

# Need ??



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## 2011 India census data

Area	India	Karnataka
Disability Population	2,68,14,994	13,24,205
Disability Percentage	2.21%	4.94%
Disabled Children (0-6 years)	7.01 %	4.55 %

## APD Base line survey

- APD conducted base line survey at 7 taluks and 231 villages.
- Developmental gaps increased from 27.5 % (0to 2 years ) to 55.2 % (5 years)

**“Early”** refers to the most critical period of a child’s development (0-3years) and

**“Intervention”** means giving a child a variety of opportunity to experience, explore and play with things around.



# IMPORTANCE OF EARLY DETECTION



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Productive  
society

Livelihood

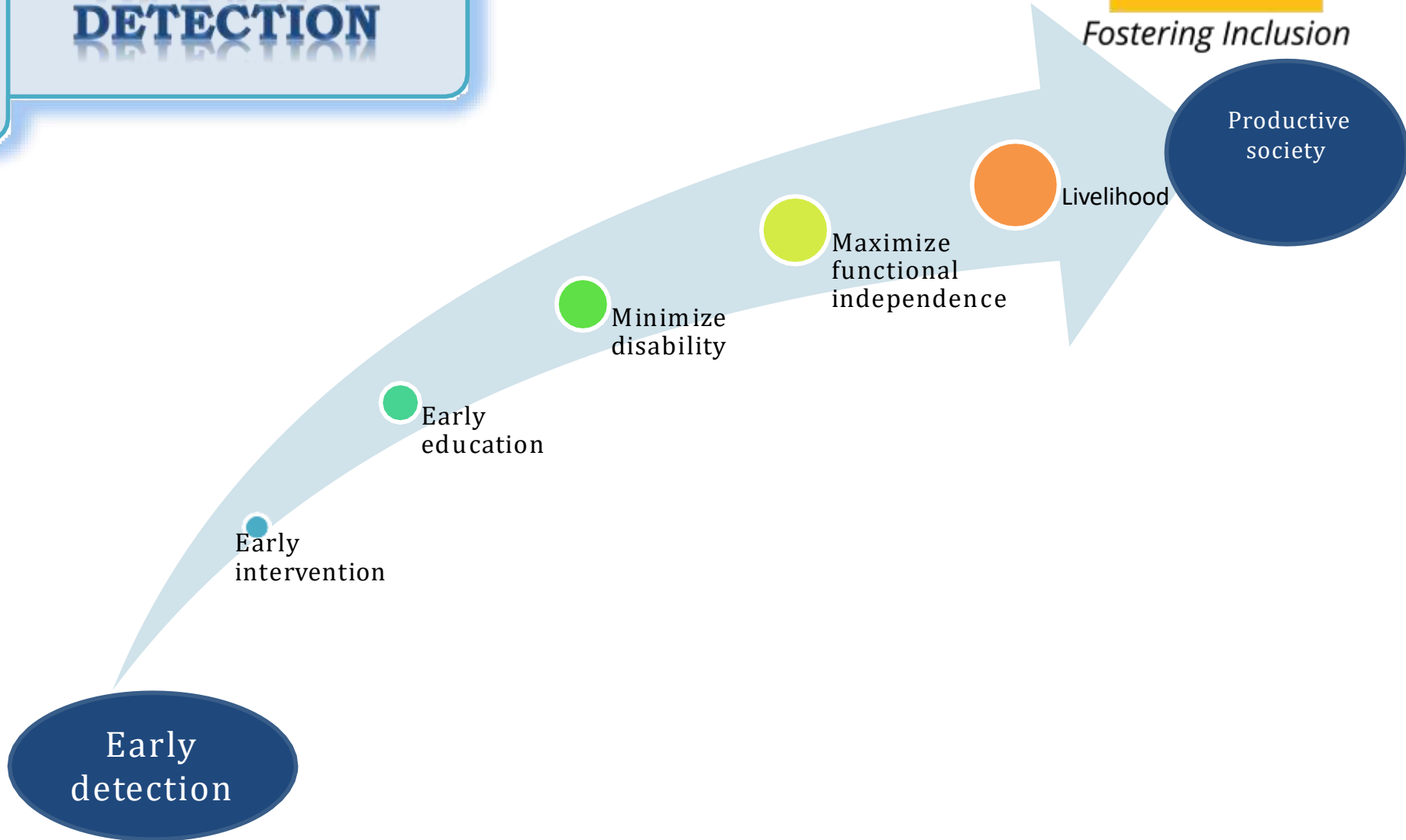
Maximize  
functional  
independence

Minimize  
disability

Early  
education

Early  
intervention

Early  
detection



# **What is Early Intervention ?**

- Transdisciplinary holistic approach**
- System of coordinated services which includes Physiotherapy, occupational therapy , speech therapy , special inclusive education to promote child's age appropriate developmental milestones administered in a play way method.**

