FIP Education Initiatives

Pharmacy Education Taskforce
A Global Competency Framework

Version 1

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1912 • 2012
100 YEARS OF
ADVANCING
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Developing the Health Care Workforce of the Future

Disclaimer

Please note that this is Version 1 (v1) of the FIP Global Competency Framework (GbCF) document. This Version will be subject to further validation and editing. Feedback on this document is also actively being solicited, encouraged, and welcomed, please contact Dr Andreia Bruno for further information at **education@fip.org**.

A GLOBAL COMPETENCY FRAMEWORK

for Services Provided by Pharmacy Workforce

THE DRIVE FOR DEVELOPING A GLOBAL COMPETENCY FRAMEWORK

A competent and capable practitioner workforce is an essential pre-requisite for all health care professions. The capacity to improve therapeutic outcomes, patients' quality of life, scientific advancement and enhancement of our public health imperatives are dependent on a foundation of competence. Before overarching capability, or **competence**, can be determined, the specific **competencies** that comprise that capability must be identified[1,2,3]. In this case, competencies refer to the knowledge, skills, attitudes and behaviours that an individual develops through education, training, development and experience[4]. Taken together, these competencies can be formulated into a **framework** that can contribute towards supporting practitioner development, within an individual, for effective and sustained performance.

Practitioner Development frameworks, containing a structured assembly of behavioural competencies have become increasingly popular in professional education, driven by the need for transparency in the training, development and professional recognition of healthcare professionals. The evidence to support their routine use in professional development is unequivocal[5,6,7].

One of the first health professions to apply these concepts universally for developing a **global competency framework** was medicine. The World Federation for Medical Education (WFME) has a priority to ensure that competencies of physicians are globally applicable and transferable, accessible and transparent. According to the WFME, international standards can be defined for basic medical education, taking in account the variations of countries due to the differences in teaching, culture, socio-economic conditions and health systems, among others. Nonetheless, the scientific basis of medicine is universal. **FIP Education Initiatives (FIPEd) believes such guidance is also possible for pharmacy.**

For these reasons, the FIP*Ed* is now working to develop a global competency framework to support the educational development pharmacy practitioners.

More information about the FIP Education Initiatives and Pharmacy Education Taskforce, the scope of its activities and how to become involved is available on pages 15-17.

It is important to recognise that the Global Competency Framework for pharmacy is intended to act as a **mapping tool** (which by its nature will continue to progress as the profession evolves). The Framework has a foundation in the **outcomes** of initial education and training, and hence this document will have interest and applicability for leaders, educators, regulators and practitioners who are working towards global harmonisation of the practice-based expectations for our practitioners. This has important applications for fostering transnational collaboration and enhancing our professional scope of practice, across all sectors and settings. In this document, competencies are described using behavioural terminology, and should not be viewed as a functional 'task list'; competencies that are based on behaviours are useful for developmental purposes, which is the primary intention of the GbCF.

The scope of the Framework encompasses foundation level (or early years) practice and represents global consensus on the capability competencies of the outcomes of registration (licensing) levels of initial career education and training. There is an implicit assumption that the pharmaceutical sciences are a *de facto* underlying component of these practice-based competencies; the Framework does not seek to replicate the foundations of pharmaceutical science, but to support the translation of pharmaceutical science within the components of practice, independently of the setting or sector of one's practice.

Future work will develop competency-based descriptions of more advanced levels of practice for supporting career development.

DEVELOPING THE GLOBAL FRAMEWORK

Following a literature search (2008) and global survey (2009), 47 documents were retrieved and grouped into categories (eg, competency frameworks, good pharmacy practice, or regulatory documents). Eight documents were closely related to educational development frameworks for practitioners[8-18].

