Tanzania: Human Resource Capacity Assessment in Public Health Supply Chain Management

APRIL 2015
This publication was produced for review by the U.S. Agency for International Development. It was prepared by the USAID | DELIVER PROJECT, Task Order 7.
Tanzania: Human Resource Capacity Assessment in Public Health Supply Chain Management

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USAID | DELIVER PROJECT, Task Order 4
The USAID | DELIVER PROJECT, Task Order 4, is funded by the U.S. Agency for International Development (USAID) under contract number GPO-I-00-06-00007-00, order number AID-OAA-TO-10-00064, beginning September 30, 2010. Task Order 4 is implemented by John Snow, Inc., in collaboration with PATH; Crown Agents Consultancy, Inc.; Eastern and Southern African Management Institute; FHI 360; Futures Institute for Development, LLC; LLamasoft, Inc.; The Manoff Group, Inc.; Pharmaceutical Healthcare Distributers (PHD); PRISMA; and VillageReach. The project improves essential 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. The project encourages policymakers and donors to support logistics as a critical factor in the overall success of their healthcare mandates.

Recommended Citation

Abstract
This report explains the methods and processes used to arrive at the findings and recommendations for improving the human resource capacity of the public health supply chain in Tanzania. It will be particularly useful to human resources managers, policymakers, managers in the Ministry of Health and Social Welfare, partners, and others working with either public health supply chain management or, more broadly, human resources for health.

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<tbody>
<tr>
<td>ARV</td>
<td>antiretroviral</td>
</tr>
<tr>
<td>BPharm</td>
<td>bachelor’s degree in pharmacy</td>
</tr>
<tr>
<td>BRN</td>
<td>Big Results Now</td>
</tr>
<tr>
<td>CDC</td>
<td>Centers for Disease Control and Prevention</td>
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<tr>
<td>CHMT</td>
<td>Council Health Management Team</td>
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<tr>
<td>DDH</td>
<td>district hospital</td>
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<tr>
<td>DFID</td>
<td>Department for International Development</td>
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<tr>
<td>FBO</td>
<td>faith-based organization</td>
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<td>FGD</td>
<td>focus group discussion</td>
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<tr>
<td>GFATM</td>
<td>Global Fund to Fight AIDS, Tuberculosis and Malaria</td>
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<td>HCW</td>
<td>health care worker</td>
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<td>HMIS</td>
<td>health management information system</td>
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<td>HR</td>
<td>human resource</td>
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<td>HRH</td>
<td>Human Resource for Health</td>
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<td>HRIS</td>
<td>Human Resources Information System</td>
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<td>HRHIS</td>
<td>Human Resource for Health Information System</td>
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<tr>
<td>HRM</td>
<td>human resource management</td>
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<tr>
<td>HSDG/MMAM</td>
<td>Health Sector Development Grant/Primary Health Services Development Programme</td>
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<td>HWI</td>
<td>Health Workforce Initiative</td>
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<tr>
<td>ILS</td>
<td>integrated logistics system</td>
</tr>
<tr>
<td>IAPHL</td>
<td>International Association of Public Health Logisticians</td>
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<tr>
<td>JSI</td>
<td>John Snow, Inc.</td>
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<tr>
<td>LGA</td>
<td>local government area</td>
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<tr>
<td>LGDG</td>
<td>Local Government Development Grant</td>
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<tr>
<td>LMU</td>
<td>logistics management unit</td>
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<tr>
<td>MoHSW</td>
<td>Ministry of Health and Social Welfare</td>
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<tr>
<td>MSD</td>
<td>Medical Stores Department</td>
</tr>
<tr>
<td>MMAM</td>
<td>Mpango wa Maendeleo ya Afya ya MSINGI (PHSDP)</td>
</tr>
<tr>
<td>MKUKUTA</td>
<td>Mkakati wa Kukuza Uchumi na Kupunguza Umaskini Tanzania</td>
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Acknowledgments

The authors offer their sincere appreciation and thanks to the various groups and individuals who made the assessment of human resource capacity in public health supply chain management in Tanzania feasible by offering their time and perspectives. We are very grateful to all donors, implementing partners, and all informants interviewed and everyone who attended the focus group discussion.

Much gratitude is also offered to Henry Irunde, Chief Pharmacist, Ministry of Health and Social Welfare (MoHSW); and Mercy Masuki, Head of LMU, MoHSW, who coordinated the activity.

The team would also like to thank Kelly Hamblin, MHS, Senior Supply Chain Management Specialist, USAID; and Lulu Msangi Khery, Supply Chain Management Specialist, USAID, who offered their time and support for this activity.

Special thanks to our colleague:
Deogratius Kimera, Country Director, USAID | DELIVER PROJECT Dar es Salaam

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Executive Summary

A well-trained, professional workforce is the foundation for any health system. Because of this, in 2007, the World Health Organization (WHO) included workforce performance as one of six building blocks in its health system framework needed to strengthen health systems. Similarly, ensuring the continuous availability of commodities is a critical element of a well-functioning public health system if they are to provide health workers and customers with vital public health products. To ensure commodity security, a supply chain must engage the right people, in the right quantities, with the right skills, in the right place, at the right time to follow the procedures that direct supply chain operations and ensure the supply of health products. An irrefutable requirement of supply chain human resource (HR) strengthening is high-level champions. Toward this end, as it has become increasingly apparent to the USAID | DELIVER PROJECT (the project) that our HR work must ask for input and support from supply chain managers at the highest level (Proper 2014).

To respond to widespread and systemic human resource weaknesses within health systems, a broad group of governments and organizations have created a joint initiative—People that Deliver (PtD)—which aims to strengthen supply chain personnel capacity while encouraging the professionalization of their role within the health system. This global initiative, in association with the project (a U.S. Agency for International Development–funded project), developed a human resource assessment guide and tool to gather data on human resource opportunities and challenges associated with supply chain management (SCM). The data collected are expected to strengthen the capacity of supply chain personnel by working with host countries to build human resource systems and advocate for the professionalization of supply chain management. Strengthening the capacity of public health supply chain personnel from the top down will ensure that the supply chains and health systems operate more effectively, which will improve access to health supplies and save lives.

The project assessment team, with the Ministry of Health and Social Welfare (MoHSW), seeks to improve Tanzania’s health commodity supply chains by strengthening HR for SCM. To understand the constraints and to guide solutions that support Tanzania’s supply chain human resources, an assessment team used the Human Resource Capacity Development in Public Health Supply Chain Management: Assessment Guide and Tool to conduct an HR for SCM assessment, including a desk review of relevant materials, semi-structured interviews with key informants, and a focus group with high-level health workers in Dar es Salaam.

The tool’s five dimensions, or HR components, help evaluate the capacity of supply chain HR management, based on (1) powerful constituencies, (2) policies and plans, (3) workforce development, (4) workforce performance management, and (5) professionalization.

These five components are critical as the workforce develops a comprehensive approach to building HR capacity for supply chain management in Tanzania.

Selected Findings

The assessment team identified HR strengths and areas that need improvement, specific to the supply chain in mainland Tanzania. To engage decisionmakers, the assessment was conducted at the
central level. The results include findings, strengths, recommendations for improvement, as well as interventions. Broadly, the team found that while Human Resource for Health (HRH) is strong; it was being recognized as one of the core areas addressed in the MoHSW’s Big Results Now (BRN) initiative to accelerate service delivery in the health sector. Supply chain management (SCM) is a priority for the MoHSW, as shown by the functioning logistics management unit (LMU); SCM, however, is not shown in key organizational, management, or policy areas.

The 2008–2013 HRH Strategic Plan does not include HR for supply chain management; although it is clear that it would benefit from commodity security and health care delivery, it is unclear whether it will be included in the new strategic plan currently under review.

Also, the team found limited funding for HR for SC programs, and significant reliance on donors; SC human resources are unevenly distributed and capacitated, reflecting overall recruitment, placement, and retention challenges in the country; as well as a transient workforce.

