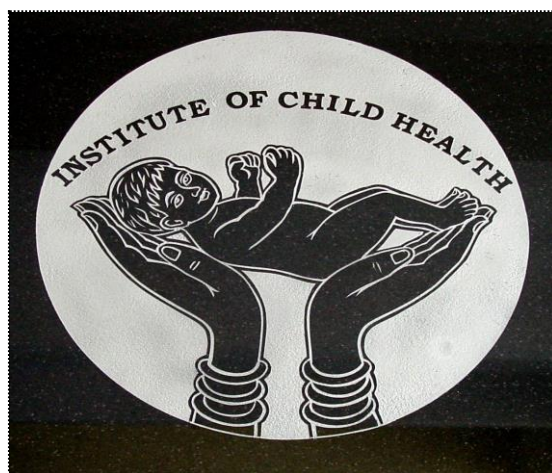


**INDIRA GANDHI INSTITUTE OF CHILD HEALTH  
AUTONOMOUS INSTITUTE OF GOVT. OF KARNATAKA  
(A Post Graduate Institute of Higher Medical Sciences)  
South Hospital Complex,  
Dharmaram College Post, (Near NIMHANS)  
Bengaluru-560 029.**

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**(AFFILIATED TO RAJIV GANDHI UNIVERSITY OF  
HEALTH SCIENCES, KARNATAKA)**



**PROSPECTUS  
FOR  
FELLOWSHIP PROGRAMME IN PAEDIATRIC  
MINIMALLY INVASIVE SURGERY**

# **CONTINUING PROFESSIONAL EDUCATION FELLOWSHIP PROGRAMME IN MINIMALLY INVASIVE SURGERY**

## **1:Name of the Programme:**

**Fellowship in Pediatric Minimal Invasive Surgery**

## **Particulars of Institution:**

1.	Name of Institution	:	<b>Indira Gandhi Institute of Child Health</b>
2.	Address	:	South Hospital Complex, D.R.College P.O., Bangalore 560 029
3.	Name of the Department desirous of conducting the programme	:	Department of Pediatric Surgery
4.	Category	:	Affiliated Institution for MD(Pediatric) & DCH & Mch., in Pediatric surgery courses.

## **2:**

### **a) Goals:**

The candidates, on completion of the training, should be able to

- Perform safely laparoscopic, thoracoscopic surgeries in children.
- Practice ethical and evidence based medicine.
- Appreciate the benefits, limitations and complications of the newer techniques.
- Adapt various technologies of Pediatric minimal invasive therapy that supplement each other and act together to decrease patient morbidity.
- Understand Proper choice of instrumentation, equipment, and energy sources
- Trouble shoot MIS equipment including monitors, insufflation, and recording components.
- Develop communication skills to present papers, lectures etc. at various fora.

### **b) Statement of objectives of the course**

- **Knowledge**
- **Skills and attitude**
- **Communication abilities.**

## c) Course contents:

This would include the following:

1. The theoretical basis of various kinds of laparoscopic surgeries.
2. Knowledge about specialized instrumentation and their maintenance.
3. Details about the various operative procedures.
4. Indications, limitations of procedures and contra-indications based on evidence based medicine.
5. Use of computers and various software to maintain surgical audit, prepare presentations, maintain website browse the net, to perform digitization of videos and edit them.
6. Evaluation of data based on surgical audit.
7. Topics which includes ethical, legal and social responsibilities of surgeons.

The various topics that would be covered in detail include:

- **Basic laparoscopy**
  - **Instrumentation and setup**
    - History of laparoscopic surgery.
    - Basic instrumentation.
    - Operating room layout and trouble shooting.
    - Anaesthetic considerations.
    - Laparoscopic Space Access and Physiological Significance
    - Sterilisation and Disinfection in Laparoscopy
    - Principles of Laparoscopic Haemostasis
    - Laparoscopic Tissue Approximation
  - **Hepatobiliary System**
    - Laparoscopic cholecystectomy
    - Intra-operative (laparoscopic) cholangiography
    - Laparoscopic Liver Biopsy
    - Laparoscopic Choledochal Cyst Excision
    - Laparoscopic surgery for Biliary Atresia
    - Laparoscopic Liver resections
    - Laparoscopic Treatment of Hepatic Cysts.
    - Laparoscopic Management of Hydatid Cyst Liver
  - **Hernia**
    - Anatomy of Inguinal Region
    - Laparoscopic Repair of inguinal Hernia
  - **Esophagus**
    - Laparoscopic Anatomy of the Esophageal Hiatus
    - Laparoscopic Management of Gastro Esophageal Reflux Disease
    - Laparoscopic Management of Achalasia Cardia
    - Thoracoscopic / Laparoscopic management of Benign Esophageal lesions
  - **Stomach**
    - Laparoscopic Pyloromyotomy
    - Laparoscopic Gastrotomy