- **AUSTRALIA** - Pharmaceutical Society of Australia. Competency Standards for Pharmacists in Australia 2003.
- **CANADA** - National Association of Pharmacy Regulatory Authorities. Model Standards of Practice for Canadian Pharmacists. 2003.
- **INTERNATIONAL PHARMACEUTICAL FEDERATION** - FIP Global Conference on the Future of Hospital Pharmacy, Final Basel Statements. December 2008.
- **NEW ZEALAND** - Pharmacy Council of New Zealand. Competency Framework for the Pharmacy Profession. August 2006.
- **THAILAND** - Thai Pharmacy Council. Standard criteria for pharmacy practitioners 2002. Bangkok: Thai Pharmacy Council. 2002
- **UNITED KINGDOM** - Competency Development and Evaluation Group. General Level Framework, a Framework for Pharmacist Development in General Pharmacy Practice. October 2007.
- **UNITED STATES OF AMERICA** - The Council on Credentialing in Pharmacy. Scope of Contemporary Pharmacy Practice: Roles, Responsibilities, and Functions of Pharmacists and Pharmacy Technicians. A Resource Paper of the Council on Credentialing in Pharmacy.
- **ZAMBIA** - Background paper on Human Resources Development. Republic of Zambia, Ministry of Health. 1996.

A comparative study was conducted to identify common behaviours within the different frameworks, resulting in a comprehensive table of elements which were further categorized into the domains of Pharmaceutical Public Health, Pharmaceutical Care, Organisation and Management, and Professional/Personal (Figure 1).

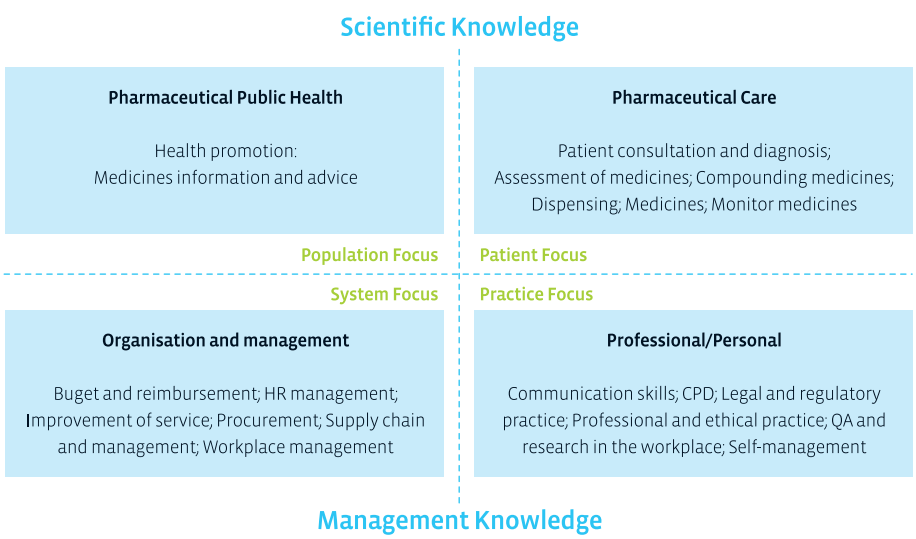

Figure 1 - Domains and illustrative competencies from the GbCF v1 for pharmaceutical services

The Global Competency Framework (GbCF) v1 contains a core set of behavioural competencies synthesised from the above documents that should be generally applicable for the pharmacy workforce worldwide. The v1 of the framework has been through a process of consensus group meetings, content validation meetings and an iterative content phase to reach this stage. There is further validation work to conduct.

Findings from the validation of the draft GbCF and meetings with experts, including a Forum held with experts from 10 countries during the FIP congress in Hyderabad, provide evidence that at the core, there are shared and common capability attributes across both sectors and borders. There are similar expectations in the competence and the practice of pharmacists as medicines experts, certainly in early years of career development.

Data gathered for the FIP Global Pharmacy Workforce Report 2012 indicate that there has been no significant increase in the number of countries reporting use or development of new national competency frameworks since 2009 (available at: www.fip.org/humanresources).

