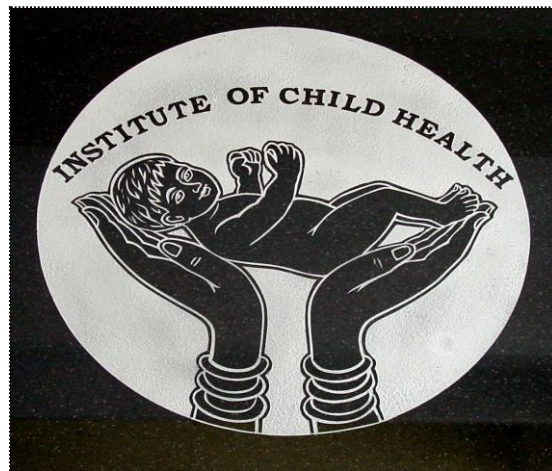


**INDIRA GANDHI INSTITUTE OF CHILD HEALTH  
AUTONOMOUS INSTITUTE OF GOVT.OF KARNATAKA  
(A Post Graduate Institute of Higher Medical Sciences)  
South Hospital Complex,  
Dharmaram College Post, (Near NIMHANS)  
Bengaluru-560 029.**

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



**PROSPECTUS  
FOR  
FELLOWSHIP IN PEDIATRIC NEUROLOGY**

INDIRA GANDHI INSTITUTE OF CHILD HEALTH,  
South Hospital Complex,  
Dharmaram College Post, (Near Nimhans)  
Bangalore-560 029.

## FELLOWSHIP PROGRAMME IN PEDIATRIC NEUROLOGY

### GOALS

- To provide Basic and Advanced training in 'pediatric neurology', producing highly competent doctors in this field.
- To be able to provide clinical care of the highest order to the neurologically affected children.
- To enable the doctor to view the child as a special individual with unique needs and pediatric neurology a super speciality.
- To inculcate and further human values of empathy, ethics, care and discipline with a sound background of knowledge and clinical skills to practice pediatric neurology.
- To empower the doctor with a necessary knowledge / expertise required to set up a pediatric neurology unit encouraging set ups in the far reach areas.

### OBJECTIVES

1. Knowledge
2. Skills (clinical /teaching/research)
3. Communication skills

#### 1. **KNOWLEDGE :- (To be able)**

- To acquire knowledge and be conversant with common pediatric neurology problems-their Etiology, pathophysiology, diagnosis, management and prevention.
- To acquire knowledge regarding pediatric neurology morbidity, mortality and prevention strategies to further decrease these.
- To acquire knowledge in pediatric neurology with respect to pediatric neurology care in the community.
- To acquire knowledge with respect to organizing and managing a tertiary level pediatric neurology' care Units.

## **2. SKILLS :-(*To be able* )**

- To be able to identify and manage pediatric neurology problems effectively and early.
- To analyze pediatric neurology health problems and develop preventive strategies to decrease pediatric neurology morbidity and mortality at a hospital and community level.
- To provide primary, secondary and tertiary level care of the highest standard to critically ill pediatric neurology.
- To plan, establish and manage electrophysiology laboratory.
- To appropriately use and maintain Equipments /Technology in the care of pediatric neurology babies.
- To involve in active research in pediatric neurology and its basic sciences applied to neonatology, publishing papers in peer reviewed journals.
- To involve in active teaching of pediatric Postgraduates Residents in their pediatric neurology electives

## **3. COMMUNICATION SKILLS (*To be able*)**

- To take rational decisions in the face of ethical dilemmas in pediatric neurology medicine.
- To exhibit skills of a good team worker including nurses, paramedical workers.
- To exhibit communication skills of a high order and demonstrate compassionate attributes befitting a caring pediatric neurology.
- To have effective interdepartmental relationship.
- To counsel parents regarding pediatric neurology problems and Genetic /Hereditary diseases

