



MINISTRY OF HEALTH  
SINGAPORE

# COMPETENCY STANDARDS

FOR PHARMACISTS IN  
ADVANCED PRACTICE





# Content

---

Preface .....	3
Members of the Workgroups .....	4
Glossary Terms .....	6
Background .....	8
Advanced Practice Framework (APF).....	9
Using the Competency Standards .....	13
Competency Standards for Pharmacists in Advance Practice	
Domain 1 Expert Professional Practice .....	22
Domain 2 Building Working Relationships .....	27
Domain 3 Leadership .....	30
Domain 4 Management .....	35
Domain 5 Education, Training and Development .....	41
Domain 6 Research and Evaluation .....	45
Frequently Asked Questions .....	51
Annex A .....	54
Annex B .....	56
References .....	57
Acknowledgements .....	58



# Preface

---

A confident, competent pharmacy team that practices at the top of their license to deliver pharmaceutical care excellence is needed to meet the evolving healthcare needs of our nation. To support healthcare transformation, pharmacists need to assume roles which are extended, specialised and more advanced than current entry level scope of practice.

The Ministry of Health (MOH) has been working on initiatives to support development of pharmacists from entry to advanced levels. In 2010, collaboration among the Chief Pharmacist's Office and the Public Healthcare Institutions resulted in the development of competency standards for advanced pharmacy practice. The competency standards would also support the 10-year National Pharmacy Strategic Thrusts on Confident Pharmacy Workforce and Pharmaceutical Care Excellence.

The competency standards describe the level of competence required for pharmacists to reflect on their practice, to identify needs for continuous professional development and to acquire new competencies to advance their practice systematically. For employers, the recognition of pharmacists as advanced practitioners enables them to have evidence of enhanced capability. Overall, the movement towards defining advanced practice in pharmacy represents progression of the pharmacy workforce.

The development of these competency standards for advanced pharmacy practice represents a significant commitment of time and effort. I would like to thank members of the Workgroups and Pharmacy Managers in making possible the provision for advanced pharmacy practice development. The Pharmacy Department, National University of Singapore and the Centre for Medical Education, Yong Loo Lin School of Medicine have also contributed their expertise. I hope more pharmacists will join us on our continued journey to transform our healthcare system so as to bring about better health, better care and better life for our nation.

**Assoc. Prof Lita Chew**

Chief Pharmacist, Ministry of Health

22 August 2017

## Members of the Workgroups

### Co-Chairperson:

Ms Chan Soo Chung, National Healthcare Group Pharmacy  
Dr Camilla Wong, Singapore General Hospital\*

### Expert Professional Practice

Ms Angelina Tan	Singapore General Hospital* (Team Lead)
Ms Elizabeth Tian	National Skin Centre
Ms Hon Jin Shing	National Heart Centre Singapore
Mr Ian Wee	Changi General Hospital
Dr Kelvin Xu	KK Women's and Children's Hospital
Ms Lai Hwei Ching	Singapore National Eye Centre
Ms Lim Gek Kee	National Healthcare Group
Ms Lim Siew Woon	National University Hospital
Ms Sharon Fan Siew May	Singhealth Polyclinics
Dr Vivianne Shih	National Cancer Centre Singapore

### Building Working Relationships

Ms Hon Jin Shing	National Heart Centre Singapore (Team Lead)
Ms Angelina Tan	Singapore General Hospital*
Ms Chang Yok Ying	National Cancer Centre
Ms Lai Hwei Ching	Singapore National Eye Centre
Ms Oh Ching Ching	KK Women's and Children's Hospital
Mr Victor Wong Kum Fai	Singhealth Polyclinics
Ms Vivian Lee Jee Jeng	Singhealth HQ
Ms Yasmin Ng	Changi General Hospital

### Leadership

Ms Yong Pei Chean	Khoo Teck Puat Hospital** (Team Lead)
Dr Camilla Wong	Singapore General Hospital*
Ms Irene Quay	KK Women's and Children's Hospital
Ms Lai Hwei Ching	Singapore National Eye Centre
Ms Lim Sok Hoon	National University Hospital
Mr Lim Wee Heng	Changi General Hospital
A/Prof Lita Chew	National Cancer Centre Singapore
Ms Sharon Fan Siew May	Singhealth Polyclinics
Mr Teo Siew Chong	National Heart Centre Singapore
Ms Vivian Lee Jee Jeng	Singhealth HQ

\*Sengkang Health at the point of publication

\*\*Woodlands General Hospital at the point of publication

## Management

Mr Chin Chee Kwong	Ng Teng Fong General Hospital (Team Lead)
Ms Chang Yok Ying	National Cancer Centre
Ms Kimmy Liew	Ng Teng Fong General Hospital
Ms Lai Hwei Ching	Singapore National Eye Centre
Ms Sharon Fan Siew May	Singapore Polyclinics
Mr Teo Siew Chong	National Heart Centre Singapore
Ms Vivian Lee Jee Jeng	Singhealth HQ
Ms Wong Hai Hong	Changi General Hospital
Ms Yee Mei Ling	Singapore General Hospital

## Education, Training & Development

Mr Ng Boon Tat	Institute of Mental Health/ Woodbridge Hospital (Team Lead)
Dr Chan Hong Ngee	Singapore General Hospital
Ms Hon Jin Shing	National Heart Centre Singapore
Ms Lai Hwei Ching	Singapore National Eye Centre
Ms Lee Hwei Khien	Tan Tock Seng Hospital
Dr Tan Wei Wei	KK Women's and Children's Hospital
Mr Victor Wong Kum Fai	Singhealth Polyclinics
Ms Wendy Ang	Changi General Hospital
Ms Yeoh Ting Ting	National Cancer Centre Singapore

## Research & Evaluation

Ms Winnie Lee	Singapore General Hospital (Team Lead)
A/Prof Alexandre Chan	National University of Singapore/ National Cancer Centre
Ms Hon Jin Shing	National Heart Centre Singapore
Dr Jonathan Seah	Changi General Hospital
Dr Tan Wei Wei	KK Women's and Children's Hospital
Mr Victor Wong Kum Fai	Singhealth Polyclinics

## Secretariat Support:

Ms Koh Sei Keng	Chief Pharmacist's Office, Ministry of Health
-----------------	---

## Glossary Terms

The following definitions<sup>1</sup> have been adopted in this document.

Term	Definition
Core areas of practice	Core areas of practice cover the essential areas that any advanced practitioner would be expected to develop and are conversant in at the place of practice. The core areas of pharmacy practice include leadership, management, education, and research.
Competency	A distinct composite of knowledge, skill, attitude and value that is essential to the practice of the profession. <sup>2</sup>
Continuing Professional Development	An ongoing, cyclical process of continuous reflection and identification of gaps in knowledge and skills that is required for maintenance and enhancement of professional competence to carry out both current duties and anticipated future services. <sup>3</sup>
Defined area of practice	The specific area of responsibility in a role, which may be a specialist or generalist that would be covered in depth beyond that of a core area. A defined area may be an area of clinical practice e.g. critical care or a service area e.g. the inpatient pharmacy.
Evidence-based Practice	The conscientious, explicit and judicious use of current best evidence in making decisions about the care of the individual patient. It means integrating individual clinical expertise with the best available evidence from systematic research.
External Environment	Outside of the pharmacist's employing institution.
Higher Level	A greater level of organisational complexity than that of the pharmacist's team.
Peer review	Expert opinion is sought to undertake a review of published work(s) in the pharmacist's area of work.

<sup>1</sup> Adapted from *The RPS Advanced Pharmacy Framework (APF) 2013*. The Royal Pharmaceutical Society. Accessed online on 2 September 2013 at <http://www.rpharms.com/faculty-documents/rps-advanced-pharmacy-framework-guide.pdf>.

<sup>2</sup> Council on Credentialing in Pharmacy. *Scope of contemporary pharmacy practice: roles, responsibilities, and functions of pharmacists and pharmacy technicians*. *J Am Pharm Assoc* 2010;50:e35-e69.

<sup>3</sup> FIP Statement of Professional Standards Continuing Professional Development. Accessed online on 16/12/2015 at [https://www.fip.org/www/uploads/database\\_file.php?id=221&table\\_id=](https://www.fip.org/www/uploads/database_file.php?id=221&table_id=).

Pharmaceutical care	Refers to the direct, responsible provision of medication-related care for the purpose of achieving definite outcomes that improve a patient's quality of life. Pharmaceutical care should underpin the delivery of medicines; ensuring health gain from medicines are maximised and harms minimised. This is achieved through enhanced engagement with patients and the public, understanding their experience and breaking down barriers between professions.
Portfolio	<p>A collection of evidence that learning has taken place. It is cumulative as it contains work collected over a period of time.</p> <p>A portfolio can be used to:</p> <ul style="list-style-type: none"> <li>a) Guide the development of competencies – includes reflective texts and self-analyses of own learning and performance;</li> <li>b) Monitor progress - includes overview of what has been done or learnt and</li> <li>c) Assess competency development – includes evidential materials to substantiate the competency level that is achieved or how certain competencies are developing.<sup>4</sup></li> </ul>
Research governance	Defined as the broad range of regulations, principles and standards of good practice that exists to achieve, and continuously improve, research quality across all aspects of healthcare. <sup>5</sup>
Team	A team is a group of professionals working together and mutually accountable for the delivery of a common goal or purpose. Within the context of the framework, "Team" refers to the group (pharmacy or multidisciplinary) with which the pharmacist works most closely and regularly.

<sup>4</sup> Driessen EE, Heeneman S, Van Der Vleuten C.P.M., 2013. Portfolio assessment. In: Dent JA, Harden RM (Eds), *A Practical Guide for Medical Teachers. Fourth Edition. Elsevier Churchill Livingstone (Chapter 39)*.

<sup>5</sup> Definition by the Joint Research Compliance Office. Accessed online on 8 August 2014 at <http://www3.imperial.ac.uk/clinicalresearchgovernanceoffice/researchgovernance/whatisresearchgovernance>

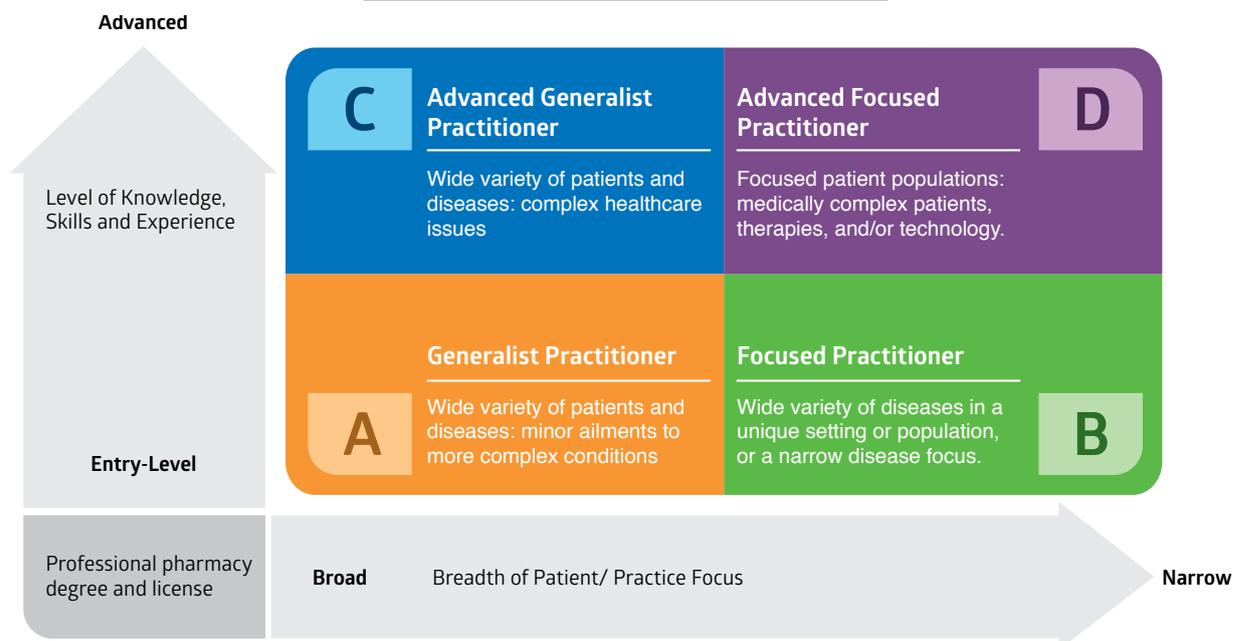
# Background

## Development of the Framework

The pharmacist career pathway framework was developed in 2009. To facilitate implementation of the career pathway framework, this competency framework would serve to map out the level of competency that would be required of pharmacists at different levels of seniority and expertise. It can also support and assist the professional development and growth of pharmacists and of the profession respectively.

The set of competencies required to be met by a pharmacist is dependent on the scope of practice i.e. the services provided or the roles performed. A pharmacist's scope of practice will change as the individual progresses in his/her career. [Figure 1](#) illustrates the different scopes and level of practice of a pharmacist in patient care. A newly registered pharmacist will be at Quadrant A or B (pharmacists in the specialised centres) and with additional training and education, will move into one of the other quadrant C or D.

