



兒童體能智力測驗服務
Child Assessment Service

Childhood Developmental Problems

Information for referrers

www.dhcas.gov.hk



Department of Health
Hong Kong Special Administrative Region Government

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Introduction

Developmental and behavioural paediatrics is a rapidly evolving field in Hong Kong, as in the rest of the world. The past decade has been designated the “Decade of the Brain”, where exciting discoveries in neuroscience have been made through applications of functional neuroimaging, event related potentials, molecular biology and genetics. These have contributed immensely to the understanding of neurodevelopmental and behavioural disorders and to their management. Furthermore, longitudinal studies on the role of nurture versus nature on developmental outcomes have demonstrated that early identification and intervention provide great benefit to children with developmental problems.

In light of the above, Child Assessment Service (CAS) strives to provide assessment and support services that are timely, evidence-based and client-centred. CAS has developed clinical protocols for common conditions managed in its centres. Subspecialty teams have been formed to keep abreast of developments in respective conditions, including new scientific findings, service trends and local resources.

We would like to share the profiles of developmental problems seen at our centres with colleagues who refer clients to CAS. The clinical features described under individual conditions are common presenting symptoms for which referrals may be considered. Our hope is that the descriptions included in this leaflet will be helpful to your clinical work and to the process of referring children to CAS.

Our service

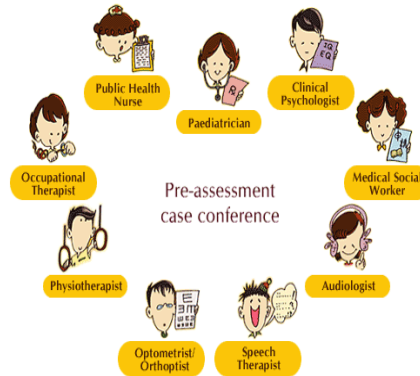
The Child Assessment Service (CAS) of Hong Kong is a service division of the Department of Health. Launched in 1977, it now comprises of 6 child assessment centres (CACs) across Kowloon and the New Territories which provide comprehensive assessment services for children under 12 years of age with developmental problems. Assessment is followed by rehabilitation recommendations and interim support, with the goal of maximizing the potential of children with special needs. The multidisciplinary team consists of developmental paediatricians, clinical psychologists, medical social workers, audiologists, speech therapists, orthoptists/ optometrists, physiotherapists, occupational therapists and health nurses.

The team provides:

- **Diagnostic assessment** including physical, developmental, intellectual, psychological and social aspects; review assessments at critical developmental stages or as indicated
- **Referrals** to medical and rehabilitation services such as specialist medical consultation, therapy, special education and social support
- **Interim support** for clients assessed in CAS including counselling, education and support programmes for parents and children
- **Resource libraries** including general resource libraries at all CACs, and specialty libraries on individual conditions at designated CACs, for loan by parents of CAC clients

Children with suspected developmental problems may be identified by parents, teachers, family doctors or at Maternal and Child Health Centres. CAS accepts referrals from registered doctors and psychologists, on a regional basis. Referrers are encouraged to provide background information, if available, that may be relevant to the child's problems, as well as their own preliminary observations of the child. Replies will be sent to referrers by CACs upon completion of assessments. Please refer to the last page for referral and registration procedures.

The CAS Team



Assessment Service Flowchart

Registration



First Appointment

Public health nurse will conduct a comprehensive interview to gather information on the physical, intellectual, behavioural, learning and psychosocial issues of the child



Team Intake Conference

A team conference will be held for formulation of a working diagnosis and further assessment plans



Team Assessment

The multidisciplinary team will perform assessments and draw up rehabilitation plans for the child



Referral and Follow Up

The multidisciplinary team will arrange necessary referrals, interim support and review consultations for the child as indicated

Developmental Delay and Mental Retardation

Developmental Delay is a term that is commonly applied to the preschool child whose developmental levels are substantially behind the average expectations of children of the same age across all domains of development.

Mental Retardation refers to a condition in which intellectual and concurrent adaptive functioning are significantly below average.