## **DUTIES/RESPONSIBILITIES**

1. Provide in-hospital medical care to patients in the NICU/ PICU with complex neurological needs.
2. Confirm the history and physical examination on all admissions, document additional findings and generate a problem list and plan of acting, and countersign the junior doctors' notes and examining child.
3. Perform/supervise procedures on pediatric neurology (e.g. lumbar puncture, muscle biopsy, nerve biopsy, skin biopsy) within limits of expected competence at the discretion of the attending pediatric neurology; and/or supervise the junior doctor/Nurse as required.
4. Assist with data collection sheets, documentation of procedures, patient progress notes and discharge summaries.
5. Provide assistance to pediatricians/family physicians with patients admitted under their care in the NICU, PICU and wards.
6. Work as an effective member of the health care team.
7. Maintain appropriate communication with the attending pediatric neurology.
8. Supervise, teach the junior resident's bedside care of the pediatric neurology patients.
9. To attend electrophysiology lab and perform and monitor procedures- EEG, NCV,EMG, RNST,BERA and VEP
10. To attend OPD regularly and manage patients appropriately under the supervision of pediatric neurologist.

**EXPECTED ORDER OF INCREASED RESPONSIBILITIES**

DESIGNATION	TIME FRAME	DUTIES	UPON SUCCESSFUL COMPLETION
Junior fellow	First 4 months	Function initially as a senior resident following management of complex pediatric neurological conditions with close supervision	Senior call at night Senior fellow during the day (in rotation). Report to the pediatric neurologist on all orders given.
Senior fellow	Next 6 months  (assessments are based on clinical skills on service and knowledge base at teaching sessions)	Junior/senior fellow  Functions as a fellow, performing procedures independently, supervising junior residents	Membership in pediatric neurology' academies ex: AOCN
Supervisor	Next 5 months	Run rounds in level NICU/PICU, educational role for junior staff.	More time available for research. Chief resident role.
Junior consultant	Last 3 months	Run rounds in PICU/NICU/ Electrophysiology LAB, supervises whole team, responsible for education of residents and medical students etc	Successful completion of the Clinical Fellowship

## **SYLLABUS**

### **Pediatric Neurological examination**

#### **CNS malformations**

1. Neural tube defects
2. Approach to a child with large and small head
3. Hydrocephalus
4. Microcephaly
5. Craniosynostosis
6. Cerebral malformations

#### **Neonatal Neurology**

1. Neurological examination of newborn
2. Neonatal seizures
3. Management of hypoxic ischemic encephalopathy
4. Intracranial hemorrhage
5. Periventricular leukomalacia
6. Bacterial meningitis
7. Bilirubin encephalopathy

#### **Seizure disorders and Epilepsy**

1. Seizures and non-seizures
2. Provoked seizures and Acute symptomatic seizures
3. Febrile seizures
4. Classifications, evaluation and management of epilepsy
5. Newer drugs in epilepsy and other options – ketogenic diet and epilepsy surgery
6. Epileptic syndromes
7. Intractable epilepsy and epilepsy syndromes
8. Status epilepticus

#### **CNS infections**

1. Acute pyogenic meningitis
2. Chronic meningitis
3. Brain abscess

4. Acute encephalitis
5. Cerebral malaria
6. Acute febrile encephalopathy
7. Neurocysticercosis
8. HIV encephalopathy and CNS opportunistic infections in HIV
9. SSPE (Sub-acute Sclerosing Panencephalitis)
10. Congenital Infections

### **Development**

1. Cerebral palsy
2. ADHD
3. Autism
4. Learning disability
5. Mental retardation
6. Botox treatment for spasticity
7. Development assessment
8. Early stimulation programme
9. Intellectual disability

### **Neurometabolic disorders**

1. An Approach to Neurometabolic disorders
2. Aminoacidurias
3. Organic acidurias
4. Fatty acid oxidation defects
5. Urea cycle disorders
6. Neurotransmitter disorders
7. Lysosomal disorders
8. Mitochondrial disorders
9. Peroxisomal disorders
10. Special diet formulation for Neurometabolic disorders

### **Neurodegenerative disorders**

1. White matter disorders
2. Gray matter disorders
3. Cerebellar disorders
4. Basal ganglia disorders

## **Stroke in young**

### **Approach to dysmorphic child**

#### **Neuromuscular disorders**

1. approach to the site of lesion
2. Approach to muscular dystrophy
3. Approach to a Floppy infant
4. Congenital myasthenia graves
5. Acute flaccid paralysis(AFP)

## **Neuroimaging and Neuroradiology**

### **Headache in children**

#### **Duration of Course:**

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

#### **Eligibility:**

- i) MD (Paediatrics), DNB or its Equivalent/DCH with Three Year Clinical Experience.