Figure 1: Practitioners in Direct Patient Care



Adapted from the Council on Credentialing in Pharmacy. *Scope of contemporary pharmacy practice: roles, responsibilities, and functions of pharmacists and pharmacy technicians.* J Am Pharm Assoc 2010;50:e35-e69

## Performance standards for advanced practice

The competency standards in this document describe the knowledge, skills and attributes that a pharmacist in advanced practice should possess in order to perform a range of professional practice activities to a desired standard. *Advanced pharmacy practice is defined as practice derived from in depth knowledge, expertise and training that is beyond that achieved at entry level. Practitioners develop their abilities through delivery of services, higher levels of responsibility and accountability. They aim to meet the needs of a changing healthcare landscape by improving healthcare outcomes through practice innovation, education and research.*

# Advanced Practice Framework (APF)

## Domains and Competencies of the Framework

The competency framework for pharmacists in advanced practice (APF) is adapted from the Advanced to Consultant Level Framework (ACLF) developed by the UK Competency Development and Evaluation Group (CoDEG) in 2004. Like the ACLF, the competency framework for pharmacists in advanced practice identifies six key domains that are important for the development and demonstration of advanced practice. The six domains are:

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

The APF comprises 25 competencies across six domains. Each of the competency standards is presented at three performance levels of Intermediate, Advanced and Expert. The three performance levels reflect the performance continuum associated with learning and career progression and are defined as<sup>6</sup>

1. **Intermediate** – Able to successfully complete tasks with occasional help from an expert. Focus is on applying and enhancing knowledge or skill.
2. **Advanced** – Routinely manages complex situations and a recognised “person to ask” in the organisation. Focus is on broad organizational/professional issues.
3. **Expert** – Recognised as an authority in that area of expertise, alongside a breadth of experience. Able to explain issues in relation to broader organizational Issues. Creates new applications and processes. Focus is strategic.

<sup>6</sup> Adapted from *Competencies Proficiency Scale*. Office of Human Resources at the National Institutes of Health. Accessed at <http://hr.od.nih.gov/workingatnih/competencies/proficiencyscale.htm> on 18 October 2013

## Summary of the Competency Standards

<b>Domain 1</b>	<b>Expert Professional Practice</b>
Standard 1.1	Demonstrates Expert Skills and Knowledge
Standard 1.2	Manages patient care responsibilities/ delivery of professional activities
Standard 1.3	Exhibits reasoning and judgement including analytical skills, judgemental skills, interpersonal skills and appraisal of option
Standard 1.4	Uses professional autonomy
<b>Domain 2</b>	<b>Building Working Relationships</b>
Standard 2.1	Ability to communicate effectively (Communication)
Standard 2.2	Collaborates with members of the health care team and offer consultations (Teamwork and Consultation)
<b>Domain 3</b>	<b>Leadership</b>
Standard 3.1	Creates Vision
Standard 3.2	Strategic Planning
Standard 3.3	Innovation
Standard 3.4	Motivates individual (Motivational)
<b>Domain 4</b>	<b>Management</b>
Standard 4.1	Implementing Organisational Priorities
Standard 4.2	Managing resource utilisation
Standard 4.3	Establishing standards of practice
Standard 4.4	Managing risk
Standard 4.5	Managing performance
Standard 4.6	Project management
Standard 4.7	Managing change
<b>Domain 5</b>	<b>Education, Training and Development</b>
Standard 5.1	Role model
Standard 5.2	Mentorship
Standard 5.3	Conducting education and training
<b>Domain 6</b>	<b>Research and Evaluation</b>
Standard 6.1	Evaluating literature critically and identifying evidence gaps
Standard 6.2	Developing and evaluating research protocols
Standard 6.3	Disseminating evidence
Standard 6.4	Guiding others undertaking research
Standard 6.5	Establishing research partnerships

## Application of the APF

Table 1 describes the experience or career development likely to have been achieved by the pharmacists whose performance satisfies the competency standards for that level. They provide general guidance on the expectations for the three performance levels described. The APF guides the development of pharmacists from intermediate performance level to expert level. The continuum of practice and competency progression of a pharmacist is illustrated in Figure 2.

The APF is portfolio based and applies to pharmacists who have achieved a minimum job grade level of PH03 i.e. senior pharmacist or the equivalent. The APF may be used by the:

### a) Institution

- i. To design and structure a training framework to develop the pharmacist workforce and
- ii. For training program development.

### b) Pharmacist

- i. To craft individual development plan for career progression.

The performance criteria state the observable results or behaviours expected of the pharmacist at that performance level. The evidence column elaborates the knowledge, skills and attributes of a pharmacist performing at that competency level. *All the evidence listed for a performance criterion should be met in order to achieve the full requirement of that performance criterion.* Evidence Examples have been included to guide both pharmacists and their reviewers/assessors at providing the evidence needed to support the performance level. *The list of evidence examples is by no means exhaustive.*

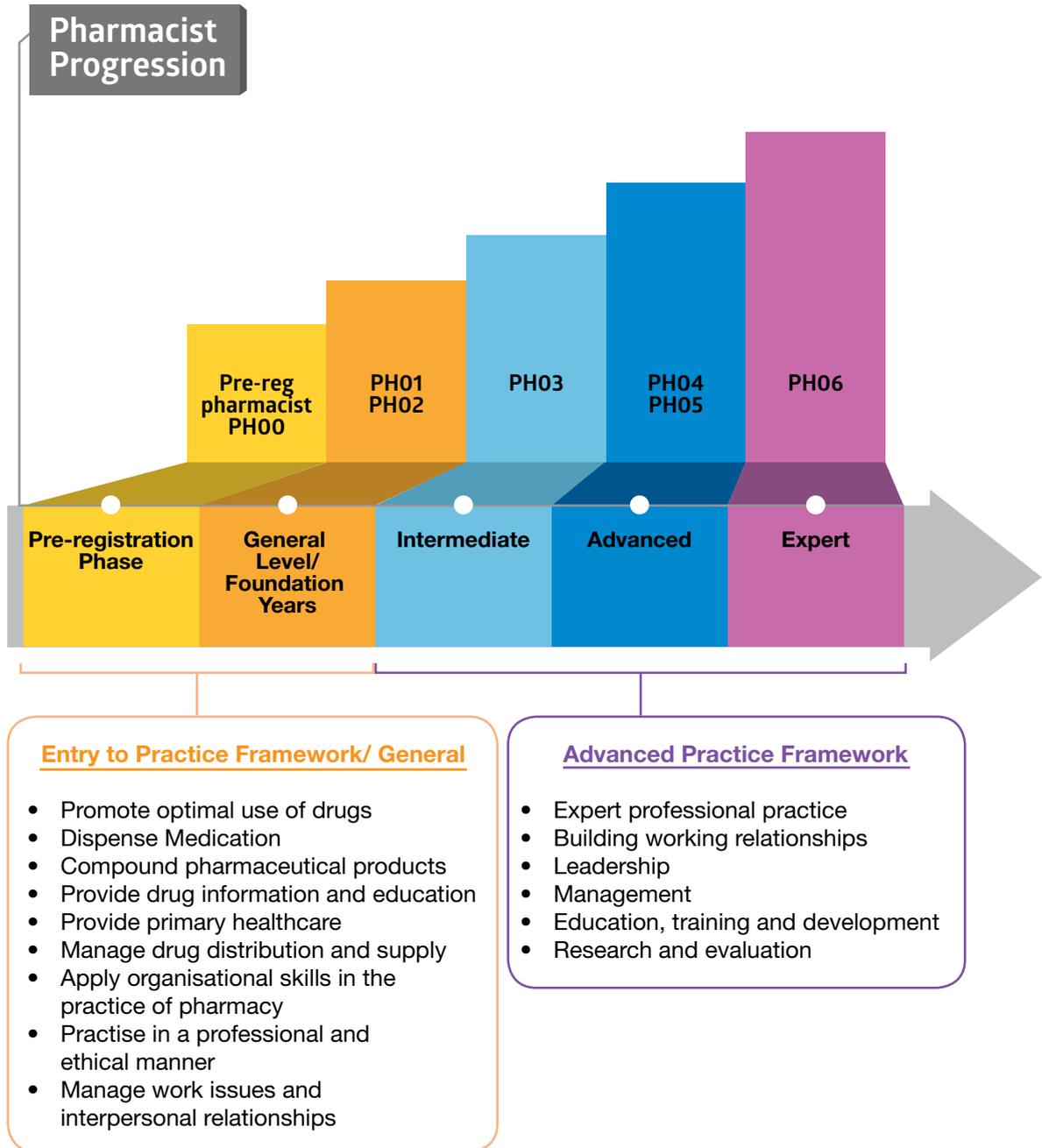
Table 1: General characteristics of pharmacists working with advanced practice competency standards.<sup>7</sup>

		
Intermediate	Advanced	Expert
<i>Scope of practice experience<sup>8</sup></i>		
Able to successfully complete tasks independently. Assistance from an expert may be required from time to time. Focus is on applying and enhancing knowledge or skill.	Able to perform the actions associated with this skill without assistance. Recognised within the organisation as “person to ask” when difficult questions arise. Focus is on broad organisational / professional issues.	Recognised as an authority in that area of expertise, alongside a breadth of experience. Able to explain issues in relation to broader organizational issues. Creates new applications and processes. Focus is strategic.
<i>Job Grade</i>		
PH03	PH04-05	PH06

<sup>7</sup> Adapted from *An Advanced Pharmacy Practice Framework for Australia 2012*. The Advanced Pharmacy Practice Framework Steering Committee on behalf of the pharmacy profession in Australia. Assessed online on 2 September 2013 at <http://www.psa.org.au/download/standards/advanced-pharmacy-practice-framework.pdf>

<sup>8</sup> Adapted from *Competencies Proficiency Scale*. Office of Human Resources at the National Institutes of Health. Accessed at <http://hr.od.nih.gov/workingatnih/competencies/proficiencyscale.htm> on 18 October 2013.

Figure 2: Development of a Pharmacist



# Using the Competency Standards

## For Pharmacists

The competency framework allows pharmacists to design and structure an individual development plan to meet competence and to develop their career.

### Getting started...

1. Read through the performance criteria and the corresponding evidence to guide the understanding and self-assessment of competence.
2. List and gather the evidence from the last three years (last five years for research domain) which may be used to support the competency in that area. The evidence gathered could be patient education materials developed, narratives on patient encounters or quality improvement projects. *Some of the evidence examples may be used to cover different competencies across the other competency domains.*
3. Identify the competency level which best describes current level of practice based on evidence collected. Seek a second opinion from a peer or coach/mentor who is familiar with your performance at work if needed. The recommended competency level at each job level is listed in [Table 1](#).
4. Determine whether you are performing below, above or at the competency level expected for your current job level. If you have ticked “Below” for any competency, that competency is an area of immediate development need.
5. Identify your aspirational/next job level and determine whether you are performing below, above or at the competency level expected of the aspirational/next job level. If you have ticked “Below” for any competency, that competency is an area of long-term development needs.

### Charting development plan

1. Identify immediate and long-term development needs.
2. Identify learning strategy for each development need.
3. Select the course of action, expected learning outcomes and decide on the expected completion date. For immediate development needs, the completion time frame should be within a year whereas for long-term development needs, the completion time frame can be more than two years. Pharmacists can discuss with their reviewer, assessor or mentor on how they can be developed to close the gaps in the competencies.
4. Take action to achieve your goal and review your development plan regularly to ensure that you are on track.

## For Reviewer, Assessor and Mentor

1. The reviewer, assessor or mentor can use the Evidence column to aid assessment of the pharmacists' competencies and portfolio. They can take the opportunity to gather more information from the pharmacists on the depth of practice (performance level) for the evidence examples listed. Some of the evidence examples may be used to cover different competencies across the other competency domains.

### An Example of Needs Assessment and Development Plan

Current Job Role/Level: Principal Pharmacist (PH04)      Expected Competency Level: Advanced Level  
 Aspirational/Next Job Level: Senior Principal Pharmacist (PH05)      Target Competency Level: Advanced/Expert Level

Needs Assessment					Development Plan					
Competency	Current Performance Level	Expected Performance Level	Current vs Expected Level	Aspirational/Next Performance Level	Current vs Aspirational Performance Level	Types of needs	Course of action	Expected Learning Outcomes	Expected Completion Date	Achieved?
1.1 Demonstrate expert knowledge and skills	Advanced	Advanced	Met	Expert	Below	Long term	Experiential training (HMDP) – expansion of anticoagulation service into DOACs and perip clinic	Develop new service line for perip management of anticoagulation including DOACs Develop outcomes for the service	June 2018	In Progress
2.1 Ability to communicate effectively	Advanced	Expert	Below expected level	NA	NA	Immediate	Communication course Conflict management course Experiential (On job training)	Able to communicate concepts in a concise, coherent and confident manner at management level/ committees	Dec 2017	In Progress

Note: For template on Needs Assessment and Development Plan, please refer to Annex A (page 54)



## An example of using the APF

**Y**ou are an inpatient pharmacist at PH04 level and a member of the outpatient anticoagulation team. Your daily work includes reviewing of medication charts, attending medical rounds with cardiologists, dispensing medications and managing anticoagulation therapy at the outpatient clinic. You are a preceptor to pre-registration pharmacists and is involved in the training of pre-registration pharmacists, residents and other pharmacists.

As an inpatient pharmacist, during your daily medication chart review, you noted the high incidence of adverse drug reactions due to inappropriate management of anticoagulant therapy in the hospital. This resulted in prolonged hospitalisation stay, and increased the incidence of elevated INR, bleeding complications and the time to therapeutic range. While patients in the outpatient anticoagulation clinic are managed by a team of highly-trained anticoagulation providers, the patients in the inpatient setting were not.

