FIP Global Advanced Development Framework

Supporting advancement of the profession

2019

fip | International Pharmaceutical Federation

Colophon

Contents

Acknowledgements

Executive summary

1. What is the GADF?

1.1. The FIP Global Advanced Development Framework (GADF)[1] is a validated tool intended *to support the professional development and recognition* of the pharmaceutical workforce everywhere. The framework has the primary purpose of identifying broad areas for professional development and advancement for pharmacists and pharmaceutical scientists to develop their careers in a structured manner.

1.2. The GADF builds on the support provided by the FIP Global Competency Framework (GbCF)[2]. The FIP current workforce policy suggests that special attention is paid to "early-year careers" (the immediate post-licensure foundational period of perhaps 1 to 2 years). The GbCF[2] is designed as a focused support structure for our younger professionals. Our current evidence suggests that pharmacists should start professional development engagement with GADF following this early but crucial foundational career stage (see Pharmaceutical Workforce Development Goal 2).

1.3. At present, the GADF currently maps **three broad-based advanced practice stages** across developmental competencies focused on **medicines expertise, leadership capabilities** (e.g. clinical, medicines related activities, teamwork, etc.)**, managing health and professional delivery services and people, training and mentoring,** and **developing evaluation skills and innovation in health and professional service provision**. FIP believes these capabilities are all common components of a rounded, flexible, effective and advanced pharmacist practitioner, and relatable to pharmaceutical scientists too.

1.4. The implementation of the GADF not only supports our individual members in their career progression but is crucial for progress in collectively working towards meeting the FIP Global Vision for Pharmaceutical Workforce & Education and the FIP Pharmaceutical Workforce Development Goals (PWDGs), particularly PWDG 4: Advanced practice and specialisation. It is about fully extending service delivery, be it for our communities and patients or for providing medicines expertise to our nations.

2. How can the GADF be used?

2.1. The GADF is developed by FIP to support its members and stakeholders progress and advance medicines related practice at national and institutional levels. It can be used by individual practitioners and scientists to map and plan their professional development and develop their personal development portfolio and career pathway.

2.2. The GADF is designed to be applicable for all career options in our profession- pharmacists and pharmaceutical scientists. For our national member organisations and partners, the GADF is designed to be adopted and adapted for *any pharmaceutical sector, practice area or field and pharmacists, pharmaceutical scientists and the support workforce* to develop their advanced practice and specialisation and assist with their career progression. FIP is able to support professional leadership bodies directly in this adoption and adaptation process, enabling ownership at national level, through the FIP Workforce Transformation Programme (WTP). Implementing the GADF is a direct contribution to national progression for PWDGs 4, 5, 6, 7, 8, 9 and 11.

2.3. This framework complements the FIP GbCF for foundation or early career practice, which is already being globally implemented by our member organisations as part of the FIP WTP roll-out. The GADF will increase opportunities for transnational collaboration and will enhance learning opportunities between countries, directly linking to the FIP Strategic Plan and our members' priorities.

---

[1] Following review by an Internal Reference Group, FIP is publishing Version Zero (2019) of the GADF for immediate member engagement and consultation over a 12-month period. All feedback will be used to continuously review the global applicability of the GADF. An updated and revised Version 1 will be released in late 2020.

[2] The GbCF is currently under review by FIP expert teams; several new language versions with additional support resource will be available during 2020. Available online: https://www.fip.org/www/streamfile.php?filename=fip/PharmacyEducation/GbCF/GbCF_v1_online_A4.pdf

Part 1 Introduction and background

1.1 Investment in advanced practice development

The global health workforce is the foundation of strong and sustainable health systems, able to deliver quality health care services for better health outcomes [1]. Investing in the capacity, competency and capability of health workers is critical to achieving universal health coverage (UHC) and the United Nations (UN) Sustainable Development Goals (SDGs) [2]. The UN High-Level Commission on Health Employment and Economic Growth, the World Health Organisation's (WHO) Global Strategy on Human Resources for Health, and the 'Working for Health: Five-Year Action Plan for Health Employment and Inclusive Economic Growth (2017–2021)' all call for the unequivocal need for investment in the global health workforce [3-5].

Health systems organisation, demographic and priority changes are influenced by growing and ageing populations, shifts in disease and epidemiological profiles in patients, and scientific advances in technology and medicines. Systems and health workers are therefore required to be responsive to these changes and capable of addressing complex national health and patient needs that require advanced and specialist knowledge and skills. One of the WHO Global Strategy's key objectives describes the imperative to "optimize performance, quality and impact of the health workforce through evidence informed policies on human resources for health"[3]. The UN Commission also calls for investment in lifelong learning so that health care workers "can work to their full potential"[4]. The more recent Astana Declaration [6] by WHO also emphasised the importance of primary health care services in country to help in achieving Health for All. Achieving these objectives is dependent on re-configuring the workforces ensuring that they practice within the full and extended scopes of their practice.

As experts in medicines, pharmacists play a key role in optimising safe and effective use of medicines - a prerequisite to achieving UHC and SDG 3 to 'Ensure healthy lives and promote wellbeing for all at all ages'[2]. Recent decades have witnessed an expansion of pharmacists' roles from being primarily product-centred compounders to becoming competent and capable patient-centred practitioners who deliver expert services related to medicines and their use. In light of this and the growing evidence supporting pharmacists' direct effects on improved patient outcomes [7] there is increasing movement towards professional recognition of advancement of performance, credentialing and quality assured specialisation of pharmacists. It is recognised that the capabilities of 'advanced' pharmacists to deliver enhanced patient care and make clinical decisions are at higher levels than those of entry-level pharmacists [8, 9].

Developing an enhanced scope of practice through advancement, often accompanied (but not always) with a focussed specialisation, will therefore potentially widen the public's access to optimised medicines-related healthcare services. The Astana Declaration of 2018 emphasised the importance of primary health care services in achieving "Health for All", and the role of pharmacists in this mission has never been stronger [10]. Having structured advancement of pharmacy practice is imperative to develop a flexible, adaptable and competent global workforce to meet the challenge of optimization of complex pharmaceutical patient care. Clear career pathways for workforce development, coupled with professional recognition of practitioners, becomes a priority.

1.2 Global evidence and national workforce transformation

Two recent and significant developments in pharmacy education and workforce contribute to our understanding of workforce policy development. In 2015, the International Pharmaceutical Federation (FIP) published a global report on Advanced Practice and Specialisation in Pharmacy[3] [11]. This report was the first to provide a baseline on global trends to formally recognise the advancement of practice, including elements of specialisation and professional recognition [11]. This report outlined summaries from 48 countries and territories, confirming that there was global variation on systems for developing advanced practice and specialisation. This variance included terminology and definitions of advanced practice and specialisation (See Figure 1), developmental

---

[3] FIP WDH is currently analysing a data set of 88 countries on advanced practice and specialisation variables to identify gaps, shortages and development opportunities to accelerate the progress of advancing the global workforce.

frameworks for advancement of practice and specialisation, professional recognition mechanisms and perceived benefits across countries [11]. In addition, evidence from seventeen in-depth country case studies informed our understanding of the impact of national frameworks on advanced practice development & specialisation [11] .

Following the 2015 Report, the FIP subsequently set out a roadmap [12] to facilitate the transformation of pharmaceutical education and workforce by providing the appropriate strategic tools to support and develop education and pharmaceutical workforce[4] at national levels. One of these outcomes was the Pharmaceutical Workforce Development Goals (PWDGs) a globally consented systematic framework to support and drive country-level workforce transformation based on needs assessments [13]. Workforce Development Goals 4 and 5 relate to 'Advanced and specialist expert development' and 'Competency Development' respectively and provide outline indicators for progress, informed by evidence from the 2015 Report (See Table 1). FIP evidence from both data sets clearly show a positive correlation between the level of advanced practice & specialisation development and the existence of a framework for professional recognition.

