

**INTERVENTIONAL NEPHROLOGY FELLOWSHIP
ATTACHMENT PROGRAMME IN SGH**

Components	Information
1. Division/ Department	Medicine/ Department of Renal Medicine
2. Title of Programme	Fellowship Training programme in Interventional Nephrology
3. Relevant Registrations	<ul style="list-style-type: none"> • Temporary Registration with Singapore Medical Council (SMC) • Training employment pass application with Ministry of Manpower, Singapore (MOM) (upon successful Temporary Registration with Singapore Medical Council)
4. Overview	A functioning dialysis access is critical to the delivery of life saving therapy in patients with End Stage Renal Failure. The programme aims to teach the Clinical Fellows the knowledge and technical skills required for the management of dysfunctional dialysis access.
4.1 Background information	
4.2 Goal/ aim(s)	<p>On completion of the programme, Clinical Fellows are expected to be able to:</p> <ol style="list-style-type: none"> 1. Insert, exchange and remove tunneled and non-tunneled dialysis catheter independently. 2. Perform a diagnostic fistulogram and graftogram independently. 3. Perform angioplasty, thrombolysis and stent placement, when clinically indicated independently with acceptable outcomes. 4. Complete clinical research projects in the field of intervention nephrology.
4.3 Duration	3 – 12 months
5. Target Audience	Nephrologists who are interested in dialysis access management.
5.1 Pre-requisite /eligibility requirement(s)	<p>General requirements for Temporary Registration for training (required by SMC):</p> <ul style="list-style-type: none"> • A basic medical degree from an accredited medical university or medical school • Passed the relevant national licensing examination in the country of conferment of basic degree, where applicable • Evidence of at least 12 months houseman-ship / internship with a certificate of satisfactory completion of houseman-ship or equivalent • Been registered as a medical practitioner in the country where he is currently practising • Been certified to be of good standing by the Medical Council or the relevant national authority <p>Note: the doctor should be in active clinical practice for the 3 years preceding the application for medical registration.</p> <p>In addition to the above criteria, Clinical Fellow must:</p> <ol style="list-style-type: none"> a) Have a minimum of 3 years of relevant working experience as a medical officer (or equivalent) b) Fulfil English Language requirements of SMC if the medium of instruction for the basic medical qualification is not in English c) Preferably have obtained a postgraduate diploma or degree in his country or overseas

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	<p>d) As a Clinical Fellow, the doctor will be allowed to be involved in patient care and make entries in patients' case note, communicate care plans to patients and fellow healthcare professionals, and perform procedures under <u>direct</u> supervision or Level 1 supervision</p> <p>Department's requirement, if any (only for Clinical Fellow in this subspecialty):</p> <ul style="list-style-type: none"> • Postgraduate medical qualification e.g. MRCP, MMed or equivalent. • Minimum 3 years of postgraduate training experience in Renal Medicine or Nephrology (after obtaining the postgraduate medical qualification) • Current position as Associate Consultant or above.
<p>6. Learning Objectives</p>	<p>This fellowship would allow the Clinical Fellow to acquire:</p> <ul style="list-style-type: none"> • The necessary skills required for insertion and exchanged of tunneled hemodialysis catheter • The necessary skills required for performing diagnostic fistulogram, graftogram and balloon angioplasty • The necessary skills required for performing thrombolysis in the salvage of thrombosed dialysis access
<p>7. Course/Training Syllabus</p>	<p>The programme includes:</p> <ol style="list-style-type: none"> 1. Ward round to assess patients who are admitted for dysfunction dialysis accesses 2. Outpatient clinics to assess patients who have dysfunctional dialysis accesses 3. Interventional sessions in INS to perform catheter insertions, catheter exchanges, angioplasty and thrombolysis 4. Clinical research related to vascular access 5. Didactic lectures on nephrology 6. Renal grand ward round 7. Renal Morbidity and Mortality rounds

