TITLE OF THE COURSE:

Post-Doctoral Fellowship for International Graduates in Developmental and Behavioural Paediatrics

INTRODUCTION:

A one-year postdoctoral fellowship in Developmental and Behavioral Pediatrics (DBP) for international pediatricians should be competency-based, clinically intensive, multidisciplinary, and aligned with international standards while being adapted to the realities of low-, middle-, and high-income countries. The overall aim of the fellowship is to develop pediatricians into competent, independent specialists in Developmental and Behavioral Pediatrics who can provide comprehensive, evidence-based, family-centered care for children and adolescents with developmental, behavioral, learning, neurodisability, and mental health conditions, while functioning as clinical leaders, educators, researchers, advocates, and service developers in their setting.

FACULTY:

Course Coordinator: Dr. Samuel P. Oommen

Mentors: Drs. Beena Koshy, Srinivasa Raghavan and Rashmi Ilango (Developmental Paediatrics Medical Faculty),

Faculty: Mrs. Hannah Grace and Mrs Rachel Beulah (Psychology), Mrs. Preethi and Ms. Aishwarya (Speech Language Pathology), Mrs. Anu Jacinth and Mrs. Rhema Anu (Occupational Therapy), Mr. Senthil (Physiotherapy), Dr. Sangeeth Yoganathan (Paediatric Neurology), Dr. Sathya Raj (Child Psychiatry), Dr. Naina Picardo (Pediatric ENT), Dr. Deepa John (Paediatric Ophthalmology), Dr. Judy John (PMR), Dr. Sumita Danda (Genetics), Dr. Abhay Gahukamble (Paediatric Orthopedics)

DETAILED OBJECTIVES OF THE COURSE:

.At the completion of the fellowship, the fellow will be able to:

1. **Demonstrate advanced knowledge of normal and abnormal child development** across the cognitive, language, motor, social-emotional, behavioral, and adaptive domains from infancy through adolescence.

2. **Conduct comprehensive developmental and behavioral assessments**, integrating information from medical, developmental, educational, psychological, family, and social sources to arrive at accurate diagnoses and management plans.
3. **Diagnose and manage a broad range of developmental, behavioral, learning, and neurodisability conditions**, including developmental delays, intellectual disability, autism spectrum disorder, attention-deficit/hyperactivity disorder, learning disorders, communication disorders, cerebral palsy, motor disorders, genetic syndromes, and associated mental health conditions.
4. **Provide evidence-based interventions and longitudinal care** that address the developmental, functional, educational, behavioral, emotional, and participation needs of children and adolescents.
5. **Identify developmental risks and disabilities early**, implement appropriate developmental surveillance and screening strategies, and promote timely intervention to optimize outcomes.
6. **Apply a multidisciplinary and family-centered approach to care**, working effectively with therapists, psychologists, educators, social workers, rehabilitation professionals, and other specialists to support children and families.
7. **Assess and address functional abilities and participation**, including communication, mobility, learning, self-care, social relationships, community participation, and quality of life.
8. **Provide effective counseling and support to families**, facilitating informed decision-making, promoting resilience, and addressing psychosocial challenges associated with developmental and behavioral disorders.
9. **Collaborate with educational and community systems** to promote inclusive education, access to services, disability rights, and participation in home, school, and community settings.
10. **Develop and implement individualized intervention, rehabilitation, educational, and transition plans** tailored to the needs, strengths, and goals of the child and family.
11. **Recognize and manage coexisting medical, neurological, psychiatric, and psychosocial conditions** that commonly occur in children with developmental and behavioral disorders.

12. **Demonstrate competence in the use and interpretation of developmental, behavioral, functional, and diagnostic assessment tools** relevant to Developmental and Behavioral Pediatrics.
13. **Apply principles of evidence-based practice**, critically appraising scientific literature and integrating current evidence into clinical decision-making.
14. **Conduct clinical research, quality improvement, and program evaluation activities** that contribute to the advancement of developmental and behavioral pediatric practice.
15. **Teach and mentor healthcare professionals, trainees, educators, and families**, contributing to capacity building in developmental and behavioral child health.
16. **Advocate for children with developmental and behavioral challenges and their families**, promoting equitable access to healthcare, education, rehabilitation, and social support services.
17. **Demonstrate professionalism, ethical practice, cultural sensitivity, and leadership skills** in the delivery of clinical services and the development of developmental and behavioral pediatric programs.
18. **Develop the skills necessary to establish, lead, and expand Developmental and Behavioral Pediatrics services** within diverse healthcare systems and resource settings.