NEXT STEPS FOR THE GBCF V1

FIP*Ed* wishes to continue to engage with a wider constituency of practitioners in order to validate this framework to ensure it will meet general needs as a mapping tool. The purpose of this input is to evaluate the relevance and validity of the current version, and to specifically capture reactions to the behavioural competencies.

For this reason, an online survey form has been created to widen the engagement with this new instrument. **The survey is available at the following address - http://www.codegnet.org.uk/gbcf/ and we are inviting all pharmacists to engage with this validation survey.** Although all the materials you will need to respond to the survey are available online, a printed version of framework v1 as well as the operational definitions supporting the work are included for your convenience (page 10-14; 18-19).

Following the success of the first competency forum held at the FIP Congress in Hyderabad 2011, a special interest Forum was created with expert practitioners working in the domain of competency-led development. The Forum will meet at each FIP Congress to provide opportunity for engagement. If you would like to be part of the Forum please send an email to Dr Andreia Bruno at education@fip.org.

Thank you for taking an interest in this unique global development project, which we anticipate will result in a valid and useful framework for the benefit of educators, regulators and practitioners in all countries.

GUIDANCE ON USE

The GbCF Version 1 can be a starting point to provide guidance for foundation level practice, not only at an individual level but also for further development into advanced practice. It can also be an aid in providing an overview of how practice at a foundation level can be translated into 'what' and 'how' students should learn and interact with pharmaceutical care skills during their initial degree, always with country specifications in mind (the GbCF does not imply that there should be a 'single' global curriculum that would fit all countries).

Acting as a mapping tool for the creation of country specific needs for the development of practice and practitioner professional development, the GbCF can be attached to an assessment grid (Figure 2) and, together with appropriate assessment tools, can aid countries that do not currently have a competency framework but wish to develop one. By creating a portfolio, in synergy with other assessment tools, countries can implement the GbCF into practice, developing education and training infrastructures for their practitioners.

2.3 Dispensing

	Frequency				
2.3.1 Accurately dispense medicines for prescribed and/or minor ailments and monitor the dispense (re-checking the medicines)	Consistently *(85-100% of the time)*	Usually *(51-84% of the time)*	Sometimes *(25-50% of the time)*	Rarely *(0-24% of the time)*	U/C
Comments:					
2.3.2 Accurately report defective or substandard medicines to the appropriate authorities	Frequency				
	Consistently *(85-100% of the time)*	Usually *(51-84% of the time)*	Sometimes *(25-50% of the time)*	Rarely *(0-24% of the time)*	U/C
Comments:					

Figure 2 - Example of the assessment grid for one of the competencies of Pharmaceutical Care Competencies domain (adapted from the GLF assessment grid available at: www.codeg.org)

There are several ongoing regional and national projects looking at outcomes-based frameworks for practitioner development (inspired by the original FIP work – GbCF draft version, August 2010).

These include the Pharmaceutical Society of Ireland and national Expert Panels in both Portugal and Serbia have recently conducted studies and initiated country-level competency frameworks, using the FIP draft GbCF as a basis for their workforce development. Organisations in Singapore, Australia and Croatia are implementing practitioner frameworks linked with the GbCF; The 'PHARMINE' European joint initiative is also demonstrating transnational evidence of consensus in competence and outcomes. The GbCF is also being used as basis for collaboration with the Pan-American Health Organization, Pharmaceutical Forum of the Americas and Pan-American Conference on Pharmaceutical Education (Technical Group for the development of competencies for Pharmacy Services). The Royal Pharmaceutical Society of Great Britain also recommends the use of frameworks at all stages of a professionals' career, as national development tools (which are directly linked with the GbCF).

