

# FIP-UNESCO UNITWIN Strategic Roadmap: Focus on the Eastern Mediterranean Region

Report from a FIP insight  
board

2025



ACADEMIC  
CAPACITY

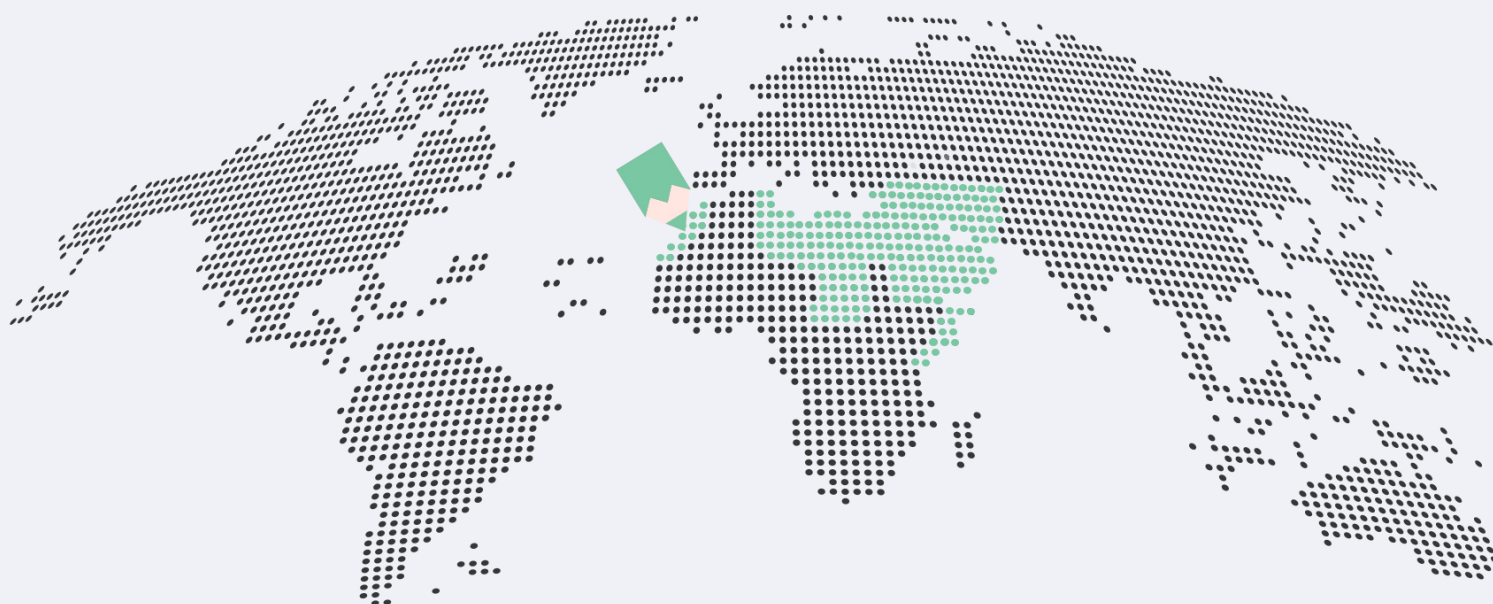


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EASTERN MEDITERRANEAN REGION



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# 1 Acknowledgements

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## 2 About this report

This report synthesises key insights gathered from discussions during an insight board meeting with colleagues from the Eastern Mediterranean Region (EMR) 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 EMR.

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

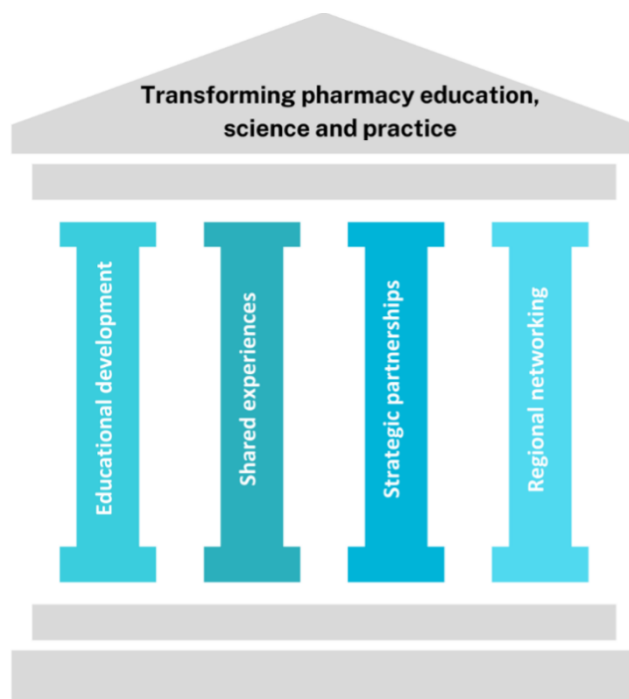
The UNESCO UNITWIN/UNESCO Chairs Programme was established in 1992 to foster international inter-university cooperation and networking to enhance institutional capacities through knowledge sharing and collaborative work.<sup>1</sup> The UNITWIN/UNESCO Chairs Programme (further referred to by UNESCO as “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

