

# DEVELOPMENTAL-BEHAVIOURAL PAEDIATRICS (DBP) SUBSPECIALTY:

DBP SERVICES & TRAINING  
IN HK CHILDREN'S HOSPITAL

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# DEVELOPMENTAL-BEHAVIOURAL PAEDIATRICS (DBP)

A subspecialty of paediatrics

Deals with evaluation, treatment and management of children with or at risk for developmental, learning, emotional and behavioural problems

Through assessment of biological and social factors

Delivered in context of the children's lives and families

Case manager role for anticipatory and longitudinal support

Evidence based cross discipline and cross sector collaboration

# EXISTING **AMBULATORY** DBP SERVICES

- **Screening and surveillance** for developmental problems: mainly in HA and DH
- **DBP assessment of NON-hospital cases:** DH Child Assessment Service (DHCAS), HA DKCAC, NGOs and private sector
- **Training and rehabilitation in community:**
  - Social Welfare Department for preschool (SWD) special needs services
  - Education Bureau for school support
  - HA clinics and NGOs for therapy and training programmes
  - SWD for post-secondary support

# EXISTING **HOSPITAL** DBP SERVICES

- HA/DHCAS DBP teams input towards hospital intervention (pre-admission, in-patient interim assessment and discharge planning)
- Follow through on reintegration into family and school
- Host regular cross-departmental clinics for conditions with complex medical and functional needs
- Serve as long term case manager post-discharge
- DKCAC, CMC and others provide in-hospital rehabilitation for children with chronic disabilities

# HK COLLEGE OF PAEDIATRICIANS DBP SUBSPECIALTY TRAINING PROGRAMME

DBP Programme accredited by HKAM/HKCP 2013:

“... Details of the Training programme

(a) DBP Core Component

18 months full time DBP module at accredited training centres. Ambulatory DBP exposure will be provided at the training centres, while in-patient DBP exposure will be accessed through consultation case-based logging.”

# Hong Kong College of Paediatricians DBP Subspecialty Training Programme

|   |  |                              |                            |                             |                  |
|---|--|------------------------------|----------------------------|-----------------------------|------------------|
| <b>DBP Core Programme</b>                         |  |                              | <b>Child<br/>Neurology</b> | <b>Child<br/>Psychiatry</b> | <b>Electives</b> |
| <b>DBP core module</b>                            | <b>Public and<br/>Community<br/>Child Health</b> | <b>Clinical<br/>Genetics</b> | <b>3 months</b>            | <b>6 months</b>             | <b>6 months</b>  |
| <b>Ambulatory and<br/>in-patient<br/>exposure</b> | <b>2 months</b>                                  | <b>1 month</b>               |                            |                             |                  |
| <b>18 months</b>                                  |  |                              |                            |                             |                  |
| <b>36 months</b>                                  |  |                              |                            |                             |                  |

# HK COLLEGE OF PAEDIATRICIANS DBP SUBSPECIALTY TRAINING PROGRAMME

## *“ ... In-patient DBP exposure*

- Whilst the majority of clients for DBP attention are seen in ambulatory settings, in-patient exposure for trainees is needed for children with **developmental problems which are part-and-parcel of, or sequelae to their medical illnesses**
- **Provide consultation on developmental and functional needs to support inpatient and discharge management**
- Training exposures will be activity-based and case-based”

# ONGOING DIAGNOSTIC GROUPS WITH DBP INPUT IN MANAGEMENT

Examples of diagnostic groups with DBP input to hospital specialty teams over the past decades:

1. **Acquired brain injury**, related to oncology and brain tumor, cerebral vascular accident, trauma, infection
2. **Epilepsy surgery** candidate evaluation, assessment and follow up
3. **Chronic physical impairment** requiring critical point assessment and intervention planning
4. **Hospitalized children with no speech/severe speech difficulties** requiring augmentative & alternative communication in hospital



# PROPOSED DBP SUBSPECIALTY SERVICE MODEL

- Preparatory phase to opening of HKCH
  1. Continue current work with respective specialty teams at regional hospitals and DHCAS/DKCAC
  2. Establish working group involving representatives from these diagnostic group teams, to confirm
    - Current and anticipated case load
    - Format of consultation and joint case work at HKCH
    - Joint training programmes at HKCH
  3. Explore other conditions which may benefit from DBP input at HKCH
  4. Determine training needs for DBP and related HA team members

## ■ Services after opening of HKCH

1. Consultative collaboration between HKCH and DHCAS/DKCAC for the above diagnostic groups, +/- others when services evolve at HKCH
2. Provide functional evaluation and intervention input to support in-hospital management, discharge planning and reintegration to community
3. HKCH Child Assessment Unit (CAU) has been planned through ongoing input of DHCAS/HA, and will be equipped for DBP team presence and complex assessment procedures
4. Evaluation of patients at HKCH CAU, or at bedside or ward if necessary, with integration of family and school assessment findings

# **WHEN** ARE DBP SERVICES NEEDED IN HKCH?

- **DBP services provide bio-social and developmental support, evaluation and family-community-hospital connected care plan for children with complex functional impairment**
- **DBP consultation services are thus recommended for relevant patients from the commencement HKCH operations**

# DBP SERVICES IN HONG KONG CHILDREN'S HOSPITAL

- DBP teams' (DBP paediatrician, clinical psychologist and relevant allied health team members) manpower enhancement to be planned according to further discussions on consultation workload and training needs

