

FIP-UNESCO UNITWIN Strategic Roadmap: Focus on the Region of the Americas

Report from a FIP insight
board

2025



ACADEMIC
CAPACITY



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WITH OTHERS

FIP Development Goals



UNITWIN
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International
Pharmaceutical
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Colophon

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International Pharmaceutical Federation (FIP)

Andries Bickerweg 5

2517 JP The Hague

The Netherlands

www.fip.org

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Authors

Genuine Desireh, UNITWIN and Provision Manager

Hanadi Alolimi, UNITWIN and Provision Coordinator

Tabarek Ahmed Shah, UNITWIN Programme Intern

Editor

Dalia Bajis, Head of Programmes and Provision

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Chairs		
Silvana Leite	Professor, Department of Pharmaceutical Sciences, Federal University of Santa Catarina FIP Hub Global lead – Development Goal 8	Brazil
John Pieper	President and Professor Emeritus, University of Health Sciences and Pharmacy in St. Louis FIPEd Chair	USA

Facilitators		
Dalia Bajis	Head of Programmes and Provision, FIP	The Netherlands
Genuine Desireh	UNITWIN and Provision Programme Manager, FIP	The Netherlands
Hanadi Alolimi	UNITWIN and Provision Programme Coordinator, FIP	The Netherlands

Note takers		
Nour Eltahla	Equity and FIPWiSE Programme Manager, FIP	The Netherlands
Inês Nunes da Cunha	Practice Development and Transformation Manager, FIP	The Netherlands
Tabarek Shah	UNITWIN Remote Intern	The Netherlands
Chanda Nkandu	UNITWIN Remote Intern	The Netherlands

Participants from the Region of Americas (AMR)		
Kim Brouwer	Interim Dean, UNC Eshelman School of Pharmacy, University of North Carolina	USA
Leticia Caligaris	Clinical Pharmacist, Universidad de la República Oriental del Uruguay; Secretary, FIP Community Pharmacy Section; FIP Hub Global Lead	Uruguay
Gabriela Carrasco	International Consultant of Medicines and Health Technologies, Pan American Health Organization (PAHO)	Argentina
Stephen Eckel	Associate Professor and Associate Dean for Global Engagement, University of North Carolina Eshelman School of Pharmacy	USA
Aline Hajj	Associate Professor, Faculty of Pharmacy, Université Laval; FIP Hub Global Lead – Development Goal 10	Canada
Abby Kahaleh	Dean, School of Pharmacy, South University; FIP Hub Global Lead – Development Goal 3	USA
Jill Kolesar	Professor and Dean, College of Pharmacy, University of Iowa	USA
Wanda Maldonado	Professor, School of Pharmacy, University of Puerto Rico; AIM Advisory Committee Member	Puerto Rico

Kelechi Ogbonna	Professor and Dean, School of Pharmacy, Virginia Commonwealth University	USA
Tatiana Orjuela	International Consultant, Pan American Health Organization (PAHO)	Colombia
Lalitha Ramam-Wilms	Professor and Dean, Faculty of Pharmaceutical Sciences, University of British Columbia	Canada
Robin Rojas	Technical Officer, Safe Use of Pharmaceuticals, Biologicals and Vaccines, Pan American Health Organization (PAHO)	USA
Magaly Rodríguez de Bittner	Professor, School of Pharmacy, University of Maryland; President, Regional Pharmaceutical Forum of the Americas	USA
Peter Swaan	Professor and Dean, College of Pharmacy, University of Florida; AIM Advisory Committee Member	USA
Alain Stintzi	Professor, School of Pharmaceutical Sciences, University of Ottawa	Canada
Toyin Tofade	President and Professor, Albany College of Pharmacy and Health Sciences President, FIP Academic Pharmacy Section	USA

Observer		
Goncalo Sousa Pinto	Head of Membership and Regional Engagement, FIP	The Netherlands

2 About this report

This report synthesises key insights gathered from discussions during an insight board meeting with colleagues from the Region of the Americas (AMR) to inform the establishment of a FIP-UNESCO UNITWIN Centre for Excellence (CfE) in the region. Drawing on an in-depth analysis of stakeholder input, the report outlines region-specific challenges, emerging priorities, and collaborative opportunities aligned with the FIP Developmental Goals. The report is structured around two primary questions posed to participants and concludes with strategic recommendations.

The objectives of this insight board meeting were to:

1. Understand the emerging needs and priorities from the region.
2. Map and align regional CfE priorities to FIP Calls to Action projects and regional forum priorities.
3. Revise/prioritise regional roadmap activities based on current regional needs and alignment with wider FIP strategic goals.
4. Inform the launch of the FIP-UNESCO UNITWIN CfE in the AMR.

The main questions discussed during the meeting were:

1. How does your regional roadmap contribute to delivering on the objectives of the FIP-UNESCO UNITWIN agreement (2023-2027)?
 - a. How do your CfE's current priorities align with FIP's priorities and calls to action?
 - b. Since the 2021 regional roadmap workshops, what emerging needs or challenges have become more prominent in your region's pharmacy education, science, or practice?
2. Can you share one example from your region where an activity or initiative successfully delivered a UNITWIN objective?
 - a. How do you envision networking, collaboration, and sharing of best practices across institutions and regions?
 - b. What resources, support, or partnerships would best enable your CfE to respond effectively to regional challenges and accelerate progress?

Disclaimer

The views expressed during the insight board reflect the personal expertise and experience of participants in pharmacy education, science, and practice within their countries and the region. These views do not represent official FIP policy or positions, though they may build upon existing FIP positions and statements. FIP will use these insights to consider what further support will be required by colleagues in the region to operationalise the Centre for Excellence following its launch.

3 Background

3.1 Introduction

The International Pharmaceutical Federation (FIP) is the global federation representing pharmacists, pharmaceutical scientists and pharmaceutical educators dedicated to improving the access to and value of appropriate medicine use, and contributing to changes in science, practice and health policies worldwide. FIP—through official NGO status—has been in official relations with the World Health Organization (WHO) since 1948.

Our vision: A world where everyone benefits from access to safe, effective, quality and affordable medicines and health technologies, as well as from pharmaceutical care services provided by pharmacists, in collaboration with other healthcare professionals.

Our mission: To support global health by enabling the advancement of pharmaceutical practice, sciences and education.

