HONG KONG COLLEGE OF PAEDIATRICIANS

Committee for Subspecialty Boards

Forum on the Impact of Hong Kong Children's Hospital on the future paediatric training and service

Proposal of the service model & training programme of Metabolic Medicine

Date: 24 September 2016 (Saturday)

Time: 2:00 pm - 5:50 pm

Venue: Function Room 1, 2/F, HKAM Jockey Club Building

HK Society Inborn errors of metabolism

- Established in 2004
- Started by few paediatricians, chemical pathologists & geneticists who saw the need of developing IEM services in HK
- a platform for discussion & collaboration among various specialists
- more diagnostic investigative tools are being developed locally
- obsoletes the previous dependence on overseas laboratories
- the diagnostic yield of various metabolic diseases greatly enhanced
- metabolic clinics set up at 4 HA hospitals
 PWH, QMH, QEH & PMH







香港黏多醣症暨罕有遺傳病互助小組

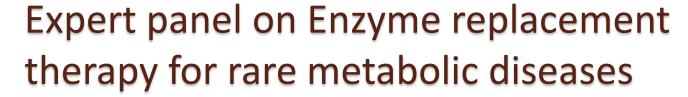
Hong Kong Mucopolysaccharidoses & Rare Genetic Diseases Mutual Aid Group



- Established 2005
- mutual support children & their families with rare diseases
- a strong advocate for enzyme replacement therapy for lysosomal storage diseases









Set up by Hospital Authority 2007 Panel members: HA administrators, Clinicians, Pharmacists Regular meetings 3-4 times per year

- To oversee commissioning of ERT in HK
- To set up treatment guidelines on ERT for specific disease groups
- To assess relative priorities for funding for ERT
- To review every new as well as renewal applications
- To evaluate or facilitate independent evaluations of ERT
- To appraise new evidence on ERT

LSD patients currently on ERT funded by HA (19 patients/2016)

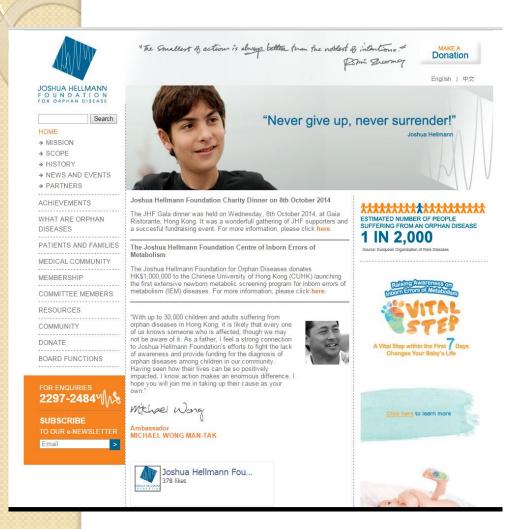
MPS

- 2 MPS I
- 2 MPS VI

Other LSDs

- 8 Pompe (2 infantile, 7 late onset)
- 2 Gaucher
- 5 Fabry

Joshua Hellmann Foundation

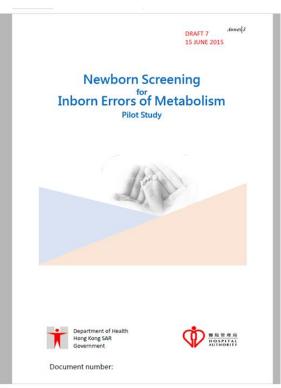


- Established 2009
- mission of advancing the awareness, diagnosis, treatment and research of orphan diseases
- aims at improving the welfare of children with orphan diseases in Hong Kong
- donation for the establishment of the CUHK pilot NBS program

HKSAR Government Newborn screening for IEM

- Announced in Chief Executive's 2015 Policy address
- Task force set up in 2015
- Members from both Department of Health & Hospital Authority
- Obstetricians, Paediatricians, Chemical Pathologists, Clinical Geneticists, Maternity Child Health clinics
- Pilot study
- rolled out 1st Oct 2015 at 2 birthing units (QMH & QEH)
- extension into territory wide programme for all newborn babies in HK by 2 phases
- 2017-8 (PWH, TMH, KWH)
- 2018-9 (PMH, UCH, PYNEH)





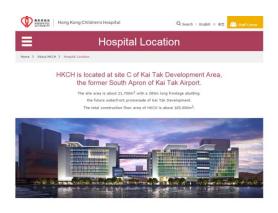
IEM patients: Complex, Serious, Rare

IEM patients

• the rarity and complex nature of IEM requires an integrated specialised clinical & laboratory service to provide satisfactory diagnosis & management

