STRATEGIES FOR ENGAGING YOUTH IN SUPPLY CHAIN MANAGEMENT CAREERS

November 2024

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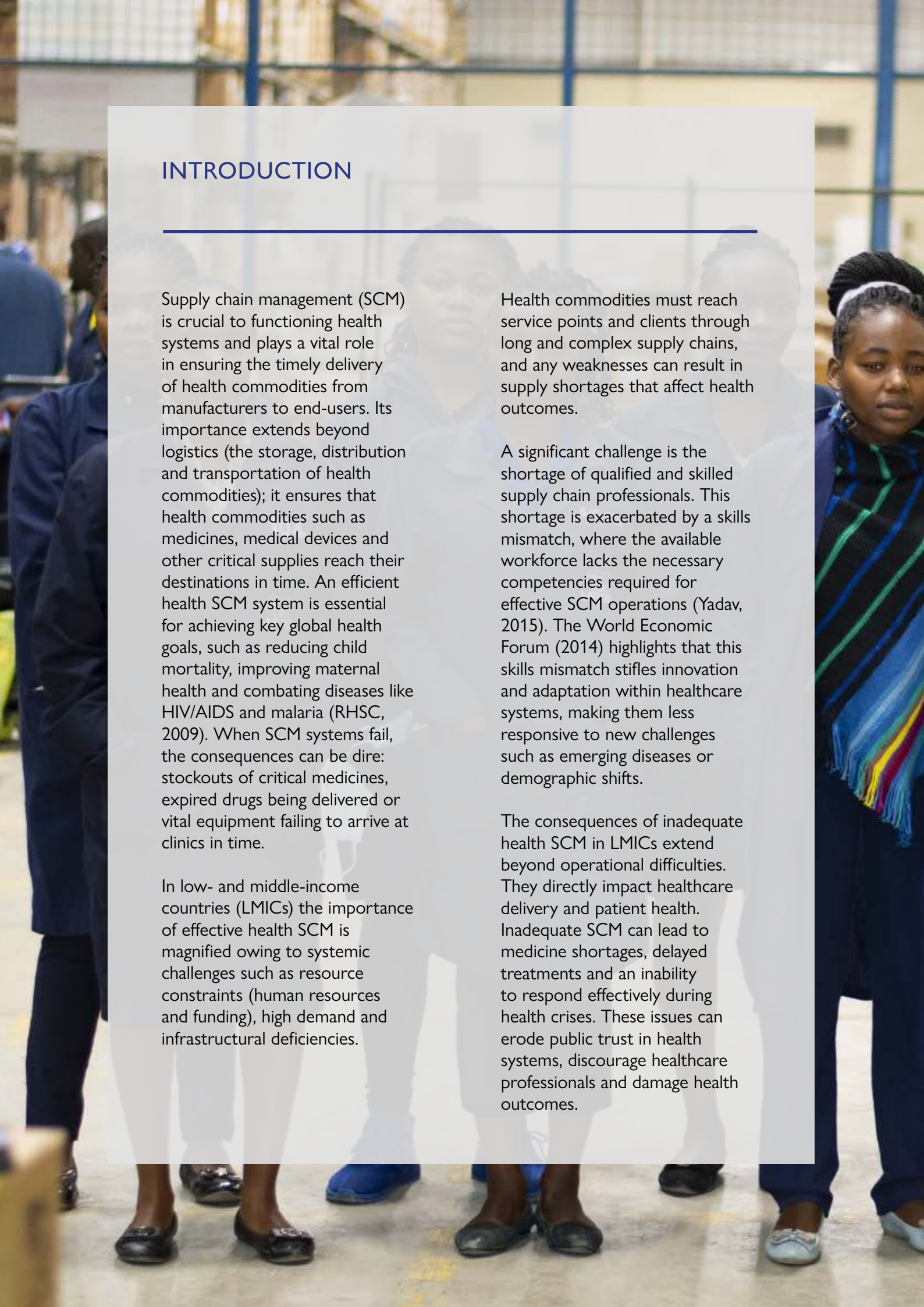


INTRODUCTION

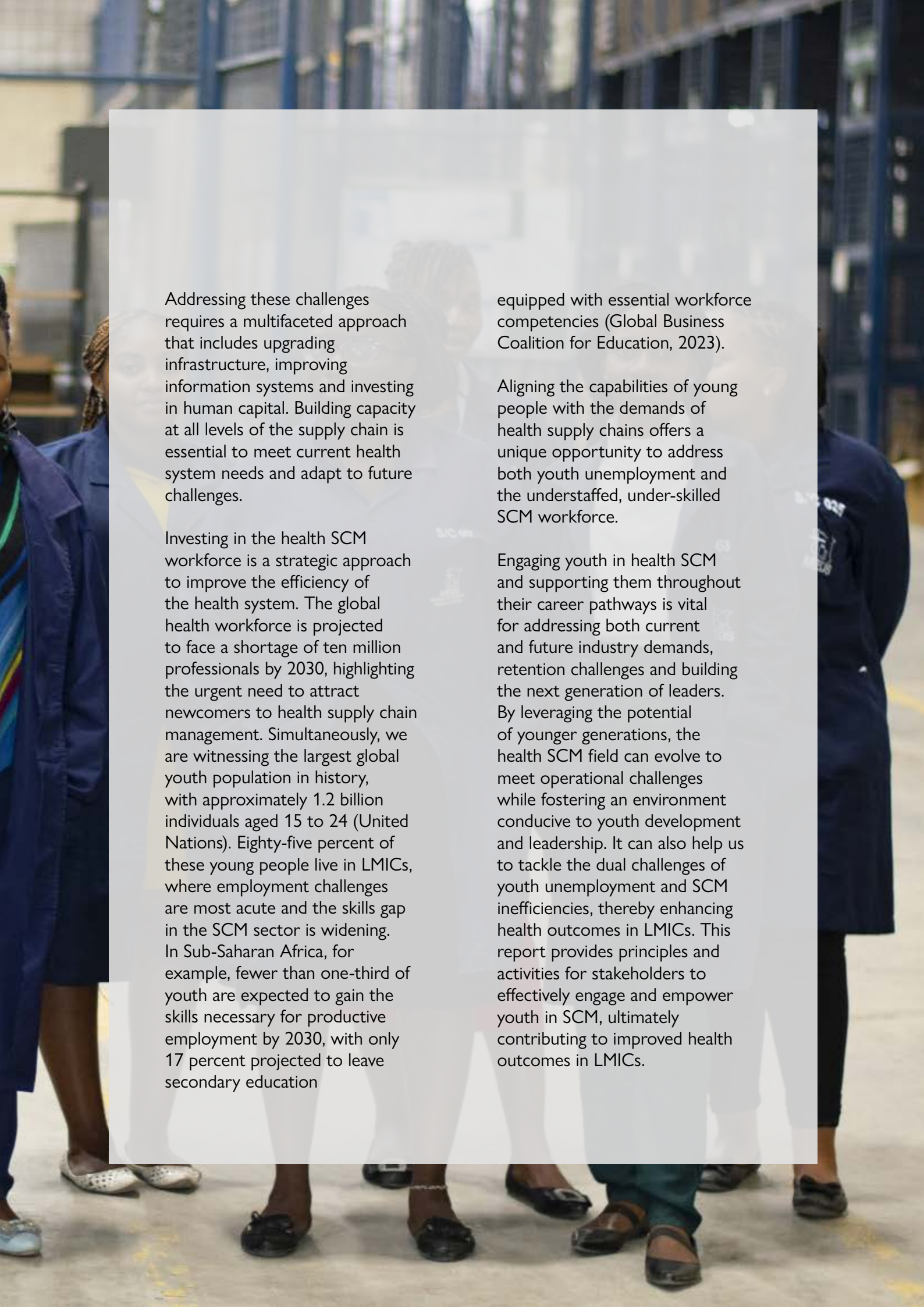
Supply chain management (SCM) is crucial to functioning health systems and plays a vital role in ensuring the timely delivery of health commodities from manufacturers to end-users. Its importance extends beyond logistics (the storage, distribution and transportation of health commodities); it ensures that health commodities such as medicines, medical devices and other critical supplies reach their destinations in time. An efficient health SCM system is essential for achieving key global health goals, such as reducing child mortality, improving maternal health and combating diseases like HIV/AIDS and malaria (RHSC, 2009). When SCM systems fail, the consequences can be dire: stockouts of critical medicines, expired drugs being delivered or vital equipment failing to arrive at clinics in time.

In low- and middle-income countries (LMICs) the importance of effective health SCM is magnified owing to systemic challenges such as resource constraints (human resources and funding), high demand and infrastructural deficiencies.

Health commodities must reach service points and clients through long and complex supply chains, and any weaknesses can result in supply shortages that affect health outcomes.

A significant challenge is the shortage of qualified and skilled supply chain professionals. This shortage is exacerbated by a skills mismatch, where the available workforce lacks the necessary competencies required for effective SCM operations (Yadav, 2015). The World Economic Forum (2014) highlights that this skills mismatch stifles innovation and adaptation within healthcare systems, making them less responsive to new challenges such as emerging diseases or demographic shifts.

The consequences of inadequate health SCM in LMICs extend beyond operational difficulties. They directly impact healthcare delivery and patient health. Inadequate SCM can lead to medicine shortages, delayed treatments and an inability to respond effectively during health crises. These issues can erode public trust in health systems, discourage healthcare professionals and damage health outcomes.



Addressing these challenges requires a multifaceted approach that includes upgrading infrastructure, improving information systems and investing in human capital. Building capacity at all levels of the supply chain is essential to meet current health system needs and adapt to future challenges.

Investing in the health SCM workforce is a strategic approach to improve the efficiency of the health system. The global health workforce is projected to face a shortage of ten million professionals by 2030, highlighting the urgent need to attract newcomers to health supply chain management. Simultaneously, we are witnessing the largest global youth population in history, with approximately 1.2 billion individuals aged 15 to 24 (United Nations). Eighty-five percent of these young people live in LMICs, where employment challenges are most acute and the skills gap in the SCM sector is widening. In Sub-Saharan Africa, for example, fewer than one-third of youth are expected to gain the skills necessary for productive employment by 2030, with only 17 percent projected to leave secondary education equipped with essential workforce competencies (Global Business Coalition for Education, 2023).

