Pharmacy in Sub-Saharan Africa: A FIP Situational Report

A FIP Multinational Needs Assessment Programme report

EXECUTIVE SUMMARY

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Executive summary

The advancement towards universal health coverage (UHC) across Sub-Saharan Africa is contingent on establishing effective healthcare systems. These systems must provide accessible, high-quality services, address the demand for essential services, and demonstrate health system resilience.[1, 2] However, poor physical access remains a significant constraint, particularly affecting adolescents and the elderly.[2] While communicable disease control services are well-covered, noncommunicable diseases and health promotion services remain challenging.[2] Sub-Saharan Africa is also challenged by maintaining and sustaining health service quality and system resilience.[1, 2]

A well-trained and distributed pharmaceutical workforce is essential in every country. However, the countries in Sub-Saharan Africa face additional challenges due to limited training capacity, poor retention, and professional migration.[3, 4] Workforce shortfall is expected to widen, with a projected deficit of 6.1 million healthcare professionals by 2030, further limiting access for vulnerable populations.[3] Addressing these challenges requires expanding essential health services, improving governance, and aligning healthcare with socio-economic goals. National and regional initiatives should focus on needs-based education and skill development to build a robust pharmaceutical workforce.[3, 4]

The International Pharmaceutical Federation (FIP) supports national efforts to enhance pharmaceutical services access through the FIP Development Goals (DGs), which are aligned with the UN's 2030 Agenda for Sustainable Development. The DGs emphasise the critical role of the pharmacy workforce in achieving UHC and sustainable development.

The African Pharmaceutical Forum, an integral part of FIP, plays a major role in supporting the advancement of African healthcare by enhancing pharmaceutical practice, sciences, education, and the workforce. The FIP regional forum has prioritised Development Goal 18 (Access to medicines, devices, and services), Development Goal 17 (Antimicrobial stewardship) and Development Goal 16 (Communicable diseases) as areas of focus for 2024, setting the stage for targeted health improvements.

Access to medicines, devices, and services in Sub-Saharan Africa is crucial for the population's well-being, the region's economic development, and the advancement of global health goals. Sub-Saharan Africa faces significant challenges, particularly in combating diseases such as malaria, HIV, and tuberculosis. In 2022, the WHO reported that the region accounted for nearly 94% of malaria cases (233 million) and 95% of malaria-related deaths (580,000), with children under five representing around 80% of fatalities.[5] Addressing and prioritising these areas in the region supports fortifying public health resilience and contributing to advancing broader global health goals.

Significant disparities in healthcare access and pharmaceutical availability are notable in the south compared to the northern parts of Africa, namely sub-standard medicines, poorer access to medicines, supply chain issues, and medicines costs. Addressing these challenges requires targeted interventions and strategic approaches, for example, implementing UHC, promoting solidarity in health system financing, fostering countries' economies in health facilities, ensuring equitable access to vaccines, and enhancing health literacy among the population. Policy recommendations and advocacy strategies require collaborative efforts from governments, international organisations, professional associations, academia, and civil society to drive meaningful change and advance health equity in Sub-Saharan Africa.

Data from the FIP Global Workforce Surveillance Project, covering 20 Sub-Saharan African countries, reveals variability in pharmacist density, ranging from 0.21 to 4.45 per 10,000 population. The analysis shows an increasing trend in pharmacist density in most countries over time, with higher income levels correlating with greater densities and widening the gap between low and higher-income countries over time. The number of pharmacy schools and graduates as a supply pipeline for the workforce impacts production, with higher numbers of pharmacy schools per capita producing more graduates. Community pharmacy is the predominant employment sector for pharmacists across the region. Additionally, on average, women represent 48% of the total pharmacy workforce across 11 sampled African

countries, yet the analysis indicates variations between countries in gender representation in the pharmacy workforce. There is an increasing trend in female workforce proportion in the region, as observed between 2009 and 2022.

Continuing Professional Development (CPD) strategies for pharmacists' licensing are widely implemented across 16 sampled countries. Of these, 11 countries have defined the scope of practice for pharmacists. Seven of these countries also have a competency framework, and six have a national professional recognition or credentialing system in place for pharmacists. However, there is a notable gap in advanced competency frameworks and membership bodies supporting specialisation in pharmacy, which underscores the need for further professional development in advanced training for pharmacists in the region.