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8. Training Method	<p>Method of Supervision: Direct observation and feedback. Clinical Fellow will be supervised by an assigned supervisor at all times.</p> <p>Observed Only: Clinical Fellows will have opportunities to observe the following procedures:</p> <ol style="list-style-type: none"> 1. Insertion of peritoneal dialysis catheter 2. Creation of AVF and AVG <p>Hands-On Experience: Clinical Fellows will perform or assist in the following procedures under supervision:</p> <ol style="list-style-type: none"> 1. Ultrasound scans of arteriovenous fistula and graft 2. Fistulogram and graftogram, including central venogram 3. Balloon angioplasty of arteriovenous fistulas and grafts 4. Thrombolysis of arteriovenous fistulas and graft 5. Stent placement <table border="1" style="width: 100%; margin-top: 10px;"> <thead> <tr style="background-color: #cccccc;"> <th colspan="3">TRAINING ACTIVITIES & METHODOLOGY</th> </tr> <tr style="background-color: #cccccc;"> <th style="width: 35%;">Name of activity</th> <th style="width: 35%;">Frequency / No. of sessions / Length of session</th> <th style="width: 30%;">Teaching methodology</th> </tr> </thead> <tbody> <tr> <td>Performance of interventional procedure</td> <td>2 AM sessions per week (4 hours each) 3 PM sessions per week (4 hours each)</td> <td>Competency in performing interventional procedure is the main focus of the training program and 50% of the program is dedicated to this. The Clinical Fellow will spend a major portion of his time in the Interventional Nephrology Suite observing and performing procedures under direct supervision of the program director Dr Tan Chieh Suai and the training Faculty. As part of the training, the Clinical Fellow is also expected to review patients in the emergency department, wards and outpatient clinic before the intervention, obtain consent for intervention</td> </tr> </tbody> </table>	TRAINING ACTIVITIES & METHODOLOGY			Name of activity	Frequency / No. of sessions / Length of session	Teaching methodology	Performance of interventional procedure	2 AM sessions per week (4 hours each) 3 PM sessions per week (4 hours each)	Competency in performing interventional procedure is the main focus of the training program and 50% of the program is dedicated to this. The Clinical Fellow will spend a major portion of his time in the Interventional Nephrology Suite observing and performing procedures under direct supervision of the program director Dr Tan Chieh Suai and the training Faculty. As part of the training, the Clinical Fellow is also expected to review patients in the emergency department, wards and outpatient clinic before the intervention, obtain consent for intervention
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			<p>and follow them up for possible complications of endovascular interventions. Through this process, the Clinical Fellow will come to appreciate the indications for intervention, master the necessary procedural skills and be conscious of the possible complications of endovascular interventional.</p>
	<p>Clinical Patient Management</p>	<p>Morning renal ward round 2 sessions per week (4 hours each)</p> <p>Clinic 1 session per week (4 hours each)</p> <p>Daily vascular ward round (5 hours/week)</p>	<p>25% of time will be spent in clinical patient management. The Clinical Fellow will assist the program director during his daily vascular ward rounds and clinic sessions to manage and follow-up challenging vascular access issues. This would train the Clinical Fellow improve understanding of difficult vascular access and formulate treatment plans effectively.</p>
	<p>Research</p>	<p>4 hours per week</p>	<p>15% of the program will be dedicated to research. The Clinical Fellow will have the opportunity to participate in dialysis access related research project under supervision of the program director and faculty. Time off will be given to the Clinical Fellow to conduct at least 1 research project. Clinical Fellows are encouraged to present</p>

