

# **Paediatric Cardiology Service Model, Manpower and Training Plan Hong Kong Children's Hospital**

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(Paediatric Cardiology & Cardiac Surgery)**

**Forum on the Impact of Hong Kong Children's Hospital on  
the future paediatric training and service  
Hong Kong College Of Paediatricians, Committee for Subspecialty Boards**

**HKAM Jockey Club Building  
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## Clinical Work Group :

### • Paediatric Cardiology and Cardiac Surgery

## Membership:

### *Co-chairs*

- Dr Adolphus CHAU, QMH CON(DPC)
- Dr L Y SO, PYNPAE COS

### *Members*

- Dr T C YUNG, QMH COS(DPC)
- Prof Y F CHEUNG, HKU Prof(PAE)
- Dr M C YAM, PWH CON(PAED)
- Dr Y F CHOW, KCC CSC(Surgical) / QEH CON(Anaes & OTS)
- Dr K L KWOK , KWH SMO(PAD)
- Ms Bernice TSUI, QMH DOM(DPC)
- Ms Agnes TO, QMH WM(CTSD)
- Dr Timmy AU, QMH COS(CTSD)
- Dr K S LUN, QMH CONS(DPC)/QMH Comm Amb
- Dr K C CHAN, AHNH CON(P&AM)
- Dr C C MA, QEH COS(CTS)
- Dr Y C HO, UCHC AC(P&AM)
- Ms W K AU, WM(DPC)
- Ms K L WONG, QMH PTI(PHY)
- Dr S R DAS, QMH CON(DCA)
- S N CHEANG Dr, QMH COS(DCA) [New COS]
- Dr S H LEE, QEH CON(PAED)
- Dr Dora WONG, QEH SMO(PAED) [resigned, part-time staff]
- Dr N C FONG , PMH CON(Paed&AM)
- Dr Daniel TING , TMH AC (PAED&AM)
- Ms Rita LI, QMH DOM(CTSD) [retired]
- Ms Melody WONG, QMH DOM(CTSD)
- Ms M Y CHAN, QEH APN(PAED)

## Deliberation Process:

Prior discussion in Meetings	Date	Outcome
• Clinical Work Group Representatives Meeting	13 Jan 2015	Supported
• Clinical Management Committee (CMC)	4 Mar 2014	Supported
• Work Group on Manpower & Training	13 Mar 2015	Supported
• Planning & Commissioning Committee (PCC)	14 Oct 2015	Supported

# Introduction

- All tertiary services in paediatric cardiology and cardiac surgery will be centralised at the Hong Kong Children's Hospital (CH)
- It is a specialist-led services
- Regional hospitals will provide secondary paediatric cardiac services
- Integration of tertiary and secondary paediatric cardiac services into a single program /network for the whole of Hong Kong

# Hong Kong Children's Hospital

## Paediatric Cardiology Service

- Clinical Service
- Teaching – Education
- Research

## Service arrangement upon HKCH service commencement in 2018

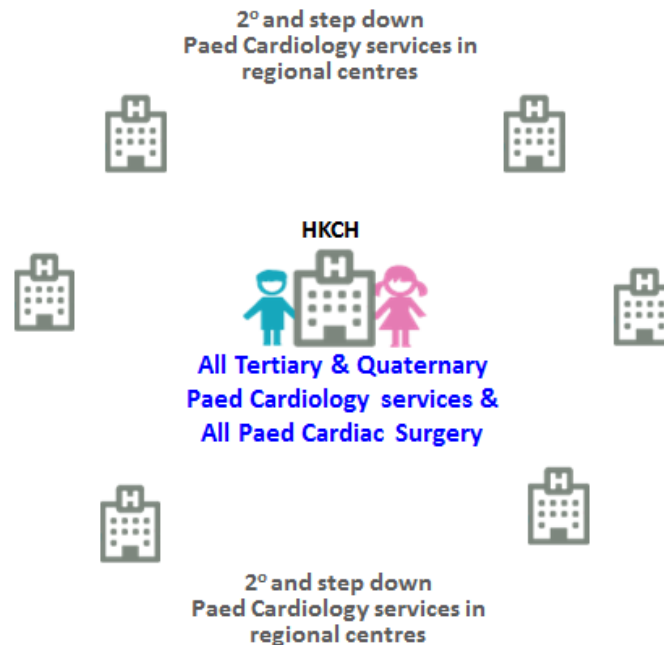
Hospital	Role	Scope of Services
<b>HKCH</b>	Take up the role of <u>tertiary referral centre</u> by <u>translocating ALL tertiary &amp; quaternary paed cardiology &amp; paed cardiac surgery from QMH to HKCH</u>	<ul style="list-style-type: none"> <li>• A specialist-led service with concentration of all tertiary and quaternary paed cardiology &amp; cardiac surgery services at HKCH               <ol style="list-style-type: none"> <li>1. <i>Complex heart disease</i></li> <li>2. <i>Paed cardiac surgery</i></li> <li>3. <i>Interventional (Therapeutic) and diagnostic cardiac catheterizations</i></li> <li>4. <i>Cardiac arrhythmias, electrophysiology, ablation of arrhythmia pathways, pacemaker implantation</i></li> <li>5. <i>Cardiac intensive care (integration with PICU at HKCH)</i></li> <li>6. <i>End stage heart failure and paed heart transplantation program</i></li> <li>7. <i>Mechanical circulatory support (ECMO, VAD)</i></li> <li>8. <i>Severe pulmonary hypertension</i></li> <li>9. <i>Fetal cardiology: fetal echo and prenatal counseling (collaboration with obstetricians)</i></li> <li>10. <i>Support adult congenital heart disease program</i></li> </ol> </li> </ul>