You subsequently collaborated with your anticoagulation physician champion to establish an inpatient anticoagulation service in the hospital to better manage the inpatients so as to enhance the safety and efficacy of anticoagulant treatment. This also led to better continuity of care as the inpatients transited into the outpatient setting. The proposal for the new service was endorsed and supported by the Chairman of Medical Board.



### Tips

- 1** Start early from junior stage to gather portfolio systematically;
- 2** Actively gather feedback from supervisors and peers;
- 3** Find a mentor or coach to journey with you;
- 4** Review and reflect on career progression regularly

An example on the evidence examples documented for Expert Professional Practice and Collaborative Working Relationship is shown as follows:

Domain 1 Expert Professional Practice				
Competency Level	Intermediate Level	Advanced Level	Expert Level	
<b>Standard 1.1</b> <b>Demonstrates Expert Skills and Knowledge</b>	<i>Demonstrates general pharmaceutical knowledge in core areas.</i>	<i>Demonstrates advanced pharmaceutical knowledge in a defined area(s). Is able to plan, manage, monitor, advise and review pharmaceutical care programmes for patients in a defined area(s).</i>	<i>Demonstrates ability to advance the knowledge base in the defined area. Is able to advance specialist pharmaceutical care programmes for patients in the defined area(s).</i>	
<b>Evidence</b>	<ol style="list-style-type: none"> <li>As a pharmacist at inpatient, able to identify drug related problems and counselled patients during dispensing.</li> </ol>	<ol style="list-style-type: none"> <li>As an anticoagulation pharmacist at outpatient clinic, able to manage patients on anticoagulation therapy and titrate and manage therapy to therapeutic range.</li> <li>Able to conduct audit and review the performance of the anticoagulation clinic to identify gaps and propose action plans.</li> </ol>	<ol style="list-style-type: none"> <li>Able to review patient safety and medication error data to identify any adverse drug events on anticoagulation and proposed for an inpatient anticoagulation service aimed at minimising over anticoagulation and complications, and decreasing length of stay and time to therapeutic INR range. Proposal for the establishment of the inpatient anticoagulation service was approved by CMB in Jan 2015. Interim report shows a decrease in length of hospitalisation stay, shorter time to target INR during inpatient stay and fewer patients with out of range INR at first outpatient visit.</li> </ol>	
<b>Evidence Examples (documents to be provided for review)</b>	<ol style="list-style-type: none"> <li>Documentation of pharmacy interventions and enquiries from other healthcare professionals.</li> </ol>	<ol style="list-style-type: none"> <li>Performance record of % time in range of each anticoagulation provider (70%).</li> <li>Case logs of complicated cases.</li> <li>Records of consultation requests from other healthcare professionals.</li> <li>Summary of audit findings, gap identification and action plans proposed.</li> </ol>	<ol style="list-style-type: none"> <li>Reports on patient safety, including medication error rates, on anticoagulation management.</li> <li>Business proposal for justification of a pharmacist managed inpatient anticoagulation therapy detailing the resources required, standard operating procedures, and outcome measurements.</li> <li>Annual report with details on KPIs and workplan for following year.</li> </ol>	

Competency Level	Intermediate Level	Advanced Level	Expert Level
<p><b>Standard 1.2</b></p> <p><b>Manages patient care responsibilities/delivery of professional activities</b></p>	<p><i>Is accountable for the delivery of a pharmacy service to patients to whom they themselves directly provide pharmaceutical care.</i></p>	<p><i>Is accountable for the delivery of a pharmacy service to a defined group of patient.</i></p>	<p><i>Is accountable for the delivery of pharmacy services beyond defined group of patients.</i></p>
<p><b>Evidence</b></p>	<p>1. As a pharmacist at outpatient, able to identify drug related problems and counsel patients during dispensing</p>	<p>1. As an anticoagulation pharmacist at the outpatient clinic, able to manage patients on anticoagulation therapy and ensure that patients understand dosing regimens and counsel patients on adherence and side effects.</p> <p>2. Able to achieve KPIs and milestones set.</p>	<p>1. As the inpatient anticoagulation service IC, able to identify KPIs for the new service, monitor progress and to propose action plans to address the gaps.</p>
<p><b>Evidence Examples</b></p>	<p>1. Documentation of pharmacy interventions and enquires from other healthcare professionals.</p>	<p>1. Case logs.</p> <p>2. Annual report showing KPIs achieved and milestones reached.</p>	<p>1. Annual report on KPIs achieved.</p> <p>2. Gantt chart on achievements of milestones and other initiatives in progress.</p> <p>3. Action plan for coming year.</p>
<p><b>Standard 1.3</b></p> <p><b>Exhibits reasoning and judgement including analytical skills, judgemental skills, interpersonal skills and appraisal of option</b></p>	<p><i>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</i></p>	<p><i>Demonstrates ability to use skills to make decisions in complex situations where there are several factors that require analysis, interpretation and comparison.</i></p> <p><i>Demonstrates an ability to see situations holistically.</i></p>	<p><i>Demonstrates ability to use skills to manage difficult and dynamic situations.</i></p> <p><i>Demonstrates ability to see situations holistically and make decisions in the absence of evidence or data or when there is conflicting evidence or data.</i></p>

Competency Level	Intermediate Level	Advanced Level	Expert Level
<b>Evidence</b>	1. As an inpatient pharmacist, able to identify DRPs and suggest suitable options for discussion with prescribers.	1. As inpatient pharmacist, collected and analysed data on length of stay and outcomes of inpatients on anticoagulation therapy and drafted recommendation for an inpatient anticoagulation service. Co-presented with a physician champion at the medical board meeting to share on recommendations for improving anticoagulation therapy at the inpatient setting.	
<b>Evidence Examples</b>	1. Case interventions and enquiries.	1. Recommendation for an inpatient anticoagulation service. 2. Documentation of issues raised at the medical board meeting and replies provided in a professional manner to address physician concerns.	
<b>Standard 1.4 Uses professional autonomy</b>	<i>Is able to follow legal, ethical, professional and organisational policies/procedures and codes of conduct.</i>	<i>Is able to take action based on own interpretation of broad professional policies/procedures where necessary.</i>	<i>Is able to interpret overall health service policy and strategy, in order to establish goals and standards for others within the defined area(s).</i>
<b>Evidence</b>	1. Able to encourage and educate ward nurses and doctors to use premix potassium instead of concentrates to reduce medication and administration error as per institutional's guidelines.	1. Able to discuss with physicians on the use of medications for off-label indications and where appropriate, discourage use and provide suitable options.	1. Able to develop SOPs and guidelines for safer use of anticoagulants, a high alert medication, in the institution. 2. Able to develop monitoring parameters for the continuous improvement of the services.

Competency Level	Intermediate Level	Advanced Level	Expert Level
<b>Evidence Examples</b>	1. Consumption records showing reduction in use of potassium concentrate.	1. Case documentation of the discussion and intervention outcome.	1. SOPs and guidelines for safer use of anticoagulants in institution. 2. Dashboard for the monitoring of service performance, with reports of achievements of KPIs.
<b>Standard 2.1</b> <b>Ability to communicate effectively</b>	<i>Demonstrates use of appropriate communication to gain the co-operation of individual patients, colleagues and clinicians.</i>  <i>Demonstrates ability to communicate where the content of the discussion is explicitly defined.</i>	<i>Demonstrates use of appropriately selected communication skills to gain co-operation of small groups of patients, colleagues, senior clinicians and managers within the organisation.</i>  <i>Demonstrates ability to communicate where the content of the discussion is based on opinion.</i>	<i>Demonstrates ability to present complex, sensitive or contentious information to large groups of patients, clinicians and senior managers.</i>  <i>Demonstrates ability to communicate in a hostile, antagonistic or highly emotive atmosphere.</i>
<b>Evidence</b>	1. Able to clarify misconceptions (e.g. cannot take vegetable, cannot fall down, bleeding nonstop if suffer a cut) on the use of warfarin for patients and to convince them on the need to start therapy.	1. Able to persuade and convince GMB and senior physicians on the need and importance for an inpatient anticoagulation service. 2. Able to discuss with physicians on the off-label use of medications and where appropriate, to discourage use and provide suitable options.	
<b>Evidence Examples</b>	1. Narrative of incident.	1. Documentation of issues raised at medical board meetings and replies provided in a professional manner to address any concerns of the physicians. 2. Documentation of interventions and outcomes of discussion.	

Competency Level	Intermediate Level	Advanced Level	Expert Level
<p><b>Standard 2.2</b></p> <p><b>Collaborates with members of the health care team and offer consultations (Teamwork and Consultation)</b></p>	<p><i>Demonstrates ability to work as a member of the pharmacy team.</i></p> <p><i>Recognises personal limitations and is able to refer to more appropriate colleague.</i></p>	<p><i>Demonstrates ability to work as an acknowledged member of a multidisciplinary team.</i></p> <p><i>Accepts consultation for specialist advice from within the organisation.</i></p>	<p><i>Works across boundaries to build relationships and share information, plans and resources.</i></p> <p><i>Sought as an opinion leader both within the organisation and in the external environment.</i></p>
<p><b>Evidence</b></p>	<ol style="list-style-type: none"> <li>1. Able to work with pharmacy team to ensure timely review of medication charts and dispensing of medications to patients.</li> </ol>	<ol style="list-style-type: none"> <li>1. As a member of the anticoagulation team, able to collaborate with a physician champion to manage patients and to initiate new projects.</li> <li>2. Able to guide and advise junior pharmacists on anticoagulation dosing when consulted.</li> <li>3. Accepts referrals for inpatient anticoagulation therapy management.</li> </ol>	<ol style="list-style-type: none"> <li>1. Able to collaborate with a physician champion to review anticoagulation data and develop a business plan for an inpatient service.</li> <li>2. Member of the national anticoagulation group. Helped to draft and edit guidelines on anticoagulation in special populations and propose KPIs for pharmacist-managed anticoagulation clinics.</li> <li>3. A member of the Venous thromboembolism (VTE) prevention group in own institution, and drafted the thromboprophylaxis and VTE treatment guidelines.</li> <li>4. Consulted by counterparts in other institutions on anticoagulant management.</li> <li>5. Speaker on “Managing drug interactions and anticoagulants” at Asian Pacific Conference on Antithrombotics held in March 2015.</li> </ol>
<p><b>Evidence Examples</b></p>	<ol style="list-style-type: none"> <li>1. Narrative documentation.</li> <li>2. Feedback from colleagues.</li> </ol>	<ol style="list-style-type: none"> <li>1. Documentation of projects initiated with physician champions.</li> <li>2. Feedback/comments.</li> <li>3. Documentation of enquiries.</li> </ol>	<ol style="list-style-type: none"> <li>1. Documentation of issues raised at medical board meetings and replies provided in a professional manner to address concerns of the physicians.</li> <li>2. Drafted guidelines.</li> <li>3. Documentation of enquiries.</li> </ol>

The following may be used as evidence to support the APF:

Competency domains	Evidence examples
Expert Professional Practice	<ul style="list-style-type: none"> <li>Guidelines on the use and monitoring of anticoagulants and your role in its development e.g. perioperative management of anticoagulants</li> <li>Case logs of patients managed, clinical interventions, drug enquiries</li> <li>Outcome measurements</li> </ul>
Collaborative working relationship	<ul style="list-style-type: none"> <li>Communication of a pharmacy plan to hospital management e.g. presentations</li> <li>Narrative on how you influenced other practitioners to change the practice</li> <li>Documentation on collaborative management of patients with the primary team</li> </ul>
Leadership	<ul style="list-style-type: none"> <li>Your participation in creating a new policy on managing anticoagulation in the hospital</li> </ul>
Management	<p>The part you played in developing/facilitating the following;</p> <ul style="list-style-type: none"> <li>Policies and procedures for the inpatient anticoagulation services</li> <li>Resourcing for manpower</li> <li>Collaboration with other teams e.g. doctors to initiate a new service or expand an existing one</li> </ul>
Education, training and development	<ul style="list-style-type: none"> <li>Training conducted for staff involved in the inpatient anticoagulation service</li> <li>Continuing education programs on anticoagulation conducted to help bridge knowledge gaps and to share clinical pearls</li> <li>Participants' feedback</li> </ul>
Research	<ul style="list-style-type: none"> <li>Quality audit on the service</li> <li>Publication of results</li> <li>Conducted critical review of literature to develop practice guidelines</li> </ul>

# Competency Standards for Pharmacists in Advanced Practice

## Domain 1 Expert Professional Practice

Standard 1.1	Demonstrates Expert Skills and Knowledge
Standard 1.2	Manages patient care responsibilities/ delivery of professional activities
Standard 1.3	Exhibits reasoning and judgement including analytical skills, judgemental skills, interpersonal skills and appraisal of option
Standard 1.4	Uses professional autonomy

This Domain includes those competency standards that address the professional responsibilities of pharmacists and the profession's commitment to advancing the standards of pharmaceutical care for patients and the public.