UNESCO

UNESCO, the United Nations Educational, Scientific and Cultural Organization, is a specialised agency focused on promoting education, science, culture, and communication to enhance global unity. It sets standards, develops tools, and generates knowledge to address major global challenges while fostering equality and peace. Its work includes protecting biodiversity, responding to artificial intelligence, advancing quality education, safeguarding heritage, and ensuring access to reliable information in collaboration with its 194 Member States worldwide.

UNESCO has four key strategic objectives:

- a. **To ensure equitable and inclusive education for all:** For UNESCO, education is a fundamental human right and UNESCO commits to supporting lifelong learning by promoting early childhood education, literacy for all, and technical and vocational training.
- b. **To build sustainable societies by sharing scientific progress:** UNESCO has established programmes that mobilise international experts to help preserve biodiversity and build more sustainable societies.
- c. **To make the world more just and inclusive:** As the United Nations agency for intercultural understanding and cultural diversity, UNESCO works to build inclusive, just and peaceful knowledge societies, while protecting human rights and fundamental freedoms.
- d. **To guarantee that new technologies benefit humanity:** UNESCO is committed to ensuring that emerging technologies are accessible to all, and users are equipped with the skills to navigate the ever-evolving digital landscape.

UNESCO UNITWIN/UNESCO Chairs Programme

The UNESCO UNITWIN/UNESCO Chairs Programme was established in 1992 to foster international inter-university cooperation and networking to enhance institutional capacities through knowledge sharing and collaborative work.¹ The UNITWIN/UNESCO Chairs Programme (further referred to by UNESCO as “the UNITWIN Programme”, where UNITWIN stands for University Twinning and Networking) is a unique intellectual and strategic resource of hundreds of institutions from over 120 countries aimed at strengthening connections between research and development, policy and practice at country, regional and global levels. It has contributed to strengthening higher education systems and fostering collaborative research partnerships and networks.

FIP-UNESCO UNITWIN Network

In 2010, FIP and UNESCO, in collaboration with the FIP University College London School of Pharmacy Collaborating Centre, established an innovative global programme under the UNITWIN framework—the FIP-UNESCO UNITWIN Cooperation Programme in Global Pharmacy Education Development (GPhEd). Recognised as the **FIP-UNESCO UNITWIN** programme, it stands as a pioneering initiative, being the first in higher education for health professionals and the first dedicated to global pharmaceutical education.

The [FIP-UNESCO UNITWIN Network](#) on Global Pharmacy Education Development aims to promote an integrated system of research, teaching, and training, as well as community engagement and communication. It facilitates collaboration between high-level, internationally recognised researchers and teaching staff of

the coordinating institution (FIP), member institutions, and other institutions across different regions of the world. The network's priority workstreams for transforming pharmacy education, practice and science are shown in figure 1.

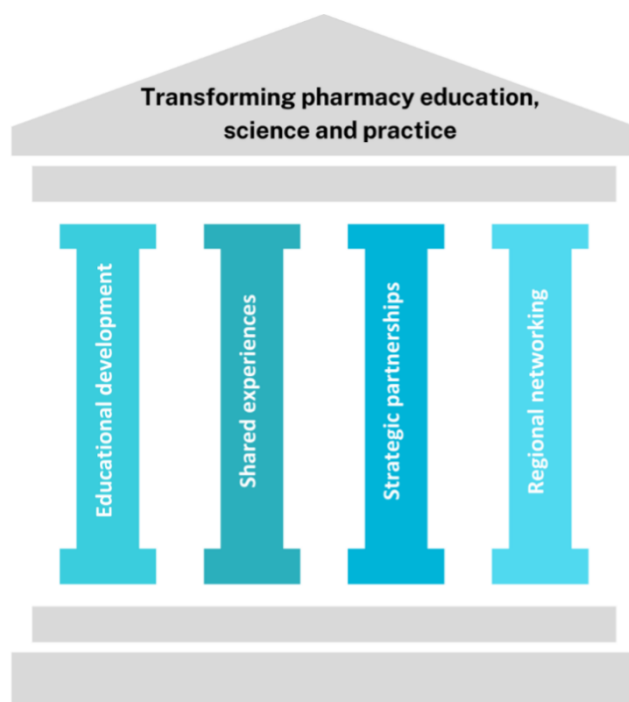


Figure 1: Priority workstreams for transforming pharmacy education, practice and science

In accordance with the agreement with UNESCO (2023–2027), FIP has established new regional centres for excellence, set to cover each of the World Health Organization (WHO) regions. Centres for excellence have already been launched in Africa, Southeast Asia and the Western Pacific regions. These centres bring together experts and resources in the region to advance the transformation of pharmaceutical education inspired by the FIP-UNITWIN regional roadmaps on pharmaceutical education and the [global call to action on pharmaceutical education](#). The centres aim to facilitate the transformation of pharmaceutical education regionally, underpinned by the following principles:

- Alignment with specific objectives of the UNESCO agreement to promote an integrated system of research, teaching, and training, as well as community engagement and communication.
- Recognition of the fact that one size does not fit all for pharmaceutical education transformation because of the diverse needs and systems across different countries and regions.
- Leveraging the achievements and expertise gained from the pioneering FIP-UNESCO UNITWIN Network and its distinguished FIP UNITWIN Centre for Excellence in Africa.
- Acknowledging emerging and evolving global health priorities to guide the advancement of pharmacy and pharmaceutical education in alignment with practice needs and scientific progress.
- Alignment with the FIP Development Goals as guiding principles for driving the transformation journey.

The objectives for the FIP-UNESCO UNITWIN Network as outlined in the renewed agreement with UNESCO (2023–2027) are to:

1. Enhance the integrated system of research, training, information and documentation activities in the field of global pharmacy education, addressing issues of academic capacity, quality assurance of educational systems, and workforce competency;
2. Lead educational and scientific transformations, and promote global collaboration to address sustainability, inequities and technology in education through the establishment of new regional centres for excellence across all regions of the world, namely in Southeast Asia, Western Pacific, Europe, in the Americas and Eastern Mediterranean regions;
3. Contribute to the improvement of global health; and,

4. Cooperate closely with UNESCO, other UNESCO Chairs and UNITWIN Networks on relevant programmes and activities.

Key milestones for the FIP-UNESCO UNITWIN network are shown in figure 2.

