1st International Conference on Humanitarian Medical Missions
30th October to 1st November 2014
Singapore

BOOK OF ABSTRACTS
“A pair of hands embodies the spirit of giving and the vision of humanitarian medical missions. The full circle encompasses the global concerted effort and the total dedication of all healthcare volunteers to overcome the unending medical needs of the world.”

Benny Ong
Designer
This conference is dedicated to all the medical volunteers working across and beyond borders. The term medical is generic and includes physicians, nurses, dentists, allied healthcare and support personnel.

There are many NGOs around the world doing humanitarian work, usually in less privileged communities and bringing medical aid and relief to countries where healthcare is deficient or totally lacking.

To organise these volunteer medical missions requires tremendous manpower and financial resources. There are many logistical issues and other problems which are encountered at both the organisational level, as well as during the execution of these missions. This international conference will allow discussions amongst all the donor and recipient organisations regarding both the upside as well as the downside of these volunteer missions. Our hope is that at the end of the conference, guidelines can be drawn up to aid budding volunteer teams in the organisation of successful missions.

The Singapore General Hospital and allied SingHealth Institutions have been very supportive and proactive in the organisation of these volunteer medical missions in the region and beyond. Multiple missions have been carried out in the surrounding ASEAN countries in response to their needs and requests. The SGH corporate philosophy to encourage such humanitarian activities by allowing its staff to participate in these missions is both laudatory and global in outlook. Medical and nursing staff are given official leave of absence when they go on these missions.

This inaugural conference will highlight the scope of these humanitarian activities across all medical disciplines. We will share with the international community what SGH has done over the last three decades with support from organisations such as the Singapore International Foundation (SIF). This conference will for the first time bring all the volunteers across borders together to exchange and interact. This will no doubt enhance the spirit of volunteerism and encourage physicians and healthcare professionals across borders to work for a better and more peaceful world.
### Thursday, 30 October 2014

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### Keynote Address

**Citation: Professor ST Lee**

Peace and Harmony Through Humanitarian Medical Missions and Medical Diplomacy

Professor Tommy Koh
Ambassador-At-Large, Ministry of Foreign Affairs, Singapore

### Morning Tea/Poster Exhibition

### Morning Symposia 1

**Goals of International Medical Missions**

**Chairperson: Professor ST Lee, Assoc. Professor Chua Yeow Leng**

1. Perspective of International Collaboration in Healthcare
   Abstract 295
   Associate Professor Chua Yeow Leng, Singapore Health Services

2. Interplast Australia & New Zealand: Building Plastic And Reconstructive Surgical Skills In The Asia Pacific Region
   Abstract 244
   Ms Jessica Howell, Interplast Australia & New Zealand

3. The Development of Operation Smile In China
   Abstract 275
   Mr Wu Wei, General Executive, Operation Smile China

### Morning Symposia 2

**Organisation/Funding/Sponsorship**

**Chairperson: Ms Prue Ingram, Assoc. Professor Anette Jacobsen**

1. Preparing For A Successful Medical Volunteer Mission
   Abstract 314
   Mr Keith Koh, Assistant Director (International Volunteerism), Singapore International Foundation

2. Reflections from Interplast Australia & New Zealand
   Abstract 338
   Ms Prue Ingram, Chief Executive Officer, Interplast Australia & New Zealand

3. Rotary International Abstract 340
   Dr Yap Lip Kee, Rotary Club

4. Operation Smile Singapore
   Abstract 333
   Mr Abhimanyu Talukdar, Executive Director, Operation Smile Singapore

5. Role of Singapore Hainan Hwee Kuan IN PROJECT ‘HAINAN SMILE’
   Abstract 324
   Mr Richard Cheng, Singapore Hainan Association

6. KK Hospital Regional Outreach To Kids Program and More
   Abstract 261
   Professor Annette Jacobsen, Pediatric Surgeon, Clinical Education Lead (Medicine), KK Women’s & Children’s Hospital

7. TIMA – Humanitarian Medicine With Love And Compassion
   Abstract 299
   Dr Ho Eu Chin, ENT Consultant, Tan Tock Seng Hospital, Singapore

8. Panel Discussion

### Lunch/Poster Exhibition

**Day 1**

4. A Successful Volunteer Collaboration: Residency and Fellowship Training In The Lao PDR
   Abstract 239
   Mr Erik Torjesen, President, Health Frontiers

5. Panel Discussion
Thursday, 30 October 2014

Experiences in Humanitarian Medical Missions

Morning Symposia 3
Attributes of a Good Volunteer
Auditorium

Chairperson: Dr Wg Cdr Ankur Pandya, Dr Rachael Pereira

1. How to Act and Speak Like A Humanitarian Aid Worker Abstract 166
   Associate Professor Mark Leong, Head, SingHealth Humanitarian Relief Programme, SingHealth, Singapore

2. Conduct Of A Medical Volunteer In Humanitarian Medical Missions Abstract 293
   Ms Grace Sardual-Burgos, Nurse, Houston Royal Oaks Lions Club, United States

3. Qualities Needed By Western Trained Nurses Volunteering in Hospitals In Developing Nations Abstract 264
   Julie Bostrom, Nurse, St. Charles Medical Center, United States

4. Qualities Of A Successful Medical Volunteer Abstract 191
   Mr Bodinga Boyiga Nuga, M.Gorky Donetsk National Medical University, Ukraine

5. Panel Discussion

Afternoon Symposia 4
Cleft Lip & Palate Missions in Different Countries
Auditorium

Chairperson: Dr Mark Moore, Professor Bowornsilp Chowchuen

1. Paraguay Experience: Kilometer 81 Abstract 200
   Professor Mirek Stranc, University of Manitoba, Canada

2. Cleft Lip & Palate (CLIPP) Mission to Sitagu Ayudana Hospital, Sagaing Hills, Sagaing, Myanmar Abstract 253
   Mr Masniza Mustaffa, Health Coordinator, Mercy Malaysia

3. Cleft Surgery Missions to Miri, Sarawak Abstract 306
   Dr Kim K Tan, Pantai Hospital Kuala Lumpur, Malaysia

4. Life-Changing Through Operation Smile Humanitarian Missions In Cambodia Abstract 308
   Dr Theavy Mok, Operation Smile Cambodia

5. 25 Years Lesson Learned of Comprehensive Cleft Care In Developing Country Abstract 257

Afternoon Symposia 5
Community Projects/ Primary Healthcare
L1-S3

Chairperson: Dr Tham Meng Keat, Prof Fong Poh Him

1. Field Report of Recce Mission To East Timor Abstract 269
   Ms Jayne Chiang, NUS Yong Loo Lin School of Medicine, Singapore

2. Community Building Programs In Bandipur, Nepal Abstract 274
   Dr Tham Meng Keat, Mt Elizabeth Medical Centre, Singapore

3. Oral Hygiene in School Children In Tansen, Nepal Abstract 260
   Dr Roshan Kharel, United Mission Hospital Tansen, Nepal

4. Lessons Learnt From A Successful Specialized Centre In Mongolia Abstract 210
   Mr David Sin, NUS Yong Loo Lin School of Medicine, Singapore

5. Impressions, Concerns and Suggestions – A Study From The Primary Caregivers in Mongolia Abstract 226
   Ms Tham Kar Mun, NUS Yong Loo Lin School of Medicine, Singapore

6. Panel Discussion

Afternoon Tea/Poster Exhibition
Foyer

Afternoon Symposia 6
Education and Training in Humanitarian Medical Missions
Auditorium

Chairperson: Mr Erik Torjesen, Assoc. Prof Celia Tan

1. Building Bridges In Asia – The Education Model Abstract 182
   Associate Professor Celia Tan, Singapore General Hospital, Singapore

2. Paediatric and Neonatal Education and Care In A Maternal And Child Health Volunteer Humanitarian Mission To Myanmar Abstract 190
   Associate Professor Poon Woei Bing, Singapore General Hospital, Singapore
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1. **Training Healthcare Professionals From Underserved Regions As A Long Term Strategy To Improve Its Healthcare System** Abstract 199  
   Dr Umapathi Thirugnanam, National Neuroscience Institute, Singapore  

2. **Striving Towards Improving Maternal Morbidity and Mortality In Kampong Chhnang Province, Cambodia: A SCVD Initiative Collaborated by KK Women’s & Children’s Hospital (Medical Mission Trip 2013-2015)** Abstract 221  
   Dr Sharon Foo, KK Women’s & Children’s Hospital, Singapore  

3. **Q&A**

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### Afternoon Symposia 7

#### 1600 – 1800

**Ophthalmology Missions in Different Countries**

**Chairperson: Dr Wong Tien Yin (Dr Shamira Perera), Dr Frank Klemm**

1. **Navigating The Transition From Post-Conflict Mission to Permanent Locally-Controlled Service** Abstract 202  
   Dr Genevieve Oliver, National Eye Centre, Dili, Timor-Leste  