OVERALL COURSE STRUCTURE

A. Duration

- 12 months (50 working weeks)
- 2 weeks annual leave/conference/study leave

B. Components

Component	Percentage
Clinical work	50%
Multidisciplinary observations	15%
Didactic teaching	10%
Research/Quality Improvement	10%
Community and school visits	5%
Independent learning	5%
Teaching junior trainees	5%

C. Weekly Schedule

Monday

- Outpatient Consultation under Supervision of Mentors

Tuesday

- Mornings: In-patient Assessments/ Rounds/ Therapy observations
- Afternoons: Specialty clinic (Down syndrome/ Dysmorphology/ High risk Infant/ Feeding Clinic)

Wednesday

- Academic Seminars
- Research activities

Thursday

- Outpatient Consultations under supervision
- Case discussions

Friday

- Specialty Neurodisability Clinic
- Multidisciplinary Conference

Saturday (twice monthly)

- Journal Ciub
- Community visits
- Parent training workshops
- School observations

CORE COMPETENCIES

The fellow should become competent in:

1. Developmental Assessment

- Developmental history
- Neurological examination
- Developmental examination
- Behavioral assessment
- Functional assessment
- Family assessment

2. Standardized Assessment Tools

Development

- Bayley Scales
- Griffiths Scales
- DASII
- Developmental Profile
- Vineland Adaptive Behavior Scales
- Ages and Stages Questionnaire

Autism

- Autism Diagnostic Observation Schedulei-2
- Autism Diagnostic Interview Revise (ADI-R)
- Childhood Autism Rating Scales (CARS-2)
- Indian Scales Autism Assessment (ISAA)

Cognition

- Binet Kamat Test
- Wechsler Intelligence Scales for Children -V
- Leiter Scales of Non Verbal Intelligence
- Raven's Progressive Matrices

Behavior

- Strengths and Difficulties Questionnaire (SDQ)
- Conners
- Childhood Behaviour Checklist (CBCL)
- Behavioral Assessment Scales for Indian Children (BASIC)

Adaptive Skills

- Vineland
- Adaptive Behaviour Assessment System (ABAS)

Learning Disability

- Grade Level Assessment Device. (GLAD)
- Woodcock-Johnson
- NIMHANS SLD Battery

Cerebral Palsy and other Motor Disorders:

- Gross Motor Function - Gross motor function classification (GMFCS)
- Manual Function - Manual Ability Classification system (MACS)
- Communication- Communication Functional Classification system (CFCS)–
- Visual Function – Visual function Classification system
- Eating and Drinking Assessment Classification System (EDACS)

Sensory Assessment:

Vision: Cortical Visual Impairment (CVI) check List, CVI Range

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MONTH-BY-MONTH CURRICULUM

MONTH 1

Foundations of Developmental Pediatrics

Topics

- Normal child development
- Developmental theories
- Developmental surveillance
- Developmental screening
- Family-centered care
- Developmental examination
- Basic neuroimaging

Clinics

- Developmental Paediatrics Clinics

Skills

- Developmental history taking
- Developmental examination
- Writing developmental reports

Reading

- Developmental and Behavioral Pediatrics (Carey et al.)
- Nelson Textbook chapters

Assessment

- Case presentation

- Seminars

MONTH 2

Early Identification and Developmental Delay

Topics

- Global developmental delay
- Intellectual disability
- Etiological evaluation
- Genetic testing
- Neuroimaging

Clinics

- Developmental Paediatrics Clinic

Skills

- Differential diagnosis
- Investigations
- Family counseling

Procedures

- Developmental testing observations

Assessment

- Long case examination

MONTH 3

Autism Spectrum Disorder

Topics

- DSM-5 criteria
- Early signs
- Diagnostic assessment
- Severity classification
- Evidence-based interventions

Clinics

- Developmental Paediatrics Clinic

- Autism clinic

Therapy Exposure

- ABA
- Naturalistic interventions
- Speech therapy
- Occupational therapy

Skills

- Autism diagnosis
- Feedback to parents

Assessment

- Directly observed autism evaluation

MONTH 4

ADHD and Behavioral Disorders

Topics

- ADHD
- ODD
- Conduct disorder
- Emotional disorders
- Executive dysfunction

Clinics

- Developmental Paediatrics Clinic

Skills

- Rating scales
- Behavioral management
- Medication management

Medications

- Risperidone, Arpiprazole
- Methylphenidate
- Atomoxetine
- Guanfacine

- Clonidine

Assessment

- Behavioral case presentation

MONTH 5

Learning Disorders and School Problems

Topics

- Dyslexia
- Dysgraphia
- Dyscalculia
- School refusal
- Academic interventions

Activities

- School visits
- Psychoeducational evaluations

Skills

- Educational planning
- Individualized Education Plans

Assessment

- School consultation report

MONTH 6

Infant Development and High-Risk Follow-up

Topics

- Prematurity
- HIE
- NICU graduates
- Early intervention

Clinics

- High-risk infant clinic

Skills

- Hammersmith Infant Neurologic Examination
- Amiel Tisone Neurologic Assessment
- General Movements Assessment
- Early developmental evaluation

Assessment

- Infant developmental case

MONTH 7

Cerebral Palsy and Neurodisability

Topics

- Cerebral palsy
- Neuromuscular disorders
- Functional classifications
- Assistive technology

