

# Ministry of Health and Child Welfare



## Analysis and findings from the Zimbabwe supply chain human resource assessment

March 2012

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## Introduction

*“But why would I stay in the public sector? Right now I am deployed here without any benefits, not even housing. I can earn almost \$2000 in the private sector. I can’t wait to finish. I will look for a position in the private sector as soon as I get my registration and license”* Key informant, serve delivery point

The USAID | DELIVER PROJECT, a U.S. Agency for International Development (USAID)-funded project, seeks to improve Zimbabwe’s health commodity supply chains by strengthening logistics management information systems, streamlining distribution systems, identifying financial resources for procurement and supply chain operation, and enhancing forecasting and procurement planning. While significant progress has been made in growing the Zimbabwean public sector health commodity supply chain, one obstacle that remains is building an under-developed and under-resourced supply chain workforce.

WHO identified health workforce performance as one of the six building blocks essential to strengthening health systems. An essential component of a robust health system is an effective supply chain providing health workers and clients with vital public health commodities. But an effective supply chain requires engaging the *right* people in the *right* quantities with the *right* skills in the *right* place at the *right* time to implement the procedures that direct supply chain operations and ensure the supply of health commodities.

To understand constraints and guide solutions that will develop Zimbabwean public health sector supply chain human resources the Ministry of Health and Child Welfare (MOHCW) Directorate of Pharmacy Services (DPS), with support from the USAID | DELIVER PROJECT, carried out an assessment of human resources for supply chain management in March 2012. The purpose of this assessment was to:

- Document the state of Zimbabwe’s public health supply chain human resource capacity;
- Identify opportunities to build the organizational and individual capacity of public health supply chain human resources; and
- Document professionalization efforts of supply chain personnel.

The *Human Resource Assessment Tool* was employed to evaluate the capacity of Zimbabwe’s public health supply chain human resources based on five important drivers, or human resource components: powerful constituencies, policies and plan, workforce development, workforce performance management, and professionalization. These five components encapsulate all aspects of workforce management needed to develop a comprehensive approach to building human resource capacity. Data gathered using this tool was used to inform:

- **Gap Analysis** that describes the current state of public health supply chain human resource functions in the Zimbabwe public health sector and gaps between the current and desired future state.
- **Public Health Supply Chain Human Resource Strategy** that defines key people initiatives (including policy, process and technology inputs as appropriate) which will positively impact the performance of applicable supply chains by supporting the development and professionalization of public health supply chain management personnel.

- **Strategy Implementation Roadmap**, or workplan, that identifies key activities, stakeholders, and timelines required to implement the *Public Health Supply Chain Human Resource Strategy*.

By strengthening the capacity of public health supply chain personnel, both supply chains and ultimately health systems will operate more effectively, thus ensuring improved access to health supplies that save lives of health systems clients.

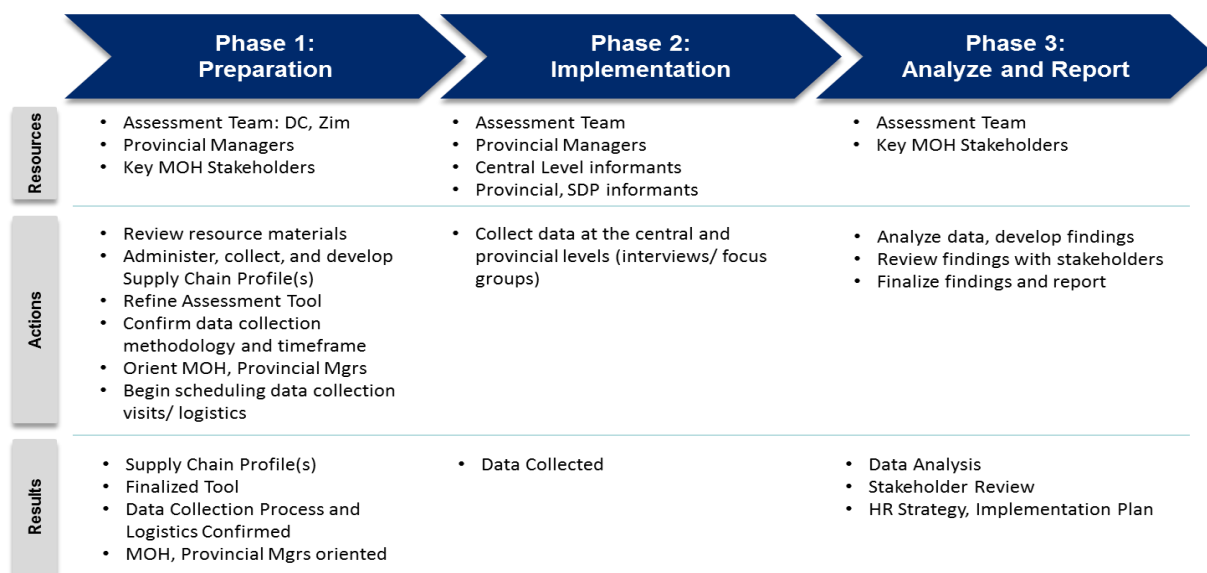
## 1. Methods

*“It is not clear what my next career move should be. I will probably look for greener pastures elsewhere.”*  
Key informant, provincial hospital

The HR assessment was rolled out in three phases: preparation, implementation, and analysis and reporting. Details of these steps are shown in

Figure 1 below.

**Figure 1: Approach to the supply chain HR assessment in Zimbabwe**



### 1.1 Data collection

This tool was deployed by a cross-functional, collaborative team. Data was gathered from respondents using focus groups and interviews using the tool’s standardized data collection survey. Over the course of two weeks, data was gathered at each level within the Zimbabwean public health sector supply chain (central, provincial, district, service delivery point):

- Two urban (Harare, Bulawayo) and two rural (Matebeleland South and Mashonaland East) provinces were surveyed.
- Survey sites included MOHCW, city, and mission-managed facilities.

Key informants at each level included supply chain managers (pharmacists, pharmacy technicians, dispensary assistants, nurses) as well as human resource managers and relevant medical managers. Additionally, donors, the pharmaceutical professional council and regulatory authorities, training schools, and partners were interviewed.

