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# FIP STATEMENT OF POLICY

## Quality assurance of pharmacy and pharmaceutical sciences education

### INTRODUCTION

Globally, pharmaceutical practice, sciences and education are undergoing unprecedented changes as additional roles for pharmacists become increasingly recognised and valued. However, in some countries, policy measures are still necessary for the full integration of knowledge and skills of pharmacists in healthcare systems and other relevant sectors.

As a response, many countries have undertaken a major transformation of pharmacy and pharmaceutical sciences education, and some countries have recently established educational programmes for pharmacists and pharmaceutical scientists.

The International Pharmaceutical Federation (FIP)'s policy statement on quality assurance of pharmacy and pharmaceutical sciences education aims to outline the guiding principles for quality assurance (QA) of pharmacy and pharmaceutical sciences education, with the following specific objectives: to provide a background on FIP's initiatives and milestones in QA of pharmacy and pharmaceutical sciences education, to set the standards for a successful QA in education, and to offer recommendations for key stakeholders in pharmacy and pharmaceutical sciences education. This statement is focusing on pharmacists and pharmaceutical scientists' education and the recommendations in this statement may be adopted and adapted to ensure the QA by the education providers for the pharmacy support workforce. This statement is intended to act as a foundation for QA in education, supported by FIP's existing and forthcoming tools, frameworks and publications on QA. This statement also links with the FIP Statement of Policy on Continuing Professional Development (2022)<sup>1</sup>.

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<sup>1</sup> International Pharmaceutical Federation (FIP). FIP Statement of Policy on Continuing Professional Development (2022)



## Background

According to the World Health Organization's (WHO) [Global Strategy on Human Resources for Health \(HRH\) Workforce 2030](#),<sup>2</sup> health, social and economic development outcomes can be improved by ensuring universal availability, accessibility, acceptability, coverage and quality of the health workforce. Projections developed by the WHO and the World Bank point to the creation of approximately 40 million new health and social care jobs globally by 2030 and to the need for 18 million additional health workers, primarily in low-resource settings, to attain high and effective coverage of the broad range of health services necessary to ensure healthy lives for all.

Without adequate pharmaceutical workforce capacity, it will be difficult to attain advancement in health system deliverables; specialisation in pharmacy practice; innovation in pharmaceutical sciences; provision of safe, effective and quality use of medicines, health technologies and pharmaceutical care services; and, ultimately, achieve universal health coverage.

According to [FIP's pharmacy workforce intelligence: global trends report](#),<sup>3</sup> a 40% growth of the global pharmacy workforce by 2030 is projected, with low-income countries exhibiting the slowest growth in the capacity of pharmacists (pharmacist density — number of pharmacists per 10,000 population). This variable growth is associated with increasing income-based "capacity gap" between countries that will continue to widen into the future. Furthermore, many countries, specifically low-income countries, still face critical shortages of pharmaceutical workforce. In that regard, and in order to continuously collect and track data on the pharmaceutical workforce, FIP established the [FIP Global Pharmaceutical Observatory](#) (GPO),<sup>4</sup> which is an integrated global pharmacy-related information hub, including data on pharmaceutical workforce, that can be used to inform advocacy work, policy development, decision-making, the advancement of pharmaceutical practice, sciences and education, — and, critically, career development through continuing education.

Addressing projected shortages and improving the distribution of pharmaceutical workforce requires adequate workforce planning in the context

<sup>2</sup> Global Strategy on Human Resource for Health: Workforce 2030. (2016). The World Health Organization

<sup>3</sup> International Pharmaceutical Federation (FIP). Pharmacy Workforce Intelligence: Global Trends Report. The Hague: International Pharmaceutical Federation; 2018

<sup>4</sup> International Pharmaceutical Federation (FIP): Global Pharmaceutical Observatory (GPO) (Accessed 22 April 2022)



of the WHO's predictions and expectations for 2030, as well as the FIP GPO workforce data. Additionally, education standards and funding should be established and monitored in national policies. Ultimately, radical improvements in the availability and quality of the workforce are only possible if the higher education and health sectors collaborate by implementing a transformative education agenda grounded in continuous quality improvement, competency-based learning, and quality academic and institutional infrastructure.