#### **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.

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### **Training includes:**

1. Weekly Seminars/Journal club
2. Monthly Lectures by faculty
3. CTS Seminars
4. CTC discussions
5. One publications or two representations at State/National level.
6. Internal assessment every six months
7. Final certifying examinations (clinical & Practical) examiners-National Faculty)

### **Attendance & Leave:**

As per University Guidelines

### **Faculty:**

Staff from Indira Gandhi Institute of Child Health, Bangalore.

## **Allied subjects**

### **Pediatric Intensive care**

1. Status epilepticus
2. Acute febrile encephalopathy

### **Neonatology**

1. Neonatal neurological disorders

### **Genetics**

1. Genetic causes of GDD and intellectual disability
2. Neurometabolic disorders
3. Lysosomal disorders
4. Neurodegenerative disorders
5. Genetic counseling

### **Pediatric orthopedics**

1. Surgery of cerebral palsy
2. Surgery for neuromuscular disorders

### **Pediatric Surgery**

1. Management of hydrocephalus
2. Management of MMC

### **Pediatric Dermatology**

1. Neurocutaneous syndromes

**Pediatric Pulmonology**

Respiratory management of neuromuscular disorders

**Pediatric Endocrinology**

Management of neuro-endocrine management

**Electro-physiology lab**

**Performance and interpretation of**

1. EEG
2. NCV
3. EMG
4. BERA
5. VEP
6. RNST

**Practical management**

1. Muscle biopsy
2. Nerve biopsy
3. Skin biopsy
4. EEG/NCV/EMG/BERA/VEP/RNST
5. Ketogenic diet
6. Botox injection administrations
7. Management of intractable epilepsy
8. Multidisciplinary management of cerebral palsy and developmental disorders
9. LP- CSF analysis
10. Neostigmine challenge test

<b>Procedure</b>	<b>O</b>	<b>PA</b>	<b>PI</b>
Lumbar puncture	2	5	5
Muscle biopsy	2	5	5
Nerve biopsy	2	1	1
Skin Biopsy	2	2	2
EEG	5	5	5
NCV	2	5	5
EMG	1	5	5
BERA	2	2	2
VEP	2	2	2
RNST	1	2	2
Neostigmine test	2	2	2
Forearm ischemic test	1	2	2

These are minimum numbers to be performed

Teaching learning activities

Learning will be self directed and will take place as a continuous process but in addition the following formal sessions are recommended:

Academic sessions:

In addition to attending all the academic sessions, the candidate needs to make a minimum number of presentations in this academic session during the training period of one yr.

### **References**

1. Text book of pediatric Neurology- Swaiman-5<sup>th</sup> Edition
2. Text book of Child Neurology- Menke's
3. Clinical pediatric neurology- G M Fenichel
4. Pediatric Neuroradiology- Barkovich's
5. Practical pediatric neurology-Veena Kalra
6. Cerebral palsy and early stimulation –Vykuntaraju KN
7. Bickerstaff – Neurological examination
8. De Jong's –Neurological examination
9. De Myer's –Neurological examination
10. Neurological examination made easy- Geraint Fuller
11. Aicardi text book on Epilepsy
12. EEG interpretations- U K Mishra
13. Localization in clinical neurology-5<sup>th</sup> ed by Paul W. Brazis
14. Brain's diseases of the nervous system-Adam and victor neurology
15. Brett pediatric neurology
16. Avery's neonatal neurology

### **Journals**

1. Pediatric neurology
2. The Journal of child neurology
3. Journal of pediatric neurology
4. Journal of pediatric Neurosciences
5. Developmental medicine and child Neurology
6. European journal of pediatric neurology
7. Brain and Development
8. Epilepsia
9. Neurology

10. Pediatrics
11. Lancet Neurology
12. Seizure
13. European neurology
14. Seminal in pediatric neurology
15. Seminars in Neurology
16. Clinics in neurology
17. Indian pediatrics
18. Indian Journal of Pediatric Neurology

### **SCHEME OF EXAMINATION**

THEORY EXAMINATION – includes 2 theory papers 100 marks each.

- Two long essays( 20 marks each)
- Remaining six short essays ( 10 marks each)

PRACTICAL EXAMINATION – 2 Cases – 75 marks each

VIVA VOCE – 50 marks

Total – 400 marks

### **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. MD(Paediatrics)/DCH Certificates / Marks card / Convocation Certificates
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.**