### 1.1.1 Data collection tool

The HR Assessment Tool was utilized to evaluate the capacity of supply chain human resource management based on five important drivers, or human resource components. As previously noted, these components form the foundation of the tool and provide a comprehensive approach to understanding and building human resource capacity. They are summarized briefly below:

- **Building Powerful Constituencies:** this component examines promoting advocacy, communication strategies, and coalitions in support of supply chain management and supply chain human resources;
- **Optimizing Policies and Plans:** this component examines organizational strategies for and policies that support human resource development and management;
- **Developing Workforce:** this component examines standard operating procedures for sourcing and then developing mission critical talent competency;
- **Increasing Workforce Effectiveness or Performance Management:** this component examines standard operating procedures for assessing, supervising, and retaining employees; and
- **Professionalization:** this component examines networks and processes for creating a professional formal cadre among supply chain personnel.

Figure 2: Components of the HR assessment tool



Each HR component is comprised of sub-components, or “dimensions”, which are designed to assess the level of development found within a given HR component. Dimensions under each component were rated by respondents using a modified Likert scale from 0 to 4. For example, dimensions were rated zero if they did not exist all or four if they were developed and consistently and uniformly applied with full funding and stakeholder support (as appropriate). The full scale is noted in Figure 3.

Figure 3: HR assessment tool rating scale

Rating	Definition
0	Dimension does not exist.
1	Dimension is being developed and/or exists but is outdated or inappropriate to current system requirements.
2	Dimension is developed but not consistently or uniformly applied.
3	Dimension is fully developed and has stakeholder support, but lacks requisite funding.
4	Dimension is developed and consistently and uniformly applied with full funding and stakeholder support (as appropriate).

Dimension ratings were aggregated to provide an overall assessment of development for each respective component. Aggregated findings were depicted in a dashboard which is included in *Section 2: Findings*. Data collection and aggregation was conducted and is displayed by system level: central, provincial, and district/service delivery point.

(Note: data was gathered at both district and service delivery points independently. However, data found no difference between the two levels thus they are combined for the purposes of this assessment).

Results for all levels were subsequently verified at a stakeholders meeting.

## 2. Findings

*“...But why would I stay in the public sector? Right now I am deployed here without any benefits, not even housing. I can earn almost \$2000 in the private sector. I can't wait to finish. I will look for a position in the private sector as soon as I get my registration and license. ”* Key informant, mission operated facility

The assessment team carried out a detailed analysis of the strengths and weaknesses of each assessment component based on a review collected data. Subsequently, the team looked at both internal strengths and weaknesses of and external opportunities and threats to HR capacity that could be leveraged and/or mitigated. Broader findings include:

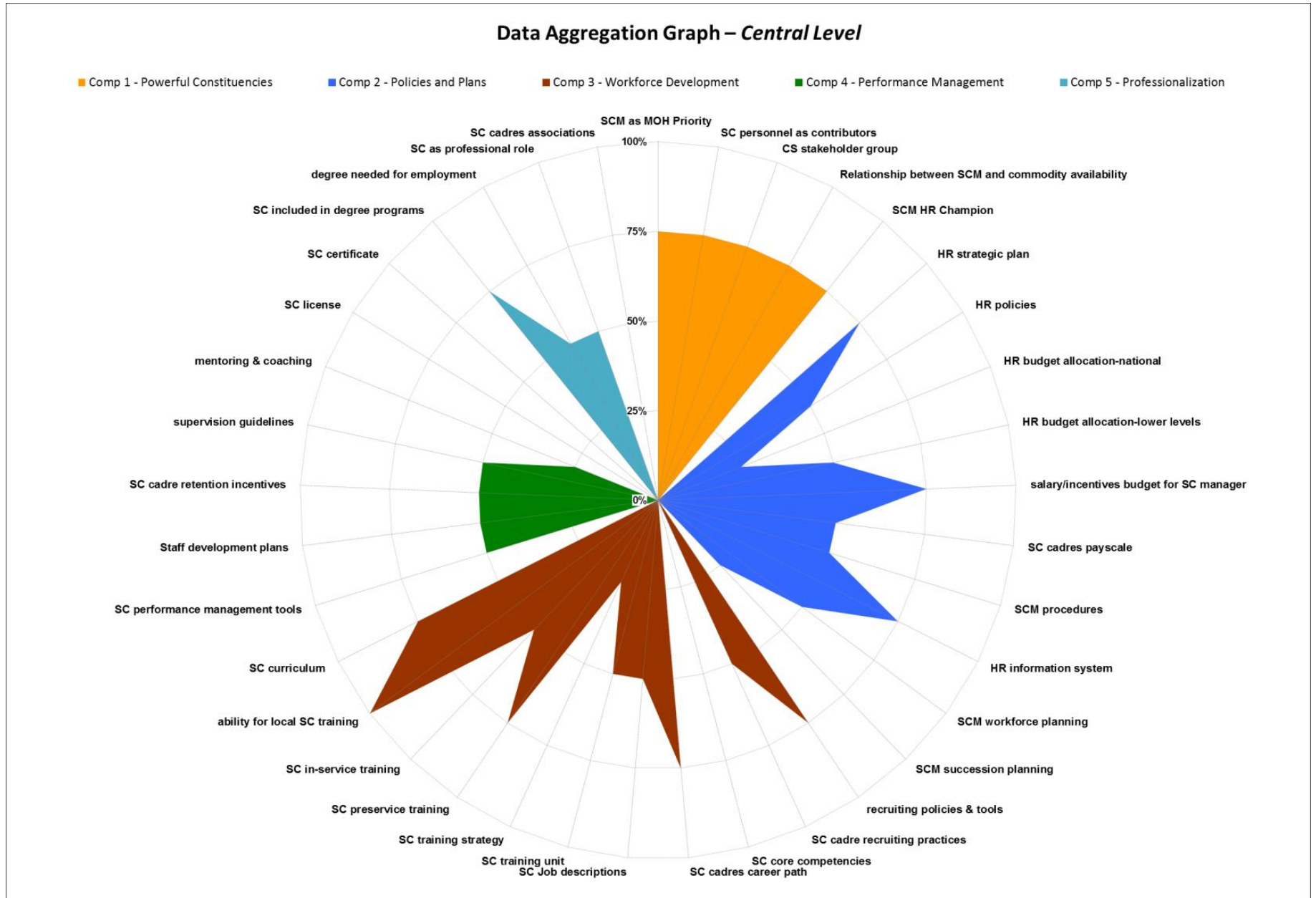
- Limited funding for HR programs and significant reliance on donors for the staffing of key positions;
- Inadequate coordination and communication of workforce resources and expectations between MOHCW's DPS, Directorate of Nursing Services (DNS), and Directorate of Human Resources (DHR); and
- Inequitable access to HR programs (i.e. locums for pharmacy cadre at the institutions they are working at, access to and distribution within of Global Fund for AIDS, TB, and Malaria (GFATM) retention scheme).

