



GLOBAL SITUATION REPORT ON PHARMACY 2025

WORKFORCE, PRACTICE, POLICY

*Evidence, investment and solutions
to strengthen health systems*





CHAPTER 1

Achieving UHC through strong PHC: The role of pharmacy

This chapter outlines how pharmacy supports global goals to achieve universal health coverage by strengthening primary health care systems. It positions pharmacists as integral providers of essential services, aligned with the Astana Declaration and Lusaka Agenda, and calls for regulatory reform to ensure full integration.



High level summary



1. Pharmacists are increasingly recognised as essential contributors to Universal Health Coverage (UHC), expanding access to essential medicines and primary care services in the community.¹ Using pharmacies—often the first point of care—helps **bring health services closer to where people live**, supporting the UHC goal of “**health for all**”.
2. Fully integrating pharmacists into primary health care (PHC) improves preventive care, chronic disease management, and medication optimisation. Evidence from across the globe shows that pharmacist-delivered interventions (such as vaccinations and hypertension management) lead to better health outcomes and reduce strain on doctors and hospitals.
3. Despite their value, pharmacists remain under-recognised and under-used in many countries’ health policies and laws. A 2024 commentary highlights that pharmacists are “**essential yet often overlooked**” health professionals.²
4. Outdated, doctor-centric views and restrictive legislation have limited pharmacists mainly to dispensing roles in some settings.³ This misclassification deprives health systems of a readily available workforce and leads to avoidable costs from suboptimal medicine use and late interventions.
5. FIP has made PHC a strategic priority, aligning its programmes with the WHO agenda and Astana Declaration on PHC. **Through the 21 FIP Development Goals and new tools** (such as PHC self-assessment indicators), FIP is empowering pharmacy worldwide to advance PHC and UHC, documenting progress and guiding best practices.

Key message



Achieving **UHC by 2030** will require harnessing the full potential of pharmacists in primary health care. With enabling policies and investment, **pharmacy can deliver far more in health promotion, disease prevention, and treatment optimisation**—ultimately improving access, quality, and equity in health for all.






CHAPTER 2

Global pharmacy workforce: Trends, challenges and opportunities

This multi-part chapter presents a global analysis of the pharmacy workforce, addressing trends, migration, competencies, new roles, gender equity, and optimal working environments. It aligns with the WHO Workforce 2030 Strategy and FIP Development Goals, highlighting the importance of structured education, ethical recruitment, professional recognition, and sustainable practice conditions.





2A. The 2025 global pharmacy workforce review: Capacity, competence and coverage



High level summary



1. Data-driven leadership:

Since 2006, the FIP workforce surveillance programme has curated a longitudinal, pharmacy-specific data set for global health workforce planning. The latest 2022 data cycle captured information on 5.5 million pharmacists and 0.68 million pharmacy technicians and assistants across 83 countries (covering approximately 71 % of the global civil population). A current 2024-25 survey is now specifically mapping pharmacy technician roles, skills and distribution—giving health service planners a reliable evidence base needed for human resources for health (HRH) 2030 targets.

Why it matters: Reliable, disaggregated data are an essential first step towards meeting WHO Workforce 2030 targets and SDG 3.c indicators. Capacity data is now more essential than ever as countries develop more advanced pharmaceutical health delivery scopes of practice.

2. Capacity and equity gap:

If current trends continue, an estimated shortfall of 11 million health workers is expected by 2030.¹ The global pharmacist density disparity remains significant, with high-income countries averaging 12.1 pharmacists per 10,000 people compared to 3.8 in low-income countries (a three-fold disparity).

3. Pharmaceutical technicians and assistants are an under-used workforce asset:

Our current global data suggest there are, on average, 0.63 technicians for every pharmacist, with the ratio ranging from virtually none in some low-income countries to more than 3.5 in some high-income systems. In places where technicians are fully regulated (for example, in the UK and Canada), pharmacists gain up to one-third more time for direct clinical care. There is a clear opportunity to formalise technician cadres, broaden their legal scope and introduce tiered training so they can contribute more effectively to the pharmacy team skill mix.^{2,3}

4. Demographic shift:

Women currently constitute 65% of the global pharmacist workforce (projected to reach 69-72% by 2030).ⁱ Age profiles diverge: the workforce is ageing in many high-income settings but remains predominantly under 35 in several low-income regions. The pharmacy workforce is distributed primarily across the following sectors: community settings (77%), hospitals (10%), and the pharmaceutical industry (4%).