- **Spleen and Pancreas**
  - Laparoscopic Splenectomy
  - Pancreatic Pseudocyst
  - Laparoscopic Pancreatico Jejunostomy for Chronic Pancreatitis.
  - Laparoscopic Distal Pancreatic Resection
- **Appendix, Small Bowel, Colon and Rectum**
- **Diagnostic Laparoscopy**
  - Laparoscopic Appendectomy.
  - Laparoscopic Enterostomy / feeding jejunostomy
  - Role of Laparoscopy in Acute Small Obstruction/ Trauma
  - Meckel's Diverticulum and Other small bowel lesions
  - Laparoscopic-Assisted Colonic Resection
  - Laparoscopic Management of Prolapse Rectum
  - Laparoscopic Pullthroughs for Hirshprung's Disease
  - Laparoscopy Assisted AnoRectal Pullthrough
- **Urology**
  - Laparoscopic Access
  - Retroperitoneoscopic Surgery
  - Laparoscopic Hand-Assisted Surgery in Urology
  - Laparoscopic Adrenalectomy
  - Laparoscopic Excision of Renal Cysts
  - Retroperitoneoscopic Nephrectomy
  - Transperitoneal Laparoscopic Nephrectomy and
  - Nephroureterectomy
  - Role of Laparoscopy in Urinary Bladder Surgery
  - Laparoscopic Varicocelectomy
  - Retroperitoneoscopic pyeloplasty
  - Retroperitoneal and Transperitoneal ureteral surgery
  - Transperitoneal Pyeloplasty
  - laparoscopic ureteric re-implantation
- **Gynaecology**
  - Diagnostic Laparoscopy for inter-sex conditions
  - Laparoscopic management of ovarian cysts
  - Laparoscopic management of tubo-ovarian mass
  - Polycystic ovaries, surgical management
- **Thoracoscopy**
  - Thoracoscopic Decortication for Empyema Thoracis
  - Thoracoscopic repair of Diaphragmatic Hernia
  - Thoracoscopic repair of Diaphragmatic Eventration
  - Thoracoscopic repair of Esophagela ATresia
  - Thoracoscopic biopsy/excision of Tumours
  - Thoracoscopic pericardectomy
  - Thoracoscopic excision of Bronchogenic cysts
  - Thoracoscopic repair of Duplication cysts
  - Thoracoscopic Lobectomy
  - Thoracoscopic excision of Lung Hydatid Cysts
  - Laparoscopic Management of Diaphragmatic Hernia

- **Neuro-endoscopy**
  - Endoscopic Third ventriculostomy
  - Endoscopic management for VP Shunt Malfunction

● **Graded Responsibility in care of patients and operative work:**

The candidate will be given an opportunity to observe (O), assist surgeries (A), perform with assistance (PA) and perform independently (PI) in various cases and the minimum participation of the candidate will be as per the table mentioned below:

Procedure	Category	Number
Laparoscopic Cholecystectomy	O	5
Laparoscopic Cholecystectomy	A	5
Laparoscopic Cholecystectomy	PA	2
Laparoscopic Appendicectomy	O	5
Laparoscopic Appendicectomy	A	10
Laparoscopic Appendicectomy	PA	10
Inguinal Hernia(female)	O	5
Inguinal Hernia	A	10
	A	5
Diagnostic Laparoscopy	A	5
Diagnostic Laparoscopy	PA	10
Diagnostic Laparoscopy	PI	10
	A	5
	PA	5
	O	20
Thoracoscopy for Empyema	O	5
	A	5
	PA	5
	PI	5
	PA	10
Laparoscopic Pyloromyotomy	O	5
	A	5
	PA	5
Laparoscopic Undescended Testis	A	10
	PA	5
	A	20
	PA	5
Diagnostic Laparoscopy	O	5
	A	20
	PA	5
	PA	10
	PI	15
Liver Biopsy/ Intraopcholangiogram	O	5
	PA	10
	PI	5
	O	20

**d) Teaching / Learning Activities:**

**1. Participation in Departmental activities:**

The training will be imparted at Indira Gandhi Institute of Child Health, Bangalore.