Also, without exception, when analyzed each human resource component was more robust and better disseminated, with great adherence, at the central level than at lower levels.

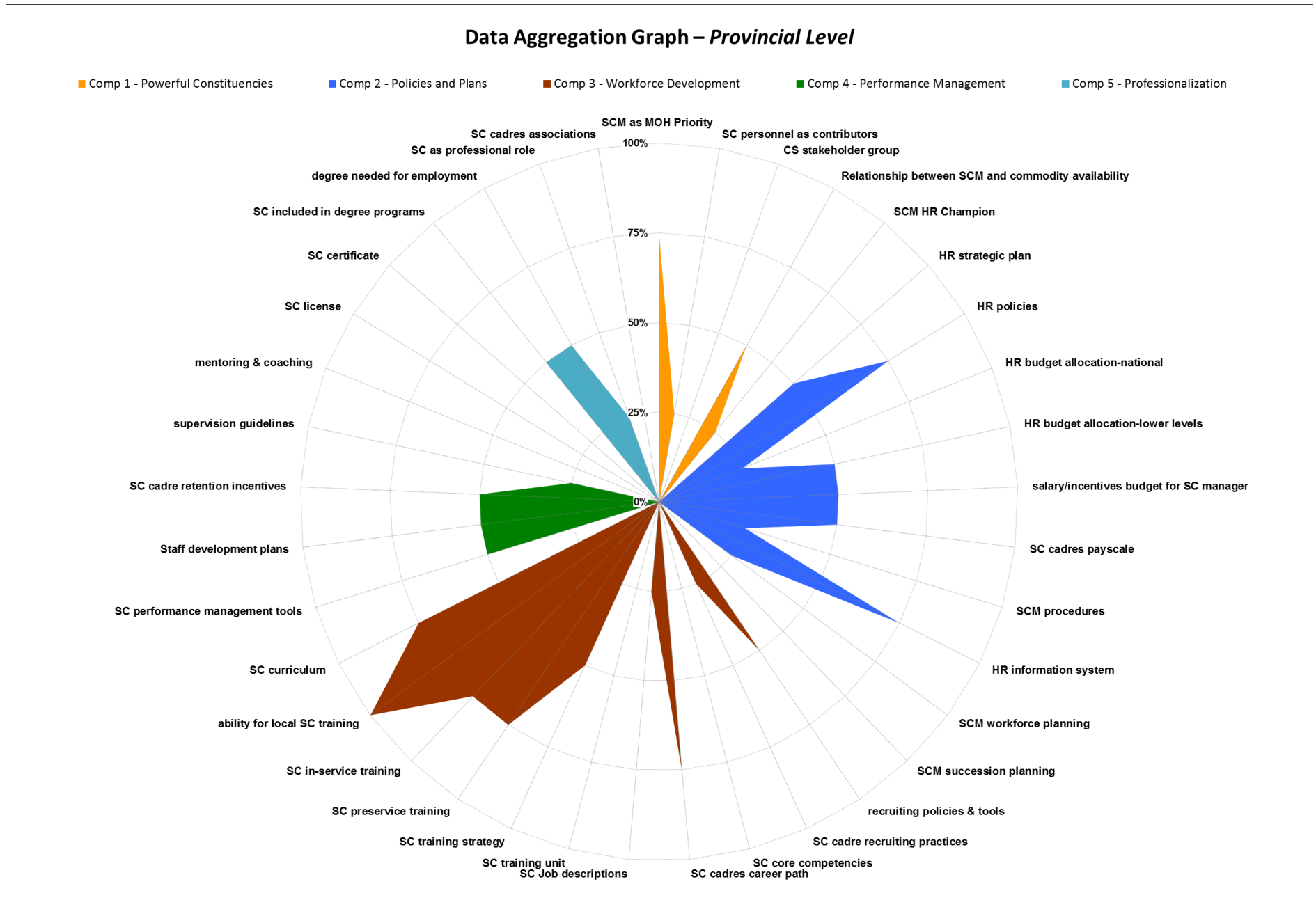
A more detailed analysis for each component is provided in the following section. Findings from the assessment are illustrated and summarized in the three central, provincial, and district/service delivery level graphs that follow.

Each HR component is represented by a different color and dimensions associated with each HR component are noted on the outside of the graph. As previously noted, each dimension was rated by respondents on a 0 to 4 scale; these scores are aligned to a percentage (e.g. 0 rating = 0%, 4 rating = 100%). The score percentage for each dimension is plotted on the graph. Once each question is plotted for a given HR component, the area is colored in to depict the overall level of development.