5. Education bottleneck:

Pharmacy training capacity is the supply-side challenge: 71% of countries have fewer than 0.8 pharmacy schools per million people, and annual graduate output ranges from <10 to >100 new pharmacists per million. Regions with the greatest need (e.g., Africa) have the fewest schools and graduates, while Europe and Eastern Mediterranean regions have a significant expansion of graduates, widening the gap despite a projected 40% average global growth in pharmacist density (*per capita*) by 2030 (since 2016).⁴

6. Workforce evolution:

More than 50 jurisdictions now authorise pharmacist-led vaccination.⁵ Increasingly, countries are deploying pharmacists for long-term disease management through medicines review and optimisation,⁶ antimicrobial use stewardship⁷ and primary healthcare teams⁸; all are evidence-led trends accelerated by the COVID-19 response.⁹ Yet, outdated legislation and weak service remuneration still confine many pharmacists

ⁱ 95%CI, $p < 0.001$ mixed model regression analysis; FIP surveillance data.



to dispensing roles and leave technicians under-used, stalling the profession's full contribution to delivering on improving population health.¹⁰

The table below provides a consolidated snapshot of key indicators from the FIP 2022 global pharmacy workforce survey.ⁱⁱ

INDICATOR (2023)	*TOTAL COUNT	GLOBAL AVERAGE / PROPORTION
Pharmacists	5,572,326	9.6 per 10,000 population
Pharmacy technicians	678,292	5.2 per 10,000 population
Technician:pharmacist ratio	–	0.63
Women (pharmacists)	–	65%
Under-35 share	–	44%
Community setting	–	77%
Hospital setting	–	10%
Pharmaceutical industry	–	4%

* 83 countries for pharmacists; 35 countries for technicians.

7. FIP solutions and call to action:

The revised [Nanjing Statements](#),¹¹ the [global competency framework](#)¹² and six [FIP-UNESCO Centres for Excellence](#)¹³ provide established templates for curriculum reform, faculty development and competency-based regulation.

Key message

A sufficient, equitably distributed, well-trained **pharmacy workforce is indispensable for universal health coverage, yet global capacity remains highly uneven**, making targeted investment in education, regulation and retention a top priority for FIP and its partners.

ⁱⁱ Data capture is credited as 2022 data; the surveillance and analysis were conducted during 2023-24.





2B. Global pharmacy workforce migration: Trends, drivers and implications



High level summary



1. Workforce migration is a critical issue affecting both low- and middle-income countries (LMICs) and high-income countries (HICs). It exacerbates workforce imbalances by depleting pharmacy professionals in LMICs, weakening healthcare systems, while increasing HICs dependence on foreign-trained pharmacists, creating long-term sustainability challenges.¹
2. The decision of whether and where pharmacists migrate is driven by push and pull factors, which are shaped by the economic, political and social conditions in each country.²⁻⁶ These factors include:
 - Push factors: Few opportunities for career advancement, low salaries, inadequate working conditions, systemic challenges in source countries, lack of resources and infrastructures, economic crises, fewer opportunities for higher education, insecurity, and lack of technology.
 - Pull factors: Better career opportunities, higher income, improved working conditions, higher standard of living, travel opportunities, better health system, better opportunities for education and specialisation, better security provision, better technology in healthcare, and economic support to the family in the source country.
3. Workforce migration is also influenced by demographic characteristics such as age and gender. Political changes and external crises—including conflicts, natural disasters, and healthcare policy reforms—further shape migration patterns.^{3, 7-9}
4. Pharmacist migration has several impacts on healthcare systems:
 - Access and service gaps: Migration reduces access to care in LMICs, especially in rural areas, and disrupts service delivery in both source and destination countries.^{10, 11}
 - Sustainability risks: LMICs face ‘brain drain’ⁱ and loss of public investment, while HICs grow increasingly dependent on foreign-trained pharmacists.¹²⁻¹⁴
5. Country case studies are presented, illustrating migration trends within the pharmacy workforce across example countries:
 - In **Nigeria**, the number of migrating pharmacists rose from 124 in 2013 to 702 in 2024, with Canada consistently being the most preferred destination (data from the Pharmacy Council of Nigeria).
 - In **Zimbabwe**, migration increased from 35 in 2022 to 66 in 2023, before slightly declining to 59 in 2024, with Canada remaining the top destination (data from the Pharmaceutical Society of Zimbabwe).
 - **Romania** experienced a decline in pharmacist migration, with numbers falling from 198 pharmacists in 2015 to just 113 in 2021 (data from the Association of Pharmacies and Pharmacists from Romania).
 - In **Saudi Arabia**, non-Saudi pharmacists make up a majority of the pharmacy workforce, accounting for 58% (21,350) of the total 36,810 registered pharmacists (data from the Saudi Pharmaceutical Society).
 - In **Germany**, between 2012 and 2023, a total of 723,000 applications for recognition and certificate evaluation were submitted, with 6,132 coming from foreign-trained pharmacists (data from Federal Union of German Associations of Pharmacists).
 - In the **Philippines**, from 1997 to 2007, a total of 1,821 Filipino pharmacists and pharmacy assistants worked overseas. Saudi Arabia was the top destination for