Selected findings by HR for the SCM component follow:

**Powerful Constituencies**
Supply chain management is a priority for the MoHSW. They acknowledge that a key to accelerating service delivery—i.e., achieving BRN goals—is ensuring that health commodities are consistently available. Several high-level champions and stakeholder groups are active in pharmaceutical logistics, and they are members of the International Association of Public Health Logisticians (IAPHL). In 2013, the Chief Pharmacist established the LMU, but it has not been ratified. Securing a budget line for SC activities, including the LMU, will simultaneously help lessen the dependence on foreign donor support, as well as secure the MoHSW’s place for the SC in Tanzania.

**Policies and Plans**
Tanzania has a HRH strategy, but it is not widely circulated, nor is it consistently advocated for or implemented. Furthermore, the 2008–2013 HRH strategy does not explicitly address the supply chain. There is political will to include the supply chain in the HRH strategy, but even champions noted that the follow-on strategic plan is already under review; therefore, the issue may remain mute. Tanzania uses a centralized human resources information system (HRIS); but, because no SC cadre (i.e., job title/role) is carrying out specific tasks, HRIS is nonfunctioning. This may mean that HRIS cannot be used as a management tool for SC employment or staffing decisions that might improve service delivery and access to quality health commodities. The integration of HRIS and Train SMART offers opportunities to track and train health care workers (HCWs) around the country; however, users must use the database in order for it to be effective.

The MoHSW budget includes the salaries of staff in recognized cadres. Typically, the HCWs are not offered broad-based career development, staff retention, or motivating activities/rewards.

**Workforce Development**
As an unstated rule—and a logical conclusion for the Tanzanian National Drug Policy (1991) regarding the mandate of the Pharmaceuticals and Supplies Unit (PSU), pharmaceutical personnel—would be the intended target for SC workforce development. However, in practice, at the lower levels, pharmacists, pharmaceutical technicians, pharmacist assistants, nurses, and warehouse officers may all perform some SC tasks. Task sharing is problematic because it is more likely to be a substitute or trade-off in job responsibility; instead of additional work that would increase competencies, different skills, and increased responsibilities. The central-, regional-, district-, and facility-levels have general job descriptions, but they are not suitable for SC tasks. Without an SC
cadre with job descriptions and skills competencies, the HCWs who perform SC tasks may not be trained in health commodity SCM, and/or are underqualified to fulfill the requirements.

The lack of competency models for supply chain roles has a detrimental effect on (1) workforce planning, performance management, training, career path, and job descriptions without SC knowledge, skills, and ability standards; and (2) ad hoc—even absent—employee development and, consequently, an inability to strategically allocate appropriate HR funds to those areas and skills most needed for the supply chain HR.

The MoHSW is well positioned to meet SC workforce development needs in-country. Pre-service and in-service training programs for SC of health commodities, as well as nine zonal health resource centers (including Zanzibar) are within training institutions in the districts. In addition, experienced colleagues orient newly placed staff. The capacity and potential for impact of the MoHSW’s training unit are positive signs for rapid staff development after SC guidelines, task descriptions, and competencies frameworks are established.

**Workforce Performance Management**

The MoHSW uses the Open Performance Review and Appraisal System (OPRAS) to evaluate staff. The annual performance review process is well documented, but it may not be adequate because there are not enough indicators, it’s too general (i.e., doesn’t appraise against job descriptions), and does not consider accountability. Also, the SC workers do not have targeted personnel performance development plans.

For support staff, many mechanisms are available. General and program specific supervision guidelines exist, but they are not specific to SCM. Formal mentoring and coaching programs are available. It was noted that on-going training in HR management for supervisors for Council Health Management Team (CHMT) is available at the district level. Without development plans, performance is rarely managed in systematically or strategically; therefore, it is hard to ensure that training is appropriately administered for the roles and employees who need it most.

**Professionalization**

In Tanzania, the public health supply chain profession does not have a certification or licensing program. Several pre-service supply chain modules have been integrated into some pharmacy diploma and bachelor degree programs (Muhimbili University of Health and Allied Sciences). A challenge to the professionalization of SCM of health commodities is a fundamental misunderstanding of the depth and breadth of what supply chain management is. For example, procurement is regarded as SCM, rather than as a component of SCM.

**Selected high-level findings on HR for SCM in mainland Tanzania:**

- Supply chain management is a priority for the MoHSW, as shown by the Pharmaceutical Services Section (PSS) and the establishment of the LMU, but the budget for SCM is insufficient.

- The supply chain does not have a specific cadre; pharmacists and other health cadres assume the supply chain roles.

- A strong HRH strategic plan is updated every five years, but it does not include the SC.

- The HRIS does not collect specific information on SC cadres.
- Staffing guidelines and a guiding document for HR policies are available.
- Targeted health commodity supply chain trainings and job aids are available.
- Graduates are directly posted and deployed, based on their interest in the location.
- General job descriptions are available at the central-, regional-, district-, and facility-levels, but they are not tailored to SC skills.
- Supply chain personnel do not have a career path or succession plan.
- General and program-specific supervision guidelines are available, but not for SCM.
- Some institutions provide general supply chain courses (e.g., Mzumbe University).
- The University of Muhimbili has included supply chain in its curricula (i.e., School of Pharmacy and IAHS).

**Recommended Initiatives**

The technical report has more detailed analysis of the data. Based on the assessment of data and analysis, the following initiatives are recommended:

**Supply Chain HR Management Interventions**
- Encourage more health training institutions to adopt SCM module in their curricula.
- Advocate for HR for SCM to be on the agenda of the HRH technical working group.
- Increase funding allocation and budgeting toward HR development for supply chain activities.

**HR for SCM Operational Interventions**
- Standardize curricula between different institutions that offer health SCM using course cataloguing, coordinating, and offering technical assistance.
- Develop job descriptions for SC tasks for HCWs that have dual roles.
- Strengthen the newly established LMU to organize and coordinate all SC activities across all programs.
- Finalize the LMU charter process.

**Performance Management Interventions**
- Update supervision guidelines to include SCM.
The United Republic of Tanzania in East Africa covers 947,480 square kilometers. It borders Kenya and Uganda in the north; Rwanda, Burundi, and Democratic Republic of Congo in the west; Msumbiji, Malawi, and Zambia in the south; and the Indian Ocean in the east. The country is divided into 30 administrative regions—25 in the mainland and 5 in Zanzibar Islands, for a total of 170 districts, including Zanzibar (see figure 1).

The current population is 44.9 million: the mainland has 43.6 million and Zanzibar has 1.3 million.

Figure 1. Administrative Regions of Tanzania
Health Sector

Ministry of Health

The Ministry of Health and Social Welfare (MoHSW) must ensure that everyone in the country has quality health services. To accomplish this, the ministry’s functions are divided into six directorates: hospital services, preventive services, human resource development, policy and planning, social welfare, and administration and personnel. For effective management, these departments are further divided into sections. The organization and management of human resources for health (HRH) functions are done within the parameters of the MoHSW mandate.

The process of organizing and implementing human resource management functions includes multi-institutional arrangements, which require linkages (internal and external) with other government units and ministries. Internally, the coordination of the HRH function is shared between the Human Resource Development (HRD) and administration and personnel directorates. Externally, the MoHSW has the human resource function, in partnership with the ministry of finance, local government areas (LGAs), and other stakeholder institutions. The MoHSW is the employer for referral hospitals and training institutions and, also, handles health technical issues at all levels of healthcare. Under the current arrangements, the MoHSW oversees the collection and analysis of human resource information, including providing statistical estimates for the present and future human resource requirements, at all levels of the health system.

In addition, the ministry provides technical support to the local authorities and regions, which enable them to achieve their human resources requirements. Also, the ministry formulates policies, regulations, and standards. Within the framework of the ongoing local government reforms, the district authorities are responsible for delivering health services, including full responsibility for human resources within their jurisdiction. The human resource management framework includes an extensive process requiring multiple decisionmaking steps, which are occasionally time consuming and slow.

The Department of Hospital Services of the Ministry of Health is divided into several sections, including the Pharmaceutical Service Unit. An assistant director heads this section; it has several pharmaceutical personnel performing day-to-day activities. One function is to formulate the national drug policy and to oversee its implementation in the country. It represents the pharmacy profession at the MOH for planning and coordinating all matters related to the pharmaceutical services, including human resources. It is also involved in preparing the annual budget and procuring all medicines and other pharmaceutical commodities required for the public sector. The pharmacy council is responsible for regulating the pharmacy profession and for registering the pharmaceutical personnel in the country. The Tanzania Food and Drugs Authority (TFDA) is responsible for regulating medicines and they inspect the private and public drugs outlets in Tanzania.