**Figure 3: Central level HR component and dimension dashboard**

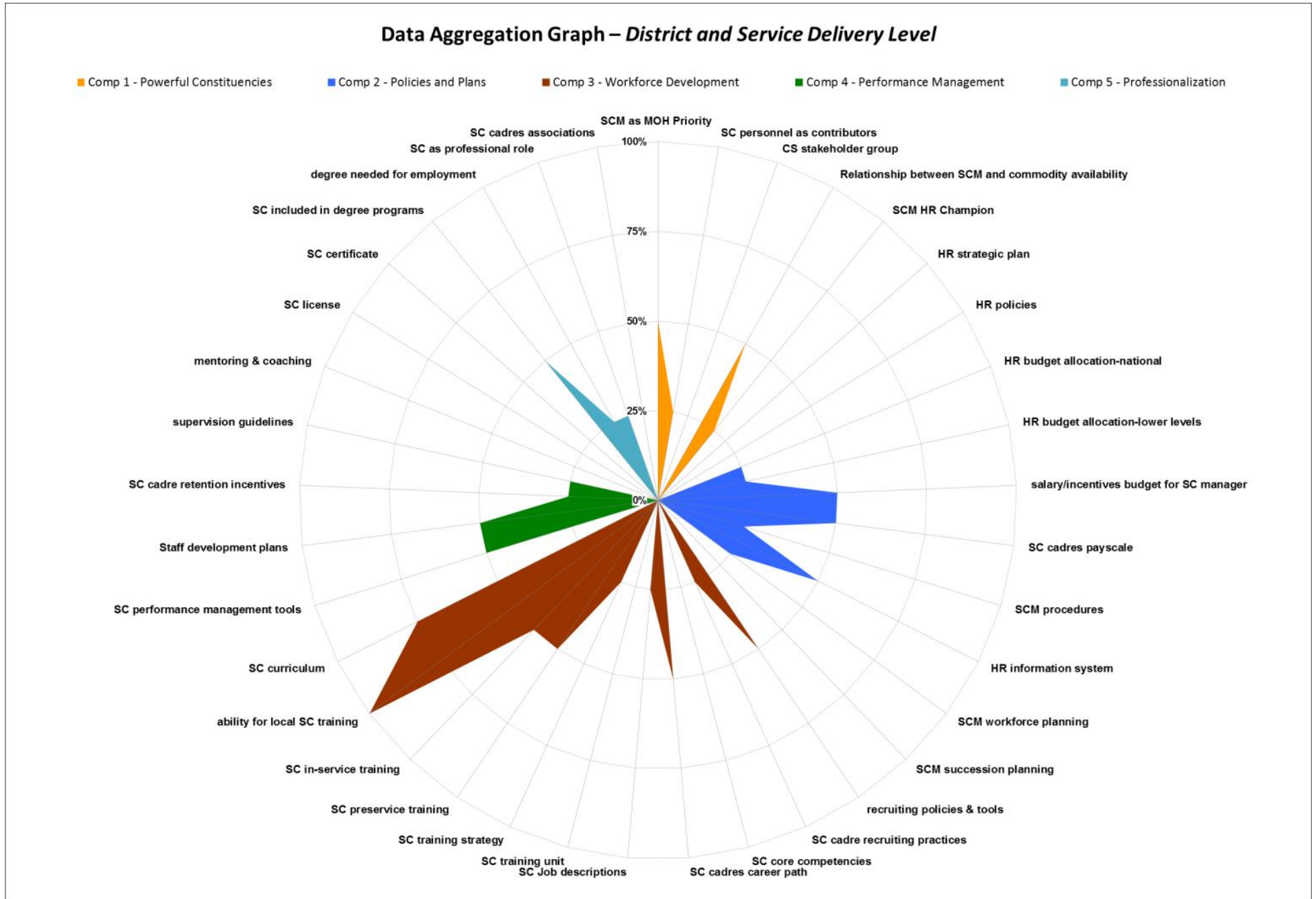


**Figure 4: Provincial level HR component and dimension dashboard**





**Figure 5: Central level HR component and dimension dashboard**



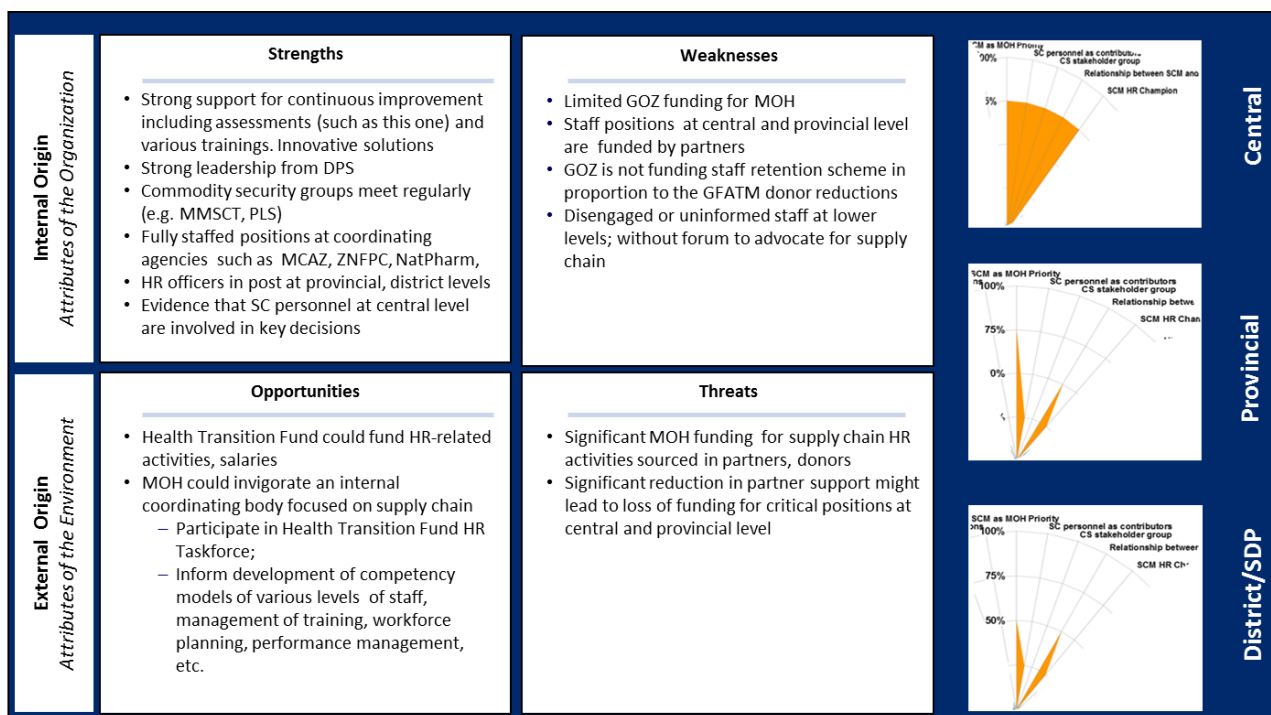
## 2.1 SWOT analysis

### Component 1: Powerful constituencies

Powerful constituencies are active and influential at the central level and there is evidence of strong leadership. At multiple levels, DPS was cited as a true champion of supply chain and supply chain human resource issues. Leadership is built and sustained through various commodity security groups, such as the Medicines and Medical Supplies Coordination Team (MMSCT), who are fully operational and meet frequently at central level. There was a culture of continuous improvement among these groups and Ministry leadership, as illustrated by support for assessments and training of supply chain cadres. However, this diminished significantly at provincial level and was even lower at district and clinic level as respondents felt the absence of a distinct group of persons who could advocate for public health supply chain HR issues. Additionally, the salaries of noted sources of powerful constituencies (namely the DPS, Logistics Unit (LU), and Provincial Pharmacy Managers (PPMs)) are supported by partners. Thus advocacy for and management of supply chain systems and workforce is at risk; should partners cease to provide salary funding, these positions could disappear which would significantly disable the supply chain. The Health Transition Fund was cited as a possible temporary source of funding for HR positions at higher level. However, respondents suggested that the Government of Zimbabwe (GOZ) should prioritize funding for these critical central, provincial, and district level positions so that they may continue to be effective when partner support eventually ends.

This dynamic is mirrored within human resource management as well; advocates for personnel and personnel support services are informed and present at the central level but uniformed and/or disengaged at lower levels. Many supply chain staff feel powerless in addressing human resource issues related to their workplace or job. This is a significant de-motivator and, ultimately, negatively impact supply chain functionality.