# What happens if there is a Damage ?



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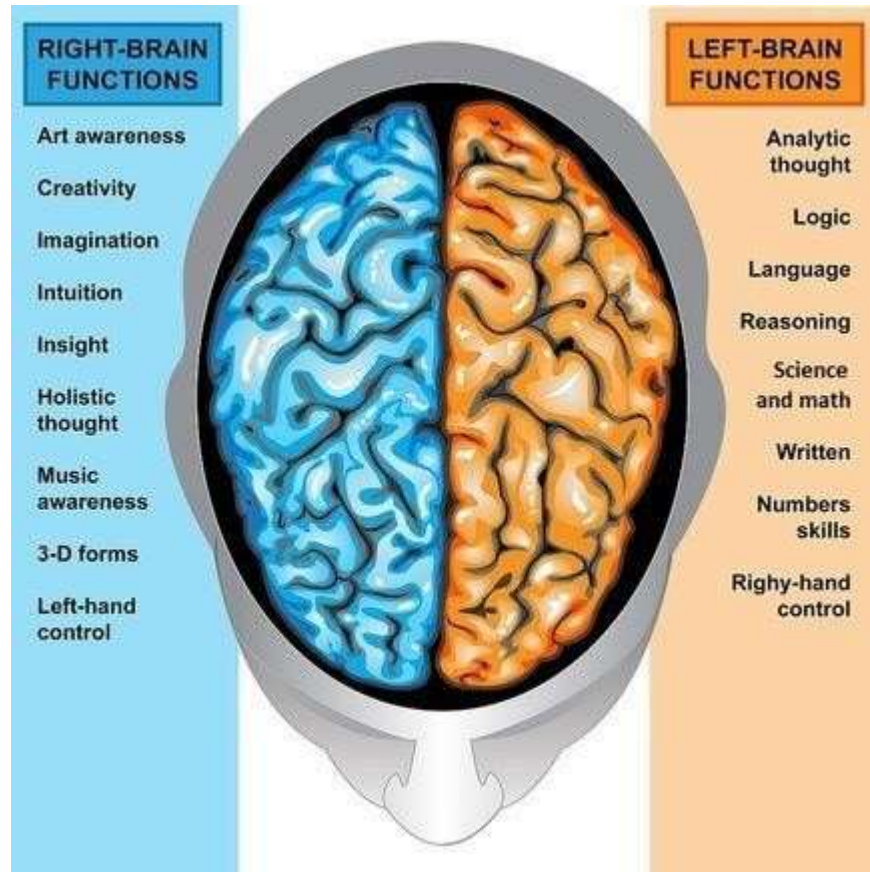


- Impairment in the function that it controls
- Level of impairment depend upon type , location and severity of injury

# Left and right side of the Brain



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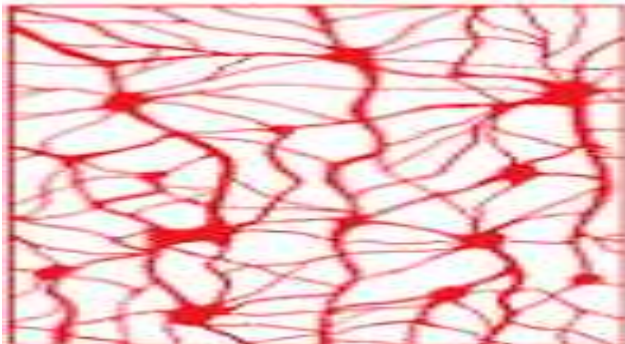
# What is Neuroplasticity ?