## Service arrangement upon HKCH service commencement in 2018 (cont'd)

Hospital	Role	Scope of Services
<b>Regional Hospitals</b>	Provide <b>secondary paed cardiology services</b> and <b>step-down care</b>	<ol style="list-style-type: none"> <li>1. Common / less severe cardiac problems <i>(e.g. VSD, ASD, PDA+/- heart failure, TOF, Kawasaki disease)</i></li> <li>2. Evaluation of children with possible heart diseases <i>(e.g. heart murmur, palpitations, syncope, chest pain)</i></li> <li>3. Assessment of neonates with possible heart diseases <i>(e.g. cyanosis or tachypnea in the newborn)</i></li> <li>4. Initial pre-op or pre-catheterization evaluation and preparation</li> <li>5. Late post-op care (step-down care from HKCH)</li> <li>6. Develop cardiovascular health promotion program</li> <li>7. Liaise with primary health sector</li> </ol>
<b>Interactions between HKCH and regional hospitals</b>		<ol style="list-style-type: none"> <li>1. Step-up or step down care</li> <li>2. HKCH to provide outreach/joint cardiac consultation</li> <li>3. Common protocols and guidelines: maintain standard</li> <li>4. Communication on patient progress, Mx plan, teleconference etc.</li> <li>5. Training and education: rotation of trainees and specialists</li> </ol>

## Service Arrangement upon HKCH service commencement in 2018 (cont'd)

*“A **Networking Model** between HKCH and Regional Hospitals for Paediatric Cardiac and Cardiac Surgery services”*



## Service areas requiring collaboration and planning with other sub/-specialties

- Detailed service model for **paed thoracic surgeries** as well as **paed heart and lung transplantation program** would require further discussion and deliberation

## Estimated Workload in HKCH

- Incidence of congenital heart disease = 10/1000 livebirths
- New cases of CHD / year = 500 – 600

	<u>No./year</u>
<i>No. of Cardiac surgery:</i>	<i>360-400</i>
<i>No. of Cardiac catheterization:</i>	<i>500 - 550</i>
<i>In-patient admission:</i>	<i>1,000</i>
<i>Out-patient attendance:</i>	<i>14,000-15,000</i>
<i>Ambulatory patients:</i>	<i>2,600</i>
<i>Echocardiogram:</i>	<i>5,500-6,000</i>
<i>Non-invasive cardiac Ix:</i>	<i>700</i>

- *Anticipated additional workload:*
  - Cardiac consultation: oncology, paediatric surgery, PICU, etc
  - Echocardiography
  - Non-invasive cardiac investigations and requested by other subspecialties at HKCH
  - To provide care for adult congenital heart program (QMH, PWH, QEH)



## Bed Opening Plan

Existing no. of paed cardiac beds	Related bed capacity in HKCH	No. of cardiac beds to be opened in HKCH in 2018
<p><b>41</b></p> <ul style="list-style-type: none"> <li>• 15 Gen</li> <li>• 6 SCBU</li> <li>• 7 PICU</li> <li>• 4 HDU</li> <li>• 9 day beds</li> </ul>	<ul style="list-style-type: none"> <li>• <b>22 CCU beds</b></li> <li>• 18 PICU+ 4 HDU <i>(cover all sub-specialties including cardiac)</i></li> <li>• 160 general beds <i>(including 22 renal beds, 14 ID beds)</i></li> <li>• 20 Day beds <i>at Ambulatory Care Centre</i></li> </ul>	<p><b>31</b></p> <ul style="list-style-type: none"> <li>• 22 Paed Cardiac beds (IP)</li> <li>• 9 day beds (DP)</li> </ul> <p><i>(Paed cardiac ICU and HDU support to be covered by HKCH's PICU)</i></p>

# Manpower Planning for Doctors Paed Cardiology, HKCH

	Manpower requirement for HKCH Paed Cardiology in 2018	Present number of doctor in QMH Paed Cardiology	Additional staff requirement HKCH
CON	5.5 <sup>†</sup>	4	1
AC/SMO	4	2	2
MO/R	8*	5	3
<b>Total</b>	<b>17.5 FTE</b>	<b>11 FTE</b>	<b>6 FTE</b>

<sup>†</sup>1 Prof in HKU (QMH) = **0.5** FTE Consultant

\* *Plan for some cross-coverage and rotation between paediatric department and/or subspecialties*

**→ Additional doctor requirement: 6 FTE (1 CON, 2 AC, 3 Resident)**

# **Cardiac Subspecialisation**

1. Interventional cardiology
2. Electrophysiology
3. Echocardiography
4. Heart Failure/Transplantation
5. Grown up congenital heart disease
6. Fetal cardiology

# Training Program for Paediatric Cardiology

At HKCH : Paediatric Cardiologists, tertiary service

- Basic : 3 years full-time (1 yr overseas training preferred)
- Scope :
  - complex heart disease in children
  - Echocardiography
  - Non-invasive cardiac investigation (Holter, Treadmill, CPX, etc)
  - Cardiac catheterization
  - Paediatric cardiac intensive care
  - Arrhythmias / electrophysiology / pacing / ICD

# Training Program for Paediatric Cardiology

At Regional Hospitals : Paediatric Cardiologists or  
Paediatricians with interest /  
training in paediatric cardiology

- Basic :
  - 6-12 months training at QMH/HKCH
  - 6 months overseas
  - part-time cardiology practice in regional hospitals
  - ? possible rotation to HKCH for a certain period every 2-3 years

# Unresolved Issues regarding Manpower Planning / Training

## Difficulties in recruitment of adequate trainees

1. Staff resignation
2. Staff opted out
3. Inadequate supply of residents in general
4. Hardship in taking up paediatric cardiology
5. Career prospects

***Thank you***