2. **Eye Trips in the Region - Cataracts and Beyond** Abstract 222 & 223  
   Dr Stephanie Ming Young, National University Hospital, Singapore  

3. **Project Netra – Restoring Sight in the Tribal Belt of Western Odisha**  
   Jayant Venkatramani Iyer, Singapore National Eye Centre  

4. **Prevention and Healing of Cataract and Blindness In Tanzania** Abstract 305  
   Dr Frank Klemm, Vision for Puma E.V., Germany  

5. **Musings of a Volunteer Ophthalmologist** Abstract 218  
   Dr Pauline Cheong, Ophthalmic Consultants, Singapore  

6. **Q&A**

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### Afternoon Symposia 8

#### Paediatric Cardiology/ Cardiac Surgery in Humanitarian Missions

**Chairperson: Dr Sriram Shankar, Dr Josephine Tan**

1. **Dr Sriram Shankar/Dr Josephine Tan** Abstract 342  
2. **Saving The World, One Heart At A Time** Abstract 196  
   Dr Cheng Ming Hua Jonathan, Singapore Health Services, Singapore  

3. **First Open Heart Surgery Programme In Mauritius (A Saudi Arabian Contribution)** Abstract 204  
   Dr Fazlur Jaufeerally, Singapore General Hospital, Singapore  

4. **Cardiothoracic Surgery In Papua New Guinea** Abstract 205  
   Dr Noah Tapaua, National Heart Centre Singapore, Singapore  

5. **Q&A**

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### End of Scientific Programme

**1830**  
**Welcome Reception**  
Foyer and Atrium
Friday, 31 October 2014

0830 – 0900  Registration  Foyer

0900 – 0930  Plenary Lecture 1  Auditorium

Citation: Mr Lee Poh Wah
Building Access to Fullest Palliative Care as a Human Right
Associate Professor Cynthia Goh
Senior Consultant, Department of Palliative Medicine, National Cancer Centre Singapore, Singapore

0930 – 1000  Morning Tea/Poster Exhibition  Foyer

Morning Medical Aid in Natural Disasters

1000 – 1115  Morning Symposia 9A  Auditorium

A) The Role of Military in Humanitarian Medical Missions

Chairperson: RADM (DR) Kang Wee Lee, Professor Anantharaman Venkataraman

1. The Role Of The Military In Humanitarian Medical Missions – The SAF Perspective Abstract 318
   RADM(DR) Kang Wee Lee, Headquarters, Singapore Armed Forces Medical Corps

2. Operational And Clinical Challenges In Humanitarian Missions: Experience From The Pariaman Earthquake Abstract 319
   LTC(Dr) Pang Hee Nee, Army Medical Services, Singapore Armed Forces Medical Corps

3. Humanitarian Assistance: The RSN Surgical Deployment Concept Afloat and Peri-Operative Challenges at Sea Abstract 320
   MAJ(DR) Liow Ming Han Lincoln, Navy Medical Service, Singapore Armed Forces Medical Corps

4. The Role of Aeromedical Evacuation in Humanitarian and Disaster Relief Operations Abstract 321
   SLTC(Dr) Dale Lim, Air Force Medical Services, Singapore Armed Forces Medical Corps

5. Enhancing Inter-operability and Co-ordination in Military Medicine Response for Disaster Relief Operations Abstract 322

1115 – 1130  Break

Morning Symposia 9B  Auditorium

B) Logistics and Preparedness for Natural Disasters

Chairperson: Dr Robert de Souza, Assoc. Professor Stefan Kutzsche

1. Logistics in Emergency Relief Operations – Challenges and Opportunities Abstract 316
   Dr. Robert de Souza, Executive Director, TU-Asia Pacific & Mr Jonas Stumpf, Program Director, Kuehne Foundation – NUS HumLog Centre, Singapore

2. Logistics and Preparation For A Medical Mission – Disaster Medical Action Team Logistics, Rationale and Example Abstract 309
   Professor Anantharaman Venkataraman, Senior Consultant, Department of Emergency Medicine, Singapore General Hospital, Singapore

3. Developing Multiple Casualty Incident Preparedness and Response Competence Through Team Training In Remote Areas Abstract 186
   Associate Professor Stefan Kutzsche, International Medical University, Malaysia

4. Mercy Malaysia’s Medical Relief Society Emergency Response Unit (ERU) – A Disaster Medical Action Team Abstract 236
   Dr Shalimar Abdullah, Executive Committee, Emergency Response, Mercy Malaysia, Malaysia

5. Pre-deployment Preparation For Disasters And Humanitarian Assistance Missions Abstract 288
   Dr Ng Yih Yng, Chief Medical Officer, Singapore Civil Defence Force, Singapore

6. Panel Discussion

1245 – 1330  Lunch/Poster Exhibition  Foyer
**Morning Symposia 9C**

**Sharing Experiences in Natural Disasters**

**Chairperson:** Assoc. Professor Mark Leong, Dr Shalimar Abdullah

1. **What Really Goes On In A Humanitarian Medical Mission** - Observations and Experiences Over the Last Decade in SingHealth Humanitarian Relief Programme Abstract 167
   - Associate Professor Mark Leong, Head, SingHealth Humanitarian Relief Programme, SingHealth, Singapore

2. **Paediatric Morbidity In The Pakistan Floods 2010 – Experience of a Singapore Medical Relief Team** Abstract 178
   - Dr Gene Ong, Emergency Medicine Department, KK Women’s & Children’s Hospital, Singapore

3. **Ilo Ilo – Typhoon Haiyan** Abstract 181
   - Associate Professor Rahul Goswami, Emergency Medicine Department, Changi General Hospital, Singapore

4. **Q&A**

**Break (10 minutes)**

**Chairperson:** Dr Jugindra S, Mr Benjamin William

5. **Approach To Decision-Making For Operative Intervention In Orthopaedic Trauma Cases In Austere Conditions – Typhoon Haiyan Experience** Abstract 232
   - Dr Shalimar Abdullah, Executive Committee, Emergency Response, Mercy Malaysia, Malaysia

6. **Mercy Malaysia Medical Relief Society Field Out-Patient Clinic Deployment During Typhoon Haiyan – Lessons Learnt** Abstract 235
   - Masniza Mustaffa, Health Coordinator, Executive Committee, Emergency Response, Mercy Malaysia, Malaysia

7. **Management of Humanitarian Emergencies: Focus On Children** Abstract 240
   - Mr Erik Torjesen, Health Frontiers, Singapore

8. **Experience As A Relief Volunteer In The Gujarat Earthquake** Abstract 255
   - Dr Jugindra S, Director, Medical Services, Shija Hospitals & Research Institute, India

9. **Q&A**

**Morning Symposia 10**

**Specialised Services in Humanitarian Missions**

**L1-S3**

**Chairperson:** Dr Russell Corlett, Dr Chew Khong Yik

1. **Establishment of A Urological Surgical Service In A Developing Pacific Island Nation: A Review of The Vanuatu Urology Pacific Island Project** Abstract 234
   - Dr Richard Grills, Barwon Health, Deakin University, Australia

2. **Interplast Australia and New Zealand: Microsurgical Skills Development In Bangladesh** Abstract 243
   - Dr Russell Corlett, Interplast Australia and New Zealand, Australia

3. **Orthopaedic Outreach: Recognising The Need For A Socially Responsible Approach To Humanitarian Aid In Developing Countries** Abstract 262
   - Mr Graham Hextell, Chief Operational Manager, Orthopaedic Outreach, Australia

4. **All Ears Cambodia – A Local Health Project By Cambodians, For Cambodians** Abstract 297
   - Dr Ho Eu Chin, ENT Consultant, Tan Tock Seng Hospital, Singapore

5. **Q&A**

**Break (10 minutes)**

**Chairperson:** Dr Ho Eu Chin, Dr Christopher Goh

6. **ENT Non-surgical Humanitarian Work – The Philippines** Experience Abstract 298
   - Dr Ho Eu Chin, ENT Consultant, Tan Tock Seng Hospital, Singapore

7. **Acheh Tsunami: Anaesthetic Considerations In Disaster Surgical Mission** Abstract 171
   - Dr Tan Tong Khee, Senior Consultant, Department of Anaesthesiology, Singapore General Hospital, Singapore

8. **Tales of The Unexpected: Stories From The Surgical Mission Field** Abstract 300
   - Dr Lee Shu Ying, Consultant, KK Women’s & Children’s Hospital, Singapore

9. **Complex Reconstruction for Neglected Facial Tumours in the Third World: Bringing Humanitarian Aid Home** Abstract 329
   - Dr James Leong, Clinical Director Plastic Surgery, Dandenong and Casey Hospitals, Monash Health, Australia

10. **Q&A**
Day 2
Friday, 31 October 2014

**Afternoon Symposia 11**
Role of Nurses in Humanitarian Medical Missions

**Chairperson: Ms Pansy Patsy Lee, Ms Gin Cheng Yam**

1. **Nursing Touch In An Operation Smile Mission** Abstract 183
   Ms Jasmine Goh, Staff Nurse, Department of Plastic, Reconstructive and Aesthetic Surgery, KK Women’s and Children’s Hospital, Singapore