### **The significance of quality assurance in pharmacy and pharmaceutical sciences education**

FIP, the WHO, and the United Nations Educational, Scientific and Cultural Organization (UNESCO) jointly recognise the need to build capacity and expertise in quality assurance (QA). Whether nationally or regionally applicable, QA systems must ensure that educational programmes are supported by a research-active environment, are competency-based, and reflect a modern vision for pharmacy practice. Furthermore, pharmacy and pharmaceutical sciences education should ideally be developed through profession-wide consensus and should meet the needs of countries and their societies.

Multiple stakeholders have a strong interest in the quality of pharmacy and pharmaceutical education, notably, governments, policymakers, regulators, professional organisations, academia, practitioners, students, funders of education, accreditation agencies, QA organisations and the public. Well-established national systems of QA for institutions of higher education include internal processes and self-assessment. It is worth noting that while some QA systems may be governmental, some QA systems may have a degree of independence with varying levels of government oversight.

In some countries, there is no QA system at the national level, leaving adherence to international or regional QA standards as an option for higher education institutions, which leads to heterogeneity in the workforce competencies. For example, the [FIP pharmacy education in sub-Saharan Africa report](#)<sup>5</sup> investigated the QA and accreditation systems across seven sub-Saharan African countries, namely, Ghana, Kenya, Malawi, Namibia, Nigeria, Uganda and Zambia. The results showed numerous QA in education challenges, one of which was the unavailability of QA systems in some countries either internally or externally. Furthermore, adherence to international or regional QA standards results in complying with standards that might not necessarily be suitable for the national context.

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<sup>5</sup> International Pharmaceutical Federation (FIP). FIP pharmacy education in sub-Saharan Africa. The Hague: International Pharmaceutical Federation; 2020.



In addition, the world has been facing disasters, crises and conflicts which led to disruption of QA of education. For example, with the COVID-19 (coronavirus disease) pandemic, education has changed dramatically, with the rise of e-learning, where teaching and learning were undertaken remotely and on digital platforms. Distance teaching was applied not only on theoretical courses, but also on experiential training, which has potentially posed more challenges in achieving the learning outcomes.

The COVID-19 pandemic affected not only the teaching and learning methods, but also content, and curricula had to be revised to prepare the pharmaceutical workforce for expanded roles in order to maintain public health during similar crises that may occur in the future. Always maintaining the quality of education, emergency preparedness, response to crises, and managing disruptions in services should be key topics in academic institutions as well as for governments and policymakers.

To assure the quality of education, academic staff need to be updated in their knowledge and skills and have clear professional values and attitudes. Providing [continuing professional development](#)<sup>6</sup> for academic staff can improve the quality of education. Competent academic staff should have the necessary knowledge and skills to practise and teach pharmacy and pharmaceutical sciences as well as to conduct research. Therefore, academic institutions need to support their academic staff in building practical experiences in various aspects, including teaching, research and service.

### **FIP's initiatives on QA in pharmacy and pharmaceutical sciences education**

FIP has been developing initiatives, tools, publications and resources on QA in education, for which an overview can be found in FIP Development Goal 3 — [webpage](#)<sup>7</sup>. Details of all resources are described in this guide to showcase FIP's work to date in QA in education.

FIP, through the former International Forum for QA of Pharmacy Education, which was established within FIP to promote and facilitate international dialogue and collaboration in QA of education, developed the [FIP Global Framework for Quality Assurance of Pharmacy Education](#) (QA framework) in 2008<sup>8</sup> to identify the core principles and elements considered essential for an effective approach

<sup>6</sup> The International Pharmaceutical Federation. FIP Development Goal 9: Continuing professional development strategies. <https://developmentgoals.fip.org/dg9/> (Accessed 15 April 2022)

<sup>7</sup> The International Pharmaceutical Federation. FIP Development Goal 3: Quality Assurance. <https://developmentgoals.fip.org/dg3/> (Accessed 23 August 2022)

<sup>8</sup> A Global Framework for Quality Assurance of Pharmacy Education. International Pharmaceutical Federation Pharmacy Education Taskforce. 2008.



to QA of pharmacy education. The QA framework was offered as a tool to facilitate the establishment of QA systems in countries where no such formal systems exist and to improve existing systems. The QA framework could also be applied on continuing education activities, aligned with the needs-based education concept.