---

[4] In this document, 'Pharmaceutical Workforce' refers to the whole of the pharmacy related workforce (registered pharmacist practitioners, pharmaceutical scientists, pharmacy technicians and other pharmacy support workforce cadres, pre-service students/trainees) working in a diversity of settings (community, hospital, research and development, industry, military, regulatory, academia and other sectors) with a diversity of scope of practice.
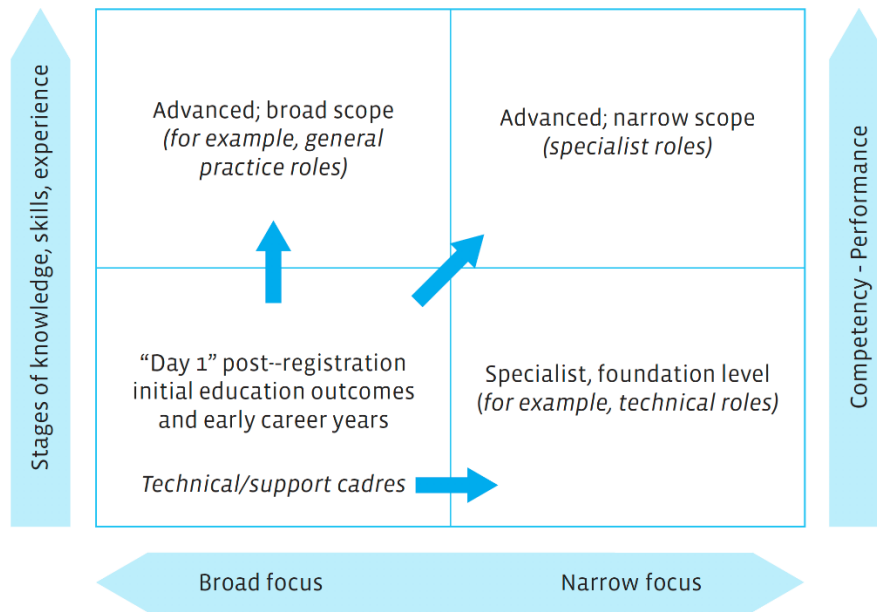
Figure 1: From "Advanced Practice and Specialisation in Pharmacy" [11]

Transforming the global pharmaceutical workforce to meet the primary health care and Universal Health Coverage (UHC) agenda requires a future in which advanced generalist and specialist pharmacists have the flexibility and capability to adapt to emerging patient and health system needs that are essential to achieving UHC. The pharmaceutical workforce is a principal access point for primary health care for people with acute and long-term conditions in addition to preventative and public health services. To have pharmacists working at recognised levels of advancement will improve and safeguard patient safety and more effectively manage complexity in many areas of expert practice.

Additionally, professional recognition of advanced practice improves acceptance by other colleagues in the clinical team; this includes other areas of practice such as research, education or healthcare management. The pharmaceutical workforce does need highly competent specialist pharmacists, but in a global context, we urgently need an expert cadre of generalist pharmacists, with advanced capabilities to support a wide range of long term and acute medicines-driven disease management. "Advanced generalist" is a key workforce goal to enable universal health cover for primary healthcare needs.

Table 1. FIP Pharmaceutical Workforce Development Goals 4 and 5

Cluster	PWDG	PWDG general description Countries/territories and member organisations should have:	Rationale, drivers and potential Indicators
Professional development Focus on the pharmaceutical workforce	4. Advanced and specialist expert development	Education and training infrastructures in place for the recognised advancement of the pharmaceutical workforce as a basis for enhancing patient care and health system deliverables.	Need for a common and shared understanding of what is meant by "specialisation" and "advanced practice" in the context of scope of practice and the responsible use of medicines. Ensure competency and capability of an advanced and expert pharmacist in all sectors (including specialisations extending into industry and administration settings) for greater optimisation of complex pharmaceutical patient care. This may now include prescribing roles within a recognised scope of practice. Systematic use of professional recognition programmes/systems as markers for advancement and specialisation across the workforce, including advanced pharmaceutical scientists.
	5. Competency development	Clear and accessible developmental frameworks describing competencies and scope of practice for all stages of professional careers. This should include leadership development frameworks for the pharmaceutical workforce	Use of evidence-based developmental frameworks to support the translation of pharmaceutical science within scope of practice, across all settings and according to local/national needs. Support professional career development by using tools, such as competency frameworks, describing competencies and behaviours across all settings. Evidence of clear policy that links leadership development (from early years) with competence attainment for the advancement of practice activities.

FIP is committed to facilitate global implementation of the PWDGs, including PWDG4 through the provision of the Global Advanced Development Framework (GADF) as a development tool.

The FIP introduced the FIP Global Competency Framework (GbCF) in 2012 [14]. This framework suggested that although there were some country-specific variations in pharmacy practice, there is a set of competencies which are globally applicable for foundation practice development[5]. Since its introduction, it has been used by some countries to develop their foundational framework [15-17]. In a similar way, some countries have described

development of their advanced competency framework by a process of adopting and adapting a framework from another country. A recent controlled crossover study demonstrated transnational comparability of two national advanced competency frameworks [18]. Therefore, there is a clear opportunity for transnational collaboration on framework development.

Building on the Global Competency Framework (GbCF), FIP recognises the importance of developing a globally applicable Advanced Development Framework, with the aim of producing a mapping and development tool to advance the pharmacy profession. Because it is founded in outcomes of education and training, this framework will have

[5] As described In PWDG2: Foundation Training

interest and applicability for leaders, national organisations, educators, regulators and practitioners who are working towards global advancement of pharmacy practice. This will have important applications for fostering transnational collaboration and enhancing all aspects of our professional scope of practice, across all sectors and settings.

Part 2 Development of the FIP Global Advanced Development Framework (GADF)

The GADF Version Zero development process can be explained in the following phases.

Phase 1: Adaptation of the Advanced to Consultant Level Framework (ACLF)

The original framework used as a platform for the Global Advanced Development Framework (GADF) is the Advanced & Consultant Level Framework (ACLF), developed by the UK-based Competency Development and Evaluation Group (CoDEG). The ACLF was initially developed for pharmacists working in the clinical services [19] and after initial trials was contextually revised to map all sectors and scopes of practice. It was designed as a professional development framework for practitioners who are working at more complex or advanced levels of practice across all scopes of practice; it has been repeatedly tested and validated – and evolved - in different specialities of pharmacy, in a variety of sectors and levels of practice [20-25].

The development of the ACLF itself was conducted through a mixed methodology of grounded qualitative analysis, Delphi approaches for consensus building, controlled trial methodology and statistical applications such as Multiple Correspondence analysis (MCA)[26]. The domains of developmental competencies (expert practice, collaborative working, leadership and management, educational and evaluative competencies) have subsequently and similarly been identified by other professions as core and essential areas for practice development. The ACLF has a history of adoption and adaptation by other countries to develop locally national validated frameworks [25-28]. There is current activity for adaptation in non-English speaking countries, for example Indonesia and Jordan, to develop and test generalisability and validity outwith the original cultural context of the framework.

Phase 2: Validation through country adoption

Between 2018 and 2019, the original ACLF was initially modified in preparation for a nation-wide survey in Indonesia (See Section 4.2.2), as part of its national adoption and adaption process. Formalised feedback on context, language and terminology resulted in a draft GADF which was subsequently validated via a survey of registered pharmacists in Indonesia. More than 6,000 responses regarding usability, relevance and generalisability of the draft GADF were received. Integration of validation responses resulted in an Indonesian version which was subsequently mapped to form the basis of GADF Version Zero. A targeted Jordanian adaptation, using similar methodology, is planned for 2020.