Aligning the capabilities of young people with the demands of health supply chains offers a unique opportunity to address both youth unemployment and the understaffed, under-skilled SCM workforce.

Engaging youth in health SCM and supporting them throughout their career pathways is vital for addressing both current and future industry demands, retention challenges and building the next generation of leaders. By leveraging the potential of younger generations, the health SCM field can evolve to meet operational challenges while fostering an environment conducive to youth development and leadership. It can also help us to tackle the dual challenges of youth unemployment and SCM inefficiencies, thereby enhancing health outcomes in LMICs. This report provides principles and activities for stakeholders to effectively engage and empower youth in SCM, ultimately contributing to improved health outcomes in LMICs.

PURPOSE OF THE REPORT

This report provides strategies for stakeholders—including academic and training institutions, professional associations, public and private sector organisations, and government policymakers—to engage youth in the health supply chain workforce. It promotes work-based learning activities designed to equip youth with the necessary skills and experiences and provides examples of projects that exemplify these approaches.

Integrating youth into workforce strategies will benefit both the supply chain sector and the economy in LMICs. By involving these stakeholders, the report aims to foster a collaborative approach that enhances both educational outcomes and professional development opportunities in SCM.

This document supplements the Work-based learning toolkit.

STRUCTURE OF THE REPORT

The report is split into four key sections:

1. **YOUTH LABOUR MARKET REVIEW**

This section explores the current state of health supply chain management in LMICs, highlighting the socioeconomic factors impacting youth employment, educational deficits, and the broader implications for global health systems. It sheds light on the challenges and opportunities in engaging youth in SCM.

2. **KEY PRINCIPLES FOR ENGAGING YOUTH IN SCM**

Building on insights from the desk review, this section outlines foundational strategies for effectively integrating youth into health SCM. It focuses on context-driven approaches, diverse partnership building, leveraging technology and emphasising evidence-based learning.

3. **ADDRESSING THE BARRIERS FACED BY YOUTH**

This section explores specific solutions to overcome the barriers identified in the desk review, such as limited awareness of health SCM careers, gender disparities, educational gaps, unclear career prospects and inadequate continuing education opportunities. Each solution includes WBL activities to engage youth effectively.

4. **ANNEX**

This section contains:

Evaluation and feedback guidance, which discusses strategies for maintaining high standards through systematic feedback and routine evaluations

YOUTH LABOUR MARKET REVIEW

This section examines the various factors impacting youth employment and focuses on the socioeconomic challenges and educational deficits contributing to the skills gap in supply chain management (SCM). These elements have broader implications on health systems in low- and middle-income countries (LMICs) and understanding them is crucial to developing strategies to engage and equip the next generation of supply chain professionals.

Youth employment in LMICs is significantly influenced by a range of socioeconomic factors. Poverty, social exclusion, low education levels, family background, immigration status, household income and age exacerbate these challenges (Kume, 2019). These factors create substantial barriers to youth integration in the labour market, particularly in specialised sectors like SCM, where the demand for qualified professionals is high. By addressing these socioeconomic and educational deficits, it is possible to improve youth employment outcomes and enhance the efficiency and responsiveness of health supply chains in LMICs.

THE SCM SKILLS GAP

The efficiency of health supply chain management is crucial to achieving key global health goals. However, a significant challenge is the shortage of qualified and skilled supply chain professionals. This shortage is exacerbated by a skills mismatch, where the available workforce lacks the necessary competencies required for effective SCM operations (Yadav, 2015). The World Economic Forum (2014) highlights that this skills mismatch stifles innovation and adaptation within healthcare systems, making them less responsive to new challenges such as emerging diseases or demographic shifts.

The 2016 World Bank Logistics Performance Index (LPI) report revealed the global perception of a scarcity of adequately qualified personnel at all occupational levels in both developed and developing countries, with the most severe shortages in the bottom LPI quintile countries (World Bank, 2016) – those that perform most poorly. The LPI is a benchmarking tool that rates countries' trade performance on a scale of one to five. High skills deficits of between 20% and 30% are reported at all job levels in South Asia and Sub-Saharan Africa, with particular shortages in administrative and supervisory roles. Public interventions and private-public dialogue are crucial in enhancing logistics performance and establishing sustainable supply chain connections (World Bank, 2016).

THE IMPACT OF HIGH WORKLOADS

High workload, evidenced by the yearly increase in health commodity requirements and procurement, as well as the increase in the number of patients treated, is an issue that persists at most levels of the government-run health supply chain. An increased focus on universal health coverage and expanding access to services is expected to increase the workload in the short and medium term. In Rwanda, for instance, laboratory commodity SCM was a highlighted area of need. At some health service delivery points the SCM workload may be preventing clinical activities taking place (Rwanda, 2019).

GLOBAL YOUTH DEMOGRAPHICS

The world's youth population has never been so large and of the approximately 1.2 billion young people (aged 15 to 24), 85 percent live in LMICs. In sub-Saharan Africa alone the youth population is expected to grow by 89 percent over the next three decades (UN, 2019). This increase in the working-age population presents an exciting opportunity, leading to a 'demographic dividend' that offers opportunities for investment and accelerated economic growth. However, this is contingent on providing productive employment for everyone, especially youth (UN, 2019).

In LMICs, youth face significant employment challenges. The Global Business Coalition for Education (2023) reports that fewer than one-third of young people in Sub-Saharan Africa will gain the skills necessary for productive employment by 2030. Only 17 percent are projected to complete secondary education with the basic competencies required for the modern workforce. This educational shortfall threatens economic stability and growth.

EDUCATIONAL DISPARITIES

Despite increased investment in education over the past 30 years, Sub-Saharan Africa's workforce remains the least skilled in the world. Learning outcomes are poor with fewer than two in every three children completing primary school and even fewer reaching higher levels of education. This has resulted in substantial gaps in basic cognitive skills—literacy and numeracy—among children, young people and adults (Arias, Evans, & Santos, 2019).

Participation in tertiary education[1], particularly in Asia, Africa, and Latin America and the Caribbean, is significantly lower than in North America and Western Europe, with rates at 46 percent in Asia and 9 percent in Africa, compared with 79 percent in Europe and North America (UNESCO-UIS, 2019). Between 2000 and 2020, the biggest regional increase in the gross enrolment rate was in Eastern and South-Eastern Asia (up 36 percentage points), and the smallest in Sub-Saharan Africa (up five percentage points).

The disparity in the participation in tertiary education rates suggests that many young people in these regions are unable to access the higher education necessary to secure skilled employment.

Studies by Gereffi et al. (2011) and Goldin (2015) detail the educational disparities and employment challenges in developing countries. Gereffi et al. suggest the lack of visibility into future job creation and the changing business landscape, with a conservative approach to workplace development that relies heavily on outdated labour market signals, are responsible for these disparities. Goldin's work underscores the disconnect between university education and labour market demands and claims that this results in a significant number of graduates being unemployed or underemployed.

Despite high levels of youth unemployment, companies often struggle to fill key positions, citing a lack of relevant skills among applicants. Higher education institutions in many African countries do not sufficiently prepare graduates to meet employer needs (World Economic Forum, 2014). Critics argue that African universities produce many humanities and arts graduates but relatively few in the fields of science and technology. Additionally, those who graduate in fields such as technology or medicine often move abroad when job openings are advertised (Marumo & Emmanuel, 2019).

1. Tertiary education builds on secondary education, providing learning activities in specialised fields of education. It aims at learning at a high level of complexity and specialisation. Tertiary education includes what is commonly understood as academic education but also includes advanced vocational or professional education. (UNESCO-UIS, 2012)

YOUTH UNEMPLOYMENT, UNDEREMPLOYMENT AND NEET

The International Labour Organization (ILO) reports that global youth unemployment remains high, with an estimated at 73 million young people unemployed in 2022, slightly down from 75 million in 2021 but still above pre-pandemic levels (ILO, 2022). The COVID-19 pandemic has worsened labour market challenges for those aged 15 to 24, leading to higher employment losses compared to adults. The rate of young people not in employment, education or training (NEET) rose to 23.3 percent in 2020, the highest in at least 15 years, putting these young people at risk of long-term labour market scarring (ILO, 2022).

High levels of youth unemployment and underemployment are prevalent issues in LMICs, contributing to economic stagnation and social unrest. Engaging young people in SCM can provide them with valuable skills and career opportunities, thereby reducing unemployment rates. According to the African Development Bank (2016), integrating youth into active sectors like SCM can transform potential economic crises into opportunities for economic dynamism and innovation, stabilizing economic conditions by creating a more diverse and skilled workforce.

Some of the leading causes of youth unemployment in Africa include:

- **Lack of demand:** Insufficient youth wage employment is primarily a demand-side problem (African Development Bank, 2016).
- **Skills mismatch:** Educational systems often do not equip young people with market-needed skills. Youth unemployment is higher among those with advanced or intermediate education than those with basic education (ILO, 2017).
- **Lack of experience:** Graduates aged 25–29 are more likely to be unemployed due to a lack of work experience and relevance to their degrees (Meyer & Mnacayi, 2021).
- **Low quality of education:** Black Africans in South Africa often lack basic job market skills and historically-black institutions offer less marketable fields of study (Marumo & Emmanuel, 2019).
- **Dominance of the informal sector:** Employing up to 80 percent of people in some countries, the informal sector often lacks opportunities for growth and skills enhancement (Penar, 2021).
- **Limited formal jobs:** The formal job market cannot absorb the large number of new graduates.
- **Youth perception:** Many new graduates are discerning about job types, leading to feelings of discouragement when they remain unemployed (Marumo & Emmanuel, 2019).

With an increasing number of youth unempolyed owing to the scarcity of formal jobs, there is growing interest in entrepreneurship and vocational education (Mncube & Olaniran, 2018).