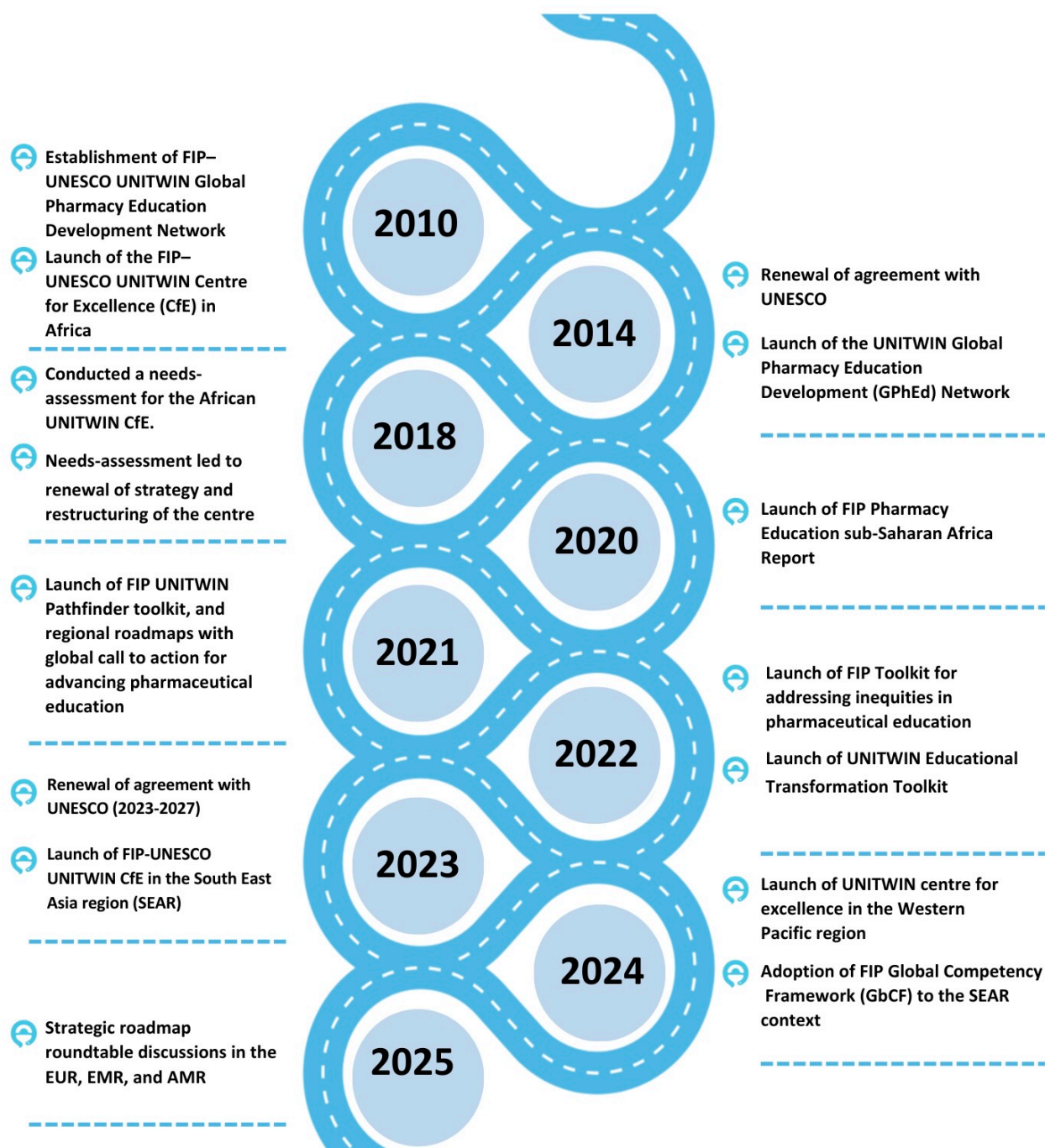


Figure 2: Key milestones for the FIP-UNESCO UNITWIN network

## 3.2 Eastern Mediterranean Region (EMR): Regional snapshot

The World Health Organization Eastern Mediterranean Region (WHO-EMR) comprises 22 countries: Afghanistan, Bahrain, Djibouti, Egypt, the Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Pakistan, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, the Syrian Arab Republic, Tunisia, the United Arab Emirates, and Yemen.