Following the general release of GADF Version Zero, FIP will be offering the framework for ongoing global validation. See Part 4 of this Handbook for country experiences on adopting and adapting the GADF.

Phase 3: Expert engagement with the FIP Internal Reference Group

To prepare the launch document for the Global Advanced Development Framework (GADF) Version Zero, an engagement process with experts drawn from across FIP members was conducted. These members constituted the FIP GADF Internal Reference Group (IRG) (see acknowledgements for further details). Following a communications and webinar package, an online feedback questionnaire was circulated to gain a cross-cultural data review set. Further iteration, incorporating feedback from this consultation, resulted in production of GADF Version Zero for wider member engagement in Abu Dhabi in September 2019.

Phase 4: External engagement with pharmacy stakeholders

The launch version of the GADF has been extensively reviewed by an FIP expert group (the GADF IRG), but we wish to engage with a broader constituency of practitioners and pharmaceutical scientists to add further validation data for this framework and to ensure it meets general needs as a mapping and development tool. The external stakeholder engagement will evaluate the relevancy and validity of Version Zero and an online continuous survey will be accessible for feedback and comments. Please access the survey[6] to provide your feedback on GADF Version Zero before **1 March 2020**.

Phase 5: Launch of Version 1.0 in 2020

Following completion of the external member stakeholder engagement (Phase 4) and review and

---

[6] Available online: http://bit.ly/FIP_GADF_member_engagement

incorporation of feedback received - combined with the focussed country level validation (Indonesia and Jordan) – the formal GADF Version 1.0 will be launched in 2020. This does not preclude use of the current Version Zero; GADF - regardless of the version - is always available to be adopted and adapted to specific country needs – please contact the FIP Team if you wish to have a targeted project developed. The 2020 Version 1 will have available translations in several languages, such as Spanish, Arabic, French, Portuguese and others; please contact the FIP Team if you have specific translation requirements.

Part 3 Design features of the FIP Global Advanced Development Framework (GADF)

3.1 Principles of GADF

The GADF is intended to be relevant and applicable across a broad range of career options that are available in the pharmacy profession. The educational design is aimed at supporting individual professional portfolio development and should be directly linked to personal career development. The GADF has a primary purpose of supporting structured career development and is therefore grounded in the context of developmental progress, enabling the identification of areas for professional growth and development and supports the development of a professional portfolio of evidence for pharmacy practitioners.

As the GADF is designed to be generally applicable, it does not define job descriptions or a specific scope of practice; it generically and structurally supports the continued professional development of pharmacy practitioners along any chosen career trajectory. The literature supports the principle that the advancement of professional healthcare developmental competencies should include those competencies connected with leadership, managing others, educating and mentoring others and supporting evaluation and innovation in health service provision.

3.2 Clusters and competencies of the GADF

There are currently 6 clusters of developmental competencies included in the GADF. The six clusters are:

1. Expert Professional Practice
2. Working with others
3. Leadership
4. Management
5. Education, Training and Development
6. Research and Evaluation

The first cluster, 'Expert Professional Practice' is adaptable for all sectors and specialities. "Expert practice" should be defined and shaped by the practitioner, within the context of the individual's job and career. The Expert Practice cluster reflects this design principle and is formatted to allow the advancing practitioner to self-define their area of medicines expertise.

The remaining five clusters are generic domains which are applicable and independent of sector of practice or focus. There are 34 competencies located across 6 clusters. Each competency has three defined stages of advancement which will allow a continuum of practitioner development and progression.

The GADF Version Zero is presented in Table 2 below.

Table 2. The FIP Global Advanced Development Framework (GADF) Version Zero

Clusters and competencies	Advanced Stage 1[7]	Advanced Stage 2[8]	Advanced Stage 3[9]
1. Expert Professional Practice Improves standards of pharmaceutical care[10]			
1.1. Expert Skills and Knowledge	Demonstrates general pharmaceutical skills and knowledge in core areas[11]. Plans, manages, monitors, advises and reviews programmes in core areas.	Demonstrates in-depth pharmaceutical skills and knowledge in defined area(s). Plans, manages, monitors, advises and reviews in-depth/complex programmes in defined practice area[12].	Advances in-depth/complex programmes in defined practice area.
1.2. Developing Professional Expertise[13]	Demonstrates accountability in providing professional expertise and direct service delivery[14].	Demonstrates accountability in providing professional services and expertise via a team or directly to groups of patients/clients/users.	Demonstrates accountability in providing professional expertise at a defined higher level[15].
1.3. Reasoning and Judgement Including: Analytical skills, Judgemental skills, Interpretational skills, Problem solving skills, Option appraisal	Demonstrates ability to use skills in a range of routine situations requiring analysis or comparison of a range of options. Recognises priorities when problem-solving and identifies deviations from the normal pattern.	Demonstrates ability to use skills to make decisions in complex situations where there are several factors that require analysis, interpretation and comparison. Demonstrates an ability to see situations holistically.	Demonstrates ability to use skills to manage difficult and dynamic situations. Demonstrates ability to make decisions in the absence of established practice, protocols, evidence or data or when there is conflicting evidence or data.
1.4. Professional Autonomy	Is able to follow legal, ethical, professional and organisational policies/procedures and codes of conduct.	Is able to take action based on own interpretation of broad professional policies/procedures where necessary.	Is able to interpret relevant policy and strategy, in order to establish goals and standards for others within the defined area(s).

---

[7] Advance Stage 1 level broadly describes a pharmacy workforce that performs well, and is at the early stages of advancement

[8] Advanced Stage 2 level broadly describes a pharmacy workforce that is an expert in their area of practice. They are able to manage complex situations and are recognised as leaders locally/regionally.

[9] Advanced Stage 3 level broadly describes a pharmacy workforce recognised as leaders in an area of expertise (nationally, and often internationally).

[10] This standard relates to pharmacy workforce's self-defined area of practice. It is not only for pharmacy workforce providing direct patient care services, but also for pharmacy workforce working in other areas of practice (eg. drug development, regulatory, etc.)

[11] Core areas cover the common areas that any pharmacy workforce would be expected to be familiar with in a similar role at an advanced level.

[12] This is defined by the individual, as per design parameters of the framework.

[13] The pharmacy workforces' area of responsibility and accountability in professional practice (relate to their expert professional practice).

[14] 'Service delivery' relates to the defined area of practice of the individual e.g. health services, educational services, etc.

[15] This may include providing expertise and service delivery nationally, regionally, internationally or at a strategic level.

Clusters and competencies	Advanced Stage 1	Advanced Stage 2	Advanced Stage 3
2. Working with Others Is able to communicate, establish and maintain professionally driven working relationships and gain the co-operation of others			
2.1. Communication Including ability to: Persuade, Motivate, Negotiate, Empathise, provide reassurance, Listen, Influence, And Networking Skills, Presentation Skills	Demonstrates use of appropriate communication to gain the co-operation of relevant stakeholders (including patients, colleagues, and other professions). Demonstrates ability to communicate where the content of the discussion is explicitly defined.	Demonstrates use of appropriately selected communication skills to gain co-operation of small groups of relevant stakeholders within the organisation. Demonstrates ability to communicate where the content of the discussion is based on professional opinion.	Demonstrates ability to present complex, sensitive or contentious information to large groups of relevant stakeholders. Demonstrates ability to communicate in a hostile, antagonistic or highly emotive atmosphere.
2.2. Teamwork and Consultation	Demonstrates ability to work as a member of a team. Recognises personal limitations and refers to more appropriate colleague(s).	Demonstrates ability to work as an acknowledged member of a multidisciplinary team. Accepts expert advice through consultation from within the organisation.	Works across boundaries[16] to build relationships and share information, plans and resources. Sought as an opinion leader both within the organisation and in the external environment[17].