There will be regular training sessions for the candidates, as follows:

- Lectures
- Video demonstrations
- Seminars and Symposia
- Panel discussions
- Ward rounds and Case presentations
- Journal club
- Interdepartmental Meetings
- Presentations of papers in Conferences and regular Meets
- Publications in important journals
- Project Work
- Practical training in inanimate trainers, computerized modules, animal tissue labs, virtual reality modules, animal labs.
- Assisting live surgeries
- Performing surgeries under supervision

**a) Lectures:**

- **Didactic Lectures:**

Selected common topics will be discussed during the first few months of the course and most of them will be introduced to the candidate to enable him increase his productivity during the course. These would include:

- Bio-statistics
- Use of library
- Research Methods
- Medical code of Conduct and Medical Ethics
- Communication Skills etc.
- Use of computers
- Basic operating knowledge of some software like MS Word, MS Powerpoint, MS Excel, MS Access, Adobe Photoshop and Coreldraw.
- Video recording, editing and archiving.

- **Integrated Lectures:**

These are a combination of multidisciplinary talks given by experts in the respective fields the intention being that we need to react with our inter-disciplinary colleagues and work with them.

These would include: Pediatric Anesthesia, Pediatrics, Pediatric Intensive Care, Oncology, Pathology & Radiology

**b) Video Demonstrations**

There will be a series of lectures based on video demonstrations of various laparoscopic surgeries. This will be from the vast compilation of videos (over 1000 laparoscopic surgeries performed by various surgeons of international repute). Several points will be discussed during these sessions, which include:

- The operative procedure details

- Problems that would be encountered during the surgeries
- Dealing with different situations and pathologies
- Various approaches to a given problem
- Different techniques of surgery that can be adapted
- Proper usage of various instruments and energy sources

**c) Seminars and Symposia:**

This will be held once in two weeks. All the PG students from other institutions will also be invited to attend and actively participate in discussion. The candidate will present on various topics at least six times a year. There will be evaluation of the candidate based on his participation and contribution for the seminar. A comprehensive rooster will be made for the seminars throughout the year.

**d) Panel discussion:**

This will be conducted along with PG students of other institutions and departments as and when felt necessary. This would also be considered for the continual evaluations of the candidate

**e) Ward Rounds & Case Presentations:**

The candidate will be doing two rounds of all in-patients in the department of minimal invasive surgery every day. Rounds in ICU will be more frequent depending on severity of illness of the patients. There will be a teaching rounds every day with faculty in the department. Candidates will be entering relevant data in their logbooks every day. There will be case presentations by the candidate during the rounds.

**f) Journal Club:**

There will be journal clubs held once in two weeks. All the specialists and PG students from other institutions also will be invited to attend and actively participate in discussion. The candidate will present from the allotted journal(s) of selected articles and also from literature search which obtained from Internet and other sources. There will a minimum of 6 presentations from each candidate during the fellowship course. There will be continual assessment of the candidate during the journal club presentation and discussion.

**g) Inter Departmental Meetings:**

There would be regular meetings with radiologists, pathologists, medical gastroenterologists, intensivists and anaesthesiologists.

**h) Teaching Skills:**

The candidate will teach post graduate students who will be participating in the various Meets that are organized by the department. A list of this activity will be maintained in the log book for consideration during the final evaluation of the candidate.

**i) Presenting Papers in Conferences :**

The candidate will be encouraged to attend as many conferences and workshops in laparoscopic surgery during the course. He/She would also be encouraged to present as many papers, posters and videos at these conferences. The candidate will have to prepare a report in the log book, after attending each of these Meets.

**j) Publications**

All facilities will be given to acquire and record data and to send articles for publications in journals of international repute. Each candidate will be encouraged to send in atleast one article for publication in each semester.

### **k) Practical training**

- **Pelvi-trainer sessions:** Practical training will be given on inanimate trainers which are called pelvitainers. Various types of exercises are taught in these trainers, the actions of which mimic the various steps of surgical procedures.
- **Computerised Modules:** We will tie up with AV Hospital who have developed different computerized modules which can be used for training on how to go step by step during surgery and also to perform certain manouvres including assisting surgery holding the telescope.
- **Virtual reality training module:** We will have a tie-up with AV Hospital who have developed the most sophisticated virtual reality modules that can be used for training in laparoscopic surgery. These modules help in fine-tuning the skills of surgery and also in assessment of the candidate's performance during any surgical exercise.
- **Assisting surgeries:** The candidate will be give opportunities to assist a number of surgeries which are mentioned in the rooster. The assisting surgeries would include organ retraction operating through the other ports other than what the surgeon is using and coordinating by holding the camera.
- **Performing surgeries under supervision:** Based on the performance and the active involvement of the candidate he/she will be allowed to perform certain operations under supervision by senior faculty. The type of surgery and number of surgery will be decided upon based on the expertise that the candidate as acquired.