FIP-UNESCO UNITWIN Programme - Key milestones

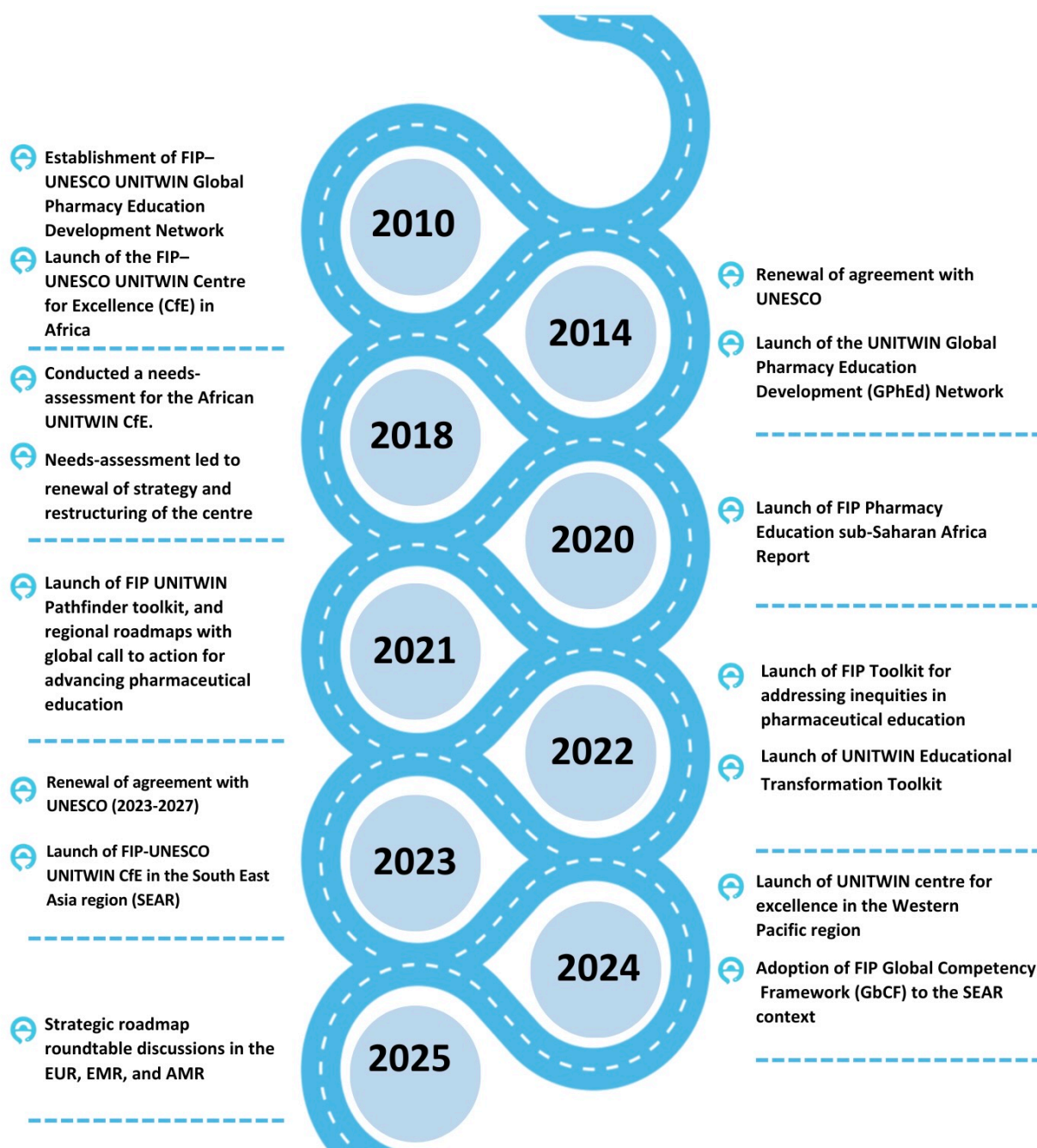


Figure 2: Key milestones for the FIP-UNESCO UNITWIN network

3.1 Region of the Americas (AMR): Regional snapshot

Regional context and population trends

The World Health Organization Region of the Americas (AMR) consists of North America, Central America and South America and comprises 35 countries: Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bolivia (Plurinational State of), Brazil, Canada, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Puerto Rico (*Associate WHO Member State), Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, United States of America (USA), Uruguay, and Venezuela (Bolivarian Republic of).²

In 2019, the total population of the Americas reached 1.01 billion, having surpassed the 1-billion mark in 2017. The region experienced a 31% growth from 1994 to 2019. The ten most populous countries, led by the USA (329.1 million), Brazil (211.1 million), and Mexico (127.6 million), accounted for 89% of the total regional population and grew by 30% since 1995. Conversely, the ten least populated entities, such as Antigua and Barbuda (97,000) and Montserrat (5,300), represent a tiny fraction of the overall population.³

NCD burden and health system pressures

In the AMR, noncommunicable diseases (NCDs) are leading causes of death and disease burden. In 2021, NCDs were responsible for approximately 6 million deaths, constituting 65% of all fatalities in the region, at an age-adjusted rate of 420.2 deaths per 100,000 people.⁴ The impact extends beyond mortality: NCDs accounted for 226 million disability-adjusted life years (DALYs), including 121 million years of life lost prematurely and 105 million years lived with disability or poor health.⁴ These statistics demonstrate the significant burden on health systems and the critical role healthcare providers, including pharmacists, will need to play in addressing this challenge over the next decade.

Pharmacy workforce capacity and distribution

In 2023, the FIP Multinational Needs Assessment Programme (M-NAP) included five key countries from the Americas: Argentina, Brazil, Colombia, Chile, and Mexico, which collectively contribute 2.3 million pharmacists to the global workforce. The region is home to 1,271 pharmacy schools, graduating approximately 15,000 professionals annually. However, significant disparities exist in pharmacist density per 10,000 people and reflect varied healthcare infrastructure and accessibility. For instance, among the surveyed countries, Brazil's pharmacist density of 10.99 exceeded the average of 8.44, whereas Argentina reported a lower density of 4.74, though it notably led in pharmacy technician density, with 26.45 per 10,000 people compared to the regional average of 6.02.⁵

Overall, countries in South America tend to show lower densities of both pharmacists and new registrants, highlighting ongoing challenges in ensuring a stable supply of qualified pharmacy professionals.⁵ Most pharmacists in the Americas primarily work in community and hospital settings, but their responsibilities are expanding into vital areas like public health, research, academia, and regulatory roles.⁵