Contacts

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GLOBAL COMPETENCY FRAMEWORK | VERSION 1 | ABRIDGED

1. Pharmaceutical Public Health Competencies	
Competencies	Behaviours
1.1 Health promotion	1.1.1 Assess the primary healthcare needs (taking into account the cultural and social setting of the patient)
	1.1.2 Advise on health promotion, disease prevention and control, and healthy lifestyle
1.2 Medicines information and advice	1.2.1 Counsel population on the safe and rational use of medicines and devices (including the selection, use, contraindications, storage, and side effects of non-prescription and prescription medicines)
	1.2.2 Identify sources, retrieve, evaluate, organise, assess and disseminate relevant medicines information according to the needs of patients and clients and provide appropriate information
2. Pharmaceutical Care Competencies	
Competencies	Behaviours
2.1 Assessment of medicines	2.1.1 Appropriately select medicines (e.g. according to the patient, hospital, government policy, etc)
	2.1.2 Identify, prioritise and act upon medicine-medicine interactions; medicine-disease interactions; medicine-patient interactions; medicines-food interactions
2.2 Compounding medicines	2.2.1 Prepare pharmaceutical medicines (e.g. extemporaneous, cytotoxic medicines), determine the requirements for preparation (calculations, appropriate formulation, procedures, raw materials, equipment etc.)
	2.2.2 Compound under the good manufacturing practice for pharmaceutical (GMP) medicines
2.3 Dispensing	2.3.1 Accurately dispense medicines for prescribed and/or minor ailments and monitor the dispense (re-checking the medicines)
	2.3.2 Accurately report defective or substandard medicines to the appropriate authorities
	2.3.3 Appropriately validate prescriptions, ensuring that prescriptions are correctly interpreted and legal
	2.3.4 Dispense devices (e.g. Inhaler or a blood glucose meter)
	2.3.5 Document and act upon dispensing errors
	2.3.6 Implement and maintain a dispensing error reporting system and a 'near misses' reporting system

	2.3.7 Label the medicines (with the required and appropriate information)
	2.3.8 Learn from and act upon previous 'near misses' and 'dispensing errors'
2.4 Medicines	2.4.1 Advise patients on proper storage conditions of the medicines and ensure that medicines are stored appropriately (e.g. humidity, temperature, expiry date, etc.)
	2.4.2 Appropriately select medicines formulation and concentration for minor ailments (e.g. diarrhoea, constipation, cough, hay fever, insect bites, etc.)
	2.4.3 Ensure appropriate medicines, route, time, dose, documentation, action, form and response for individual patients
	2.4.4 Package medicines to optimise safety (ensuring appropriate re-packaging and labelling of the medicines)
2.5 Monitor medicines therapy	2.5.1 Apply guidelines, medicines formulary system, protocols and treatment pathways
	2.5.2 Ensure therapeutic medicines monitoring, impact and outcomes (including objective and subjective measures)
	2.5.3 Identify, prioritise and resolve medicines management problems (including errors)
2.6 Patient consultation and diagnosis	2.6.1 Apply first aid and act upon arranging follow-up care
	2.6.2 Appropriately refer
	2.6.3 Assess and diagnose based on objective and subjective measures
	2.6.4 Discuss and agree with the patients the appropriate use of medicines, taking into account patients' preferences
	2.6.5 Document any intervention (e.g. document allergies, medicines and food, in patient medicines history)
	2.6.6 Obtain, reconcile, review, maintain and update relevant patient medication and diseases history

3. Organisation and Management Competencies

Competencies	Behaviours
3.1 Budget and reimbursement	3.1.1 Acknowledge the organisational structure
	3.1.2 Effectively set and apply budgets
	3.1.3 Ensure appropriate claim for the reimbursement
	3.1.4 Ensure financial transparency
	3.1.5 Ensure proper reference sources for service reimbursement