Common presenting features include:

- Pre-schoolers with delayed developmental milestones noted in different areas at the same time. For example:
 - 6m head lag, no reaching out
 - 12m cannot stand with support, no pincer grasp
 - 18m cannot walk alone
 - 24m no single words, cannot follow situational commands
 - 30m cannot scribble, no short phrases
 - 36m unable to speak simple sentences, cannot identify basic shapes and colours



- School age children with significantly below average intelligence manifested by overall impairments in cognitive, language, motor and social skills, with resultant delay in abilities for learning and communication, and in skills for activities of daily living and self-care.



Cerebral Palsy

Cerebral palsy is a neurological condition that is caused by irreversible, non-progressive damage to the developing brain before, during or after birth. Children with cerebral palsy have significant problems with controlling movement and posture, and abnormalities of muscle tone, leading to contractures and deformities. There are different types of cerebral palsy including spastic, dyskinetic, ataxic and mixed types. These children may also have seizures, problems with eating, breathing, sleeping, speech production, visual and hearing impairment, learning difficulties and mental retardation.



Children at risk include:

- High-risk babies, such as those with prematurity, history of birth asphyxia, brain trauma, severe infections and kernicterus.

Common presenting features include:

- Delayed motor milestones
- Persistent primitive reflexes
- Spasticity or marked hypotonia
- Abnormal gait
- Early hand dominance (before 12 months of age)



Significant Hearing Impairment

Significant hearing impairment is defined as a hearing threshold of worse than 40dB in the better ear, irrespective of the nature of hearing loss. This will likely lead to problems in listening, speech and language development, learning and self-esteem, if appropriate interventions are not provided.



Children at risk include:

- Infants who failed infant/ newborn hearing screening tests or whose parents suspect that their children may have hearing problem
- Prenatal and postnatal high risk factors such as congenital infections, severe neonatal jaundice, very low birth weight, birth asphyxia, meningitis
- Craniofacial anomalies or syndromal conditions known to involve sensorineural hearing loss
- Family history of deafness

Common presenting features include:

- Poor response to environmental sounds
- No response when being spoken to from behind
- Looking intently at the speaker's face and mouth when listening
- Misunderstanding of verbal commands and frequently asking for repetition
- Severe language and articulation problems
- Setting television to excessively high volumes



Visual Impairment

Visual impairment (VI) Visual acuity and visual field measurements are currently used as visual parameters of visual function in VI. Visual impairment can range from being mild to severe, to complete blindness. Around two thirds of patients with visual impairment have multiple problems including cerebral palsy, epilepsy, mental retardation and/or hearing impairment.



Children at risk include those with:

- Congenital cataract
- Retinopathy of prematurity
- Brain damage including those resulting from perinatal asphyxia, head trauma and encephalitis, which may in turn lead to cortical visual impairment (CVI), where the damaged brain cannot adequately perceive or interpret signals from the eyes
- Family history such as retinitis pigmentosa
- Congenital conditions such as albinism and craniosynostosis
- Acquired brain or ocular abnormalities

Common presenting features include:

- Behavioural signs of visual impairment such as head tilt, eye poking, poor eye contact, eccentric viewing (abnormal head posturing when looking) and holding objects close to the eyes.
- Physical signs such as strabismus, nystagmus, leukokoria or microphthalmia.



Autistic Spectrum Disorder

Autistic Spectrum Disorder (ASD) is a behavioural syndrome characterized by qualitative abnormalities in reciprocal social interactions and in patterns of communication, and by a restricted, stereotyped, repetitive repertoire of interests and activities. Disturbance in at least one of these areas must be manifest prior to age three years.



Common presenting features include:

- Impairment in social interaction including poor eye contact, poor response when name called, lack of spontaneous sharing of enjoyment or showing objects of interest to others, poor reciprocal social and emotional response and failure to develop appropriate peer relationships.
- Poor communication and language development including delay in verbal language that is not compensated through other means such as gestures, persistently echoing what others say, inability to sustain conversation or abnormal use of language. Poor symbolic, make-believe and social imitative play, such as playing with toy cooking sets, or acting out an imaginative family or classroom scenarios.
- Stereotyped, repetitive behaviour and narrow interests such as in road maps or numbers that are abnormal in content and focus, persistent preoccupation with parts of objects like wheels of toy cars; and inflexible adherence to specific, non-functional routines or rituals such as insistence on a same route or taking a certain bus ride everyday.
- Symptoms may be accompanied or modified by features of global delay/ mental retardation, which may also be present in some children with ASD.



