

FIP IMPACT DATABASE: ADVANCED AND SPECIALIST PHARMACY DEVELOPMENT



Advancement of practice and specialisation within the pharmacy workforce has become a critical element of workforce policy formation, as reflected in FIP Development Goal 4 (1), which fosters education and training infrastructures to improve pharmaceutical care and health system outcomes (2).



Evidence from studies indicates that advanced and specialist pharmacy practice contributes to:

- Improved and safeguarded patient safety (6).
- More effective management of complexity in expert practice areas (6).
- Optimised medicine-related services, clinical decision-making, and patient outcomes (7).
- Expanded access to advanced healthcare services (7).

Key FIP publications related to advanced and specialist pharmacy

Through its publications, FIP explores global trends, drivers for advancing pharmacy practice, global frameworks, and implementation that advocate for and support workforce development.



Handbooks and toolkits on advanced and specialist pharmacy include the global competency framework, global advanced development framework, competency-based education in pharmacy and pharmaceutical science, and the global humanitarian competency framework.

Trends in FIP advanced and specialist pharmacy outputs



37 FIP outputs related to advanced and specialist development issues were published between 2017 and 2024 (2).



Reports on advanced and specialist pharmacy represent the most frequently produced outputs, followed by handbooks, frameworks, and other resources (2).

FIP's commitment to supporting advanced and specialist pharmacy development

FIP plays a crucial role in empowering the pharmaceutical workforce to meet global health priorities by:

- Providing access to global frameworks to support countries in structuring workforce development (3):
 - Global Competency Framework (GbCF) for early-career readiness and foundational skills.
 - Global Advanced Development Framework (GADF) to guide progression from foundational levels towards advanced and expert professional practice.
 - Global Competency Framework for Educators (GCFE) to strengthen teaching and training capability (particularly for non-academic sector practitioners).

- Encouraging career development models that reflect local health needs and support evolving scopes of practice (4).

- Promoting the value of specialised expertise in areas such as prescribing, digital health, antimicrobial resistance (AMR), oncology, paediatrics, and mental health (4).

FIP IMPACT DATABASE: ADVANCED AND SPECIALIST PHARMACY DEVELOPMENT



Formal credentialing and certification requirement(s) for advanced and specialist pharmacy

This table compares national approaches to credentialing and certifying pharmacists for advanced or specialised practice, outlining key credential types and certification requirements as part of global efforts to advance pharmacy practice (5).

While most systems include postgraduate learning, supervised training, and formal assessment, the structure and intensity of these requirements differ widely between countries.

Country	Formal credentials	Certification requirement(s)
Argentina	Hospital pharmacy; Community pharmacy; Sterilisation; Industrial pharmacy; Health and legal pharmacy; Nutrition and food analysis; Biopharmacy	Accredited residency; written assessments for experienced pharmacists (5 years); postgraduate diplomas; or University Professor in one of specialty areas
New Zealand	Pharmacist Prescriber; Medicines Therapy Assessment (MTA) Pharmacist; Community Pharmacy Anticoagulation Management Service (CPAMS) Pharmacist; Pharmacist Vaccinator; Medicines Use	Varies across credentials but all require university-taught postgraduate certificates/courses
Portugal	Pharmacist specialised in Clinical Analysis; Pharmacist specialised in Regulatory Affairs; Pharmacist specialised in Hospital Pharmacy; Pharmacist specialised in Pharmaceutical Industry	Examinations and/or internships and/or presentation of a work-related thesis
Singapore	Advanced Pharmacotherapy Specialist in Cardiology Pharmacy; Advanced Pharmacotherapy Specialist in Geriatric Pharmacy; Advanced Pharmacotherapy Specialist in Infectious Diseases Pharmacy; Advanced Pharmacotherapy Specialist in Psychiatric Pharmacy; Oncology Pharmacy Specialist	Relevant postgraduate qualification working experience, USA specialty board certification
South Africa	Primary Care Drug Therapy Pharmacist; Radiopharmacist; Pharmacokineticist; Authorised pharmacist prescriber; Clinical Pharmacist; Public Health Pharmacy and Management	Postgraduate diplomas; or specialised undergraduate track plus work experience
Spain	Hospital Pharmacy and Primary Care; Clinical Analysis and Biochemistry; Clinical Genetics; Immunology; Microbiology and Parasitology; Nuclear Pharmacy; Doctor; Master	Varies across credentials but generally involves an entrance examination and minimum training requirements
USA	National-level: Ambulatory care pharmacy; Nuclear pharmacy; Critical Care; Nutrition Support; Oncology; Paediatrics; Psychiatry; Pharmacotherapy; Certified Geriatric Pharmacist (CGP) State-level: Advanced Practice Pharmacist (California only); Clinical Pharmacist Practitioner (Montana and North Carolina)	Varies across credentials and states but national-level specialty requirements generally include work experience, specialty residence and examination