In 2014, the QA framework was updated to [version 2](#), which includes indicators and self-assessment questions related to the newly developed Pillars and Foundations of Quality of education (namely, Context, Structure, Process, Outcomes, Impact, Science, Practice and Ethics).<sup>9</sup> The QA framework version 2 is intended as a foundation that can be adapted, adopted and built upon to suit national needs, systems and conditions.

Building on a decade of experience of the former FIP Pharmacy Education Taskforce, in 2016, with the leadership of FIP Education (FIPeD) section, FIP developed three milestones for pharmaceutical education: [FIP Global Vision for Education and the Workforce](#), [FIP Pharmaceutical Workforce Development Goals](#) (PWDGs), and [FIP Nanjing Statements on Pharmacy and Pharmaceutical Sciences Education](#). [These milestones](#) include clusters on QA and aim to transform pharmaceutical education.<sup>10</sup>

With [FIP's Global Vision for Education and the Workforce](#),<sup>10</sup> FIP promotes models of education and training to ensure pharmacy workforce has access to the highest quality education and training experiences. Furthermore, [FIP Pharmaceutical Workforce](#)<sup>10</sup> PWDG 3 – [Quality assurance](#) indicates that countries should have transparent, contemporary and innovative processes for the QA of needs-based education and training systems. Additionally, QA has been identified as one of the eight clusters of the [FIP Nanjing Statements](#).<sup>10</sup> The QA cluster refers to the key aspects and mechanisms to identify opportunities for and make improvement in pharmacy and pharmaceutical sciences education to ensure achieving sustainable performance and suitable competencies of the future workforce.

Building on the FIP PWDGs, FIP launched the [21 FIP Development Goals](#)<sup>11</sup> (FIP DGs),<sup>10</sup> which bring workforce, practice and science together into one pharmacy transformative framework in alignment with wider global imperatives such as

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<sup>9</sup> Quality Assurance of Pharmacy Education: the FIP Global Framework 2nd Edition. International Pharmaceutical Federation. The Hague, The Netherlands. 2014.

<sup>10</sup> International Pharmaceutical Federation (FIP). Transforming Pharmacy and Pharmaceutical Sciences Education in the Context of Workforce Development. The Hague: International Pharmaceutical Federation; 2017

<sup>11</sup> International Pharmaceutical Federation (FIP). The FIP Development Goals: Transforming global pharmacy. The Hague: International Pharmaceutical Federation; 2020.



United Nations Sustainable Development Goals and WHO Global Strategy on HRH Workforce 2030. The FIP DG 3 “workforce” element targets the global availability of transparent, contemporary and innovative processes for the QA of needs-based education and training systems. FIP identified mechanisms for implementing the “workforce” element of FIP DG3.

The global leads of the ONE FIP Hub Development Goal 3, former FIP Workforce Development Hub global leads, is developing a QA in education self-assessment tool for pharmacy and pharmaceutical sciences education, planned to be published in 2023. The tool can be used to better understand the status of QA of pharmacy and pharmaceutical sciences education programmes around the world, as well as to plan the implementation of any change that may upscale the standards of the education and training that they deliver. Furthermore, the tool will help in identifying areas of improvement and offer recommendations at a global level to continuously improve the QA of pharmacy and pharmaceutical sciences education.

FIP urges countries to comply with its global standards, statements, tools and frameworks on QA by adopting or adapting them to their national context. By using FIP DGs, Nanjing statements, the QA self-assessment tool and QA framework as guiding tools, FIP identifies the needs and priorities in QA of its academic and education community, namely members of the [FIP Academic Pharmacy Section](#), [FIP Academic Institutional Membership](#) and [FIP-UNESCO UNITWIN networks](#). Through a needs-based approach, FIP DG3 as a goal and its mechanisms could be implemented across countries and regions.