Specific Language Impairment

Language delay occurs commonly in young preschool children with otherwise normal development. While many of these children may outgrow their language difficulties, others may have persistent symptoms of specific language impairment. Early attention to language delay with follow-up is important.

Specific Language Impairment (SLI) refers to significant impairment in spoken language ability that interferes with activities of daily living, learning and social communication. There is no obvious accompanying condition such as mental retardation, neurological damage or hearing impairment. Persistent language impairment is commonly associated with dyslexia, attention deficit disorder, and developmental coordination disorder.



Common presenting features include:

- Pre-schoolers with delay in verbal comprehension and expression or both, such as not comprehending situational verbal commands or no single words by 2 years, or inability to speak in sentences by 3 years, with apparently normal development in other aspects.
- School age children with weakness in verbal comprehension and/or expression and normal intelligence. They may appear inattentive because they cannot understand daily conversation or follow a series of instructions. They may have difficulty in conveying messages or reporting events. Word finding problems and poor organization are common in their speech. Those with coexisting learning and behavioral problems will particularly benefit from multidisciplinary assessment.



Dyslexia

Dyslexia is the commonest type of specific learning disability (SLD). Children with dyslexia have difficulties in word reading, writing to dictation or spelling. It is not the direct result of mental retardation, visual or hearing impairment, environmental factors, inadequate educational opportunities, or social/emotional problems.



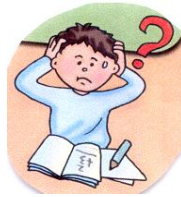
Common presenting features include:

- Pre-schoolers with developmental language problems, emerging difficulties in letter and word/character recognition, copying and dictation, but with satisfactory development in other areas.
- School age children with reading, writing and spelling difficulties. They show unexpected discrepancy between their satisfactory general intelligence and low achievement in school. Other SLD problems, while not being part of dyslexia *per se*, may occur in these children, including difficulties in listening, speaking, mathematics and motor coordination.



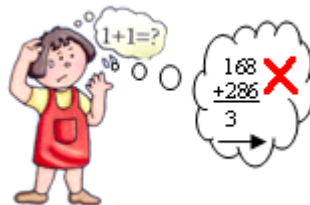
Mathematics Disorder

Mathematics disorder is a type of specific learning disability. It is not caused by intellectual or sensory deficits, emotional problems or environmental factors. Children with mathematics disorder have difficulties in acquiring basic number concepts, arithmetic calculations and practical mathematical applications, such as for time, money and geometry.



Common presenting features include:

- Persistent difficulties in learning basic arithmetic concepts including numeracy (representation of quantity by numbers), counting in small sets (such as 5, 10, 15) and recalling commonly used number facts. They have difficulty in learning computational skills, tending to use immature methods such as finger counting. There is discrepantly poor performance in mathematics which is incongruent with their general intelligence. Frequent co-existing problems include dyslexia and attention deficit/ hyperactivity disorder.



Developmental Coordination Disorder

Developmental coordination disorder (DCD) is a motor skill disorder that affects about 5% of school age children. These children lack the motor coordination necessary to perform daily tasks that are considered to be appropriate for their age and intellectual ability, in the absence of other neurological disorders. This lack of motor coordination leads to significant interference with academic achievements and activities of daily living. As a result, these children face frequent frustrations in performing daily tasks, and social difficulties at school and play. DCD commonly co-exists with a variety of other developmental problems including attention deficit/hyperactivity disorder and dyslexia.



Common presenting features include:

- Pre-schoolers with slower mastery of gross motor skills such as managing stairs, and fine motor skills and coordination in self-care functions such as feeding and in play. Children with history of prematurity and/or low birth weight are at higher risk. However, DCD is difficult to diagnose in the early preschool age.
- School age children with significant difficulties in
 - self-care tasks such as dressing, using utensils, managing tidiness
 - academic tasks such as writing, copying, organizing homework, participating in physical education, especially gymnastics classes
 - leisure activities such as sports and playground activities



Attention Deficit / Hyperactivity Disorder

Attention Deficit/ Hyperactivity Disorder (AD/HD) is a disability of neurobiological origin that interferes with a person's ability to sustain attention, focus on a task or inhibit impulsive behavior. It is characterized by developmentally inappropriate attention skills, impulsivity and hyperactivity that are maladaptive, persistent and present across different settings. AD/HD is not a type of specific learning disability although they may occur in the same child. Other co-existing problems may include motor in-coordination and emotional disorders.



