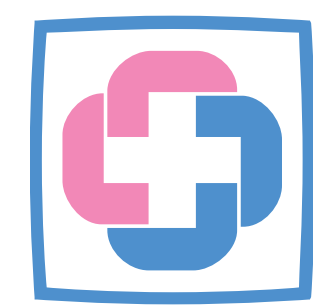


# KKH-TF Health Care Specialists, Paediatric Emergency Care Train-the-trainer Program in Myanmar

Pang Nguk Lan, Judith Wee, Ng Kee Chong, Irene Chan, Anette Jacobsen, Chong Shu-Ling, Lee Siew Kum

KK Women's and Children's Hospital



KK Women's and Children's Hospital  
SingHealth

## Background

In 2011, Eden Group, the major sponsor for hospital development and equipment donor to the newly opened 550 Bedded Mandalay Children Hospital (MCH) made request through their Singapore contact for Paediatric specialist in KK Women's and Children's Hospital (KKH) to advise on equipment procurement. A visit to 550-MCH was conducted for team to provide recommendations and another visit was carried out on request by 550-MCH in early 2012 to explore assistance in training. During the visit, 550-MCH doctors shared their limitations and constraints in managing of sick children and neonates which largely contributed by thin spread of resources and newly graduated staff. MCH team expressed their strong desire for KKH to extend assistance to develop their skills and to enhance their capability in managing essential specialties e.g. the sick neonates and the acutely ill children.

KKH Team approached Temasek Foundation (TF) to collaborate with KKH in this outreach effort as there are numerous technical exchange opportunities and most of these can be fulfilled by training a core group of their staff to develop the capabilities for the Children's Hospitals in Yangon and Mandalay and hospitals close by. The Children's Hospitals are the referral hospitals and will cater to large number of sick children with diverse and complex conditions. The training model that the KKH Team recommended was the Train-the-Trainers (TOT) Program.

## Aim


To provide a 2 years Paediatric Emergency Care (PEC) (TOT) training program aiming at building the capability of 40 doctors and nurses from 4 Children's Hospitals in Myanmar, namely Yangon Children's Hospital (YCH), Yankin Children's Hospital (YKHC) 300-bedded Mandalay Children's Hospital (300-MCH), and 550-Bedded Mandalay Children's Hospital (550-MCH) to be Master Trainers (MTs) in Paediatric Emergency Care (PEC) with a view to reduce mortality by developing an effective triage system, recognizing and timely care management in the hospitals



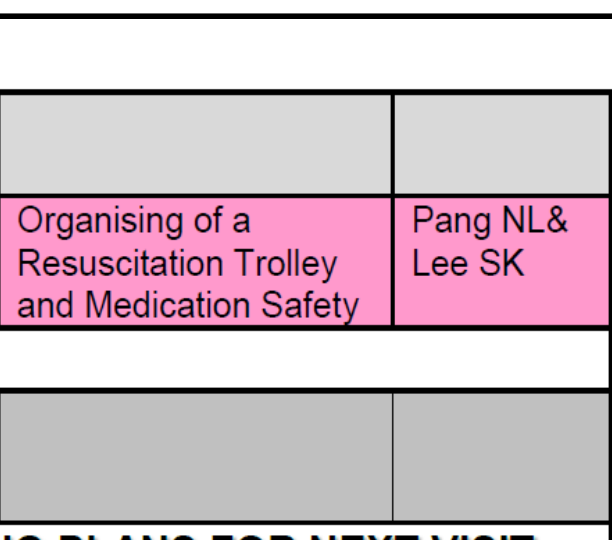


## Methodology

With the support of KKH Senior Leaders and funding from TF, KKH Team was able to embark on the training. The training takes a span of 2-3 years over four trips, each trip will last a week and the team comprising of 6-7 trainers (4 doctors and 2-3 nurses) and a Project coordinator. The core group of MTs were selected by their Heads of Department (HODs) of YCH, YKCH, 550-MCH and 300-MCH. Most of the MTs have teaching experience except for the nurses. The 1<sup>st</sup> run of training (April 2013) was conducted by KKH Team to the MTs in 550-MCH. At the 2<sup>nd</sup> run (November 2013), 550-MCH MTs organized a similar training for their healthcare colleagues. KKH Team's role was to observe, assist and provide feedback to the 550-MCH MTs. Likewise, the TOT 1<sup>st</sup> run in Yangon (November 2013) was conducted in YCH where KKH Team trained the MTs and in the 2<sup>nd</sup> run (July 2014) YCH MTs organised a similar TOT training for their colleagues staff.

Figure 1- TOT Program

Figure 1- TOT Program DAY 1				
Time	Mandalay Trainers Track	Nursing Track (Clinical Training)		
0800 to 0830 hrs	Registration and Opening Ceremony			
0830 to 0915 hrs	Recognition of A Sick Child & Principles of Triage	Ng KC		
0915 to 1015 hrs	Advanced Airway Management and Non-invasive Ventilation	Irene Chan	Skill Training –Airway clearance (ETT suctioning) for patient with ventilatory support	Pang NL & Lee SK
1015 to 1030 hrs	BREAK			
1030 to 1115hrs	Airway Management and Clearance	Pang NL		
1115 to 1200 hrs	Approach to Arrhythmias in Children	Chong SL	Practical Session on Sterilization and Decontamination of equipment	Pang NL & Lee SK
1200 to 1330 hrs	LUNCH			
1330 to 1645 hrs	Skills Station 1	Pang NL		
Each station 35 minutes	Chest Compression (Neonate & Child)	Lee SK		
BREAK @ 1500 to 1515 hrs	FBAO Management (Baby and child)	Irene Chan		
(Round robin style- 4 groups of 5 to 6 each)	Skills Station 2	Ng KC		
	Bag & Mask & Intubation	Chong SL		
	Skills Station 3			
	IO Needling & UV insertion			
Skills Station 4				
Defibrillation				
1645 to 1700 hrs	DAY 1 WRAP-UP & DEBRIEF			