### **2 Rotation and Posting in other Departments**

The students will be posted to other ancillary departments like Neonatal & Pediatric Intensive care units to impart training in Post-Operative management of high risk babies.

### **3. Orientation Programme**

An orientation program about the course will be given at the start & a periodic appraisal will be done to monitor the candidates' progress in the course.

### **4. Training in teaching skills and research methodology**

**Monitoring of teaching/ Learning activities:**

The evaluation of learning outcome of trainees consists of:



- **Assessment Plan during the Course:**

There will be continuous monitoring and regular assessment of all academic activities of the candidate.

Formal evaluation is done by the staff of the department based on participation of students in various teaching / learning activities. The evaluation is structured on the basis of checklists that evaluate these various parameters.

The following aspects will be assessed:

- **Personal Attitudes** – It is pertinent to assess and guide the candidate in facing a stressful conditions in the ward, ICU and operating room, to assess the candidate’s ability to work as a team and to evaluate the leadership qualities, and coordinating abilities.
- **Acquisition of Knowledge** – This will be done by evaluation of the candidates performance during the journal club, seminars, symposia, clinicopathological conferences and discussions during the ward rounds which are entered in the log book.

**CHECK –LIST FOR EVALUATION OF JOURNAL CLUB**

<b>Parameters Evaluated</b>	<b>Poor 0</b>	<b>Below Average 1</b>	<b>Average 2</b>	<b>Good 3</b>	<b>Very Good 4</b>
1. Article chosen					
2. Understanding of scope & objectives					
3. Cross references					
4. Relevant publications consulted					
5. Response to questions					
6. Audio-Visual aids used					
7. Ability to defend the paper					
8. Clarity of presentation					

**CHECK-LIST FOR EVALUATION OF SEMINAR PRESENTATIONS**

<b>Parameters Evaluated</b>	<b>Poor 0</b>	<b>Below Average 1</b>	<b>Average 2</b>	<b>Good 3</b>	<b>Very Good 4</b>
1. Relevant publications consulted					
2. Cross references consulted					
3. Completeness of Preparation					
4. Clarity of Presentation					
5. Understanding of subject					
6. Ability to answer questions					
7. Time scheduling					
8. Audio-Visual aids					
9. Overall Performance					

**CHECK LIST FOR EVALUATION OF CLINICAL WORK IN WARD / OPD**

<b>Parameters Evaluated</b>	<b>Poor 0</b>	<b>Below Average 1</b>	<b>Average 2</b>	<b>Good 3</b>	<b>Very Good 4</b>
1. Regularity of attendance					
2. Punctuality					
3. Interaction with colleagues					
4. Maintenance of case records					
5. Case presentation during rounds					
6. Investigations work up					
7. Bedside manners					
8. Rapport with patients					
9. Counselling patient's relatives					
10. Over all quality of Ward work					

**Clinical and operative skills** – This would include an evaluation of the candidate’s sincerity, punctuality ability to diagnose correctly handling of the patient and relatives, the speed and effectiveness of the decisions taken in the outpatient department and the wards. The candidates operative skills will be assessed based on performance in the operating room, performing on virtual reality training module and standard tests given in inanimate pelvi-trainer sessions and assisting during surgery.

**CHECKLIST OF OPERATIVE SKILLS**

<b>Parameters Evaluated</b>	<b>Poor 0</b>	<b>Below Average 1</b>	<b>Average 2</b>	<b>Good 3</b>	<b>Very Good 4</b>
1. Pre-operative Preparation					
2. Setting up of Equipment					
3. Creation of Pneumoperitonium					
4. Port placement					
5. Patient positioning					
6. Co-ordination with operating team					
7. Camera focusing					
8. Proper usage of instruments					
9. Overall Dissection skills					
a) Dexterity of movements					
b) Blunt dissection					
c) Sharp dissection					
d) Haemostasis					
e) maintaining clear field of vision					
f) Usage of energy sources					
g) Clipping					
h) Extra corporeal knotting					
i) Suturing					
j) Intra-corporeal knotting					
10. Safety measures during surgery					
11. Reaction to Trouble shooting					
12. Handling crisis					

Standard objective skill assessment tests will be conducted in pelvitrainers periodically.

Accurate assessment of laparoscopic surgical skill will be obtained about the various techniques using the virtual reality module.

**Teaching skills** – A close watch and guidance will be provided regarding the skills in communicating and teaching during the presentations that the candidates would make.