2. **The Development Of A Paediatric Emergency Transfer Service In A Developing World Setting With Assistance From International Medical Teams** Abstract 350
   Helen Catton, Angkor Hospital for Children, Cambodia

3. **Preparing For Humanitarian Medical Missions: What It Entails** Abstract 231
   Ms Tan Moarie, Nurse Clinician, Singapore General Hospital, Singapore

4. **Cyclone Nargis In Myanmar** Abstract 246
   Mr Muruges Mekkappan, Nurse Clinician, Tan Tock Seng Hospital, Singapore

5. **Warmth Beyond The Cold Walls: Operating Room Nurses’ Experience On Volunteer Medical Mission** Abstract 228
   Ms Ong Shihui, Senior Staff Nurse, Department of Plastic, Reconstructive and Aesthetic Surgery, Singapore General Hospital, Singapore

6. **Q&A**

**End of Scientific Programme**

**Afternoon Symposia 12**
Students in Humanitarian Medical Missions

**Chairperson: Assoc. Professor Dean Sutphin, Dr Jugindra S**

1. **Complementing The Current Healthcare Services in Poipet, Cambodia With A Referral System** Abstract 220
   Ms Soh Ser Yee, NUS Yong Loo Lin School of Medicine, Singapore

2. **Galvanizing Cambodian Students To Maintain Sustainable Healthcare Services In Cambodia** Abstract 233
   Mr Joel Chan Chee Yee, NUS Yong Loo Lin School of Medicine, Singapore

3. **Humanitarian mission in Cambodia: are we improving after 7 years?** Abstract 172
   Dr Tan See Wei, University Malaya Hospital, Malaysia

4. **Preparing and Operating a Safe and Effective Pharmacy – A Cambodian Medical Mission** Abstract 177
   Mr Tan Xin Zhong Timothy, NUS Yong Loo Lin School of Medicine, Singapore

5. **The importance, outcomes and challenges of administering household surveys in Humanitarian Medical Missions using Project Battambang as a case study** Abstract 225
   Mr S. Surentheran, NUS Yong Loo Lin School of Medicine, Singapore

6. **Q&A**

**Free / Social Event**
Saturday, 1 November 2014

0830 – 0900  Registration  Foyer

0900 – 0930  Plenary Lecture 2  Auditorium

Citation: Claire Ang
Preparation, Prevention and Pitfalls in Short Term Medical Mission Trips
Dr Tan Lai Yong
Toh Chin Chye Fellow, College of Alice and Peter Tan, National University of Singapore, Singapore

0930 – 1000  Morning Tea/Poster Exhibition  Foyer

1000 – 1100  Morning Symposia 13  Auditorium
Young Singaporean Volunteers Abroad

Chairperson: Professor Mirek Stranc, Assoc. Professor Aymeric Lim

1. Genesis Of Student-Led Missions To Cambodia Abstract 323
Dr Jonathan Ng, Medical Officer, Singapore General Hospital

2. Relevance Of Student Led Humanitarian Medical Missions Abstract 229
Ms Huang Xiaoting, NUS Yong Loo Lin School of Medicine, Singapore

3. The Value Of Humanitarian Missions in Medical Student Training Abstract 173
Dr Tan See Wei, University Malaya Hospital, Malaysia

4. Humanitarian Assistance And Accountability: What Are We Really Talking About? Abstract 164
Mr Tan Yen Siong Andrew, NUS Yong Loo Lin School of Medicine, Singapore

5. The Logistical Considerations Of A Humanitarian Medical Mission Abstract 174
Mr Tan Xin Zhong Timothy, NUS Yong Loo Lin School of Medicine, Singapore

6. Panel Discussion

1100 – 1215  Morning Symposia 14  Auditorium
Hainan Smile – A Model for Multi-Disciplinary Team in Action

Chairperson: Professor ST Lee, Dr Catherine Lee

1. Genesis of Hainan Smiles Collaborative Project Abstract 325
Mr Richard Cheng

2. Surgical Aspects Abstract 337
Dr Ng Siew Wing

3. Anaesthesia for Medical Missions in Hainan Abstract 332
Dr Philip Tseng

4. Nurses:
   – Operating Theatre Nurses Preparation for Hainan Mission Abstract 331
     Ms Goh Meh Meh
   – Nurses’ Roles In Management of Cleft Lip And Palate Patients Abstract 326
     Ms Lew Lian Choo

5. Role of Speech Therapy in Hainan Mission Abstract 336
Dr Phua Sin Yong

6. Orthodontic Care Abstract 345
Dr Catherine Lee

1215 – 1300  Lunch/Poster Exhibition  Foyer
Panel Discussion 1

**Developing Guidelines for Volunteer Medical Missions to Developing Countries – Do’s & Don’ts**

Chairperson: Professor Mirek Stranc, Professor ST Lee

1. **Interplast Australia and New Zealand**
   Ms Prue Ingram, Chief Executive Officer, Interplast Australia and New Zealand, Australia

2. **Operation Smile Singapore Abstract 335**
   Mr Abhimanyu Talukdar, Executive Director, Operation Smile Singapore

3. **Maintaining Quality Assurance and Governance On Humanitarian Missions… The Operation Smile Model Abstract 189**
   Dr Wg Cdr Ankur Pandya, Deputy CMO and Director of Quality Assurance, Opmsmile, United Kingdom

4. **Shija Hospitals & Research Institute**
   Dr Jugindra S, Director, Medical Services, Shija Hospitals & Research Institute, India

5. **Medico-Legal Implications in Humanitarian Medical Missions Abstract 303**
   Mr Michael Yap, Partner, Soh, Wong & Yap, Singapore

6. **International Committee of the Red Cross Abstract 325**
   Ms Katrin Weigmann, Regional Delegate, International Committee of the Red Cross, Kuala Lumpur

7. **Panel Discussion**

1300 – 1430

Panel Discussion 2

**Future of International Humanitarian Medical Missions**

Chairperson: Mr David Inglis, Professor Anantharaman Venkataraman

1. **SIF’s Vision And Experience Of Building Healthcare Capacity In Asia With Medical Volunteers Abstract 313**
   Ms Margaret Thevarakom, Director, International Volunteerism, SIF.

2. **Reflections from Interplast Australia and New Zealand Abstract 339**
   Ms Prue Ingram, Chief Executive Officer, Interplast Australia and New Zealand, Australia

3. **Future of International Humanitarian Medical Missions – Operation Smile Singapore Abstract 334**
   Mr Abhimanyu Talukdar, Executive Director, Operation Smile Singapore, Singapore

4. **The Future of Rendering Humanitarian Aid – Smile Train’s Philosophy Abstract 330**
   Mr Satish Kalra

5. **Goals of International Medical Missions – Humanitarian Medical Rescue Missions in Operations Abstract 307**
   Professor Anantharaman Venkataraman, Senior Consultant, Department of Emergency Medicine, Singapore General Hospital, Singapore

1445 – 1615

End of Scientific Programme

Final Banquet

Marina Bay Sands
Collaborations between healthcare individuals and institutions across national borders play a crucial role in the advancement of the expertise and increased availability of healthcare especially in the developing world. SingHealth places emphasis on International Collaboration to achieve better patient care, training and research to enhance its profile and role as an Academic Medical Cluster in this region and beyond. ICO was set up to focus on and optimize these efforts.

SingHealth institutions (SGH, KKWCH and the 5 National Centres) have been involved actively in medical, nursing and allied health initiatives with our neighbours in Asia. Medical projects involving doctors from orthopedics, emergency and trauma, plastic surgery, cardiology and cardiac surgery, paediatrics, obstetrics and gynaecology and others have made significant impact in enhancing medical expertise and delivery of patient care to hospitals in Indonesia, China, Myanmar, Vietnam and Cambodia. Training of their promising doctors in Singapore and subsequent surgical missions to support these trainees in their home countries have been an important strategy for success.

Nursing and Allied Health training initiatives are crucial complements to the medical team in its goal of achieving excellent patient care. Funding for training has been more challenging because of the large number of personnel involved. An essential focus is our strategy of training the local trainers. The Alice School of Advanced Nursing and the Post-graduate School of Allied Health in SingHealth have been particularly successful in their many projects with local partners.

Many of these long-term collaborations, some stretching over decades, have been especially fruitful. The benefits are mutual and recently, we have been sending some of our trainees for attachments to these institutions, which by virtue of their tremendous workload, are now centres of excellence. The Singapore International Foundation (SIF) has partnered many SingHealth individuals and institutions over the years. This collaboration with clear objectives and KPIs has been particularly successful. SIF and SingHealth signed a memorandum of understanding (MOU) early this year to formalize the collaboration and to proactively develop signature programs to focus on key needs and key countries.

SingHealth has also partnered with Temasek Foundation for nursing training in Shanghai, China and disaster management training in Makassar, Indonesia.