To support the development of an adequate and appropriate pharmaceutical workforce and to deliver competency-based education, a QA system should:

- Be based on standards that recognise and address the internal and external contexts (political, legal, social, economic, cultural, etc.) and the potential future professional advancements in pharmacy and pharmaceutical sciences education.
- Reflect the vision for pharmaceutical practice, sciences and education that has been developed by allowing appropriate input from all stakeholders, including other healthcare professionals, researchers, students, the public and patients.
- Ensure inclusiveness of pharmaceutical sciences, clinical pharmacy, policy and regulatory components of the practice, research, and innovation, as well as the practical experiences in experiential learning.
- Ensure that pharmacy and pharmaceutical sciences education programmes are supported by evidence-based research to meet the social determinants of health, and the needs of the country.
- Be fair, accessible, inclusive, transparent, unbiased and based on ethical values in its development and implementation.



- Promote and foster outcomes-based evaluation, self-assessment and continuous quality improvement, based on outcomes-based standards, as well as institutional structures and processes, and employability.
- Be socially accountable to society and appropriate governmental authorities.
- Be supported by accreditation systems and processes for quality continuing educational programmes.

**AGAINST THIS BACKGROUND, FIP OFFERS RECOMMENDATIONS TO KEY STAKEHOLDERS OF PHARMACY AND PHARMACEUTICAL SCIENCES EDUCATION, AS FOLLOWS:**

**Governments, policymakers, regulatory and quality assurance organisations should:**

1. Ensure the continuous development of workforce quality through the delivery of adequate and appropriate education and training.
2. Implement fair, effective, transparent, and socially accountable policies, procedures and key performance indicators for QA of pharmacy and pharmaceutical sciences education and training, which have been developed with broad stakeholder involvement, including the public.
3. Strengthen the quality of educational institutions and their faculty members through accreditation and certification of diplomas and degrees awarded by educational institutions to the pharmaceutical workforce.
4. Align investments in quality education, academic and institutional infrastructure with the health systems and population needs.
5. Establish mechanisms to ensure the quality of experiential education and practice sites, and that they align with the requirement of the educational programme.
6. Promote research and systems that allow innovation and collaboration among institutions, while maintaining full compliance with standards of quality.
7. Coordinate the development and implementation of risk management frameworks and emergency preparedness action plans for potential disruption of pharmacy and pharmaceutical sciences education during crises.
8. Establish and maintain regulatory mechanisms to assure educational preparedness and entrustable professional activities of pharmacists and



pharmaceutical scientists as well as adequate continuous professional development activities.

**FIP member organisations should:**

1. Collaborate with all key stakeholders to develop, revise, and implement a national vision for pharmacy practice and education based on current and future needs, considering potential future professional advancements.
2. Establish and validate national core and specialised competency frameworks, in collaboration with relevant stakeholders, such as the labour market, academics, health-related authorities and decision-makers.
3. Establish or enhance collaborative working relationships with other organisations to advance health-professional education, including inter-professional educational opportunities, and other quality-related educational initiatives.
4. Encourage members to support and be actively involved in the education of pharmacists and pharmaceutical scientists, including serving as preceptors for students and intern pharmacy practice experiences.
5. Establish mechanisms to ensure the quality of experiential and practice sites, and that they align with the requirement of the pharmacy programme.
6. Adopt and adapt this FIP policy statement on QA when creating the educational programmes and activities for continuing education of practitioners, educators and scientists.
7. Promote a QA approach for continuous education in pharmacy and pharmaceutical sciences (including certification, evaluation and innovations).

**Pharmacy and pharmaceutical sciences academic institutions should:**

1. Establish an institutional strategy for quality education, teaching and learning
2. Establish needs-based educational outcomes that reflect a profession-wide vision for pharmacy practice, pharmacy and pharmaceutical sciences education, considering the current context and potential future