Various interventions target the NEET population, such as education, advice and guidance, vocational training, counselling and mentoring. However, many governments struggle to reduce NEET rates owing to a lack of practical policy tools for the most vulnerable youth. Those who benefit least from these interventions often have lower socioeconomic status, high previous arrest rates, poor literacy and are from minority ethnic groups (Mawn et al., 2017). Tailored approaches, rather than a one-size-fits-all strategy, are necessary to effectively reduce the NEET population (Kume, 2019).

Regional differences in youth unemployment also highlight the diverse challenges faced across different LMICs. The United Nations (UN) reports that youth unemployment in LMICs not only stunts economic development but also exacerbates social tensions and instability, leading to increased poverty, inequality, and in some cases, social unrest or migration (UN, 2019). Regional differences are stark: in 2022 youth unemployment rates in the Arab States were projected at 24.8 percent, Latin America and the Caribbean at 20.5 percent, Europe and Central Asia at 16.4 percent, and Africa at 12.7 percent, although this may not count many African youths who have withdrawn from the labour market altogether (ILO, 2022).

THE IMPACT ON YOUNG WOMEN

Sustainable Development Goal 8 (SDG 8) emphasises promoting sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all. Many young people are in low-paying, precarious, or informal work, with marginalized groups, including young women, facing even greater barriers (UN, 2017).

Young women are particularly disadvantaged in the youth labour market. The ILO's global youth labour participation rate in 2018 showed that 13 percent of young men were not in employment, education, or training, whereas this figure doubled for young women to 30 percent (ILOSTAT, 2022). In 2014, the youth employment-to-population ratio – or the proportion of a country's working-age population that is employed (ILO, 2024) – was approximately 47.7 percent for young men, compared to 39.4 percent for young women.

Gender disparity is a global issue but is more pronounced in Asia, Africa, and certain Arab states (Gammarano, 2019).

Many young women are socially excluded from employment in Africa, particularly in North Africa. Issues faced by young women in these regions reflect the dire need for continuous policy reforms to enable them to enter the labour market, addressing areas such as childcare and maternity leave (Rainsford, 2021). For example, Wilkinson et al. (2017) found that young women in rural South Africa faced greater difficulty than young men in getting jobs, as many opportunities involved physical labour, such as construction. Additionally, they often had young children, lacked skills or faced stigma in many professions.

Young women and individuals with low education levels are most at risk of becoming NEET. In most regions, young women are much less likely than young men to participate in formal employment, education or training. This contributes to a vicious cycle where unemployment, poverty and food inadequacy disproportionately affect girls and young women, making them more vulnerable to teenage pregnancy. This further impacts their education and economic prospects as they are forced to drop out of school (Kume, 2019).

ECONOMIC IMPLICATIONS

As mentioned above, the economic implications of not engaging youth in the workforce can be severe, affecting economic development, exacerbating social tensions and instability, leading to increased poverty, inequality, and in some cases, social unrest or migration. A large, unemployed youth population represents not just a loss of potential economic output, but also a missed opportunity for innovation. The long-term consequences include youth that are less able to contribute effectively to national development and have fewer opportunities to exercise their rights. This can have damaging effects on individuals, communities, economies and society at large (ILO, 2022). The ILO emphasises the need for strategies to provide this demographic with jobs and paths for upward mobility and skills development, which are crucial for sustainable development.

Engaging youth in SCM addresses immediate operational challenges and fosters long-term economic growth and societal stability. Oluwatayo & Ojo (2018) highlight that involving young people in key economic sectors like SCM can mitigate the risks associated with high youth unemployment, such as social exclusion and economic dependency.

> “What young people need most is well functioning labour markets with decent job opportunities for those already participating in the labour market, along with quality education and training opportunities for those yet to enter it.”
>
> *Martha Newton*
> *Deputy director-general, policy*
> *ILO*

By providing stable employment and career growth opportunities, countries can harness the potential of their youth to drive development and reduce incidences of crime and social unrest linked to unemployment.

ENHANCING SCM EFFICIENCY WITH YOUTH INTEGRATION

Young people offer fresh perspectives, adaptability and a propensity for technological innovation, all of which are crucial to modernising SCM in LMICs. As noted by Berhe (2021), young people are more likely to embrace new technologies and innovative approaches, which improve the efficiency and responsiveness of supply chains. Their engagement can enhance supply chain logistics, inventory accuracy and distribution strategies, which are essential for the timely delivery of medical supplies.

Investing in the development and integration of young people into the SCM workforce allows LMICs to address critical gaps in their supply chains, reduce youth unemployment, and set a foundation for continuous economic improvement and social stability. This approach not only benefits the health sector but also contributes broadly to national development goals.

However, youth aiming to enter the supply chain management workforce confront several significant barriers, including limited awareness, gender disparities, educational gaps, unclear career prospects and inadequate continued education. Before we explore these challenges, the following chapter, 'Key principles for engaging youth,' will examine foundational strategies to integrate young professionals into the health SCM sector. This discussion will outline how principles such as context-driven approaches, diverse partnership building and technological innovation can form the backbone of initiatives designed to empower and equip the next generation of supply chain professionals.

By establishing these key principles, we aim to provide a comprehensive framework for engaging youth. This strategic engagement is essential for overcoming the barriers and enhancing healthcare delivery and outcomes across LMICs.

S/C OU

A FOCUS ON: KENYA

Kenya faces significant challenges in its youth labour market, despite the potential presented by the large number of young people entering the job market each year. Approximately 500,000 to 800,000 young Kenyans seek employment annually, and with appropriate education and job opportunities, this demographic could drive substantial economic growth (British Council, 2017). However, the youth unemployment rate in Kenya remains high.

Addressing Kenya's labour market challenges requires coordinated policy efforts, targeted skills development programmes and inclusive economic strategies to harness the potential of Kenya's growing youth population. With improved policy coordination and strategic partnerships, youth labour market participation can increase, driving the development of the Kenyan economy.

Economic context and labour market challenges

Kenya's economy has shown consistent annual GDP growth of more than 5 percent, yet youth unemployment has remained stagnant at around 22 percent as of 2016 (British Council, 2017).

This figure underestimates the true extent of the issue, as many youths are inactive, and a significant portion of youth considered unemployed have informal jobs.

The informal sector provides 83 percent of employment opportunities, particularly in rural areas where formal job opportunities are scarce. Youth in these areas often engage in agriculture, transport, food service, waste management and ICT. However, the rise in criminal activity and prostitution among youth seeking income is a growing concern (British Council, 2017).

Inactivity and poor-quality jobs

Unemployment is not the only problem; inactivity and poor-quality jobs disproportionately affect Kenyan youth. Labour force participation rates have decreased, while youth inactivity rates have increased. This issue was highlighted during the post-election crisis in 2008, which underscored the lack of employment opportunities and dissatisfaction among youth.

Gender disparities

Young women in Kenya face even greater challenges. The rate of young women NEET is higher than the regional average (Shawa, Sossa, O'Higgins, & Folawewo, 2020). Female labour force participation rates are declining, often due to home-based activities, childcare responsibilities and participation in informal household businesses like agriculture. In urban areas, female youth unemployment is exceptionally high, with fewer opportunities for education and skills development. This lack of economic opportunities leads to risky sexual practices and poor health, education and social outcomes for girls and young women (USAID, 2019).

Impact and consequences

- The rise in criminal activity and prostitution among youth seeking income is a growing concern.
- Young women in Kenya face even greater challenges than young men.
- The lack of economic opportunities leads to risky sexual practices and poor health, education and social outcomes for girls and young women.

A FOCUS ON: NIGERIA

Nigeria faces a severe youth unemployment crisis, which presents significant socio-economic challenges for the country. With over 80 million young people, representing more than 60 percent of the population, Nigeria struggles to provide sufficient employment opportunities for its burgeoning youth demographic. Youth unemployment has steadily increased, with the unemployment rate reaching 42.5 percent and an additional 21 percent of young people being underemployed as of 2021 (National Bureau of Statistics, 2021).

Addressing the youth unemployment crisis requires a multifaceted approach, including educational reform to better align skills with market needs, economic diversification to create more job opportunities, and targeted policies to support youth employment. With coordinated efforts, Nigeria can harness the potential of its youth to drive economic growth and development, ensuring a more stable and prosperous future for the nation.

Economic context and labour market challenges

Despite being one of Africa's largest economies, Nigeria's economic structure has not been conducive to generating adequate employment opportunities for its youth. The economy's heavy reliance on the oil and gas sector has limited diversification, resulting in a mono-economy vulnerable to global market fluctuations and unable to create jobs in other sectors.

This economic structure has contributed to a high rate of structural unemployment, where there is a significant mismatch between the skills young people possess and the demands of the labour market. Graduates often find themselves equipped with qualifications in fields that are not in high demand, such as humanities, while critical areas like science, technology, engineering and mathematics (STEM) are underrepresented (McGrath, 1999; Salami, 2013).

Educational system misalignment

The Nigerian educational system has undergone numerous policy changes since independence, yet it continues to struggle with delivering relevant and employable skills. Frequent shifts in educational policies, coupled with an overemphasis on theoretical knowledge, have left many graduates ill-prepared for the realities of the labour market. As a result, even those with higher education degrees often find it difficult to secure employment that matches their qualifications. This misalignment between education and labour market needs exacerbates the youth unemployment crisis, contributing to a cycle of underemployment and job dissatisfaction (Salami, 2013; Kent & Mushi, 1995).

Cultural and social factors

Cultural attitudes towards education and employment further complicate the youth unemployment situation in Nigeria. There is a widespread belief that formal education and professional degrees are the only pathways to success, leading many young Nigerians to pursue higher education without considering vocational or technical training. This societal pressure, combined with a "get rich quick" mentality, has devalued skilled trades and vocational careers, resulting in a lack of interest in these potentially lucrative and immediate employment options (Salami, 2013).

Economic and policy constraints

Nigeria's economic policies have also played a significant role in the youth unemployment crisis. Low capital expenditure, high-interest rates, and limited trade openness have stifled economic growth and job creation, particularly in the private sector. Additionally, the government's focus on overhead and recurrent expenditure, rather than capital investment, has limited the potential for infrastructure development and job creation.