---

[16] Working across boundaries can be described as working across professions, sectors or areas of practice.
[17] Outside of the pharmacy workforce organisation; for example: pharmaceutical services in other organisations, educational institutions regional or national committees.

Clusters and competencies	Advanced Stage 1	Advanced Stage 2	Advanced Stage 3
3. Leadership Inspires individuals and teams to achieve high standards of performance and personal development			
3.1. Strategic Context	Demonstrates understanding of the needs of stakeholders. Practice reflects relevant local, national, regional or global policy.	Demonstrates ability to incorporate relevant local, national, regional or global policy to influence local strategy.	Demonstrates active participation in creating relevant local, national, regional or global policy policies.
3.2. Governance (Standards, Quality and Accountability)	Demonstrates understanding of the pharmacy role in governance[18], and pharmacists are able to implement this appropriately within the workplace.	Influences the planning or development of governance processes, for the team and/or service delivery.	Shapes and contributes to the planning or development of governance processes at a higher level.
3.3. Vision	Demonstrates understanding of, and contributes to, the organisation vision.	Creates vision of future and translates this into clear directions for others.	Convinces others to share the vision at a higher level.
3.4. Innovation	Demonstrates ability to improve quality within limitations of service[19].	Recognises and implements innovation from the external environment.	Takes the lead to ensure innovation produces demonstrable improvement in service delivery.
3.5. Service Development	Reviews last year's progress and develops clear plans to achieve results within priorities set by others.	Develops clear understanding of priorities and formulates practical short-term plans in line with workplace strategy.	Relates goals and actions to strategic aims of organisation and profession.
3.6. Motivational	Demonstrates ability to motivate self to achieve goals.	Demonstrates ability to motivate individuals and/or the team.	Demonstrates ability to motivate individuals and/or teams at a higher level.

---

[18] Governance can be described as frameworks to which an organisation is accountable to improve service quality continuously and to maintain a high standard.
[19] Often requires supervision.

Clusters and competencies	Advanced Stage 1	Advanced Stage 2	Advanced Stage 3
4. Management *Organises and delivers service objectives in a timely fashion*			
4.1. Responding and adapting to national needs	Demonstrates understanding of the implications of national priorities for the team and/or organisation.	Shapes the response of the team and/or organisation to national priorities.	Accountable for the direct delivery of national priorities at a higher level.
4.2. Resource[20] Utilisation	Demonstrates understanding of the process for effective resource utilisation.	Demonstrates ability to effectively manage resources.	Demonstrates ability to reconfigure the use of available resources.
4.3. Standards of Practice	Demonstrates understanding of, and conforms to, relevant standards of practice.	Develops and monitors standards of practice at team level.	Develops and monitors standards of practice at a higher level.
4.4. Managing Risk	Demonstrates ability to identify and resolve risk management issues according to policy/protocol.	Develops risk management policies/protocols for the team and/or organisation, including identifying and resolving new risk management issues.	Develops risk management policies/procedures at a higher level, including identifying and resolving new risk management issues.
4.5. Managing Performance	Follows professional and organisational policies/procedures relating to performance management. Refers appropriately to colleagues for guidance.	Contributes to performance management for a team.	Contributes to performance management at a higher level.
4.6. Project Management	Demonstrates understanding of the principles of project management.	Demonstrates ability to successfully manage a project at team and/or organisation level.	Demonstrates ability to successfully manage a project at a higher level.
4.7. Managing Change	Demonstrates understanding of the principles of change management.	Demonstrates ability to manage a process of change for the team and/or organisation.	Demonstrates ability to promote, initiate and/or lead a process of change at a higher level.
4.8. Strategic Planning	Demonstrates ability to plan and deliver the desired outcomes according to the proposed strategy.	Demonstrates ability to plan and deliver the desired outcomes, while adapting the planning and strategy based on the changes in internal and external environment.	Demonstrates long term and sector wide strategic planning and understanding of organisational politics changes in the external environment.
4.9. Working Across Boundaries (profession/sector/area)	Demonstrates ability to extend boundaries of service delivery within the team.	Demonstrates ability to extend the boundaries of the service delivery across more than one team.	Demonstrates the value of extending service delivery across boundaries in the external environment.

---

[20] Resources can include finances, human, capacity, technology or other resources.

Clusters and competencies	Advanced Stage 1	Advanced Stage 2	Advanced Stage 3
5. Education, Training and Development *Supports the education, training & development of self and others. Promotes a learning culture within the organisation*			
5.1. Role Model	Understands and demonstrates the characteristics of a role model to members in the team and/or organisation.	Demonstrates the characteristics of an effective role model at a higher level.	Is able to develop effective role model behaviour in others.
5.2. Mentorship	Demonstrates understanding of the mentorship process.	Demonstrates ability to effectively mentor others within the team and/or organisation.	Demonstrates ability to effectively mentor outside the team and/or organisation.
5.3. Conducting Education & Training	Demonstrates ability to deliver teaching and feedback effectively according to a learning plan with supervision from a more experienced colleague.	Demonstrates ability to evaluate the learning performance and learning needs of others. Demonstrates ability to plan a series of effective learning experiences for others.	Demonstrates ability to design and manage a course of study, with appropriate use of teaching, learning and study methods.
5.4. Professional Development	Demonstrates self-development through professional development activity.	Facilitates the professional development of others.	Shapes and contributes to the professional development strategy.
5.5. Links Practice and Education	Participates in the delivery of education and training[21].	Participates in structured[22] education and training.	Shapes, contributes to or is accountable for the creation or development of higher education qualification(s).
5.6. Educational Policy	Demonstrates an understanding of current educational policies relevant to workforce development.	Demonstrates ability to interpret national policy in order to design strategic approaches for local workforce education planning and development.	Shapes and contributes to national education and workforce planning and development policy.

---

[21] This can be didactical or experiential.
[22] Structured or formal education and training.

Clusters and competencies	Advanced Stage 1	Advanced Stage 2	Advanced Stage 3
6. Research and Evaluation *Uses research to deliver effective practice. Identifies and undertakes research to inform practice*			
6.1. Critical Evaluation	Demonstrates ability to critically evaluate and review evidence.	Demonstrates application of critical evaluation skills.	Is recognised as a peer reviewer undertaking critical evaluation activities.
6.2. Identifies Gaps in The Evidence Base	Demonstrates ability to identify where there is a gap in the evidence base to support practice.	Demonstrates ability to formulate appropriate and rigorous research questions.	Demonstrates ability to design a successful strategy to address research questions.
6.3. Develops and Evaluates Research Protocols	Demonstrates ability to describe the core features of research protocols.	Demonstrates ability to design a rigorous protocol to address previously formulated research questions.	Demonstrates active involvement in the critical review of research protocols.
6.4. Creates Evidence	Demonstrates ability to generate evidence suitable for presentation at local level.	Demonstrates ability to generate new evidence suitable for presentation at research or professional symposium.	Demonstrates authorship of primary evidence and outcomes in peer reviewed media.
6.5. Applies Research Evidence into Working Practice	Demonstrates ability to apply research evidence into own practice.	Demonstrates ability to apply research and evidence-based practice within the team and/or organisation.	Is able to use research evidence to shape policy/procedure at an organisational and/or local, national, regional and international level.
6.6. Supervises Others Undertaking Research	Demonstrates understanding of the principles of research governance.	Is able to contribute to research supervision in collaboration with research experts.	Is a research project supervisor for postgraduate students.
6.7. Establishes Research Partnerships	Demonstrates ability to work as a member of the research team.	Demonstrates ability to work with others across professional boundaries to conduct research projects.	Demonstrates ability to show leadership within research teams concerning the conduct of research.

