supply chain training database.	• Commitment from MOH • Effective communication from bottom up • Effective supervisory visits • Funds available	• Lack of MOH staff commitment to manage databases • Database not sitting at MOH
Strategic Intervention 6: Storage Capacity at Facilities a) MOH shall conduct a needs assessment, including desk review of other reports on storage capacity, to determine current situation at all health facilities. b) MOH shall develop a detailed Implementation Plan for upgrading facility stores to meet/prepare for future needs. c) Resource mobilization from GRZ and donors to be aligned towards Ministry of Health's strategy to address storage challenges in health facilities.	• Desk review of various reports on storage capacities, share findings, MOH approval of findings, and stakeholder buy in into the assessment • Approval of recommendations by MOH • Consensus by stakeholders • Political will; MOH approval • Availability of funds • Stakeholder engagement • Availability of funds	• Will take considerable amount of funding and involvement of various levels of the MOH for improvements across the public sector • Non-approval by MOH due to offsetting priorities • Conflict of interest, • Lack of political will, • Unreliable power supply • Funds may not be available

Annex 3: Roles and Responsibilities

1. MOH Leadership
    - Policy development
    - Overall vision and mission
    - Provide financial resources
    - Petition government for increased funding
    - Donor coordination
    - Ownership of policy development process
    - Road map setting
    - Program approval

2. MOH Directorate of Clinical Care and Diagnostic Services
    - Product selection and development of EML
    - Quantification (in part - so many different people involved)
    - Specification for procurement
    - EMLIP rollout
    - Coordinate formulation of STGs and treatment protocols - takes leadership in the implementation of pharmaceutical services
    - Provides guidance in medicines management
    - Technical input to MOH senior management on SCM-related issues
    - Drug budget control

3. MOH Pharmaceutical Services Unit (under Directorate of Clinical Care and Diagnostic Services)
    - Coordination of forecasting and quant of all essential health commodities
    - Facilitates product selection
    - Coordinates and facilitates the development of ZEML, STGs, ZNF
    - Provides leadership in implementation of pharmaceutical services
    - Works in partnership with HR to increase pharmacy staff
    - Promotes rational use of medicines
    - Capacity building of staff in SDPs in LMS in collaboration with partners
    - Liaison with MSL
    - Prepare drug budget for submission to planning unit
    - Supervise provincial to SDP pharmacists
    - Coordination with disease programmes
    - Coordinate with procurement and supplies unit
    - Disposal of obsolete stock in collaboration with MSL and health facilities
    - Coordination with ZMRA

4. Directorate of Public Health and Research (MOH Strategic Disease Programmes)
    - Selection (EML) / lead in product selection with pharmacy
    - Manage disease-specific forecasting and quantification
    - Disease pattern monitoring
    - Development of treatment protocols
    - Quantification and forecasting programme commodities
    - Monitoring and evaluation

5. MOH Directorate of Planning

- Ministry of Health to select category of products for transfer to Medical Stores Limited to assess their capability
- Ministry of Health and Medical Stores Limited to develop and sign a Memorandum of Understanding stipulating a clear modus operandi between the two institutions
- Policy formulation and planning activities
- Budget planning
- Mobilizes resource for drug financing
- Leadership of planning for health services
- IT development
- Health systems development
- Infrastructure planning and resource mobilization (storage)
- M&E unit
- Publication of health statistics

6. MOH M&E Unit (under Directorate of Policy and Planning)
    - Monitor and evaluate programs
    - Provision of baseline data for planning
    - Manage and analyze data

7. MOH Procurement and Supply Unit
    - Ministry of Health to select category of products for transfer to Medical Stores Limited to assess their capability
    - Ministry of Health to transfer procurement functions to Medical Stores Limited through a gradual phased approach
    - Procure medicines and medical supplies for MOH
    - Provision of procurement guidelines/standards
    - Participates in forecasting and quantification
    - Oversight of procurement contracts
    - Preparing the procurement plan (joint with CPs)
    - Lead in selection of suppliers
    - Coordinate tendering activities
    - Provides model for procurement
    - Adherence to ZPPA requirements
    - Pipeline monitoring

8. Medical Stores Limited
    - Fleet management for MSL
    - Warehousing and distribution (distribution to hospitals and DHOs)
    - Inventory management
    - Quality assurance
    - Quantification and forecasting
    - Receiving medicines and medical supplies
    - Technical input on SCM-related issues to MOH
    - Information management
    - Logistics systems project management
    - Participation in contract/tender evaluation for framework contracts
    - SKUs analysis
    - Customer management (DHOs, hospitals)
    - Expiry date control/disposal
    - Returns