Structure of Tanzania Health System

Health services in Tanzania are now delivered through a decentralized system; local governments—under the Prime Minister’s Office–Regional Administration and Local Government (PMO-RALG)—are responsible for service delivery through dispensaries, health centers, and district hospitals. Implementing the decentralization policy is still a large part of the major efforts under the Local Government Reform Program II to solve lingering challenges in the separation of roles and responsibilities between PMO-RALG and other ministries, including the MoHSW.
Under the decentralized structure, the MoHSW is responsible for—

- Policy formulation, regulation, control, quality assurance; and monitoring and auditing
- Resource mobilization and allocation, coordination, and intersectoral linkages
- Management support to level-three hospitals; including national, referral, and special hospitals
- Public health-related interventions
- Health and social welfare research
- Executive agencies management
- Preventive and curative health services delivery supervision
- Key professional health cadres training and monitoring the quality of training offered by private institutions (COWI 2007).

The decentralized health system broadly falls into three functional levels: district (Level I), regional (Level II), and referral hospital (Level III). Under this system, the district has a full mandate to plan, implement, monitor, and evaluate the health services.

The district level provides primary healthcare services through dispensaries at ward-level catering, for 3–5 villages, with an average population of 10,000. The current move is to have a dispensary catering for each village. The health center is the referral level for the dispensary; it provides a slightly broader range of services than dispensaries, including in-patient care; it previously covered an average population of 50,000. District hospitals provide services to an average of 250,000 people. All districts have districts hospitals, except the 21 districts where there are no government hospitals. In these districts, faith-based organization (FBO) hospitals are designated as district hospitals (DDHs).

The regional hospitals at Level II are the referral point for Level I—i.e., district hospitals with more specialized services that serve a population of about 1,000,000 people. Level III includes the referral and specialized hospitals. Four referral hospitals and four special hospitals provide psychiatry, tuberculosis, orthopedics/trauma, and cancer care. Some private and FBO hospitals offer specialized services.

**Background**

The government of Tanzania and donors spend billions of dollars to procure lifesaving medicines and other health commodities. A large percentage of the MoHSW budget is going to the supply chain; therefore, it is prudent to ensure all the efforts and investments benefit the intended targets and ensure that the few resources are used efficiently to accomplish the envisioned impact.

An essential component of a robust health system is an effective supply chain that provides health workers and clients with vital public health commodities. To run effectively, a public health supply chain needs a sufficient number of motivated staff with the competency to perform essential supply chain functions; staff must also be empowered to make decisions that positively impact health supply availability and supply chain operations. An insufficient number of adequately trained and/or motivated personnel often causes supply chain system breakdowns and poor system performance; which often results in product stockouts, expiry, or commodities not getting to the people who need them.
Strengthening supply chains means 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. This calls for effective human resources management for the supply chain system. Robust human resource management is defined by a strategy that enables the MoHSW to systematically address the dynamics of the health workforce across the country. By clearly defining each employee’s responsibilities, as they link to the government mission, and building the policies and systems needed to enable efficient performance of those responsibilities, human resource capacity management can increase the performance and yield the outcome and impact intended.

The assessments and various reports in Tanzania indicate that, while human resource needs are recognized by some of the various supply chain entities, skills and numbers of supply chain-related personnel are still limited because of the unclear role definition and a lack of investment. Also, supply chain functions, within the health system set up, are not clear to any cadre working within health system; but, most of the functions are being done by the pharmaceutical cadre and, sometimes, temporarily, by other cadre, even though the tasks are not their core activities. Supply chain capacity is also limited at most levels, as well. Supportive supervision related to the management of commodities is ineffectively carried out. Additionally, pre-service supply chain training in professional and technical schools has only recently been established and training programs remain underdeveloped. As a result, supply chain management in the health sector is not professionalized.

Current supply chain reforms and system strengthening in Tanzania is, as stipulated in the Pharmaceutical Services Action Plan (PSAP) 2014–2020 aim, among other things, to ensure that commodity management roles and responsibilities are carefully defined, presented clearly, and accepted. They aim to ensure that the supply chain has adequate human capacity, both quantity and quality, and that the skills adequately meet the job requirements. Regular supportive supervision by knowledgeable staff is also recognized as a key maintenance mechanism for data reliability and accuracy in the supply chain.

Therefore, it is because of the rationale discussed above that the MoHSW- Pharmaceutical Services Unit conducted this assessment, in collaboration with the USAID | DELIVER PROJECT (the project) and other stakeholders.
Methodology

Objectives
The objectives of this supply chain HR assessment are to do the following:

• Document the state of Tanzania’s public health SC HR management and capacity.
• Identify opportunities to build the organizational and individual capacity of supply chain human resources by attracting, motivating, developing, and retaining new and existing talent.
• Align the HR for the supply chain to the broader HRH activities of the MoHSW.
• Document professionalization efforts of personnel working across Tanzania’s public health supply chains.

Technical Team
The assessment team comprised—

• Three technical advisors: the project, Arlington, Virginia home office
• Three technical representatives: the project, Dar es Salaam, field office.

The team conducted an in-brief with the project country director and project staff, MoHSW officials, and the USAID activity manager. The technical team convened to review the schedule, tools to be used, best practices in qualitative and quantitative data collection; and to determine roles and responsibilities of each team member. The team finalized the list of informants for the semi-structure interviews and the focus group participants. The team divided the work load between two groups. Each group met to compile notes at the end of each day of interviews; later, the entire team met to compare notes and share findings and impressions. Each team member was assigned one dimension and was responsible for the final write up of that dimension.

Assessment Process
To understand constraints and guide solutions that support supply chain human resources, an assessment team conducted a desk review of a number of documents; they also used the Human Resource Capacity Development in Public Health Supply Chain Management: Assessment Guide and Tool to conduct a HR capacity for SCM assessment in Tanzania. The team completed desk studies, interviewed key informants, and held a focus group discussion with high-level SCM

Figure 2. Components of the HR Assessment Tool
stakeholders. The tool was used to evaluate the capacity of the supply chain human resource management, based on five important drivers, or human resource components (discussed below). These five components encapsulate all aspects of workforce management needed to develop a comprehensive approach to building human resource capacity in Tanzania. See figure 2.

**Five Dimensions of SC Human Resources for Health**

The *Human Resource Capacity Development in Public Health Supply Chain Management: Assessment Guide and Tool* collects information on the five components of human resources. The assessment tool evaluates the capacity of supply chain human resource management based on the five HR components. It is used with a focus group method to achieve consensus on participants’ observations, as well as to rank the maturity of the dimensions; which will enable an analysis of quantitative data. The five components are summarized briefly below:

- **Building Powerful Constituencies**: technical leadership in the field of supply chain management, advocacy, communication strategies, and coalitions
- **Optimizing Policies and Plans**: health teams, financing, human resource management (HRM), and Human Resource Information Systems (HRIS)
- **Developing the Workforce**: recruiting, competency modeling and development, pre-service education, and in-service education
- **Increasing Workforce Effectiveness or Performance Management**: performance management, retention, supervision, mentoring, coaching, productivity, and task shifting
- **Professionalization**: networks and processes for creating a professional cadre among supply chain personnel.

The dimensions under each component were rated by participants on a scale from 0 to 4. Maturity of the building block dimensions were rated (a.) zero, if they did not exist at all or (b.) 4, if they were fully “developed and consistently and uniformly applied with full funding and stakeholder support (as appropriate)” (see figure 3). Results for all levels were collated and verified at a stakeholders’ validation meeting (see figure 6).