Evolving roles and workforce trends

Looking at the Americas, a distinct split in pharmacy workforce dynamics emerges. North America, particularly the USA and Canada, boasts a high pharmacist density, complemented by the advanced clinical roles these professionals are increasingly adopting. Conversely, Central and South America present a more varied picture, generally exhibiting lower pharmacist densities and a noticeable variability in their workforce capacity.⁶

A significant and consistent trend across the entire region is the increasing number of female pharmacists, aligning with global patterns and projected to reach 72% by 2030. This demographic shift, however, exists alongside persistent disparities in workforce strength and infrastructure between the region's high-income countries like the USA and Canada, and its lower-income nations.⁶

4 Snapshot: Challenges, emerging needs, and priorities in pharmacy education in the AMR

Insight board participants shared challenges, emerging needs, and priorities in pharmacy education, science, and practice in the AMR, with a focus on informing the establishment of the UNITWIN Centre for Excellence.

4.1 Key challenges facing pharmacy education, science and practice in the AMR

4.1.1 Gaps in education and practice

Practice and educational misalignment

According to the participants, many academic programmes across the Americas are struggling to keep pace with the rapid evolution of pharmacy practice and the dynamic healthcare needs of the region. Curricula often lack proper alignment with real-world demands, leading to a significant mismatch between the competencies of pharmacy graduates and the actual requirements of national workforces. This disconnect creates inefficiencies in preparing pharmacists to effectively address pressing healthcare priorities.

“There is a disconnect between education and practice...curricula are not advancing at the way that practice and the healthcare needs of the country are.” – USA

Academic capacity gaps

The participants mentioned that there is considerable variability in the academic capacity throughout the region. For example, Brazil, despite having numerous pharmacy schools, experiences wide variations in their quality and resources. Even where state-level accreditation systems are in place, they do not consistently guarantee uniformity. While some institutions boast strong faculty and facilities, others face significant challenges with basic capacity. This directly impacts the number of pharmacists each country can produce and the quality of training they receive, posing a substantial hurdle when attempting to raise regional standards. Particularly in smaller countries like Uruguay, the pharmacy education system faces severe limitations, with only one public pharmacy school in the entire country. Such infrastructure deficits can hinder efforts to implement reforms or expand pharmacy roles nationally.

“We have huge differences in the number of pharmacists between our countries, and this is related with the academic capacity... even in Brazil... the academic capacity is really diverse between our schools of pharmacy... even with a state accreditation system... we have a huge difference between the capacity and the quality of the schools.” – Brazil

“In Uruguay we are only one school of pharmacy... we only have 25 or 30 new pharmacists per year.” – Uruguay

Shortage of trained pharmacists

It was agreed that South American countries are grappling with a serious shortage of pharmacists, particularly those specialised in community care or holding postgraduate qualifications. This scarcity restricts the profession's ability to effectively educate the public on safe and effective medication use, manage complex therapies, or support patient adherence. Without a sufficient number of adequately trained professionals in the field, the potential impact of pharmacy on population health and well-being remains limited.

“We are a few professionals and even fewer professionals with postgraduate degrees, especially in community pharmaceutical care...they directly impact the sustainability of the population health and well-being systems” – Tatiana Orjuela

4.1.2 Fragmentation and representation issues

Diversity across regions and institutions

It was noted by the participants that the Region of the Americas is characterised by vast differences in regulatory environments, scopes of pharmacy practice, and educational quality. These disparities exist not

only between countries but also within their sub-territories. This inherent diversity significantly complicates efforts to develop a unified regional approach, necessitating highly contextualised strategies tailored to the unique conditions of specific jurisdictions.

“Even within Canada, we have a huge difference between the different pharmacy landscapes, scope of practices, educational standards...” – Canada

Unequal representation of universities in regional initiatives

Participants identified a significant challenge in fostering a truly regional initiative, which is ensuring equitable representation from all parts of the Americas. Currently, the majority of Academic Institutional Members (AIM) are from the USA, with notably limited participation from universities in South America. This imbalance risks undermining the legitimacy of initiatives intended to represent the entire region as they do not adequately include its diverse components. Part of this issue stems from the bureaucratic and financial hurdles that many universities in countries like Brazil face, making it difficult for them to formally join or actively participate in international networks.

“We have 50 AIM members now in the Americas, but more than 40 are in the United States... We have bureaucratic difficulties and financial difficulties... We need to have a plan to be more representative in the region.” – Brazil

“Even though they’re [Uruguay] considered a high-income country... the cost of joining AIM is prohibitive to them... I think we’ve got to figure out a way.” – USA

4.2 Emerging needs in pharmacy education, science and practice in the AMR

4.2.1 Expanding pharmacist scope, practice, and business models

Expansion of pharmacy scope and regulatory adaptation

Participants noted that in many countries, particularly across North America, pharmacy practice is undergoing rapid evolution, driven by new legislation that broadens pharmacists’ responsibilities to include prescribing, renewing prescriptions, administering vaccines, and delivering essential frontline care. This accelerated pace of change places significant pressure on pharmacy education systems to continually adapt and redesign their curricula. Without timely regulatory alignment and educational responsiveness, pharmacists may find themselves inadequately prepared to fulfil these burgeoning roles, potentially leading to implementation gaps and patient safety concerns.

“The scope of practice in pharmacy... is very rapidly evolving... laws... adopted now in less than 6 months, allowing pharmacists to prescribe, for example, and to renew prescriptions... I believe this is an emerging need.....We’re changing our programmes every year to be able to adapt to these new practices.” – Canada

Primary care workforce

Participants observed that in all countries within the Region of the Americas face considerable healthcare access issues in rural and remote communities, largely due to primary care shortages and limited infrastructure. As the pharmacist’s role expands, particularly in these underserved areas, they should be further empowered to provide a broader range of primary care services.

Leveraging the accessibility and expertise of pharmacists can enhance healthcare delivery and improve outcomes for these populations. Realising this potential will require consensus-building and strategic planning to effectively integrate pharmacists into national and regional healthcare frameworks.