These macroeconomic constraints have made it challenging to generate the economic expansion necessary to absorb the growing youth population into the labour market (Olubusoye, Salisu, & Olofin, 2022).

Impact and consequences

- **Social instability and economic stagnation:** High levels of unemployment contribute to social unrest and hinder economic development.
- **Increased poverty:** Unemployment leads to persistent poverty, with intergenerational effects that perpetuate the cycle of poverty (Ajufo, 2013).
- **Limited access to healthcare:** Unemployed and underemployed youth struggle to afford healthcare, leading to increased rates of self-medication and poor health outcomes.
- **Insecure, low-productivity jobs:** Many young people are forced into the informal sector, where they engage in insecure and low-paying jobs that do not fully utilise their skills or provide adequate income

KEY PRINCIPLES FOR ENGAGING YOUTH IN SCM

Engaging youth in health supply chain management in LMICs requires innovative and strategic approaches.

This section outlines foundational strategies based on modern technologies, diverse partnerships and regional-specific needs to make youth engagement in SCM effective and sustainable.

CONTEXT-DRIVEN APPROACHES

Effective engagement strategies must be tailored to the local context of each region, considering supply chain dynamics, cultural factors and logistical constraints. By involving local youth in the design and implementation of SCM initiatives, these programmes gain broader acceptance and become more effective. Engaging youth in the planning process ensures solutions are developed with their unique perspectives in mind, increasing their participation and long-term commitment to SCM.

DIVERSE PARTNERSHIP BUILDING

Building partnerships across government agencies, private sector entities and youth-led organisations is crucial for sustainable SCM solutions. Partnerships pool resources, expertise and perspectives, fostering a collaborative environment. Involving youth-led entities offers valuable insights into the youth demographic, central for tailoring effective and relevant programmes.

INNOVATION THROUGH TECHNOLOGY

Leveraging modern technologies enhances SCM strategies. Digital training platforms, mobile applications, and virtual simulations provide youth with practical, hands-on experience and real-time data access, crucial for decision-making in SCM. Online degrees and diplomas in SCM ensure accessibility and flexibility, enabling youth to balance education with other commitments, especially in remote or underserved regions.

EVIDENCE AND LEARNING FOCUSED

SCM strategies must be rigorously evidence-based and incorporate continuous learning and improvement mechanisms. Emphasising regular assessments, meticulous data collection and programme adaptations based on feedback and emerging trends ensures strategies remain effective and evolve to meet changing needs.

The above elements are critical for transforming SCM into a dynamic and inclusive field that meets operational demands while fostering youth development and leadership.

By tailoring SCM initiatives to meet regional challenges and leveraging the technological savviness of youth, SCM professionals and organisations can ensure the field remains relevant and appealing. Addressing the specific barriers youth face when entering SCM can help to harness their full potential, leading to a capable, diverse and innovative workforce for the future.

ADDRESSING BARRIERS FACED BY YOUTH ENTERING SCM

Youth aiming to enter the health supply chain management workforce confront several barriers that impact their ability to integrate into and progress within the SCM sector. Whether transitioning from other health fields or entering directly through SCM educational programmes, key barriers include limited awareness of SCM careers, gender disparities, educational gaps, unclear career prospects and inadequate continuing education.

This section explores solutions that can effectively engage youth in health SCM. Informed by the key principles presented in the previous chapter, these solutions aim to equip the next generation of supply chain professionals with the necessary skills and experiences. By using a work-based learning (WBL) approach, we provide a framework for overcoming these barriers and improving healthcare delivery and outcomes across LMICs.

Work-based learning is a strategy to bridge the educational and skills gap in health SCM by providing practical, hands-on experience. It integrates academic learning with job exploration, networking and career development, helping individuals understand various professions, build professional relationships and develop the skills necessary to develop a long-term career.

WBL enhances youth employability by developing job-specific skills, deepening understanding of the health SCM field through direct exposure and creating pathways for career advancement. Immersion in actual supply chain environments allows students to apply theoretical knowledge, develop problem-solving skills and build professional networks.

WBL PROGRAMME FOCUS AREAS

Career exploration
Activities such as job shadowing, guest speaker sessions and site visits offer insights into different SCM roles and daily operations.

Pre-professional development
Internships and apprenticeships provide structured opportunities to gain hands-on experience, apply theoretical knowledge and develop specific job skills under the guidance of experienced professionals.

Career development
On-the-job training, skills workshops and professional networking opportunities help individuals transition from education to full-time employment and progress in their careers.

CAREER PATHWAYS FOR HEALTH SUPPLY CHAIN PROFESSIONALS

Figures 1 and 2, developed in by VillageReach in collaboration with PtD, the International Association of Public Health Logisticians (IAPHL) and Management Sciences for Health (MSH), illustrate the challenges and solutions around building and advancing a career as a supply chain professional. There are two pathways to a career in SCM: the traditional education pathway and the non-direct pathway.

The traditional pathway (Pathway A) involves formal education through academic programmes and certifications specifically in public health supply chain and is less common in LMICs.

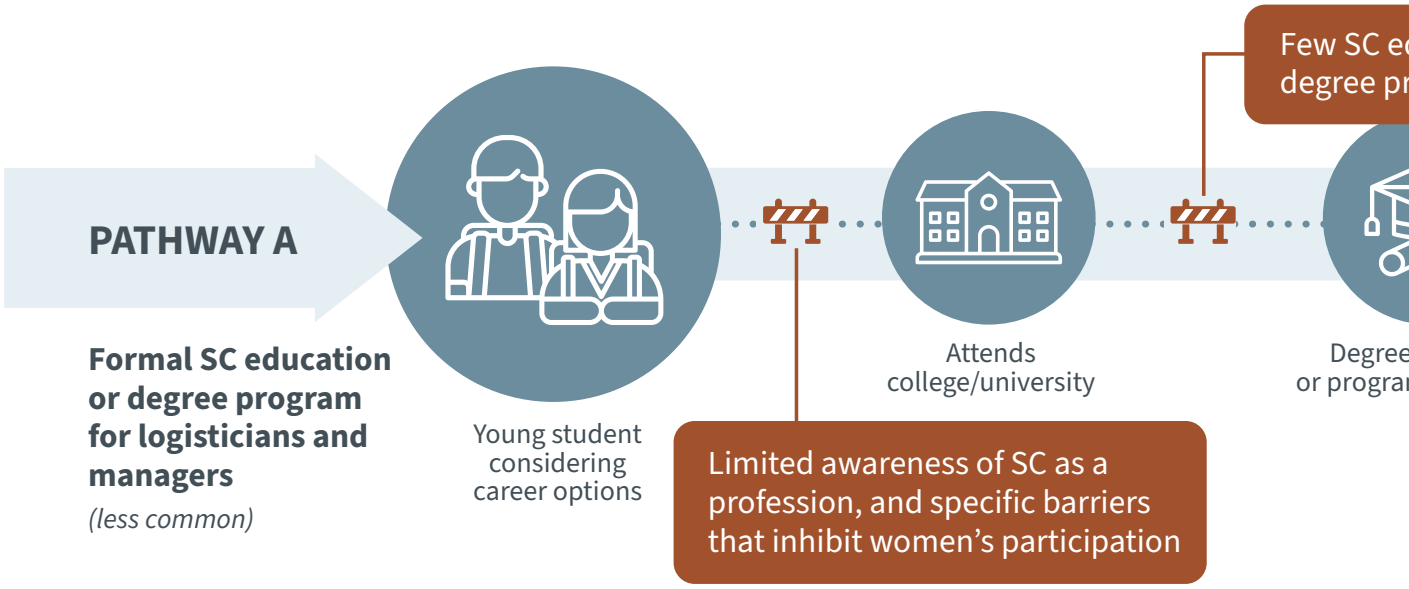
The non-direct pathway (Pathway B) is more common and includes healthcare professionals, such as pharmacists and nurses, who are assigned supply chain duties as part of their roles. It is a useful resource for youth plotting their career paths in the industry.

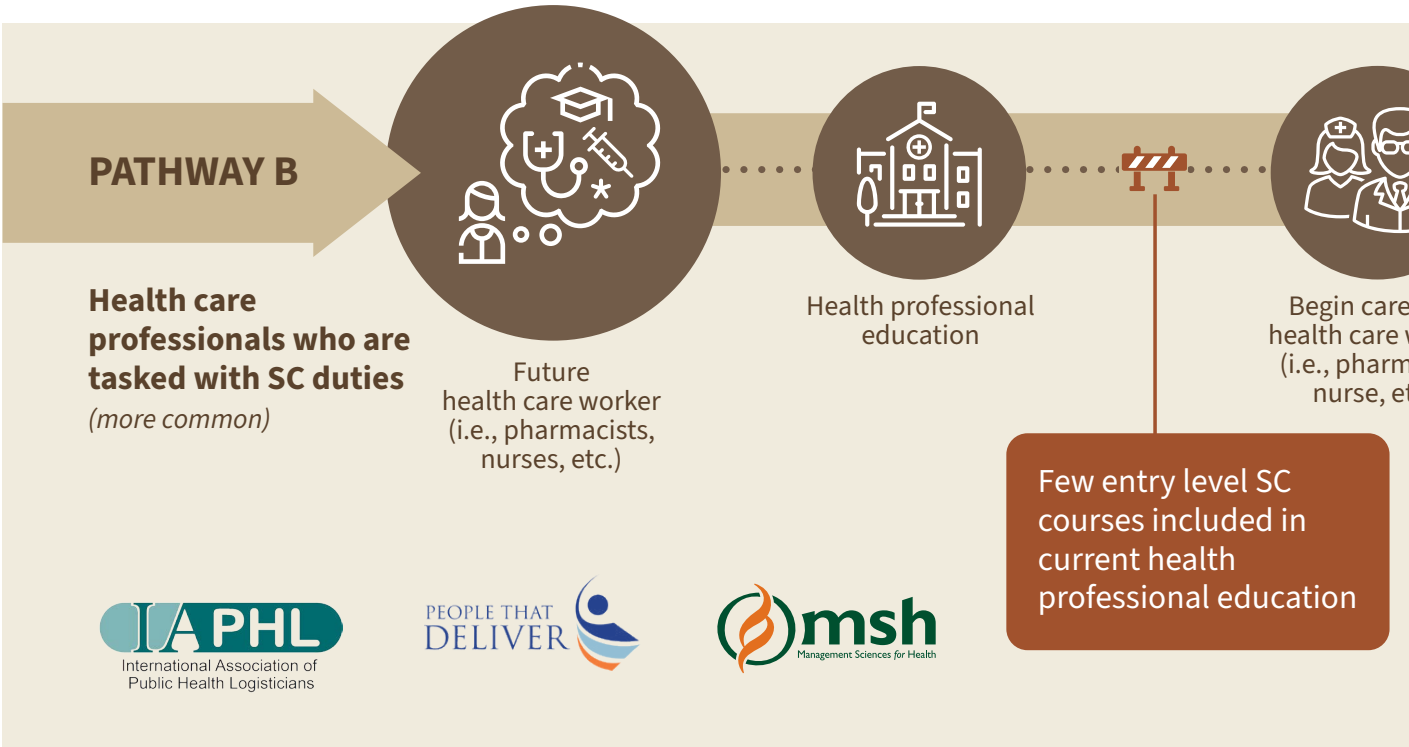
Both pathways benefit from WBL and experiential learning, which provide practical experiences that complement theoretical knowledge and facilitate career development. By supporting both traditional and non-direct pathways, stakeholders can ensure the development of a well-rounded and capable SCM workforce.