DAY 2						
0830 to 0930 hrs	Recognition & Acute Management of Circulation in Paediatrics	Irene Chan				
0930 to 1030 hrs	Principles of Acute Trauma Management in Children (with Role of FAST)	Chong SL				
1030 to 1045 hrs	BREAK					
1045 to 1130 hrs	Post Resuscitation Follow up Care and Management	Chong SL				
1130 to 1200 hrs	Oxygen Therapy	Pang NL				
1200 to 1400 hrs	LUNCH					
1330 to 1645 hrs	Mock Integrated Code 1	Ng KC with team				
	Septic Child	Irene Chan with team				
	Mock Integrated Code 2	Chong SL with team				
	Newborn resuscitation	Chong SL with team				
	Mock integrated Code 3	Chong SL with team				
Each station 35 minutes	Child with SVT	Chong SL with team				
	Mock Integrated Code 4					
	Child with myocarditis and pulseless VT/VF					
1645 to 1700 hrs	DAY 2 WRAP-UP & DEBRIEF					

DAY 3				
0800 to 0930 hrs	Short Answer Questions (SAQ)	Team		
0930 to 1015 hrs	INTERNATIONAL RESUS GUIDELINES UPDATE (ILCOR 2010/11)	Ng KC	Organising of a Resuscitation Trolley and Medication Safety	Pang NL & Lee SK
1015 to 1030 hrs	BREAK			
1030 to 1115 hrs	Care Management of Paeds Patients on Fluid Mx & IV devices	Lee SK		
1115 to 1300 hrs	CLOSING OF PEC / DEBRIEF & MAKING PLANS FOR NEXT VISIT			
1300 to 1400 hrs	LUNCH			
1400 to 1600 hrs	HOSPITAL VISIT			

During training, KKH Team conducts debrief daily within the team and with MTs. The interaction and communication during the debrief sessions were useful to improve on the delivery of the TOT to participants.

For example, the nurses at the 1<sup>st</sup> Run shared that they found some of the lectures difficult to follow and understand. The team did a review and separated the lectures into two tracks ie. Clinical and Nursing at the 2<sup>nd</sup> run (see Figure 1 for program structure). The change in the program allowed for KKH Trainers to focus and have more interaction with the Myanmar nurses.

At the Skill Stations/Demo/Practices and during Short Answer Questions (SAQs) sessions, emphasis was placed for both doctors and nurses to interrelate and work as a team work. To improve the interaction among all members during team work, KKH Trainers refined guidelines for SAQs and will award extra points to teams who were able to demonstrate active interaction and discussion among doctors and nurses. Rewards were given to the winning team. To promote doctors and nurses collaborative effort in care management, nurses are encouraged to participate and speak up. As the nurses are shy, extra bonus points were awarded for answers provided by nurses to help boost their confidence to speak up.

## Result

The Train-the-trainer Program was initiated in April 2013 and ended successfully in January 2015 with 100% of the last cohort of MTs rated the training as above expectation. Besides lectures and skill training, KKH Team dedicated time to do small group practical sessions relevant to their areas of work. TF, the funder also provided full range of training manikins and equipment to the two hospitals who hosted the training venue ie. 550 MCH and YCH. The training aim was to equip the hospital staff with knowledge and skills to manage sick neonates and children, with its key consideration to build capability and confidence for the MT to train their own medical and nursing staff in their region with the adaption of the training materials to local context. KKH observed a multiplier effect with trainers grown by many folds (see Figure 2).

Figure 2

	Doctors	Nurses	Total
<b>No. of Master Trainers trained by KKH Team</b>	<b>59</b>	<b>30</b>	<b>89</b>
<b>No. of participants trained by Master Trainers</b>	<b>48</b>	<b>30</b>	<b>78</b>
<b>No. of participants trained by CORE MTs</b>	<b>216</b>	<b>162</b>	<b>378</b>

Since inception YKCH has trained more than 300 Junior Doctors and House Officers (HOs) as PEC has become their basis training for these doctors rotated to their hospital. Feedback provided by 550-MCH doctors in April 2015 that the PEC has increased the knowledge and skills in the recognition of sick child which has very much improved in emergency department and paediatric wards. The practical skill of paediatric resuscitation is much better, almost all of the junior paediatricians at MCH are capable of putting endotracheal tube, umbilical- venous insertion, intraosseous needling.



## Sustainability

The TOT program KKH adopts is through partnership with corporate sectors, and both local and international non-governmental organizations (NGOs) with the aim of bringing about active community service and fostering people-to-people relations. The TOT program originated in 2007 when KKH started the training for National Paediatric Hospital (NPH) in Phnom Penh, Cambodia. The outcome of the program was gratifying, and within 4 years, NPH made massive strides in improving its facilities and there was a significant drop in mortality rate for children going through their Emergency Room. In addition, NPH was appointed as the WHO training centre for its Emergency Triage And Treatment program which enables their staff to train their medical fraternity both within and outside of NPH. The TOT program emphasises on sustainable skills transfer with advantageous outcome.



## Conclusion

The program offers professionals to share their experiences with people of different healthcare settings. Such platform has provided both parties with opportunity to exchange thoughts and ideas, and discuss the levels of care that would benefits both of the communities. Such work allowed KKH's team to learn from our Myanmar counterparts in overcoming challenges faced. Indeed the most gratifying experience is the cross transferability of knowledge and excellent relationship that KKH built with our Myanmar colleagues, it bears witness that people from different communities, cultures and backgrounds can contribute and learn from one another in a spirit of mutual growth.