Among all WHO regions, the Eastern Mediterranean is the least populated, with an estimated population of 676 million, accounting for nearly 9% of the global population. In 2018, Djibouti was the least populated country in the region with fewer than 1 million people, while Pakistan had the highest population, estimated at around 208 million. During the same period, population growth rates across the region varied significantly from as low as 1.1% in Morocco to as high as 10.8% in Kuwait.<sup>2</sup> A defining characteristic of the region is its marked heterogeneity in historical background, geopolitical and social contexts, demographic profiles, and the capacities and coverage of health systems. Prolonged war, conflict, and political or social unrest have led to the forced displacement and migration of millions, severely disrupting the structure and functionality of health systems in affected countries. This has, in turn, slowed progress in health promotion and protection, with some areas even experiencing regression.<sup>2</sup>

The pharmaceutical workforce plays a critical role in achieving universal health coverage (UHC) and ensuring the delivery of quality healthcare services. However, significant shortages and imbalances in the distribution of this workforce across countries and regions present considerable barriers to attaining UHC by 2030, as outlined in the United Nations Sustainable Development Goals.<sup>3</sup> According to data from the FIP Multinational Needs Assessment Programme (M-NAP), many EMR countries demonstrate a relatively high density of pharmacists per 10,000 population. This suggests that, comparatively, the region may possess a stronger pharmacy workforce capacity, indicating its potential readiness to scale up pharmaceutical services and contribute to broader health system strengthening initiatives.<sup>3</sup> Despite being the most populous country in the region, Pakistan's case illustrates persistent intra-regional disparities. This underscores the need for context-specific policy and workforce development strategies.

While higher pharmacist density may imply an improvement in service delivery, it does not necessarily translate to equitable access or optimal service quality. Thus, strengthening the pharmaceutical workforce in the Eastern Mediterranean requires a multifaceted approach that also addresses geographic distribution, the quality of pharmacy education, and regulatory oversight to ensure effective and equitable pharmaceutical care delivery. Furthermore, it must be emphasised that the FIP study covered only nine of the 22 countries in the region. Therefore, its findings do not fully capture the scope of pharmacy workforce challenges across the EMR.

The scarcity of critical literature on human resources for health in the EMR further impedes comprehensive workforce planning and intelligence. This gap hinders monitoring and informed decision-making in health sector workforce development. Still, existing literature does highlight a key challenge: the clear imbalance in the distribution and capacity of the pharmaceutical workforce. This underscores the urgent need for improved coordination and workforce monitoring mechanisms at both regional and global levels, with a focus on learning from the experiences of other countries.<sup>4</sup>

In a commentary article, Al-Ghananeem and colleagues observed that regulatory progress in pharmacy practice and healthcare system reforms across the 22 EMR countries has been significantly slower compared to regions such as Europe, Asia, and the Americas. Many EMR countries face substantial cultural, legal, and logistical barriers, and lack a unified approach to accreditation standards, educational outcomes, and curriculum design.<sup>5</sup> To address these shortcomings and meet both patient care and educational needs, Al-Ghananeem and colleagues recommend the implementation of competency-based pharmacy education. This would better prepare pharmacists to serve as integral members of the healthcare system.<sup>5</sup> Additionally, they call for the development of new and improved learning outcomes for clinical pharmacy education, along with a reassessment of prevailing teaching methods and learning environments.

Given the region's limited academic capacity, Al-Ghananeem and colleagues further advocate for the development of locally and regionally relevant accreditation standards and quality assurance guidelines to standardise pharmacy education and practice.<sup>5</sup> They emphasise the need to implement robust continuing professional development (CPD) programmes as a requirement for licensure renewal and recommend strengthening experiential and interprofessional education (IPE) through strategic planning and optimised

use of available resources.<sup>5</sup> To support these efforts, they propose involving key global stakeholders such as the Accreditation Council for Pharmacy Education (ACPE) and the FIP Global Pharmacy Education Taskforce. Collaboration with such organisations would allow EMR pharmacy programmes to benefit from global experiences and best practices.<sup>5</sup>

In response to these identified gaps and challenges, the International Pharmaceutical Federation (FIP), in partnership with UNESCO under the UNITWIN Programme, aims to establish a Centre for Excellence for the region. This initiative is designed to bridge and strengthen pharmacy education, scientific advancement, and workforce development across the EMR. The centre seeks to directly address shortcomings in leadership, digital readiness, crisis resilience, and the implementation of competency-based learning models throughout the region.