**Figure 3. Dimension Rating System**

<table>
<thead>
<tr>
<th>Score</th>
<th>Score Dimension</th>
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<tbody>
<tr>
<td>0</td>
<td>Dimension does not exist.</td>
</tr>
<tr>
<td>1</td>
<td>Dimension is being developed and/or exists but is outdated or inappropriate to current system requirements.</td>
</tr>
<tr>
<td>2</td>
<td>Dimension is developed but not consistently or uniformly applied.</td>
</tr>
<tr>
<td>3</td>
<td>Dimension is fully developed and has stakeholder support, but lacks requisite funding.</td>
</tr>
<tr>
<td>4</td>
<td>Dimension is developed and consistently and uniformly applied with full funding and stakeholder support (as appropriate).</td>
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Data Collection, Analysis, and Validation

**Figure 4. Methods Used**

<table>
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<th>Desk Study</th>
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<tbody>
<tr>
<td>• Collected body of reports, studies, &amp; articles on SC profile</td>
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<tr>
<td>• Reviewed documents to understand political environment, HR structures,</td>
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<tr>
<td>and SCM practices</td>
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<td>• Scheduled in-country activities.</td>
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<tr>
<th>Supply Chain Profile</th>
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<tr>
<td>• Administered <em>Supply Chain Profile Tool</em></td>
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<tr>
<td>• Collected and analyzed responses</td>
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**Desk Review:** The technical team conducted a desk review of relevant HR materials, as well as country-specific background resources. The team also outlined an assessment timeline and scheduled in-country activities (i.e., interviews, focus group discussion, and validation meeting).

**Supply Chain Profile:** The project’s field office team and the government team members completed the Supply Chain Profile Survey. This pool provides a snapshot of the supply chain organization and status in-country, taking into consideration the human resource aspect. The entire technical team then reviewed the Supply Chain Profile Survey data and gathered complementary data.

**Key Informant Interviews:** The team established a key informant list of suitable supply chain stakeholders at the central level who would be familiar with the five assessment areas. To understand the Tanzanian context, the team conducted semi-structured interviews to explore the five domains outlined in the *Human Resource Capacity Development in Public Health Supply Chain Management: Assessment Guide and Tool*.

**Focus Group Discussions:** A focus group discussion for decisionmakers was held at the Double Tree Hotel in Dar es Salaam. The assessment team identified people who are involved in SCM HR and who are familiar with the key components of this assessment. There were 21 participants, with near equal numbers of men (11) to women (10) (see figure 5). Participants included senior-level
managers from the MoHSW Chief Pharmacist’s Office and Logistics Management Unit, institutions of higher education (i.e., Muhimbili University of Health and Allied Sciences [MUHAS] and Mzumbe University), and other organizations with interests in public health (i.e., USAID and ITECH). Please see appendix C for a list of the focus group discussion (FGD) participants.

**Central-level Validation Workshop:** A validation workshop was held on September 24, 2014, at the Colosseum Hotel in Dar es Salaam for key stakeholders, which included high-level government authorities. Participants reviewed data, confirmed findings, validated recommendations, and determined next steps and follow-up actions. Please see appendix D for a list of attendees.

![Figure 5. Gender Split in FGD](image)

**Figure 6. Dashboard View of HR for SCM**

![Figure 6. Dashboard View of HR for SCM](image)
Component I—Powerful Constituencies

Introduction

Powerful constituencies refer to stakeholders from organizations and institutions, or stakeholder groups, who play various roles in supporting and advocating for the importance of supply chain functions and HR for the supply chain in public health through funding, management, communication strategies, and coalition building.

The assessment team reviewed key dimensions related to this component:

- Supply chain management as an MOHSW priority
- SCM personnel as involved contributors in decisionmaking
- Commodity security stakeholder groups
- Relationship between improved SCM workforce and improved commodity availability
- Existence of key figures in the MOH advocating for HR for SCM.

Powerful constituencies play a key role in SCM and are instrumental in improving HR for SCM.

After holding semi-structured interviews with powerful constituents from various organizations and departments, the same interviewees, or their representatives, participated in a focus group discussion to further discuss the Tanzania’s HRH for SC. Some of the participants were from the PSS-MoHSW, the directorate of the HRM-MoHSW, the directorate of human resource capacity development (MoHSW), Department for International Development (DFID), USAID, Centers for Disease Control and Prevention (CDC), and the Pharmacy Council.

Findings

Figure 7 summarizes the focus group’s consensus on the status of powerful constituencies in mainland Tanzania, at a centralized level. The group rated SCM HR champion existence and relationship between HR for SCM and improved access to commodities as only 25 percent developed. They also rated 50 percent for SCM personnel as involved participants in decisionmaking. Participants rated the existence of commodity security stakeholders group and SCM as a MOH priority, all at 75 percent.
Supply Chain Management As a Priority for the MOH
The MoHSW considers supply chain management as crucial and a priority for health service delivery in Tanzania. This is evident by the existence of the Pharmaceutical & Logistics Monitoring Component within the Pharmaceutical Services Section (PSS), which oversees all supply chain activities; with the aid of other agencies like the Medical Stores Department (MSD), Tanzanian Food and Drugs Authority (TFDA), training institutions, etc. Also included is the establishment of a logistics management unit (LMU) to coordinate all supply chain functions. However, the MoHSW has not set a specific budget for capacity building activities; rather, the capacity development for supply chain personnel are being supported by donors and implementing partners. Thus, the participants rated this dimension as 75 percent developed.

Supply Chain Personnel As Involved Contributors
Pharmacy staff with SC expertise help formulate and develop MoHSW policies and strategic documents that guide the implementation of SCM activities in the country. The Chief Pharmacist, although in charge of pharmaceutical concerns in the country, has minimal authority to make decisions; because the PSS, unlike other directorates, remains under the MoHSW. Supply chain personnel contributed to the National Medicine Policy. Based on the reasons above, the participants rated this dimension as 50 percent developed.

Commodity Security Stakeholder Group
Some of the stakeholder groups for commodity security include program-specific working groups, such as the Reproductive and Child Health commodity security group, which includes the Reproductive Health Commodity Security (RHCS) and the United Nations Commission on Life-Saving Commodities for Women and Children (UNCoLSC); National AIDS Control Programme (NACP) working group for HIV/AIDS commodities; etc. However, under the chairmanship of the Chief Pharmacist, the MoHSW is leading a technical working group that cuts across all programs; membership includes donors, program pharmacists from all programs, and implementing partners. The working group is called Pharmaceutical Infrastructure and Food Safety Technical Working Group (PIFTWG); they meet once every quarter. At the regional-, district-, and facility-levels, no formalized or institutionalized forums work specifically with commodity security concerns. Commodity security issues are usually discussed as part of the general discussions during meetings. Therefore, because these working groups are functioning, participants rated this dimension as 75 percent developed.

Relationship Between “Improved HR Management of Supply Chain Functions and Personnel” and “Improved Access to Commodities”
To ensure product availability, SC needs skilled people to perform various functions and tasks, such as product selection, forecasting, procurement of supplies, inventory control, warehousing and storage, transport and distribution, organizational support for logistics, financing, donor coordination, and commodity security planning.

The MoHSW, with the project, has implemented some HR capacity development initiatives, which include the development and training of commodity managers at the district- and regional-levels, as well as healthcare workers from facility levels. Trainings reinforced standard operating procedure (SOPs) for various logistics systems implemented in the country, such as the integrated logistics system, antiretrovirals (ARVs), and opportunistic infection (OI) medicines, logistics system, and laboratory supplies logistics system. Supply chain technical advisors conduct regular supportive supervision visits to health facilities where staff without the requisite skills in SCM, receive on-the-
job training. In addition, SCM has been integrated into the curricula of two health institutions: MUHAS, School of Pharmacy; and the Institute of Allied Health Sciences. Because of these promising, but new, initiatives, participants ranked this dimension as 25 percent developed.

**HR for Supply Chain Management Champion**

Champions of supply chain management are within the MoHSW. Focus group respondents indicated that the Director of Health Quality Assurance, Chief Pharmacist, and program managers as champions of SCM. These people provide technical input into policymaking discussions and other decisions about SC activities. Their efforts have increased the supply chain management workforce and established the LMU and logistics officers in all programs. However, their impact is hindered by inadequate funding to increase the number of public health professionals familiar with SCM who can support SC systems to improve access to health commodities. Increasing the workforce will facilitate the professionalization of supply chain managers to ensure a sustainable cadre of SC workers. Participants recognized that support is needed to build on the leadership of the existing champions and move SCM forward as a profession; they ranked this indicator as only 25 percent developed.

