A Departmental Overview

Email: pedneuroaiims@yahoo.com
Autism helpline: autismhelp.pedsaiims@gmail.com
Website: www.pedneuroaiims.org Mobile link: m.www.pedneuroaiims.org
AIIMS web address: http://www.aiims.edu/en.html
Departmental Description

The Child Neurology division was established in early 1970s. It is providing leadership in the Child neurology in fields of patient care, academic, research and training at National and Regional levels. It is the first Paediatric department in South Asia providing post-doctoral training in child neurology.

The department caters to patients from all across the country. In addition, children with neurological issues from the SAARC region, and various middle east countries also seek the services of the division. Both in-patient and out-patient services are provided to these children.

The division is the front-runner in the field of research with multiple institutional and collaborative projects. The division has spear headed several research projects of the National Institute of Health, Autism Speaks, National Trust, World Health Organization, Department of Science and Technology, Indian Council of Medical Research, Department of Biotechnology, INCLEN, and All India Institute of Medical Sciences, New Delhi. Currently, it is collaborating with various institutes like IIT, NDRI, IGIB and PHFI in various research fields.

Patient Services

Broad spectrum of disorders seen

- Seizures
- Developmental delay/ Cerebral palsy
- Autism
- Other neurobehavioral disorders
- CNS infections
- CNS Autoimmune disorders
- Stroke
- Headache
- Neurocysticercosis
- Neurometabolic disorders
- Neuromuscular disorders
- Neurodermatoses
Specialty Clinics

The department conducts OPD and in addition runs special clinics to facilitate diagnosis and management of patients. These include:

<table>
<thead>
<tr>
<th>Day</th>
<th>Clinic</th>
<th>Room No</th>
<th>Timings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>Development Clinic</td>
<td>5</td>
<td>2:00 PM onwards</td>
</tr>
<tr>
<td></td>
<td>Neurocysticercosis Clinic</td>
<td>11</td>
<td>2:00 PM onwards</td>
</tr>
<tr>
<td>Tuesday</td>
<td>Pediatrics OPD</td>
<td>4, 5, 14</td>
<td>09:00 AM onwards</td>
</tr>
<tr>
<td>Wednesday</td>
<td>Pediatric Neurology Clinic</td>
<td>3, 4, 5</td>
<td>2:00 PM onwards</td>
</tr>
<tr>
<td>Thursday</td>
<td>Autism Clinic</td>
<td>12, 13</td>
<td>09:00 AM onwards</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Room D</td>
<td></td>
</tr>
<tr>
<td>Friday</td>
<td>Pediatrics OPD</td>
<td>4, 5, 14</td>
<td>09:00 AM onwards</td>
</tr>
<tr>
<td></td>
<td>Neuromuscular Disorder clinic</td>
<td>3, 4</td>
<td>02:00 PM onwards</td>
</tr>
</tbody>
</table>

The care of these patients is supported by the following facilities in the institution:

- Ophthalmology facilities at Rajendra Prasad Centre
- ENT services
- Orthopaedic services
- Child psychologist
- Physical and medical rehabilitation services providing physical and occupational therapy in addition to aid in form of splints, CIMT etc.
- Genetic services
Lab C5 ward) seen in Child Neurology during inpatient stay, given at room no. 12, Pediatric Neurology inpatients after seen by a Neurology resident/ faculty. 

Ambulatory EEG: Is done bedside when indicated for in-patients who cannot be shifted to EEG room.

Video-EEG: is performed in C5 ward video EEG laboratory. Long-term video EEG is performed in special circumstances.

Polysomnography: is performed in sleep laboratory in C5 ward.

Laboratory services

**EEG**

**Routine EEG:** is done in Room no 12 in Paediatric OPD. The appointment is given after the child has been seen in Paediatric Neurology division.

**Ambulatory EEG:** Is done bedside when indicated for in-patients who cannot be shifted to EEG room.

**Video-EEG:** is performed in C5 ward video EEG laboratory. Long-term video EEG is performed in special circumstances.

**Polysomnography:** is performed in sleep laboratory in C5 ward.

**Electrophysiologic Studies**

The electrophysiologic laboratory is in Room no 3057 in the academic block of All India Institute of Medical Sciences. The studies performed herein include Nerve Conduction studies, and Needle Electromyography. In addition, in collaboration with Department of ENT and Department of Ophthalmology, Brain stem Evoked Response Audiometry (BERA), and Oto-Acoustic Emissions (OAE), and Visual Evoked Response respectively are also performed.
Laboratory services

Biopsies
Skin, muscle and nerve biopsies are done in C5 ward as a day care procedure by Paediatric Neurology residents on Tuesday and Friday. The appointments for the same given on OPD basis. The patients are then suggested to collect the report of biopsy from the Pathology department and then follow up in the OPD.

Other Day Care Procedures
Various other diagnostic tests are performed as a day care procedure. These include:

- Lumbar puncture and CSF manometry
- Blood/ CSF Lactate
- Neostigmine challenge test
- Forearm ischemic test
- Dynamometry
- Oto-acoustic emission
Clinical Services Data
Laboratory Services Data

- EPS: 687
- EEG: 2827
- Lab Procedures: 231
- Dynamometry: 54
- OAE: 11
Total number of OPD’s from 01 Apr 2014 to 31 Mar 2015 = 92
Total number of patients seen in OPD from 01 Apr 2014 to 31 Mar 2015 = 21,144
## Research Projects

### Completed Projects

- Multi centric National study: Neuro-developmental Disabilities among children in India: An INCLEN study funded by NIH, Autism speaks, National Trust; International collaborators) [Autism, ADHD, Epilepsy; Cerebral Palsy]

- Model Injection Centres: A Program to improve injection practices in the country: An IndiaCLEN study; USAID