Part 4 Strategies for adopting and using the GADF

4.1 Guidance on implementation[23]

The GADF is a tool aimed to support the pharmaceutical workforce – across all and any sector/field – to develop their advanced practice and support career progression. The tool can also be used to assist countries progress advanced practice at the national level by developing national frameworks and support for the workforce. It offers opportunities for transnational collaboration to enhance learning opportunities between countries.

For individual practitioners, the GADF provides a set of developmental competencies that can be used to lead and support their own professional career learning and development. Practitioners identify areas that they may wish to develop across all the competency clusters therefore assisting in formulating a personal development plan to advance their practice.

Nationally, the GADF can be used as a basis for a professional recognition system to signpost and mark the achievement of advanced practice through a credible, valid and nationally consistent process of peer assessment. Formal recognition of practitioners can provide assurance to the public, embedding trust in the role of pharmacists in Universal Health Care (UHC) delivery. By creating a professional recognition system, countries can systematically develop robust and strategic education and training infrastructures for their practitioners [29, 30].

4.2 Country experiences

There are two categories of countries described in this section to provide a full range of cross-regional experiences as examples. The first category is for countries which have already adopted, adapted and are implementing the framework including: Australia, Singapore and United Kingdom, and the second category is for countries that are in process of developing their national frameworks including Indonesia and Jordan.

---

[23] Using the GADF as an advancement on early years and GbCF is recommended. The complete set of developmental frameworks, together with other FIP mechanisms and policy developments, is a basis for the FIP Workforce Transformation Programme

4.2.1 Countries that have adopted, adapted and implemented

Australia

Authors

Ian Coombes, Director of Pharmacy, Royal Brisbane and Women's Hospital, Australia.

Adoption and adaptation background

This work originated in the state of Queensland during the establishment of the Safe Medication Practice Unit (SMPU) which was funded as a result of the Quality in Australian Health Care Study [31]. SMPU had system and workforce development arms. Simultaneously the Australian Health Ministers in 2003 agreed that all patients should have a pharmaceutical review as part of their care and there was an appetite for all healthcare professionals to consider the need to demonstrate competency.

Also, at this time a number of designated areas of speciality practice were developing (and were funded) such as heart failure, emergency, paediatric and cancer care pharmacists. A range of Specialty Interest Groups across Australia, often with contacts in the United Kingdom, started looking at what would be a useful curriculum, road map and developmental framework.

SMPU and CoDEG had a pre-existing agreement for use of the CoDEG General Level Framework (GLF) and this was extended enabling adoption of the CoDEG Advanced and Consultant Level Framework (ACLF).

Overview of development process

At a national level, a group representing all pharmacy bodies in Australia (the Pharmacy Practitioner Development Committee) collaborated to agree an advanced competency framework which was initially separate to the national core competencies for pharmacists. This Advanced Pharmacy Practice Framework (APPF)[24] described generic domains including leadership, management, education, evaluation and research, collaboration and professional practice, mirroring the domains in the CoDEG ACLF. The Queensland experience of the CoDEG ACLF was heavily drawn upon during this process.

The APPF was designated agnostic to area of practice, with individualisation according to area of speciality. The Society of Hospital Pharmacists Australia (SHPA), and the Clinical Oncology Society of Australia worked with medical colleagues to further develop the CoDEG ACLF and the APPF into tools specifically focused on areas of speciality such as palliative care, medicines information, infectious diseases and critical care.

Implementation and forward planning

The APPF was used by the Australian Pharmacy Council throughout 2015 in a pilot process involving evaluation of submitted portfolios of context and impact statements for each advanced competency, accompanied by supporting evidence. Trained evaluators provided feedback to candidates and awarded the credential AdvPractPharm to those pharmacists who achieved stage 3: Advanced. The process was steered by an advisory group including a representative from the UK, who had experience with use of a similar framework.

In 2016 the APPF was incorporated into the latest version of the National Competency Standards Framework for Pharmacists in Australia. This framework now clearly outlines the journey of increasing performance for each domain and competency, as pharmacists develop from student to intern to foundation level and more advanced practitioner.

In 2017, a new group "Advancing Practice"[25] took responsibility for credentialing of more advanced practice in Australia, using the latest competency standards, and revised advanced competencies, as the basis for evaluation.

Whilst the credentialing process continues, the use of the advanced practice framework as a "curricula or road map" has also continued, albeit by informal collaborations of pharmacists working in designated areas. A National Advanced Training residency has been proposed by SHPA, but it is unclear how this will be driven, how practitioners will be assessed and how it will integrate into the national advancing practice credentialing program.

---

[24] Available online:
https://www.advancedpharmacypractice.com.au/publications/

[25] Available online: https://advancingpractice.com.au

The Pharmaceutical Society of Australia has recently released its Pharmacists in 2023[26] and Roles and Remuneration[27] reports. These reports describe a continuum of practice, with progression from general level practice to more advanced levels. For the first time, a clear link has been made between remuneration, and level of advanced practice as described by the competency standards. This progression is already built into career pathways in many hospital settings.

Link to the Framework

National Competency Standards Framework for Pharmacists in Australia[28]

Resources and Publication

1. Jackson S, Martin G, Bergin J, Clark B, Stupans I, Yeates G, Nissen L, Marty S, Gysslink P, Matthews A, Kirsa S. An Advanced Pharmacy Practice Framework for Australia. Pharmacy. 2015 Jun 9;3(2):13-26.
2. Jackson S, Martin G, Bergin J, Clark B, Stupans I, Yeates G, Nissen L, Marty S, Gysslink P, Matthews A, Kirsa S. Understanding advanced and extended professional practice. Australian Pharmacist. 2015:76-9.
3. Coombes I, Kirsa SW, Dowling HV, Galbraith K, Duggan C, Bates I. Advancing pharmacy practice in Australia: the importance of national and global partnerships. Journal of Pharmacy Practice and Research. 2012 Dec 1;42(4):261-3.
4. Jackson S et al. Advanced practice: a survey of current perspectives of Australian pharmacists. Journal of Pharmacy Practice and Research 2015;45:186-92
5. Galbraith K, Ancora Imparo. Journal of Pharmacy Practice and Research 2013;43(3):175-6
6. Coombes I, Bates I, Duggan Cm Galbraith K. Developing and Recognising Advanced Practitioners in Australia: An Opportunity for a Maturing Profession? Journal of Pharmacy Practice and Research 2011;41(1):17-19
7. O'Leary K, Kirsa S, Dowling H, Allinson Y, Coombes I. A Professional Development Framework for Pharmacists. Journal of Pharmacy Practice and Research 2012;42(4):259-60
8. Galbraith K, Coombes I, Matthews A, Rowett D, Bader L, Bates I. Advanced pharmacy practice:

aligning national action with global targets. Journal of Pharmacy Practice and Research 2017;47:131-5

---

[26] Available online: https://www.psa.org.au/advocacy/working-for-our-profession/pharmacists-in-2023/

[27] Available online: https://www.psa.org.au/advocacy/working-for-our-profession/pharmacists-in-2023-roles-and-remuneration/

[28] Available online: https://www.psa.org.au/wp-content/uploads/2018/06/National-Competency-Standards-Framework-for-Pharmacists-in-Australia-2016-PDF-2mb.pdf

Singapore

Authors

Carolyn Ho, Senior Manager, Chief Pharmacist Office, Ministry of Health, Singapore ; **Associate Professor Lita Chew,** Chief Pharmacist, Ministry of Health, Singapore.

Adoption and adaptation background

The pharmacist career pathway framework was developed in 2009. To facilitate implementation of the career pathway framework, there was a need to develop a competency framework in order to map out the level of competency that would be required of pharmacists at different levels of seniority and expertise.

The CoDEG ACLF has been introduced to pharmacists in one of the tertiary hospitals and the competency domains in the ACLF were aligned with pharmacists' scope of practice in Singapore. Hence the decision for the competency framework for pharmacists in advanced practice (APF) was made by adapting the CODEG ACLF.