In addition, in line with FIP Development Goal 10 (Equity and Equality) FIP is making efforts to increase women's visibility in the pharmacy workforce through improving global health. Both equity in the female workforce and equity in access to health services are major development areas for Sub-Saharan Africa that FIP identified through the multinational needs assessment programme. As listed in the recommendations, FIP will seek to support the Women in Global Health (WGH) initiative named "Landscape Analysis Gender Integration in the Ethiopian Supply Chain System", to highlight women whose voices are underrepresented, particularly those from low-income countries, especially in Ethiopia. FIP will support this and share lessons learned with other nations across the region and world.

This report provides an overview of pharmacy practices in the Sub-Saharan Africa and addresses the critical healthcare areas aligned with the World Health Organization's global health priorities. This report includes a compilation of 12 case studies by FIP member organisations. The collected insights from the African pharmacy professional leadership bodies provide an update on the current landscape regarding workforce development and shortages, the role of pharmacy in managing and preventing both communicable and non-communicable diseases, pharmacists' contributions to humanitarian efforts, and the implementation of sustainable pharmacy practices.

Summary of case study findings:

Pharmacy workforce development and shortages
1. **Cameroon:** Remuneration, job satisfaction, and burnout are key challenges. Strategies include expanding pharmacy schools and roles in chronic disease management and vaccination.
2. **DR Congo:** Limited training opportunities and regulatory barriers affect workforce growth. Initiatives include increased funding for training and integration into chronic disease management.
3. **Ghana:** Significant shortages exacerbated by migration and low recruitment rates in government facilities. Efforts include the establishment of the Ghana College of Pharmacists and transition to a PharmD curriculum.
4. **Liberia:** Constrained by low pay, limited job opportunities, and restrictive policies. Government-sponsored free pharmacy education aims to increase enrolment.
5. **Malawi:** Lack of a clear pharmacy structure with the Ministry of Health. Strategies include the introduction of the pharmacy assistant programme.
6. **Nigeria:** Educational capacity issues, remuneration and job satisfaction problems. Efforts focus on opening more pharmacy faculties and advocating for better remuneration.
7. **Rwanda:** Limited training institutions and migration are significant issues. The "4x4 Reform" aims to quadruple healthcare workers, including pharmacists, by 2027.
8. **South Africa:** The skewed distribution of pharmacists and limited absorption capacity of new graduates are challenges. Strategies include the 2030 Human Resources for Health Strategy.
9. **Sierra Leone:** A single university produces pharmacy graduates. Plans for more institutions and accreditation are underway.
10. **Tanzania:** Challenges include non-recognition of specialisations and non-adherence to staffing levels. Clinical pharmacy training and HR advocacy are ongoing.
11. **Uganda:** Significant shortages with registered pharmacists. Educational capacity is limited with only three universities training pharmacists. Government initiatives include opening more pharmacy schools.

12. **Zimbabwe:** Competitive salaries and limited specialised training contribute to workforce shortages. Increasing the number of pharmacy schools and sourcing funding for public health roles are strategies being implemented.

Pharmacy's role in managing and preventing communicable diseases

1. **Cameroon:** Involvement in vaccination and rapid diagnostic tests for diseases like malaria and HIV.
2. **DR Congo:** Significant gaps exist, but efforts are ongoing to integrate pharmacists into communicable disease management, vaccination and surveillance.
3. **Ghana:** Pharmacists play crucial roles in vaccination and public health education. Advocacy has led to community pharmacies being recognised as vaccination centres.
4. **Liberia:** Pharmacists contribute through public health campaigns and community education.
5. **Malawi:** Pharmacists participate in public health awareness and vaccination programmes.
6. **Nigeria:** Pharmacists are trained in vaccination and involved in public health education.
7. **Rwanda:** Pharmacists ensure the availability of antimicrobial medicines and are involved in antimicrobial stewardship.
8. **South Africa:** Pharmacists are key players in vaccination programmes and pharmacovigilance.
9. **Sierra Leone:** Pharmacists participate in disease prevention programmes within the Ministry of Health.
10. **Tanzania:** Pharmacists are involved in patient education and public health awareness campaigns.
11. **Uganda:** Community pharmacists detect outbreaks and engage in public health campaigns.
12. **Zimbabwe:** Pharmacists are involved in pharmacovigilance and disease surveillance.