“One of the major areas of focus... is to move primary care into the community pharmacy, and have those pharmacists offer a lot more of those primary care services.” – USA

Regulatory policy development

Participants observed that in several South American countries, the current legal framework does not mandate the physical presence of a pharmacist in community pharmacies. This significant oversight limits the implementation of advanced services such as medication counselling, prescribing, or chronic disease management, even where educational programmes have begun preparing graduates for these tasks. This critical disconnect between regulatory policy and academic preparation leads to a disregard for pharmacists' competencies and ultimately weakens the case for expanded professional roles. Urgent legal reform is necessary to enable pharmacists to practice to the full extent of their training and licensure.

"In South America it's not mandatory that the pharmacist has to be in the pharmacy....We want to prescribe. But first we have to be in the pharmacy...." – Uruguay

Sustainable business models in pharmacy

It was noted by the participants that as pharmacists assume more advanced roles, particularly in community settings, there is a growing and urgent need to advocate for sustainable business models that genuinely support this expansion. Simply adding responsibilities without addressing how these services are funded is insufficient. During the COVID-19 pandemic, pharmacists stepped up to provide critical services, such as immunisations, often without proper compensation. Policy changes, both nationally and globally, are required to formally recognise pharmacists' contributions and establish robust financial models that enable them to practice at the full scope of their training.

"We are advocating for expanding the pharmacy services. But we want the legislators... recognising those contributions/ impacts that we do for patient outcomes... Community pharmacists... stepped up to the plate without really looking to see who's going to pay us... they saved pretty much all their community by devoting time to do immunisation." – USA

Demonstrating pharmacy impact

To effectively demonstrate the true value of pharmacy services, especially within community settings, the participants agreed that a stronger focus on measurable outcomes, encompassing clinical, economic, and humanistic aspects is essential. These quantifiable outcomes can fully articulate the profound contributions pharmacists make to public health, particularly in underserved communities. Utilising frameworks like the ECHO (Economic, Clinical, and Humanistic Outcomes) model can significantly strengthen the case for policy change, secure appropriate reimbursement, and facilitate more integrated care models.

"What I mean by outcomes... economic, clinical, humanistic outcome...Focus on the ECHO model, which is the economic and humanistic outcome for our patients." – USA

4.2.2 Adapting education to current and future healthcare demands

Tailored needs-based approach to pharmacy education

The participants identified that a significant gap in current pharmacy education and workforce planning across the Americas is the pervasive lack of detailed, localised data that accurately reflects the unique needs of individual countries, and even sub-national regions. Policy and educational interventions frequently rely on generalisations or limited datasets that fail to account for the diverse infrastructure, regulatory landscapes, or specific public health demands. Tailored needs assessments are therefore essential for designing context-relevant strategies, ensuring that no territory is overlooked. Curriculum reform must be directly informed by what each country genuinely requires from its pharmacists, whether that emphasis is on primary care, community services, or another specialised area.

Competency-based models are particularly valuable as they shift the focus from a pharmacist's practice setting (e.g., industry vs. community) to their demonstrable abilities. Countries are increasingly beginning to assess baseline competencies and use that data to reshape their academic programmes. This transformative shift is crucial for pharmacists to effectively meet the real-world healthcare demands on the ground. Furthermore, to ensure long-term sustainability, not only of pharmacy services but also of science-driven projects and institutions, there is a growing imperative to incorporate entrepreneurial thinking into pharmacy education. Embedding entrepreneurship into the curriculum can empower future professionals to create sustainable impact, rather than merely operating within existing systems.

“It is important to know what are the needs of each... not only each region, but each country, or even each territory in each of our countries.” – USA

Digital health and emergency preparedness

Participants stated that the rapid expansion of digital health technologies, encompassing telepharmacy, e-prescriptions, and various virtual care platforms, necessitates immediate and comprehensive integration into pharmacy curricula. Given the increasing frequency of climate-related emergencies, such as the wildfires in Canada and the presence of remote populations, training pharmacists to proficiently utilise digital tools is a critical priority for enhancing access to pharmaceutical care across the region.

“Digital health is rapidly expanding, rapidly improving. And it allows us maybe to have better care for patients with the remote areas, underserved areas, some emergency settings...” – Canada

Competency framework development

Participants observed that while many countries in the Americas have successfully developed national or regional competency frameworks, these often do not significantly align with the global standards established by FIP. In regions like North America, for instance, frameworks tend to be more heavily influenced by domestic regulatory bodies. There is a growing and essential need to bridge these global and local frameworks to ensure that pharmacists across the Americas and worldwide are equipped with comparable, high-quality skills that are well-suited for the evolving demands of contemporary practice.

“We saw that the competency framework... in North America... rely more on the bodies of local regulatory bodies... and less on FIP frameworks...” – Canada

Advanced and specialist development

Participants highlighted that despite the increasing number of pharmacy schools and new graduates entering the field, there remains a notable lack of specialised training options across the region. Developing more postgraduate programmes is critical to effectively meet the workforce needs in vital areas such as advanced pharmaceutical care and public health. The long-term impact on the profession and patient outcomes will heavily depend on how these specialised offerings grow and evolve.

“A good offering of specialised studies is also required. The impact will be in the long term.” – Colombia

4.2.3 Strengthening regional collaboration and resource mobilisation

Regional synergistic collaborations

Participants emphasised a growing imperative for enhanced coordination among key pharmacy education and practice organisations across the Americas, including FIP, PAHO, and the Pan American Conference on Pharmacy Education. Currently, various groups are working towards similar goals, but often in isolation or with overlapping efforts, leading to duplication, missed opportunities for collaboration, and wasted resources. A unified regional approach would foster greater coherence, allow organisations to build upon each other's work, and facilitate more efficient progress. Stronger networks and open communication between countries and institutions are essential for collective advancement. Groups such as the American Association of Colleges of Pharmacy (AACP), Association of Faculties of Pharmacy of Canada (AFPC), and Pan American Conference on Pharmaceutical Education (CPEF) bring invaluable experience, leadership, and resources to the table. Excluding them risks fragmented or duplicated efforts. Keeping these academic partners informed and engaged from the outset is crucial for building alignment and ensuring that reforms accurately reflect the full diversity of pharmacy education across the region.

“It is so important that this effort is coordinated and that all actors are part of it... so we do not duplicate efforts.” – USA

Resource mobilisation

Participants acknowledged that, while there is a substantial vision and volunteer energy driving pharmacy collaboration across the Americas, sustaining momentum will be difficult without solid human and financial

resources. Most individuals spearheading these initiatives are already working full-time, making consistent coordination, execution, and follow-through challenging. In addition to personnel, adequate funding is critical. This could be secured through various avenues, including corporate sponsorships, partnerships with organisations like UNESCO, or dedicated budget allocations from FIP itself.