Clinics

- Developmental Paediatrics Unit
- Cerebral Palsy Clinic,

Skills

- GMFCS
- MACS
- CFCS
- AAC planning

Multidisciplinary Exposure

- Physiotherapy
- Occupational therapy
- Orthotics

Assessment

- Neurodisability portfolio

MONTH 8

Communication Disorders

Topics

- Language delay
- Speech disorders
- Hearing impairment
- Cochlear implants

Clinics

- Developmental Paediatrics Unit
- Speech-language clinic

Skills

- Communication assessment
- AAC systems

Assessment

- Communication case presentation

MONTH 9

Behavioral Pediatrics

Topics

- Sleep disorders
- Feeding disorders
- Toileting difficulties
- Anxiety
- Depression
- Somatization

Clinics

- Developmental Paediatrics Unit
- Child Psychiatry Unit and Behavioral clinic

Skills

- Parent management training
- Behavioral counseling

Assessment

- Behavioral intervention project

MONTH 10

Genetics, Metabolic Disorders and Complex Neurodevelopmental Conditions

Topics

- Genetic syndromes
- Fragile X
- Rett syndrome
- Angelman syndrome
- Noonan syndrome
- Tuberous sclerosis

Clinics

- Genetics clinic
- Paediatric Neurology unit

Skills

- Dysmorphology examination
- Genetic counseling

Assessment

- Syndrome recognition OSCE

MONTH 11

Adolescent Development and Transition

Topics

- Adolescent medicine
- Sexuality
- Transition planning
- Vocational training
- Mental health

Clinics

- Adolescent clinic

Skills

- Transition plans

- Vocational assessment

Assessment

- Transition plan portfolio

MONTH 12

Leadership, Program Development and Independent Practice

Topics

- Service development
- Team leadership
- Quality improvement
- Advocacy
- Research

Activities

- Independent clinics under supervision
- Teaching residents

Final Project

- Research or Quality Improvement Project

Assessment

- Exit examination
- Viva voce
- Portfolio review

MANDATORY MULTIDISCIPLINARY ROTATIONS

Rotation	Duration
Speech-Language Pathology (within the Developmental Paediatrics Unit)	4 weeks
Occupational Therapy within the Developmental Paediatrics Unit)	4 weeks
Physiotherapy (within the Developmental Paediatrics Unit)	2 weeks
Clinical Psychology (within the Developmental Paediatrics Unit)	6 weeks
Child Psychiatry (Child Psychiatry Department)	2 weeks
Pediatric Neurology (Paediatric Neurology)	2 weeks

Rotation	Duration
Genetics (Genetics and Cytogenetics)	1 weeks
Audiology and Vision (ENT and Ophthalmology departments(	1 week each
Community-Based Rehabilitation	1 week

These rotations are integrated throughout the year rather than as separate blocks. The remaining 26 weeks will be in the Developmental Paediatrics Unit

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RESEARCH REQUIREMENTS

Each fellow must:

1. Complete a research methods course.
2. Conduct one research or quality-improvement project.
3. Present at least one conference paper.
4. Write a Dissertation based on the research project
5. Submit one manuscript suitable for publication.
6. Lead one journal club per month.

PROCEDURAL LOGBOOK REQUIREMENTS

Minimum numbers:

Activity	Minimum
New developmental assessments	100
Autism evaluations	100
ADHD evaluations	50
Learning disability evaluations	30
Infant developmental assessments	50
Neurodisability and Cerebral Palsy assessments	100
Parent counseling sessions	100
School visits	10
Multidisciplinary meetings	20

FINAL EXIT COMPETENCIES

At the end of the fellowship, the trainee should be able to independently:

- Diagnose developmental and behavioral disorders.
- Conduct comprehensive developmental assessments.
- Diagnose autism spectrum disorder.
- Diagnose and manage ADHD.
- Evaluate learning disabilities.
- Manage cerebral palsy and neurodisability.
- Coordinate multidisciplinary rehabilitation.
- Counsel families effectively.
- Design individualized intervention plans.
- Lead developmental services.
- Teach residents and therapists.
- Conduct and publish research.
- Establish developmental pediatric services in their own country.

This curriculum would be comparable in breadth to advanced fellowship programs offered by major centers in North America, Europe, Australia, and leading Asian developmental

EXIT ASSESSMENT

Components of Exit Assessment

1. **Continuous Internal Assessment (40%):** Based on Direct observation of patient encounters, Clinical decision-making, Professionalism, Communication skills, Teamwork: **Assessed Quarterly**
2. **Final Summative Assesment (60%):**
    a. Final Written Examination (20%)
    b. Practical (Clinical) Examination (20%)
    c. Log Book (10%)
    d. Dissertation/ Research Paper (10%)

CERTIFICATION:

After the completion of the course the Fellow will receive the Post-Doctoral Fellowship Qualification from the Christian Medical College