The above countries are selected examples. For more country examples refer to this peer-reviewed article: **“Trends in advanced practice and specialisation in the global pharmacy workforce: a synthesis of country case studies (2020)”**
(For additional information on advanced and specialised practice, please refer to the **Global Situation Report (Chapter 2C)**.)

FIP IMPACT DATABASE: ADVANCED AND SPECIALIST PHARMACY DEVELOPMENT



Advanced and specialist framework

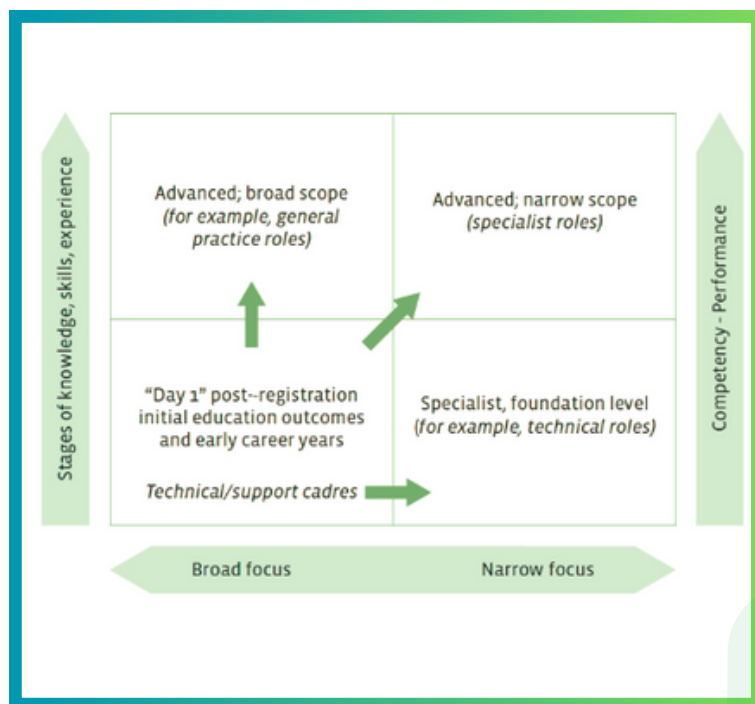


Figure 1: Differentiation between advanced and specialist practice scopes (6,7).

Competency-based approach with a set of transferable and learned behaviours (6).

- One key distinction frames specialisation as a "horizontal" differentiation in scope of practice, while advancement is a "vertical" differentiation in performance level.
- The "core clusters" are fundamental competencies common to all sectors of pharmacy practice, covering key areas such as leadership, management, education, and innovation.
- Each competency area is further defined by three performance levels that demonstrate advanced pharmacy.

Barriers and/or drivers to formalise advanced practice and specialisation

Eight main areas that present barriers and/or drivers to formalise advanced practice and specialisation (5):



Regulations and governmental strategies

Laws, regulations, and national funding strategies play a key role in progressing advanced practice and specialisation.



Educational institutions and academic capacity

Education providers are key stakeholders in driving advanced practice and specialisation.



Human resources and logistics

The lack of human resources and logistical capacity can pose a barrier to sustaining specialisation systems.



Professional leadership and support

The role of professional associations is a critical determinant of the status of advanced practice and specialisation.



Alignment with national health strategies

Strong support and integrated workforce planning strategies are an important driver.



Health system organisation

A decentralised health system can pose a barrier to national implementation of specialisation.



Interprofessional collaboration

Recognition by other health professions is a driver for advanced practice and specialisation.



Multi-stakeholder engagement

Engagement between all stakeholders is essential to developing advanced and specialty practice.