THE CHALLENGES:

Health Supply Chain Profe

Barriers around building and advancing a career as a su





IAPHL International Association of Public Health Logisticians

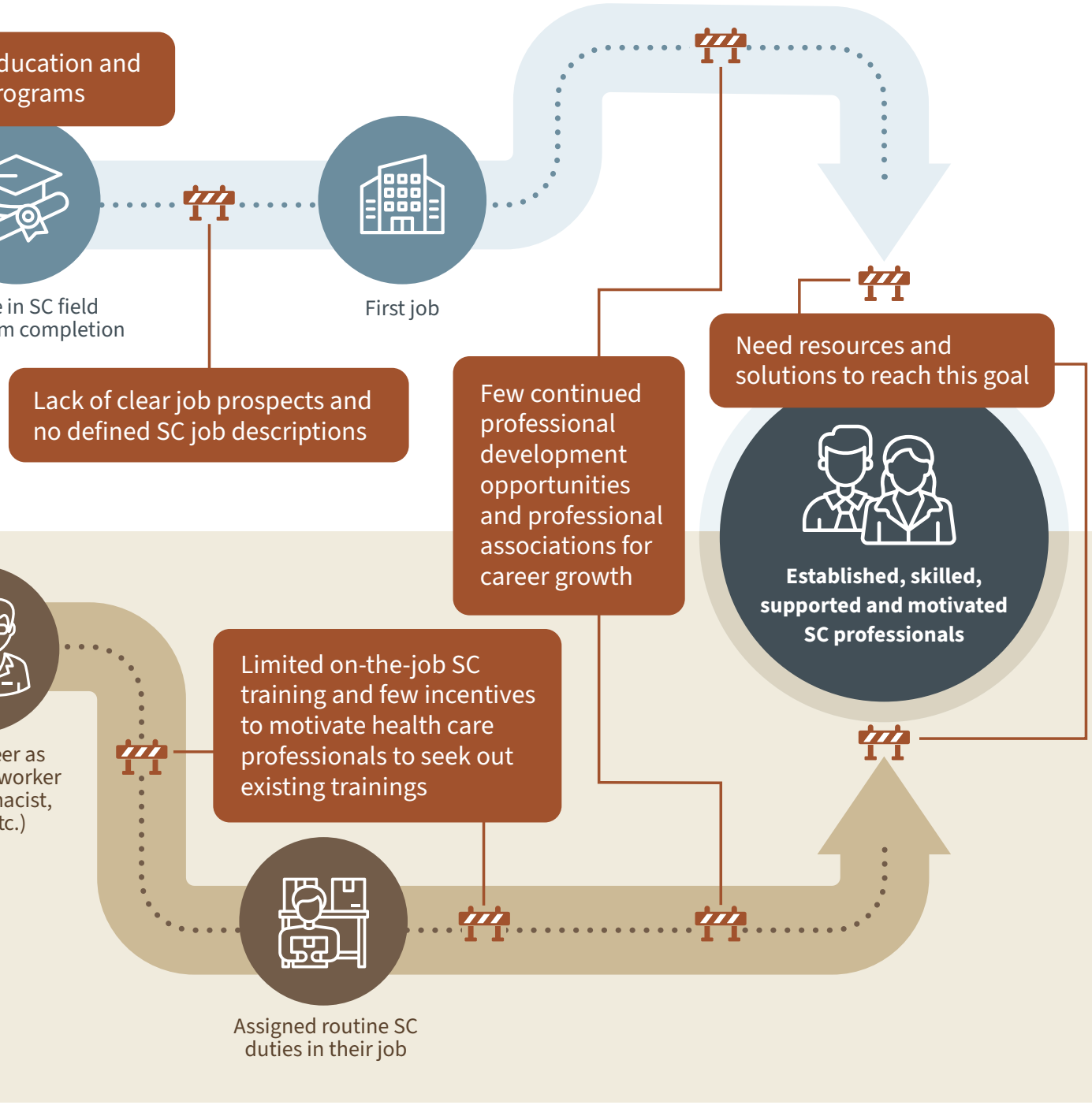
PEOPLE THAT DELIVER

msh Management Sciences for Health

ssional Career Pathways

upply chain (SC) professional

VILLAGE REACH Rx



THE SOLUTIONS:

Health Supply Chain Profe

Resources and approaches available for supporting SC

Create an
programs
building u

PATHWAY A

Formal SC education or degree program for logisticians and managers
(less common)

Young student considering career options

Attends college/university

Degree
or progra

Sensitize youth & women about SC as a profession via internships, career fairs, student outreach

In
int
pri
of

PATHWAY B

Health care professionals who are tasked with SC duties
(more common)

Future health care worker (i.e., pharmacists, nurses, etc.)

Health professional education

Begin care
health care
(i.e., pharm
nurse, e

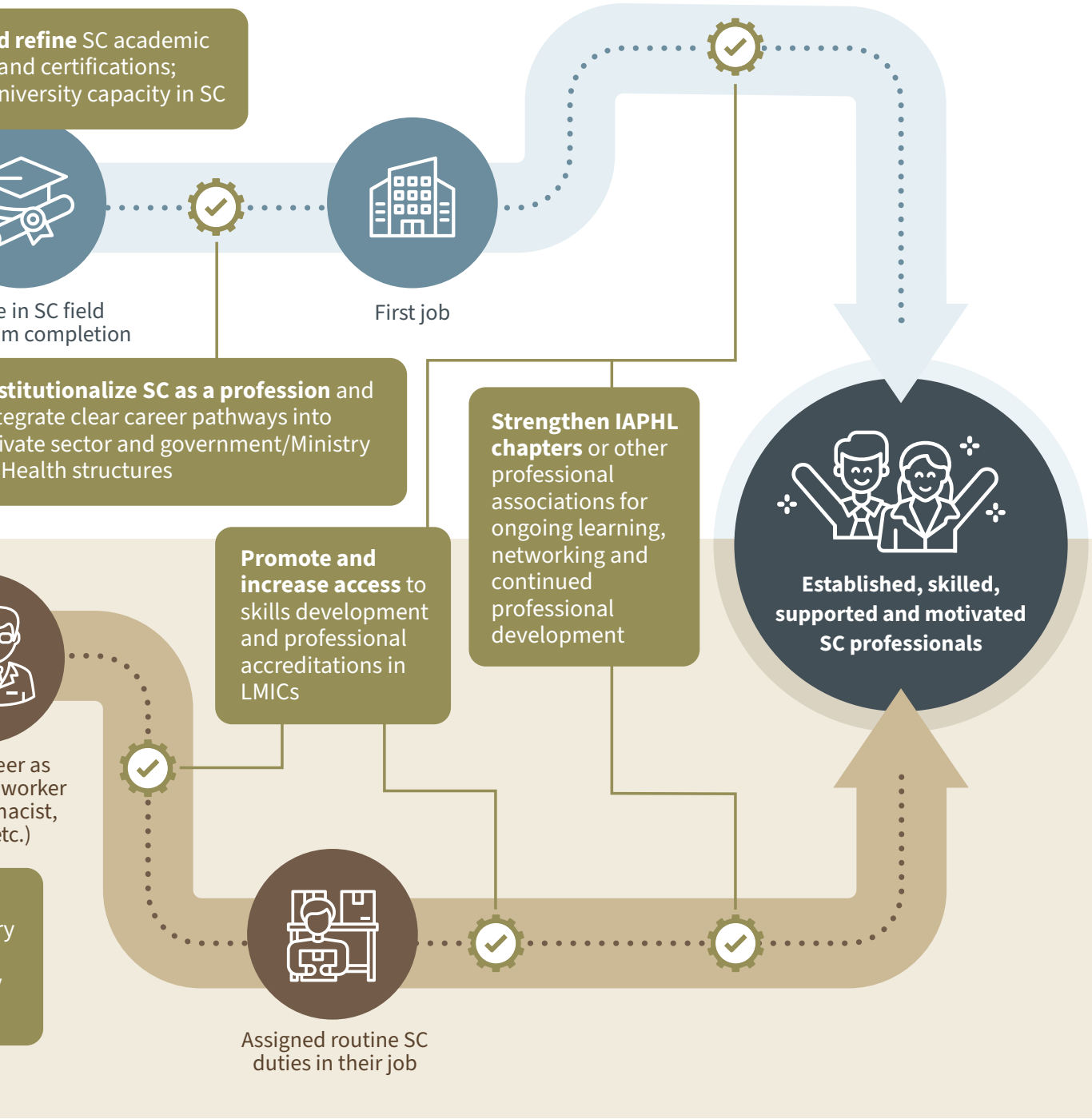
Update health professional training curricula to have entr
level SC courses, & **update job descriptions** to include supply
chain responsibilities

RESOURCES:

1. International Association of Public Health Logisticians (IAPHL) E-Learning: **https://iaphl.org/resources/laptop-e-learning/**
2. People that Deliver: Supply Chain Management Professionalization Framework: **https://www.peoplethatdeliver.org/supply-chain-management-professionalisation-framework**, STEP 2.0: **https://peoplethatdeliver.org/whats-step-20**
3. The Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program: **https://www.mtapsprogram.org/**
4. VillageReach: **https://www.villagereach.org/project/supply-chain-professionalization/**

ssional Career Pathways

professionals along the career pathway



ADDRESSING LIMITED AWARENESS IN SCM

In LMICs, a significant barrier to youth pursuing a career in health supply chain management is their limited awareness of the viable career paths. This contributes to and exacerbates human resources (HR) shortages in the health supply chain sector. HR constraints lead to high workloads, low performance and neglected duties. The shortage of skilled and qualified SCM staff at warehouses and health facilities is often compensated by medical personnel tasked with SCM duties, affecting both supply chain efficiency and healthcare quality.