ⁱ This report will avoid the use of this term. By ‘brain drain’ we mean loss of human capital and talent from one area to another.



both groups. Among pharmacists, 51% were employed in Saudi Arabia, followed by Papua New Guinea as the second most common destination at 12.6%.¹⁵

6. Efforts to support the integration of migrant pharmacists have been implemented in HICs. For example:
 - In **Sweden**, a multi-stakeholder initiative led by Sveriges Farmaceuter (The Swedish Pharmacists Association) in collaboration with Sveriges Apoteksförening (The Swedish Pharmacy Association), Lif, Almega, and Svensk Handel called Project Senna was implemented from 2017 to December 2024 to support foreign-trained pharmacists' integration into the Swedish labour market. Approximately 700 foreign-trained pharmacists have received help through the project, and around 800 pharmacists received Swedish licenses between 2017 and 2025 (data from the Swedish Pharmacists Association).
 - In **Germany**, the project "IQ Apotheker: Innen für die Zukunft" was initiated in January 2017 to support migrant pharmacists by providing subject-specific language courses to overcome language difficulties while preparing to obtain state recognition. So far, the project has supported over 50 pharmacists to receive their recognition and work in Rhineland Palatinate (data from Federal Union of German Associations of Pharmacists).
7. Ethical recruitment practices are fundamental to sustaining a pharmacy workforce that meets regulatory standards and addresses the evolving needs of the healthcare system.
 - In **Australia**, pharmacists are recruited through temporary visas or skilled migration pathways. The Pharmacy Board of Australia, under the Australian Health Practitioner Regulation Agency (AHPRA), oversees registration. Key steps include providing a certificate of good standing, completing an English language test (if required), passing the Overseas Pharmacist Readiness Assessment (OPRA), and obtaining approval from the Australian Pharmacy Council before final registration with AHPRA.
 - In **Ireland**, pharmacists enter via the EU/EEA route or the Third Country Qualification Route (TCQR). The Pharmaceutical Society of Ireland (PSI) manages the process. EU/EEA applicants undergo qualification recognition and register via the PSI portal or the European Professional Card. TCQR applicants complete adaptation or equivalence exams, pass the Professional Registration Examination (PRE) and then register with PSI.

Key message



Workforce migration contributes to achieving universal health coverage (UHC) by alleviating critical workforce shortages in destination countries, yet it risks destabilising health systems in source countries. To manage migration flows, coordinated action among stakeholders is essential. Strengthening data-driven efforts to monitor the workforce and identifying tailored strategies for each country will help ensure a sustainable pharmacy workforce.





2C. Building a capable pharmacy workforce – From competency to advanced and specialised practice