## Standard 1.1 Demonstrates Expert Skills and Knowledge

Performance criteria	Evidence	Evidence Examples <sup>9</sup>
<p><b>Intermediate</b></p> <p>Demonstrates general pharmaceutical knowledge in core areas.</p>	<ol style="list-style-type: none"> <li>1. Able to provide relevant information for consultation requests.</li> <li>2. Able to identify drug-related problems and develop therapeutic plans for patients in core areas.</li> </ol>	<ol style="list-style-type: none"> <li>1. Records of consultation requests from healthcare professionals within the hospital.</li> <li>2. Documentation of pharmacy interventions and enquiries e.g. requests from other healthcare professionals or patients.</li> </ol>
<p><b>Advanced</b></p> <p>Demonstrates advanced pharmaceutical knowledge in a defined area(s).</p> <p>Is able to plan, manage, monitor, advise and review pharmaceutical care programmes for patients in a defined area(s).</p>	<ol style="list-style-type: none"> <li>1. Regarded as a source of expertise for the management of patients with drug-related problems related to specific disease states.</li> <li>2. Able to accurately and efficiently identify multiple, complex drug-related problems and develop therapeutic plans through evidence-based knowledge and experience in a defined field of practice.</li> </ol>	<ol style="list-style-type: none"> <li>1. Documented pharmacy interventions and enquiries e.g. requests from other healthcare professionals or patients.</li> <li>2. Documented pharmaceutical care plans in complex cases.</li> </ol>

<sup>9</sup> The list of evidence examples is non-exhaustive

Performance criteria	Evidence	Evidence Examples
<p><b>Expert</b></p> <p>Demonstrates ability to advance the knowledge base in the defined area.</p> <p>Is able to advance specialist pharmaceutical care programmes for patients in the defined area(s).</p>	<ol style="list-style-type: none"> <li>1. Able to look beyond the current level of care in the defined area and provide solutions to enhance patient outcomes.</li> <li>2. Able to lead practice through research or start new service initiative.</li> </ol>	<ol style="list-style-type: none"> <li>1. Title of translational research conducted.</li> <li>2. Initiation of new services.</li> <li>3. Reviews of new information and subsequent actions undertaken.</li> </ol>

### Standard 1.2 Manages patient care responsibilities/ delivery of professional activities

Performance criteria	Evidence	Evidence Examples
<p><b>Intermediate</b></p> <p>Is accountable for the delivery of a pharmacy service to patients to whom they themselves directly provide pharmaceutical care.</p>	<ol style="list-style-type: none"> <li>1. Able to provide safe, effective and timely pharmaceutical care to each patient independently</li> </ol>	<ol style="list-style-type: none"> <li>1. Documented pharmacy Interventions done.</li> <li>2. Documented case based discussions conducted.</li> <li>3. Feedback from patients, peers/colleagues, clinical heads.</li> </ol>
<p><b>Advanced</b></p> <p>Is accountable for the delivery of a pharmacy service to a defined group of patient.</p>	<ol style="list-style-type: none"> <li>1. Able to provide safe, effective and timely pharmaceutical care to a defined group of patients with special needs or in a defined service area.</li> <li>2. Able to collate and analyse data for improvement opportunities.</li> </ol>	<ol style="list-style-type: none"> <li>1. Achievement of Key Performance Indicators (KPIs) as Manager of a section.</li> <li>2. Contribution as Leader of a Quality Improvement project for care delivery to a defined group of patients e.g. patients in Anticoagulation clinic, Hypertension-Diabetes-Lipid clinic.</li> <li>3. Documentation of how Plan-Do-Check-Act (PDCA) cycle is applied to service delivery.</li> </ol>

Performance criteria	Evidence	Evidence Examples
<p><b>Expert</b></p> <p>Is accountable for the delivery of pharmacy services beyond defined group of patients.</p>	<ol style="list-style-type: none"> <li>1. Able to influence and contribute actively to inter-professional teams.</li> <li>2. Able to synthesize data for programme monitoring and evaluation and to generate new ideas/solutions/guidelines.</li> </ol>	<ol style="list-style-type: none"> <li>1. Contribution to the development of a new protocol/ guideline.</li> <li>2. Contribution as the Pharmacist-In-Charge of pharmacy services e.g. Anticoagulation clinic, Hypertension-Diabetes-Lipids, ambulatory care clinics, Intensive Care Units.</li> <li>3. Contribution to the development of a service that transforms the delivery of care e.g. Utilize data from Medication Therapy Management (MTM) service to develop a packing service that improves patient compliance.</li> </ol>

### Standard 1.3 Exhibits reasoning and judgement including analytical skills, judgemental skills, interpersonal skills and appraisal of option

Performance criteria	Evidence	Evidence Examples
<p><b>Intermediate</b></p> <p>Demonstrates ability to use skills in a range of <i>routine</i> situations requiring analysis or comparison of a range of options.</p> <p>Recognises priorities when problem-solving and identifies deviations from the normal pattern.</p>	<ol style="list-style-type: none"> <li>1. Able to interpret and adhere to institutional policies and protocols.</li> <li>2. Able to identify and fully describe (verbally or in writing) the nature of a problem and probable causes or causative factors.</li> <li>3. Able to document the identified problem(s), causative factor(s) and options for resolving the problem.</li> <li>4. Able to make practical and effective decisions in a timely fashion, in day-to-day activities, prioritising</li> </ol>	<ol style="list-style-type: none"> <li>1. Feedback from:             <ol style="list-style-type: none"> <li>a. Peers/colleagues</li> <li>b. Team members</li> <li>c. Supervisors/tutors</li> <li>d. Learner/trainees</li> </ol> </li> <li>2. Examples of documented interventions done</li> <li>3. Documented evidence of problem/ feedback management when handling difficult customers.</li> </ol>

Performance criteria	Evidence	Evidence Examples
<p><b>Advanced</b></p> <p>Demonstrates ability to use skills to make decisions in complex situations where there are several factors that require analysis, interpretation and comparison.</p> <p>Demonstrates an ability to see situations holistically.</p>	<ol style="list-style-type: none"> <li>1. Able to make practical and effective decisions in a timely fashion, in complex situations.</li> <li>2. Able to ask pertinent questions, list and evaluate options by constructing best and worst scenarios, and assess chances of success and consequences or failures.</li> <li>3. Able to discuss and communicate these plans with team members and stakeholders effectively.</li> </ol>	<ol style="list-style-type: none"> <li>1. Contribution as a member of institutional committee e.g. clinical governance committee.</li> <li>2. Feedback from:               <ol style="list-style-type: none"> <li>a. Peers/colleagues</li> <li>b. Supervisor/tutors</li> <li>c. Team members</li> <li>d. Learner/trainees</li> </ol> </li> <li>3. Examples of documented interventions done.</li> <li>4. Reports of medication errors investigated.</li> <li>5. Documented evidence of problem/ issue resolution when handling difficult customers with complex needs.</li> <li>6. Role in the revision or development of departmental/institutional guidelines/protocols.</li> </ol>
<p><b>Expert</b></p> <p>Demonstrates ability to use skills to manage difficult and dynamic situations.</p> <p>Demonstrates ability to see situations holistically and make decisions in the absence of evidence or data or when there is conflicting evidence or data</p>	<ol style="list-style-type: none"> <li>1. Able to assimilate knowledge and understand situational conditions and goals, in order to develop new standards, guidelines, protocols or governance frameworks.</li> </ol>	<ol style="list-style-type: none"> <li>1. Role in development of a new pharmacy guideline.</li> <li>2. Contribution as a member of the MOH Clinical Practice Guidelines workgroup.</li> <li>3. Contribution as a member of the Medication Safety Committee at institutional/ cluster level or the equivalent.</li> <li>4. Implementation of measures that improved the quality of service.</li> </ol>

## Standard 1.4 Uses professional autonomy

Performance criteria	Evidence	Evidence Examples
<p><b>Intermediate</b></p> <p>Is able to follow legal, ethical, professional and organisational policies/procedures and codes of conduct.</p>	<p>1. Able to understand and apply the codes of ethics and conduct; and the legal framework which governs practice.</p>	<p>1. Feedback on day to day work from:</p> <ul style="list-style-type: none"> <li>a. Peers/colleagues</li> <li>b. Supervisor</li> <li>c. Team members</li> </ul>
<p><b>Advanced</b></p> <p>Is able to take action based on own interpretation of broad professional policies/procedures where necessary.</p>	<p>1. Able to decide on a course of action in an ambiguous situation or in the absence of specific policy/procedure.</p>	<p>1. Role in the initiation of a new service which has no precedence e.g. telepharmacy even when the law has no provision for it.</p> <p>2. Documented actions taken in situations requiring ethical considerations.</p>
<p><b>Expert</b></p> <p>Is able to interpret overall health service policy and strategy, in order to establish goals and standards for others within the defined area(s).</p>	<p>1. Able to assimilate knowledge and understand situational conditions and goals, in order to develop new standards/ guidelines/ protocols or governance frameworks.</p>	<p>1. Role in the development of a new practice guideline.</p> <p>2. Contribution as a member of the MOH Clinical Practice Guidelines workgroup.</p> <p>3. Contribution as a member of the Medication Safety Committee at institutional/ cluster level or the equivalent.</p> <p>4. Role in the initiation, development or implementation of new services.</p>

## Domain 2 Building Working Relationships

Standard 2.1	Ability to communicate effectively (Communication)
Standard 2.2	Collaborates with members of the health care team and offer consultations (Teamwork and Consultation)

The Domain includes those standards that are required to communicate effectively with fellow colleagues so as to establish and maintain professionally-driven working relationships within the healthcare team and gain the cooperation of others. It also includes the consultancy activities undertaken by the pharmacists in advanced practice.

### Standard 2.1 Ability to communicate effectively (Communication)

Performance criteria	Evidence	Evidence Examples
<p><b>Intermediate</b></p> <p>Demonstrates use of appropriate communication to gain the co-operation of individual patients, caregivers, colleagues and clinicians.</p> <p>Demonstrates ability to communicate where the content of the discussion is explicitly defined.</p>	<ol style="list-style-type: none"> <li>1. Able to communicate with patients, caregivers and colleagues within the department and show the ability to persuade, motivate and collaborate.</li> <li>2. Able to actively listen, empathise and engage with patients, caregivers and colleagues and understand their positions/needs.</li> <li>3. Able to communicate effectively with small groups within the department through presentation/ talk/meeting.</li> <li>4. Able to present accurate information in a concise, coherent and confident manner appropriate to the target audience</li> </ol>	<ol style="list-style-type: none"> <li>1. Feedback from:               <ol style="list-style-type: none"> <li>a) 360 degree evaluation.</li> <li>b) Observational feedback from colleagues both within and outside department.</li> <li>c) Patients</li> <li>d) Trainees' evaluation.</li> </ol> </li> <li>2. Written communication by the individual e.g. correspondences, articles.</li> <li>3. Presentation materials and audience feedback.</li> <li>4. Evidence of collaboration with colleagues from other departments through projects/workgroups, etc.</li> </ol>
<p><b>Advanced</b></p> <p>Demonstrates use of appropriately selected communication skills to gain co-operation of small groups of patients, caregivers, colleagues, senior clinicians and managers within the organisation.</p> <p>Demonstrates ability to communicate where the content of the discussion is based on opinion.</p>	<ol style="list-style-type: none"> <li>1. Able to communicate with patients, caregivers and colleagues both within and outside of the Department and show the ability to persuade, motivate and collaborate.</li> <li>2. Able to communicate effectively with small groups both within and outside the department through presentation/ talk/meeting with minimal guidance.</li> <li>3. Able to deal with difficult situations where communication is required e.g. managing difficult situations and diffusing conflicts.</li> </ol>	<ol style="list-style-type: none"> <li>1. Feedback from:               <ol style="list-style-type: none"> <li>a) 360 degree evaluation.</li> <li>b) Observational feedback from colleagues both within and outside departmental.</li> <li>c) Patients</li> <li>d) Trainees' evaluation.</li> </ol> </li> <li>2. Written communication by the individual e.g. correspondences, articles, replies to complaints,</li> <li>3. Presentation materials and audience feedback.</li> <li>4. Evidence of collaboration with colleagues from other departments through projects/workgroups, etc.</li> </ol>

Performance criteria	Evidence	Evidence Examples
<p><b>Expert</b></p> <p>Demonstrates ability to present complex, sensitive or contentious information to large groups of patients, caregivers, clinicians and senior managers.</p> <p>Demonstrates ability to communicate in a hostile, antagonistic <u>or</u> highly emotive atmosphere.</p>	<ol style="list-style-type: none"> <li>1. Able to communicate concepts and ideas in a concise, coherent and confident manner at management level/ committees e.g. to directors, clinicians and senior managers.</li> <li>2. Is sensitive to changes in the working atmosphere due to communication issues (e.g. tension, low morale, uncooperative behaviour) and take the appropriate action.</li> <li>3. Able to select the appropriate approach/ strategy that is effective for resolving conflict.</li> </ol>	<ol style="list-style-type: none"> <li>1. Feedback from:               <ol style="list-style-type: none"> <li>a) 360 degree evaluation.</li> <li>b) Observational feedback from colleagues both within and outside departmental.</li> <li>c) Patients</li> <li>d) Trainees' evaluation.</li> </ol> </li> <li>2. Written communication by the individual e.g. correspondences, articles, workplan/ budget/ board papers.</li> <li>3. Presentation materials and audience feedback.</li> <li>4. Leadership role in collaboration (especially if it's in area of expertise) OR in multiple interdepartmental/ interdisciplinary collaborations.</li> </ol>

### Standard 2.2 Collaborates with members of the health care team and offer consultations (Teamwork and Consultation)

Performance criteria	Evidence	Evidence Examples
<p><b>Intermediate</b></p> <p>Demonstrates ability to work as a member of the pharmacy team.</p> <p>Recognises personal limitations and is able to refer to more appropriate colleagues.</p>	<ol style="list-style-type: none"> <li>1. Able to actively contribute to the department's daily operations.</li> <li>2. Able to demonstrate a positive attitude to working collaboratively with others.</li> <li>3. Able to provide feedback, encouragement and support to team members.</li> <li>4. Able to identify the types of circumstances where assistance should be sought.</li> </ol>	<ol style="list-style-type: none"> <li>1. Peer review through 360 degree feedback.</li> <li>2. Observational feedback from colleagues both within and outside department.</li> <li>3. Achievement of team-based outcomes.</li> <li>4. Contribution as a member in workgroups/ committees, at departmental level.</li> </ol>