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			abstracts/posters at local/regional conferences and submit manuscripts for publications. The theme of the research project will be discussed within the first month of the training program and approval from the institutional Review Board will be obtained as per established protocol.
	Continuous Education	5 sessions per week (1 hour each)	10% of the time will be spent in continuous education. The Clinical Fellow will join the Department of Renal Medicine's structured education for Clinical Fellows and residents which include mortality and morbidity rounds, journal clubs, didactic teachings, radiology meetings and case discussions.
9. Assessment and Evaluation	<p>Clinical Fellow will need to demonstrate their proficiency level based on the following competencies:</p> <p>1) Patient Care Diagnosis the etiology of dialysis access dysfunction Formulate treatment plan Review patient post procedure and plan follow up appointment</p> <p>2) Medical Knowledge Understand the principles of endovascular interventions Know the indications and risk of each procedure</p> <p>3) Practice-Based Learning and Improvement Able to perform endovascular interventions competently Perform 25 angioplasty, 25 thrombolysis and 25 catheter insertions independently with minimal assistance from the supervisor. Review the outcome of endovascular interventions</p> <p>4) Interpersonal and Communication Skills</p>		

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	<p>Communicate with vascular surgeon, interventional radiologist and the primary renal teams on the management plans of patients with dysfunction dialysis access</p> <p>5) Professionalism Punctuality for rounds, interventional sessions and lectures Punctuality in submitting assessment forms</p> <p>6) Systems-Based Practice Complete one project looking at the outcome of dialysis access interventions in Singapore General Hospital</p>									
9.1 Assessment approaches	<p>Formative assessment:</p> <ul style="list-style-type: none"> Regular evaluation between Clinical Fellow and Supervisor / Head of Department Reflective journal- logbook recordings of training activities Passing percentage - 70% completion <p>Summative assessment:</p> <ul style="list-style-type: none"> Periodical assessment reports as required by Singapore Medical Council Department's Assessment with passing percentage - 80% completion (Informal assessment) <p>Feedback:</p> <ul style="list-style-type: none"> End-of-training feedback form as required by Singapore Medical Council End-of-training feedback session with SGH-PGMI with indication of minimum 80% of training objectives met indicated in the logbook, under the Summary of Training and Certification page 									
9.2 Evaluation Process 9.2.1 General overall grading system	<p>The general overall grading system evaluates the Clinical Fellow's performance upon completion of the fellowship programme. All Clinical Fellow will be given a general overall grading status at the end of the fellowship programme based on the grading criteria requirements incorporating the six competencies based knowledge, skills and performance that Clinical Fellow must demonstrate throughout the programme.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #4F81BD; color: white;">Grading Status</th> <th style="background-color: #4F81BD; color: white;">Description</th> <th style="background-color: #4F81BD; color: white;">Grading Criteria Requirements</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">CMP</td> <td>Completes the programme</td> <td> <ul style="list-style-type: none"> Able to perform the procedures independently with minimal assistance from supervisor </td> </tr> <tr> <td style="text-align: center;">USP</td> <td>Unsatisfactory performance</td> <td> <ul style="list-style-type: none"> Unable to perform the procedures independently. Requires assistance most time </td> </tr> </tbody> </table>	Grading Status	Description	Grading Criteria Requirements	CMP	Completes the programme	<ul style="list-style-type: none"> Able to perform the procedures independently with minimal assistance from supervisor 	USP	Unsatisfactory performance	<ul style="list-style-type: none"> Unable to perform the procedures independently. Requires assistance most time
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9.2.2 Options for Clinical Fellow who was graded with a (USP) for unsatisfactory performance	Fellows will be provided opportunities to remediate performance or terminate fellowship.						
9.3 Criteria for Early Termination	<p>The attachment programme will be terminated early on the ground of the Clinical Fellow's poor performance, misdemeanour, misconduct, negligence or breach of any terms stipulated or referred to in the Fellowship Letter of Offer and Institution Terms and Conditions.</p> <p>The Clinical Fellow may also request to terminate the attachment programme for reasons such as serious illness or other personal obligations. The institution will review all requests for early termination with the Clinical Fellow and the Supervisor / Head of Department.</p>						
10. Course Administration	<p>Type of Certification: Certificate of Training</p> <p>Training Fee: S\$3,210 per month</p> <p>Programme Funding source: Self-funded</p>						
11. Number of Clinical Fellow to be accepted at any one time	2						