High level summary



1. Pharmacists are increasingly taking on advanced and specialised roles in response to global health challenges such as ageing populations, rising chronic diseases, healthcare workforce shortages, and digital transformation.¹⁻⁵
2. Developing and recognising pharmacy competencies in relation to advanced practice and specialisation is critical to building a responsive, skilled, and future-ready pharmaceutical workforce.⁶⁻¹⁰
3. Clarity of terminology is essential. Concepts like "competency," "capability," "advanced practice," and "specialisation" are often used interchangeably, yet they represent distinct professional trajectories that require differentiated recognition and development strategies. Global concordance on lexicon is essential, particularly as scope of practice and professional roles are rapidly extending.
4. Specialisation ideally refers to a deepening of knowledge within a defined field or scope of practice (e.g., oncology pharmacy, radio-pharmacy, mental health pharmacy, etc.),^{11,12} while advanced practice reflects vertical progression in complex competencies, such as professional responsibility, autonomy, and leadership, often across sectors.¹²⁻¹⁵
5. FIP provides access to global frameworks to support countries in structuring workforce development:¹⁶
 - a. Global Competency Framework (GbCF) for early-career readiness and foundational skills.
 - b. Global Advanced Development Framework (GADF) to guide progression from foundational to expert.
 - c. Global Competency Framework for Educators (GCFE) to strengthen teaching and training capability (particularly for non-academic sector practitioners).
6. Digital health transformation demands new competencies. FIP has launched [courses](#) and has developed a global digital health competency framework to support pharmacists in leading and integrating digital care (due for launch early 2026).
7. Pharmacist independent prescribing is expanding worldwide, supported by evidence showing improved medicines access, improved medicines optimisation, and health system efficiency.¹⁷ Some countries are at advanced stages of regulatory development, some have implemented, others have not. This will clearly have an impact on what we currently consider 'advanced practice' and how these varied models (independent, collaborative, protocol-based) map to foundational or advanced practice. Regulatory clarity, structured training, and public trust will all need to be addressed in this complex future picture.
8. Pharmacy specialisation continues to develop traction but lacks standardisation.¹ Definitions, credentialing pathways, and monitoring systems vary across countries, limiting mobility, recognition, and data comparability. FIP is currently building a global glossary (as a first stage) that will assist in this challenge.
9. Robust workforce intelligence is needed. Many countries lack data systems that track pharmacy specialisation and credentialing, hindering strategic workforce planning.¹⁸⁻²⁰ FIP advocates aligning with WHO's NHWA to fill these gaps.^{21,22}
10. FIP leadership in global competency advancement will support members and countries to adopt and adapt tools that build capacity, ensure career progression, and align pharmacy education and practice with health system needs.



Key message

Empowering pharmacists through competency development, specialization, and advanced practice is key to strengthening health systems and achieving universal health coverage. FIP supports this transformation by providing global frameworks and enabling national implementation.





2D. Pharmacy workforce deployment and new practice environments



High level summary



1. In traditional settings (primary care, community pharmacy, and hospitals), pharmacists have proven to reduce GP workload, lower emergency visits, manage chronic diseases, provide public health services, and improve medication adherence.¹⁻³
2. The evolving healthcare landscape requires a pharmacy workforce in new practice environments beyond traditional community and hospital settings, such as correctional facilities, hospice care (palliative care), mental health services, sports pharmacy, and digital health. Their responsibilities include:
 - In correctional facilities, pharmacists contribute to comprehensive medication therapy management for psychiatric and chronic illnesses, diabetes management, and HIV care. They manage methadone programmes and provide continuity of care for inmates transitioning back to the community.^{4,5}
 - In hospice care, pharmacists perform crucial tasks such as medication reviews, clinical consultations, and regulatory compliance oversight, ensuring safe and effective care for terminally ill patients.⁶
 - In mental health services, pharmacists manage medications, detect early issues of mental health, reduce stigma, and contribute to suicide prevention.⁷⁻⁹
 - In sports pharmacy, pharmacists support athletes with medication management, doping prevention, supplement advice, and injury prevention.^{10,11}
 - Digital health and AI are revolutionising pharmacy practice by enhancing healthcare delivery using telepharmacy, mobile health applications and other digital tools. It helps automate prescription validation and drug interaction analysis, allowing pharmacists to focus more on patient-centred care and expanding healthcare access.^{12,13}
3. Pharmacy technicians are expanding beyond traditional roles, finding new opportunities in non-conventional settings such as medication access programmes, insurance administration, automation and technology management, pharmaceutical manufacturing, telepharmacy, and specialised fields such as compounding, informatics, and veterinary pharmacy.¹⁴⁻¹⁸
4. The pharmacy workforce faces multiple challenges in adapting to new practice settings, including keeping pace with complex therapies, meeting the needs of diverse populations, gaining professional recognition, and overcoming barriers such as time constraints, ethical concerns, insufficient collaboration with other healthcare professionals.¹⁹⁻²²
5. Optimising the future pharmacy workforce depends on embracing technological advances, fostering collaborative innovation through new thinking models, and promoting environmental sustainability in pharmacy education and practice.^{23, 23-25}

Key message



As healthcare continues to evolve, the pharmacy workforce plays an increasingly vital role across both traditional and emerging practice settings. Expanding into areas such as correctional facilities, hospice care, mental health services, sports pharmacy, and digital health, pharmacists contribute to improving access to care, strengthening medication management, and advancing public health. This transformation aligns with FIP's vision to equip the pharmacy workforce with the competencies, leadership, and innovative practices needed to meet global health challenges.