Performance criteria	Evidence	Evidence Examples
<p><b>Advanced</b></p> <p>Demonstrates ability to work as an acknowledged member of a multidisciplinary team.</p> <p>Accepts consultation for specialist advice from within the organisation.</p>	<ol style="list-style-type: none"> <li>1. Able to respond to the demands and expectations of members of the health care team.</li> <li>2. Able to share information and expertise to facilitate a common understanding.</li> <li>3. Able to maintain rapport and work in partnership (share information with patient's consent, and work cooperatively on patient's health goals) with other healthcare professionals to achieve therapeutic goals.</li> <li>4. Able to be actively contributing a pharmacist's perspective and make a positive contribution to team-based problem solving and decision making.</li> </ol>	<ol style="list-style-type: none"> <li>1. Peer review through 360 degree feedback.</li> <li>2. Observational feedback from colleagues both within and outside department.</li> <li>3. Achievement of team-based outcomes or participation in defining the outcomes to be achieved by the department.</li> <li>4. Contribution as a member in workgroups/ committees, at organisation level.</li> </ol>
<p><b>Expert</b></p> <p>Works across boundaries to build relationships and share information, plans and resources.</p> <p>Sought as an opinion leader both within the organisation and in the external environment.</p>	<ol style="list-style-type: none"> <li>1. Able to be assertive and use supportive and persuasive communication to achieve a desired outcome.</li> <li>2. Able to describe or demonstrate an appropriate negotiation strategy for a particular situation.</li> <li>3. Able to maintain rapport and work in partnership across boundaries to achieve strategic goals.</li> <li>4. Able to proactively identify opportunities for collaboration based on common goals and interest.</li> <li>5. Able to contribute to policy development at the cluster or national level.</li> </ol>	<ol style="list-style-type: none"> <li>1. Peer review through 360 degree feedback.</li> <li>2. Observational feedback from colleagues both within and outside department.</li> <li>3. Achievement of team-based outcomes.</li> <li>4. Contribution as a member in workgroups/ committees at organisational/ cluster/ national level e.g. defining outcomes to be achieved and to see through the achievement of stated outcomes as a team and be able to independently review processes and troubleshoot along the course of implementation.</li> <li>5. Invitation as a speaker/ judge for conferences.</li> <li>6. Invitation as a speaker for public event.</li> </ol>

## Domain 3 Leadership

Standard 3.1	Creates Vision
Standard 3.2	Strategic Planning
Standard 3.3	Innovation
Standard 3.4	Motivates individual (Motivational)

The Domain includes those competency standards that encompass the ability of the pharmacists to inspire individuals and teams to achieve high standards of performance and personal development. It also addresses the competencies required to undertake clinical governance as well as the planning of professional services.

### Standard 3.1 Creates Vision

Performance criteria	Evidence	Evidence Examples
<p><b>Intermediate</b></p> <p>Demonstrates understanding of and contributes to the department and corporate vision.</p>	<ol style="list-style-type: none"> <li>1. Able to articulate how daily activities fulfil the department and corporate visions.</li> <li>2. Displays situational awareness thus understanding current limitations.</li> </ol>	<ol style="list-style-type: none"> <li>1. Goals set for self is in alignment with the department/ hospital vision.</li> <li>2. Observed to embrace core values and shared goals of the department/ institution in the way that these are translated into daily activities and practice.</li> </ol>
<p><b>Advanced</b></p> <p>Embraces the vision and translates this into clear directions for staff and management.</p>	<ol style="list-style-type: none"> <li>1. Able to communicate department and corporate visions to staff and conceptualise them into action plans for the section/department</li> </ol>	<ol style="list-style-type: none"> <li>1. Examples of how the vision is translated into strategies and actions for the team.</li> <li>2. Workplan and targets developed for team/ section is in alignment with the department/ hospital's vision.</li> </ol>
<p><b>Expert<sup>10</sup></b></p> <p>Creates vision of future and convinces others to share the vision at a higher level.</p>	<ol style="list-style-type: none"> <li>1. Has a clear and strong vision with a realistic strategy to carry it out.</li> <li>2. Able to communicate the vision in a clear and passionate manner in order to rally the support of others.</li> <li>3. Able to understand the healthcare landscape and values of stakeholders.</li> </ol>	<ol style="list-style-type: none"> <li>1. Vision developed is inspiring and creates purpose which resonates with different stakeholders.</li> <li>2. As the leader, he/ she communicates the vision through his/ her actions (walks the talk).</li> <li>3. The strategies are achievable and clearly articulated.</li> <li>4. Role as a member of strategic planning workgroup e.g. institution or national committees (e.g. Antimicrobial Stewardship Programme, Pharmacy Specialist Accreditation Board, Intensive Care Unit committee).</li> </ol>

<sup>10</sup> Taken from the AHEAD Leadership Framework by the Allied Health Division, Singapore General Hospital.

## Standard 3.2 Strategic Planning

Performance criteria	Evidence	Evidence Examples
<p><b>Intermediate</b></p> <p>Demonstrates understanding of the needs of stakeholders, and practice reflects institutional, cluster and national health care policy.</p> <p>Demonstrates ability to plan 4-12 months ahead within a defined area.</p>	<ol style="list-style-type: none"> <li>1. Able to communicate (including describing and interpreting) policies effectively to others.</li> <li>2. Displays situational awareness i.e. able to assess what is happening on the ground, through engaging key stakeholders.</li> <li>3. Able to identify gaps, prioritise and develop short term plans (either for a specific project or department), and show how the plans align to the department's middle and long term strategy.</li> </ol>	<ol style="list-style-type: none"> <li>1. Clear explanation of policies (e.g. drug classification, subsidy level) provided to others (e.g. patients, subordinates, staff etc).</li> <li>2. Documented plan to achieve departmental/institutional balance score card indicators.</li> <li>3. Role in encouraging colleagues to use measures that can ensure or enhance patient's safety during routine practice e.g. encouraging nurses to use pre-mixed solutions for patient safety.</li> <li>4. Successful completion of short-term projects (Clinical Practice Improvement Programme, Quality Improvement projects etc).</li> <li>5. Project Presentation at relevant platforms.</li> </ol>
<p><b>Advanced</b></p> <p>Demonstrates understanding of culture, climate and needs of stakeholders both internal and external; and the ability to incorporate national healthcare policy which influences departmental / institutional strategy.</p> <p>Demonstrates ability to plan over a year ahead within a defined area.</p>	<ol style="list-style-type: none"> <li>1. Able to conceptualise strategies and implement at departmental/ institutional/ cluster levels, that are in line with national healthcare policies.</li> <li>2. Able to display situational awareness i.e. able to assess what is happening on the ground, through engaging key stakeholders.</li> <li>3. Able to persuade and influence key stakeholders.</li> <li>4. Able to identify gaps, prioritise and develop middle-term plans (1-3 years) for the department and shows how the plans align to the sector's/organisation's long term strategy.</li> <li>5. Able to stay abreast of changes in the healthcare scene and identify potential opportunities where information may be useful in the future and inform longer term strategy.</li> </ol>	<ol style="list-style-type: none"> <li>1. Role in implementing of new policies within institution, e.g. MAF plus.</li> <li>2. Identification of competency gaps of staff and role in implementing the necessary education and training programmes to fulfil the criteria of the national specialisation framework.</li> <li>3. Role in identifying gaps highlighted through customer satisfaction surveys and recommendations made.</li> <li>4. Workplan(s) presented</li> <li>5. Contribution as Organiser or participant in departmental retreats.</li> </ol>

Performance criteria	Evidence	Evidence Examples
<p><b>Expert</b></p> <p>Demonstrates understanding of culture, climate and needs of stakeholders both internal and external and actively participate in creating institutional/ national policy.</p> <p>Demonstrates active participation in <u>creating</u> institutional/ national health care policies.</p> <p>Strategizes goals and actions at organisational and/or professional levels.</p> <p>Plans long term and sector wide.</p> <p>Takes the long-term perspective.</p>	<ol style="list-style-type: none"> <li>1. Able to evaluate, influence and manage situations and stakeholders, with political astuteness by understanding diverse interest groups and power bases within organisations and the wider community and the dynamic between them so as to lead health services more effectively.</li> <li>2. Able to recognise and interpret organisational culture to achieve desired results.</li> <li>3. Able to anticipate implications of the policies created and plan ahead.</li> <li>4. Able to develop long-term plans (over 3 years) for the pharmacy sector and show how the plans will align to the cluster's strategy and direction.</li> <li>5. Able to continuously learn and demonstrate understanding of trends in healthcare, economy, technology and foresee future opportunities and challenges.</li> </ol>	<ol style="list-style-type: none"> <li>1. Contribution as a member of a national workgroup e.g. Pharmacy Specialist Accreditation Board, Pre-registration Pharmacist Training Implementation Workgroup.</li> <li>2. Contribution as a member of relevant institutional/ cluster strategic team/workgroup.</li> <li>3. Role in the development of manpower training and service quality (e.g. redefinition of Pharmacy Technician job scope).</li> <li>4. Workplan(s) presented.</li> <li>5. Contribution as a member of institution or cluster level committees.</li> <li>6. Contribution as Facilitator for discussion during strategic retreat or formulating strategic plan.</li> </ol>

### Standard 3.3 Innovation

Performance criteria	Evidence	Evidence Examples
<p><b>Intermediate</b></p> <p>Demonstrates ability to improve quality with minimal supervision.</p>	<ol style="list-style-type: none"> <li>1. Able to think differently (outside the box) in order to improve quality with some supervision and is receptive to new ideas/suggestions from co-workers.</li> </ol>	<ol style="list-style-type: none"> <li>1. Quality of the reviews conducted on routine processes and work done on small scale quality improvement projects.</li> <li>2. Contribution as a Team member of Clinical Practice Improvement Programme / Quality Improvement / EPIC projects or quality initiatives within the section or department.</li> </ol>

Performance criteria	Evidence	Evidence Examples
<p><b>Advanced</b></p> <p>Recognises and implements innovation independently.</p>	<p>1. Able to make connections to seemingly unrelated questions, problems, or ideas by questioning, leading to improvement in the respective practice settings.</p>	<p>1. Contribution as a Team member of CPIP / QI / EPIC projects or quality initiatives within the department or institution.</p> <p>2. Collaboration projects with other healthcare professionals to improve processes.</p> <p>3. Principal Investigator for a research study that significantly improves the way things are done.</p> <p>4. Contribution as Project participant of lead involving the use of new models or technology.</p>
<p><b>Expert</b></p> <p>Takes the lead to ensure innovation produces improvement in areas of practice.</p>	<p>1. Able to anticipate future trends in healthcare and is constantly challenging status quo to experiment with new concepts, leading others into new directions that ultimately result in innovative solutions.</p>	<p>1. Contribution as a Team leader for Clinical Practice Improvement Programme (CPIP) / Quality Improvement / Enhancing Performance, Improving Care (EPIC) projects or quality initiatives within the department or institution.</p> <p>2. Principal Investigator for a research study that innovatively improves the way things are done.</p> <p>3. Contribution as a Project leader for large scale or complex projects.</p>

### Standard 3.4 Motivates individual<sup>11</sup> (Motivational)

Performance criteria	Evidence	Evidence Examples
<p><b>Intermediate</b></p> <p>Demonstrates ability to motivate self to achieve goals.</p>	<p>1. Has a positive attitude and is determined to change negative experiences into growing experiences in order to lift his/her morale.</p> <p>2. Is highly driven in a cause(s).</p> <p>3. Possesses high energy levels, is able to create task excitement for oneself.</p>	<p>1. Achievement of the objectives set for each appraisal period.</p> <p>2. Feedback from pharmacy colleagues, workgroup lead and clinical leaders</p> <p>3. Description of purpose, goals and targets set for oneself.</p>

Performance criteria	Evidence	Evidence Examples
<p><b>Advanced</b></p> <p>Demonstrates ability to motivate individuals <u>in the team</u>.</p>	<ol style="list-style-type: none"> <li>1. Has a positive attitude and is determined to change negative experiences of the team into growing experiences in order to lift the team's morale.</li> <li>2. Is highly driven in a cause(s) and can foster that same enthusiasm in his/her staff by providing an environment that encourages motivated members within the team.</li> <li>3. Possesses high energy levels, and is able to create task excitement and be a catalyst for positive action within the team.</li> <li>4. Able to understand their staff's needs, and is able to verbally persuade their staff to gain "buy-in" to their ideas and inspire them to greater heights.</li> </ol>	<ol style="list-style-type: none"> <li>1. Achievement of goals set for the team.</li> <li>2. Quality of constructive feedback to team members.</li> <li>3. Contributions as a Chair/member of a workgroup/committee e.g. a Quality Improvement project, pilot study, automation project, research.</li> </ol>
<p><b>Expert</b></p> <p>Demonstrates ability to motivate individuals at a <u>higher level</u>.</p>	<ol style="list-style-type: none"> <li>1. Has a positive attitude and is determined to change negative experiences of the group into growing experiences in order to lift the department's (and beyond) morale.</li> <li>2. Is highly driven in a cause(s) and can foster that same enthusiasm in their staff by providing an environment that encourages motivated members in the department and beyond.</li> <li>3. Possesses high energy levels, and is able to create task excitement and be a catalyst for positive action for the department and beyond.</li> <li>4. Able to understand other's (both within and outside of the organisation) needs, and is able to verbally persuade others to gain "buy-in" to their ideas and inspire them to greater heights.</li> </ol>	<ol style="list-style-type: none"> <li>1. Achievement of goals set for the department and beyond.</li> <li>2. Contributions as a Chair of a workgroup/committee e.g. Pharmacy Specialists Accreditation Board, Clinical Pharmacy in-charge.</li> <li>3. Function as a mentor in a formal program.</li> <li>4. Observed morale and energy level, understanding and commitment of the team to achieving the goals set.</li> </ol>

<sup>11</sup> Taken from the AHEAD Leadership Framework by the Allied Health Division, Singapore General Hospital.