3.2 Human Resources management	3.2.1 Demonstrate organisational and management skills (e.g. know, understand and lead on medicines management; risk management; self management; time management; people management; project management; policy management.)
	3.2.2 Identity and manage human resources and staffing issues
	3.2.3 Participate, collaborate, advise in therapeutic decision-making and use appropriate referral in a multi-disciplinary team
	3.2.4 Recognise and manage the potential of each member of the staff and utilise systems for performance management (e.g. carry out staff appraisals)
	3.2.5 Recognise the value of the pharmacy team and of a multidisciplinary team
	3.2.6 Support and facilitate staff training and continuing professional development
3.3 Improvement of service	3.3.1 Identify and implement new services (according to local needs)
	3.3.2 Resolve, follow up and prevent medicines related problems
3.4 Procurement	3.4.1 Access reliable information and ensure the most cost-effective medicines in the right quantities with the appropriate quality
	3.4.2 Develop and implement contingency plan for shortages
	3.4.3 Efficiently link procurement to formulary, to push/pull system (supply chain management) and payment mechanisms
	3.4.4 Ensure there is no conflict of interest
	3.4.5 Select reliable supplies of high-quality products (including appropriate selection process, cost effectiveness, timely delivery)
	3.4.6 Supervise procurement activities
	3.4.7 Understand the tendering methods and evaluation of tender bids
3.5 Supply chain and management	3.5.1 Demonstrate knowledge in store medicines to minimise errors and maximise accuracy
	3.5.2 Ensure accurate verification of rolling stocks
	3.5.3 Ensure effective stock management and running of service with the dispensary
	3.5.4 Ensure logistics of delivery and storage
	3.5.5 Implement a system for documentation and record keeping
	3.5.6 Take responsibility for quantification of forecasting
3.6 Work place management	3.6.1 Address and manage day to day management issues
	3.6.2 Demonstrate the ability to take accurate and timely decisions and make appropriate judgments

	3.6.3 Ensure the production schedules are appropriately planned and managed)
	3.6.4 Ensure the work time is appropriately planned and managed
	3.6.5 Improve and manage the provision of pharmaceutical services
	3.6.6 Recognise and manage pharmacy resources (e.g. financial, infrastructure)

4. Professional/Personal Competencies

Competencies	Behaviours
4.1 Communication skills	4.1.1 Communicate clearly, precisely and appropriately while being a mentor or tutor
	4.1.2 Communicate effectively with health and social care staff, support staff, patients, carer, family relatives and clients/customers, using lay terms and checking understanding
	4.1.3 Demonstrate cultural awareness and sensitivity
	4.1.4 Tailor communications to patient needs
	4.1.5 Use appropriate communication skills to build, report and engage with patients, health and social care staff and voluntary services (e.g. verbal and non-verbal)
4.2 Continuing Professional Development (CPD)	4.2.1 Document CPD activities
	4.2.2 Engage with students/interns/residents
	4.2.3 Evaluate currency of knowledge and skills
	4.2.4 Evaluate learning
	4.2.5 Identify if expertise needed outside the scope of knowledge
	4.2.6 Identify learning needs
	4.2.7 Recognise own limitations and act upon them
	4.2.8 Reflect on performance
4.3 Legal and regulatory practice	4.3.1 Apply and understand regulatory affairs and the key aspects of pharmaceutical registration and legislation
	4.3.2 Apply knowledge in relation to the principals of business economics and intellectual property rights including the basics of patent interpretation
	4.3.3 Be aware of and identify the new medicines coming to the market
	4.3.4 Comply with legislation for drugs with the potential for abuse
	4.3.5 Demonstrate knowledge in marketing and sales
	4.3.6 Engage with health and medicines policies