2E. Advancing gender equity and women's leadership in pharmacy



High level summary



1. Women make up 67% of the global health and social care workforce but only 25% of senior roles.¹ This leadership gap is a critical inefficiency—we are not fully leveraging the talent of half the workforce. In pharmacy, women currently constitute 65% of the workforce globally (up from 59.5% in 2016 and projected to be 69% by 2030) yet continue to face barriers to leadership.
2. FIP has a focus on gender equity activities that support the WHO's call to reduce the gender leadership gap in health and contribute to [SDG 5 \(Gender Equality\)](#) and [SDG 3 \(Health & Well-being\)](#).
3. As the global pharmacy leadership organisation, FIP has made gender equity a strategic priority. Through combined activities mediated through the FIP [Development Goal 10: Equity & Equality](#), activities such as the [EquityRx programme](#), [FIP Women in Science and Education \(FIPWiSE\)](#), global surveys, and policy guidance, FIP is actively supporting our members to identify gaps and implement solutions.
4. Within pharmacy, addressing gender disparities ensures equal opportunities for career advancement, leadership, and professional development.
5. Challenges that hinder women's leadership development in pharmacy include gender biases, cultural norms, unequal access to mentorship, systemic barriers, lack of leadership exposure, and work-life balance difficulties. In a 2024 FIPWiSE survey, 45% of women reported exposure to psychosocial risks or violence at work; rigid schedules and unequal parental-leave policies further derail careers.
6. Key enablers for professional gender equity include access to mentorship programmes, financial support, professional development opportunities, gender-responsive policies, and stronger community networks.

Key message



A pharmacy workforce that reflects the talent and leadership potential of women is indispensable to Universal Health Coverage (UHC), patient safety and resilient health systems. Today, women are the numerical majority in pharmacy but a minority in leadership roles; closing that leadership gap is both an equity imperative and a strategic investment in care quality.





2F. Optimal working environments



High level summary



1. Optimal working environments for pharmacists are essential for ensuring high-quality patient care, job satisfaction, and overall well-being.
2. A supportive workplace should provide adequate staffing, manageable workloads, and sufficient breaks to prevent burnout.
3. Clear communication channels, collaborative teamwork, and access to continuous professional development help pharmacists stay informed and engaged. Additionally, fostering a culture of respect and safety, including measures to prevent workplace violence, enhances job security and motivation.
4. Ultimately, an optimal work environment empowers pharmacists to perform their roles effectively while maintaining their professional and personal well-being.
5. FIP and the World Health Professions Alliance (WHPA) advocate for positive practice environments (PPEs), a concept that FIP has advanced through toolkits, workforce intelligence, and gender-responsive strategies such as the FIPWiSE PPE Toolkit.
6. Strategic, data-driven workforce planning is essential: Countries must assess population trends, disease burdens, and policy priorities to ensure the supply of pharmacy professionals aligns with national health needs—examples from Namibia and Ireland show practical impact using FIP tools.
7. Emotional intelligence is foundational to workforce resilience: FIP's Emotional Intelligence Toolkit provides early-career pharmacists with practical strategies to strengthen communication, manage stress, and foster workplace well-being.
8. Workplace equity must be gender-responsive: The FIPWiSE Positive Practice Environment Toolkit for Women in Science and Education supports the creation of inclusive, supportive work environments—crucial in a profession where women make up most of the workforce but remain underrepresented in leadership.

Key message



Creating fair, safe, and supportive working environments is a prerequisite for workforce sustainability, quality care, and gender equity in pharmacy. FIP is leading global efforts to enable positive practice environments through data-driven tools, policy advocacy, and inclusive leadership development.





CHAPTER 3

Advancing public health and disease prevention through pharmacy

This chapter highlights the essential role of pharmacists in advancing public health and disease prevention, focusing on two primary areas: vaccination and the management of non-communicable diseases (NCDs). It demonstrates how pharmacy-led services contribute to stronger, more equitable health systems through early intervention, risk mitigation, and improved access.