## 4 Snapshot: Challenges, emerging needs, and priorities in pharmacy education, science, and practice in the EMR

Insight board participants shared challenges, emerging needs, and priorities in pharmacy education, science, and practice in the EMR, 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 EMR

#### 4.1.1 Impact of conflict, migration and humanitarian crises

Participants highlighted major challenges rooted in the diversity and disparity in education standards across the EMR, further compounded by conflict, migration, and limited resources. These have resulted in significant differences in the quality of pharmacy training and graduate preparedness, prompting calls for a unified regional vision and strategy. Additionally, ongoing and overlapping crises in the region such as political instability, economic collapse, and armed conflict have significantly affected pharmacy education and practice in the region. Participants noted that pharmacy professionals are increasingly expected to expand beyond traditional roles to provide emergency support, mental health care, and ensure continuity of services in severely disrupted healthcare systems.

*“As we know, the EMR faces growing challenges, from conflict to workforce migration.” – Jordan*

*“Over the past few years, Lebanon has been facing one of the most severe and prolonged crises in its history. From the economic collapse, the Beirut port explosion, medication shortages, political instability, and now the impact of local and regional conflicts. Pharmacists have been on the frontlines every step of the way. Beyond dispensing, pharmacists are now navigating emergencies daily, offering guidance, emotional support, and even acting as bridges between patients and broken systems” – Lebanon*

#### 4.1.2 Disparities in education standards and graduate preparedness

Furthermore, participants observed disparities in the quality of pharmacy education and training across the EMR. While some institutions offer innovative and locally relevant curricula, others lack standardisation or quality assurance frameworks. These disparities limit the ability to establish common benchmarks or facilitate students and professionals working across regional borders. There is a recognised need to support schools of pharmacy in quality improvement efforts and to align pharmacy education with international standards through regional collaboration.

*“The major aim is to foster collaboration across academic institutions, practitioners and policymakers to improve pharmacy.” – Jordan*

*“...Another aspect would be to support the schools of pharmacy in their quality improvement plans, leaning on the group of experts already identified ...” - Lebanon*

#### 4.1.3 Misalignment between curricula and emerging health needs

A recurring concern among participants was that current pharmacy curricula are not adequately preparing students for evolving professional roles. Critical areas such as leadership, crisis management, humanitarian pharmacy, digital transformation, and mental health support remain unrecognised in the current curricula. Resistance from some institutions and faculty to update curricular content poses an additional challenge. Participants called for urgent reform to ensure pharmacy education reflects contemporary health system demands and equips graduates for emerging challenges.

*“There is resistance from faculty and colleges’ administration... The pharmacy curriculum should prepare students for new and emerging roles.” – Lebanon*

*“We need to adapt education in Lebanon to include crisis management, humanitarian response, mental health support, and system resilience.” – Lebanon*

## 4.2 Emerging needs in pharmacy education, science and practice in the EMR

Participants across the region identified key gaps and emerging priorities that must be addressed to ensure pharmacy professionals are adequately equipped to respond to both current and future challenges. These include strengthening continuous professional development (CPD), embedding leadership and resilience training, expanding digital competencies, and improving experiential learning. A recurring theme was the call for regionally responsive, forward-looking educational models that align with pharmacists' evolving roles, particularly in contexts of crisis, public health emergencies, and technological advancement.

This section outlines these emerging needs, as identified by stakeholders, to inform the design and implementation of future education and workforce initiatives across the EMR.

### 4.2.1 Continuous professional development (CPD) programmes

Participants consistently highlighted the need for structured and purposeful CPD across the EMR. Rather than fulfilling CPD obligations for compliance alone, stakeholders advocated for programmes that are aligned with pharmacists' career stages and areas of specialisation. Early-career pharmacists need targeted support in areas such as leadership, resilience, public health, and soft skills. A cultural shift towards continuous, self-directed learning was seen as essential for sustainable professional development. The emphasis was on developing a learning ecosystem that promotes innovation and meaningful progression, rather than just ticking boxes.