- RCT: Gabapentin in Spinal Muscular atrophy

- Newborn screening; Neurocognitive follow up; Difficult to treat epilepsy, proteomics profiling in meningitis; heavy metals and autism; heavy metals and cerebral palsy;

### Ongoing Projects

- Valproate and carnitine in spinal muscular atrophy: RCT

- Blood heavy metals and quantitative EEG in children with Autism: A cross sectional study

- Validation and Indian Adaptation of the adapted ASQ-3 (Ages and Stages Questionnaire) as a developmental screening tool as compared to DASII in Indian children 2 to 24 months of age

- Telephonic follow up of epilepsy patients

- Ataxia Telangiectasia-Multi-centre, RCT on Intra-Erythrocyte Dexamethasone Sodium Phosphate

- Rett Syndrome-Multi-centre, RCT on Sarizotan

### Ongoing MD/ DM Dissertation

- Sleep abnormalities and polysomnographic profile among children with drug resistant epilepsy

- Prevalence of Smooth Muscle dysfunction in children with Duchenne muscular dystrophy

- Efficacy of Ketogenic Diet, Modified Atkins Diet and Low Glycemic Index Therapy Diet among children with drug resistant epilepsy: A Randomised Non-Inferiority Trial

- Prevalence of neuro-cognitive abnormalities among children with HIV
Achievements

Faculty
• Dr. S Janaki Memorial Oration by National Academy of Medical Sciences 2016
• Sheila Wallace Award by International Child Neurology Association 2014
• Lifetime Achievement Award, Indian Academy of Paediatrics (Neurology Chapter), October 2014
• AIIMS award of excellence in Research (September 2014)
• Revised and Updated IAP Guidelines for Childhood Epilepsy , 2014
• Fellow IAP, Fellow, IMSA •Member ICMR Task Force: IEM and Non Polio AFP;
• National Advisory Board Member, Indian Rett Syndrome Foundation
• 247 publications in various International & National Journals
• Assisting in editing book: 1, Section editor 1
• Chapters in book: 95
• Abstracts :272
• Learning resource material 51
• Impact Factor: Upto 8.31 Citations: Upto 100 per publications
• Citations : 1483, h-Index:20, i10-Index:49

Innovations
• Skin biopsy can replace muscle biopsy
• Telephone based consultation
• Dietary therapies
• Mobile applications for diagnosis of Epilepsy and Autism
• Weighted compression vest for children with autism

Training
• DM Pediatric Neurology programme established in 2004;
• 25 students have been awarded DM degree till date
• Holistic training including management of in-patients and out patient department, and comprehensive training in EEG, EMG, NCV, RNST, muscle and nerve biopsy.
• Residents also undergo extramural posting including neuro-ophthalmology, speech and audiology, physical medicine and rehabilitation, Biostatistics, Genetics, Neonatology, Intensive Care, Child psychology, Adult neurology, and Neurosurgery. Also, the programme includes extensive exposure in Neuroradiology and Neuropathology.
Developmental examination

- Developmental kit collated along with guide about how to use the kit
- Organised development examination symposium in April 2013
- The development examination kit is available from room no 3056, Teaching Block, AIIMS

Neurological Examination

- Developed resource material including video and powerpoint presentations on neurological examination.
- Organised a seminar on neurological examination in 2010

IAP Epilepsy Guideline 2014

- IAP guidelines for diagnosis and management of childhood epilepsy revised and updated in 2014
Part of team that developed this framework

The microsite was launched by Hon’ble Health Minister Shri JP Nadda in December 2014. It contains training modules and videos for health care professionals and parents to assist in interventions in children with neurodevelopment disorders.
Community Awareness Activities

Autism helpline: autismhelp.pedsaiims@gmail.com

Paediatric Neurology Helpline: 9868399037
Autism Related Services and Activities

2013

• Autism helpline email (autismhelp.pedsaiims@gmail.com) was created on 22 April 2013 to answer queries and improve awareness about autism.

2014

• Patient information booklet and an information DVD for autism developed.

• In the Neurodevelopment workshop:
  • Microsite with training module on autism was launched by Hon’ble Health Minister Shri JP Nadda.
  • Framework for care of children with autism and other developmental disorders launched in collaboration with Government of India and UNICEF.
Autism Related Services and Activities

2015

- A guide was launched to aid early identification of children with autism. It also contained evidence based therapeutic guidelines for management of children with autism. This booklet also highlighted the government policies and initiatives to help these children.

- A telephone based helpline was launched: 9868399037

2016

The process of certification for autism was initiated in consultation with Ministry of Social Justice & Empowerment. First certificate for Autism was given on 28-Apr-2016. In addition, a mobile application was launched for diagnosis of Autism Spectrum Disorder.
Patient Information Booklets

All the patient information booklets are available online at:

http://aiims.edu/aiims/departments/pediatrics/ped_neuro/patientedu.htm
Mobile Applications

Childhood Epilepsy Diagnostic Tool


Diagnostic Tool For Autism Spectrum Disorder


Application for iOS platform being launched
Application for diagnosis of neuromuscular impairment and Attention Deficit Hyperactivity Disorder under development
Child Neurology Division

Head of Department
Prof VK Paul

Faculty
Prof Shefali Gulati  Dr Biswaroop  Dr Prashant

DM Residents
Dr Ranjith  Dr Rajni  Dr Vishal  Dr Priyanka  Dr Aparajita  Dr Shruthi  Dr Ankita  Dr Prateek

EEG Technicians
Mrs Sushila  Mr Suresh

Specialty Nurse
N/S Mable

Project Staff
Ms Shobha  Mr Surender

Secretarial Staff
Ms Sweta  Ms Avantika
For all appointments please contact from Monday to Friday
Between 2PM to 5PM: 011-26594679  

Updated till July 2016