## Neu-ro-plas-tic-ity

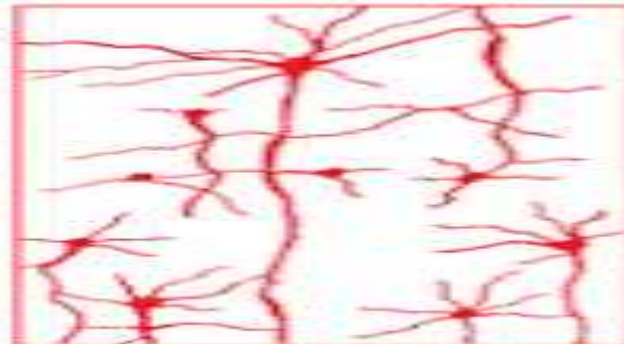
- Neuroplasticity is re-wiring of brain pathways.
  - Neurogenesis is growth of new neural networks
1. Beginning of life when the immature brain develops
  2. Through adulthood when something new is learned
  3. In case of brain injury to compensate for lost functions



## Brain cell connections

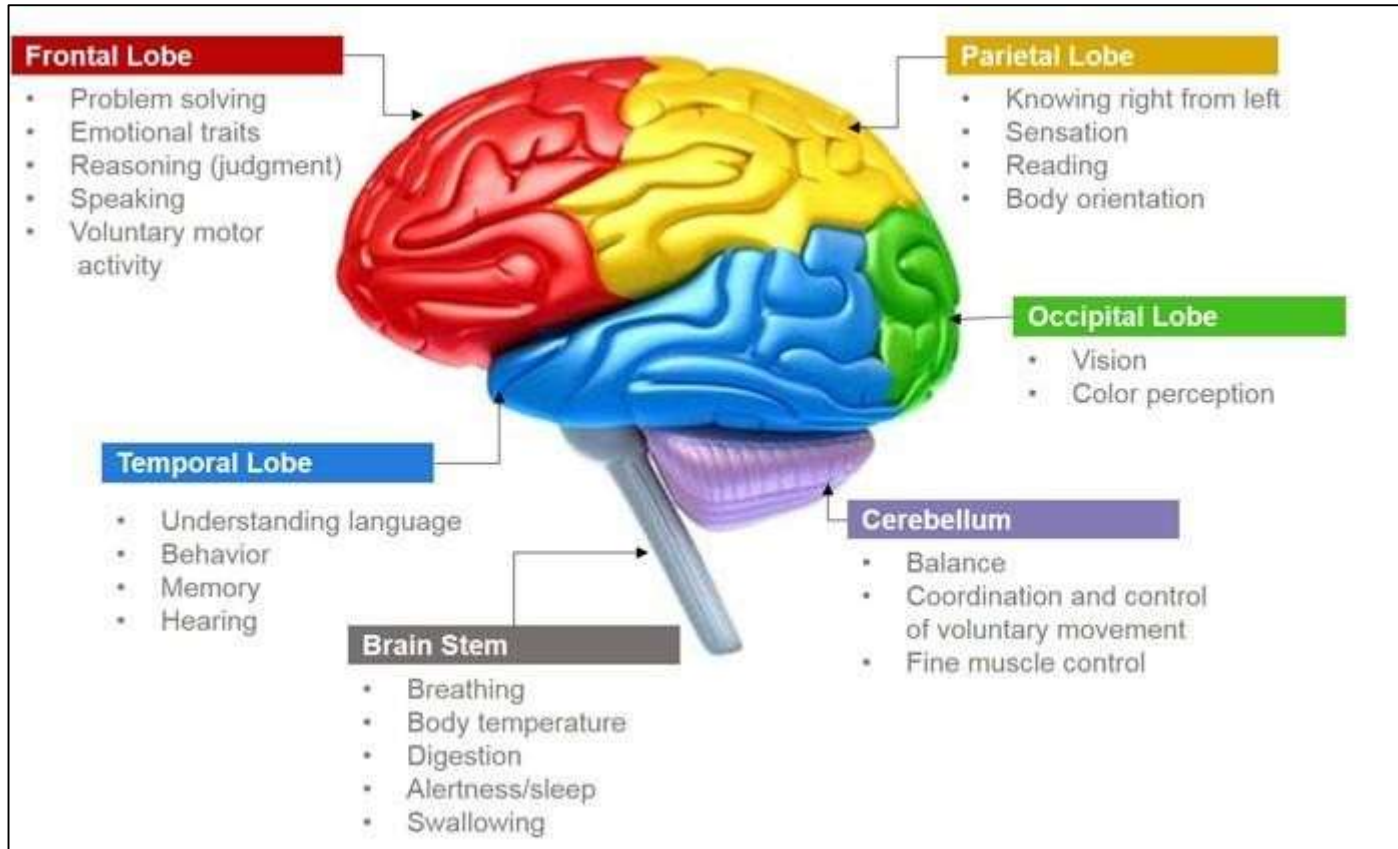


section of a  
stimulated brain



section of an  
unstimulated brain

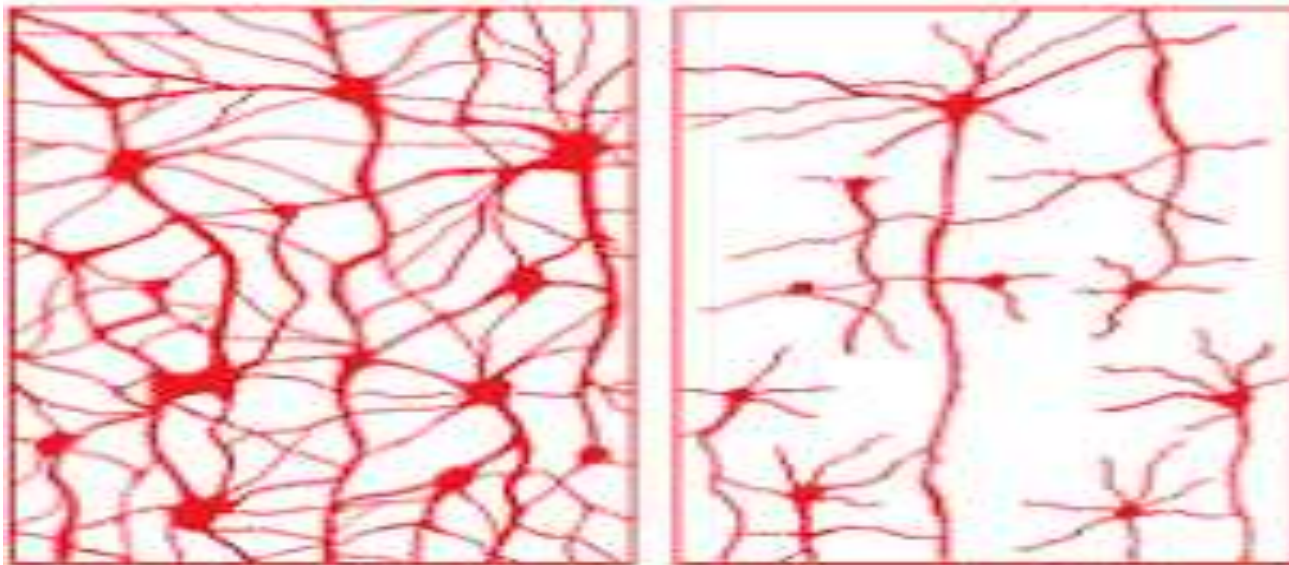
# Functions Of Brain





# Early Stimulation

## Brain cell connections



section of a  
stimulated brain

section of an  
unstimulated brain

**Early Intervention and Stimulation activities can stimulate the brain and help the child reach their maximal functional abilities**



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# Rehabilitation

- **Brain is like a muscle** - The more you use it, the stronger it gets and less you use it , weaker it gets
- **Neuroplasticity** - The brain's ability to reorganize itself by forming new neural connections throughout life

# Domains -8



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**Self Help**



**Social & Emotional**

**Communication**

**Motor**



**Sensory**

**Play**

# Area of development



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Physical

Head & trunk control

Rolling

Sitting

Crawling & Walking

Arm and hand control

Communication

Seeing

Hearing

Attention & interest

Intelligence & learning

Self help

Play

Social



# Who, Why and When require early intervention ?



- **A Child who has delay in one or more domain and area of development**
- **Early intervention and neuroplasticity of the brain can enhance the child's learning and achieve maximal functional independence and quality of living**
- **Early Intervention should be started immediately once a delay has been identified**

# Seven Key Principles



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**1. Infants and toddlers learn best through every day experiences and interactions with familiar people in familiar contexts.**



**2 All families, with the necessary supports and resources, can enhance their children's learning and development.**

**3. The primary role of the service provider in early intervention is to work with and support the family members and caregivers in a child's life**



**4. The early intervention process, from initial contacts through transition, must be dynamic and individualized to reflect the child's and family members' preferences, learning styles and cultural beliefs.**

**5. IFSP outcomes must be functional and based on children's and families' needs and priorities**



**6. The family's priorities needs and interests are addressed most appropriately by a primary provider who represents and receives team and community support.**