*“It shouldn't be a random activity. CPD should have structure, timelines, and micro-credentials.” – Jordan*

*“CPD has many frameworks already, but a region-specific plan is needed.” – Qatar*

*“We need to support early-career pharmacists with leadership, mental health, and resilience competencies.” – Lebanon*

*“Let's prepare university graduates for lifelong learning.” – Lebanon*

Additionally, with regards to CPD, stakeholders stressed that future CPD in the EMR should be explicitly aligned with a validated regional competency framework. This would ensure relevance to evolving pharmacy roles and facilitate more strategic, needs-based development. CPD frameworks should also be adaptable to national contexts, enabling each country to customise continuous learning programmes according to its health system and workforce maturity. This alignment is critical in fostering coherence across training, licensure, and career advancement.

*“There should be detailed documents for CPD aligned with national context and development level.” – Qatar*

Stakeholders strongly advocated for the use of digital platforms to expand the accessibility, inclusivity, and relevance of CPD across the EMR. Digital learning was seen as essential for bridging gaps between countries with differing resource levels and infrastructure. Participants emphasised the need for a regional virtual hub that would enable sharing of CPD toolkits, simulation cases, and educational content. Integrating digital health, artificial intelligence, and virtual reality competencies into CPD and undergraduate education was viewed as critical for aligning with global trends and building future-ready competencies in the pharmacy workforce.

*“A virtual regional hub is needed to share CPD toolkits, simulation cases, and educational modules.” – UAE*

*“We envision a digital and in-person network where the EMR can exchange innovations.” – UAE*

*“We need training in AI and virtual reality tools in pharmacy education.” – UAE*

#### 4.2.2 Competency-based training and leadership development

In crisis affected countries such as Lebanon, pharmacists often operate on the frontlines and are required to make swift, high-stakes decisions under pressure. Participants emphasised the need to embed competencies in emotional resilience, mental health support, humanitarian response, and critical decision-making into training and CPD. These skills were identified as essential, not only for ensuring personal well-being but also for maintaining service delivery and patient care during emergencies.

*“Many pharmacists are burning out offering guidance, emotional support, and even acting as bridges between patients and broken systems.” – Lebanon*

*“Mental health, burnout, and resilience are important to highlight in the competencies needed.” – Lebanon*

There was clear consensus among participants that a regionally validated competency framework is vital for the successful functioning of the UNITWIN Centre for Excellence. While global models such as those from FIP offer a strong starting point, stakeholders stressed the importance of adapting these to reflect regional realities, including both generalist and specialist pharmacist roles. A harmonised framework would support national implementation, career development, and quality assurance across EMR countries.

*“We should start with a regional shared framework based on work already done. Many competencies exist; we need to validate them for local needs.” – Lebanon*

Leadership development emerged as a critical yet underrepresented area in pharmacy education. Participants expressed the need to proactively embed leadership training within curricula, fostering strategic thinking and system-level influence among future pharmacists. Strengthening leadership capacity was viewed as essential for advancing the profession and ensuring that pharmacy graduates are equipped to take on roles in policy, regulation, and institutional innovation.

Participants emphasised that developing leadership skills must go beyond optional workshops or extracurricular activities. Instead, it should be systematically integrated into pharmacy programmes through structured modules, interdisciplinary collaboration, and mentorship opportunities. Leadership competencies are especially vital in the EMR context, where pharmacists are increasingly called upon to respond to complex health challenges, contribute to policy dialogues, and lead service transformation. Investing in leadership development not only empowers individuals but also strengthens institutional resilience and supports regional workforce reform. It also aligns with FIP Development Goal 9, which calls for targeted leadership strategies to improve education and professional advancement, and which is tagged to Call to Action 8 under the [global call to action on pharmaceutical education](#).

*“Leadership should be taught and embedded, not assumed.” – UAE*

*“Leadership is very important in the region and developing competencies for leaders would be beneficial.” – Lebanon*

*“There is a lack of strong leadership in pharmacy education and practice that will help drive the academic agenda and profession forward.” – UAE*

#### 4.2.3 Digital competency and data literacy

The stakeholders identified a significant gap in digital health training across pharmacy programmes. Skills in artificial intelligence (AI), data analytics, and virtual tools are increasingly important for modern pharmacy practice, yet these competencies remain marginal in most curricula. Participants called for intentional integration of digital health capabilities, including simulation-based learning, to prepare pharmacists for technology driven roles and improve service delivery.

*“We need training in AI and virtual reality tools in pharmacy education.” – UAE*



*“There is a lack of data-driven initiatives and a centralised way to collect and manage data.” – UAE*

*“We have to see what the industry needs, and we should build our curriculums and our students’ competency according to that.” – UAE*

#### 4.2.4 Experiential learning and regional mobility

Practical training opportunities vary significantly across the region, prompting strong support for the establishment of regional experiential education networks. Participants advocated for cross-border clinical placements, student exchanges, and shared training standards to address gaps in infrastructure and teaching quality. These experiences would enhance learning, promote peer exchange, and improve consistency in practice readiness among pharmacy graduates.