**Recommendations**

Based on these findings, the assessment team makes the following recommendations:

- Advocate for HR for SCM to be on the agenda for the HRH technical working group.
- Increase funding allocation and budgeting for HR development for supply chain activities.
- Strengthen the newly established LMU to organize and coordinate all supply chain activities, across all programs.
- Finalize the LMU charter process.
- Advocate for increased resources to improve human resources for supply chain management and performance of SC tasks, at all levels.
- Advocate for a supply chain cadre for health commodities.
Component II—Policies and Plans

Introduction

Supply chain management HR policies help with the following:

- Strengthen a SC workforce, develop priorities and objectives for operating the health commodity supply chain system; and specify strategies for recruitment, retention, productivity, performance, and deployment.
- Specify the resources required to meet the objectives.
- Support decisionmaking at the various levels of the SCM system.
- Provide a framework for evaluating the SC workforce and SCM system performance.

The HR plans to support these policies by providing the SC workforce procedures and steps on how the policies will be implemented.

Policies Supporting Human Resources for Health

A number of strategic plans within the MoHSW and among partners support human resources for health:

- The 2008–2013 HRH strategic plan lists strategic objectives on strengthening the health workforce in the country.
- Health Sector Strategic Plan III (HSS III), July 2009–June 2015, includes a strategy that focuses on “improving the number and quality of human resources for health.”
- National Strategy for Growth and Reduction of Poverty II (NSGRP II) has an overall goal of training, deploying, and retaining the appropriate number and mix of health professionals.
- Under the WHO Country Cooperation Strategy, HRH was highlighted as the first objective for policy monitoring: reviews and long-term planning to improve training, deployment, career development, and retention of health workers in both the public and private sectors. This strategy also includes building capacity for procurement and supply management under a separate strategic objective.
- The U.S. Government Global Health Initiative Strategy 2010–2015 articulated an expected result—improved human resources for health for efficient quality service delivery. It focuses, especially, on working with the President’s Office for Public Services Management and the MoHSW to introduce new health cadres that do not require clinical training to improve laboratory and commodity services; and to eliminate administrative burdens for staff that provide clinical services.
Another important policy document supporting the HSS III is the Pharmaceutical Sector Action Plan 2020 (2014–2020), Tanzania mainland. The MoHSW, through the PSS, prepared this prioritized action plan for the pharmaceutical sector, instead of a specific health commodity supply chain strategic plan; it incorporates health commodity supply chain improvements and considers prioritized strategies and actions from the draft National Medicines Policy (NMP) Implementation Strategy.

The Health Workforce Initiative (HWI) 2009–2015, a special initiative to address the HRH crisis in the short- to medium-term, supports all of the above mentioned strategic plans and addresses gaps in HRH that could prevent attaining the strategic interventions funded through the health basket fund. It supports the HSS III and complements the key priorities of HRH and public-private partnerships (PPP).

**Findings**

*Human Resource Strategic Plan for Supply Chain*

“The retrenchment of the civil service required in past IMF programs contributed to massive health worker shortages” (RESULTS 2009). While fiscal policies, such as the employment freeze (1993–1999), prevented the country from training, hiring, and keeping the health workers it needed to meet the objectives of its health targets; this accelerated the human resource for health crisis and put HRH at the forefront of the government’s health-sector agenda. Following the crisis, out of the 57 crisis countries on HRH, Tanzania was the first to invest in strengthening its health workforce. As such, HRH is a high priority; the ministry has developed the HRH Strategic Plan 2008–2013 to guide its interventions, primarily the supply, deployment, recruitment, and retention of health workers. To prepare for the 3rd HRH Global Forum, challenges and areas of improvement in the implementation of the strategy have been analyzed and will be used to develop the subsequent strategic plan (2014–2019). It is expected that the strategic objectives in the updated strategic plan will be in line with the HRH commitments made during this conference. See figure 8.

*Figure 8. Policies and Plans*

- Increase the availability of skilled health workers, at all levels of health service delivery, from 46 percent to 64 percent by 2017, based on 2013 staffing levels.
• Increase the financial base—other charges and private-sector investment—to operationalize the pay and incentive policy by 2017 to promote retention, productivity, and quality of health services.

• Develop and implement a task-sharing policy on HRH by 2017.

The HRH strategic plan does not include supply chain management, nor does it include developing a supply workforce. The strategies mentioned above that support HRH state the availability of medicines and supplies, one of the building blocks for building health systems (WHO systems framework), as an expected result; but it does not link strengthening a supply chain workforce to achieve this result.

Although it is clear that, at the central level, pharmacists assume the supply chain tasks, it is not as clear at the lower levels where other cadres perform those tasks, in addition to their daily responsibilities.

**Supply Chain Human Resource Budget Allocation—National**

At the national level, the health-sector budget is directed to the MoHSW and its directorates. Supply chain human resources at the national level does not have a budget allocation. However, donors and other ministry resources fund some activities—such as training of pharmacists and other health cadres—performing supply chain tasks. The level of coordination of funding received from partners is high; donors work closely with the MoHSW to support the strengthening of supply chain activities.

**Supply Chain Human Resource Budget Allocation—Lower Levels**

At the lower levels, the budget is allocated and disbursed to local governments through the Prime Minister’s Office Regional Administration and Local Government (PMO–RALG). Alternative sources of funding are also available. Findings from the September 2013, *Summary and Analysis of the Comprehensive Council Health Plans 2013/2014*, show that the major share of funds for health service delivery at the council level in FY2013–2014 is channeled to the local level, through central government grants. Other sources of funding include other charges, the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM); Council Health Basket Funds; Receipt in Kind (MSD); Local Government Development Grant (LGDG); cost sharing and insurance funds; Health Sector Development Grant/Primary Health Services Development Programme (HSDG/MMAM); council’s resources; and community contribution. Human resources (salaries, etc.) receive 90 percent of these central-government grants.

**Salary/Incentives for Supply Chain Workers**

Pharmacists and other health cadres perform supply chain tasks; the country does not have a supply chain cadre. Therefore, it was impossible to collect any information on pay scale and salaries.

**Supply Chain Management Standard Operating Procedures**

The lower levels have SOPs, but the national level does not. To manage commodities, several SOPs correspond to each vertical logistics system.

**Human Resource Policies**

The President’s Office, Public Service Department (PO-PSM) is responsible for human resource policies for public employees. The department approves staffing levels for all public facilities,
determines recruitment procedures for public employees; and, with the treasury, approve salary structures.

**Human Resources Information System**
According to the July 2013 Human Resource for Health Country Profile 2012/2013 (United Republic of Tanzania July 2013), the MoHSW is setting up a computerized; web-based Human Resource Information System (HRHIS), which is linked to the national health management information system (HMIS). The system will include both public- and private-employees. Authorized district-level personnel with Internet access will enter and update the information. However, so far, the HRIS or HRHIS does not include any information on supply chain management.

**Supply Chain Management Workforce Planning**
At the MoHSW, the Human Resource Development Division plans and oversees the implementation of a workforce plan for healthcare workers. A human resource planning manual was developed in 2009; it was disseminated to 24 ministries and 16 regions. In the health sector, the workforce plan is reviewed annually and updated every four years.

As per the guidelines for preparing the plan and budget for 2011/2012, within the five-year development plan framework (2011/2012–2015/2016), the human resource plan should also include “aligning skills requirements to job requirements.” Also, recommended was possibly leaving the existing staff filling positions vacant, due to attrition (including retirement); they are supposed to be filled either through a succession planning process or hiring from the labor market. In the health sector, this replacement process is guided by the MoHSW’s staffing guidelines for health service facilities, health training institutions, and agencies. As previously mentioned, this is not applicable to supply chain management because no cadre exists.

**Supply Chain Succession Planning**
Although there is no supply chain succession planning, in 2011, the office of the permanent secretary provided a management standards checklist: i.e., a collection of acceptable and agreed-to tools—guidelines and manuals used in the public service. Standards for succession plans include—

- Identify a skilled and knowledgeable staff that can develop and implement the succession plan.
- Formally establish a succession plan.
- Regularly update the seniority list.
- Base HR decisions—promotion, capacity building, etc.—on the succession plan.
- Link succession plans to HR plans, Open Performance Review and Approval System (OPRAS), and job lists.
- Follow up with restructuring and capacity building.
- Monitor the implementation of the plans—reporting results to POPSM and PO-PSC.