- professional advancements, meet national needs and comply with best practices.
3. Design, implement and assess educational interventions continuously to bring effectiveness to learning and maintain an institutional culture of evaluation for continuous quality improvement.
  4. Comply with national and international accreditation standards to ensure systems are in place to support accuracy of content, learning and development and assessment of students' competencies as well as to ensure transparency, credibility and accountability of education programmes and systems.
  5. Involve all stakeholders, including students, wherever possible, in QA and quality advancement of policies, strategies and activities.
  6. Provide an environment that promotes professional, ethical and effective communication among all relevant stakeholders for QA in pharmacy and pharmaceutical sciences education, including research, business, technical and community partners.
  7. Include emergency preparedness and change management in pharmacy and pharmaceutical sciences education curricula to coordinate efficient and evidence-driven rapid education responses when needed.
  8. Promote research in pharmacy practice, pharmacy and pharmaceutical sciences education to perform an evidence-based quality improvement in pharmacy and pharmaceutical sciences education.
  9. Advance professional practice through community engagement by involving community-based organisations in the development of socially accountable pharmacists who can address the needs of the community.
  10. Establish mechanisms to ensure the quality of experiential education and practice sites in alignment with the requirement of the pharmacy and pharmaceutical sciences education programme.

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**Continuing professional development (CPD) providers should:**

1. Ensure educational programmes are based on the various learning needs and desired competencies relevant to area of practice of pharmacists, pharmaceutical scientists and educators according to local needs, and comply with best practices.
2. Design, implement and assess educational interventions to bring effectiveness to learning.



3. Comply with national and international accreditation standards to ensure systems are in place to support accuracy of content, learning and development, and assessment of pharmacists' abilities to meet performance expectations.
4. Comply with national and international accreditation standards to ensure transparency, credibility and accountability of CPD programmes and systems.
5. Comply with the FIP criteria for providers of programmes to ensure CPD programmes are aligned with the federation's global mission to advance pharmacy, quality requirements and the FIP Development Goals.
6. Comply with the FIP criteria for accreditation agencies to ensure CPD accrediting organisations align with the federations' global mission to advance pharmacy, quality criteria and the FIP Development Goals.

**AGAINST THIS BACKGROUND, FIP COMMITS TO:**

1. Develop international strategies to promote among its members the importance of high-quality pharmacy and pharmaceutical sciences education to ensure an adequate, adaptable, competent and well-distributed pharmaceutical workforce for the provision of accessible, safe and rational use of effective medicines.
2. Promote standards-based global guidance for QA of pharmacy and pharmaceutical sciences education in the context of local needs and practice.
3. Develop key performance indicators to measure the implementation of the workforce element of FIP DG 3.
4. Promote the use of the FIP DG 3 self-assessment tool on QA for academic institutions, member organisations and CPD providers.
5. Promote the use of the FIP QA framework for academic institutions and CPD providers.
6. Support its members to provide further and up-to-date tools and resources on QA.
7. Advocate QA of healthcare education collectively with other healthcare professionals at national and international levels.
8. Support its member organisations to establish policy dialogues with policymakers and regulators in their countries to enable appropriate funding for the quality improvement of pharmacy and pharmaceutical sciences education.
9. Support the exchange of experiences and success stories among its member organisations and countries, with an emphasis on developing countries.



10. Identify and celebrate its members and countries that have successfully developed and implemented effective and efficient QA systems.
11. Encourage international collaboration for further research in QA in pharmaceutical education.

Date of adoption	:	18 September 2022
Proposed by	:	FIP Bureau
This Statement replaces the following previous FIP Statements	:	FIP Statement of Policy Quality assurance in pharmacy education, 2009
This Statement can be quoted by stating	:	FIP Statement of Policy on quality assurance of pharmacy and pharmaceutical sciences education
This Statement references the following FIP Statements and documents	:	International Pharmaceutical Federation. FIP Statement of Policy on Continuing Professional Development. The Hague: FIP, 2022. Available at: <a href="https://www.fip.org/file/5241">https://www.fip.org/file/5241</a>
Implementation of the Statement	:	This Statement will be distributed to the following: FIP Member Organisations, pharmacy educators, education and health-care policy makers, WHO, FIP Regional Forums, professional associations, relevant NGOs, pharmacy and other health practitioner organisations.
Indicators for monitoring the implementation of the Statement	:	Number of institutions that have reviewed and considered implementation of the FIP statement of policy Number of Member Organisations that have used the FIP statement of policy as a reference in discussions with policy makers Number of institutions that have completed the survey in the DG3 QA survey self-assessment tool Number of institutions that have reviewed and considered implementation of the FIP QA framework
Review of the Statement	:	This Statement will be reviewed in the year 2027 for continued relevance or as the Framework is modified.

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