Overview of development process

In 2010, the Chief Pharmacist's Office collaborated with public healthcare institutions to develop competency standards for pharmacists in advanced practice. The competency standards from CODEG ACLF were adapted for this purpose.

Implementation and forward planning

At Ministry of Health Singapore, the Advanced Practice Framework (APF) implementation plan included the following:

- APF roadshows to introduce the framework to pharmacists across sectors;
- A review of training roadmaps across sectors to understand training gaps and emerging training needs for advanced practitioners;
- Portfolio training workshops to facilitate adoption of the APF;
- Portfolio building toolkit for pharmacists to support the use of APF as a developmental tool;
- Regular engagements with pharmacy leaders and pharmacists for update on progress of APF implementation.

Our future plan for the use of the framework are to:

- Continue to develop education and training infrastructures to enable the implementation of APF at institutional level;
- Develop training pathways for entry-level pharmacists to gear up for APF;
- Conduct reviews on APF communication and implementation plans to monitor and to chart future plans;
- Continue to engage key stakeholders regularly.

Link to the Framework

Competency Standards for Pharmacists in Advanced Practice 2017[29]

Resources and Publication

1. Koh SK, Wong CML, Chan SC, Samarasekera D, Chan YH, Wong HC, Chew LSC. Developing and validating a national Advanced Pharmacy Practice Competency Framework for Singapore. Presented at the FIP World Congress 2018 in Glasgow. 2018.

---

[29] Available online:
https://www.healthprofessionals.gov.sg/docs/librariesprovider3/forms-publications/competency-standards-for-pharmacists-in-advanced-practice-2017-(web-version).pdf

United Kingdom

Authors

Beth Ward, Head of Education Royal Pharmaceutical Society, United Kingdom.

Adoption and adaptation background

In 2011, the Modernising Pharmacy Careers Programme was established in order to undertake a major review and restructure of the way that pharmacist education and training is delivered and funded in England, to allow patients, the public and the NHS to benefit more completely from the unique contribution that pharmacists – as medicines experts – make to health, wellbeing and patient safety. A key workstream of this programme centred around the need for a review of development frameworks that were currently in use - the ALF and the GLF.

Overview of development process

An Independent evaluation of competency frameworks within pharmacy education in the UK (ALF and GLF) was undertaken, funded by the Department of Health. Recommendations were made to adapt and adopt across all areas of pharmacy practice. The Royal Pharmaceutical Society established an expert group to review the existing ACLF in order to establish a core for practitioner development within the RPS Faculty. The work was tied to providing pragmatic evidence for areas of expertise (mapped to professional curricula) that reflect practice across all sectors and scope of practice, including leadership and science.

Implementation and forward planning

The ALF was used as the basis for Department of Health recommendations for the development of the new NHS consultant pharmacist post guidelines and was renamed as the more widely known ACLF (see DoH "Guidance for the development of NHS consultant pharmacist posts"). The subsequent Advanced Pharmacy Framework has been used as the basis of the RPS Faculty (advanced practice professional development and recognition programme) and updated Consultant Credentialing pathways in England, Scotland and Wales. The APF is also used by Universities and training providers across the UK in the development of E&T

programmes aimed at developing and advancing the pharmaceutical workforce.

Our future plan for the use of the framework are:

- Continued use as the basis of advanced and consultant credentialing processes.
- Continued use as the basis of professional development and education programmes for the pharmacy workforce.

Link to the Framework

The RPS Advanced Pharmacy Framework (APF)[30]

Resources and Publication

1. Kopelman P, Bates I, Ward B, Duggan C. The RPS Roadmap to Advanced Practice. Royal Pharmaceutical Society. 2016.
2. Duggan C. RPS Faculty: development opportunities and evidence of progression. The Pharmaceutical Journal. 2013.

---

[30] Available online: https://www.rpharms.com/Portals/0/RPS%20document%20library/Open%20access/Frameworks/RPS%20Advanced%20Pharmacy%20Framework.pdf

4.2.2 Countries that are currently adopting & adapting the framework

Indonesia

Authors
Roy Himawan, IAI-FIP WTP National Professional Officer Chair, Indonesia; Desak Ernawati, IAI-FIP WTP National Professional Officer Vice Chair, Indonesia; Rasta Naya, IAI-FIP WTP National Professional Officer Secretary, Indonesia; Franciscus Kristianto, IAI-FIP WTP National Professional Officer Vice Chair, Indonesia; Sherly Meilianti, FIP Research Analysis of Workforce Transformation Programme, Indonesia.

Adoption and adaptation background
From our preliminary study, we found that there was a need to develop advanced pharmacy practice from the perspectives of Indonesian pharmacists. It was found that pharmacists need to have a clearer career pathway and to have supporting ecosystems to motivate themselves throughout their career. We searched the literature on developing a framework for advanced practice. But we could not find much literature on advanced practice framework. The most prominent publication about an advanced practice that we found was from the FIP report in 2015 about Advanced Practice and specialization. From this report, we knew that some countries developed their advanced framework based on CoDEG ACLF. Then we decided to adopt and adapt CoDEG ACLF as it has been used widely in other countries around the world as a starting point.

Overview of development process
The adoption and adaptation of the framework consisted of two phases. The first phase was the translation phase using forward and backward approach. Two pharmacists translated the framework into Bahasa Indonesia, and we conducted a discussion between our translators (reconciliation phase), to discuss which Indonesian version of the framework we used. The reconciliation phase was conducted by using the approach from Koller et al. (2012) [32]. Following that, the agreed Indonesian version of the framework was translated to the English language by another pharmacist. The back-translated version was compared to the original translation by conducting a discussion with a native English speaker who is the expert developing the original framework. There was no major issue found; however, some cultural context raised during the discussion; for example, terminology of governance was not available in Indonesia.

The second phase after the translation was the adoption and adaptation of the Indonesian version of the framework. We did a series of consensus panel discussions to identify issues and concepts related to the clarity of the adopted and adapted version of CoDEG ACLF. We also aligned this framework with the previous evidence and policy that we have, e.g. Indonesia Competency Standard, career progression for governmental employee, and credentialing system plan for industry and hospital setting in Indonesia.

We acknowledged that member engagement is one of the fundamental principles for producing a framework. For everything that we have planned and conducted, we always ensure that members (Indonesian pharmacists) are engaged and informed either through social media or through the official website of Indonesian Pharmacists Association (IAI). We conducted a nation-wide survey to ask Indonesian pharmacists to use the framework to assess their current stage in their practice (framework was converted into an online questionnaire). We distributed the survey; within two months, we received over six thousand pharmacists involved in the study showing interest from Indonesian pharmacists to use this framework. An initial analysis of the survey results added more validity of the framework where the framework is able to differentiate the career stages of Indonesian pharmacists.

Implementation and forward planning
Our next step is to incorporate all feedback from the members to establish the updated version of Indonesian framework. Then, we are planning to develop a professional recognition system by using this framework as a tool for advancement. We are also planning to do some intervention related to provision of education and training and we would like to see how this affect in the future, e.g. 3 years' time.

Link to the Framework Draft

Advanced Level Framework in Indonesia[31]

---

[31] Available online: http://iai.id/uploads/alfredeem/penyelarasan-alf-dengan-skai.pdf

Jordan

Authors

Saja Naher, JPA-FIP WTP National Professional Officer, Jordan; Lina Bader, FIP Lead for Workforce Transformation and Development, Jordan.

Adoption and adaptation background

The Jordanian Pharmacist's Association, the national professional body for pharmacists, has entered a formal partnership with the FIP through the FIP Workforce Transformation Programme. The FIP-JPA WTP programme of work aims to identify workforce development needs in Jordan whilst also working on the development of an advanced practice framework for Jordan, which was identified as a need in the absence of any advanced workforce development and professional recognition system.