“Who will be coordinating or executing the idea of having a global meeting...? That’s going to require commitment... but then each of these individuals are volunteers... Staffing of these initiatives would be critical...How about corporate sponsors? Perhaps a partnership with UNESCO?... How are we going to allocate specific resources to ensure that the vision gets accomplished?” – USA

Regional learning exchanges

Participants identified a significant opportunity to establish a robust platform that consolidates and shares knowledge and experiences from across the Americas. This could encompass success stories, practical tools, foundational frameworks, and survey results, all shared openly between North, Central, and South America. Such a centralised space would enable countries to learn effectively from each other and apply common methodologies within their unique contexts. For instance, a needs assessment survey successfully used in South America could be adapted and applied in North America using consistent metrics, thereby facilitating easier comparison and collaboration. Furthermore, faculty and student exchange programmes could substantially strengthen inter-regional relationships and increase visibility for diverse pharmacy practice models. These types of exchanges are vital for fostering a shared regional vision and could ultimately contribute to shaping a governance structure deeply rooted in genuine collaboration.

“It could be interesting to have a platform, a sharing platform of knowledge... to co-develop a framework... we can have exchange between faculty and students across regions... that would foster the shared vision of the region.” – Canada

Regional communication platform

Participants suggested that establishing a simple, shared communication platform is one of the most straightforward and effective ways to maintain momentum between larger regional meetings. Currently, there is no dedicated space to disseminate timely updates, conference dates, or relevant regional news. Creating such a platform would significantly improve information flow and enable continuous engagement among stakeholders.

“It’d be nice to be on some type of list where we get periodic updates on happenings in the different regions... that’s another opportunity for us to support one another even before the bigger collaborative efforts.” – USA

4.2.4 Leadership and faculty development

Leadership development

Participants stressed that, as healthcare systems evolve and the roles of pharmacists expand, there is an urgent and undeniable need to cultivate robust leadership capacity across the Americas. The region's vast differences in pharmacy education and practice between North, Central, and South America underscore that, without strong, coordinated leadership, it becomes exceptionally challenging to forge shared strategies or unify professional standards. Leadership is paramount not only for advocating effectively within the profession itself but also for shaping health policy, guiding essential curriculum reform, and responding dynamically to shifting workforce trends, such as the growing interest in industry careers. If pharmacists are not adequately equipped to lead within their own roles or institutions, progress inevitably stalls, regardless of how ambitious their vision may be. Building leadership capacity is a universal requirement, unconstrained by country, language, or system, making it essential for every pharmacist.

“If you're not able to lead yourself... the hopes and dreams that you have are going to be stalled... That to me seems to be a translatable activity, no matter region, no matter language, no matter culture.” – USA

Faculty development

Participants emphasised that, if the ambition is to truly transform pharmacy practice across the Americas, faculty development must be prioritised. Many universities and pharmacy schools expressed a desire to

advance pharmacy practice, but they are frequently hindered by a lack of adequately trained faculty who feel confident leading change or delivering new models of care. Without this foundational support, even the most meticulously crafted policy or curricular reforms will fail to take root. Faculty members require comprehensive training, exposure to diverse practice models, and ongoing support to effectively prepare the next generation of pharmacists.

“They cannot advance practice if they don't have the ability to do so. If they don't know what the models are, if they are not confident... faculty development is crucial.” – USA

4.3 Priorities to advance pharmacy education, science, and practice in the AMR

4.3.1 Fostering unified regional leadership and governance structures

Regional leadership development

Participants agreed that for the proposed Centre for Excellence to succeed, its leadership model is as crucial as its operational activities. This initiative cannot be solely driven by North America; it must be a genuine partnership from its inception, ensuring equal leadership representation from Central, South, and North America.

Equity in leadership is not merely desirable but is fundamental to making the centre sustainable, credible, and beneficial to all involved. A key priority in establishing a Centre for Excellence in the Americas is therefore to adopt a shared leadership model that guarantees equity and balanced representation. The proposal suggests including a lead from North America, one from Central or South America, and a respected "connector" figure who can effectively bridge both regions. Such a structure would facilitate strategic planning that simultaneously addresses local needs while coordinating a cohesive regional vision.

“We could have a lead from North America... and a lead from Central and South America... and maybe a surfactant in the middle, like Wanda or Magali, who can live in both areas... and really help liaise this group.” – USA

Regional collaboration

Participants identified that a crucial next step in advancing the Centre for Excellence, or any regional collaboration, involves formally engaging leadership from key pharmacy education organisations. This includes the American Association of Colleges of Pharmacy (AACP) in the USA, the Association of Faculties of Pharmacy of Canada (AFPC), and the Pan American Conference on Pharmaceutical Education (CPEF). The objective is to involve these groups in early-stage planning to ensure that the developing structure is regionally balanced and informed by institutions already leading major national efforts.

“I see a critical next step is engaging with the AACP, and the Association of Faculties of Pharmacy of Canada... and also reaching out to the right people at the Pan American Conference of Pharmacy Education... I think we need a structure to do that.” – USA

4.3.2 Establishment of an inclusive and impactful regional network

Establishing a regional platform for the Americas

Participants stressed an urgent need to establish a dedicated platform where pharmacy leaders, schools, and stakeholders from across the Americas can regularly connect. Currently, a truly inclusive space for dialogue, knowledge sharing, or joint planning does not exist. While FIP and the Pan American Health Organisation (PAHO) offer global forums, they do not always address the specific needs of the Region of the Americas, particularly given language barriers and unequal access. A dedicated regional forum would significantly help build community, identify shared goals, and embed cross-country collaboration as a routine aspect of operations.

“There really hasn't been a consistent forum for all the Americas to come together... FIP has an opportunity to create consistent networking and partnerships... just as a way to create that community that doesn't really exist throughout the Americas.” – USA

Structured partnership and collaborations

Participants recognised that while strong momentum and partnerships already exist within pharmacy networks across the region, what is lacking is a clear, overarching structure to effectively coordinate these

efforts. Instead of scattered, isolated projects, there is a need for a dedicated team or working group responsible for identifying existing initiatives, pinpointing the most suitable partners, and actively driving progress. This structured approach would transform general collaboration into tangible action, preventing efforts from dissolving merely in discussion. Groups like Academic Institutional Membership (AIM) and other entities already engaged in this work could play a pivotal role in its realisation.