The resulting heavy workloads, coupled with a lack of training in essential SCM functions like stock management and ordering procedures, create a cycle of inefficiency and high turnover that exacerbates the shortage of qualified SCM professionals (Privett & Gonsalvez, 2014; Dowling, 2014).

Given these challenges, raising awareness about the importance and viability of careers in health SCM is crucial to addressing HR shortages and improving supply chain efficiency and healthcare quality.

Addressing the challenge of limited awareness among youth of careers in health SCM requires a mix of direct engagement and modern awareness campaigns. These efforts should showcase the practical aspects of SCM and highlight its relevance and dynamic nature through digital and interactive means. WBL activities play a crucial role in this process, especially in the context of career exploration and pre-professional activities.

ACTIVITIES TO RAISE AWARENESS OF HEALTH SCM CAREERS

1. **Create shadowing opportunities**
Supply chain organisations should arrange for learners to accompany SCM professionals through a typical day, offering a behind-the-scenes look at the roles and responsibilities inherent in the sector.

2. **Invite guest speakers**
Learning and development institutions, professional associations, and public and private supply chain organisations should host guest speakers from various SCM roles to discuss industry trends, challenges and career advice.

3. **Arrange site visits**
Learning and development institutions and professional associations should organise visits to warehouses, distribution centres, and logistics companies to observe supply chain operations firsthand.

4. **Organise networking events**
Public supply chain organisations, learning and development institutions, and professional associations should facilitate events with industry professionals to foster connections and learn about different roles and career paths.

5. **Create a digital outreach strategy**
To create an effective digital outreach programme for supply chain management careers, public supply chain organisations organisations and learning and development institutions could consider:

- Using social media platforms popular with youth to share engaging content about SCM careers.
- Creating video content or webinars featuring young professionals in SCM roles.
- Developing interactive online tools or games that simulate supply chain challenges.
- Offering virtual job shadowing or mentorship opportunities.
- Creating a dedicated website or app with resources, career paths and educational information about SCM.

6. Engage through inspiration

- **SCM days in educational institutions**

Public supply chain organisations and professional associations should conduct workshops and panel discussions in schools and colleges to give students a practical taste of SCM tools and technologies.

- **Youth ambassadors programme**

Public supply chain organisations and learning and development institutions should collaborate to launch an ambassador programme where young SCM professionals can connect with students, share their experiences and inspire them to pursue SCM careers. This programme should include training for ambassadors to effectively communicate and engage with youth.

IN PRACTICE

These activities and examples illustrate effective strategies to raise awareness about SCM careers, encouraging more youth to consider this critical field and ultimately helping to address the HR shortages in health supply chain management.

Empowering youth in Nigeria

Supported by the Nigeria Youth Future Fund and LEAP Africa, the Catalyzing Youth Actions for Accountability in Governance project from GreenLight Initiative in Nigeria empowers the younger generation, encourages active participation and cultivates a culture of accountability. By engaging diverse partners, including government agencies, civil society organisations and youth groups, the project pools resources and expertise to foster a more inclusive and effective governance structure. This collaborative approach enhances youth engagement and demonstrates how diverse partnerships can lead to more sustainable and impactful solutions in SCM.

ASCM's youth outreach program

The Association for Supply Chain Management (ASCM) runs career awareness programmes to prepare professionals who will transform tomorrow's supply chains while tackling the ongoing industry talent shortage. The Supply Chain STEM Educational Outreach Program offers age-specific activities for K-12 students to highlight STEM concepts and their connection to supply chain management. These sessions, delivered by volunteers or teachers in schools, clubs or community organisations, provide hands-on experience with supply chain principles.

The ASCM Foundation Scholars Program engages undergraduate students, providing them with scholarships to attend the ASCM annual conference and learn about supply chain management. Scholars are matched with mentors who share their expertise and receive complimentary registration and hotel accommodation courtesy of the ASCM Foundation.

Inviting guest speakers to Chicago

Loyola University Chicago hosts a supply chain speaker series to complement students' classroom experience with the advice and expertise of practitioners. The online series is open to the public to engage both students and supply chain professionals.

ADDRESSING EDUCATIONAL GAPS IN SCM

Educational gaps in supply chain management present a significant barrier to building a competent workforce, particularly in LMICs. This section proposes strategies to close these gaps by integrating theoretical knowledge with practical skills through work-based learning activities. WBL activities, including internships and apprenticeships, combined with experiential learning methods, play an important role in bridging these gaps.

Developing and refining academic programmes and certifications, along with fostering strong industry-academia collaborations, can equip young professionals with the necessary skills to navigate the complexities of modern supply chains. Regular curriculum updates, the integration of real-world case studies, and the promotion of practical training and internships ensure that the next generation of SCM professionals is well-prepared to meet industry demands and drive innovation in their fields.

In LMICs, the development of specialized skills necessary for effective supply chain operations is often hindered by the lack of dedicated SCM educational programmes. While offerings are improving, budget constraints and high demand remain challenges. For example, the University of Rwanda's Regional Center of Excellence programmes face overwhelming demand, with over 600 applications for a cohort of just 20 people each year.

What's more, the reliance on medical personnel to perform SCM tasks owing to a shortage of qualified logistics staff adversely impacts supply chain efficiency and healthcare quality. Legislative requirements in many LMICs mandate that pharmaceutical supply chains be managed by pharmacists and medical personnel, which further exacerbates the skills gap. The disconnect between educational institutions and industry needs, compounded by insufficient educator support and outdated curricula, further contributes to this gap (Privett & Gonsalvez, 2014; Goldin, 2015).

Addressing the challenge of limited awareness among youth of careers in health SCM requires a mix of direct engagement and modern awareness campaigns. These efforts should showcase the practical aspects of SCM and highlight its relevance and dynamic nature through digital and interactive means. WBL activities play a crucial role in this process, especially in the context of career exploration and pre-professional activities.

ACTIVITIES TO CLOSE EDUCATIONAL GAPS

1. **Enhance theoretical knowledge**
Educational institutions, supply chain organisations and professional associations should offer structured educational programmes, seminars, workshops, and training sessions that keep up with the latest trends and innovations in SCM.

2. **Develop practical skills**
Supply chain organisations and government institutions should offer immersive internships, on-site training and mentorship programmes.

3. **Foster industry-academia collaboration**
Partnerships between educational institutions, public supply chain organisations and leading SCM firms should be developed.

4. **Continuously review curricula**
Education institutions should hold periodic curriculum reviews to support the development of new SCM programmes.

5. **Share real-world case studies**
Real-world SCM challenges should be integrated into the academic syllabus.

6. **Offer practical training & internships**
Course providers should offer mandatory internships or apprenticeships as part of the SCM course curriculum.

7. **Introduce mentorship programmes**
Supply chain management organsations should facilitate mentorship initiatives where experienced SCM professionals guide and counsel students.

8. **Invite feedback**
Supply chain organisations should implement robust feedback systems for students post-internship or after undertaking SCM roles to monitor the efficacy of such initiatives.

9. **Create customised training modules**
Course providers should develop supplementary training modules or workshops targeting specific areas of concern

IN PRACTICE

These examples illustrate effective strategies for addressing educational gaps in SCM. By integrating theoretical knowledge with practical skills and fostering strong industry-academia collaborations, these initiatives ensure that young professionals are well-prepared to meet industry demands and drive innovation in the SCM field.

VillageReach in Malawi

In 2013, VillageReach launched the Pharmacy Assistant Training Program in Malawi to address HR shortages and raise awareness of health SCM careers. This two-year certificate-level programme includes practical training and classroom-based learning, focusing on improving data management, decreasing logistics burdens on clinical staff and enhancing the quality of care. By training facility-based pharmacy staff, the programme introduces new career paths in health SCM and highlights the critical role of supply chain professionals in improving healthcare delivery. This initiative demonstrates how targeted training programmes can effectively raise awareness and address HR challenges in the health supply chain sector (VillageReach, 2019).

A 2018 evaluation of the programme revealed that health facilities with pharmacy assistants (PAs) performed better than facilities without PAs in almost every process indicator measured. Interviews with a wide range of supply chain stakeholders indicated that PAs have professionalised medicine management, improved logistics management information system (LMIS) data quality, improved dispensing quality, freed up significant time for clinicians to focus on their patients, and more broadly, supported pharmacy work in district hospitals, neighbouring health centres and communities. Most importantly, stockouts reduced at PA facilities for reproductive health/family planning commodities, and also for malaria and HIV tests, while they stayed the same or got worse at non-PA facilities.

VillageReach in Mozambique

In Mozambique, VillageReach is collaborating with the Instituto Superior de Ciências de Saúde to create the country's first bachelor's degree in health logistics, set to begin educating in 2025. After conducting a needs assessment, drafting the curriculum and hosting a validation workshop with multiple partners, the curriculum has been submitted for national approval. Next steps include launching the course, training ISCISA faculty to ensure they have the technical capacity to teach the course, and marketing the programme to attract youth, particularly women, to the profession.