Projects in new geographical areas such as Papua New Guinea will require us to explore other sources of funding as they are beyond the scope of local funding agencies. Engaging international funding agencies will be more challenging and there is a need to align our projects with Millennium Development Goals and Global Health Initiatives.

Global Health is changing healthcare education and delivery. Duke Global Health Institute is at the forefront of this developing field and Singapore is one of their priority areas through collaboration with DukeNUS. SingHealth and DukeNUS, partners in this Academic Medical Cluster, are in a unique position to develop Global Health as a program in order to make a significant impact on the lives of the people in this region of challenging healthcare needs.

Interplast Australia & New Zealand (Interplast) was established in 1983, and is an Australian-based not for profit organisation which sends fully qualified plastic and reconstructive surgical teams around the Asia Pacific region to provide life-changing surgery and train local medical personnel. Over the past 30 years, Interplast’s programs have evolved with the ever-changing needs of our local partners, implementing programs based on principles of capacity building and partnership which are enshrined in our Development Philosophy.

Interplast’s programing takes a “twin-track” approach - “that is, supporting the surgical service needs of today, while training up local medical personnel to be able to better manage local needs in the future.

Currently, Interplast is working in 16 countries around the Asia Pacific region. In all of our program partner countries, Interplast develops an annual country program plan in collaboration with our local partners. This plan identifies the local needs for that particular country and designs projects to work towards meeting those needs, in a broader context of the mission and vision of Interplast and the health sector in that country. In many of the places where Interplast works, these goals and program focus developed substantially over the decades.

One example which is illustrative of Interplast’s focus on building of local capacity and the shift in programming from service delivery to training and mentoring is Interplast’s Fiji program. When Interplast first started working in Fiji in 1983, the
The focus of its work was very much on providing otherwise unavailable plastic and reconstructive surgical service programs. Over the years, the focus of Interplast’s Fiji programs have shifted dramatically to focus much more on the building of local surgical, anaesthetic, nursing and allied health capacity. There are many training-specific programs in Fiji each year, and the ongoing surgical visits focus substantially on involving the local surgeons and surgical trainees to improve their clinical skills in the operating theatre.

Drawing on 30 years of experience working across the Asia Pacific region, Interplast has developed a deep understanding of the complexities of the health sector which has underpinned the implementation of its integrated “twin-track approach”. This experience, together with the significant technical expertise in plastic and reconstructive surgery and associated medical and allied health services, has enabled Interplast to strengthen its clinical and developmental outcomes for individuals, in-country partners and local health systems.

The Development of Operation Smile in China
Wu Wei
1Executive Director, Operation Smile China Medical Mission
Email: wuweihz@gmail.com

In China, roughly 1 in 600 children is born with a cleft lip, cleft palate, perhaps both. Many families cannot afford proper medical treatment, and their children face a lifetime of social and physical hardship. Fortunately, a one-hour surgery can change all this.

Operation Smile, the worldwide children’s medical charity, conducted its first medical mission to China in May 1991. During the mission, medical volunteers from around the globe performed free reconstructive surgery on 176 children. Later that year, Operation Smile China Medical Mission Ltd. (OSCMM) was founded in Hong Kong to organize and fund medical programs in China.

After 23 years’ development, with the substantial support of individuals, corporations, governments, OSCMM has established medical mission sites in more than 24 provinces, including Beijing, Hangzhou, Nanchang, Lanzhou, Qingdao, Linyi, Dujianyang, Nejiang, E-meishan, Mianyang, Aha, Lianshengan, Nanji, Suqian, Xi-an, Yan-an, Baoji, Ha-erbin, Zhengzhou, Nancyang, Umumqi, Kunming, Zhenshong, Qianxi, Hefei, Zhaoping, Meizhou, Zhongshang, Fengkai, Nanning, Baise, Zhangzhou, Kashgar, Hulunbuir, Liangyang etc.

In the early days, OSCMM only had one or two missions every year. With the establishment of more medical mission sites, the brand influence of operation smile became more and more widely, more governments and hospitals began to collaborate with operation smile. Since 2007, we have been able to organize around 20 missions annually.

As for the medical volunteers, starting with 10 domestic volunteers, we now have a database of more than 500 domestic medical volunteers. The doctors and nurses became OSCMM volunteers by attending missions. For a better development of the medical volunteers, OSCMM ,with the support from American Heart Association, provides lifesaving skills certification courses annually for about 200 doctors and nurses in China. Also, outstanding medical volunteers are sponsored to attend specialty courses and training overseas, to share knowledge and learn from the best medical professionals in the field.

As of now, OSCMM has helped over 27,000 needy children and young adults regain their smiles and self-confidence to lead healthy, normal lives. We are always adhering to mobilizing a world of generous hearts to heal children’s smiles and transform lives across China.

A Successful Volunteer Collaboration: Residency and Fellowship Training in the Lao PDR
Erik Torjesen1, Karen Olness
1President, Health Frontiers
Email: etorjesen@sas.edu.sg

Volunteer-based efforts can support effective and sustainable medical education, both for residency training in Paediatrics and Internal Medicine, and for subspecialty fellowships. A volunteer-based model, focused on relationships and support, can be effective and sustainable.

Health Frontiers (HF) is an outreach of health professionals, focused on outcomes in global health and child development that would be lost without a volunteer effort. In our flagship Laos Project, 76 new Lao paediatricians and 67 new Lao internists have graduated to date in our 23-year collaboration with the Lao University of Health Sciences (UHS). When it began, Laos had only a handful of fully trained medical specialists. They were determined to launch in-country residency training programs, and they asked HF volunteers to help them do it. The graduates are now transforming primary health care throughout the country, and taking increasing responsibility for the intensive three-year training programs.

This has been achieved by focusing on long-term outcomes. We began by building relationships with stakeholders in the Lao health and education hierarchies,
working collaboratively to support their efforts to develop and deliver advanced curricula. Volunteer efforts have been key, with long-term physician volunteers supporting the training programs, modeling good teaching, and coordinating visiting short-term specialist teachers. Finally, humility and a sensitivity to cultural norms have proven important.

Volunteer-based efforts can significantly enhance medical education programs by working collaboratively with host country institutions and professionals. By building capacity within host country medical systems, we can make sustainability a more likely outcome for these efforts.

Preparing for a Successful Medical Volunteer Mission

Keith Koh1
1Assistant Director (International Volunteerism) Singapore International Foundation
Email: keith.koh@sif.org.sg

Medical volunteers often work in life and death situations under very challenging conditions, with limited resources at hand and within immense time pressures. A key to success of these missions lies in planning missions well - recruiting the right volunteers, preparing them well for the mission and ensuring they are able to deliver their work in a safe and supported environment as is reasonably possible.

The Singapore International Foundation (SIF) sends more than 100 medical volunteers a year on skills training projects in 10 countries in Asia. This presentation will share our experience of utilising four key principles from our Project and Volunteer Management Systems to ensure mission success and also seamlessly guide and support our volunteers for a safe and meaningful volunteering experience. Our first principle and most critical step to overseas medical missions lies in establishing clear goals and objectives between all parties and planning well to achieve those objectives. SIF spends more than 50% of its effort in ensuring that all parties agree on what needs to be achieved, how it will be achieved, roles and responsibilities of every individual, resource required and how the mission will be carried out from a logistical perspective. This investment has proven mission success and volunteer satisfaction every time.

The second principle is in finding the “right” volunteers for the mission. Skills match aside, it is critical that a mission director screens and selects the right team members to form a collaborative and high performing team - united by common objectives, personal motivations, realistic expectations and positive team dynamics.

Volunteer orientation and training is another important principle to ensuring mission success. This ensures volunteers know what is expected of them, what field conditions to expect, what risks and opportunities to expect and how to deal with cultural difference, resource constraints and unexpected incidents such as emergencies or security threats.

Strong logistical support for volunteer safety is paramount in ensuring a successful mission. In addition to detailed planning, coordinating arrangements, the SIF provides logistical support to volunteers in the form of safe transport and accommodation, and basic living expenses during the mission. A comprehensive risk management plan, including insurance coverage, established emergency management processes and protocols assure volunteers of a reasonably safe mission away from home.

This presentation will illustrate the above principles by sharing some of the most challenging and sometimes funny experiences SIF has faced and conclude on key lessons learnt from some of these situations.

Reflections from Interplast Australia & New Zealand

Prue Ingram1
1Chief Executive Officer, Interplast Australia & New Zealand
Email: prue.ingram@interplast.org.au

As with all humanitarian programs, sourcing funds is a key focus to ensuring that these programs can be delivered. There are many potential donors for these types of programs but also many pitfalls, particularly in relation to securing longer term funding. Funding is generally subject to current and strategic directions of donors and particularly if there is a reliance on donations from the general public, subject to variations in the prevailing economic climate. There are few programs which have guaranteed long-term funding for priorities.