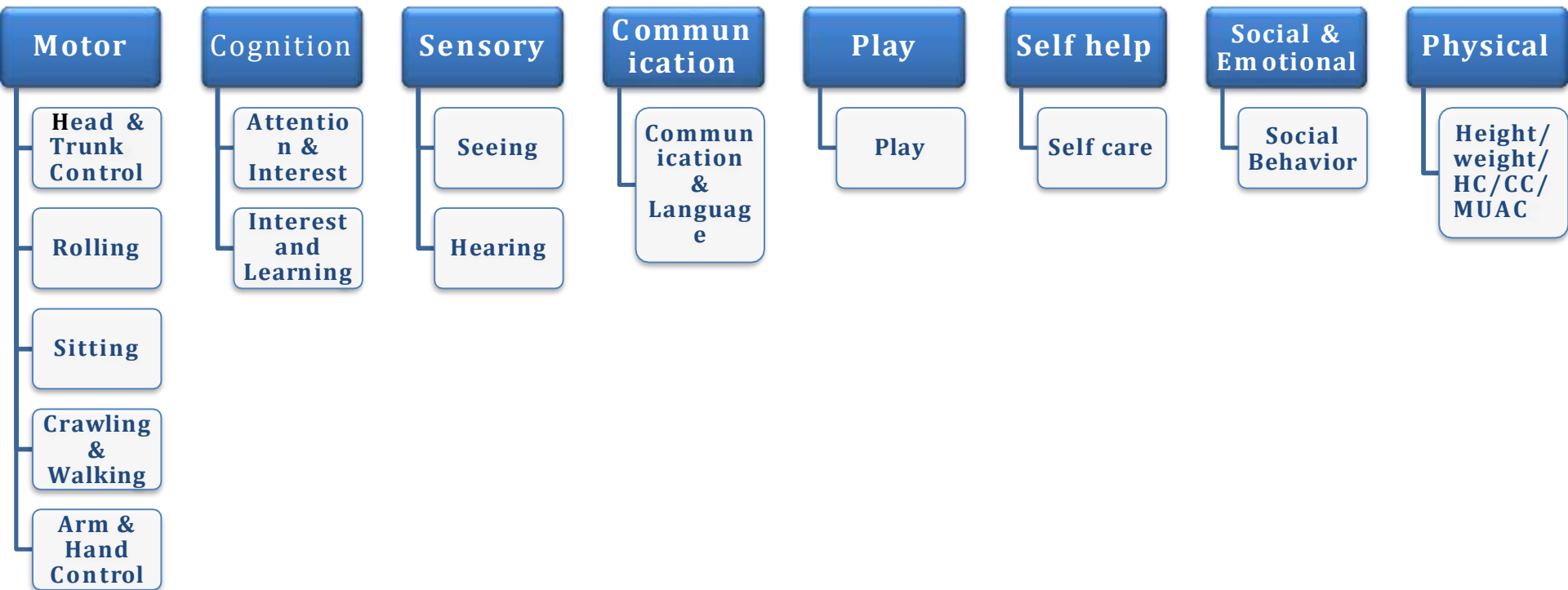
- 7. Interventions with young children and family members must be based on explicit principles, validated practices, best available research and relevant laws and regulations.**



**APD has presented the model and won the best paper at the Indian association of cerebral palsy conference 2017**

# Model framework

- Based on 8 domains and 14 areas of development
- DD (Developmental delay) and GDD (Global developmental delay)
- DD is delay in one area of development
- GDD is delay in two or more area of development



EVALUATION OF A CHILD'S LEVEL OF PHYSICAL DEVELOPMENT

Name: \_\_\_\_\_

Birth date: \_\_\_\_\_










Date: \_\_\_\_\_

Note: Although on these guides physical and mental skills are separated, the two are often closely interrelated.

These charts show roughly the average age that a normal child develops different skills. But there is great variation within what is normal.