### CHECK-LIST FOR EVALUATION OF TEACHING SKILL

Parameters Evaluated	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1. Communication of the purpose					
2. Evokes audience interest					
3. The introduction					
4. The sequence of ideas					
5. Use of practical examples					
6. Speaking style					
7. Attempts audience participation					
8. Summary of main points at the end					
9. Asks questions					
10. Answers questions					
11. Effectiveness of the talk					
12. Uses AV aids appropriately					

#### Log book

Prime importance will be given to maintaining a proper record of events of teaching and experiences that the candidate has obtained in a log book. Internal assessment will be based on the evaluation of the log book. The record will include academic activities as well as the presentations and procedures carried out by the candidate.

#### Scheme of Examination:

- **Eligibility:** When the head of our Institution certifies the candidate's competence and performance, the Rajiv Gandhi University of Health Sciences, will grant permission for assessment. The assessment will be conducted by the faculty at IGICH
- **The written assessment:** There shall be a written assessment at the end of the prescribed period of the programme consisting of at least two question papers. Each paper shall carry 100 marks. Questions on basic sciences and recent advances may be asked in any or all papers. IGICH will conduct the Paper setting and valuation for the examination. No marks will be assigned, only grades will be assigned to the performance and informed to the University.
- **Clinical / Practical:** Assessment consists of examination of given cases or practicals and presentation to the examiners on which viva-voce will be held
- **Examiner:** There shall be one internal examiner, generally the programme coordinator and an external examiner appointed by the Rajiv Gandhi University of Health Sciences. The appointment of external examiner is by invitation based on the panel of three names given by the programme coordinator.
- **Certification:** Based on the recommendations made by the examiners, successful candidate would be awarded the fellowship scroll by Rajiv Gandhi University of Health Sciences. In case of unsatisfactory completion, the fellow would be given another chance to appear before the examiners (6 months) later. However, the fellow ship in the IGICH for such a candidate ceases at the end of the duration of the course.

## **Recommended book and journals**

*\* Please refer the attachment*

## **Criteria for selection**

The candidate applying for Fellowship of Minimal Invasive Surgery should have successfully completed

M.Ch. in Pediatric Surgery in MCI approved programme or D.N.B. in Pediatric Surgery in NBE approved programme

## **Accommodation facilities**

Furnished accommodation is available in the adjacent PG Hostel which is situated within the campus.

## **Request of IGICH for accreditation for this programme**

- The Institute is equipped with the best of facilities and staff required for performing minimal invasive surgery (Annexure 1).
- The Hospital has been involved in training Pediatric Surgeons from all over the country and abroad in Minimal Invasive Surgery (Annexure 2).
- The Hospital has organized several conferences and workshops at the national and international level to spread minimal invasive surgery in Pediatric Surgery.
- The faculty at the hospital has presented several papers in Minimal Invasive Surgery at national and international conferences and journal.
- There has been a constant effort by the department to spread the knowledge of minimal invasive surgery and to further their effort there is a need to start such a training programme.

## **Duration of Course:**

12 Months (full time work as per RGUHS guidelines and not permitted to work elsewhere)

## **Eligibility:**

- i) MCh in (Pediatric Surgery) or its Equivalent.

## **Experience: -**

Preference will be given to candidates having three years' experience after post graduation in the concerned specialty.

## **Selection:**

- 1) Candidates will be selected from 4 Member panel by interview  
(Approved by RGUHS)
- 2) If necessary entrance test will be conducted.

### **Fees & Stipend:**

Fees for the course	:As per IGICH norms
Monthly stipend	:Rs.60000/- Per Month

\*In the event of the candidate leaving the course by discountenance or otherwise and thus failing to complete course;

1. The fee paid by candidate will not be refunded.
2. The stipend drawn by the candidate from the Institute during the period of the Fellowship programme to be paid to Institute.

### **Experience**

Preference will be given to candidates having three years experience after post graduation in the concerned specialty.

### **Attendance & Leave:**

As per University Guidelines

### **Faculty:**

Staff from Indira Gandhi Institute of Child Health

### **Copies of certificates to be enclosed with application (Originals at the time of Interview)**

1. Photos –2
2. SSLC Marks card.
3. MBBS Degree Certificate and marks cards for all the four years.
4. MS (Gen.Surgery & MCh., (Paediatric Surgery) / Marks card / Convocation Certificates etc.,
5. KMC Registration Certificate(updated qualification)
6. Application of in-service candidates should be routed through proper channel only.
7. Experience Certificate if any.

**\* This Fellowship Programme is not recognized by Medical Council of India.**