## Domain 4 Management

Standard 4.1	Implementing Organisational Priorities
Standard 4.2	Managing resource utilisation
Standard 4.3	Establishing standards of practice
Standard 4.4	Managing risk
Standard 4.5	Managing performance
Standard 4.6	Project management
Standard 4.7	Managing change

The Domain includes those competency standards that relate the way in which the pharmacist organises and delivers service objectives in a timely fashion. It also addresses the competency required by the pharmacist to plan and manage professional services and resources.

### Standard 4.1 Implementing Organisational Priorities

Performance criteria	Evidence	Evidence Examples
<p><b>Intermediate</b></p> <p>Demonstrates understanding of the implications of organisational priorities for the team.</p>	<p>1. Able to explain organisational priorities and the rationale, and how they impact the team and stakeholders.</p>	<p>1. Disseminated information to team on new policies and procedures</p>
<p><b>Advanced</b></p> <p>Shapes the response of the team to achieve organisational priorities.</p>	<p>1. Able to formulate strategies at the departmental level to achieve organisational priorities.</p>	<p>1. Developed plans/ protocols/ guidelines</p>
<p><b>Expert</b></p> <p>Accountable for the direct delivery of organisational priorities at a higher level.</p>	<p>1. Able to lead the committee in the formulation and implementation of the strategies and report results directly to the hospital management.</p>	<p>1. Results or progress achieved by the team.</p> <p>2. Evidence of clear formulation of strategies, action plans and timelines.</p>

## Standard 4.2 Managing resource utilisation

Performance criteria	Evidence	Evidence Examples
<p><b>Intermediate</b></p> <p>Demonstrates understanding of the process for effective resource utilisation.</p>	<ol style="list-style-type: none"> <li>1. Able to explain the processes for service delivery and the required resources to meet demands.</li> <li>2. Demonstrates appreciation of service demands through self-management of time.</li> </ol>	<ol style="list-style-type: none"> <li>1. Timely return from the wards to do discharges.</li> <li>2. Performed dispensing and counselling efficiently and effectively during peak period.</li> </ol>
<p><b>Advanced</b></p> <p>Demonstrates ability to effectively manage resources</p>	<ol style="list-style-type: none"> <li>1. Able to negotiate for and manage resources within the section.</li> </ol>	<ol style="list-style-type: none"> <li>1. Prepared roster that is able to meet service demands.</li> <li>2. Appropriate management of inventory including usage of consumables.</li> <li>3. Budget work plans that reflect the monitoring and interpretation of financial results e.g. operational budget.</li> </ol>
<p><b>Expert</b></p> <p>Demonstrates ability to reconfigure the use of available resources</p>	<ol style="list-style-type: none"> <li>1. Able to lead the team in acquiring and optimising the resources provided; set clear and achievable milestones for the delivery of plans and monitor progress against them.</li> </ol>	<ol style="list-style-type: none"> <li>1. Good allocation of resources to achieve objectives/Key Performance Indicators e.g.               <ol style="list-style-type: none"> <li>a) Conducting relevant quality improvement projects.</li> <li>b) Introduction of automation within the section or department.</li> <li>c) Utilisation of Pharmacy Technicians to support the medication reconciliation process.</li> </ol> </li> <li>2. Budget workplans that reflect the monitoring and interpretation of financial results e.g. capital budget for large scale projects.</li> <li>3. Good identification of talent for various roles in the team.</li> </ol>

### Standard 4.3 Establishing standards of practice

Performance criteria	Evidence	Evidence Examples
<p><b>Intermediate</b></p> <p>Demonstrates understanding of, and conforms to relevant standards of practice.</p>	<p>1. Able to personally comply with relevant standards of practice.</p>	<p>1. No feedback or report of regulatory, policy or procedural breaches.</p>
<p><b>Advanced</b></p> <p>Accountable for the setting of targets and monitoring of standards of practice.</p>	<p>1. Able to ensure that the team complies to relevant standards of practice.</p>	<p>1. Reviewed and updated existing SOPs/Work Instructions.</p>
<p><b>Expert</b></p> <p>Accountable for the formulation, setting and implementation of standards.</p>	<p>1. Able to develop, implement, and monitor new standards of practice within the organisation.</p> <p>2. Able to benchmark to relevant standards of practice</p>	<p>1. Contribution towards establishing new protocol/ guidelines or SOPs on new processes e.g. Business Continuity Planning (BCP) plan for haze management.</p>

### Standard 4.4 Managing Risk

Performance criteria	Evidence	Evidence Examples
<p><b>Intermediate</b></p> <p>Demonstrates ability to identify and resolve risk management issues according to policy/protocol.</p>	<p>1. Able to effectively manage risk to reduce the potential for patient harm.</p> <p>2. Able to comply with existing workflow protocols to manage operational risks.</p>	<p>1. Efforts towards reducing risk of near misses and errors in medication review and dispensing through compliance to policies and protocols.</p>
<p><b>Advanced</b></p> <p>Is accountable for developing risk management policies/ protocols for the <i>team</i>, including identifying and resolving new risk management issues.</p>	<p>1. Able to develop / revise risk management policies including identifying and resolving new risk management issues at the departmental level.</p>	<p>1. Reviewed and updated existing work procedures to mitigate risks whenever there are changes to existing factors that impact risks.</p> <p>2. Recommendations provided to mitigate/resolve identified risks.</p>
<p><b>Expert</b></p> <p>Is accountable for developing risk management policies/ procedures at a <i>higher level</i>, including identifying and resolving new risk management issues</p>	<p>1. Able to identify new risks, evaluate its impact on patients and organisation in the strategic plans, develop risk minimisation strategies and monitor the risks.</p>	<p>1. Reviewed and updated existing department/ institutional policies whenever there are changes to existing factors that impacts risks.</p> <p>2. Proactively builds systems to monitor performance measures so that problems can be identified early and countermeasures can be taken i.e. supply-chain risk.</p>

## Standard 4.5 Managing performance

Performance criteria	Evidence	Evidence Examples
<p><b>Intermediate</b></p> <p>Follows professional and organisational policies/procedures relating to performance management. Refers appropriately to colleagues for guidance.</p>	<ol style="list-style-type: none"> <li>1. Able to comply with operational standards/policies and fully meet the respective job description/duty requirements.</li> <li>2. Able to review own performance against specified objectives set by supervisors.</li> </ol>	<ol style="list-style-type: none"> <li>1. Feedback from supervisors and peers.</li> <li>2. Objective evidence to support achievements of targets set.</li> </ol>
<p><b>Advanced</b></p> <p>Is accountable for performance management for the team.</p>	<ol style="list-style-type: none"> <li>1. Able to assess team performance through the appropriate documentation and review process.</li> <li>2. Able to work with team members within their area of strength to reach achievable goals and strategies that are consistent with the objectives established for the team.</li> <li>3. Able to set clear expectations, SMART* targets and provide constructive feedback**, encouragement and support to team members. (This would include identifying and addressing work issues (e.g. excessive workload, conflict contributing to unsatisfactory performance).</li> </ol> <p>*S = Specific M = Measurable A = Achievable R = Relevant T = Time-bound</p> <p>** May include personnel expectations, achievements and contributions.</p>	<ol style="list-style-type: none"> <li>1. Quality of documented feedback provided to team members.</li> <li>2. Achievement of targets for department/team Balance Scorecard (BSC) Key Performance Indicators (KPIs) as reflected in the reports submitted to HOD.</li> </ol>

Performance criteria	Evidence	Evidence Examples
<p><b>Expert</b></p> <p>Is accountable for performance management at a higher level.</p>	<ol style="list-style-type: none"> <li>1. Able to assess department performance through the appropriate documentation and review process.</li> <li>2. Able to work with the respective pharmacy sections and /or others outside of the department, to establish achievable goals and strategies that are consistent with the objectives established for the department.</li> <li>3. Able to set clear expectations and provide constructive feedback, encouragement and support to staff.</li> </ol>	<ol style="list-style-type: none"> <li>1. Achievement of department targets and explanations of failure to meet targets, as reflected in reports or presentations to Senior Management.</li> <li>2. Achievement of institutional KPIs e.g. budget, outcomes of clinical services, medication safety targets.</li> <li>3. Achievement of desired results as reflected in the Employee Engagement/ Climate Surveys.</li> </ol>

### Standard 4.6 Project Management

Performance criteria	Evidence	Evidence Examples
<p><b>Intermediate</b></p> <p>Demonstrates understanding of the principles of project management.</p>	<ol style="list-style-type: none"> <li>1. As a team member, able to contribute to a project's initiation, planning, execution, monitoring, control and closure of a project.</li> </ol>	<ol style="list-style-type: none"> <li>1. Feedback from team members and/or supervisors.</li> </ol>
<p><b>Advanced</b></p> <p>Demonstrates ability to successfully manage a project at team level.</p>	<ol style="list-style-type: none"> <li>1. As a project leader<sup>12</sup>, able to ensure timely initiation, planning, execution, monitoring, control and closure of a project at the team level.</li> </ol>	<ol style="list-style-type: none"> <li>1. Evaluation of project's results or achievement of key milestones.</li> </ol>
<p><b>Expert</b></p> <p>Demonstrates ability to successfully manage a project at a higher level.</p>	<ol style="list-style-type: none"> <li>1. As a project leader, able to ensure timely, initiation, planning, execution, monitoring, control and closure of a project at the higher level.</li> <li>2. Able to articulate the project clearly and solicit buy-in from key stakeholders.</li> </ol>	<ol style="list-style-type: none"> <li>1. Appointed project supervisor or mentor/sponsor.</li> <li>2. Evaluation of project's results or achievement of key milestones.</li> <li>3. Communication strategy to engage stakeholders e.g. presentations at various platforms.</li> <li>4. Funding approved for proposal.</li> </ol>

<sup>12</sup> Project Leader includes projects managers/directors/supervisors. Mentors/sponsors are typically not directly involved in projects.

## Standard 4.7 Managing Change

Performance criteria	Evidence	Evidence Examples
<p><b>Intermediate</b></p> <p>Demonstrates understanding of the principles of change management</p>	<p>1. Able to show understanding of the need for thoughtful planning, sensitive implementation, and consultation with, and involvement of the stakeholders affected by the changes.</p>	<p>1. Activities planned to ensure that subordinates and peers understand the rational and need for change e.g. to comply to accreditation standards, new work processes, new models of care delivery, introduction of new technology, job redesign.</p>
<p><b>Advanced</b></p> <p>Demonstrates ability to manage a process of change for the team.</p>	<p>1. Able to show thoughtful planning, sensitive implementation, and consultation with, and involvement of, the stakeholders affected by the changes, ultimately identifying the benefits achieved by the change and getting buy-in from the relevant stakeholders.</p>	<p>1. Well planned and executed activities to achieve the desired results of a project/ program.</p> <p>2. Feedback from relevant stakeholders.</p>
<p><b>Expert</b></p> <p>Demonstrates ability to manage a process of change at a higher level.</p>	<p>1. Lead others in the thoughtful planning <b>and</b> sensitive implementation, and consult with, and involve the stakeholders affected by the changes, ultimately:</p> <ul style="list-style-type: none"> <li>a) getting buy-in from the relevant stakeholders;</li> <li>b) identifying the benefits achieved by the change;</li> <li>c) ensuring that the change is sustainable and</li> <li>d) Influencing and managing any resistance to change.</li> </ul> <p>2. Able to use of relevant performance indicators to measure achievements, explain variations from the plan and make appropriate adjustments.</p>	<p>1. Feedback from relevant stakeholders.</p> <p>2. Achievement of desired results as reflected in the Employee Engagement/ Climate Surveys.</p> <p>3. Achievement of objectives for the change initiative and the level of engagement from the stakeholders.</p>

## Domain 5 Education, Training and Development

Standard 5.1	Role model
Standard 5.2	Mentorship
Standard 5.3	Conducting education and training

This Domain includes those competency standards which supports the education, training and development of others. They help to build capability in pharmacists and promote a learning culture within the organisation.

