

Programme Name

**National Pharmacy Residency Year 2 (R2) Programme in Critical Care Pharmacy**

**Introduction**

The critical care pharmacy residency is a specialised programme consisting of 12 months rotations in various critical care settings in academic teaching hospitals. It is designed to include core experiences required for establishing a foundation of critical care knowledge and skills and elective experiences that will allow the resident to develop into an exceptional critical care pharmacist.

During the residency, residents will participate in various aspects of comprehensive pharmacy service. Core rotations include medical, surgical, neuroscience, cardiology, cardiothoracic, and burns intensive care. Electives such as Clinical Nutrition, Haematology / Bone Marrow Transplant, and Infectious Diseases are offered to provide breadth in the residency training.

Upon completion, the resident will be prepared for a career opportunity as specialist pharmacist in critical care.

**Programme Overview**

The R2 Residency builds upon the broad-based competencies achieved in a R1 Pharmacy Residency to train pharmacists for a clinical specialist role in a critical care practice setting such as medical, surgical, neuroscience, burns and trauma, and cardiology and cardiothoracic intensive care. Residents who successfully complete the programme will possess necessary skills to function as an advanced practitioner and assume clinical leadership role in the area of critical care pharmacy practice.

The programme adheres to the Programme Standards for National Pharmacy Residency Programmes. The Four Competency Areas that the resident will achieve at the end of the residency are as follows:

Competency Area: Patient Care (PC)

Standard PC1: In collaboration with the health care team, provide comprehensive medication management to critically ill patients following a consistent patient care process.

Standard PC2: Ensure continuity of care during critically ill patient transitions between care settings.

Competency Area: Advancing Practice and Improving Patient Care (AP)

Standard AP1: Demonstrate ability to manage formulary and medication-use processes for critically ill patients.

Standard AP2: Demonstrate ability to conduct a quality improvement or research project.

Competency Area: Leadership and Management (LM)

Standard LM1: Demonstrate leadership skills for successful self-development in the provision of care for critically ill patients.

Standard LM2: Demonstrate management skills in the provision of care for critically ill patients.

Competency Area: Teaching, Education, and Dissemination of Knowledge (TE)

Standard TE1: Provide effective medication and practice-related education to critically ill patients, caregivers, health care professionals, students, and the public (individuals and groups).

Standard TE2: Effectively employ appropriate preceptor roles when engaged in teaching students, pharmacy technicians, or fellow health care professionals in critical care.

## Programme Structure and Activities

Rotations	Duration/Descriptions
<b>Core rotations</b>	<b>39 weeks</b>
1. Orientation	1 week
2. Cardiology Intensive Care (TTSH)	4 weeks
3. Cardiothoracic Surgery Intensive Care (NUH)	6 weeks
4. Medical Intensive Care (SGH and NUH)	10 weeks
5. Neuroscience Intensive Care (SGH or TTSH)	8 weeks
6. Surgical Intensive Care (SGH and CGH)	10 weeks
7. Burns Intensive Care (SGH) (The resident will be rotated to the <b>Burns ICU</b> throughout the training stint, as and when there are cases there).	Longitudinal (minimum of 8 cases)
<b>Required longitudinal learning experiences</b>	
1. Management	- Medication use evaluation and participation in quality improvement activities pertaining to critical care
2. Operational	- Manage ICU medication verification and distribution - Ward stock review
3. Research / Quality Improvement Projects	- Quality improvement initiative - CITI certification - Complete clinical research project focusing on critical care pharmacotherapy - Present research at a national pharmacy or critical care meeting and prepare a manuscript suitable for publication - <b>4 weeks</b> of project week
4. Teaching	- Provide lecture(s) in Critical Care SIG meetings - Precept trainees and R1 residents on critical care rotations - Deliver continuing pharmacy education lecture in critical care/ ICU in-service
<b>Elective rotations (to select 2) - SGH</b>	<b>8 weeks</b>
1. Clinical Nutrition	4 weeks
2. Haematology / Bone Marrow Transplant	4 weeks
3. Infectious Diseases	4 weeks
<b>Research project week</b>	<b>4 weeks</b>
<b>Christmas &amp; Chinese New Year break</b>	<b>1 week</b>
<b>Total</b>	<b>52 weeks</b>

### Summary of Learning Experience Evaluations

Type	How	Evaluator(s)	When
Formative	Verbal	Preceptor + Resident	Daily
Formative	Care Plan	Preceptor + Resident	Weekly
Formative	Snapshot TBD	Preceptor + Resident	Weekly
Quarterly Formative and Summative	Summative	Preceptor + Resident	Quarterly for longitudinal rotation
Summative	Summative	Preceptor + Resident	End of Rotation
Preceptor	Standard	Resident	End of Rotation + Quarterly if longitudinal rotation
Learning Evaluation	Standard	Resident	End of Rotation + Quarterly if longitudinal rotation

### Exit Requirements

Meet all R2 Pharmacy Residency requirements including making sufficient progress towards all the required educational outcomes as evidenced by either satisfactory progress or achieved being marked for all competency areas.

In the event that the resident is unable to meet this requirement by the end of residency, the resident will have to complete an extra learning experience up to a maximum of 12 weeks as determined by the RPD to demonstrate sufficient progress.

- Satisfactory completion of all learning experiences as evidenced by all required work assigned being completed to the satisfaction of preceptors.
- Achieve a pass in the portfolio-based exit assessment conducted by the Board of Examiners appointed by Pharmacy Residency Exit Committee.
- Completion of residency major project with a manuscript that is approved by the project supervisor and RPD.
- In the event that the resident is unable to meet this requirement by the end of residency, the resident will be given a grace period of 12 weeks to complete the project.
- Meet the stipulated allowable days of absence.
- Compliance with institutional and departmental policies.

If a resident fails in his/her first attempt in any of the above-mentioned assessments, opportunity will be given for a second attempt within the next 12 weeks immediately after the end of the programme. Any additional fee(s) will be borne by the resident's home institution. Upon successfully passing all assessments, the resident will likewise be awarded the Certificate of Completion in Pharmacy Residency in Critical Care.

However, if a resident fails any of the assessments in the second attempt, he/she will be deemed as unsuccessful and will not be awarded the certificate.

**Training Site**

Singapore General Hospital, National University Hospital, Changi General Hospital, Tan Tock Seng Hospital.