Some of the challenges around funding include:
• resisting the lure of funds that have specific requirements from donors which conflict with stated program objectives
• the limitations of insecure funding on longer term planning
• reliance on one major funding source

The experience of Interplast Australia & New Zealand (Interplast) is that funding is a continually evolving process and must be strongly linked to organisational values and the ability to demonstrate effective program outcomes and value for donor money.
Interplast’s strategic approach to funding and sponsorship incorporates:

- A diverse funding base which includes Rotary clubs, government, trusts and foundations, corporate supporters and general public
- Guidelines to ensure that funding is only accepted from sources that are compatible with Interplast’s strategic objectives and philosophy
- Clear and transparent processes that comply with fundraising legislation
- Donor stewardship at all levels

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**340  Funding Resources for Medical Missions – Rotary International**

Yap Lip Kee¹

¹Rotary International
Email: lipkce@gmail.com

The focus of Rotary International in relation to humanitarian missions can be summarised as promoting peace, fighting disease, providing clean water, and saving mothers and children. Supporting education and growing local economies make up the remaining focus points but are more long term and of less relevance to medical missions.

Despite being the world’s largest service organisation Rotary International’s ability to help fund local humanitarian missions is by working through the heart of Rotary, its Rotary Clubs (there are around 1.2 million members in more than 30,000 clubs worldwide) and giving support through the Rotary Foundation. Much of the funding is through working partners, large organisation like the World Health Organisation, UNESCO, Global FoodBanking Network, Bill and Melinda Gates Foundation.

However, for medical missions and regional humanitarian missions the relevant examples are the partnership of local Rotary Clubs with health caregivers with support given by Rotary Foundation through its Global Grants program. The term Global Grants may sound grand but its impact is local. The best examples to illustrate this working relation is to describe the work carried by the Rotary Club of Singapore through its “Gift of Sight” programs of the past decade in India and Cambodia and recent Global Grant Projects like the “Help the Children” Project in Malang and “Mobile Dental Clinic” in Cuyan, Philippines.

The examples illustrate the pitfalls of liberally giving financial aid and the benefits of tight fiscal control and adherence to ethical guidelines in financing medical missions. There is a fine line between doing good and being a do gooder.

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**333  Funding Resources for Medical Missions – Operation Smile Singapore**

Abhimanyu Talukdar¹

¹Executive Director, Operation Smile Singapore
Email: atalukdar@operationsmile.org.sg

As a resource centre for Asia, Operation Smile Singapore employs various ways to ensure that resources are available for missions wherever there is a short fall. The resource generation is not limited to Singapore, and includes the world. Also, funds are only one form of resource. Operation Smile depends on various other forms of resources, including medical volunteers, donated services and products, help in getting regulatory approvals etc.

In countries where there are local Operation Smile offices – China, India, Cambodia, Thailand, Philippines and Vietnam, Operation Smile Singapore works through the local foundations, if and when there is a need. In countries where there is no direct Operation Smile representation – Bhutan, Bangladesh, Indonesia, Laos, Mongolia, Myanmar, Uzbekistan and Timor Leste, Operation Smile works with local partner organisations to ensure that the mission resources are available. Operation Smile Singapore currently do not have a system of calculating non-cash donations. But non-cash donations certainly form a formidable and vital part of our resource generation. In fact the value of non-cash resources will be much higher than the cash or tangible donations. If we are able to put a value to that, the resources generated from within the programme countries will be certainly higher than the resources generated from the resource countries.

For a clearer understanding, I will focus on one specific multi-country fundraising event organised and managed from the Singapore office. I am choosing a fundraising event because revenue generated is in cash, and hence tangible.

Smile Asia Week 2014 was initiated in partnership with The Ritz-Carlton Hotels & Resorts in Asia to celebrate Smile Asia Week from 5-11 May 2014. This was a first of a kind initiative where we sold over 14,000 Smile Asia cakes through 20 Ritz-Carton properties in 9 countries and territories. Over $500,000 was raised from China, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, Singapore and Thailand. We achieved 94% of our target revenue.

For the record, the funds raised in other countries were given back to the respective country foundations. The only condition was that the funds has to be expended in programmatic activities. Wherever a country foundation didn’t exist, the funds were designated for expending in that country.
The presentation will detail our approach to this initiative and the challenges we faced because of varying regulatory requirements, and how we managed to pull it through.

324 Role of the Singapore Hainan Hwee Kuan in Project ‘HAINAN SMILE’
Richard Joseph Cheng
1Head of Youth Wing, The Singapore Hainan Hwee Kuan
Email: richard@bldrcnas.com.sg

The role of the Singapore Hainan Hwee Kuan is as Facilitator and Financial Sponsor of the project. The Singapore Hainan Hwee Kuan is a Singapore Chinese Clan. It was founded in 1854 by Hainanese immigrants from the Hainan Island, China. With a 5000 membership strength and over 220,000 Singaporean Hainanese, the Hainan Hwee Kuan has raised nearly $200,000/- to fund HAINAN SMILES from 2009 to 2013.

Each year, there are two medical missions in April and October. The April Mission which last about 2 days is to review the cases of patients that were operated in the previous October and also to shortlist new patients and current patients for the October Medical Mission. The team comprises of about one to two plastic surgeons, one anaesthetist, one orthodontist, one speech therapist and two nurses. The April Medical Mission will cost about $5000 to $6000.

For the October Medical Mission which last 8 to 9 days, the team is much larger as it involves operating on about 30 to 35 patients. The team comprises of about 5 plastic surgeons, 3 anaesthetists, one orthodontist, three to four speech therapists, 4 operating nurses and three ward nurses. The October Medical Mission will cost about $28,000 to $32,000.

HAINAN SMILE is the first time that the Singapore Hainan Hwee Kuan has engaged in a Humanitarian Medical Mission. In fact, the Singapore Hainan Hwee Kuan is the only overseas Hainanese Association in the World Federation of Hainanese Associations to have led medical mission to their ancestral home of Hainan Province, China.

HAINAN SMILE is made possible through the Medical Specialists from Singapore, its medical counterparts from Chengmai, the Government of Chengmai County, Hainan Federation of Returned Overseas Chinese, the Singapore Hainan Hwee Kuan and the generous sponsorships of the Singaporean Hainanese and their fellow Singaporeans.

261 KK Hospital Regional Outreach to Kids Program and more
Anette Jacobsen
1Associate Professor, Paediatric Surgery, Clinical Education Lead (Medicine), KK Women’s and Children’s Hospital
Email: anette.jacobsen@kkh.com.sg

The KKH Regional Outreach to Kids Program was established in April 2002. Its aim is to sponsor patients for complex procedures which cannot be done in the parent country. To date, over 100 patients have been treated. The funding has been purely charitable funding. The work done here is augmented by mission trips and overseas’ fellowship training of the regional surgeons in KKH.

299 TIMA · Humanitarian Medicine with Love and Compassion
Ho Eu Chin
1ENT Consultant, Tan Tock Seng Hospital
Email: eu_chin_ho@ntu.edu.sg

Introduction
TIMA or the Tzu Chi International Medical Association is part of the Tzu Chi Foundation, which was founded in 1966 by a young Buddhist nun in Hualien, Taiwan. From this remote part of Taiwan, Tzu Chi Foundation has developed into an international humanitarian NGO (Non-Government Organisation) with Special Consultative Status with the United Nations. Tzu Chi currently has a presence in 50 countries, including Singapore.

Tzu Chi means ‘Compassionate Relief’ and their volunteers strive to serve those in need with compassion, kindness, joy and selflessness; regardless of race, religion, language and nationality. Tzu Chi has 4 main missions, namely; Charity, Medicine, Education and Humanistic Culture. TIMA volunteers focus on the delivery of humanitarian and humanistic medicine, but may also participate in other Tzu Chi activities.

TIMA Singapore
TIMA chapters are found in many countries with Tzu Chi offices. TIMA Singapore started in 1999. Within Singapore, it operates 2 Free Clinics with the participation of health care and non-health care volunteers. TIMA volunteers also pay home visits to patients with mobility issues.

Local TIMA chapters in each country would evaluate the medical needs of their populations in needy areas. For example, following a natural disaster, medical relief missions are frequently organised, sometimes in conjunction with
humanitarian relief efforts. Where the need arises, local TIMA chapters can invite the participation of TIM chapters from other countries. Singapore TIMA members have had a long track record of contributing to the success of TIMA medical missions in our neighbouring countries, including Sri Lanka, Philippines and Indonesia.

**Modus operandi**

Singapore TIMA welcomes volunteers regardless of racial and religious backgrounds. Volunteers can help out at the 2 Free Clinics or volunteer for overseas medical missions. TIMA overseas medical missions are always delivered at no cost to the recipients. Singapore TIMA volunteers also take pride in giving up their own time and in always fully paying their own costs to participate in overseas medical missions. This ensures that any public donations go fully to the people who need them the most.

Frequently, TIMA missions are to remote areas with poor infrastructure, which present considerable logistical challenges. The close ties, both at organisation and individual levels between the various TIMA chapters have helped ensure the successful running of TIMA medical missions all these years. The safety and well-being of our volunteers are not overlooked either and TIMA missions provide many opportunities for fellowship and sharing.