Overview of development process

The JPA is currently working on planning the adoption and adaption of GADF Version Zero, informed by the progress made & methods used in Indonesia. The steps, generally will be as follows:

1. Version Zero has been translated to Arabic and the translation is undergoing validation.
2. Validation & review of the framework through a series of consensus panel discussions.
3. A nationwide survey with JPA members (registered pharmacists) to identify issues and concepts related to the clarity.
4. First version of the National Advanced Development Framework for Jordan.

Implementation and forward planning

For sustainable uptake, a phased nationwide implementation is planned, Including the piloting of the framework similarly to what has been done in Australia. Integration of this plan with CPD strategies is essential.

Part 5 Next Steps for the GADF Version Zero

FIP*Ed*, though the Workforce Development Hub, wishes to engage with a broader constituency of practitioners to validate this framework to ensure it will meet general needs as a mapping and development tool. The purpose of this engagement is to evaluate the relevancy and validity of the current version. For this reason, an online survey form has been created to widen the engagement of this tool. The survey is available through this following address:

http://bit.ly/FIP_GADF_member_engagement.

We invite all pharmacists and pharmaceutical scientists to engage with this survey.

If you have any questions on this project, please do not hesitate to contact us through our email: education@fip.org . We thank you for your interest in this unique global development project. We hope this framework will have a benefit for educators, regulators and practitioners in all countries to advance their workforce.

Part 6 Summary and conclusions

As pharmacists' roles become more complex, with greater responsibilities and accountabilities for pharmaceutical care, clear pathways for the pharmaceutical workforce and professional recognition of practitioners becomes an important consideration. This handbook describes the development of FIP Global Advanced Development Framework from the CoDEG Advanced and Consultant Level Framework which can be used as a tool for countries to advance their pharmaceutical workforce. This handbook also outlines some country case studies on the adoption of the CoDEG Advanced and Consultant Level Framework, demonstrating country level examples of implementation of the framework. FIP Education Initiative will continue to progress this area to provide tools and guidance on how to use this framework to advance pharmaceutical workforce. The GADF will increase opportunities for transnational collaboration to enhance learning opportunities between countries.

The FIP has recently launched the Workforce Transformation Programme, following a decade of innovation, evidence, consensus & collaborative working, to set out milestones and outcomes for education & workforce development, and link directly with a global vision for transforming pharmacy. It is a global programme to support FIP's member organisations and stakeholders in leading the advancement of their national workforce. Importantly, it is designed to support countries in developing needs-based, national workforce development strategies, workforce planning and actions. The GADF supports the FIP Workforce Transformation Programme (WTP) as a tool which can be used by countries to advance their workforce.

Annexes

Annex 1. Reference Lists

[1] Anand S and Bärnighausen T. Human resources and health outcomes: cross-country econometric study. Lancet 2004; 364: 1603-9.

[2] United Nations (UN). Sustainable Development Goals. UN, 2015.

[3] World Health Organization (WHO). Global Strategy on Human Resources for Health: Workforce 2030. Geneva: WHO, 2016.

[4] World Health Organization (WHO). Final report of the expert group to the High-Level Commission on Health Employment and Economic Growth. Geneva: WHO, 2016.

[5] World Health Organization (WHO). "Working for Health": A Five-Year Action Plan for Health Employment and Inclusive Economic Growth (2017–21). Geneva: WHO, 2017.

[6] World Health Organization (WHO) and United Nations Children's Fund (UNICEF). Declaration of Astana Global Conference on Primary Health Care. Geneva: 2018.

[7] Nkansah N et al. Effect of outpatient pharmacists' non-dispensing roles on patient outcomes and prescribing patterns. Cochrane Database of Systematic Reviews 2010; Cd000336.

[8] Coombes I et al. Advancing Pharmacy Practice in Australia: the Importance of National and Global Partnerships. Journal of Pharmacy Practice and Research 2012; 42: 261-263.

[9] Giberson S et al. Improving Patient and Health System Outcomes through Advanced Pharmacy Practice: A Report to the U.S. Surgeon General. U.S. Public Health Service, 2011.

[10] The Lancet. The Astana Declaration: the future of primary health care? Lancet 2018; 392: 1369.

[11] International Pharmaceutical Federation (FIP). Advanced Practice and Specialisation in Pharmacy: Global Report 2015. The Hague: The Netherlands: International Pharmaceutical Federation, 2015.

[12] International Pharmaceutical Federation (FIP). Transforming Our Workforce. The Hague, 2016.

[13] International Pharmaceutical Federation (FIP). Transforming Pharmacy and Pharmaceutical Sciences Education in the Context of Workforce Development. The Hague: FIP, 2017.

[14] International Pharmaceutical Federation (FIP). FIP Education Initiatives Pharmacy Education Taskforce A Global Competency Framework Version 1. The Hague: International Pharmaceutical Federation, 2012.

[15] International Pharmaceutical Federation (FIP). 2013 FIPEd Global Education Report. [online] 2013.

[16] The Pharmaceutical Society of Ireland. Core Competency Framework for Pharmacists. Dublin: Pharmaceutical Society of Ireland, 2013.

[17] Brown AN et al. Validated competency framework for delivery of pharmacy services in pacific-Island countries. Journal of Pharmacy Practice and Research 2012; 42: 268-272.

[18] Udoh A et al. Transnational comparability of advanced pharmacy practice developmental frameworks: a country-level crossover mapping study. Int J Pharm Pract 2018;

[19] Competency Development and Evaluation Group (CoDEG). Developing the ACLF. 2005.

[20] Department of Health. Guidance for the development of consultant pharmacist posts. 2005.

[21] Howard P. A survey of NHS consultant pharmacists in england. European Journal of Hospital Pharmacy: Science and Practice 2012; 19: 251-252.

[22] McKenzie C et al. Developing a process for credentialing advanced level practice in the pharmacy profession using a multi-source evaluation tool. Pharmaceutical Journal 2011; 286:

[23] Competency Development and Evaluation Group (CoDEG). GLF and ACLF Map. 2019.

[24] Galbraith K et al. Advanced pharmacy practice: aligning national action with global targets. Journal of Pharmacy Practice and Research 2017; 47: 131-135.

[25] Coombes I et al. Developing and Recognising Advanced Practitioners in Australia: An Opportunity for a Maturing Profession? J. Pharm. Pract. Res 2011; 41:

[26] Meadows N et al. Developing and validating a competency framework for advanced pharmacy practice. Pharmaceutical Journal 2004; 273: 789-792.

[27] Jackson S et al. An Advanced Pharmacy Practice Framework for Australia. Pharmacy (Basel) 2015; 3: 13-26.

[28] Koh SK et al. Developing and validating a national Advanced Pharmacy Practice Competency Framework for Singapore. In: eds. FIP World Congress. Glasgow: 2018:

[29] Joint Partners Credentialing Task Group (JPCT). Professional recognition and professional advancement: For our practitioners, for our profession and for our patients. London: 2013.

[30] Low J et al. Advanced and Extended Pharmacy Practice. Canberra: 2013.

[31] Wilson RM et al. The Quality in Australian Health Care Study. Med J Aust 1995; 163: 458-71.

[32] Koller M et al. The process of reconciliation: evaluation of guidelines for translating quality-of-life questionnaires. Expert Rev Pharmacoecon Outcomes Res 2012; 12: 189-97.

