Paediatric Developmental Assessment of Preschool and School-Aged Children:

The Role of the Frontline Worker

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Why Does Early Identification Matter?

- **Access to early intervention**
- **Prevention of secondary disabilities:**
  - Maladaptive behaviour
  - School failure
  - Low self-esteem
  - Family dysfunction

Front Line Professionals: How you make a difference

- Your observations occur in natural settings:
  - Home
  - Daycare
  - School
- You see the child in relationship to her family, caregivers, and peers
- Your assessment is longitudinal
- You observe **HOW** the child learns, as opposed to **WHAT** she knows

Domains of Development

1. Motor
   - Fine Motor
   - Gross Motor
2. Speech and Language
3. Cognitive
4. Adaptive/Personal-social

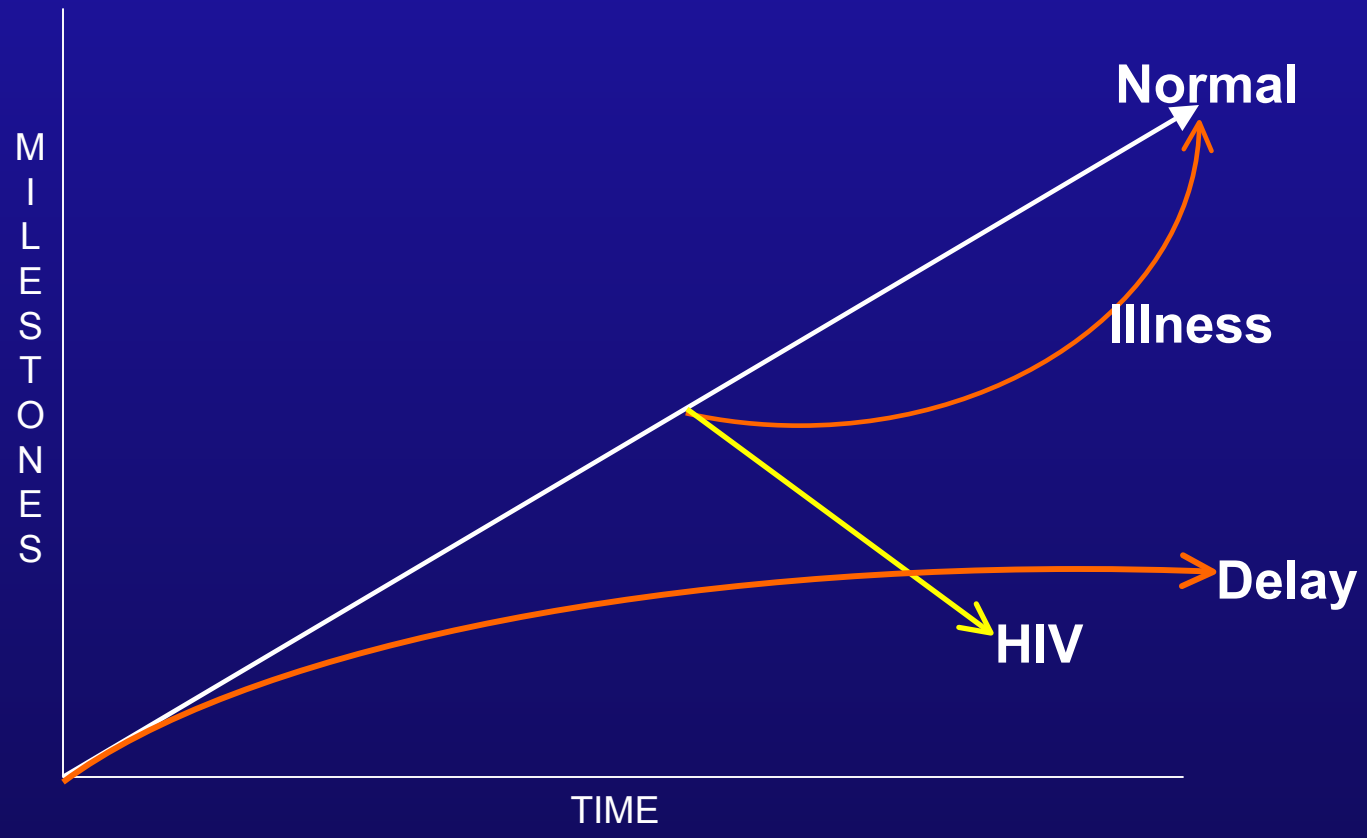
When Should You Ask for Further Evaluation?