166  **Basics of Humanitarian Relief – How to act and speak like a Humanitarian Aid Worker**

**Mark Leong**

1Associate Professor, Singapore General Hospital & Head, SingHealth Humanitarian Relief Programme, SingHealth Services

Email: mark.leong.k.l@sgh.com.sg

After a disaster (be it natural or technological, complex or civil), many well meaning folks would naturally like to provide assistance of many different forms to the afflicted community. Healthcare workers in particular can provide such assistance in various phases of the disaster - preparedness, acute, recovery and reconstruction phases. Regardless of the nature of assistance and the beneficiary, humanitarian organizations and their workers will have to work with, work for, or work around many different governmental and non-governmental agencies which throng the mission field. Working in cooperation and collaboration requires the aid worker/volunteer to be able to “speak” and negotiate the humanitarian jargon/talk and “act” appropriately as one. This presentation introduces the key concepts and glossary of terms which a humanitarian worker should have in their armamentarium. To be able to communicate, discuss, negotiate, and present humanitarian issues to an internationally oriented audience including donors and aid agencies is critical in fulfilling the goals of a humanitarian mission.

293  **Do’s and Don’ts in Conduct of Volunteer Medical Missions**

**Grace Sardual-Burgos**

1Nurse, Houston Royal Oaks Lions Club

Email: mikegrace61@yahoo.com

When volunteering to be a part of a medical mission, there are standards and expectations required and should be followed by each member of the team. This will include being involved in the planning process, attending meetings, and participating in fund raising efforts if any. Financially, the volunteer might have to be responsible for his/her own travelling, board and lodging expenses especially if there is inadequate funding from the organization. There are additional recommendations to bear in mind when volunteering in a medical mission such as, familiarization of the culture of the country where medical mission is conducted through reading, interviewing people who have joined medical mission; respecting health care practices of the foreign country; compliance with travel requirements; respecting the law of the country being visited; carrying out assigned task during the mission with prudence; asking for language interpreter if needed and being flexible. In as much as there are “dos” when joining medical mission, there are some precautions or restrictions involved. Volunteers will be prohibited from carrying firearms or to be involved in any terrorist act; neither should they join any political activity nor use illicit drugs or substances. With adequate preparation and adherence to the policies and standard set for medical mission, the learning opportunity for the volunteer is worthwhile and lasting.

264  **Challenges Faced by Western Trained Nurses Volunteering in Hospitals in Developing Nations**

**Julie Bostrom**

1Nurse, St. Charles Medical Center

Email: petejuliekb@yahoo.com

I have participated in 14 humanitarian trips with Operation Smile that have included cleft lip and palate missions, nursing education missions and burn missions. Each one of these missions presents unique challenges to nurses and other volunteers that we don’t encounter at home and we must be able to quickly adapt to a multitude of differences from our working environment. We often arrive jet lagged having travelled hours if days and immediately begin working with 40 or more people we have never met. That alone is a
A medical volunteer is primarily an agent of change. He or she is concerned about the welfare of others and wants to play a part in ensuring that he/she improves people’s health and quality of life. While on a mission, he/she readily adapts to new conditions like harsh weather, new culture, new language, new food and even new lifestyle. His primary objective is to make a healthy difference in the health sector. He/she is driven by the passion and the zeal to bring about positive health changes and his/her commitment to making a difference is relentless. As a result, he/she injects a new dynamism into the medical mission. He carries out people driven intervention on health and on human lives with the vision to create a healthier world in which everyone enjoys a right to a life of dignity and wellness. The ultimate goal of a medical volunteer is to make the greatest possible impact on the causes of debilitating illnesses that incapacitate humanity. The job of a medical volunteer becomes even more meaningful when he/she is able to help the poor and the excluded to take charge of their lives and to eradicate debilitating illnesses. Therefore, a Medical Volunteer must be a team player who is brave and ready to take risks. He must aim constantly to promote, protect and to save lives. He/she must care less about what he/she gets on a medical/volunteer mission. Finally, he/she must be a patient and a selfless humanitarian who is ever ready to go anywhere that duty calls.

315   How Pharmacists Contribute to Successful Missions in Developing Countries
Shyamala Narayanaswamy1
1Pharmacy Practice Manager, Singapore General Hospital
Email: shyamala.nara@sgh.com.sg

Pharmacists are excellent logisticians, and effective and friendly communicators. This places us in an ideal position to professionally support medical missions, especially in developing countries where planning is critical to success. This abstract summarises 5 key success factors (based on personal experience from 13 years volunteering in 9 Asian countries):

1. Be a united team. The mission team must comprise members with compatible temperaments and common objectives. Divisive persons can endanger the team especially if the going gets rough in a rough environment. Useful medical specialties are GPs, ophthalmologists, ob-gyns, and dental surgeons. Able assistants and nurses are needed too.

2. Be logistically prepared. Ascertain access to water, translators, and transport for inventory and humans alike. Have a reliable contact person at the destination location who preferably has some basic healthcare knowledge, or who can advise what medications/items can be purchased there (consider this as supporting the local economy!). Obtain a letter of authorisation if bringing large amounts of medications/equipment, but be prepared for some to be confiscated. Have lockable containers for secure storage. Plan to conduct teaching about basic health principles in a fun way (during lull periods at the clinic), targeted to local women and children e.g. handwashing, tooth-brushing, toilet hygiene, water sanitation, HIV/STD prevention.

3. Be professionally prepared. Make sure there are enough medications. If your team is planning on purchasing meds at destination, ensure that range, quality
and quantity desired are available, as well as stationery needs (envelopes, bottles, spoons, syringes, pens, stickers, sun/moon labels for illiterate patients). Bring a copy of your license. The medical team needs to agree whether/how you will manage chronic diseases e.g. diabetes, and decide in advance how to support acute emergencies that may occur. Learn some basic dispensing phrases in the local dialect. If possible, take your flute or ukelele along. A smile, a kind word and some music can be very healing.

4. Expect challenges. There may be negative local biases due to gender/age/race/religion/diet etc; have contingency plans to manage each scenario gracefully. Be prepared to be flexible. Where possible, teach and nurture the people who work alongside you who long to learn.

5. Taking stock of personal limitations. Elements such weather, food, insects, or even the state of toilets can get to any volunteer; the nadir is at about 5 days.

200   Paraguay Experience: Kilometer 81   Mirek Stranc1, Wanda Stranc
1Professor, University of Manitoba   Email: mirek.stranc@gmail.com

It all started in 1986 when Dr. Frank Duerksen, an orthopaedic resident rotating through Plastic Surgery, asked me to help him with the repair of clefts in Paraguay. The first visit that year took me and my wife Wanda, also a physician, to a small hospital in a Menonite colony that specialized in treating leprosy and was situated 81 kilometers from Asuncion.

The operating room and the wards were the only official structures - the rest of the hospital consisted of huts. There were 24 beds for non lepromatous patients and further 30 in a leprosarium located in close proximity. The operating room had minimal facilities. Medical support was provided by four local doctors who also acted as general practitioners, pathologists, surgeons and filled many other roles.

Over the next 16 years our yearly visits of a week’s duration increased to two weeks as we went to other colonies. Most of our work was cleft-related but we also operated on other conditions as the need arose. On average we operated on 20 patients a week. Anesthesia facilities (the anaesthetist and his assistant travelled daily from Asuncion) were initially rudimentary, so many of the adult surgeries were done under local anaesthesia.

Over the years, the facilities were upgraded to modern standards through the generous support of the Menonite community, Winnipeg Kiwanis, Rotarians and my private patients. These donations induced the local government to provide matching funds and new operating rooms with modern equipment are now on site. Many other facilities including new wards were also built. From 1986 to 2001, we operated on over 300 patients. The only permanent members of the team were myself and my wife who acted as my theater nurse. This arrangement helped as few of the nurses spoke or understood English.

Early on we mentored local doctors. One of whom became a plastic surgeon and now provides regular service to the km.81 community. Towards the end, we started bringing residents and colleagues in the hope that they would continue this work after my retirement.

253   Cleft Lip & Palate (CLIPP) Mission to Sitagu Ayudana Hospital, Sagaing Hills, Sagaing, Myanmar   Masniza Mustaffa1
1Health Coordinator, MERCY Malaysia   Email: masniza@mercy.org.my

According to the Central Women Hospital of Yangon (2008), cleft deformities affect roughly one in every 800 to 1000 babies in Myanmar. The global average is one in every 700, with Native American and some Asian ethnicities experiencing a higher prevalence, and Africans a lower prevalence. CLIPP missions to Myanmar started in 2013 after an on-site assessment was done to collect information regarding the prevalence of cleft lip and palate and facial deformities.