Figure 3: SWOT analysis for powerful constituencies



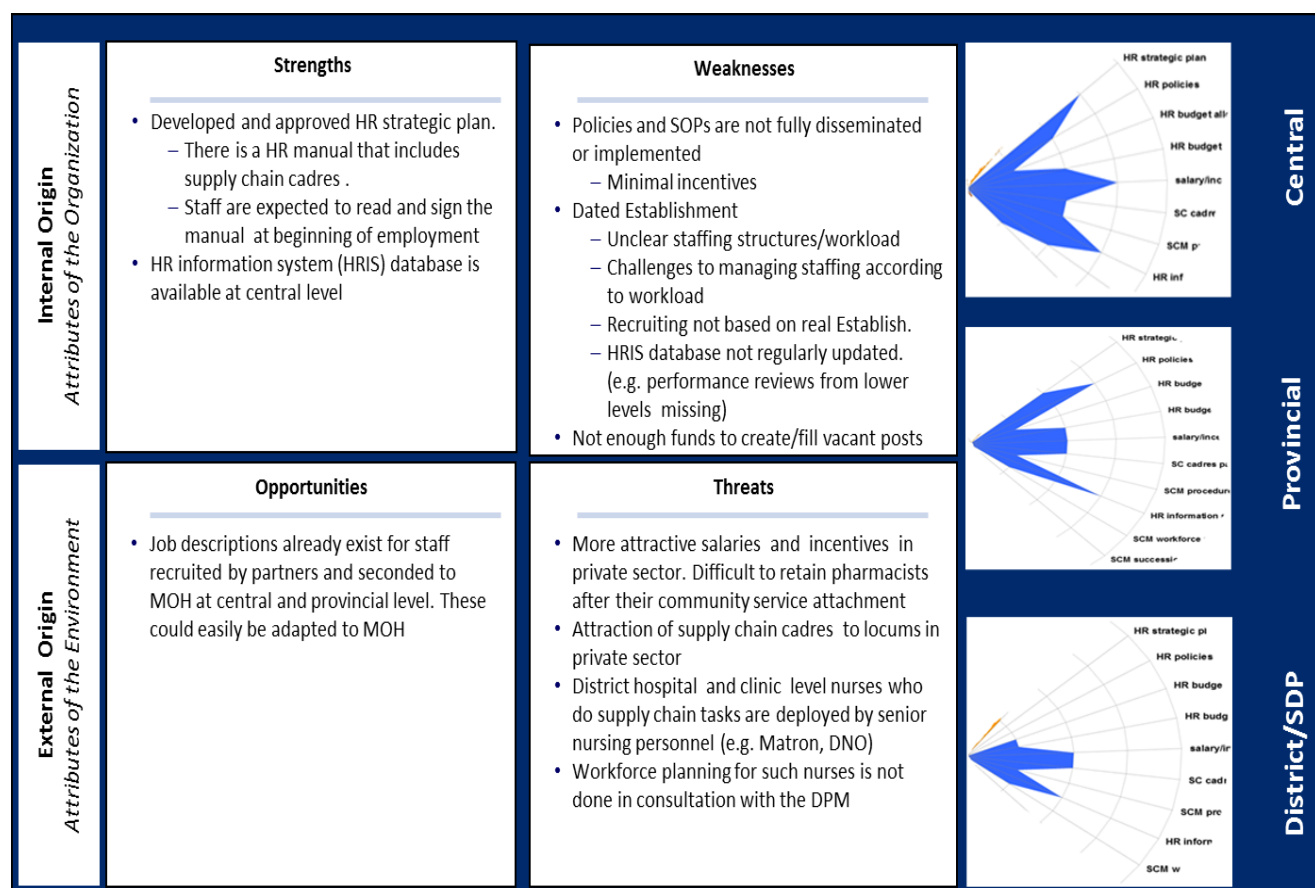
## Component 2: Policies and plans

MOHCW human resource operations are guided by a DHR *HR Strategic Plan*. This plan provides a detailed and comprehensive approach to workforce management. A companion HR policies and procedures pamphlet is also developed and accessible (at some levels and facilities), providing standard operating procedures for most HR processes. Both documents address the HR needs of supply chain cadres. While supporting HR policies were robust and documented, they are not consistently distributed or implemented.

Difficulties were also noted with the organizational staffing structure. Some cadres are asked to fulfill supply chain tasks for which they may not have organizational authority. This is often the result of understaffing of supply chain roles where other employees (e.g. nurses) are required to fill in. This is exacerbated by staffing practices. Currently nurses are rotated in and out of positions with supply chain management responsibilities without consulting supply chain managers and HR officers at all levels.

Finally, the HR budget is considered insufficient and, consequently, salaries and incentives are not adequate. Under the guidance of GFATM, a retention scheme was developed to supplement some supply chain cadres' salaries in an effort to retain staff at post. However, donor funding for the scheme is being phased out and the GOZ has been unable to assume responsibility for funding the difference thus exacerbating salary and incentive deficits. Additionally, only certain positions received the allowance and, for those positions, the distribution of monies is perceived as inequitable in comparison to other positions. Finally, the practice of allowing for locums is not implemented equitably at all levels within the system (e.g. those at central level can participate whereas those at lower levels cannot per local supervisor decision). These factors are notable un-motivators and have contributed to ongoing tension among employees and a sense of dissatisfaction.