	4.3.7 Understand the steps needed to bring a medicinal product to the market including the safety, quality, efficacy and pharmacoeconomic assessments of the product
4.4 Professional and ethical practice	4.4.1 Demonstrate awareness of local/national codes of ethics
	4.4.2 Ensure confidentiality (with the patient and other healthcare professionals)
	4.4.3 Obtain patient consent (it can be implicit on occasion)
	4.4.4 Recognise own professional limitations
	4.4.5 Take responsibility for own action and for patient care
4.5 Quality Assurance and Research in the work place	4.5.1 Apply research findings and understand the benefit risk (e.g. pre-clinical, clinical trials, experimental clinical-pharmacological research and risk management)
	4.5.2 Audit quality of service (ensure that they meet local and national standards and specifications)
	4.5.3 Develop and implement Standing Operating Procedures (SOP's)
	4.5.4 Ensure appropriate quality control tests are performed and managed appropriately
	4.5.5 Ensures medicines are not counterfeit and quality standards
	4.5.6 Identify and evaluate evidence-base to improve the use of medicines and services
	4.5.7 Identify, investigate, conduct, supervise and support research at the workplace (enquiry-driven practice)
	4.5.8 Implement, conduct and maintain a reporting system of pharmacovigilance (e.g. report Adverse Drug Reactions)
	4.5.9 Initiate and implement audit and research activities
4.6 Self-management	4.6.1 Apply assertiveness skills (inspire confidence)
	4.6.2 Demonstrate leadership and practice management skills, initiative and efficiency
	4.6.3 Document risk management (e.g. critical incidents)
	4.6.4 Ensure punctuality
	4.6.5 Prioritise work and implement innovative ideas

FIP EDUCATION INITIATIVES

FIP*Ed* is the directorate that brings together all of FIP's education activities and strengthens our projects and partnerships with the World Health Organization (WHO) and UNESCO. FIPEd comprises the Academic Institutional Membership (AIM), the Pharmacy Education Taskforce, and the Academic Section.

FIP*Ed* is working to stimulate transformational change in pharmaceutical education and engender the development of science and practice, towards meeting present and future societal and workforce needs around the world. Advocating for the use of needs-based strategies where pharmacy education is socially accountable, where practice and science are evidence-based and practitioners have the capabilities to provide the health care services for their communities.

FIP Education Initiatives provides a global platform for exchange, mentoring and learning for leaders and academics, focusing on the development of leadership skills and academic management and pedagogic skills; FIPEd is building, advocating, and disseminating evidence-based guidance, consensus-based standards, tools and resources for educational development for organisations and practitioners; in addition, FIPEd is developing and facilitating education-related policy that supports the advancement of the pharmaceutical profession at global, regional and local levels.

THE PHARMACY EDUCATION TASKFORCE (PET)

The PET was established in November 2007 with the endorsement of FIP Executive to undertake a collaborative tripartite programme of work (with our UNESCO and WHO partners) formulated in the Pharmacy Education Action Plan 2008 – 2010[19]. The Action Plan aimed to support wider efforts to catalyse country level responses to the pharmacy workforce crisis.

A particular focus was to provide evidence-based guidance and frameworks to facilitate pharmacy education development and capacity to sustain a pharmacy workforce relevant to country-level needs (Figure 3). This work was conducted using a needs-based approach to education development.

NEEDS-BASED PROFESSIONAL EDUCATIONAL MODEL

Figure 3 - The needs-based education development cycle.

Model FIP- WHO- UNESCO Pharmacy Education Taskforce

THE PET DOMAINS OF ACTIVITY

The ability to scale up the pharmacy workforce and further develop pharmacy education is directly related to the overall capacity of the education and training institutions and the corresponding academic workforce. In addition, educational governance and process, and the challenges related to career, education and continued training, underpin attempts to enhance pharmaceutical services provision worldwide. The Taskforce domains for action, as defined by the wider global constituency through the consultation events, are:

- Vision for pharmacy education
- Competency based approaches for developing and sustaining pharmaceutical services
- Academic and institution capacity (workforce and infrastructure), and
- Quality Assurance
- Pharmacy Support Workforce
- Leadership Development

If you would like more information about the FIP Education Initiatives, please see http://www.fip.org/pharmacy_education.
To join our online community of practice, please contact education@fip.org.

Glossary

Competency framework – A complete collection of competencies that are thought to be essential to performance.

Competencies – Knowledge, skills, behaviors and attitudes that an individual accumulates, develops, and acquires through education, training, and work experience.