During the 8-day mission to Sitagu Ayudana Hospital, Sagaing Hills, Sagaing, Myanmar, the oral maxilla-facial team operated on 50 cleft lip and palate patients (with or without facial deformities). The team was well accepted by the local community as one of the team members is native Myanmar. This mission is the second mission for CLIPP Myanmar. At the conclusion of the mission day, the local hospital medical superintendent requested for MERCY Malaysia volunteer anaesthetist to perform a spinal block on a patient so the local anaesthetist could learn the technique. That was a good opportunity for the MERCY Malaysia team to build trust and rapport not only with the hospital staff but also with the local population. All surgeries went well with no post-operative complications.

Fifty underprivileged beneficiaries received corrective surgeries for cleft lip and palate to improve appearance and function. Parents/caregivers of the surgical
patients received education and training on how to care for the surgical site. They were also taught to look out for signs and symptoms of infection/complications. MERCY Malaysia team did daily post-operative ward rounds to inspect the surgical site and educate parents/caregivers on feeding, care, and what to expect after the sutures have been taken out.

It was also an expected finding that almost all cleft lip & palate patients were underweight or cachexic looking. During ward rounds, the caregivers were also being educated on how adequate nutrients can promote wound healing. They were educated on high protein food such as legumes that can be included in their children’s daily nutrient intake.

Collectively, over 4 operative days, the team performed 21 cheiloplasty, 9 palatoplasty, 2 palatoplasty with ABG (please provide abbreviations in full), 7 secondary lip repair, 1 secondary lip repair with ABG, 1 frenulectomy, 1 enucleation, 2 excisional mole biopsy, 2 scar revisions, 1 excisional biopsy of skin tag, 1 excisional biopsy of birthmark on philtrum, & 1 ABG. The team did post-operative round to assess for wound healing, possible complications, and provide post-operative care to the caregivers.

Some of the preparations and challenges faced during this mission which will be discussed further include getting permits/approvals from relevant authorities both in Malaysia &and Myanmar, logistics arrangement for medical supplies and equipment, and patient education due to language barrier.

306  Cleft Surgery Missions to MIRI, Sarawak
Kim K Tan¹
¹Consultant Plastic and Reconstructive Surgeon, Pantai Hospital
Kuala Lumpur
Email: kktan@pantai.com.my

Since 2004, a team from Kuala Lumpur has been going to Miri, Sarawak to carry out cleft surgery. For the past 10 years, the team has embarked on 15 trips, and has performed over 300 operations. The socio-economic factors for these missions will be discussed. It was decided that these missions should be sustainable in order to provide continuity of care. The logistics of organizing such a trip will also be presented. Over the years, the trend of the treatment provided has changed from patients with unrepaired lips and palates to more complex one like pharyngoplasty, alveolar bone graft and rhinoplasty.

308  Life-Changing Surgeries in Cambodia Through Operation Smile Humanitarian Missions
Theavy Mok¹
¹Operation Smile Cambodia
Email: theavymok@ksfh.org

It has been estimated that over 160,000 babies are born yearly around the world with cleft lip and palate deformities. They usually have normal intelligence and learning abilities. Unfortunately, in many places around the world many children born with such congenital deformities do not receive proper treatment. They struggle to eat, drink, and suffer major social and physical disadvantages such as being abandoned at the orphanage, by the road side, or worst buried alive because of these deformities.

It takes as little as 45 minutes to save a child from a lifetime of pain, shame, and isolation through reconstruction surgery. The close collaboration with partners in many countries around the world, including Operation Smile Singapore, Operation Smile Cambodia changed the lives of many children by providing free surgery to repair cleft lip, cleft palate, and other facial deformities. These life-changing surgeries were made possible through the generous support from sponsors, staff, and volunteers who donated their time and energy to create smiles on many children faces. Many children have been impacted by not only having a better cosmetic appearance, but also better social relations such as school participation and social interaction with the other children. Moreover, such missions create awareness about clefts and their impact on children world wide. Operation Smile missions not only transformed the lives of the children, but their family and their community.

257  25 Years Lesson Learned of Comprehensive Cleft Care in Developing Country
Bowornsilp Chowchuen¹
¹Associate Professor & Director, Tawanchai Cleft Center
Email: bchowchuen@gmail.com

Introduction
Globalization and Challenges to Gaining Equal Access to Quality of Cleft Care
Process Cultural differences are Economic, social and environmental factors, Sustainable development in the country and limited global health resources for cleft care in developing Countries. Overwhelming numbers of newborns with oral clefts found in countries with high birth rates, with limited resources,
burden with high cleft care loads and less systematically arranged facilities and support are situation in the developing countries. The challenges of global cleft care are how to balance the needs between the well developed and developing countries by the development of international collaborative program in term of exchange of knowledge, innovation, information, technology and communication.

Materials and methods
The 25 experience cleft care in the developing countries with the analysis of the previous results as well as the future challenges and opportunities were used in the study.

Results
The challenges of cleft care system in developing country are impact on cleft prevalence, large case load, and difficult in making accessibility of every child with special attention to remote area; many countries are during the stage of transition economy, changing health pattern with scarce monetary and health care resources, unequal coverage of needs, low priority of government agenda and lack of awareness about cleft in general public to convince health personal to take up the challenge of being in the cleft team, emphasis on surgical repair of cleft over other considerations, mainly involved in the primary deformity but lack in the secondary deformity management and absence of or few health care professionals in disciplines besides surgery were noted. Acquisition of required diagnostic tools and materials are needed to provide accurate and timely treatment of the patients. The lesson learned are the diagnosis, management, and treatment of clefts and craniofacial deformities can be complex and requires coordinated care and Interdisciplinary team management. Holistic care and outcome assessment; the respect of patient & family needs and expectation and the collaboration with health policy & school are important.

Conclusions
Comprehensive interdisciplinary management in a craniofacial center with the clearly and systematically planning was necessary to provide proper, early longitudinal care and to optimum outcomes for these patients. The standard method of data collection should be performed for registration and long-term care of these rare anomalies. Funding from a number of sources, including the Foundation, is needed to ensure patients’ access to treatment and follow-up and for the Craniofacial Cleft Center to improve the quality of treatment and programme.

269  A Comprehension Health Program in Letefoho, Ermera, Timor Leste - Field Report and Proposal
Andrew Fu Wah Ho1, Kai Kok Ang2, Eliza I-Lin Sin3, Ai Yun Taha4, Jayne Jie Yi Chiang5, Adrian Yeo6, Kathryn Chai7, Perlita Tiro8, John Lee9
1Emergency Medicine Residency Program, Singhealth Services, 2Ministry of Health Holdings, 3General Surgery Residency Program, SingHealth Services, 4Singapore Armed Forces, 5Yong Loo Lin School of Medicine, National University of Singapore, 6Nanyang Technological University, Singapore, 7Bank of Canada in Singapore, 8Rotary Club of Singapore, Singapore, 9World Federation of Catholic Medical Associates
Email: sophronesis@gmail.com

Objective
Timor Leste is located northwest of Darwin, Australia and is the poorest economy in South Asia. Having only recently emerged from a brutal conflict that ended in 2002, Timor Leste is ranked 20th worst in the Failed State List of 2009 proposed by Fund for Peace. Amongst its thirteen districts, Ermera has consistently the worst health and social situation. This paper reports a reconnaissance trip to Letefoho, Ermera and a resultant proposal on water and sanitation which was submitted to the Royal Bank of Canada Blue Water Project Leadership Grant in 2011.

Methods
A reconnaissance trip was undertaken in 2010 to gather ground information in three villages in Ermera. Visits to local health facilities and regional hospitals were taken. Inhabitants across the socioeconomic strata were interviewed on sanitary practices and perceptions. Samples from water sources were obtained for laboratory analysis. Diplomatic relationships were established with community and church leadership.

Results
Letefoho is located in a mountainous area, five hours drive from the capital Dili. Interviews revealed opportunities for improvement in sanitary practices including hand-washing, breast-feeding, water storage and health-seeking behaviours. There is poor coverage for childhood vaccinations. Villagers expressed welcome for external aid including training which has not reached Letefoho so far. Villagers employed the use of pit toilets shared by several households. Water samples from drinking sources revealed coliform content that exceed acceptable levels. Based on location, needs and paucity of existing aid, Letefoho was selected for pilot implementation of a water and sanitation project. The proposed project comprised 3 components: 1. Water infrastructure 2. Public hygiene centres 3. Health training, and is designed to be completed over a period of one year.
Conclusion
Our field report suggests tremendous opportunities for improvements in areas of health and sanitation in Letefoho, and a proposed project comprising infrastructure building and large-scale education may improve the situation.

Community Building Programs
Tham Meng Keat1
1Consultant Physician, Mt Elizabeth Medical Centre
Email: mktham@pharmelite.com

Projects to help the underprivileged, whether they are highly specific and focused or are broad-based community assistance programs/projects, have their own merits. No project is a bad project when they are done properly.

I have been involved in community work since 1989. They range from post-disaster a week to 2 of medico-dental work to as short as weekend excursions to Malaysia to do the same. The community work had taken me to the Philippines, Vietnam, Thailand and Malaysia.