**Recommendations**
Based on these findings, the assessment team makes the following recommendations:

- Establish a cadre for supply chain management.
• Create a category for supply chain personnel in HRIS.
• Include HR for supply chain in the revised HRH strategic plan.
• Strengthen recruiting policies by improving recruiting procedures and tools.
• Mobilize resources for the incentive policy implementation, especially in rural areas.
• Reinforce the use of SOPs for the supply chain.
Component III—Workforce Development

Introduction

In public-health sectors, a well-functioning supply chain requires well-designed systems and adequately trained and managed supply chain workers.

The workforce supporting supply chain activities must be adequately trained and supported to ensure that medicines and other health commodities are accessible for all clients—at the right time, in the right quantity, in the right place, at the right price, and in the right condition.

In reality, the supply chain workforce may include pharmacists, logisticians, supply chain managers, data managers, and nurses, as well as warehouse and transport personnel. Therefore, it is essential that supply chain tasks are defined and articulated in an appropriate model and SOPs; and, that these are institutionalized at all levels.

Workforce development is a long-term process by which an organization builds the knowledge, skills, and attributes needed to fulfill its mission; in this case, that help the supply chain operate efficiently and effectively. With a loosely and under-articulated professional cadre, it is imperative that, at a minimum; SCM tasks are clearly defined and mechanisms are put in place to train, monitor, and mentor staff carrying out these important public health SC activities, regardless of their primary training and other professional responsibilities.

Some of the basic elements needed to build an effective SC workforce are—

- Clearly defined educational pathways that result in recognized credentials
- Competency frameworks
- Comprehensive job descriptions
- Opportunities for continuing professional development
- Presence of coordinated SC curricula
- Local institutions able to deliver the curricula
- Regular schedule of trainings.

Findings

The snapshot view below (see figure 9) clearly shows a number of gaps in SC workforce development. Focus group participants indicated that MoHSW’s strengths are solidly in training and education. From the perspective of human and institutional capacity development, training and education is one element of performance improvement. Aligning policies, processes, systems, and
organizational culture to facilitate learning transfer would enable performance outcomes to be achieved.

**Supply Chain Recruiting Policies, Procedures, and Tools**
A general recruiting policy for public servants is available, but it does not include anything specific to supply chain management. The lack of competency recruiting in Tanzania is a necessary response to the dire healthcare labor shortage. In addition, most new graduates are deployed based on their interest in a specific location. All things remaining equal, as SCM pre-service education programs mature (see below) the situation should be corrected.

**Connection between Supply Chain Cadre Recruiting and Workforce Planning**
A workforce plan that guides the number of staff needed to be recruited exists; but, due to budget constraints and the lack of graduates from the health science disciplines, it is not followed. All new graduates are recruited to fill open positions. While it is generally accepted that pharmacists are responsible for SCM functions, the assessment team found that local understandings of SCM are limited to procuring health commodities. Therefore, in practice, the Department of Human Resource Management coordinates with the Chief Pharmacist as-needed for recruitment needs. In addition, SC tasks (i.e., procurement, forecasting, storage, data keeping, and transport) are carried out by distinct and, often, unrelated categories of staff.

**Supply Chain Core Competencies and Frameworks**
Supply chain competencies do not exist.

**Supply Chain Cadres Career Path**
No SC cadre exists, therefore, there is no SC career path.

**Supply Chain Job Descriptions**
Supply chain–specific job descriptions are not available. Pharmacists have job descriptions that include some supply chain tasks.

**Supply Chain Training Coordination Body**
HCWs who perform SCM tasks attend trainings coordinated by the MoHSW, with the support of implementing partners (i.e., the project). The MOH Training Unit works with programs and the LMU to provide technical support (e.g., curriculum, training materials, etc.). It is broadly recognized
that the private sector plays a critical role in preparing health personal. For best practices, interviewees also noted that there could be regular and better knowledge sharing between the MSD and MoHSW. At the central level, there is a general training plan; health departments at the regional- and local-governments coordinate these trainings. The TRAINSMART database captures all health-related in-service trainings. HR assessment participants informed the technical team that regular and consistent updating of TRAINSMART can, like a lot of database management functions, be problematic.

Supply Chain Training Strategy/Implementation Document
SCM does not have a formal or coordinated training plan or strategy.

Supply Chain Pre-Service Education
Both general- and health-specific SCM courses are available to students in Tanzanian universities and higher learning institutions. The MoHSW supports integrating SCM modules into pre-service education for the pharmacy diploma. While several institutions offer a diploma in pharmacy—e.g., St. Luke Foundation at the Kilimanjaro Christian Medical Centres School of Pharmacy and St. John’s University—School of Pharmacy and Pharmaceutical Science (SOPH), Catholic University of Health and Allied Sciences, Kampala International University Dar es Salaam College and MUHAS—only MUHAS was designated as a pilot school for the project’s pre-service training (PST). Currently, MUHAS has integrated an SCM module into the bachelor of pharmacy (BPharm) program. In addition, MUHAS offers an SCM course under the postgraduate pharmaceutical management program.

Despite the existing university programs in supply chain management, only HCWs within the public health sector can perform SCM tasks. This, in effect, limits the number of personnel with university-level training in SCM who can contribute to the HRH labor pool. For example, at the undergraduate and postgraduate levels, Mzumbe University offers general SCM courses, but they are not specific to health commodities. The Procurement and Supplies Professionals and Technicians Board (PSPTB) certifies procurement and supplies personnel, but the certification is not specifically health related.

In conclusion, continued mentorship and evaluation by the project will positively influence the success of the PST program and service delivery, as much as possible, during the remaining months of the project.

Supply Chain In-Service Training
HCWs have several ways to obtain in-service training in SCM. Mentors and supervisors have procedure books for assessing service provider skills. Primarily, however, training is offered, based on the needs of the MoHSW; training is not linked to required competencies. In fact, to-date, the MoHSW has not outlined SCM competency models.

Ability of Local Institutions to Provide Supply Chain Education and Training
In Tanzania, nine zonal health resource centers (including Zanzibar) offer training in the regions; however, they don’t offer SCM for health trainings, although they are capable of doing that. In addition, Mzumbe and ESAMI offer short courses on general, non-health commodity-specific SCM. The MoHSW recognizes that the private sector plays a critical role in preparing health personnel, and that training sponsorship should go to institutions—rather than individuals—which would better meet the needs at the lower level.
Supply Chain Curriculum Availability
As mentioned earlier, MUHAS has integrated an SCM module into the BPharm program. In addition, MUHAS offers an SCM course under the postgraduate pharmaceutical management program. Because the Pharmacy Council is central in coordinating the education of pharmacists and pharmaceutical technicians—as well as recognizing the role that nurses occasionally play in essential SC tasks—its continued and augmented support of SCM pre-service, in-service, and on-the-job training, as well as supportive supervision, is essential to the goal of achieving the six rights of supply chain management.

Recommendations
Based on these findings, the assessment team made the following recommendations:

- Review the current job descriptions for HCWs with dual roles.
- Implement Workload Indicators for Staffing Needs (WISN) data to develop staffing requirements.
- Establish a career path for health workers, in general, and specifically for those supporting the supply chain.
- Develop a competency framework for SCM.
Component IV—Workforce Performance Management

Introduction

Workforce Performance Management, a systematic process, is essential to ensure that the human resource capacity/workforce is performing, based on the goals and objectives set by the organization. Performance criteria are established in competency models, embedded in job descriptions, and linked to organizational objectives. Rather than being an isolated effort, performance management is a continuous process that includes guidance, supervision, and coaching/mentoring; as and when required, to enhance performance. To motivate continued performance excellence, the workforce receives recognition and rewards when they show sustained good performance.

Ultimately, to positively impact supply chain performance, performance management links individual employee goals and performance to organizational goals and performance through competency-based assessment.

The Workforce Performance Management building block addresses the following five dimensions:
1. performance management policies, procedures, and tools
2. staff development plans
3. retention and performance incentives
4. supportive supervision guidelines and implementation
5. mentoring and coaching.