PHYSICAL DEVELOPMENT	Average age skills begin	3 months	6 months	9 months	1 year	2 years	3 years	5 years	What to do if a child is behind
Head and trunk control	 lifts head part way up	 holds head up briefly	 holds head up high and well	 holds up head and shoulders	 turns head and shifts weight	 holds head up well when lifted	 moves and holds head easily in all directions		Activities to improve head and trunk control (see p. 302).
Rolling		 rolls belly to back	 rolls back to belly	 rolls over and over easily in play					Activities to develop rolling and twisting (see p. 304).
Sitting		 sits only with full support	 sits with some support	 sits with hand support	 begins to sit without support	 sits well without support	 twists and moves easily while sitting		Work on sitting. Special seating if needed (p. 308).
Crawling and walking		 begins to creep	 scoots or crawls	 pulls to standing	 takes steps	 walks runs	 can walk on tiptoe and on heels	 walks easily backward hops on one foot	Activities to improve balance (see p. 306).
Arm and hand control	 grips finger put into hand	 begins to reach towards objects	 reaches and grasps with whole hand	 passes object from one hand to other	 grasps with thumb and forefinger	 easily moves fingers back and forth from nose to moving object	 throws and catches ball		Eye-hand activities. Use toys and games to develop hand and finger control (see p. 305).
Seeing	 follows close object with eyes	 enjoys bright colors/shapes	 recognizes different faces	 eyes focus on far object	 looks at small things/pictures	 Sees small shapes clearly at 6 meters (see p. 453 for test).	 Have eyes checked		Have eyes checked (see p. 452). If poor, see Chapter 30.
Hearing	 moves or cries	 turns head	 responds to	 enjoys rhythmic	 understands TOUCH YOUR NOSE	 hears clearly and understands WHERE IS DAD?			Have hearing checked. If poor, see Chapter 30.

Date: \_\_\_\_\_

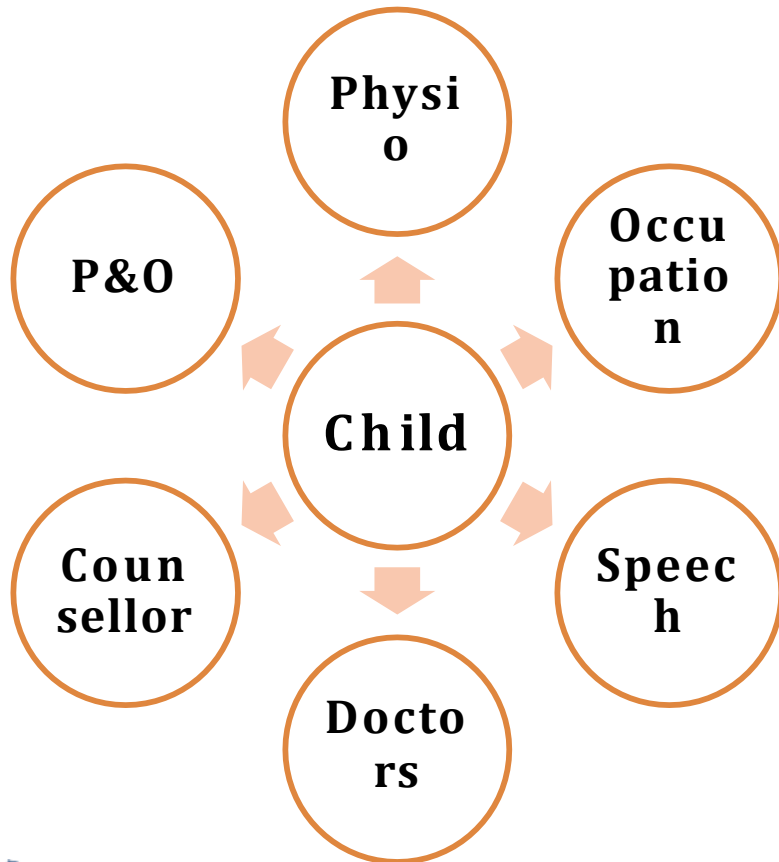
MENTAL DEVELOPMENT	Average age skills begin	3 months	6 months	9 months	1 year	2 years	3 years	5 years	What to do if a child is behind
Communication and language	cries when wet or hungry	coos when comfortable	makes simple sounds 	uses certain sounds for different things 	begins to use simple single words 	begins to use words together 	uses simple sentences 		Speak and sing often to child. If needed, develop alternatives to speech (p. 313).
Social Behavior		smiles when smiled at		begins to understand and respond to "NO!" 	begins to do simple things when asked 	likes to be praised after completing simple tasks 	interacts with both adults and children		Consider trying behavioral approach to social behavior (see p. 349).
Self-care	sucks breast	takes everything to mouth		chews solid food	begins to feed self	drinks alone from glass	toilet trained	helps with simple work	Encourage child to help self if possible. Use behavioral approach to learning (see p. 350).
Attention and interest		smiles when smiled at	brief interest in toys and sounds	develops strong attachments to caretakers	takes longer interest in toys and activities	sorts different objects	builds playthings with several pieces		Early stimulation activities (see Chapter 35). Provide toys and "fun" objects.
Play	grasps things placed in hand	plays with own body	plays with simple objects	begins to enjoy first social games (peek-a-boo)	imitates and copies people	begins to play with other children	plays independently with children and toys		Guided play, lots of stimulation and interaction with other children.
Intelligence and learning	cries when hungry or uncomfortable	recognizes mother	recognizes several people	looks for toys that fall out of sight	copies simple actions	points to things when asked 	follows simple instructions	follows multiple instructions	Early stimulation (p. 316). Lots of toys, talk, and step-by-step training.