High level summary



1. Empowering pharmacists in disease prevention helps people stay healthy and productive, drives economic growth, eases health system burdens, and supports the World Health Organization's (WHO) goal of leaving no one behind, contributing to [SDG 3 \(Health & Well-being\)](#).¹
2. Pharmacy-based vaccination (PBV) is now available in 56 countries and territories—an increase of nearly 65% since 2020, when only 34 had authorised PBV. However, barriers to implementation still exist globally.²
3. Regulatory and policy constraints, such as the absence of clear legal frameworks and limitations on the practice of pharmacists, perceived lack of government support, resistance from physicians and nurses, limited access to vaccination information systems, funding mechanisms, and underrepresentation in vaccination technical committees, deter PBV progress.^{2,4}
4. The surge from 12 to 64—a 433% increase—in the number of countries integrating vaccination training into pharmacy education since 2016, reflects the growing global recognition of the critical role of pharmacists in immunisation and the need to equip them with essential competencies.²
5. Less restrictive legal reforms, interprofessional support and collaboration, and sustainable remuneration models are key drivers for PBV implementation and expansion.^{2,3,5}
6. Within pharmacy, improving public awareness of pharmacists' roles in vaccination and addressing the perceptions that may deter patients from using pharmacy-based vaccination services is crucial for maximising the expertise and accessibility of pharmacists to increase vaccine coverage rates.⁶
7. Noncommunicable diseases (NCDs) are the leading cause of morbidity and mortality worldwide, responsible for at least 43 million deaths in 2021, with 18 million of these occurring before the age of 70. Of these premature deaths, 82% occurred in low- and middle-income countries (LMICs).⁷ This poses a significant challenge to public health and the sustainability of healthcare systems. Recognising this, FIP has prioritised not only the management of NCDs, but also their prevention and the reduction of associated risk factors as a core part of its mission to advance pharmaceutical practice, science and education in support of global health.
8. The prevention and management of NCDs require interventions that are effective, cost-effective, affordable and feasible. These should be incorporated into national policies and supported by appropriate indicators for both NCDs and their risk factors. Such interventions must promote health equity and be designed to target both populations and individuals in order to improve health outcomes.⁸
9. FIP's 2019 reference paper, "[Beating non-communicable diseases in the community: The contribution of pharmacists](#)", highlighted the significant impact of pharmacy services in the prevention, screening, management and therapeutic optimisation of NCDs.⁹
10. Between 2012 and 2025, FIP has produced over 175 publications and resources supporting disease prevention efforts.^{10,11} Through the [disease prevention programme](#) and [FIP Development Goal 16: Communicable disease](#), FIP continues to provide templates for professional competency development and advocate leveraging pharmacists to achieve the WHO's Immunization Agenda 2030.
11. In parallel, through its [non-communicable diseases programme](#) and [FIP Development Goal 15: People-centred care](#), FIP supports actions aligned with the WHO Global Action Plan for the prevention and control of NCDs 2023–2030 and its implementation roadmap. This commitment is reinforced by FIP's endorsement of the Declaration of Astana in 2018, ensuring pharmacy contributes to universal health coverage by 2030, in line with SDG target 3.4 to reduce premature mortality from NCDs.^{12,13}



Key message



Disease prevention remains a priority for FIP, as expanding pharmacists' roles in vaccination, screening, and the prevention of NCDs and their risk factors will improve health outcomes and strengthen healthcare systems. Success depends on high-level stakeholder engagement, advocacy, education, and collaboration to address vaccine hesitancy and maximise impact.

Related FIP Development Goals

Pharmacy-based vaccination and vaccine-related services are linked to 14 of the 21 FIP Development Goals, with a central role in eight.

In particular, [DG 16: Communicable diseases](#), is overtly linked to the prevention of this group of diseases, in which vaccination plays a prominent role.



NCD-related services are linked to 10 of the 21 FIP Development Goals, with a central role in six.

In particular, [DG15: People-centred care](#), provides the basic conceptual framework for the design of the FIP Practice Transformation Programme on NCDs. Although DG15 is not specifically called “Non-communicable diseases”, it is focused on the role of pharmacists in this group of conditions, which of course requires a patient-centred, interprofessional care approach.





CHAPTER 4

Pharmacy in humanitarian crises and emergency response

This chapter explores pharmacy's role in disaster, conflict, and emergency settings. It highlights pharmacist-led efforts in maintaining medicine access, continuity of care, and public health response, drawing from global case studies and advocating for greater integration into humanitarian frameworks.