“Putting together a team that’s responsible for identifying the initiatives, identifying the partners, carrying out the initiatives and moving forward... I think would be the best kind of path forward.” – USA

Engaging NASEM as a strategic partner

Participants noted that given the recent discussions on pharmacy workforce issues hosted by the National Academies of Sciences, Engineering, and Medicine (NASEM) in the USA, there is a timely opportunity to engage them as a strategic partner. NASEM is currently compiling a workshop proceeding and has also supported the formation of approximately 20 writing groups preparing commentaries, both of which could offer valuable insights for workforce development planning across the Americas.

“There was a recent NASEM meeting to talk about pharmacy workforce issues... I think we should at least consider reaching out to the NASEM organising group... as another potential and critical partner.” – USA

4.3.3 Developing a strategic roadmap and inclusive regional engagement

Structured roadmap development

Participants emphasised that when developing a roadmap for regional collaboration, it is crucial to avoid starting from scratch. A substantial body of work, including surveys, tools, and frameworks, already exists and can be immediately leveraged. The priority should be to comprehensively map out what is currently available, identify steps that are "ready to implement", and organise all initiatives into clear short-, medium-, and long-term actions. This approach helps prevent duplication of effort and ensures that progress begins immediately.

If regional pharmacy collaboration is to succeed, it must be accessible to all institutions, not exclusively those with the resources to pay high membership fees. Many pharmacy schools across the Americas are currently excluded from networks like AIM simply due to prohibitive costs. There is an urgent need to create a model that allows for meaningful participation without being financially prohibitive.

“The cost of joining AIM is prohibitive to them... We’ve got to figure out a way of engaging the faculties of pharmacy across the Americas in a way that’s meaningful for them without it being cost prohibitive. That’s a high priority for me... The schools that need us the most, maybe the schools that are least able to afford to join our group... We’ve been working... on this return-on-investment concept... What are schools getting out of being a member of AIM? We need to make sure that we’re being responsive to that... and highlight those important points more.” – USA

5 Successful initiatives and best practices in pharmacy education, science and practice in the AMR

5.1 Roadmap for the advancement of pharmacy education and practice in the Americas

In 2024, the Pharmaceutical Forum of the Americas, in collaboration with FIP, initiated a comprehensive project to analyse the current state of pharmacy practice and education across all countries in South America, including Puerto Rico. The FIP Global Pharmacy Observatory (GPO) will assist in analysing this data to identify specific priorities for each nation. Based on these identified needs, each country will then develop a tailored roadmap, which could focus on areas such as education reform, changes in regulations, or specific pharmacist training. The survey for this crucial project was primarily completed by FIP member organisations in each country. These organisations were specifically tasked with gathering information from a wide range of relevant entities and stakeholders within their respective countries, ensuring comprehensive input from diverse sources including Ministries of Health, colleges of pharmacy, and other pharmacy organisations.

“I wanted to share a project that we're doing in the region with the Forum of the Americas. As you all know, the Forums integrated within FIP last year. And one of the things that in conversation with FIP and the leaders of the Forum, we realised, is that we needed to really look at what's happening in the Americas. One of the things is that you alluded to many of the data that we have is either old, or we only have a few countries that answer, and that becomes a very big issue for us in everything.” – USA

5.2 Pan American Conference on Pharmaceutical Education (PCFE)

The Pan American Conference on Pharmaceutical Education is a regional initiative coordinated by the Pan American Health Organization (PAHO), bringing together academic institutions, professional associations, and national authorities to strengthen pharmaceutical education throughout the Americas. This initiative aims to align pharmacy curricula with regional public health needs, define essential competencies, and foster the development of a responsive and skilled pharmaceutical workforce.⁷

Notably, PCFE has successfully developed a basic education framework and competency profiles that integrate FIP global competencies with Accreditation Council for Pharmacy Education (ACPE) educational outcomes as key references. A strong emphasis is placed on integrating pharmaceutical professionals into primary healthcare systems, enabling more effective and patient-centred care, which is particularly relevant for addressing challenges like Antimicrobial Resistance (AMR) through improved medication use and counselling. PCFE also supports capacity-building by surveying pharmacy schools across various countries, collecting data on graduation rates, curriculum focus, and career trajectories, such as the observed trend towards the pharmaceutical industry.⁷

A critical challenge that PCFE actively addresses is the lack of emphasis on patient-centred care and the absence of pharmacists in many community pharmacies. Consequently, PCFE actively works on attracting more students to major in pharmacy to alleviate the workforce shortages faced across the region. The unified approach promoted by PCFE helps ensure alignment, facilitates the sharing of tools and knowledge, and encourages more efficient work toward common goals. The developed framework serves as a vital reference document that countries across Central and South America can adapt to their specific local contexts.⁷

“The document we created... combines the priorities for pharmacy education from the different models... it identifies the common characteristics that pharmacists should have, no matter what educational model they are in... a reference that can apply to their context, no matter how the practice in their country is.” – Puerto Rico

“With these documents we have produced by the Pan American Conference... They have been critical in transforming pharmacy practice... Many countries adopted that model

curriculum. Now we're trying to make sure it's competency-based... so you produce a pharmacist that can meet the needs of your country.” – USA

5.3 Community pharmacy response during COVID-19

During the COVID-19 pandemic, community pharmacists played a vital and often unpaid role in delivering care and safeguarding public health. Without waiting for direct payment or formal recognition, they proactively provided critical services such as immunisations and other essential support to their communities. This remarkable response powerfully demonstrated the profession's unwavering dedication and its significant potential to support public health initiatives at the local level.

“Community pharmacists... stepped up to the plate without really looking to see who's going to pay us... they saved pretty much all their community by devoting time to do immunisation.” – USA

5.4 AACP degree credentialing task force

The AACP Degree Credentialing Task Force has been diligently examining how academic programmes across the USA support pharmacy career development, ranging from traditional degree pathways to emerging micro-credentials. This initiative seeks to align educational offerings with real-world career outcomes and to identify opportunities where academic programmes can more effectively meet the evolving demands of the healthcare system. By its nature, this work encourages stronger collaboration between national and international education systems, helping to advance credentialing practices in pharmacy education globally.