Compounding - Preparation, mixing or assembling of a medicine. See manufacturing.

Continuing Professional Development (CPD) – The responsibility of individual pharmacists for systematic maintenance, development and broadening of knowledge, skills and attitudes, to ensure continuing competence as a professional throughout their careers.

Cost-effectiveness – A financial measure of comparative efficiency of discrete strategies and methods for achieving the same objective.

Counsel – To offer an explanation of the purpose of the prescribed medicines; proper administration, including length of therapy, special directions for use, proper storage, and refill instructions; information on common adverse effects, potential interactions, and contraindications to the use of the medicines; and guidance on steps to take given specific outcomes.

Cultural awareness and sensitivity – Customs, values, and norms of societies which affects health systems dynamics, including gender, language and residence.

Dispensing – To label from stock and supply a clinically appropriate medicine to a patient or caregiver and to advise on safe and effective use.

'Dispensing Error' - Any situation where wrong, or incomplete medicine or medicinal device or one which was incorrectly labelled which may or may not have caused harm to a patient, was given to a patient.

Evidence-Based practice – Using good quality evidence to make sound clinical decisions.

Good manufacturing practice (GMP) - The part of quality assurance that ensures that products are consistently produced and controlled to the standards appropriate to their intended use and as required in the marketing authorisation.

Health literacy – The ability to read, understand and use healthcare information to make decisions and follow instructions for treatment.

Innovation – The translation of ideas into new or improved services, processes, or systems.

Labelling - Identification of a pharmaceutical product, which includes the following information, as appropriate: name; API(s), type and amount; batch number; expiry date; special storage conditions or handling precautions; directions for use, warnings and precautions; names and addresses of the manufacturer and/or the supplier.

Manufacturing – Manufacture of medicinal active substances to be used for their pharmacological properties in pharmaceuticals and medical products. Includes – (1) manufacturing biological and medicinal products; (2) processing (i.e., grading, grinding, and milling) botanical medicines and herbs; (3) isolating active medicinal principals from botanical medicines and herbs; and (4) manufacturing pharmaceutical products intended for internal and external consumption in such forms as ampoules, tablets, capsules, vials, ointments, powders, solutions, and suspensions.

Minor ailments – Conditions which have no significant health risk to the patient are usually self-limiting and frequently become resolved without medication. Such as diarrhoea, constipation, cough, hay fever, insect bites, etc.

'Near misses' - Any situation where wrong or incomplete medicine, medicinal device or one which was incorrectly labelled which may or may not have caused harm to a patient, would have been given to the patient if an intervention had not been made.

Performance – An effective and persistent observable behaviour. What an individual actually does as opposed to what they can do.

Performance management – Process of optimising productivity and quality of work of the workforce.

Pharmaceutical Care – The responsible provision of medicines therapy for the purpose of achieving definite outcomes, to improve patient's quality of life.

Pharmaceutical Public health - Public health activities carried out by pharmacists to protect the health of populations, such as disease prevention and control and promotion of healthy lifestyles.

Pharmacovigilance – Detection, assessment, understanding and prevention of adverse effects arising from medicines use.

Procurement – The processes involved in identifying and securing adequate supplies of medicines at affordable prices with an appropriate standard of quality. It includes all activities related to the management of the medicines supply chain.

Pull system - Supply chain driven by demand (orders and consumption).

Push system - Supply chain driven by forecasts of demand.

Quality assurance – A system of processes and assessments in pharmaceutical manufacturers to ensure quality and integrity of pharmaceutical and medical products.

Standard Operating Procedures (SOP's) - A specific set of procedures to be followed routinely.

Team – The staff (pharmacy or multidisciplinary) or care group with which the pharmacist works most closely.

Therapeutic monitoring – The regular measurement of serum levels of medicines requiring close 'titration' of doses in order to ensure that there are sufficient levels in the blood to be therapeutically effective, while avoiding potentially toxic excess.

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