High level summary



1. FIP empowers pharmacists in humanitarian crises by providing training, resources, and guidance to ensure effective delivery of medicines and healthcare in emergencies, while fostering collaboration among global stakeholders to enhance pharmacists' capacity in disaster response and preparedness.
2. The **FIP HumanityRx programme** explores topics such as how to manage supply chains, ensure medicine access, and address public health challenges in crises, supporting both immediate relief efforts and long-term healthcare resilience for vulnerable populations.
3. FIP advocates for **pharmacists' integration into emergency management plans at all levels**, calls for increased training, interprofessional collaboration, and funding for pharmacist-led initiatives, and highlights the critical role pharmacists play in supply chain management, vaccination, and disease prevention in conflict and disaster-affected areas.

Key message



Pharmacists are **essential frontline responders in humanitarian and disaster settings**—ensuring medicine availability, safeguarding supply chains, and delivering public health services. However, their inclusion in **emergency preparedness and response** remains limited. Greater recognition, formal integration, and targeted investment are needed to fully leverage their potential in crises.

Related FIP Development Goals



Humanitarian crises and emergency response is primarily linked with [Development Goal 18: Access to medicines, devices and services](#) as pharmacies are accessible health points during such crises.





CHAPTER 5

Sustainability and climate action in pharmacy practice

Focusing on the intersection of planetary and public health, this chapter highlights the contributions of pharmacy to climate mitigation and adaptation. It addresses the environmental impact of pharmaceutical services and outlines FIP's SustainabilityRx agenda to build climate-resilient and environmentally responsible health systems.



High level summary



1. FIP is committed to advancing sustainability in global healthcare through FIP Development Goal 21: Sustainability in pharmacy.
2. FIP drives sustainability in global healthcare by promoting responsible pharmacy practices, integrating sustainability into education and pharmacy services, and fostering collaboration with healthcare professionals and policymakers.
3. Through initiatives linked to the FIP [SustainabilityRx](#) programme, such as policy statements, and climate advocacy efforts, FIP empowers pharmacists to adopt sustainable practices, reduce medicine waste, and contribute to climate resilience.
4. FIP recommends actions linked to integrating environmental and air pollution topics into pharmacy education and continuing professional development, promoting pharmacist-led roles in addressing environmental health risks, and urging governments to incorporate environmental risk assessments into medicine approval processes and pharmaceutical policies.

Key message



FIP is leading the advancement of **sustainability in global healthcare** through its Development Goal 21 and the SustainabilityRx programme by empowering pharmacists, **integrating environmental topics** into education and practice, reducing medicine waste, and advocating for climate-resilient policies in collaboration with governments and health stakeholders.

Related FIP Development Goals



Sustainability and climate action is primarily linked with [Development Goal 21: Sustainability in pharmacy](#), as it ensures the sustainability of the environment and minimises negative consequences of pharmaceuticals and pharmacy practice for the environment.



High level summary



1. Interprofessional collaboration (ICP) encompasses a wide range of collaborative efforts among healthcare professionals from different professional backgrounds.
2. Pharmacists play a crucial role in ICP by contributing their expertise in medication management, patient education, and clinical decision-making. Their involvement extends across hospital settings, primary care, long-term care facilities, and community pharmacies, where they work alongside other professionals to optimise medication therapy, enhance patient safety, and improve overall health outcomes.¹
3. By actively participating in team-based care, pharmacists help facilitate seamless communication, ensure the safe and effective use of medications, and support holistic, person-centred approaches to treatment and disease prevention. However, governments and agencies must provide appropriately structured health systems to support ICP with processes defining professional competencies, practice standards, and scopes of practice, that permit and facilitate effective collaborative practice.
4. Intraprofessional collaboration between pharmacists and pharmacy technicians is essential to increase healthcare efficiency, improve patient care and optimise the use of workforce skills. Effective collaboration allows pharmacists to focus on clinical and patient-centred services, while technicians manage technical and operational tasks to ensure the safe and efficient use of medicines. The extent of this collaboration varies around the world, influenced by regulatory frameworks, workforce capacity and training systems. Strengthening this collaboration through clear role definitions, supportive policies and professional development opportunities can improve pharmacy services and contribute to better health outcomes.²

Key message



Pharmacists are essential team members of **interprofessional collaboration** as they bring valuable **expertise in medication management, patient education, and clinical decision-making**. Their collaboration with other healthcare professionals is critical to optimise medication therapy and support better health outcomes.