**Figure 4: SWOT analysis for policies and plans**



### Component 3: Workforce development

A significant strength for workforce development is the recently developed curriculum for pre-service training which was already being used for pharmacists and pharmacy technicians. There is sufficient evidence of appropriate and extensive in-service trainings for supply chain cadres at all levels. For example, there were frequent trainings in SOP development, medicines management, quantification, and ZADS training. Funding partners actively support these trainings. However, while some supply chain content exists within the pre-service curriculum for nurses, it is not standardized or comprehensive. This is an issue as many nurses are asked, at points in their career, to fulfill supply chain tasks. Similarly, while training is coordinated at a central level and a calendar is managed, at lower levels supply chain staff were unaware of the calendar and training opportunities. There was some perception that certain roles and certain levels had greater access to training than other and staff who are unofficially filling supply chain roles are not given access to the training required for the role.

The effectiveness and sustainability of these staff development programs, though, is hampered by several factors. There is no competency model for supply chain cadres. This means that workforce planning, performance management activities, training, career paths, and job descriptions are not based on a uniform, accepted level of standards for desired supply-chain related knowledge, skills, or abilities. This appears to result in subjective employee development and, consequently, an inability to strategically appropriate HR funds to those areas and skills most essential to supply chain operations. Job descriptions for supply chain cadres are not widely available and those that do exist are not standardized.

Finally, Medicines Control Authority of Zimbabwe (MCAZ) is planning to require public sector pharmacies to operate only with licensed and registered pharmacists. Because there are not enough qualified, trained pharmacists, this poses a significant risk to ensuring that pharmacies remain in operation should this requirement be enforced.

Figure 5: SWOT analysis for workforce development



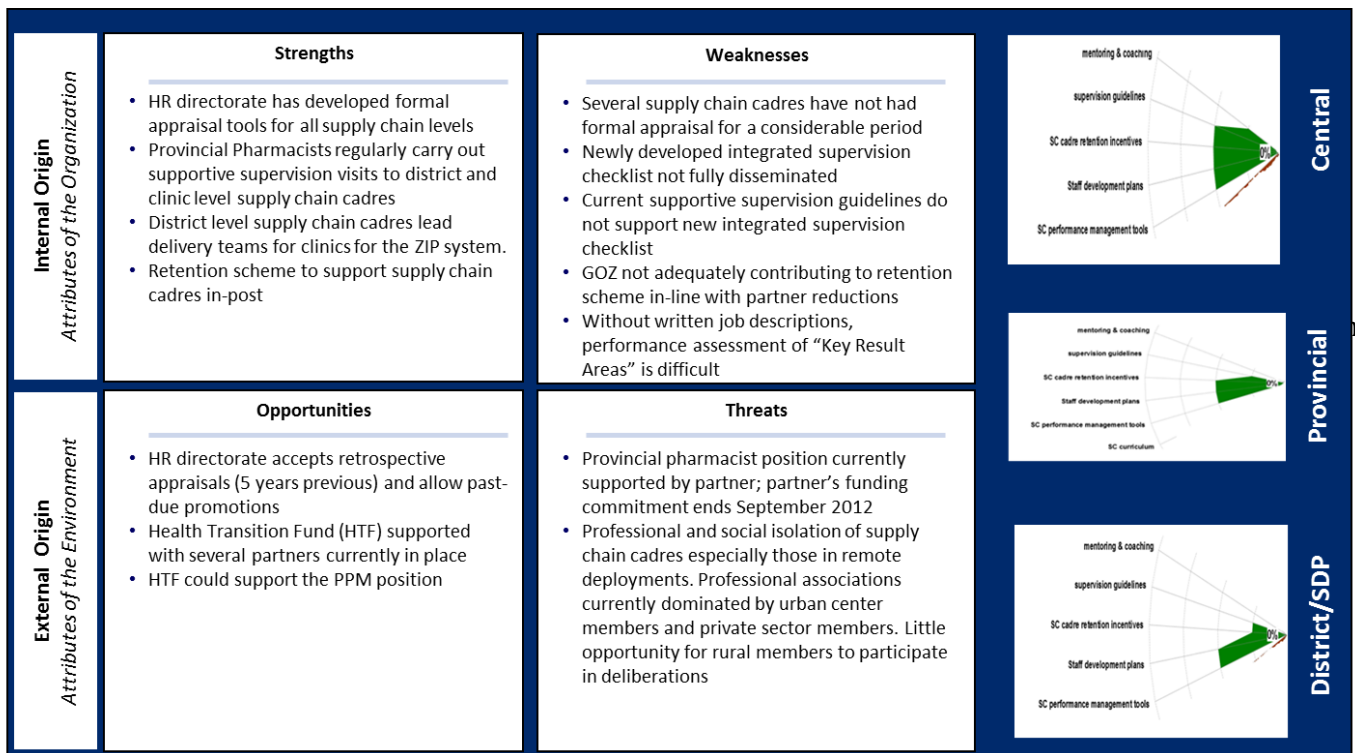
## Component 4: Workforce performance management

Employee performance is managed using a formalized, well-documented set of appraisal policies and tools. Still, there are some challenges. Among the most notable is the lack of feedback, consequences or follow-up from higher levels when appraisals are submitted. Performance incentives are absent. As such, appraisals are largely viewed as inconsequential. Thus many supply chain cadres have not had formal appraisals in several years. As a result, staff development plans were not consistently created or used.

Some formal opportunities exist for higher level supply chain cadres to manage performance at lower levels through supervision visits. PPMs regularly carry out support supervision visits to lower levels, for example. These visits were greatly appreciated by lower level staff as they provided an opportunity to discuss and devise solutions to ongoing work challenges. Similarly, district level supply chain cadres periodically lead delivery teams for clinics in the ZIP system. However, while guidelines existed for supervisory visits, they do not exist for how to exhibit appropriate and/or ideal supervisory characteristics.

