

**SINGAPORE MEDICAL COUNCIL
ACCREDITATION OF MINIMALLY INVASIVE SURGERY BASIC FELLOWSHIP – AT
DEPT of SURGERY, NUH**

Institution: National University Hospital
Period of Training: 24 months
Department: Department of Surgery
Training Program: MINIMALLY INVASIVE SURGERY BASIC FELLOWSHIP

PROGRAM DIRECTOR (PD)

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TRAINING DURATION AND LOCATION

The duration of the fellowship training is 24 months. The training location will be at Department of Surgery, Ng Teng Fong Hospital, Alexandra Hospital and National University Hospital.

NO. OF FELLOWS PER YEAR

The division offers a maximum of 2 fellowship positions per year.

ENTRY REQUIREMENTS

1. Medical Degree
2. Specialist in General Surgery
3. Fulfil Interview Criteria
4. Proficiency in English (IELTS score of at least 7 in all subject)
5. The programme is independent, and applicant can apply directly. No prior completion of any basic/advanced Clinical Fellowship in NUHS is required.

OBJECTIVES OF TRAINING

The programme is primarily intended for surgical specialists in General Surgery, who wish to acquire in depth practical knowledge and advanced structured training in Laparoscopic and Minimally Invasive Surgery.

The objective is to enable the participant/s to develop core competencies in the following aspects of Minimal Access Surgery:

1. Basic Principles in Laparoscopic Surgery
2. Endoscopic Equipment
3. Cleaning, Sterilization, & Maintenance of Equipment
4. Energy Sources
5. Operating Theatre Set-up and Technology Integration
6. Anesthetic Implications in Laparoscopic Surgery
7. Core Competency in Transferable Skills
8. Ergonomics
9. Complications
10. Troubleshooting
11. Image Capture & Video Editing
12. Competency in Performing Basic Laparoscopic Procedures
13. Skills Laboratory

COMPONENTS OF TRAINING

Training will be based on Observership and Hands-on, including exposure to clinics, operating theatres, endoscopic cases & General Surgery on-call roster. On-call roster will involve night duties. Lectures, simulators training and live-tissue training will be also part of the programme. The clinical programme will also be integrated with research activities either clinical research or laboratory activities featured by our research programme. The trainee/s will be integrated in ongoing research protocols. The research activities will be than results in presentations at International or Local Conferences and publication in peer-reviewed journals.

METHODS AND DURATION OF TRAINING

The maximum period of training is 24 months during which the Trainee will be exposed to training and assisting in advanced surgical procedures under supervision and once acquired proficiency on his own with proper supervision during which different level of skills are acquired. Two Trainee/Clinical Fellows may be admitted at the same time for the same program. The training location will be at Department of Surgery, Ng Teng Fong Hospital, Alexandra Hospital and National University Hospital.

During the 24 months programme, the basic knowledge of Laparoscopic surgery will be acquired and the following basic modules must be completed:

1. Basic principles of Minimally Invasive Surgery
2. Care, sterilization, & maintenance of instruments
3. Trouble Shooting
4. Ergonomics & Skills Training
 - a. Port placement & Triangulation
 - b. Creation of working space & Dissection
 - c. Diagnostic Laparoscopy & Biopsy
 - d. Intra-corporeal suturing
 - e. Extra-corporeal knot tying
 - f. Laparoscopic Ultrasonography
 - g. Stapling & Anastomosis
5. Complications of Minimally Invasive Surgery

The programme will also consist of full clinical attachment to acquire advanced endoscopic skills under appropriate mentoring and supervision and eventually the Fellow can deepen the knowledge in different sub- specialties like:

1. Upper Gastro-Intestinal Surgery
2. Hepato-biliary surgery
3. Pancreatic Surgery
4. Colorectal Surgery
5. Endocrine Surgery
6. Obesity Surgery

FREQUENCY OF TRAINING

Training is daily following the rules of the Hospital and generally at least 5 days a week. One week of personal leave will be granted on 6 months' basis.

ROTATIONS TO OTHER DIVISIONS OR SERVICES

The fellow will spend most of his training time with the Division of General Surgery during his/her period of training. However, the fellow may be requested to rotate as to other Divisions or Services in Department of Surgery which is related to the Division of General Surgery, on a two-months' basis. This rotation will only be a minor component of the overall training and will be subject to the approval from the relevant department. The fellow will be practicing at Department of Surgery, Ng Teng Fong Hospital, Alexandra Hospital and National University Hospital only.

Name of Institution	Percentage of Time	Department / Division(s)
National University Hospital	60-100%	Surgery / General Surgery
Alexandra Hospital	Maximum 20%	Surgery / General Surgery
Ng Teng Fong Hospital	Maximum 20%	Surgery / General Surgery

TRAINEE SUPERVISION

The supervisee (Trainee) will have an assigned a primary SMC-approved supervisor from Department of Surgery, NUH being the primary hosting hospital. The supervisor in charge will be required to verify continuously clinical practice, behavior, teamwork, role model and if necessary, give feedback for improvement. The SMC-approved supervisor at the Department of Surgery, NUH will be responsible for the supervision and training of the clinical fellows during the programme duration. Where clinical rotations at NTFGH & AH, the clinical fellow will be supervised by the secondary supervisor on site and the feedback on performance will be solicited by the primary SMC-approved supervisor, Department of Surgery, NUH.

TRAINEE ASSESSMENT

The Trainee/s will be required to demonstrate competency in all basic endoscopic skills and should be able to function independently when performing basic endoscopic skills.

The Trainee/s will be required to demonstrate the required levels of skills in performing the following:

After 6 months

1. Port Positioning and Triangulation
2. Operating Theatre Setup and troubleshooting
3. Intracorporeal suturing Extracorporeal knot tying Endoloop
4. Endostaplers
5. Energy Source including ultrasonic and HF devices Diagnostic laparoscopy
6. Diagnostic thoracoscopy (optional)
7. Diagnostic Flexible Endoscopy (optional)
8. Ovarian cystectomy both ovarian and non-ovarian sparing
9. Appendicectomy
10. Resection of Meckels Diverticulum Tumour biopsy
11. Cholecystectomy

The Trainee/s will also be required to demonstrate a competent level of understanding of the principles of:

After 24 months

1. Endoscopic Thyroidectomy Fundoplication Adrenalectomy
2. Simple nephrectomy VATS decortication Wedge Resection
3. Thoracoscopic sympathectomy Thoracoscopic lung biopsy Inguinal hernia repair
4. Ventral hernia repair Gastric Banding
5. Gastric Wedge Resection Sleeve gastrectomy

The Trainees will be required to participate in clinical and/or scientific based research leading to a publication in a refereed journal.

FEEDBACK AND COUNSELING PROCEDURES

A continuous monitoring of the activities of the Trainee/s will be monitored monthly by the Supervisor to ascertain that the training purpose of the programme are followed, and the goals of the programme are achieved. A continuous feedback and counseling of the Trainee is done monthly to verify that Trainee is adequately exposed to the training programme.

CRITERIA FOR EARLY TERMINATION OF THE PROGRAMME

In case of any lapses in clinical activities or protocol, inadequate behavior towards colleagues and staffs or any other unacceptable behavior by the Trainee that is in contrast with SMC rules or Hospital requirements, the training programme will be immediately interrupted.