### Standard 5.1 Role model

Performance criteria	Evidence	Evidence Examples
<p><b>Intermediate</b></p> <p>Understands and demonstrates the characteristics of a role model to members of the team.</p>	<ol style="list-style-type: none"> <li>1. Able to comply with departmental and institutional rules and regulations.</li> <li>2. Able to motivate team members and subordinates.</li> </ol>	<ol style="list-style-type: none"> <li>1. Feedback (verbal or written) solicited from trainees, subordinate, peer and supervisor.</li> </ol>
<p><b>Advanced</b></p> <p>Demonstrates the characteristics of an effective role model at a higher level.</p>	<ol style="list-style-type: none"> <li>1. Able to identify learning needs of others.</li> <li>2. Able to actively motivate all team members.</li> </ol>	<ol style="list-style-type: none"> <li>1. Feedback (verbal or written) solicited from trainees, subordinate, peer and supervisor.</li> <li>2. Review of formative and summative assessment reports completed for trainees.</li> </ol>
<p><b>Expert</b></p> <p>Is able to develop effective role model behaviour in others.</p>	<ol style="list-style-type: none"> <li>1. Able to identify potential in others and provide opportunities for them to meet learning needs.</li> <li>2. Able to lead by influencing and motivating the department/ management.</li> </ol>	<ol style="list-style-type: none"> <li>1. Feedback (verbal or written) solicited from trainees, subordinate, peer and supervisor.</li> <li>2. Review of formative and summative assessment reports completed for trainees.</li> </ol>

Standard 5.2 Mentorship		
Performance criteria	Evidence	Evidence Examples
<p><b>Intermediate</b></p> <p>Demonstrates understanding of the mentorship process.</p>	<ol style="list-style-type: none"> <li>1. Able to understand the role of a mentor and the skills required.</li> </ol>	<ol style="list-style-type: none"> <li>1. Experience as a Mentee in a Mentoring program.</li> <li>2. Attendance at training program for mentee.</li> <li>3. Seek advice from industry leaders or experienced individuals whom they regard as mentors.</li> </ol>
<p><b>Advanced</b></p> <p>Demonstrates ability to effectively mentor others within the team.</p>	<ol style="list-style-type: none"> <li>1. Able to manage the mentoring process* and relationship with Mentee.</li> <li>2. Able to monitor the achievement of goals established during the Mentor-mentee relationship.</li> </ol> <p>* Process include creating a mentor-mentee agreement on how they work together, setting goals, responsibilities of the mentor and mentee, building rapport, process of review and confidentiality on personal issue.</p>	<ol style="list-style-type: none"> <li>1. Reviews and feedback (verbal or written) solicited from Mentee.</li> <li>2. Observation by supervisor.</li> <li>3. Mentees' progression</li> </ol>
<p><b>Expert</b></p> <p>Demonstrates ability to effectively mentor outside the team.</p>	<ol style="list-style-type: none"> <li>1. Able to provide guidance and constructive feedback to mentees and monitor their progress at institutional/ cluster/ national level.</li> <li>2. Able to apply active listening and questioning skills to understand the needs, strengths and weakness of mentees from a different background/profession so as to support mentees in their development.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reviews and feedback (verbal or written) solicited from mentee.</li> <li>2. Observation by supervisor.</li> <li>3. Mentees' progression.</li> <li>4. Appointed mentor in a formal mentoring program.</li> </ol>

## Standard 5.3 Conducting Education and Training

Performance criteria	Evidence	Evidence Examples
<p><b>Intermediate</b></p> <p>Demonstrates self-development through routine Continuing Professional Development activity with facilitation.</p> <p>Demonstrates ability to conduct teaching efficiently according to a lesson plan with supervision from a more experienced colleague.</p>	<ol style="list-style-type: none"> <li>1. Able to maintain and improve the quality of practice by keeping own knowledge and skills up to date and relevant to the roles and responsibilities.</li> <li>2. Able to take responsibility for own learning and development including identifying self-learning needs and seeking out learning opportunities to meet those needs.</li> <li>3. Able to appropriately use a range of educational methods and technologies to achieve intended learning outcomes.</li> </ol>	<ol style="list-style-type: none"> <li>1. Completion of Continuing Professional Development (CPD) log e.g. Advanced Level Framework (ALF) or fulfilment of Singapore Pharmacy Council Continuing Professional Education (CPE) requirement (self).</li> <li>2. Participation in educational programmes including talks/ conferences.</li> <li>3. A preceptor for students and trainees.</li> <li>4. Participation in the formal training/ education to staff/ students (e.g. diploma, pharmacy/ medical students).</li> <li>5. Training log of trainees.</li> <li>6. Educational materials developed.</li> <li>7. Feedback from trainees/ supervisor.</li> </ol>

Performance criteria	Evidence	Evidence Examples
<p><b>Advanced</b></p> <p>Is able to assess the performance and learning needs of others.</p> <p>Demonstrates ability to plan a series of effective learning experiences for others.</p>	<ol style="list-style-type: none"> <li>1. Able to provide constructive feedback to trainees on their performance.</li> <li>2. Able to identify learning needs and desired outcomes of others.</li> <li>3. Able to track and monitor trainee's progress towards achievement of their learning goals and objectives.</li> <li>4. Able to define learning objectives, plan learning activities to address them and assess the learning outcomes.</li> <li>5. Able to customise the delivery of training to suit the needs of the trainee based upon an assessment of the trainee's knowledge, skills, attitudes, and abilities and interests.</li> </ol>	<ol style="list-style-type: none"> <li>1. Sample of feedback documented in the formative and summative assessment forms, appraisal forms etc. provided to trainees e.g. ALF log, formative/ summative feedback completed.</li> <li>2. Sample of learning activities/ programmes planned for healthcare professionals, with defined objectives, course outline, delivery and assessments.</li> <li>3. Documentation/ feedback that highlight learning plans and achievements of learning goals.</li> <li>4. Participation in the formal education and training of undergraduate and postgraduate students that prepare them for practice e.g. Pharm D, residency programmes, pre-reg programme, NHG Clinical Pharmacist Preparatory Program (CP3) programme, NUS student preceptorship programme.</li> </ol>
<p><b>Expert</b></p> <p>Shapes, contributes to, or is accountable for the creation or development of education and training at institutional / national level or educational institutions.</p>	<ol style="list-style-type: none"> <li>1. Able to understand the current and future challenges of healthcare and its implications for the healthcare profession and competencies needed.</li> <li>2. Able to identify opportunities to maintain and improve the quality of practice.</li> <li>3. Able to devise and implement a plan for assessing and improving the quality of the course of study including quality of preceptors as appropriate.</li> <li>4. Able to manage institutional or national resources effectively.</li> <li>5. Able to design and manage a course of study at the institution or national level with appropriate use of teaching, assessment and study methodology.</li> <li>6. Able to develop effective educational standards or governance frameworks.</li> </ol>	<ol style="list-style-type: none"> <li>1. Course/ Program Leader of workshop, seminar, residency program or the equivalent.</li> <li>2. Contribution as a member of the Program Evaluation Committee.</li> <li>3. Sample of feedback/ documented evaluations on preceptors/ trainers' performance.</li> <li>4. Role in developing curriculum, Training Blueprint, and educational progress report.</li> <li>5. Feedback on educational / training programmes provided by trainers, trainees.</li> <li>6. Involvement in strategic workgroup pertaining to CPD.</li> </ol>

## Domain 6 Research and Evaluation

Standard 6.1	Evaluating literature critically and identifying evidence gaps
Standard 6.2	Developing and evaluating research protocols
Standard 6.3	Disseminating evidence
Standard 6.4	Guiding others undertaking research
Standard 6.5	Establishing research partnerships

This Domain includes those competency standards that address the capability of pharmacists to identify and undertake research to inform effective practice.

### Standard 6.1 Evaluating literature critically and identifying evidence gaps

Performance criteria	Evidence	Evidence Examples
<p><b>Intermediate</b></p> <p>Demonstrates ability to critically evaluate and review medical literature as well as suggest changes to practice.</p>	<ol style="list-style-type: none"> <li>1. Able to systematically evaluate a research paper and derive an appropriate conclusion based on methodology's strengths and weaknesses.</li> <li>2. Able to decide if study results can be applied in a local setting.</li> <li>3. Able to suggest solutions/ changes to practice</li> </ol>	<ol style="list-style-type: none"> <li>1. Presentations made in journal club.</li> <li>2. CE sessions on topics to fellow healthcare professionals provided.</li> <li>3. Contribution as a facilitator for evidence-based medicine workshops.</li> <li>4. Publication of journal review article within the institution / department.</li> <li>5. Descriptions of instances where pharmacist has evaluated and applied published data to improve practice (e.g. projects on near-misses, waiting times, Quality Improvement).</li> </ol>

Performance criteria	Evidence	Evidence Examples
<p><b>Advanced</b></p> <p>Demonstrates ability to critically evaluate, review medical literature, and identify evidence gaps and to apply evidence-based practice at departmental/ institutional level.</p>	<ol style="list-style-type: none"> <li>1. Able to interpret and synthesise research results and apply the findings to influence practice.</li> <li>2. Able to identify evidence gaps requiring further research.</li> </ol>	<ol style="list-style-type: none"> <li>1. Active participation in the formulation or update of practice guidelines for the department or institution.</li> <li>2. Active participation in formulary decision-making processes in P&amp;T committee.</li> <li>3. Publication of systematic reviews or meta-analysis on clinical topics</li> <li>4. Scientific presentations within or outside of department (i.e. hospital conference, doctors' Continuing Education / departmental meetings).</li> <li>5. Publication of research article(s) in the last 2 years in any journal.</li> <li>6. Recently obtained grant funding of any level to conduct research.</li> </ol>
<p><b>Expert</b></p> <p>Demonstrates application of critical evaluation skills at a national or international level and/or undertakes peer review activities within practice and/or identify gaps.</p>	<ol style="list-style-type: none"> <li>1. Able to interpret and synthesise research results and apply the findings to influence practice at national or international level.</li> <li>2. Able to understand the barriers, constraints and enablers that can result in successful implementation of research outcomes.</li> <li>3. Able to identify major evidence gaps requiring further research and drive research directions for the area of interest.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reviewer or member of editorial committee for journals and/or part of a conference committee performing abstract review.</li> <li>2. Member of an Institutional Review Board (IRB)/Domain Specific Review Board (DSRB).</li> <li>3. Contribution to the formation or update of practice guidelines / policies / protocols at the national or international level.</li> <li>4. Publication of 2 or more research articles in the last 2 years in any journal or at least 1 article in a journal with impact factor of 4 and above.</li> <li>5. National or international grant funding to conduct research obtained within the last 3 years.</li> </ol>

## Standard 6.2 Developing and evaluating research protocols

Performance criteria	Evidence	Evidence Examples
<p><b>Intermediate</b></p> <p>Demonstrates ability to describe the core features of research* protocols.</p> <p>* Includes Quality Improvement (QI) projects.</p>	<ol style="list-style-type: none"> <li>1. Able to identify and explain the core features of research including ethics.</li> <li>2. Able to demonstrate general understanding of the principles of research governance and methodology.</li> <li>3. Able to evaluate studies and determine if methodology employed is appropriate.</li> </ol>	<ol style="list-style-type: none"> <li>1. Presentations made in a journal club/ quality related forums.</li> <li>2. Formal sharing/ teaching session(s) on evidence-based guidelines to fellow healthcare professionals.</li> </ol>
<p><b>Advanced</b></p> <p>Demonstrates ability to lead in the development and conduct of a research.</p>	<ol style="list-style-type: none"> <li>1. Able to apply appropriate research methodologies to develop research protocol.</li> <li>2. Able to ethically conduct research.</li> <li>3. Able to assemble the necessary resources to undertake a research project.</li> </ol>	<ol style="list-style-type: none"> <li>1. Recent (in the last 2 years) or current Co-Investigator and/ or Principal Investigator (PI) of a study.</li> <li>2. Research protocols reviewed and authorised for the department.</li> </ol>
<p><b>Expert</b></p> <p>Demonstrates ability to critically review research protocols and write grant proposals.</p>	<ol style="list-style-type: none"> <li>1. Able to <i>constructively</i> and <i>systematically</i> critique research protocols written by fellow healthcare professionals.</li> <li>2. Able to perform critical appraisal and provide constructive feedback to authors.</li> <li>3. Able to write a successful research grant proposal.</li> </ol>	<ol style="list-style-type: none"> <li>1. Recent (in the last 2 years) or current PI of a grant-funded study and/or research mentor.</li> <li>2. Member of a grant approval committee.</li> <li>3. Member of an Institutional Review Board (IRB)/Domain Specific Review Board (DSRB).</li> <li>4. Publication of articles that critique research methodologies.</li> </ol>

## Standard 6.3 Disseminating evidence

Performance criteria	Evidence	Evidence Examples
<p><b>Intermediate</b></p> <p>Demonstrates ability to generate evidence suitable for presentation.</p>	<ol style="list-style-type: none"> <li>1. Able to analyse, interpret and translate research result into meaningful data.</li> <li>2. Able to communicate scientific facts and ideas in a clear and compelling way.</li> </ol>	<ol style="list-style-type: none"> <li>1. Abstract submission to a meeting.</li> <li>2. Presentation of data e.g. near-misses, waiting times (QI projects), quality indicators, research results at meetings.</li> </ol>
<p><b>Advanced</b></p> <p>Demonstrates ability to generate new evidence accepted for presentation at research symposia (e.g. conferences, seminars or forums) or publication.</p>	<ol style="list-style-type: none"> <li>1. Able to organise the different elements of a research publication into a coherent document<sup>13</sup>.</li> <li>2. Able to address reviewers' comments on manuscripts.</li> </ol>	<ol style="list-style-type: none"> <li>1. Accepted abstract with poster or oral presentation at a <i>research symposia</i>.</li> <li>2. Publication of a research project in a peer-reviewed media.</li> </ol>
<p><b>Expert</b></p> <p>Demonstrates <u>ongoing</u> anchor (i.e. first, corresponding or last) authorship of primary evidence and outcomes in peer-reviewed media.</p> <p>Anchor authorship = key authors</p>	<ol style="list-style-type: none"> <li>1. Publish a series of studies to address significant research questions within a particular area.</li> </ol>	<ol style="list-style-type: none"> <li>1. Recent (last 5 years) or current multiple publications (minimum 10) on research projects in peer-reviewed media.</li> <li>2. Anchor author of studies.</li> <li>3. Presentation at national or international conferences for past 5 years.</li> </ol>

<sup>13</sup> Research competencies framework. Faculty of General Dental Practice (UK). Published April 2007. Assessed on 24 March 2014 at [http://fgdp.org.uk/\\_assets/pdf/research/research%20competencies.pdf](http://fgdp.org.uk/_assets/pdf/research/research%20competencies.pdf).