- ***Sudden Unexpected Change In Developmental Trajectory***
  - Unexplained regression
  - Sudden change in personality
  - Change in mood or emotional well-being
    - May be due to disease or illness
    - May reflect important events occurring at home

When Should You Ask for Further Evaluation?

- Global Developmental Delay
  - Persistent significant delay in all domains that cannot be attributed to other known factors
- Delays in a sphere of development that adversely impact the child's functioning
  - At home
  - Daycare
  - School
- Significant Emotional Concerns

Developmental Trajectories



Developmental Differences:

Delay, Dissociation, Deviance

- **Delay**:
  - Not necessarily abnormal
  - Implies child may catch up
- **Dissociation**:
  - A difference between rates of change ≥ two domains of development
  - e.g. Mental retardation
    - Motor development may be ahead of language or cognitive abilities
- **Deviance**:
  - Always abnormal
  - e.g. Autistic 3 year old child with no interest in social or imaginative play

High Risk Children

- **Established Risk**
  - Chromosomal abnormalities, e.g. Down Syndrome
- **Environmental Risk**
  - Poverty
  - Maternal mental health issues
- **Biological Risk**
  - Prenatal exposure to drugs and alcohol
  - Low birth weight and/or prematurity

Developmental Surveillance: Pitfalls

- **Gross Motor Skills**
  - Gross motor milestones DO NOT predict intelligence!
    - 35% of profoundly mentally retarded infants walk by 15 months
    - 80% of mildly mentally retarded infants have normal motor milestones
  - REMEMBER: a child with *delayed* motor milestones is not necessarily mentally deficient
    - e.g. cerebral palsy

Developmental Surveillance: Pitfalls

- **Appearance**
  - Attractive children with mental retardation are identified later than unusual looking children
  - e.g. Autistic children usually look normal

Developmental Surveillance: Pitfalls

- **Language**
  - Development of language doesn't *start* with talking!
    - Attention needs to be paid to the child's acquisition of *pre-linguistic* milestones:
      - Social smile
      - Gestures
      - Pointing
      - Appropriate facial expressions
  - Absence or delay in speech development cannot be attributed to otitis media!

Developmental Surveillance: Pitfalls

- **What Else Should You Be Thinking About?**
  - Environment:
    - Neglect
    - Deprivation
    - Abuse
  - Maternal mental health issues

Developmental Surveillance: Pitfalls

- **When does a child have abnormal attention?**
  - Attention is a developmental concept
  - There are increasing expectations of the development of attention and other executive functions with age
  - Symptoms of inattentiveness need to be seen in the context of:
    - Family
    - School
    - Mental health
    - Developmental and biological factors

Developmental Surveillance: Pitfalls

- **At what age *can/should* you consider a diagnosis of ADHD?**
  - Preschoolers have a wide range of attentional capabilities so assessment at age 3-5 years is difficult
  - Severe symptoms at an earlier age seen in certain situations:
    - Prenatal cocaine
    - Prenatal alcohol exposure

ADD vs. Fetal Alcohol Syndrome

ADD	FAS
Trouble focusing/ sustaining focus	No trouble with focus
Once focused, encoding and problem solving	Poor encoding of material
Can shift focus	Difficulty shifting focus
Impulsive	Impulsive
Can assess problems: what has happened and why	Can't understand problems
Can take responsibility and problem solve	Can't take responsibility and can't problem solve

Developmental Surveillance: Pitfalls

- **Are there other things besides ADHD which present with abnormal attention? YES!**
  - Children have a limited range of ways they can express themselves
  - Behaviours that can look like ADHD:
    - Disruptive
    - Acting out
    - Withdrawn

Developmental Surveillance: Pitfalls

- **Possible Causes of Attention Problems**
  - Sensory Deficit
  - Receptive Language Problem
  - Other Specific Learning Disabilities
    - Coexists in 12-60% of children with attention deficit
  - Seizures
  - Mood Disorders (e.g. depression)
    - Coexists in 18% of children with ADHD

Developmental Surveillance: Pitfalls

- **Possible Causes of Attention Problems**
  - Anxiety Disorders
    - Coexists in 25%
  - Oppositional Defiant Disorder, Conduct Disorder
    - Coexists in 35% of children with ADHD
  - Parent – Child Interaction Problems
  - Mental Retardation
  - Sexual and/or Physical Abuse
  - Neglect

Developmental Disabilities: Incidences

Diagnosis	Incidence
Mental retardation	3%
Cerebral Palsy	.3 - .5%
Communication disorders	common
Autism Spectrum Disorder	.67%
Learning Disabilities	5 - 7%
ADHD	10 - 14%
Blindness	.01 - .05%
Deafness	.1 - .2 %
FAS	.01 - .1%

Case History #1

6 year old girl in grade 1 at an inner city school.