Course design across Africa

The Youth Health Africa (YHA) initiative provides a robust model for curriculum design and renewal, and aims to ensure that educational programmes are comprehensive and aligned with industry needs. YHA focuses on developing courses that offer an in-depth exploration of fundamental SCM principles, concepts and theories, such as inventory management, logistics, procurement, and demand forecasting. This comprehensive approach ensures that students build a strong theoretical foundation.

Youth development in South Africa

The SAPICS Young Professional and Youth Portal supports students and graduates in SCM, offering access to experienced professionals and discounted educational resources. The youth development programme seeks to tackle youth unemployment and grow young talent for South Africa's supply chain industry by equipping young professionals with the necessary skills to be industry ready. Benefits include a young professional registration rate for the Certified Supply Chain Analyst (CSCA) course, access to SAPICS member-only events, a mentorship program, and the opportunity to serve on the SAPICS Young Professional and Student leadership committee. To date it has supported over 5,000 young professionals to develop their skills – in health supply chain and other areas – through internships with partner organisations.

Helping young professionals to use technology

The Young Logisticians Professionals Programme (YLPP) in Benin incorporates both theoretical and practical sessions, leveraging technology to manage logistics data effectively. The programme trains and integrates youth into the health supply chain workforce to address human resource and health supply chain challenges in Benin. The programme equips youth with the skills and tools needed to excel in SCM roles, providing comprehensive training in various aspects of supply chain management.

Vocational training pathways in Germany

Germany's Dual Vocational Training System offers an alternative to traditional university education, providing a pathway that combines theoretical learning with practical experience. It bridges the gap between education and employment, contributing to the country's low youth unemployment rates and highly skilled workforce. This system is particularly notable for being an effective alternative to university education, supported by both the government and private sector.

The system integrates classroom instruction at vocational schools with hands-on training at companies, where students spend most of their time. About 50 percent of German school-leavers choose this vocational route, highlighting its popularity and effectiveness. Training programs are regularly updated to align with industry needs, with significant input from employer organizations and trade unions.

For companies, it provides a cost-effective way to recruit and train skilled employees. For students, it offers market-relevant training, improving job prospects without the need for a university degree. For the government, it reduces the financial burden on public budgets by involving enterprises in the training process.

ADDRESSING UNCLEAR CAREER PROSPECTS IN SCM

Graduates often face unclear job prospects and poorly defined job descriptions within health SCM, leading to career uncertainty and dissatisfaction. The lack of defined career paths and the discrepancy between educational content and market needs hinder professional development and retention. Furthermore, SCM roles are frequently not recognised as a distinct profession, which devalues the field and demotivates professionals.

The public service structure drives demand and in a fiscally restrained environment, obtaining approval for new SCM positions within the public sector is challenging (Rwanda labour market analysis, 2019). Inadequate institutional support and limited professional recognition compound these challenges, making it difficult for SCM professionals to advance and succeed in their careers (Reproductive Health Supplies Coalition, 2009; Privett & Gonsalvez, 2014; Yadav, 2015).

ACTIVITIES TO DEFINE CAREER PATHWAYS

1. **Establish standardised roles and competencies**
   Health supply chain organisations should develop a comprehensive competency framework that outlines the skills, knowledge and behaviours required for various roles within SCM.

2. **Create professional development frameworks**
   Public health supply chain organisations should implement structured career development plans that include clear progression pathways from entry-level positions to senior roles.

3. **Institutionalise SCM as a recognised profession**
   All stakeholders – including governments, academic institutions and professional associations – should advocate the formal recognition of SCM as a distinct profession within national health and human resources frameworks.

4. **Foster entrepreneurship**
   Governments should create supportive environments that encourage young entrepreneurs to innovate within the SCM sector.

5. Enhance mentorship and networking opportunities

Collaborations between academic institutions and supply chain organisations should foster the development of structured mentorship programmes that connect young SCM professionals with experienced industry leaders.

6. Promote gender equity and diversity

All stakeholders – including governments, academic institutions and professional associations – should implement targeted initiatives to support the inclusion of women and other underrepresented groups in SCM careers.

IN PRACTICE

The PtD approach

People that Deliver (PtD) advocates a *whole of SCM labour market* approach to understand HR for SCM. This comprehensive strategy examines both the supply and demand for SCM labour, and involves key stakeholders including government ministries, professional associations, academic institutions, the private sector and the humanitarian sector.

PtD's SCM professionalisation framework is central to this approach and provides a systematic way to build job descriptions, define SCM roles and align education and training with job requirements, thereby creating clearer career paths for graduates. Specifically it:

- Defines professional standards for governments
- Articulates competency requirements and career pathways for employers
- Develops clear courses for educational institutions
- Helps SCM employees map out professional careers

The components of this framework include:

- A Library of Competencies & Designations for Health Supply Chains.
- A Collection of Roles and Descriptions for Health Supply Chains.
- Mapping of Education for Health Supply Chains.
- An Implementation Approach for Health Supply Chains.

SCM business incubators

Chemonics, in partnership with UNLEASH, has established specialised SCM business incubators to foster emerging SCM startups. These incubators provide essential resources such as co-working spaces, access to specialised SCM tools and technologies, and expert mentorship. They also facilitate networking opportunities, linking startups with potential collaborators, investors and clients. The annual Innovation Lab hosted by Chemonics and UNLEASH engages global youth in sustainability challenges, having hosted over 7,000 young innovators from 172 countries and generating 1,000 solutions across various locations.

SCM mentoring & networking

Structured mentorship and networking programmes tailored for young entrepreneurs in the health SCM sector enhance their business skills and expand their professional networks. Examples include:

- **The SAPICS Young Professional and Youth Portal** supports students and graduates in SCM, offering access to experienced professionals and discounted educational resources.
- **Pamela Steele Associates Girls on the Move** programme connects young women in supply chain roles with internships, employers and mentors.
- **Chemonics Benin and USAID's Young Logistician Professional Program** integrates youth into Benin's health supply chain, offering training and career development.
- **The Youth Health Africa (YHA) initiatives** foster networking through the Youth Work Experience (YWE) programme, where youth interact with corporate sponsors and healthcare facilities, and participate in professional development sessions. These initiatives help youth to build professional networks and gain insight from experienced practitioners.
- **boom!: A global community for women in supply chain** provides insight into the sector, skills requirements and the compatibility of SCM careers with women's professional aspirations.

ADDRESSING INADEQUATE CONTINUING EDUCATION

Ensuring the ongoing professional development of supply chain management personnel is vital for maintaining a competent and adaptable workforce. While initial education provides a foundation, continuous learning and professional growth are essential for addressing evolving industry demands. SCM professionals must have access to up-to-date training, modern technological tools, and mentorship and networking opportunities to stay current with industry practices and innovations.

Educational curricula must meet the evolving demands of the SCM field to effectively facilitate professional growth and address supply chain challenges. Although many online networks and training providers work in this space, health SCM professionals need employer support to take advantage of these resources. Organisations must also innovate in how they offer training, ensuring it is convenient and accessible to all professionals.

ACTIVITIES TO PROMOTE CONTINUING EDUCATION

1. **Strengthen professional associations**
Donor organisations, development partners and the private sector should help to enhance the role of international associations such as the International Association of Public Health Logisticians (IAPHL) by increasing their presence and activities in LMICs.

2. **Create professional development programmes**
Academic institutions should create and promote professional development programmes tailored to the needs of SCM professionals in LMICs.

3. **Foster industry-academia collaboration**
Supply chain organisations – both public and private – should establish partnerships with academic institutions that facilitate continuous learning opportunities.

4. **Share real-world case studies and simulations**
Course providers should incorporate advanced case studies and simulation exercises into professional development programmes.

5. **Offer practical training and internships**
Governments should encourage organisations to offer mid-career internships and on-the-job training opportunities.

6. **Develop mentorship and coaching programmes**
Supply chain organisations should pair experienced professionals with new or junior staff members to facilitate knowledge transfer and provide hands-on guidance.

7. **Make job rotations and stretch assignments available**
Supply chain organisations should expose employees to different roles and responsibilities within the supply chain.

8. **Leverage communities of practice**
Supply chain organisations and professional associations should make better use of communities of practice where professionals with common interests can share knowledge, discuss challenges and collaborate to discover solutions.

9. **Capitalise on digital learning platforms**
Supply chain organisations should invest in learning management systems (LMS) or digital platforms to enable self-paced learning, virtual training and collaborative learning opportunities.

10. **Enhance partnerships and collaborations**
Supply chain organisations should establish partnerships with industry bodies, academic institutions and external organisations to provide access to subject matter experts, training resources and opportunities for knowledge exchange.

11. **Open competency-based career pathways**
Supply chain organisations should implement a competency-based framework to align career path, education and professional growth within the organisation.

ACTIVITIES TO PROMOTE CONTINUING EDUCATION

An app for continuous learning

The GaneshAID VacciForm App is a mobile learning and social network platform for health workers. It promotes continuous learning and knowledge exchange, allowing users to access training materials, participate in discussions and stay up-to-date with the latest SCM practices. This innovative approach ensures that SCM professionals can access education and resources conveniently and effectively.

Humanitarian logistics and SCM training

The Logistics Learning Alliance offers comprehensive training in various aspects of humanitarian logistics and supply chain management through experiential learning programmes. These programmes use a unique case study approach to help students apply real-world thinking in a simulated environment, enhancing their professional development and competency.

Providing SCM education in Rwanda

The East African Community Regional Centre of Excellence for Vaccine Immunization and Health Supply Chain Management (RCE-VIHSCM) is strategically located in Kigali, Rwanda, serving the EAC region. The centre offers blended training programmes that are culturally relevant and contextual, providing both in-person and online education tailored to regional challenges.

The IAPHL community of practice

The International Association of Public Health Logisticians (IAPHL) is a community of practice dedicated to facilitating the exchange of professional experience and innovation in public health logistics management and commodity security. It supports continued learning, promotes the use of local and regional expertise, and expands members' professional networks. Membership is free, providing access to a global network of professional resources.