FIP IMPACT DATABASE: ADVANCED AND SPECIALIST PHARMACY DEVELOPMENT



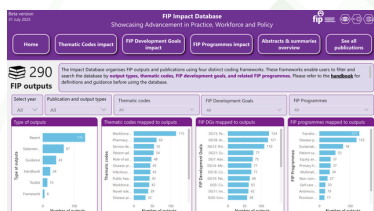
Call to action



What's next?

Explore country examples, frameworks, and evidence to support workforce planning and advanced practice implementation using the Impact Database.

The FIP Impact Database collates, summarises, categorises, and provides access to a complete range of outputs that support the Federation and Members' vision and mission.



The Impact Database is an effective tool to:

- Explore global trends and compare country approaches in advancing practice and specialisation within the pharmacy workforce.
- Find frameworks and guidance for structuring workforce development.
- Support workforce planning and credentialing design for advanced or specialised practice.

How to use the FIP Impact Database

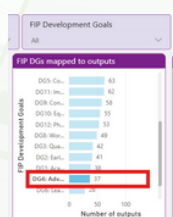
This section provides a step-by-step guide to a specific task on the Impact Database.

Task: Searching for publications focused on "FIP Development Goal 4 (Advanced and Specialist Development)"

Step by step guide



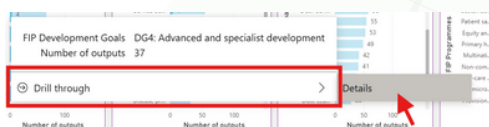
1. Click on the "Home" page.



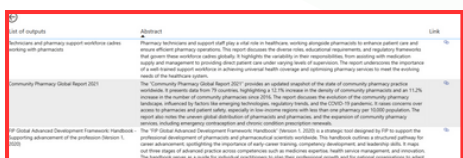
2. Click on the bar/data point for DG4 (Advanced and Specialist Development) to filter using the bar chart of FIP DGs mapped to the outputs.



3. The number of outputs related to DG4 is shown on the top left.



4. Under the bar chart of FIP DGs mapped to outputs, place your cursor (or right-click) on the bar/data point for DG4 and select "drill-through", click on "details" to see the list of related outputs mapped to DG4.



5. From the "drill-through" function, users will be able to view the list of outputs mapped to DG4.



To explore the Impact Database, visit:
<https://gpo.fip.org/fip-impact-database/>

For more information, explore the ID Handbook:
https://www.fip.org/files/content/pharmacy-data/ID_handbook_2025.pdf



FIP IMPACT DATABASE: ADVANCED AND SPECIALIST PHARMACY DEVELOPMENT



References

1. International Pharmaceutical Federation (FIP). Advanced and specialist development [Internet]. The Hague: International Pharmaceutical Federation; 2020 [16 September 2025]. Available from: <https://developmentgoals.fip.org/dg4/>
2. International Pharmaceutical Federation (FIP). Tracking impact: 2025 update on pharmacy trends with a special focus on digital health and advanced practice [Internet]. The Hague: International Pharmaceutical Federation; 2025 [16 September 2025]. Available from: <https://www.fip.org/file/6368>
3. International Pharmaceutical Federation (FIP). FIP global advanced development framework: supporting the advancement of the profession. Version 1 [Internet]. The Hague: International Pharmaceutical Federation; 2020 [17 September 2025]. Available from: <https://www.fip.org/file/4790>
4. International Pharmaceutical Federation (FIP). Global situation report on pharmacy 2025: workforce, practice and policy [Internet]. The Hague: International Pharmaceutical Federation; 2025 [16 September 2025]. Available from: <https://www.fip.org/file/6352>
5. Bader LR, Bates I, Galbraith K. Trends in advanced practice and specialisation in the global pharmacy workforce: a synthesis of country case studies. *Int J Pharm Pract*. 2020;28(2):182–190. doi:10.1111/ijpp.12612
6. International Pharmaceutical Federation (FIP). Advanced practice and specialisation in pharmacy: global report 2015 [Internet]. The Hague: International Pharmaceutical Federation; 2015 [18 September 2025]. Available from: <https://www.fip.org/file/1397>
7. Bates I, Bader LR, Galbraith K. A global survey on trends in advanced practice and specialisation in the pharmacy workforce. *Int J Pharm Pract*. 2020;28(2):173–181. doi:10.1111/ijpp.12611