“A task force led by AACP... mapping across the different or varied types of pharmacists across the profession... with a focus on retooling the preexisting workforce.” – USA

5.5 Unified basic plan for pharmacy education

Led by the Pan American Conference on Pharmaceutical Education (PCFE), this initiative successfully resulted in a unified basic plan for pharmacy education and a regional framework for core competencies specifically designed for South America. This significant initiative helped standardise educational expectations and markedly improved collaboration among pharmacy schools, professional associations, and regulatory bodies across the region. Consequently, it has supported the provision of more coherent and relevant training for pharmacists, aligning their skills with the crucial health priorities of each country. While not formally affiliated with FIP, this initiative aligns closely with the core objectives of the FIP-UNESCO UNITWIN programme, particularly concerning education quality and regional capacity-building.⁸

“The Pan American Conference on Pharmaceutical Education has achieved a UNITWIN objective in the development of the basic plan for pharmaceutical education and the proposal of core competencies... This alignment has not only improved the quality and relevance of pharmaceutical education but also strengthened the capacity of the health workforce in the Americas.” – Colombia

5.6 Université Laval’s sustainable development integration in academic programmes

Université Laval has implemented a commendable university-wide initiative to embed sustainable development principles into all its academic programmes, including pharmacy. A unique tagging system is used to identify courses that meet specific sustainability criteria, thereby ensuring consistent exposure to vital topics such as sustainable health, equity, and innovation throughout the curriculum. This comprehensive approach ensures that pharmacy graduates are not only proficient in science and practice but are also thoroughly educated on their roles as active contributors to long-term community and planetary well-being.

“Laval University is committed to the collective, long-term well-being of the community... A tagging system has been established to identify courses that meet specific sustainability criteria.” – Canada

6 Conclusion and recommendations

In summary, the successful initiatives highlighted within the Region of the Americas demonstrate that educational institutions are actively innovating and responding to systemic challenges through locally relevant yet globally informed approaches.

Participants from various countries, including those facing significant infrastructure limitations or unique demographic challenges like smaller nations or remote communities, emphasised the evolving roles of pharmacists. These discussions highlighted the need for curriculum adjustments to support expanded scopes, especially in primary care, and to integrate digital health and emergency preparedness.

These comprehensive discussions among pharmacy leaders and educators from the Region of the Americas have highlighted both the vast diversity and the shared challenges confronting pharmacy education, science, and practice across the region. While contexts and needs naturally vary from country to country, several common priorities and gaps have distinctly emerged. Key themes articulated across AMR countries included:

- Expanding pharmacists' scope and securing regulatory alignment.
- Adapting education to current and future healthcare demands (e.g., digital health, tailored curricula).
- Strengthening regional collaboration and ensuring effective resource mobilisation.
- Investing in sustained leadership and faculty development.

The establishment of a UNITWIN Centre for Excellence is thus seen as an important step towards unifying and significantly advancing pharmacy practice and education throughout the AMR. The centre is anticipated to serve as a dynamic platform for knowledge exchange, capacity building, and the promotion of best practices, with a strong focus on achieving sustainable impact and maintaining regional relevance.

Recommendations from the region to support the advancement of pharmaceutical science, education and practice in the Americas:

1. Support the establishment of the FIP-UNESCO UNITWIN Centre for Excellence to unify expertise and drive improvements in pharmacy education, science, and practice across the AMR.
2. Develop strategies to address disparities in academic capacity among pharmacy schools, promoting consistent quality, resource sharing, and support for institutions in smaller or less-resourced countries.
3. Promote urgent legal and policy reforms across South American countries to mandate the pharmacist's presence in community settings and enable expanded scopes of practice. Concurrently, advocate for sustainable business and reimbursement models that recognise and fund pharmacists' advanced services.
4. Foster stronger synergistic collaborations among key regional organisations (e.g., FIP, PAHO, CPEF) to avoid duplication and optimise resources. Develop concrete strategies for sustainable human and financial resource mobilisation for regional initiatives.
5. Prioritise the development of robust leadership capacity across all levels of the profession and implement comprehensive faculty development programmes to ensure educators are equipped to lead change and deliver advanced models of care.
6. Create platforms for regional learning exchanges, sharing best practices, tools, and successful initiatives across North, Central, and South America to enable mutual learning and adaptation to local contexts.

7 References

1. United Nations Educational Scientific and Cultural Organization. The UNITWIN/UNESCO Chairs Programme - Guidelines and procedures. 2022. Available at: https://www.unesco.it/wp-content/uploads/2023/11/Unitwin_Guidelines-and-Procedures_March2022-3.pdf.
2. World Health Organization. Countries/areas by WHO region: 2025. [Accessed: 18 June 2025]. Available at: <https://apps.who.int/violence-info/Countries%20and%20areas%20by%20WHO%20region%20-%2012bfe12.pdf>.
3. Pan American Health Organization. Core indicators 2019: health trends in the Americas. Washington, D.C. 2019. Available at: https://iris.paho.org/bitstream/handle/10665.2/51542/9789275121290_eng.pdf.
4. Pan American Health Organization. The burden of noncommunicable diseases in the Region of the Americas, 2000-2021. ENLACE Data Portal. Washington, D.C. 2025. Available at: <https://www.paho.org/en/enlace/burden-noncommunicable-diseases>.
5. International Pharmaceutical Federation (FIP). Key priorities in education and training for pharmacy professionals across 21 countries. The Hague. 2023. Available at: <https://www.fip.org/file/5651>.
6. International Pharmaceutical Federation (FIP). Pharmacy Workforce Intelligence: Global Trends Report. The Hague. 2018. Available at: <https://www.fip.org/file/2077>.
7. Pan American Health Organization. Pharmaceutical Education: 2025. [Accessed: 18 June 2025]. Available at: <https://www.paho.org/es/cpef>.
8. Pan American Health Organization. Evolucion y aportes de la Conferencia Panamerica de Educacion Farmaceutica (OPS/IMT/QR/23-0005). Washington, D.C. 2023. Available at: https://iris.paho.org/bitstream/handle/10665.2/59824/OPSIMTQR230005_spa.pdf.

International
Pharmaceutical
Federation

Fédération
Internationale
Pharmaceutique

Andries Bickerweg 5
2517 JP The Hague
The Netherlands

-

T +31 (0)70 302 19 70

F +31 (0)70 302 19 99

fip@fip.org

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www.fip.org

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