Pharmacy's role in managing and preventing non-communicable diseases

1. **Cameroon:** Pharmacists conduct health education and medication management for NCDs.
2. **DR Congo:** There is a need for clearer strategies and better integration of pharmacists in NCD management.
3. **Ghana:** Pharmacists conduct screenings for hypertension, diabetes and obesity, and provide medication therapy management services.
4. **Liberia:** Pharmacists offer health education and support disease prevention initiatives.
5. **Malawi:** Pharmacists are key in health promotion and management of NCDs.
6. **Nigeria:** Pharmacists are involved in medication management programmes and public health education.
7. **Rwanda:** Pharmacists engage in health promotion and medication management for NCDs.
8. **South Africa:** Pharmacists offer point-of-care testing and supplementary training for NCD management.
9. **Sierra Leone:** Pharmacists align their roles with Ministry of Health policies.
10. **Tanzania:** Public awareness campaigns and webinars are strategies in place.
11. **Uganda:** Pharmacists provide counselling and health education for chronic diseases.
12. **Zimbabwe:** Medication management programmes and access to primary health care are key strategies.

Pharmacy's role in humanitarian efforts

1. **Cameroon:** Pharmacists provide essential medicines during emergencies and contribute to health education campaigns.
2. **DR Congo:** Pharmacists face significant logistical challenges but contribute effectively during crises.
3. **Ghana:** Integration into emergency response plans and support for vaccination campaigns.
4. **Liberia:** Pharmacists play a key role in providing healthcare services during humanitarian crises.
5. **Malawi:** Distribution of relief items and support during natural disasters.
6. **Nigeria:** Pharmacists provide medications and supplies during emergencies.
7. **Rwanda:** Pharmacists are involved in emergency response plans and healthcare education.
8. **South Africa:** Pharmacists played a critical role during the 2021 riots by rebuilding community pharmacies.
9. **Sierra Leone:** Pharmacists participate in emergency response and vaccination support.
10. **Tanzania:** Contributions include providing medicines and conducting media campaigns.
11. **Uganda:** Challenges include supply chain disruptions and counterfeit medicines, but pharmacists contribute significantly to crisis response.
12. **Zimbabwe:** Essential medicines provision and integration into emergency plans are key contributions.

Environmental sustainability in pharmacy practice

1. **Cameroon:** Efforts focus on the responsible disposal of pharmaceutical waste.
2. **DR Congo:** Current measures involve the destruction of expired medicines.
3. **Ghana:** Policies include pharmaceutical waste disposal regulations and sustainable supply chain practices.
4. **Liberia:** Environmental sustainability efforts are currently limited. Led by the Liberia Medicines and Health Products Regulatory Authority (LMHRA).

5. **Malawi:** Policies for safe disposal of pharmaceutical waste.
6. **Nigeria:** Pharmaceutical waste disposal regulations and sustainable supply chain requirements.
7. **Rwanda:** Medical Waste Management Plan and legislation for pharmaceutical waste disposal.
8. **South Africa:** National SOPs guide waste disposal and infection control practices.
9. **Sierra Leone:** Few specific policies exist, but the Pharmacy Board leads efforts.
10. **Tanzania:** Tanzania Medicines and Medical Devices Authority (TMDA) regulations on handling unfit medicines and related waste.
11. **Uganda:** Pharmaceutical waste disposal regulations are in place, but challenges include high disposal costs.
12. **Zimbabwe:** Policies include pharmaceutical waste disposal regulations, but challenges persist in education and resistance to change.

These findings highlight the critical role of pharmacists in addressing healthcare challenges and underscore the need for continued support and development of the pharmacy workforce to improve healthcare delivery in the region.