Referred because of teacher's concerns regarding:

- Academic delay
- Possible depression

Case History #1

Past History

- Normal pregnancy and birth
- Medical history negative
- Attended a licensed daycare since 18 months of age

Gross Motor

- Walked: 16 - 17 months
- Stairs: grade 1
- Bike: hasn't learned yet

Case History #1

Fine Motor

- Right handed, feeds herself
- Can't do buttons or zippers
- Draws simple pictures

Speech

- Started talking age 3 years
- Has always had good non-verbal communication

Case History #1

Social

- No friends in class
- Likes to play with younger children
- Prefers “centres” to academics at school

Case History #1

Family History

- Mom struggled in school, has had difficulty keeping a job, on social assistance until 6 months ago
- Father has never been involved
- 2 older sisters, one dropped out in grade 10, other failing in grade 9
- Mom has depression, on medication for 6 years
- Feels she can barely cope most days
- Tries to hide this from her children
- Child doesn't like school, says it is too hard

Case History #1

Red Flags

- Global developmental delay from an early age *despite* early intervention in the form of licensed daycare
  - Gap is widening between her and her peers
  - Starting to appear to be depressed
  - Maternal depression
  - Discouragement about school

Case History #1

Possible Steps: at preschool age

- In daycare:
  - Do a Developmental Screen
  - Involve IDP
  - Monitor progress, etc
- Talk to mom: suggest supports
- Set-up appropriate transition planning into kindergarten

Case History #2

5 year old boy in kindergarten and after school daycare.

Child is in foster care, removed from his biological parents because of neglect

Case History #2

Teachers Concerns

- Hasn't adjusted well to routines, transitions are difficult
- Very disruptive at circle time especially
- Doing poorly socially, doesn't get invited for play-dates
- Expressive speech is mildly delayed
- Short attention span
- Unpredictable angry outbursts

Case History #2

Daycare

- Aggressive with other kids, then doesn't understand why they won't play with him
- Gravitates to construction toys where he is quite attentive
- Loves gross motor activities
- Can't listen to a story, even 1:1

Case History #2

Red Flags

These concerns are *atypical* for ADHD

- Inattention worse for activities requiring language comprehension
- Not appreciating cause and effect relationships
- Behaviour is *not* maturing with time

Case History #2

Assessment:

- Average non-verbal cognitive function
- Significantly lower verbal abilities
- Very low adaptive abilities (activities of daily living)
- At risk for verbal learning disability

Diagnosis: Partial Fetal Alcohol Syndrome

Case History #3

Peter is a 6 year old child whose parents are concerned that he is not making friends at school.

- He has never been invited to a birthday party or to a play date.
- When his mother arranges for a child to come and play, her son will play beside the other child but doesn't interact.
- He prefers not to have kids over because they leave his toys out of order and disturb his room.

Case History #3

Teacher's Observations:

- Peter is meeting grade expectation academically.
- He is very clumsy.
- He is a boring child because he talks non-stop about his favourite interest, dinosaurs.
- While his parents are concerned about his lack of friends, he doesn't seem to care

Case History #3

Red Flags

- Lack of interest in socialization
- Restricted range of interest

Case History #3

Assessment:

- Average cognitive function
- Abnormal social understanding and interactions
- Lack of imaginative play

Diagnosis: Autism Spectrum Disorder

Sunny Hill Developmental Paediatric School Outreach Program

- **Aim:** To provide *timely* developmental pediatric consultation in the community

- For children unable or unlikely to obtain tertiary developmental assessment at Sunny Hill Health Centre for Children
  - Poverty
  - Psychosocial dysfunction
  - Language barrier

Sunny Hill Developmental Paediatric School Outreach Program

Process:

- Daycare/preschool/school-based team appoint a case manager
- Case manager makes a referral to Sunny Hill administrative assistant Marisa Ferrara at 604 453-8306
- Pediatrician reviews referral for appropriateness:
  - Request must conform to mandate of the program to service children who wouldn't access service otherwise

Sunny Hill Developmental Paediatric School Outreach Program

Assessment

- Pediatrician comes to daycare/school to meets with staff, family & child.
  - Full history
  - Neurodevelopmental assessment
  - Physical exam
  - Observation

- Summary of findings and recommendations are communicated to family and staff at the visit.

- A written evaluation integrates the ***context*** of the child's development:
  - Prenatal exposures
  - Postnatal environment
  - Genetic influences

- A written evaluation is sent to all involved in the child's care (with parents' permission).