CHAPTER 7

Medicines and patient safety through pharmacy practice

The chapter highlights pharmacists' leadership in promoting safe, effective, and appropriate medication use. It presents evidence-based strategies for reducing medication errors, preventing harm, and supporting patient safety across all care settings, aligned with WHO and FIP global initiatives.



High level summary



1. Patient safety is fundamental to the provision of healthcare in all settings, ensuring that individuals receive safe, effective, and high-quality care without avoidable harm.¹
2. Patient and medication safety is a top priority for pharmacists, who play a critical role in ensuring the safe use of medicines, reducing medication errors, and enhancing overall treatment outcomes.¹
3. Medicines reconciliation, a key pharmacist-led patient safety service, has been widely implemented across various countries. This service helps identify and resolve discrepancies in patients' medication regimens, leading to improved clinical outcomes, enhanced patient safety, and significant economic benefits by reducing hospital readmissions and adverse drug events.²
4. Pharmacists play a crucial role in safeguarding patient safety by preventing substandard and falsified (SF) medical products from entering the supply chain. Through rigorous quality control measures, regulatory compliance, and collaboration with health authorities, pharmacists help ensure that patients receive only safe and effective medications.³
5. FIP supports pharmacists by providing essential tools, guidelines, and resources to strengthen their role in patient safety, medication management, and overall healthcare delivery.

Key message



Pharmacists are central to patient and medication safety, driving improvements in clinical outcomes and **protecting public health through proactive medication management** and rigorous quality control.

Related FIP Development Goals

1 ACADEMIC CAPACITY	2 EARLY CAREER TRAINING STRATEGY	3 QUALITY ASSURANCE	4 ADVANCED AND SPECIALIST DEVELOPMENT	5 COMPETENCY DEVELOPMENT	6 LEADERSHIP DEVELOPMENT	7 ADVANCING INTEGRATED SERVICES
8 WORKING WITH OTHERS	9 CONTINUING PROFESSIONAL DEVELOPMENT STRATEGIES	10 EQUITY & EQUALITY	11 IMPACT & OUTCOMES	12 PHARMACY INTELLIGENCE	13 POLICY DEVELOPMENT	14 MEDICINES EXPERTISE
15 PEOPLE-CENTRED CARE	16 COMMUNICABLE DISEASES	17 ANTIMICROBIAL STEWARDSHIP	18 ACCESS TO MEDICINES, DEVICES & SERVICES	19 PATIENT SAFETY	20 DIGITAL HEALTH	21 SUSTAINABILITY IN PHARMACY

This chapter primarily maps against FIP [Development Goal 19: Patient Safety](#), emphasising mechanisms to reduce medication-related harm, quality assurance processes, and supportive regulatory frameworks. It also aligns closely with [Development Goal 20: Digital](#)





Pharmacy's role in the digital transformation of health

This chapter explores FIP's global work on digital health transformation and presents examples of digital pharmacy services that enhance access, quality, and person-centred care.



High level summary



1. Digital health is transforming pharmacy practice by enabling remote care, optimising clinical decision-making, and expanding access to underserved populations.
2. Pharmacists are leveraging technologies such as AI, telehealth, robotic automation, and real-world data to improve safety, efficiency, and patient outcomes.
3. The International Pharmaceutical Federation (FIP) has played a central role in shaping digital health policy and practice, including the creation of the Technology Advisory Group (TAG) in 2019 and the publication of digital health position statements.
4. Pharmacy-led digital innovations are demonstrating measurable impact in public health areas such as antimicrobial stewardship (AMS) and vaccination services, with national case studies showing improved prescribing practices and expanded immunisation access.
5. Despite progress, gaps remain in digital literacy, infrastructure, and regulation across countries, particularly in low-resource settings.
6. FIP continues to address these challenges through global needs assessments, development of digital health competency frameworks, and training resources for pharmacy educators and professionals.
7. The forthcoming WHO Global Strategy on Digital Health (2028–2033) provides an opportunity for pharmacists to further integrate into digital health governance, equity strategies, and system-wide transformation.

Key message



Pharmacists are driving digital transformation in healthcare by leveraging technologies such as telehealth, AI, and mobile health to expand access, improve patient outcomes, and enhance the safety and efficiency of pharmaceutical care.