Put a **circle** around the level of development that the child is now at in each area.

Put a **square** around the skill to the right of the one you circled, and focus training on that skill.

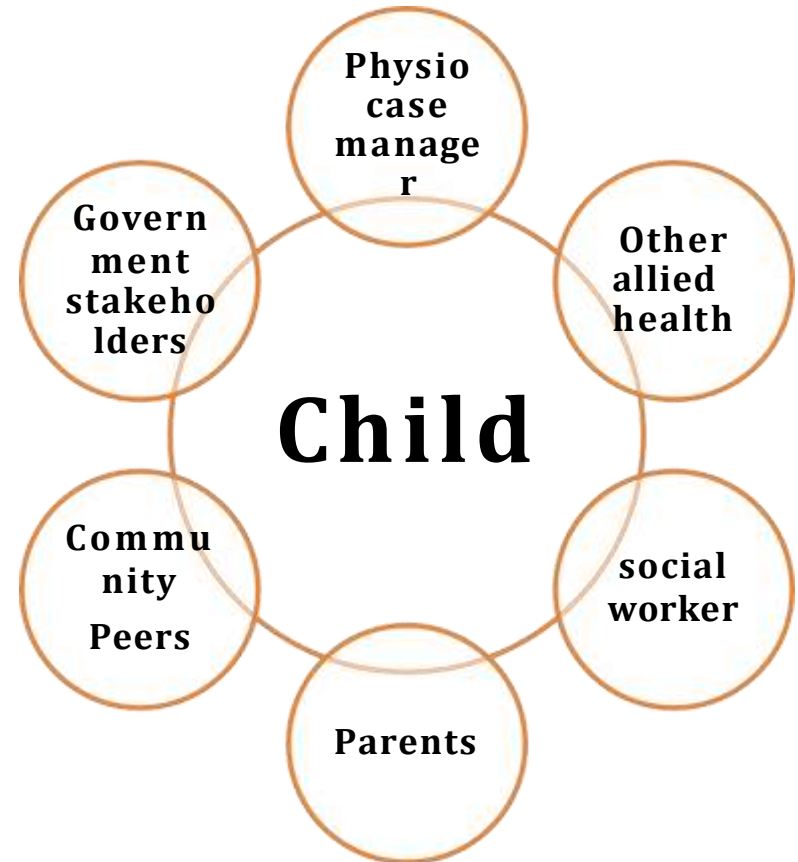
If the child has reached an age and has not mastered the corresponding level of skill, special training may be needed.

# Multidisciplinary



- ✓ No parents involvement
- ✓ Child domain is compartmentalized
- ✓ Therapist work in silos and in their domain

# Transdisciplinary



- ✓ Positive outcomes of family and child
- ✓ Increased parenting capacity
- ✓ Sustainable ecosystem

## Medical Model

- ✓ Child is faulty
- ✓ Diagnosis
- ✓ Labelling
- ✓ Impairment becomes focus
- ✓ Segregation & alternative services
- ✓ Relationship needs put on hold
- ✓ Follow up id normal or permanent exclusion
- ✓ Society remains unchanged

## Social Model

- ✓ Child is valued
- ✓ Strengths and needs defined by self and others
- ✓ Identify barriers and develop solutions
- ✓ Outcome based programme design
- ✓ Training for parents and carers
- ✓ Relationship nurtured
- ✓ Diversity welcomed , child included
- ✓ Society evolves

# What are the needs of Children With special needs ?



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- ✓ Rehabilitation –  
Physio/OT/Speech- **Center**
- ✓ Nutrition- **Anganwadi/NRC**
- ✓ Medical- **PHC doctors**
- ✓ Surgical- **RBSK**
- ✓ Wheelchair/Splints/Special  
chair- **Center**
- ✓ Accessibility – Toilet seat/ Grab  
bars- **Center**
- ✓ Early education- **Schools**
- ✓ Anganwadi inclusion
- ✓ Financial facilitation
- ✓ – Schemes- **Center**
- ✓ Policy and advocacy- **Center**