Another major challenge noted in the assessment was the social and professional isolation of those supply chain cadres posted to remote rural locations. Such cadres had limited opportunities to interact with professional colleagues and were not favored by locally designed locum policies. These disincentives were exacerbated by the fact that supply chain retention was solely dependent upon the GFATM retention scheme. As this scheme has been phasing out, the GOZ has been unable to fully fund the difference.

**Figure 6: SWOT analysis for workforce performance management**





## Component 5: Professionalization

Supply chain content is now included in pre-service curriculum at the University of Zimbabwe and the Harare Polytechnic and is a graduation requirement. This has contributed significantly to the professionalization of supply chain roles. This is complemented by the availability of local chapters of internationally recognized institutions that offered supply chain qualifications such as CIPS and CIPFM. However, while nurses fulfill many supply chain roles and tasks, they do not have standardized supply chain curriculum. Consequently supply chain is still considered by this cadre as largely “administrative”. There is an opportunity to standardize the pre-service training of nurses using the newly developed pre-service curriculum for supply chain cadres. Finally, there is no certificate or licensing program for public health supply chain.

Figure 8: SWOT analysis for professionalization



### 3. Recommendations and next steps

*“In these difficult financial times, we shouldn’t be wasting resources of any kind...including human resource...”* Key informant, district hospital

Significant opportunities exist to both position and support the supply chain workforce in Zimbabwe as they cope with existing economic challenges while continuing to provide a commendable service to clients. These opportunities strengthen both strategic and operational management of human resources.

#### 3.1 Supply chain HR strategic management interventions

##### HR strategic management intervention 1: Coordination

**Supply Chain HR Coordination Group.** A temporary Supply Chain Human Resource (SCHR) Working Group is needed to manage supply chain human resources in a more coordinated and responsive manner through the course of implementing these recommendations. The formation of a SCHR Working Group would be tied to the duration of recommendations sourced in this assessment. This working group should be led by DPS and include representatives from HR and Nursing. PPMs would be included in the SCHR Working Group as necessary. PPMs have significant access to supply chain managers at district and service delivery point and can be an important vehicle for addressing HR issues. The SCHR Working Group will:

Coordination
The approach to working collectively on intersecting/interdependent tasks and goals
<ul style="list-style-type: none"><li>• <b>Supply Chain HR Coordination Group</b> – build team, approach, and process for managing Supply Chain HR Workplan (consider identifying a full-time DPS-placed HR Coordinator)</li><li>• <b>Nursing Placement Coordination</b> – coordinate the placement of nurses filling supply chain tasks to ensure consistent, quality service provision</li></ul>

- Manage the implementation of approved recommendations;
- Liaise with the Health Transition Fund HR Working Group; and
- Direct PPM efforts to build HR capacity within the provinces including manage HR policy dissemination, staffing, training.

This group would meet twice monthly and include PPMs at least once per month in coordination meetings. By creating a supply chain-focused HR working group, special attention can be paid to directly aligning efforts to expand the capacity of those employees with supply chain tasks with supply chain requirements, and then seeing them properly implemented.

**Nursing Placement.** An enhanced approach needs to be taken to improve inter-departmental coordination between nursing and pharmacy services around deployment of nursing staff trained and carrying out supply chain roles. District Nursing Officers and matrons must coordinate with DPS when deploying nurses in supply chain management positions. Because those nurses fulfilling supply chain tasks have gained specialized supply chain skills through training and work experience, it is imperative to continue to use these cadres in supply chain roles through a consultative commissioning process with supply chain

managers. This will ameliorate the frequent loss of skilled personnel which occurs when these nurses are routinely redeployed in non-supply chain roles.

### HR strategic management intervention 2: Equitable access to benefits

**Locums.** In order to attract and maintain scarce supply chain personnel in difficult to reach position, efforts should be made to ensure that all cadres at all levels have equitable access to locum practice and other flexible working arrangements.

**Retention scheme.** The current GFATM-supported retention scheme does not provide allowances for all supply chain roles nor are funding levels for participating positions allocated with parity or transparency. This is a source of discontent, impairing motivation and retention.

Equitable Access to Benefits
The programs and resources needed to develop, motivate, and retain human capital development
<ul style="list-style-type: none"> <li>• <b>Locums</b> – ensure the locum practice is accessible at all levels to all cadres</li> <li>• <b>Retention Scheme</b> – reevaluate retention scheme to ensure equitable participation and distribution – across all levels and roles</li> <li>• <b>“Mop up” Performance Reviews</b> – ensure employees are recognized with dev plans</li> </ul>

- *Participation.* Expanding participation to all roles is recommended. If a role is important enough to supply chain operations to merit creation and staffing, then, as an essential component of effective and efficient service provision, it should receive an allowance. For example, even though a dispensary assistant role is less complex and requires less education, it is still essential to pharmacy operations. Therefore to prevent attrition and resulting gaps in operations, this role should be allocated an allowance.
- *Distribution levels.* For those roles that do receive allowances via the retention scheme, amounts are widely disparate. For example, physicians receive much higher allowance supplementals than a pharmacist. While the assessment team realizes that different roles merit different funding levels, there needs to be a more equitable and transparent method for determining distribution and levels.

These program inefficiencies and discrepancies should be addressed now so that improved retention scheme, policies, and procedures can inform decisions made by the Health Transition Fund if and when it considers financial incentives to address the acquisition, retention, and motivation of supply chain personnel.

**“Mop up” performance reviews.** To ensure that staff have access to benefits appropriate to their role and level, all staff should have past-due performance appraisals completed.

### HR strategic management intervention 3: Communication

**Policy Dissemination.** A major opportunity exists to disseminate the well-developed HR policies, procedures, and tools to supply chain cadres stationed at lower levels of the supply chain in a timely and consistent manner. This could be achieved by utilizing the PPMs and DMOs positioned at various levels in the system as HR point persons who would support HR officers at corresponding levels.

Communication
The method, tools, and guidelines for disseminating information and making decisions
<ul style="list-style-type: none"> <li>• <b>Policy Dissemination</b> – improve HR information dissemination to supply chain staff across all levels</li> </ul>



## HR strategic management intervention 4: Organizational vision and design

**Supply Chain Staffing Structure.** At lower levels within the staff are asked to complete supply chain tasks regardless of their formal role or job description or organizational authority. Clearly delineating roles and responsibilities at this level and making adjustments to the staffing structure is recommended in order to ensure that all staff asked to complete supply chain tasks are afforded the authority, training, and support needed to address supply chain needs.