Findings

Figure 10 clearly shows that procedures and tools are well-developed within the MoHSW general policies. As a whole, the participants indicated that, in terms of workforce performance management, the initiatives are predominately top down, not learner or individually focused. Increased emphasis on implementing supportive supervision, as well mentoring and coaching the staff, would increase job satisfaction and help retain skilled staff.
Performance Management Policies, Procedures, and Tools
OPRAS, a system of performance appraisal, applies to all public servants. However, it is not completely rolled out, and several key informants have stated that some of the indicators are too vague to be valuable. The performance of HCWs who perform SCM tasks is reviewed twice a year. When implemented, this performance appraisal system does, however, lead to salary increments, promotions, and demotions. In general, staff receive an incremental annual salary raise, based on their scale. At the regional level, performance-based promotions are done every three years.

Staff Development Plans
Performance development plans for all healthcare workers are not developed.

Retention and Performance Incentives
A retention scheme for healthcare workers is being developed. At present, specific upper-level HCWs are given incentives, such as housing, which can be considered to be motivation to achieve work performance excellence. Most likely, however, the recipients consider they are entitled to housing. Most personnel do not understand the use of incentives. A retention scheme has not been implemented, but one is being developed. This retention scheme should be linked to performance management.

Supportive Supervision Guidelines and Implementation
Supportive supervision guidelines are available; supportive supervision visits are made, but irregularly, across all levels in the system. At the central level, comprehensive supportive supervision guidelines are used; the lower levels have program-specific guidelines.

While the MoHSW provides supportive supervision visits, SCM is not included. Based on the project’s recent initiatives in supportive supervision, these guidelines should be updated to include supply chain management.

Mentoring and Coaching
The MoHSW supports a formal mentoring and coaching process for HCWs; however, this is not specific for SC personnel.

Recommendations
Based on these findings, the assessment team recommends the following:
- Include SCM in updated supervision guidelines.
- Create an individual performance development plan for SC personnel.
- Develop mentoring and coaching for SC personnel professional development.
Component V—Professionalization

Introduction

A profession is an occupation, practice, or vocation that requires mastery of a complex set of knowledge and skills gained through formal education and/or practical experience. It is more than a job; it is a career for someone who wants to be part of society and is willing to follow the ethical requirements of that specific profession. Generally, its professional body governs an organized profession. As professionals, public health supply chain workers ensure that medicines and other health commodities reach the people who need them. An effective public health supply chain requires specialized, competent, motivated, and well-supported personnel, who have sufficient knowledge and background in the supply chain of health commodities. Their skills will ensure the appropriate selection, forecasting, procurement, storage, and distribution of these commodities.

To improve the delivery of supply chain services, additional efforts must be made to professionalize supply chain roles and tasks through education and licensure, and the development of professional associations.

The professionalization building block addresses the following six indicators:

1. Supply chain license
2. Supply chain certificate
3. Supply chain coursework included in healthcare degree programs
4. University degree program as pre-requisite for employment
5. Supply chain role as a professional role

Findings

Figure 11 shows that FGD participants consider the state of professionalization of SCM in Tanzania as promising; but, clearly, very early in its development. Even high-level key informants were confused about what SCM is and its relationship to procuring medicines and other health commodities. Forming a distinct profession and local association should be the advocacy groups’ first step in building to support this important profession.
Supply Chain License
At present, SC licenses are not awarded in Tanzania.

Supply Chain Certificate
It is possible to earn a certificate for general supply chain management.

Supply Chain Coursework Included in Health Care Degree Programs
As mentioned earlier, in Work Force Development, some institutions have integrated SCM courses into their degree issuing programs of study. The assessment team discovered, however, that the module for clinical officers training is based on the older integrated logistics system (ILS) for essential medicines. Accordingly, students trained to use the ILS must be retrained on the current system. Therefore, existing curricula must be updated with each change in the logistics system and the SOPs. The next step is to harmonize the curriculum for standardization across institutions. Some general studies institutions have expressed an interest in adding SCM for health into their SCM curricula; the assessment team advises against loose curriculum sharing until the health commodity professionals have training under experienced SCM professionals.

University Degree Program as Pre-Requisite for Employment
Currently, Tanzania does not have an SC for health degree program. It has been noted that only MUHAS includes a supply chain module in the training curriculum for pharmacists. Tanzania has increased the number of health training institutions; consequently, graduates from these institutions will need supply chain knowledge and skills.

Supply Chain Role as a Professional Role
In Tanzania, SCM is not readily understood, or is partially understood, at best. Interviewees consider pharmaceutical personnel—pharmacist, pharmaceutical technicians, and assistant pharmaceutical technicians—to be public health supply chain specialist. Most HCWs carrying out SCM (not really understood) are usually pharmaceutical staff; professionals from other areas (nurses, clinicians, etc.) also carry out SC tasks. This means the HCWs have dual roles: providing patient care services and supply chain management. The two roles compete for time and energy in already stretched schedules. It has been agreed that commodity security should be a priority, but it is unclear how to accomplish this. Professionalizing SCM in Tanzania would improve the situation when advocating for more resources to train, recruit, and retain SC professionals. It is unclear what activities and tasks fall under SCM. Last, with the formation of the LMU, there are now a few dedicated SC workers.

Supply Chain Associations
The PSPTB is a generic body that certifies and registers procurement personnel. The PSPTB sits under the Ministry of Finance. Most, if not all people registered by this board, have training in general procurement and supply chain, but it is not specific to public health commodities.

Recommendations
Based on these findings, the assessment team makes the following recommendations:

- Encourage more health training institutions to adopt an SCM module in their curricula.
- Consider working with other non-health training institutions offering supply chain courses to tailor a public health supply chain–related course.
• Harmonize curricula between different institutions offering SCM for health education through course cataloguing, coordinating, and offering technical assistance.

• In the future, advocate for a licensed SC cadre.
Conclusions

The timing of this assessment may be either a blessing or a curse. During the assessment, the new draft HRH strategy was being circulated among MoHSW management for comment. It remains to be seen if this updated strategic plan will include SCM; the existing 2008–2015 HRH strategy does not explicitly address it. The engagement witnessed during interviews and the FGD, however, was encouraging for inclusion of SCM in the strategic plan and the formation of a cadre.

Based on the assessment, and given this transitional year, the technical team, in coordination with the MoHSW, developed a list of strategic interventions, objectives, and activities to help guide efforts to build the capacity of HR for SCM in Tanzania (see table 1).
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<th>Building Blocks</th>
<th>Strategic Interventions</th>
<th>Objectives</th>
<th>Activities</th>
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<td><strong>Powerful Constituencies</strong></td>
<td>Advocate HR for supply chain management (SCM) in the HRH agenda and for a supply chain (SC) cadre in the future</td>
<td>Integrate HR for SC in every HRH strategic intervention</td>
<td>Seek active participation for SCM champions in the HRH technical working group</td>
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<td>Policies and Plans</td>
<td>Ensure HR for SCM is highlighted as a critical support of the health system in the MoHSW's policies and plans</td>
<td>Clearly detail and document the requirement of a SC workforce to support the health system</td>
<td>Review the HRH strategic plan and identify the areas where HR for SC can be incorporated</td>
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<td>Workforce Development</td>
<td>Reinforce the existing health cadres supporting SCM</td>
<td>Establish a career path for the existing cadres operating in SC</td>
<td>Study the scheme of services in the MoHSW</td>
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<td>Develop job descriptions for SC functions at the different levels of the health system</td>
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<td>Increase the number of HCWs with supply chain skills</td>
<td>Develop the existing pharmaceutical technician cadre to become supply chain practitioners</td>
<td>Negotiate with the Pharmacy Council to recognize the need to strengthen the pharmaceutical technician’s capacity in SCM</td>
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<td>Develop a capacity-based evaluation of SC for HCWs in zonal training centers</td>
<td>Reinforce the pharmaceutical technician and assistant curricula with advanced health SCM</td>
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<td>Ensure the SC HR workforce with the right skills are in the right place</td>
<td>Establish a competency framework and roles and responsibilities for SCM at all levels</td>
<td>Map skills needed to operate SC functions by level</td>
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<td>Create a competency model that fits the logistics system in the country</td>
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<td>Workforce</td>
<td>Ensure that performance management of all health care workers including supply chain personnel is a priority</td>
<td>Improve staff motivation</td>
<td>Disseminate incentives policy and implement it at all levels</td>
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<td>Performance</td>
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<td>Develop performance development plans for SC personnel</td>
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<td>Management</td>
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<td>Review the general and the pharmacy supportive supervision guidelines to harmonize sections on SCM</td>
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<td>Professionaliza</td>
<td>Increase the SC workforce by integrating SC course in all schools of health</td>
<td>Strengthen the SC workforce in pre-service</td>
<td>Map the schools that need pre-service training, in collaboration with the training unit (HRD)</td>
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<td>Advocate and put in place steps to develop SCM as a professional cadre</td>
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<td>Harmonize the curricula of SC used in different schools</td>
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References and Suggested Readings


Appendix A

MoHSW Organogram
## Appendix B

### Key Informants Semi-Structured Interviews

**Sept 3\(^{RD}\) – Sept 8\(^{TH}\) 2014, Dar es Salaam**

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# Appendix C

## Focus Group Discussion

**Sept 10th 2014, Double Tree, Dar es Salaam**

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# Appendix D

## Validation Meeting

September 24, 2014, Colosseum Hotel, Dar es Salaam

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Appendix E

Key Terms

**accreditation**: A process of external quality review and certification, by a recognized body, that evaluates individuals, colleges, universities, and educational programs to ensure they are performing the functions that they claim to be performing in a competent manner.