## Standard 6.4 Guiding Others Undertaking Research

Performance criteria	Evidence	Evidence Examples
<p><b>Intermediate</b></p> <p>Is aware of the research activities within the department and is able to provide guidance on research methodology.</p>	<ol style="list-style-type: none"> <li>1. Aware of the research activities around a particular subject and be knowledgeable enough about the subject in order to guide the student/ junior on how to choose a topic, shape and refine the research question, taking into account the practical considerations about the planning needed and costs.</li> </ol>	<ol style="list-style-type: none"> <li>1. Functions as a department representative to authorise research protocols within the department.</li> <li>2. Functions as a supervisor or facilitator of research projects (directly or indirectly).</li> </ol>
<p><b>Advanced</b></p> <p>Is able to supervise research in collaboration with research experts.</p>	<ol style="list-style-type: none"> <li>1. Able to demonstrate good understanding of the principles of research governance and methodology.</li> <li>2. Able to demonstrate ability to instruct and guide supervisee together with the research expert(s).</li> <li>3. Able to advise on effective research planning.</li> <li>4. Able to recommend appropriate resources and systems for the research process.</li> <li>5. Able to evaluate the information collected and results.</li> </ol>	<ol style="list-style-type: none"> <li>1. Research projects performed by healthcare staff (including pre-registration pharmacists, pharmacy technicians, undergraduate students, nurses) which are directly supervised</li> </ol>
<p><b>Expert</b></p> <p>Is a research project supervisor for postgraduate students e.g. Masters, PharmD, Residents, PhDs and pharmacists.</p>	<ol style="list-style-type: none"> <li>1. Able to ensure compliance with ethical and legal requirements and carried out to the institutional research policies and guidelines.</li> <li>2. Able to demonstrate ability to instruct and guide post-graduate students independently.</li> <li>3. Able to advise on how to navigate the system to find the right collaboration partners.</li> <li>4. Able to discuss and recommend solutions to problems encountered and provide relevant feedback for each process.</li> </ol>	<ol style="list-style-type: none"> <li>1. Main research project supervisor for postgraduate students e.g. Masters, PharmD, Residents, PhDs.</li> <li>2. Mentor for grant applicants</li> </ol>

## Standard 6.5 Establishing Research Partnerships

Performance criteria	Evidence	Evidence Examples
<p><b>Intermediate</b></p> <p>Demonstrates ability to work as a member of a project team.</p>	<ol style="list-style-type: none"> <li>1. Possesses effective communication and interpersonal skills at the team level.</li> <li>2. Able to actively contribute as a team member of a project.</li> </ol>	<ol style="list-style-type: none"> <li>1. Contribution as a Team member of a project.</li> <li>2. Notes of meeting/ minutes.</li> </ol>
<p><b>Advanced</b></p> <p>Demonstrates ability to establish multidisciplinary links to conduct research projects.</p>	<ol style="list-style-type: none"> <li>1. Able to develop a network of research collaborators.</li> <li>2. Ability to identify key partners.</li> <li>3. Able to effectively communicate and share knowledge with researchers in other health/non-science disciplines.</li> </ol>	<ol style="list-style-type: none"> <li>1. Documentation of correspondence (e.g. email between pharmacist and researchers from other disciplines) on collaborative research activities</li> </ol>
<p><b>Expert</b></p> <p>Demonstrates ability to show leadership within multidisciplinary research teams concerning the conduct of research.</p>	<ol style="list-style-type: none"> <li>1. Able to steer and coordinate the multi-disciplinary research team in the direction of a research objective.</li> </ol>	<ol style="list-style-type: none"> <li>1. Principal investigator of multidisciplinary studies, PI of awarded grants with multidisciplinary involvement.</li> </ol>

## Frequently Asked Questions

	Question	Answer
1	For pharmacists, what are the desired end-goals of APF implementation?	The APF lists the skills and competencies needed for a pharmacist to practise at an advanced level. Through the APF, pharmacists would be able to identify areas for professional development in a systematic manner.
2	How should a pharmacist utilise the APF to advance and to achieve the relevant competencies?	To utilise the APF, the following are recommended: <ul style="list-style-type: none"> <li>• Identify developmental goals;</li> <li>• Acquire skills to facilitate self-reflection on developmental needs against the competency standards;</li> <li>• Document a portfolio of achievements and evidences of performance; and</li> <li>• Discuss developmental progress and the organisational plans with reporting officer regularly</li> </ul>
3	What are some examples of evidences that can be collected for portfolio building?	Evidences to be collected could include presentation slides, case notes and feedback from fellow healthcare professionals. Do remember that one key portfolio could fit into a number of domains concurrently. <ul style="list-style-type: none"> <li>• For dispensing, cases of drug interventions can be captured.</li> <li>• For case-based discussion, examples of complex cases can be used.</li> <li>• For patient education, case documentation could be used as record of this for future reference.</li> <li>• For committee members, it is important to focus on contributions to the committee.</li> </ul>

	Question	Answer
4	Due to changes in scope of practice, I might not be able to achieve the number of standards required while in transition. What should I do?	It is inevitable that job scopes evolve over time to cater to the needs of patients and organisations. The number of standards that are required to be achieved is not dictated in the APF but should be determined by healthcare institutions according to the needs. As such, pharmacists in transition could establish the number of standards to be met with their reporting officer before identifying the knowledge or skills gaps and the opportunities required to bridge the gaps.
5	What if I am in informatics, Quality Improvement (QI), or other indirect patient care roles? How would Domain 1 be relevant to me?	Domain 1 would still be applicable with adaptations to reflect relevant skillsets and scope of practice. Please refer to <a href="#">Annex B</a> for case illustration.
6	What should I include in my developmental portfolio for assessment?	Pharmacists should document activities, achievements and responsibilities that are more recent (not more than 3 years preceding portfolio assessment) for consideration. Roles beyond the past 3 years can be cited as relevant if appropriate and agreed by the reporting officer.
7	What if I am already at expert level? Do I have to gather new evidences to support my competency assessment in the following year?	As the APF is used as a developmental tool, the attainment of an expert level competency should remain relevant for the following year. However, pharmacists should review their competencies from time to time to ensure that their knowledge and skills remain relevant with the changes around them.
8	How should reporting officers use the APF as a developmental tool?	Reporting officers are required to review the evidence provided and assess on quality of involvements. It is also important for them to identify key developmental areas to design training roadmaps for staff in their department. If possible, pick another time in the year that is not too close to appraisal time for conversations on staff development.

	Question	Answer
9	What if my reporting officer does not supervise my work regularly on the ground?	Evidences such as email or feedback forms could be gathered to support achievement of competency. Pharmacists could describe a situation whereby the tasks or actions undertaken displayed the relevant competency and the outcomes achieved. Pharmacist could also work closely with a mentor or peers as referees.
10	How would the APF affect career advancements for pharmacists?	As APF is intended for development of pharmacists, the aim is to identify areas for improvement. While APF could facilitate better alignment of staff aspirations and expectations from management, considerations for staff promotions are subjected to institution's purview.

# Annex A

## Needs Assessment and Development Plan

Needs Assessment										Development Plan			
Competency	Current Performance Level	Expected Performance Level	Current vs Expected Level	Aspirational/Next Performance Level	Current vs Aspirational Performance Level	Types of needs	Course of action	Expected Learning Outcomes	Expected Completion Date	Achieved?			

## Annex B

Domain 1 Expert Professional Practice			
Competency Level	Intermediate Level	Advanced Level	Expert Level
<p><b>Standard 1.1</b></p> <p><b>Demonstrates Expert Skills and Knowledge</b></p>	<p><i>Demonstrates general pharmaceutical knowledge in core areas.</i></p>	<p><i>Demonstrates advanced pharmaceutical knowledge in a defined area(s).</i></p> <p><i>Is able to plan, manage, monitor, advise and review pharmaceutical care programmes for patients in a defined area(s).</i></p>	<p><i>Demonstrates ability to advance the knowledge base in the defined area.</i></p> <p><i>Is able to advance specialist pharmaceutical care programmes for patients in the defined area(s).</i></p>
<p><b>Indirect patient care: Informatics</b></p>	<ol style="list-style-type: none"> <li>1. Able to effectively analyse medication related data (clinical, operational and financial)</li> <li>2. Able to apply the knowledge acquired by leveraging on technology to optimize pharmacy-related practice and system usability</li> </ol>	<ol style="list-style-type: none"> <li>1. Able to analyse complex medication related information (e.g. multi-institution, multi-system data)</li> <li>2. Able to transform knowledge acquired into functional requirements / technical solutions to achieve improved outcomes, safety and/or efficiency</li> <li>3. Able to train and educate end users and user champions on features, operation and usage of medication related systems</li> </ol>	<ol style="list-style-type: none"> <li>1. Able to contribute to advancement of specialised medication informatics initiatives and/or research</li> <li>2. Able to provide consultative and mentorship role e.g. work with IT leadership for strategic planning, governance and development of policies</li> <li>3. Able to mentor pharmacists in the area of medication informatics</li> </ol>

Competency Level	Intermediate Level	Advanced Level	Expert Level
<b>Indirect patient care : Purchasing</b>	1. Able to demonstrate general knowledge in core areas such as procurement process, contract management, inventory/logistics management and IT.	1. Able to demonstrate advanced knowledge in a defined area e.g. purchasing.  2. Able to plan and manage the balance between the need to provide high levels of user service, and the need to minimise money tied up in stock or evaluation at GPO level. <sup>14</sup>	1. Able to advance knowledge base in the defined area e.g. logistics.  2. Able to develop strategic supply chain solutions that optimise stockholding costs whilst providing appropriate service level availability with optimal transportation. <sup>14</sup>

Competency Level	Intermediate Level	Advanced Level	Expert Level
<b>Standard 1.2</b> <b>Manages patient care responsibilities/delivery of professional activities</b>	<i>Is accountable for the delivery of a pharmacy service to patients to whom they themselves directly provide pharmaceutical care.</i>	<i>Is accountable for the delivery of a pharmacy service to a defined group of patient.</i>	<i>Is accountable for the delivery of pharmacy services beyond defined group of patients.</i>
<b>Indirect patient care: Informatics</b>	Is accountable for configuring medication-related system to optimize pharmacy-related workflow and processes, leveraging on knowledge obtained from medication analytics.	Is accountable to deliver sustained positive outcomes through contributing towards implementation of specific medication-related informatics initiatives e.g. OPAS in outpatient pharmacy.	Is accountable for implementation of medication-related informatics initiatives at strategic level e.g. NHIPS, and contributes to the advancement of the field of medication informatics.
<b>Indirect patient care: Purchasing</b>	Is accountable for the delivery of general purchasing services to users.	Is accountable for the delivery of a purchasing and distribution services to users in specific situation e.g. emergency preparedness or national events	Is accountable for the delivery of purchasing and distribution and monitoring at national level e.g. stockpile of antidotes or critical meds at national level

Contributed by Mr Hing Wee Chuan(NUH/Informatics) and Ms Ho Swee Geok(SGH/Purchasing)

<sup>14</sup> Procurement Directorate. Procurement Competence Frameworks v7, July 2012. Ministry of Justice, UK. <https://www.justice.gov.uk/.../competency-framework/procurement-competencies.doc>

## References

---

1. An Advanced Pharmacy Practice Framework for Australia. The Advanced Pharmacy Practice Framework Steering Committee on behalf of the pharmacy profession in Australia, 2012.
2. The Advanced to Consultant Level Framework. The Competency Development and Evaluation Group (CoDEG) UK, 2005.
3. The RPS Advanced Pharmacy Framework (APF) 2013. The Royal Pharmaceutical Society 2013.
4. Challis M. AMEE Medical Education Guide No 11 (revised): Portfolio-based learning and assessment in medical education. *Medical Teacher* 1999, 21(4):370-386.
5. Driessen EE, Heeneman S, Van Der Vleuten C.P.M., 2013. Portfolio assessment. In: Dent JA, Harden RM (Eds), *A Practical Guide for Medical Teachers*. Fourth Edition. Elsevier Churchill Livingstone (Chapter 39).
6. Academy of Medical Educators. *Professional Standards* (3<sup>rd</sup> edn, 2014). Cardiff: Academy of Medical Educators; 2014.

# Acknowledgements

---

We would like to acknowledge that this National Competency Framework is formulated with adaptation from the Advanced to Consultant Level Framework developed by the UK Competency Development and Evaluation Group (CoDEG); and under the pedagogy guidance and advice provided by Dr Dujeepa D. Samarasekera from the Center of Medical Education (CenMED), Yong Loo Lin School of Medicine.

We would like to thank:

- All Pharmacy Managers and pharmacists for their support and patience with this project;
- All pharmacists who took the time to participate and provide feedback during the competency survey; and
- A/P Chui Wai Keung, Department of Pharmacy, National University of Singapore for his valuable input.





**MINISTRY OF HEALTH**  
SINGAPORE

[www.moh.gov.sg](http://www.moh.gov.sg)