# Importance of Anganwadi

## Anganwadi



- ✓ First point of contact
- ✓ Take care of pre natal and post natal
- ✓ Immunization of children
- ✓ First identification
- ✓ Early identification and referral
- ✓ providing linkages between community stakeholders
- ✓ Early intervention
- ✓ Productive inclusive society



# Pre Natal Risk Factors



**Poor health and  
nutrition of  
mother**



**Infection to  
mother**



**Twin pregnancy**



**Age of the mother**



**Accident of mother**



**Multiple pregnancy**



**Irregular health  
check up**

# Red Flags – 0 to 3 months



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- Doesn't seem to respond to loud noises
- Doesn't follow moving objects with eyes by 2 to 3 months
- Doesn't smile at the sound of your voice by 2 months
- Doesn't grasp and hold objects by 3 months
- Doesn't smile at people by 3 months
- Cannot support head well at 3 months
- Doesn't reach for and grasp toys by 3 to 4 months
- Doesn't bring objects to mouth by 4 months
- Doesn't push down with legs when feet are placed on a firm surface by 4 months
- Has trouble moving one or both eyes in all directions
- Crosses eyes most of the time (occasional crossing of the eyes is normal in these first months)

# Red Flags – 4to7months



- Seems very stiff, tight muscles
- Seems very floppy, like a rag doll
- Head still flops back when body is pulled to sitting position (by 5 months still exhibits head lag)
- Shows no affection for the person who cares for them
- Doesn't seem to enjoy being around people
- One or both eyes consistently turn in or out
- Persistent tearing, eye drainage, or sensitivity to light
- Does not respond to sounds around them
- Has difficulty getting objects to mouth
- Does not turn head to locate sounds by 4 months
- Doesn't roll over (stomach to back) by 6 months
- Cannot sit with help by 6 months (not by themselves)
- Does not laugh or make squealing sounds by 5 months
- Does not actively reach for objects by 6 months
- Does not follow objects with both eyes
- Does not bear some weight on legs by 5 months

# Red Flags- 8 to 12months



- Does not crawl
- Drags one side of body while crawling (for over one month)
- Cannot stand when supported
- Does not search for objects that are hidden (10-12 mos.)
- Says no single words ("mama" or "dada")
- Does not learn to use gestures such as waving or shaking head
- Does not sit steadily by 10 months
- Does not show interest in "peek-a-boo" or "patty cake" by 8 mos.
- Does not babble by 8 mos. ("dada," "baba," "mama")

# Red Flags- 1 to 2 years

- Cannot walk by 18 months
- Fails to develop a mature heel-toe walking pattern after several months of walking, or walks exclusively on toes
- Does not speak at least 15 words by 18 months
- Does not use two-word sentences by age 2
- By 15 months does not seem to know the function of common household objects (brush, telephone, bell, fork, spoon)
- Does not imitate actions or words by 24 mos.
- Does not follow simple one-step instructions by 24 mos.

# Red Flags – 3 to 4 years

- Frequent falling and difficulty with stairs
- Persistent drooling or very unclear speech
- Inability to build a tower of more than 4 blocks
- Difficulty manipulating small objects
- Inability to copy a circle by 3 years old
- Inability to communicate in short phrases
- No involvement in pretend play
- Failure to understand simple instructions
- Little interest in other children
- Extreme difficulty separating from primary caregiver



# Red Flags- 4 to 6 years

- Cannot jump in place
- Cannot ride a trike
- Cannot grasp a crayon between thumb and fingers
- Has difficulty scribbling
- Cannot copy a circle
- Cannot stack 4 blocks
- Still clings or cries when parents leave him
- Shows no interest in interactive games
- Ignores other children
- Doesn't respond to people outside the family
- Doesn't engage in fantasy play
- Resists dressing, sleeping, using the toilet
- Lashes out without any self-control when angry or upset
- Doesn't use sentences of more than three words
- Doesn't use "me" or "you" appropriately
-

# **Importance of Anganwadi Inclusion**

- **Early Inclusion – feeling of oneness**
- **Early Socialization**
- **Early acceptance**
- **Early sensitization to other children**
- **Right to education**
- **Nutrition**
- **3 to 4 hours of inclusion – reduction of parental stress and socialization behaviour**

# How to include Children with special needs



Corner Chair



Standing Frame

**Together ...**



**... We Can**



**THANK YOU**