Annex 2. Pharmaceutical Workforce Development Goals (PWDGs)

Cluster	PWDG	PWDG general description. Countries/territories and member organisations should have:	Rationale, drivers, and potential indicators
Academy Focus on the schools, universities and education providers	**1|⊖ ACADEMIC CAPACITY** 1. Academic capacity	Engagement with pharmaceutical higher education development policies and ready access to leaders in pharmaceutical science and clinical practice in order to support supply-side workforce development agendas.	Increase the capacity to provide a competent pharmaceutical workforce by developing initial education and training programmes that are fit for purpose, according to national health resource needs (clinical practice, pharmaceutical science areas and stakeholders across all cadres). Develop new and innovative ways to attract young pharmacists into all areas of pharmaceutical practice and science (e.g. encourage young pharmacists to consider careers in clinical academia, as preceptors/trainers, in industrial pharmacy, regulatory sciences, nuclear and veterinary pharmacy, among others). Capacity building should include the ability to meet minimum national standards of facilities, educators and student support in order to ensure access to quality education for all students. Enhance interprofessional education and collaboration with key stakeholders, including governments, national and international pharmacy/pharmaceutical organisations and patient advocacy groups to achieve sustainable solutions for capacity development. The clinical academic educator workforce needs more attention to training, career development and capacity building, which must, importantly, include research capacity enhancement.
	2|⊖ FOUNDATION TRAINING 2. Foundation training and early career development	Foundation training infrastructures in place for the early post-registration (post-licensing) years of the pharmaceutical workforce as a basis for consolidating initial education and training and progressing the novice workforce towards advanced practice.	Create clear and purposeful education and training pathways/programmes to support post-registration (post-graduation) foundation training (clinical practice and pharmaceutical science areas). Develop early career maps and frameworks to support a seamless transition into early career practice and towards advanced practice. Develop structured approaches to early career mentoring systems to support novice practitioners to engage with peers and preceptors (in clinical practice and pharmaceutical science areas across the pharmaceutical workforce).
	3|⊖ QUALITY ASSURANCE 3. Quality assurance	Transparent, contemporary and innovative processes for the quality assurance of needs-based education and training systems.	Ensure the quality of the workforce by quality assuring the continuous development and the delivery of adequate and appropriate education and training; quality assurance needs to address academic and institutional infrastructure in order to deliver the required needs and competency-based education and training. Establish standards-based global guidance for quality assurance of pharmacy and pharmaceutical science education in the context of local needs and practice. Implement fair, effective and transparent policies and procedures for quality assurance of pharmacy and pharmaceutical science education and training. Define critical stakeholder input on development of adequate education and training and fair and effective policies, including necessary student input.

Cluster	PWDG	PWDG general description. Countries/territories and member organisations should have:	Rationale, drivers, and potential indicators
Professional development Focus on the pharmaceutical workforce	**4. Advanced and specialist expert development**	Education and training infrastructures in place for the recognised advancement of the pharmaceutical workforce as a basis for enhancing patient care and health system deliverables.	Need for a common and shared understanding of what is meant by "specialisation" and "advanced practice" in the context of scope of practice and the responsible use of medicines. Ensure competency and capability of an advanced and expert pharmacist in all sectors (including specialisations extending into industry and administration settings) for greater optimisation of complex pharmaceutical patient care. This may now include prescribing roles within a recognised scope of practice. Systematic use of professional recognition programmes/systems as markers for advancement and specialisation across the workforce, including advanced pharmaceutical scientists.
	5. Competency development	Clear and accessible developmental frameworks describing competencies and scope of practice for all stages of professional careers. This should include leadership development frameworks for the pharmaceutical workforce.	Use of evidence-based developmental frameworks to support the translation of pharmaceutical science within scope of practice, across all settings and according to local/national needs. Support professional career development by using tools, such as competency frameworks, describing competencies and behaviours across all settings. Evidence of clear policy that links leadership development (from early years) with competence attainment for the advancement of practice activities.
	6. Leadership development	Strategies and programmes in place that develop professional leadership skills (including clinical and executive leadership) for all stages of career development, including pharmaceutical sciences and initial education and training	Creation of programmes/strategies for the development of leadership skills (including tools and mentoring systems), to support pharmacists and pharmaceutical scientists through their careers. Advocacy for leadership development in healthcare teams, linked to collaborative working activities (for example, promotion of team-based approaches to healthcare service delivery). Ideally, this should be linked with competency and foundation and early year career development activities.
	7. Service provision and workforce education and training	A patient-centred and integrated health services foundation for workforce development, relevant to social determinants of health and needs-based approaches to workforce development.	Systematic development of education and training activities based on local healthcare systems, their capacity and funding. Evidence of systematic development policies and strategies for the strengthening and transforming pharmaceutical workforce education and the systematic training of trainers/educators. Education providers must ensure, by the provision of evidence-based approaches, that lecturers/teachers/trainers are themselves appropriately trained for capability and competency. Enable the pharmaceutical workforce and key stakeholders to promote health equity through actions related to social determinants of health.
	8. Working with others in the healthcare team	Clearly identifiable elements of collaborative working and interprofessional education and training which should be a feature of all workforce development programmes and policies.	Evidence of policy formation to demonstrate how healthcare professionals can develop and engage in partnerships to achieve better health outcomes. Develop education and training strategies/programmes to ensure collaboration within the pharmaceutical workforce and training on medicines for other healthcare professionals. Ideally, this should be linked with formal professional development activities.

Cluster	PWDG	PWDG general description. Countries/territories and member organisations should have:	Rationale, drivers, and potential indicators
Systems Focus on policy development, governmental strategy and planning, and monitoring systems	**9. CPD STRATEGIES** 9. Continuing professional development strategies	All professional development activity clearly linked with needs-based health policy initiatives and pharmaceutical career development pathways.	Evidence of an effective continuing professional development strategy according to national and local needs. Development of programmes to support professional development across all settings of practice and all stages of a pharmacist's career. Ideally, this should be linked with all professional development activities across the workforce. Education in continuing professional development strategies and self-directed behaviours should be initiated at the student level.
	10. GENDER AND DIVERSITY BALANCES 10. Pharmaceutical workforce gender and diversity balances	Clear strategies for addressing gender and diversity inequalities in pharmaceutical workforce development, continued education and training, and career progression opportunities.	Demonstration of strategies to address the gender and diversity inequalities across all pharmaceutical workforce and career development opportunities. Ensure full and effective participation and equal opportunities for leadership at all levels of decision-making in pharmaceutical environments; avoidable barriers to participation for all social categories are identified and addressed. Engagement and adoption of workforce development policies and enforceable legislation for the promotion of gender and diversity equality; policies and cultures for the empowerment of all without bias. This should be applicable to academic capacity and leadership development activities.
	11. WORKFORCE IMPACT 11. Workforce impact and effect on health improvement	Evidence of the impact of the pharmaceutical workforce within health systems and health improvement.	Engagement with systems to measure the impact of the pharmaceutical workforce on health improvement and healthcare outcomes. Links with needs-based education, training and workforce planning. Gather continuous data points to monitor the performance of the pharmaceutical workforce. Ideally, this should be linked with strategies to enhance workforce intelligence.
	12. WORKFORCE INTELLIGENCE 12. Workforce intelligence	A national strategy and corresponding actions to collate and share workforce data and workforce planning activities (skill mixes, advanced and specialist practice, capacity). Without workforce intelligence data there can be no strategic workforce development.	FIP should aim to have a global workforce compendium of case studies developed by 2019. Develop monitoring systems to identify workforce trends to enable decision making on deployment and supply of pharmaceutical workforce noting that time-lags are often present in these activities. Ideally, this should be linked with stewardship and leadership for professional leadership bodies.
	13. WORKFORCE POLICY FORMATION 13. Workforce policy formation	Clear and manageable strategies to implement comprehensive needs-based development of the pharmaceutical workforce from initial education and training through to advanced practice.	Adopt and strengthen sound policies and enforceable legislation for holistic needs-based approaches to professional development across all settings and stages. Develop strategies where pharmaceutical science and professional services are the driving forces for this activity.

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
-
www.fip.org　　　| 2019 / 09 / GADF