*“Let’s use leading hospitals in each country to host EMR-wide clinical rotations.” – UAE*

*“Can we have some kind of a centre where we can have students not just doing clinical rotations within the same country but maybe we can do an exchange or give opportunities for students to go to other countries” – UAE*

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

Participants articulated five key priorities to advance pharmacy education and practice through the UNITWIN Centre for Excellence. These priorities include strengthening collaborative research, fostering regional collaboration and shared action, developing a unified qualification framework for specialisations, advancing digital health and innovation, and investing in faculty development. Together, these priorities aim to build a sustainable, regionally coherent, and globally relevant platform for pharmacy excellence in the EMR.

#### 4.3.1 Collaborative research

Stakeholders recognised that research engagement among pharmacists in the region remains low and called for deliberate strategies to cultivate a strong research culture. These include establishing mentorship programmes, offering research training and infrastructure support, and promoting collaborative studies aligned with regional health priorities. Dissemination of research through digital platforms, conferences, and academic publications was also recommended. Participants underscored the need for governments and partners to commit funding to elevate research as a foundational pillar of the Centre for Excellence.

*“.... We need to focus more on research, because in the region we find a very, very high percentage of pharmacists don’t go into research, and there is a very low percentage who are into research. This is an aspect that we should focus on, to be a pillar of our work as a centre for excellence.” – Lebanon*

#### 4.3.2 Regional collaboration

There was unanimous agreement on the importance of operationalising regional collaboration through the Centre for Excellence. Participants advocated for the launch of at least one strategic action within the first year. Concrete initiatives such as shared assessments, academic partnerships, and regional benchmarking were cited as best practice. Ongoing knowledge exchanges should be supported through communities of practice and connections with global pharmacy networks, ensuring regional reform is both strategic and collaborative.

*“The major aim is to foster collaboration across academic institutions, practitioners and policymakers to improve pharmacy.” – Jordan*

*“We expect to start the implementation of a Centre for Excellence in pharmacy education in the region. We at least should be able to launch this centre soon this year and start with at least one strategic goal to be implemented by the end of this year.” – Lebanon*

*“... We often talk about collaboration across countries, but it's time to move from discussion to action. In the UAE, three colleges of pharmacy have partnered to implement a unified exit exam. This practical collaboration helps us benchmark practices and ensure our graduates meet the required competency level. We need to pursue similar concrete initiatives both locally and across countries...” – UAE*

### 4.3.3 Qualification framework for advanced and specialist development

A regional qualification framework was proposed to address disparities in pharmacy degrees, specialisations, and recognition of credentials across the EMR. Standardising degree classifications and credit systems would facilitate student and professional mobility and support the development of emerging specialisations. The framework would also enable smoother credit transfer and programme equivalency between countries, thereby enhancing academic integration and regional workforce readiness.

*“We need a regional qualification framework about the degree's classification, the types of degrees, all the credentials, the types of credits that can be exchanged between countries, and the equivalency of the degrees and that this is also something that could be addressed in our Centre for Excellence.” – Lebanon*

### 4.3.4 Digital health and innovation

To remain globally competitive and responsive to evolving health system needs, participants stressed the urgency of embedding digital innovation into pharmacy education. This includes training students and faculty in AI, virtual reality, and data-driven decision-making. Addressing regional disparities in digital capacity and promoting the use of these tools for simulation-based learning and health intelligence are key steps towards preparing future-ready pharmacy professionals.

*“... We also want the introduction of AI in pharmacy practice, and in the training of staff or the training of our students in the universities...” – UAE*

### 4.3.5 Faculty development

Participants placed strong emphasis on the need for continuous faculty development, especially in leadership and pedagogy. They recommended embedding leadership training into pharmacy curricula and aligning it with regional competency frameworks. Faculty development programmes should be responsive to local needs and regularly updated based on data-driven assessments. Building institutional capacity through targeted professional development will be crucial to achieving and sustaining regional education reform.

*“... The most important thing is also to concentrate on the faculty's development programmes, which are CPD for pharmacists and pharmacy practice in our region...” – UAE*



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

Building on the insights from section 4, stakeholders consistently identified a pressing need for a validated regional competency framework that reflects both foundational and specialist pharmacist roles, tailored to regional crises, public health demands, and emerging technologies. Participants noted gaps in curriculum relevance, particularly around leadership, digital health, humanitarian response, and mental health. The quality and accessibility of experiential training varies widely, fuelling calls for regional clinical education networks and exchange programmes.