**career development**: The process by which individuals establish their current and future career objectives and assess their existing skills, knowledge, or experience levels and implement an appropriate course of action to attain their desired career objectives.

**career ladder**: The progression of jobs in an organization’s specific occupational fields, which are ranked from highest to lowest, based on their level of responsibility and pay.

**career mobility**: The propensity to make several career changes during an individual’s lifetime instead of committing to a long-term career within a specific occupational field.

**career path**: The progression of jobs in an organization’s specific occupational fields ranked from lowest to highest in the hierarchal structure.

**career planning**: The process of establishing career objectives and determining appropriate educational and developmental programs to further develop the skills required to achieve short- or long-term career objectives.

**Competency**: Knowledge, skills, and abilities required to perform a specific task or function; also, a set of defined behaviors with a structured guide that can be used to identify, evaluate, and develop the behaviors in individual employees.

**competency model**: A model that identifies the competencies needed to perform a specific role in a job, organization, or profession; refers to a group of competencies required in a particular job.

**competency framework**: A structure that sets out and defines each individual competency (such as problem solving or people management) required by individuals working in an organization or in part of an organization.

**development program**: Training or educational programs designed to stimulate an individual’s professional growth by increasing his or her skills, knowledge, or abilities.

**employee retention**: Organizational policies and practices designed to meet the diverse needs of employees and to create an environment that encourages employees to remain employed.

**human capital**: The collective knowledge, skills, and abilities of an organization’s employees.
human resources (HR): The function dealing with the management of people employed within an organization.

human resource planning: The process of anticipating future staffing needs and ensuring that a sufficient pool of talent possessing the skills and experience needed will be available to meet those needs.

human resource specialist: A term that defines someone who has expertise and responsibility for specific areas or functions in the field of HR (i.e., compensation, benefits, employee relations, etc.).

in-service training: Capacity- and skills-building that occurs while an individual is employed within a particular field. Skills-building opportunities are often shorter or are provided on-the-job so the individual can return to their position and immediately apply the lessons learned.

incentive pay: Additional compensation used to motivate and reward employees for exceeding performance or productivity goals.

job description: A written description of a job that includes information about the general nature of the work to be performed, specific responsibilities and duties, and the employee characteristics required to perform the job.

knowledge, skills and abilities (KSAs): The attributes required to perform a job; generally demonstrated through qualifying experience, education, or training.

organization chart: A graphic representation outlining how authority and responsibility are distributed within an organization.

organizational unit: Any component that is part of the contractor's corporate structure. In a traditional organization, it could be a department, division, section, branch, or group. In a less traditional organization, it could be a project team or job family.

performance-based pay: A variable pay strategy that pays employees based on their individual performance and contributions, rather than the value of the job they are performing.

performance improvement plan: A plan implemented by a manager or supervisor that provides employees with constructive feedback, facilitates discussions between an employee and his or her supervisor regarding performance-related issues, and outlines specific areas of performance that must improve.

performance management: The process of maintaining or improving employee job performance through the use of performance assessment tools, coaching and counseling, as well as providing continuous feedback.

performance standards: The tasks, functions, or behavioral requirements established by the employer as goals the employee must accomplish.

pre-service training: Capacity- and skills-building that occurs prior to an individual joining the workforce, or prior to their service in the field of study.
privacy: Refers to information about an employee that he or she regards as personal or private—i.e., medical information, financial data, etc.—and the right of that individual to have the information kept private.

professionalization: A process by which a role or set of responsibilities or competencies are made into or established as a profession.

policy/procedures manual: A detailed written document that assists managers and supervisors in carrying out their day-today responsibilities by acquainting them with all the organization's policies and procedures required to implement those policies.

recognition: An acknowledgement of an employee’s exceptional performance or achievements expressed in the form of praise, commendation, or expressed gratitude.

recruitment: The practice of soliciting and actively seeking applicants to fill recently vacated or newly created positions using a variety of methods (i.e., internal job postings, advertising in newspapers or electronic job boards/sites, utilizing search firms, or listing position with trade and professional associations, etc.).

reward system: A formal or informal program used to recognize individual employee achievements, such as accomplishing goals or projects, or submitting creative ideas.

salary grade: A compensation level expressed as a salary range that has been established for each position within the organization.

salary range: A range of pay rates, from minimum to maximum, set for a specific pay grade.

salary structure: A structure of job grades and pay ranges established within an organization. Can be expressed as job grades or job evaluation points.

selection process: Any step, combination of steps, or procedure used to make any employment decision; including, but not limited to, informal or casual interviews, unscored application forms, paper and pencil tests, performance tests, training programs, probationary periods, and physical, education and work experience requirements, as well as the decisionmaking process used to determine whether or not to hire or promote.

skills training: Training provided to employees to help them determine the skills and knowledge necessary to perform their current jobs; also used to retrain when new systems or processes are introduced.

Staffing: The function within an organization that is responsible for recruitment, screening, and selection of employees. Often, staff in this area may also be responsible for other areas of employment, such as orientation, retention, training, and termination of staff.

stakeholder: Someone with a vested interest in the successful completion or outcome of a project.
**strategic HR:** The process of taking a long-term approach to HR management by developing and implementing HR programs that address and solve business problems and directly contribute to major long-term business objectives.

**strategic planning:** The process of identifying an organization's long-term goals and objectives and then determining the best approach for achieving those goals and objectives.

**strategic staffing:** The practice of hiring smaller core numbers of permanent employees and utilizing temporary employees to fill more highly specialized positions within the organization.

**supply chain manager:** A person with the responsibility of implementing supply chain activities and functions that ensure the availability of health supplies at service facilities, including procurement, quality assurance, warehousing, distribution, logistics information management, and monitoring.

**supervise:** To oversee—a process, work, workers, etc.—during execution or performance; have the oversight and direction for the performance.

**supervision:** The act or function of supervising.

**supportive supervision:** The process that promotes quality by strengthening relationships within the system, focusing on the identification and resolution of problems; and helping to optimize the allocation of resources, promoting high standards, teamwork, and better two-way communication.

**training:** Education or instruction provided to employees to take them to an agreed-to standard of proficiency, with the potential for promotion into supervisory or managerial-level positions within the organization, or it can be used as a remedy for performance-related issues.

**training and development:** A process dealing primarily with transferring or obtaining knowledge, attitudes, and skills needed to carry out a specific activity or task.

**turnover:** Changes in the work force resulting from voluntary or involuntary resignations.

**turnover rate:** The number of separations during a month, including both voluntary and involuntary terminations (excluding layoffs). The turnover rate is calculated by taking the number of separations during a month divided by the average number of employees on the payroll multiplied by 100.

**wage structure:** The range of pay rates to be paid for each grade for positions within the organization.

**workforce analysis:** A study of a listing of each job title as the title appears in the applicable payroll records ranked from the lowest to the highest paid within each department, including supervision department or unit.

**workforce development:** The implementation of an integrated strategy or system designed to increase workplace productivity by developing improved processes for developing and utilizing people with the required skills and aptitude to meet current and future business needs.
workforce planning: The assessment of current workforce content and composition issues; used to determine what actions must be taken to respond to future needs.
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