Common presenting features include:

- Excessive complaints by parents, teachers and child-minders that these children cannot concentrate, follow instructions, complete tasks, are disorganized and easily distractible. They may be excessively active and present with disruptive behaviour. They are often prone to accidents and frequently in disciplinary trouble because of unthinking breaches of rules. They often have social difficulties and may become isolated by other children.
- Symptoms that cause impairment usually have an early onset during the pre-school period, although many individuals are diagnosed after the symptoms have been present for a number of years.



Acquired Cognitive Impairment

Acquired Cognitive Impairment (ACI) results from brain injury which is not hereditary, congenital or degenerative in nature. It may result from events such as traumatic brain injury, central nervous system infection, cardiovascular accidents or status epilepticus. Significant impairment in one or more domains, including language, memory and attention, sensory or motor functioning and psychosocial behaviour may be present. These deficits will in turn affect a child's social, academic or daily functioning.



Children with ACI may have the following symptoms that were not part of their pre-morbid condition:

- Easy distractibility
- Forgetfulness and poor memory
- Poor organizational skills
- Withdrawn behaviour
- Social immaturity for age
- Sexual inappropriateness
- Irritability and anger
- Depression



Child Assessment Centres



1. Central Kowloon Child Assessment Centre

2/F 147L Argyle Street, Kowloon City, Kowloon.

Telephone: 2246 6633 Fax: 2715 3447

Region served: Southern District, Eastern District and Wanchai of Hong Kong Island, Kowloon City and Yau Tsim Mong

2. Pamela Youde Child Assessment Centre (Kwun Tong)

3/F, 79 Cha Kwo Ling Road, Kwun Tong, Kowloon.

Telephone: 2727 8474 Fax: 2727 8479

Region served: Kwun Tong and Sai Kung

3. Pamela Youde Child Assessment Centre (Shatin)

2/F, 31-33 Chap Wai Kon Street, Shatin, N.T.

Telephone: 2210 1600 Fax: 2646 6327

Region served: Shatin and Wong Tai Sin

4. Tuen Mun Child Assessment Centre

G/F, Tuen Mun Hospital, Tsing Chung Koon Road, Tuen Mun, N.T.

Telephone: 2468 5261 Fax: 2462 4962

Region served: Tuen Mun and Yuen Long

5. Ha Kwai Chung Child Assessment Centre

2/F, Ha Kwai Chung Polyclinic & Special Education Services Centre,
77 Lai Cho Road, Kwai Chung, N.T.

Telephone: 2370 1887 Fax: 2744 8579

Region served: Central and Western District of Hong Kong Island,
Sham Shui Po, Kwai Tsing, Tsuen Wan and Islands

6. Fanling Child Assessment Centre

4/F, Fanling Health Centre, 2 Pik Fung Road, Fanling, N.T.

Telephone: 2639 1402 Fax: 2671 2797

Region served: Tai Po and North District

Opening hours

Monday to Friday ^[Note]: 9:00 am to 1:00 pm

2:00 pm to 6:00 pm

[Note] To cater for the needs of some clients, we will operate one morning session on the first non-Public Holiday Saturday of each month in lieu of the previous Friday afternoon session.

Fees

HK\$100 for first appointment and HK\$60 for each subsequent consultation or valid GF181/HA181 or valid Certificate of CSSA Recipients (for Medical Waiver).

After receiving referrals from registered doctors or psychologists, parents are advised to contact the nearest centre for registration and appointment booking procedures in person or by phone. Parents should bring along their identity cards, the referral letter, the child's birth certificate and recent photograph when attending the first visit.

Related Websites

Department of Health

www.dh.gov.hk

Education Bureau

www.edb.gov.hk

www.hkedcity.net

Social Welfare Department

www.swd.gov.hk

Hong Kong Examinations and Assessment Authority

www.hkeaa.edu.hk

The Equal Opportunities Commission (EOC)

www.eoc.org.hk