Moreover, CPD systems were seen as fragmented, often compliance-driven rather than development-oriented. There is an urgent need to shift towards structured, career-aligned CPD models that support pharmacists at every stage, especially early-career professionals. Across all discussions, a unifying theme emerged: the call to modernise pharmacy education and workforce systems through regional cooperation, digital transformation, and a shared vision for excellence. These reforms are seen as foundational to the successful implementation and sustainability of the UNITWIN Centre for Excellence in the EMR.

Participants shared examples of successful practices that reflect the EMR's potential for innovation, collaboration, and leadership in pharmacy education and practice. These initiatives, ranging from sustainability and experiential education to policy integration and faculty development, exemplify the core goals of the proposed UNITWIN Centre for Excellence. Each case illustrates how local strategies can yield regional impact, foster inter-institutional learning, and align with global standards like the FIP Development Goals and Calls to Action. The following highlights demonstrate how the EMR is actively shaping models of excellence that can be adapted and scaled across the region.

### 5.1 Sustainable pharmacy practice: University of Sharjah's Green Pharmacy Take-Back Programme

This initiative connects academia, government, and communities to address medication waste and environmental impact. The Green Pharmacy Take-Back Programme integrates sustainability into education and raises public awareness about responsible medication use. Recognised as a model of environmental stewardship, it aligns with the UNITWIN vision by fostering inter-institutional collaboration and promoting responsible health behaviours beyond the classroom.

*“The University of Sharjah’s “Green Pharmacy Take-Back Programme” successfully integrates sustainability, education, and public awareness. It exemplifies a UNITWIN objective by connecting academia, government, and communities to improve environmental outcomes and responsible medication use. This initiative also fosters inter-institutional learning and has become a model for regional collaboration in environmental stewardship within pharmacy.” – UAE*

### 5.2 Experiential learning: Gulf Medical University's progressive experiential development track

Gulf Medical University's programme provides continuous experiential exposure from Year 1 through to graduation, encompassing hospital, community, and industrial pharmacy. This vertical integration supports competency-based education and meaningful academic-practice partnerships. The model addresses variability in experiential learning across the region and supports early skills development. It is aligned with two FIP Calls to Action: Call to Action 9, enhancing interdisciplinary and interprofessional education and collaboration with key stakeholders, including governments, national and international health and pharmaceutical organisations, and patient advocacy groups; and Call to Action 10, establishment of alliances between universities and professional organisations to develop policies, facilitate educational partnerships, and conduct regional and global faculty exchanges for building capacity and sharing knowledge.

*“Gulf Medical University’s ‘Progressive Experiential Development Track’ is a UNITWIN-aligned model that delivers early exposure to hospital, community, and industrial pharmacy settings. Spanning from Year 1 through final-year clerkships, it enhances competency-based education, supports vertical integration of curricula, and strengthens academic-practice partnerships. This initiative exemplifies the UNITWIN vision by embedding experiential learning, community engagement, and continuous assessment of competencies from the outset of pharmacy education. These echo with key themes under the FIP Calls to Action (particularly Call to Action 9 and 10 on experiential learning and progressive roles).” – UAE*

## 5.3 Policy and crisis response: INSPECT-LB and Lebanon’s National Pharmaceutical Strategy

The Lebanese initiative by INSPECT-LB demonstrates how pharmacists can influence policy and public health during crises. Their contributions to Lebanon’s national pharmaceutical strategy highlight the integration of education, regulation, and practice.<sup>6</sup> Their involvement in FIP’s humanitarian insight board also shaped an international call to action on pharmacists’ roles in humanitarian response, illustrating the EMR’s capacity for global leadership in crisis-driven innovation.<sup>7</sup>

*“As members of INSPECT-LB from Lebanon, we’ve been actively involved in several initiatives, including National pharmaceutical strategy—INSPECT-LB contributed to the development of Lebanon’s national pharmaceutical strategy, working closely with all stakeholders including the Order of Pharmacists in Lebanon—to align education, regulation, and practice in a way that strengthens the profession during complex emergencies.” – Lebanon*

*“More recently, we participated in the FIP humanitarian insight board, which gathered pharmacists and member organisations to reflect on the profession’s role during Lebanon’s recent crises. The result was a newly released call to action [The humanitarian response of pharmacists in Lebanon: Lessons from the 2024 crisis and recommendations for the future].” – Lebanon*

## 5.4 Preceptor development and experiential education: Dubai Medical University

Dubai Medical University, in partnership with the Accreditation Council of Pharmacy Education (ACPE) and the American Association of Colleges of Pharmacy (AACP), established a hybrid Preceptor Development Certificate programme. It upskills clinical preceptors across the UAE and is supported by research evaluating its impact on educational quality. This initiative directly addresses faculty and training capacity gaps, reinforcing the clinical training infrastructure needed for experiential learning excellence.