# DBP TRAINING IN HKCH

- In-service training for higher trainees at HKCH
- In-service training for related medical and allied health teams
- Log-based rotation for DBP subspecialty trainees to HKCH for in-hospital training and exposure

# DBP RESEARCH IN HKCH

- Need for systematic data on the intervention outcomes for these groups of children
- Studies to be collected through agreed clinical protocols for respective patient groups
- Longitudinal follow for reviewing treatment and rehabilitation outcome
- Data on patient function in learning, social integration and family life in the long term to support future service planning

**EXAMPLES OF ONGOING  
HOSPITAL DBP ACTIVITIES  
AND TRAINING**

# ACQUIRED BRAIN INJURY (ABI)

## (1) TRAUMATIC BRAIN INJURY

Example of TBI DBP activities:

- From early 2000's TBI joint management protocol for DHCAS, PWH and TMH for moderate to severe TBI from early post PTA stage
- Assessment at critical intervals
- Work with school team for reintegration through individualized plans based on neurological, neuropsychological and other assessments
- Family evaluation and support
- Longitudinal study done on 30 patients from the first 10 years of the protocol follow between PWH, TMH, DHCAS



## (2) BRAIN TUMOURS

- DHCAS, DKCAC, PWH, QEH, TMH, QMH & PMH cases
- DHCAS/HA evaluation protocol at critical points for evaluation and monitoring treatment effect, e.g. pre-radiotherapy, critical points post treatment
- Discharge planning for school reintegration, school conference and special needs recommendations, family preparation and community support
- Example of ongoing activities: 17 referrals to DHCAS from various hospitals during first half of this year

## (3) EPILEPSY SURGERY

- Epilepsy surgery candidate evaluation: imaging with psychological testing for lesion localization and pre-surgical developmental functioning
- Example of ongoing activities: Around 35 cases managed between DHCAS and HA in past 10 years

# BRAIN INJURY FROM OTHER CAUSES

- Examples: encephalitis-meningitis, stroke, hypoxic injury

Limited in-patient consultation

Referrals may be made to DH/HA CACs after discharge

# PARTICIPATING TEAM MEMBERS FOR ABI

- DBP teams (DHCAS/DKCAC)
- Paediatric neurologist (HA)
- Neurosurgeon (HA)
- Paediatric oncologist (HA)
- Child psychiatrist (HA)
- Clinical psychologist (DHCAS, HA)
- Educational psychologist (EDB)
- Occupational therapist & physiotherapist (DHCAS, HA)
- Social worker (DHCAS, HA, NGO e.g. Child Cancer Foundation)
- Academic partners (e.g. HKU Neuropsychology)

# PHYSICAL DISABILITIES

## AMBULATORY AND HOSPITAL SERVICE COLLABORATION

- DH/HA joint team review at critical points for medical and developmental needs, for making recommendations on medical or surgical treatments and future follow up in the community
- Collaborative clinics and teaching sessions over past two decades with DHCAS DBP team, HA specialties, education bureau, preschool and school team members

# PHYSICAL DISABILITIES

## AMBULATORY AND HOSPITAL SERVICE COLLABORATION

- Paediatric and other specialty teams from KWH, TMH, CMC, UCH, QEH, QMH, etc.
- Joint clinics held with DH/HA/school specialists, through
  - discussion of respective assessment and investigative findings
  - seeing the children and families at the clinics
  - making collective intervention decisions and recommendations
- Case managers bringing up cases at critical points for preparation and attendance at joint clinics
- Example of ongoing activities: Around 20 DHCAS/HA cases at joint clinics per year

# PARTICIPATING SPECIALTIES FOR PHYSICAL DISABILITIES

- DBP teams
- Paediatric neurologist (HA)
- Neurosurgeon (HA)
- Paediatric orthopaedic surgeon (HA)
- HA and NGO rehabilitation therapists
- Social workers
- School therapists and teachers
- Kowloon physical rehabilitation clinics and dorsal rhizotomy clinics coordinated at DHCAS
- Cerebral palsy / neuromuscular / orthopaedic / complex rehabilitation clinics, etc. at HA departments

# AUGMENTATIVE & ALTERNATIVE COMMUNICATION (AAC) IN HOSPITAL

- Children with complex medical conditions and severe communication impairment in hospitals include:
  - Children in intensive care and limited communication access, including those with airway support
  - Severe neurological conditions (SMA, post-stroke etc.) without speaking ability
  - Chronic severe disability with minimal communication ability



- **Importance of AAC in hospitals for children with severe communication impairment:**
  - **Communication to medical staff of bodily needs, pain and response to treatment. This has been shown to contribute to positive outcomes in management**
  - **Communication of wishes and fears, resulting in better care and cooperation by the child during hospital stay, and alleviation of parental anxiety when parent is away from the child**
  - **For long stay cases, socialization, language development and learning will be achieved through AAC**

# EXISTING SITUATION FOR AAC IN HOSPITAL

- Limited application of AAC in hospitals
- Conditions included long term ventilator care, SMA, neuromuscular disease, mitochondrial disease, and disabilities with severe functional impairment
- DHCAS and Hong Kong AAC Working Group (coordinated by DHCAS members) provide ad hoc out-reach support to hospitals upon referral
- AAC teams see cases in wards and work with hospital medical teams and families, including discharge preparation
- Example of ongoing activities: Over the past two years, around 5 children were referred from paediatric departments