Foreword

Progress towards universal health coverage relies on effective healthcare systems that can deliver essential services.[1] In many African countries, poor physical access to these services remains a significant barrier, hampering overall system functionality. The range of services available varies by age group, with adolescents and the elderly receiving the least attention.[2] Coverage is lowest for noncommunicable diseases and health promotion, while it is highest for communicable disease control.[1, 2] Pharmacists are vital yet in short supply, with 85% concentrated in major cities.[4] A well-educated, trained, and equitably distributed pharmaceutical workforce is crucial for healthcare development. Addressing this imbalance requires needs-based education and skills development to build a flexible and productive pharmaceutical workforce.[3, 4]
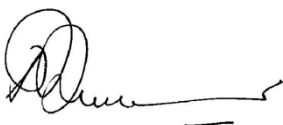
The African continent also faces the challenge of having the highest disease burden (25% of the world's diseases) and the lowest density of healthcare workers (3% or less of the global health workforce), including pharmacists.[3, 4] By 2030, the worldwide shortage of health workers is predicted to reach potentially 10 million.[6] This data supports revisiting health workforce shortage projections, which were previously estimated to be 18 million in 2016 and 15 million in 2022, with the African continent facing the most severe shortage of healthcare professionals. This shortage and frequent health emergencies highlight the urgent need for healthcare professionals, leaving one-third of the population with limited access to essential services.[3, 4]

Significant disparities in healthcare access and pharmaceutical availability exist within the region. Addressing these disparities requires targeted interventions and strategic approaches, including the implementation of UHC, promoting solidarity in health system financing, fostering economic growth within health facilities, ensuring equitable access to vaccines, and enhancing health literacy among our populations. Collaborative efforts from governments, international organisations, professional associations, academia, and civil society are essential to drive meaningful change and advance health equity in the region.

The International Pharmaceutical Federation (FIP) plays a crucial role in this endeavour, supporting efforts through our Development Goals aligned with the UN's 2030 Agenda for Sustainable Development. The African Pharmaceutical Forum, as part of FIP, is instrumental in enhancing pharmaceutical practice, sciences, education, and workforce development across the region. For 2024, the forum has prioritised Development Goal 18 (Access to medicines, devices, and services), Development Goal 17 (Antimicrobial stewardship), and Development Goal 16 (Communicable diseases), setting the stage for significant health improvements.

This report provides a detailed overview of pharmacy practices in Sub-Saharan Africa, aligned with the World Health Organization's global health priorities. It includes 12 case studies from FIP member organisations, offering valuable insights into workforce development, disease management, humanitarian contributions, and sustainable pharmacy practices.

Together, let us commit to strengthening our healthcare systems, developing our pharmaceutical workforce, and achieving universal health coverage for all.

Paul Sinclair
President
International Pharmaceutical Federation (FIP)

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5 Summary and conclusions

This report highlights the crucial role that pharmacists play in improving healthcare outcomes across the Sub-Saharan region. Despite the significant challenges, including workforce shortages, limited training opportunities, and systemic barriers, pharmacists continue to be at the forefront of healthcare delivery. They are integral to managing and preventing both communicable and non-communicable diseases, contributing to humanitarian efforts, and implementing sustainable practices in pharmacy.

The case studies from twelve countries provide valuable insights into the current state of pharmacy practice in the region. They underscore the need for strategic investments in pharmacy education, the development of policies that recognise and support the expanding roles of pharmacists, and the implementation of sustainable practices that ensure the health and well-being of communities.

The collective efforts of FIP Member Organisations and the support of the FIP African Regional Forum are essential in addressing these challenges. By strengthening collaboration, advocating for policy changes, and supporting professional development, we can strengthen the pharmacy workforce and enhance healthcare delivery in Sub-Saharan Africa.

Considering all these findings, it is imperative to continue building on these efforts, leveraging the insights gained from this report to drive positive change. With the right support and resources, pharmacists can significantly contribute to achieving global health priorities and improving health outcomes for all.

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Ethiopia
Ethiopian Pharmaceutical Association

Ghana
Pharmaceutical Society of Ghana

Kenya
Pharmaceutical Society of Kenya

Lesotho
Pharmacy Association of Lesotho

Liberia
Pharmaceutical Association of Liberia

Madagascar
Ordre National des Pharmaciens de Madagascar

Malawi
Pharmaceutical Society of Malawi

Mali
National Council of the Order of Pharmacists of Mali

Mauritius
Pharmaceutical Association of Mauritius

Namibia
Pharmaceutical Society of Namibia

Nigeria
Pharmaceutical Society of Nigeria

Rwanda
Rwanda National Pharmacy Council

Senegal
Ordre des Pharmaciens du Sénégal

South Africa
Pharmaceutical Society of South Africa

Sierra Leone
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