**PPM and LU Salaries.** Paramount to any improvements in the human resource situation of supply chain cadres is the maintenance of senior leadership. Currently, all PPMs, LU staff, and several senior leadership positions in the DPS are funded by partners. Assurance of continued funding of senior management positions through committed funding from the GOZ is essential. Furthermore, continuation and enhancement of the staff retention scheme through additional funding from the GOZ and its partners is vital for the success of these interventions. A review of the eligibility criteria and the distribution of scales among supply chain cadres is necessary to ensure continued support of these critical positions.

Organizational Vision and Design
The structure and components are sustainable and support development, promotion, and system success
<ul style="list-style-type: none"><li>• <b>Supply Chain Staffing Structure</b> – update staffing structure and clarify role expectations to reflect to-date supply chain system requirements</li><li>• <b>PMM and LU Salaries</b> – obtain assurance for ongoing funding for senior level staffing</li></ul>

### 3.2 Supply chain HR operational interventions

#### HR operational intervention 1: Pharmacist, Pharmacist Technician, and Dispensary Assistant competency models

Investment in the design and implementation of competency models that articulate the roles, knowledge, and skills of all supply chain cadres in Zimbabwe is a worthwhile investment.

Workforce Development
<ul style="list-style-type: none"><li>• <b>Competency Model</b> – inform cost-smart, relevant job description update, training development, performance management</li></ul>

For all recommendations, developing a competency model for all supply chain roles will provide the infrastructure needed to guide the development and direction of DPS' human resource priorities. Competency models will serve an integration point for all human resource management offerings (e.g. workforce planning, recruiting and staffing, training etc.) and:

- Provide insight into the needs and potential talent shortages and enable skill based staffing;
- Recruit employees who have the desired set of knowledge and skills and focus employee development on the competences needed for effective job performance;
- Provide a basis to measure current performance and identify clear objectives for future development and make assessments more objective by evaluating not only “what” goals are achieved but also “how”; and

- Guide the development of formalized programs designed to create a formal, trained cadre of supply chain workers.

By framing and then guiding performance expectations, a competency model will serve as a vital tool for ensuring that employees perform at standard that supports supply chain operations.

### HR operational intervention 2: Skill-based mentoring program

Increasing opportunities for on-the-job training through a mentoring program will have high impact on the level of motivation of supply chain cadres while improving their knowledge and skills at the same time. Designing a program with a focus on on-the-job skills transfer should be focused on intra-professional learning. Setting up opportunities for supply chain cadres to learn from each other through study visits has the potential to reduce professional and social isolation, especially for supply chain cadres located in remote postings. Based on adult-learning theory, this program will have three components which each take place on-the-job:

Workforce Performance Management
<ul style="list-style-type: none"> <li>• <b>Mentoring Program</b> – enhance development and retention of supply chain personnel</li> </ul>

- **Hear:** Develop a virtual community of practice where practitioners interact on a quarterly basis to discuss questions, issues, or trends. At least once a year, hold the community of practice meeting in person. This community of practice could be organized by province, district, role etc.
- **Do:** Expand the supportive supervision visits to include a brief session where pharmacy managers practice a skill under the direction of the attending supervisor. Currently three supervision visits (LU, PPMs, DELIVER staff) take place each quarter. Developing an annual (or bi-annual) curriculum based on supply chain operational deficits, changes, requirements etc. and leveraging planned supportive supervision visits to roll it out will provide a cost-effective and thorough approach to building skills on-the-job in a strategic and appropriately focused manner.
- **Teach:** The third component of this program is to provide employees with supply chain tasks an opportunity to interact with and teach each other on the job. While “sharing” could take a number of shapes (i.e. rotations, fellowships, one-day visit) depending on the purpose, tasks being developed, employee role and level, the fundamental purpose is to allow one employee or facility to teach another.

With this skill-based mentoring program, program initiatives will be tailored to supply chain needs. Where issues or successes are identified, experiential learning will be developed and cascaded to all employees to accelerate the development of high-performers and address the development of low-performers – with the end goal of improving supply chain management. With both, they have access to colleagues, learn from other facilities, and grow skills through immersive learning and mentoring support.

### HR operational intervention 3: Updated MOHCW Establishment

Policies and Plans
<ul style="list-style-type: none"> <li>• <b>Supply Chain Establishment</b> – improve planning, acquisition, and placement of staff to improve fiscal and manpower allocation</li> </ul>

The MOHCW Establishment, or staffing plan, for supply chain positions needs to be updated to better inform budget and implementation decisions related to acquiring skill sets needed to sustain supply chain operations. Conducting a workforce demand and supply analysis for supply chain-related positions will provide a more accurate depiction of both the current and desired future supply chain workforce profile than currently exists. Analysis will also identify and address workforce requirements and risks (e.g., no pipeline for desired staff, heavy reliance on a specific role, workload requirements without adequate coverage). An updated Establishment will serve as a powerful decision making tool for costing, sourcing, and managing workforce. With limited funds, it is essential that MOHCW strategically leverage HR funds to source the right staff with the right skills into the right positions.

**HR operational intervention 4: Nursing supply chain curriculum**

Many nurses at district and service delivery facilities are asked to fill in and/or assist in the completion of supply chain-related tasks. In some cases they are even asked to manage pharmacies and/or dispensaries. However, since supply chain content is addressed on an ad hoc level, nurses are often asked to fulfill these roles without adequate training. Reviewing and standardizing supply chain curriculum in the nursing pre-service education is recommended in order to both provide nurses with the requisite knowledge and skills to support supply chain management.

Professionalization
<ul style="list-style-type: none"> <li>• <b><i>Nursing Supply Chain Curriculum</i></b> – review and standardize pre-service supply train education</li> <li>• <b><i>Dispensary Assistant Training</i></b> – develop and implement supply chain pre-service education</li> </ul>

**HR operational intervention 5: Dispensary Assistant training**

Standardized training for Dispensary Assistants is required to ensure that those filling this role have the requisite knowledge and skills to support supply chain management, as required by the role.