- Batch control

9. Churches Health Association of Zambia (CHAZ)
    - Pharmacovigilence
    - Procurement
    - Storage
    - Distribution
    - Technical support to facilities on inventory management
    - Third party logistics
    - Forecasting and quantification
    - Collaborating with GRZ and private facilities
    - LMIS management
    - Pipeline monitoring and procurement planning

10. Hospitals
    - Promote rational drug use
    - Order medicines
    - Storage
    - Dispensing
    - Quantification of medicines
    - Stock assessments
    - Pharmacovigilence
    - Post qualification training in logistics
    - Inventory control for all health commodities
    - Report and order medicines and medical supplies
    - Disposal of drugs/waste
    - Procure essential medicines and medical supplies using the grant
    - Drug & Therapeutic Committees

11. Provinces and Districts
    - Quantification
    - Receive and distribute medicines to health centres
    - Storage
    - M&E
    - Ordering from MSL/CHAZ
    - Performance assessment - supply chain
    - Provision of data on consumption/issue
    - Audit and control
    - Drug & Therapeutic Committees
    - Disposal of waste
    - Supervision of hospitals and health centres
    - Procurement of supplementary supplies
    - Capacity building (collaborate with stakeholders)
    - Providing leadership in implementation of pharmaceutical services
    - Provision of feedback (information - LMU)
    - Coordination of forecasting and quantification
    - Promote rational drug use
    - Pharmacovigilance

12. Health Centres

- Dispensing of medicines to patients
- Storage
- Inventory management
- Data management
- Quantification
- Ordering
- Supervision (health posts and CHWs)

13. Pharmaceutical Regulatory Authority
    - To ensure quality safe and efficacious medicines and medical supplies
    - Inspection of quality of storage facilities
    - License premises for distribution
    - Pharmacovigilence
    - GMP inspection
    - Maintain list of approved suppliers/drugs
    - License premises for distribution
    - QA/QC
    - Verification of suppliers
    - Registration of medicines and related substances
    - Establishing and maintaining list of premises
    - Essential Medicines List - coordinate formulary activities
    - Post marketing surveillance
    - Regulation of medicines and related substances
    - Regulating exportation, distribution and use of medicines
    - Waste disposal
    - Enforcement of pharmaceutical act and related
    - Collaboration with other regulatory bodies which impact on supply chain (Zambia Bureau of Standards, ZEMA, DEC)

14. Donors and other stakeholders
    - Procurement of products (in part), e.g., ARVs, OI drugs, medical supplies, etc.
    - Technical support to the MOH - in-country supply chain strengthening, forecasting
    - Financial support
    - Participation in TWGs
    - Quantification
    - Health financing and costing
    - Pipeline monitoring
    - Vaccine procurement
    - Advocacy
    - Health systems strengthening
    - Promotes MOH ownership of donor-led activities

15. Child Health Unit (Ministry of Community Development and Maternal and Child Health)
    - Vaccine prequalification
    - Child Health Campaigns - commodities
    - Vaccines forecasting and quantification
    - Vitamin A, deworming, supplementary activities
    - Neglected tropical diseases - unclear structures

16. Roles not adequately defined

- Coordination of various supply chain activities
- Quantification for requirements at district/facility level
- Invoicing of drugs usage
- Supply chain audits
- Procuring full supply essential medicines
- Commodities for palliative care
- Policy for product selection/implementation by level of facility
- Roles of Ministry of Community Development and Maternal and Child Health in relation to supply chain and commodities

Annex 4: List of Reference Documents

1. National Drug Policy 1999
2. Draft revision of National Medicines Policy
3. Zambia National Standard Treatment Guidelines
4. Zambia National Formulary
5. Essential Medicines List for Zambia
6. Pharmaceutical Act 2004
7. Zambia Public Procurement Act 2008
8. Sixth National Development Plan
9. Sixth National Health Strategic Plan
10. Millennium Development Goals
11. Paris Declaration
12. International Health Partnership Plus
13. Governance and Management Capacity Strengthening Plan (GMCSP)
14. District Integrated Logistics System Assessment Tool (DILSAT)
15. National Health Policy
16. Standard Operating Procedures Manual for Essential Medicines Logistics System
17. Supply mechanisms for key disease programs (ART, TB, Malaria, Laboratory supplies, Essential Medicines)
18. Logistics Management Information System
19. Pharmaceutical Act 2004
20. Zambia Public Procurement Act 2008
21. The Medicines and Allied Substances Act 2013

Annex 5: List of Strategic Workshop Participants

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