*“The programme targeted 30 pharmacists serving as preceptors in hospitals from several emirates around the country. Course leaders are experienced preceptors and experiential education directors from USA, Cleveland Clinic Abu Dhabi, and licensed clinical pharmacists’ faculty from DMU. The purpose is to strengthen the experiential education component of all pharmacy programmes in UAE by upskilling the pharmacy preceptors around the country. This year, we are taking another 30 pharmacists. The programme starts from September till January and utilises a hybrid mode of delivery. The team is engaged in a research project evaluating the impact of the preceptor development certificate course on the quality and outcomes of experiential education in UAE.” – UAE*

## 5.5 Competency framework: Jordan’s National Pharmacy Competency Framework

Jordan has successfully developed and implemented a national pharmacy competency framework, now adopted across institutions. This initiative exemplifies regional leadership in standard-setting and curriculum reform. It also aligns directly with UNITWIN goals by supporting consistent training outcomes and offering a replicable model for other countries in the EMR.

*“The Jordanian pharmacy competency framework ... has now been implemented in the institutions and aligns with UNITWIN objectives.” – Jordan*

## 6 Conclusion and recommendations

In summary, these best practices demonstrate that EMR institutions are actively innovating and addressing systemic challenges through locally led, globally aligned initiatives. The showcased examples not only improve pharmacy education and practice but also promote sustainability, crisis preparedness, interprofessional learning, and evidence-informed policy development. By scaling and adapting these models through the UNITWIN Centre for Excellence, EMR countries can accelerate regional progress and contribute meaningfully to the global pharmacy landscape.

Participants from fragile or crisis-affected countries like Lebanon emphasised how pharmacists have stepped into broader public health and humanitarian roles, often without formal preparation. Many advocated for the inclusion of mental health, crisis response, and resilience in both pre-service and CPD programmes. Others raised the need to incorporate environmental sustainability into practice through green pharmacy initiatives and take-back programmes. These were seen not only as ethical imperatives but as vehicles for interprofessional and community collaboration that could unite and advance pharmacy education within the EMR.

Generally, there was excitement and hope about the CfE, especially its potential to connect fragmented efforts and accelerate progress. Participants stressed that implementation should be phased, measurable, and inclusive, starting with one or two high-impact areas and/or projects or programmes that have been successful in one country, and can be replicated or applied in another country to facilitate knowledge and sharing of best practices. They also called for better integration between academia, practice, and industry, noting that many pharmacy graduates feel unprepared for non-traditional career paths. The CfE was seen as a platform to bring these sectors into closer dialogue.

These discussions among pharmacy leaders and educators from the EMR have highlighted both the diversity and the shared challenges facing pharmacy education, science, and practice in the region. While the contexts and needs may vary from country to country, several common priorities and gaps have emerged. The key themes across EMR countries included:

- Strengthening the research culture
- Advancing collaboration and leadership development
- Supporting context-sensitive, competency-based education
- Promoting digital transformation
- Embedding emergency preparedness.

Participants also emphasised the importance of regional frameworks for qualifications and specialisations, as well as the necessity to address local experiences. The establishment of a UNITWIN Centre for Excellence is seen as a critical step towards unifying and advancing pharmacy practice and education in the EMR. The centre is expected to serve as a platform for knowledge exchange, capacity building, and the promotion of best practices, with a focus on sustainable impact and regional relevance.

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

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 EMR.
2. Make research a core pillar for the centre by increasing opportunities for pharmacists to develop research skills, access mentorship, and secure funding.
3. Strengthen regional and international collaboration through joint projects, resource sharing, and the exchange of best practices.
4. Support faculty and practitioner development with accessible, continuous professional development (CPD) and training programmes.
5. Integrate emergency preparedness and humanitarian response into pharmacy curricula to equip pharmacists for crisis contexts.
6. Tailor programmes to local needs, recognising the diversity of contexts within the region.
7. Promote equity and access, ensuring all EMR countries benefit from resources, training, and opportunities.

These recommendations are intended to guide the strategic direction of the UNITWIN Centre for Excellence and to support the ongoing advancement of pharmacy education, science, and practice in the Eastern Mediterranean Region.

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