



Diagnosis and Evaluation of Global Developmental Delay (GDD) and Intellectual Disability (IDD)

A systematic approach to assessment, screening, and management

Child with suspected developmental delay / Intellectual Disability

History + Developmental Surveillance + Physical Examination

- Prenatal, perinatal and postnatal history
- Family history
- Developmental history across all domains
- Neurological & physical examination

① Red Flag Signs

- | | | | |
|------------------|--------------------|------------------|------------------------------------|
| 2 months | No visual fixation | 6 months | No vocalization |
| 10 months | Not sitting | 18 months | Not walking alone |
| 18 months | No single words | Any age | Loss of previously acquired skills |

If any red flag sign is present → proceed with evaluation

GDD

Age < 5 years | ≥ 2 SD delay in ≥ 2 developmental domains
Domains: Gross motor • Fine motor • Speech/Language • Cognition • Social/Personal • Activities of Daily Living

IDD

Deficits in intellectual function + Deficits in adaptive function
Onset must occur during the developmental period

Also: If delay < 2 domains → Isolated delay

Screening Tools

ASQ-3* | DDST-II* | TDSC*

Non-risk Infants

- 9–12 months Routine screening
- 18–24 months Routine screening
- School entry Developmental review

High-risk Infants

- 6-monthly Till 24 months
- Yearly Till 5 years
- Once At school entry

ASD Screening

- 18–24 months GDD: primary screen
- 3 years If prior screen negative

Etiology by Period

Prenatal

- Genetic (Down syndrome, Fragile X)
- CNS malformations
- Metabolic disorders
- Congenital infections
- Toxins/teratogens

Perinatal

- Hypoxic ischemic encephalopathy
- Prematurity
- CNS infections
- Metabolic disturbances

Postnatal

- Brain injury
- CNS infections
- Lead toxicity
- Nutritional deficiency
- Psychosocial deprivation

Investigations

First-tier Investigations

- Hearing & vision assessment
- Chromosomal microarray (CMA)
- Fragile X testing
- Thyroid function tests
- Basic metabolic screening
- Creatine Kinase
- MRI Brain

Second-tier Investigations

- Whole exome sequencing (WES)
- Targeted gene panels
- Advanced metabolic tests
- EEG (if seizures or regression)

Identify underlying cause

Early intervention + Multidisciplinary management

*ASQ: Ages and Stages Questionnaire

*DDST: Denver Developmental Screening Test

*TDSC: Trivandrum Developmental Screening Chart



Nepal Paediatric Society (NEPAS)

📍 Baluwatar, Kathmandu, Nepal 📞 +977-9803594327 (Off) 🌐 www.nepas.org.np

📧 GPO Box No.: 2668 ✉ nepas2010@gmail.com, office@nepas.org.np/info@nepas.org.np