A higher education collaboration

The Center for Applied Research and Innovation in Supply Chain–Africa (CARISCA) is partnership between Arizona State University (ASU) and Kwame Nkrumah University of Science and Technology (KNUST). It supports higher education institutions in providing degree programmes and training, facilitating research, engaging stakeholders and increasing inclusion in SCM.

ONLINE AND VIRTUAL TRAINING PROVIDERS

Empower School of Health, in collaboration with the United Nations Institute for Training and Research (UNITAR), provides online degrees and diplomas in global health, supply chain and management.

Bee Skilled offers online training focused on public health education. Their platform combines collective intelligence with competency-based learning to provide an innovative approach to online education for public health professionals.

i+solutions offers a range of training programmes focused on pharmaceutical supply chain management and public health.

AGORA is UNICEF's comprehensive learning platform, offering a wide range of training and development opportunities tailored to the needs of its users.

ADDRESSING GENDER BARRIERS IN SCM

Gender disparities present significant challenges in SCM and women are underrepresented in leadership and operational roles. Stereotypes, which deter women from pursuing careers in the field, include the notion that SCM involves primarily physical labour, such as lifting heavy loads or driving. Additionally, women face invisible barriers such as bias in meetings and lack of female role models, which hinder their professional growth.

Organisations often lack policies that support gender equity, such as safe reporting procedures for sexual harassment or supportive policies for work-life balance. Addressing these barriers requires targeted interventions to promote gender equity within SCM, enhancing safety measures and providing mentorship opportunities to support women's careers in SCM (VillageReach,2024; USAID, 2023; Oxfam, 2023; UNFPA, 2023).

As SCM evolves, it is imperative to address gender disparities that hinder the full integration of young women and other gender minorities into the workforce. By focusing on initiatives that raise awareness about SCM career opportunities, updating educational curricula and creating supportive environments, we can overcome barriers that disproportionately affect young women. These efforts are key for developing a resilient SCM workforce that leverages the talents of all youth, ensuring that SCM systems are effective and equitable.

STRATEGIES TO ADDRESS GENDER DISPARITIES

1. **Launch awareness programmes**
   - All stakeholders should launch targeted awareness campaigns to educate youth and women about the possibilities within the SCM field.
   - They should use platforms like boom!, a global community for women in supply chain, to provide insights into the sector, skills requirements and the compatibility of SCM careers with women's professional aspirations.

2. **Enhance curricula**
   - Course providers should update health professional training curricula to include the basics of health SCM, ensuring that all health technicians and nurses are equipped with foundational SCM knowledge.
   - They should revise and enhance SCM academic programmes and certifications to reflect current best practices and technological advancements in SCM, using partnerships with established programmes like the Kühne Foundation's LEARN Logistics education programme.

3. **Provide institutional support**
   - Governments and supply chain organisations should formalise SCM as a profession within national health and human resource frameworks, adopting models like the People that Deliver's SCM professionalisation framework.
   - Professional associations, course providers and supply chain organisations should increase access to online learning platforms and skills development opportunities tailored for women, promoting participation in programmes like IAPHL's online courses and the Strategic Training Executive Programme (STEP 2.0).

4. **Make use of professional associations**
   - Donor organisations, development partners and the private sector should strengthen SCM professional associations to foster a sense of community, ongoing learning and collaboration among all SCM professionals, especially women.
   - Professional associations can provide platforms for networking, mentorship and motivation.

5. Tailor career pathway development

- Governments, supply chain organisations, educational institutions and donor organisations should develop specific programmes to overcome the cultural and structural barriers that women face in SCM careers. This includes creating internship opportunities, holding career fairs and ministry of health outreach programmes specifically designed for women.
- They should implement programmes that actively educate women and offer them career advancement opportunities, addressing specific barriers such as work-life balance, transportation and safety concerns.

6. Create an enabling environment for recruitment and advancement

- Supply chain organisations should implement equitable recruitment practices that are sensitive to gender needs, including the use of gender-neutral language in job ads, diverse interview panels and the elimination of bias in selection criteria.
- They should develop and enforce policies that support work-life balance, provide protection against sexual harassment, and promote gender equality within the workplace.

7. Offer mentorship and networking opportunities

- Supply chain organisations should establish formal and informal mentorship programmes to connect women with role models and leaders in the SCM field. These programmes should facilitate the sharing of experiences and strategies for navigating the professional landscape.
- They should organise networking events, workshops and seminars, specifically for women in SCM, focusing on building connections and providing practical advice for career advancement

8. Provide structural and financial support

- Supply chain organisations should provide structural support such as safe accommodation and travel arrangements for women required to travel for work.
- Governments should offer scholarship programmes and financial aid specifically aimed at supporting women pursuing education and training in SCM.

STRATEGIES TO ADDRESS GENDER DISPARITIES

Girls on the Move in Kenya

The Girls on the Move initiative, a partnership between the Reproductive Health Supplies Coalition and Pamela Steele Associates (PSA), illustrates the power of multi-sector collaboration to open career pathways in SCM for young women. Launched in May 2022 in Kisumu, Kenya, this programme specifically targets young women, providing them with internships and practical training opportunities in supply chain management. By engaging local employers and educational institutions, the initiative not only offers valuable on-the-job experience but also actively works to bridge the gender gap in the SCM sector. The programme has successfully integrated 36 young women into SCM roles, with 13 securing employment as a direct result of their internships. This initiative has not only provided these young women with critical career skills but also demonstrated the value of inclusive practices in SCM. By fostering an environment in which young women are encouraged to explore and excel in SCM roles, "Girls on the Move" significantly enhances youth engagement and serves as a model for similar programmes globally. The collaborative support from multiple sectors ensures the sustainability of the initiative and its ability to adapt to the evolving needs of the community and the SCM industry.

CONCLUSION

Addressing the challenge of inadequate continuing education for supply chain management professionals in LMICs requires a comprehensive, multi-faceted approach. By promoting and increasing access to skills development and professional accreditations, strengthening professional associations, and fostering industry-academia collaboration, we can ensure that SCM professionals receive the ongoing training and support they need.

Implementing WBL activities such as mentorship and coaching programmes, job rotations, communities of practice and digital learning platforms enhances professional growth and adaptability.

WBL includes career exploration activities (e.g., job shadowing and guest speaker sessions), pre-professional development (e.g., internships and apprenticeships), and career development (e.g., on-the-job training, skills workshops and professional networking). These all provide practical knowledge and foster career progression.

Combined with competency-based career pathways, these strategies create a dynamic learning environment that bridges the gap between academic instruction and industry demands. By adopting these approaches, health supply chain management organisations can build a well-prepared, resilient workforce capable of managing complex supply chain operations effectively, ultimately improving healthcare delivery in LMICs.

Access the Work-based learning toolkit

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ANNEX

EVALUATION AND FEEDBACK

To ensure the continuous improvement and relevance of the WBL initiatives, regular monitoring and evaluation are essential. Evaulating the experiences of employers and youth is key to understanding the experiences of both, evaluating the efficacy of initiatives and ensuring their usefulness.

This section outlines strategies for maintaining high standards in SCM training and professional development through systematic feedback and routine evaluations.

CONTINUOUS MONITORING

Continuous monitoring is key to understanding the effectiveness of SCM initiatives. This involves an ongoing process of collecting feedback, analysing data and making iterative improvements.

FEEDBACK LOOPS

Comprehensive feedback mechanism
Develop an easy-to-use feedback system for participants to share their experiences, challenges and suggestions. This could include surveys, focus groups and interviews.

Proactive use of feedback
Analyse feedback to identify trends and necessary changes. Use these insights to adjust programmes, ensuring they meet participants' needs and industry demands

Open channels of communication
Maintain forums or feedback portals for participants to engage in discussions and share experiences, fostering a sense of community and continuous improvement.

ROUTINE EVALUATIONS

Benchmarked review sessions
Conduct regular evaluations of SCM initiatives against predefined KPIs to quantitatively measure success and identify areas for improvement.

Strategic adjustments
Use evaluation insights to make timely adjustments to programmes, keeping them aligned with the evolving SCM landscape.

External audits
Periodically bring in external experts to evaluate programmes, providing fresh perspectives and innovative solutions.

CELEBRATING ACHIEVEMENTS

Recognising and celebrating the achievements of SCM professionals is essential for motivating and inspiring the next generation. continuous learning. Ongoing recognition fosters a culture of appreciation and continuous learning.

SUSTAINED RECOGNITION

Regular acknowledgment

Regularly recognise individuals who demonstrate excellence in innovation, leadership, impact and adaptability in SCM.

Inspirational impact

Celebrating SCM leaders acts as a powerful motivator, inspiring others and reinforcing a culture of appreciation and lifelong learning.

LIVE ENGAGEMENT SESSIONS

Planning and promotion

Organise regular interactive sessions, such as webinars, live podcasts or Q&A panels, promoting these events well in advance to maximise participation.

Interactive format

Start sessions with a presentation by the SCM champion, followed by an interactive Q&A and discussion segment.

Collaborative learning

Encourage champions to share practical insights, case studies, project breakdowns or hands-on demonstrations.

Feedback and continuity

Collect participant feedback post-session to refine future events and identify topics of interest for future discussions.

STRUCTURED RECOGNITION PROGRAMMES FOR SUPPLY CHAIN ORGANISATIONS

Develop criteria

Establish clear criteria for recognising SCM champions, focusing on key areas such as innovation, leadership, impact and adaptability.

Implement nomination process

Create an inclusive system allowing peers, mentors and industry experts to nominate candidates who have demonstrated notable achievements in SCM.

Multi-platform recognition

- **Profiles:** Highlight champions' achievements, challenges and SCM journeys on official websites or intranets.
- **Interactive media:** Produce engaging content like video interviews, podcasts or webinars featuring SCM champions.
- **Written formats:** Publish articles or blog posts detailing specific SCM projects, approaches and impacts of the champions.

By implementing these comprehensive strategies, organisations can establish a dynamic, efficient and sustainable framework for recognising and empowering SCM professionals. This approach will foster a collaborative and innovative environment in the health supply chain management sector, ensuring continuous improvement and high standards in SCM initiatives.