HK Children's Hospital

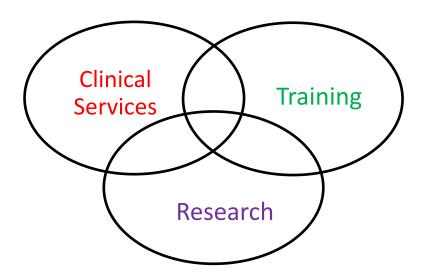
• a highly specialised tertiary care children's Hospital provides the services that these patients need





- 'Golden' opportunity to centralize & upgrade the standard of care for patients & families affected with IEM
- The Metabolic Medicine division will become the territory's tertiary referral as well as coordinating centre for the diagnosis & management of all IEM conditions

Metabolic Medicine Division Hong Kong Children's Hospital



- Build on the ground work taken place in the last two decades
- Better streamlined, seamless, quality, equitable & sustainable service
- Transition care: more IEM patients are reaching adulthood, important to involve and work with adult metabolic physicians to facilitate smooth transition between the paediatric and adult services & complement each other in the overall care of IEM patients

Aims & objectives: Clinical services (I)

Aims

- to identify & diagnose patients suspected of having an IEM
- to improve life expectancy & quality of life for children & their families affected by IEM

Objectives

- provide dedicated in & outpatient facilities to IEM patients
- provide high quality dietary &/or drug treatment and care comparable to international standards
- provide consultative services to other subspecialties at HKCH, paediatric services at regional services/ private sectors in the diagnostic workup & management of suspected IEM patients
- outreach clinics/ shared stepdown care
- ensure smooth transition from paediatric to adult care

Aims & objectives: Clinical services (II)

- ensure smooth implementation of territory wide expanded IEM newborn screening
- to evaluate & appraise the clinical & cost-effectiveness of tandem mass spectrometry based newborn IEM screening & feedback information to all the stakeholders
- compile local IEM registry: ensure accurate coding & classification of IEM disorders with constant maintenance & update
- registry data essential for determining population incidence/prevalence, correct management, providing information on outcome and directing research



Laboratories

- Specialized IEM laboratory services & other diagnostic tests crucial
- Newborn screening laboratory

IEM patients need multidisciplinary care

- Anesthesiology
- Cardiac
- Endocrine
- Genetics
- Hematology Oncology
- Hepatobiliary Gastrointestinal
- Intensive care
- Neonatology
- Neurology
- Ophthalmology
- Orthopedics
- Radiology
- Renal
- Respiratory
- Surgery (ENT, Cardiothoracic, Neurosurgical)

• Other specialties need support for diagnosis of possible IEM & joint care

Aims & objectives: Training & Education

- THE local training centre for future IEM specialists
- support the training for all healthcare staff (medical, laboratory, nursing, dietitic, allied health professionals, pharmacist) involved in the delivery of IEM services
- provide expert advice to non-medical professionals including local authorities, non governmental organisations NGOs and the voluntary sectors, to facilitate holistic care for IEM patients and support to their families/carers
- provide age-appropriate written and/or electronic material, including provision of information in the patient/family's first language, relating to the IEM condition to patients and their families/carers



- initial submission as a combined subspecialty Paediatric Endocrinology & Metabolic Medicine (PEMM) 3/2013
- College advised against combining 2 subspecialties
- re-submission with Paediatric Endocrinology (PE) as individual subspecialty 9/2016 with IEM training included as an optional (highly recommended) module for PE trainees
- ongoing planning for Metabolic Medicine to re- submit to College as a separate individual subspecialty
- training centre HK Children's Hospital
- train IEM specialists and other subspecialists involved in the care of IEM patients

Aims & objectives: Research

- research activities target at the clinical translation in order to improve understanding and patient care
- to generate and publish, aiming at increasing public and professional awareness on local IEM cases, experiences & evidence of effective treatments
- to generate and publish experiences with implementation, statistical data at evaluating & appraising the clinical and cost-effectiveness of tandem mass spectrometry based newborn IEM screening
- to participate in and contribute to international research programmes

Infrastructure requirements (Proposed core team)

- 5 senior medical staff (2 Consultants + 3 Associate consultants) (to be filled by existing HA & university staff with training & experience in IEM)
- 2 fellows (subspecialist training in IEM or other related subspecialties)
- 1 dietician with training and experience in IEM
- 2 specialty metabolic nurses/ genetic counsellors
- 1 secretary for administrative & clerical support
- 1 research assistant & registry manager

Conclusion

- Metabolic medicine service is ready to take on a new start at HKCH
- HKCH is the ideal setting for taking care of IEM patients & their families with supporting stepdown service by regional hospitals

Our common Goal:

a brighter & more promising future for all IEM patients & their families