After much reflection, I felt that I should focus in creating a sustainable project aimed at building up an impoverished community both socially and economically. Since 1997, I was tapping different areas of nearby geographical locations suitable for such a project which would involve implementing the 3 avenues I feel are important to community building. The avenues identified are health, education and livelihood.

The community chosen was a hill village called Bandipur in the southern hills of Nepal approximately 150 km west of Kathmandu. It was adopted in year 2000 and to date, there are 40 plus projects in place and are on-going.

Such projects, once successful, will propel the community to a higher level of socio-economical standing.

However, success must depend upon several factors and these are:
- The resolve and commitment stamina of the local community
- Reliable and accurate information on the community
- Existing and pending infrastructure
- A reliable and good partnership
- Good governance

Regular follow-ups will be necessary to tap on the health of the projects in place. It is obvious that there will be failures and less than good outcomes as much as there will be successes. The former will be lessons for us to learn from. We should embrace these with a positive mindset.

Comparative Study on Oral Hygiene between Schoolchildren of Public and Private Schools in Tansen, Nepal
Roshan Kharel1, Owens K., Rae J.
1Dentist, United Mission Hospital Tansen
Email: drkharel@gmail.com

Background
In developing countries like Nepal, dental caries represent an increasing public health problem (Saeed & Al-Tinawi, 2010). They affect schoolchildren from the high altitude of Himalayas to the plain terrain of Nepal, and many other children worldwide. This research was done in Tansen, a small town in Nepal.

Objectives
The objective of this study was to compare tooth brushing habits among schoolchildren from grade 4 and grade 10 in government schools and in private schools, and to determine ownership of toothbrushes.

Methods
A cross sectional, comparative analytical study was conducted among schoolchildren from two government and two private schools in Tansen. Data were obtained from individual questionnaires, entered onto a spreadsheet and analyzed using chi square analysis. P values of less than 0.005 were considered statistically significant. Prior to conducting the study, permission was granted from the Nepal Health Research Council and the Charles Sturt University Human Research Ethics Committee, Australia.

Results
Out of 474 schoolchildren from the 4 selected schools, 365 (77%) participated in the study. Three hundred and thirty three (91%) schoolchildren from government and private schools used their own toothbrushes and a small number used a family member’s toothbrush. Answering a question about whether they had brushed their teeth the night before, there was a significant difference according to level of mother’s education (chi-square= 12.677, p<0.005); the more educated the parents, the more likely children had brushed their teeth. It was the mothers of children in private schools who had a higher level of education than those of children in public schools - almost 36 % of private schoolchildrens’ mothers
had education up to grade 12 or above whereas, and for public schools, this figure was less than 16% in public schools. However, education was not a factor in whether schoolchildren ate sweet snacks. Analyzing data according to school class (4 and 10), there were similar percentages of schoolchildren (52% and 49.1% respectively) who brushed at night and brushed twice daily (36.6% and 33.3% respectively).

Conclusions
Schoolchildren toothbrush ownership and use in Tansen, Nepal, is far from complete. The relationship between parent education and oral hygiene suggest that regular classes in oral health education may be helpful to schoolchildren and to their parents, and dental/health camps may provide a means for this. In addition, a focus on education in mothers groups may be helpful because mothers teach families, and ultimately, communities and nations.

210 Lessons Learnt from a Successful Specialized Centre in Mongolia
David Sin Yang Ern\textsuperscript{1}, Tay Wan Jing, Jacqueline Koh Li Tyn, Zhou Lingyue, Kar Mun Tham, Chong Si-Jack
\textsuperscript{1}Yong Loo Lin School of Medicine, National University of Singapore
Email: davidsin.ye@gmail.com

Introduction
The authors participated in an Operation Smile Mission’s Collaboration with the Mongolian Maternal and Child Health Research Centre (MMCHRC). The MMCHRC is the national referral centre that conducts around 300 cleft operations/year.

Aim and method
We aim to highlight the lessons learnt and the little technological innovations observed from our experience in this specialist centre in Mongolia.

Work processes and key lessons learnt
In Mongolia’s current economic climate, less than ideal infrastructure, manpower, equipment and drugs available pose as obstacles to healthcare. This presentation highlights the innovation, processes, notable aspects and key lessons learnt from all aspects of their workflow that allows MMCHRC to overcome the mentioned challenges. This will include: the registration process, in-patient care, the pre-operative process, equipment workflow during operations and post-operation management.

Reliance of familial involvement and support is a resounding theme of MMCHRC’s success and plays a major role in registration and in-patient care. There is transference of responsibility pertaining to nutrition and the administering of medication from healthcare professionals to the family.

Pre and post operational care innovations allows MMCHRC to maximize its effectiveness within its manpower, infrastructure and resource constraints. Simplicity in transport within the hospital and community – style care with reliance on patients’ families are of the more noticeable solutions.

With regards to equipment workflow during operations, how equipment is cycled and utilized in MMCHRC is tailored to turn MMCHRC’s smaller set up, advantageous.

Concerning post-operation management, to circumvent less than ideal conditions and ensure standards of care remains high; MMCHRC advocates increased durations of post-operation hospitalization (2-3 days). This allows a longer period of monitoring circumvents a lack of strong transport infrastructure and satellite centres in Mongolia’s vast nation.

Key innovations and improvisations thus enable the centre to overcome challenges of operating in a developing country.

Conclusion
The authors wish to highlight the lessons learnt and the innovations that power a successful tertiary care centre.

226 Impressions, Concerns and Suggestions - A Study from the Primary Caregivers in Mongolia
Tham Kar Mun\textsuperscript{1}, Zhou Lingyue, David Sin Yang Ern, Jacqueline Koh Li Tyn, Tay Wan Jing, Chong Si-Jack
\textsuperscript{1}National University of Singapore
Email: karmun.tham@gmail.com

Introduction
Operation Smile is a prominent international children’s medical charity that provides free surgeries for children and young adults born with cleft lips, cleft palates and other facial deformities. It does not only provide surgeries through short-term medical missions but also focuses on developing local capacity for sustainability. In general, the intent of volunteers on medical mission is to provide healthcare assistance to the local population. However, there is a clear paucity of literature to study the perspective of the recipients on medical mission. This study is done with Operation Smile Mission to Mongolia in June 2014 to explore the caregivers’ view on various aspects of the medical mission.
Aim and method
It is crucial to understand the needs of the local population and subsequently incorporate their suggestions in planning for further surgical missions. This study aims to explore three main aspects of humanitarian aid: impression, concerns and suggestions.

This interview-based study was conducted on all the primary caregivers of patients participated in Operation Smile Singapore-Mongolia 2014. Standard questionnaire with both open and close-ended questions were used. This was conducted for both before and after the operation to capture their views on the different stages of the process.

Results
All 23 caregivers (100%) agreed to participate in the survey. 45% of all caregivers stated anaesthesia risk as their main concern. This is followed by 35% who indicated long-term follow-up as their main concern. Surprisingly, only 18% indicated surgical risk as their primary concern. As for the main reason for their concern, 65% stated that it was secondary to language barrier and insufficient time for explanation of medical procedure. These concerns are largely similar to those stated in a similar study done previously in Guatemala.

With regard to aspects for improvement, the primary caregivers feel that there are room for improvement in areas related to integration with the local healthcare system and communication. Other aspects such as level of satisfaction and the usefulness of the mission were critically evaluated. 87% of all patients expressed satisfaction level of at least 8/10 for all aspects of the mission. When compared to a similar study done previously during Operation Smile Mission in Honduras, only 63.6% of all patients had all their pre-operative expectations fulfilled.

Conclusion
This study allows better definition of local perceptions on medical missions. These findings have direct implications in future planning of similar medical mission in conducting a framework that is effective in contributing meaningfully. Most importantly, this study suggests avenues for future study and evaluation of the impact of medical mission on the local population.

Purpose
With the increase in aged and chronic diseases, the need for physiotherapy services will be heightened as rehabilitation requirements increase, not just in Singapore but in many developing and developed countries. The rationale of developing upgrading courses to supplement existing Physiotherapy courses was experimented over 5 years to help develop additional skills to provide relevant and quality training to physiotherapists, especially those from developing countries, such as Cambodia.

The programme sought to prepare candidates for independent physiotherapy practice in an integrated environment of clinical and educational support.

Relevance
Asia consists of 37 countries. Although only one Asian country is in the list of poorest countries in the world, the education, training and standard of Physiotherapy care in Asian countries is so diverse and certainly not matched with the country’s economic progress.

Description
Fifty-seven Cambodian physiotherapists were evaluated using an practical interview and theory test to determine their level of skill and knowledge in musculoskeletal, neurology, cardiopulmonary and electrotherapy. Following the initial evaluation, gaps in their skills and knowledge were identified and a 12-month, 2 part, training programme developed to close those gaps. Part 1 consisted of 4 modules taught in Cambodia and Part 2 consisted of 6 months of clinical training in Singapore.

Evaluation
Practical viva and multi-choice theory examinations were conducted at the end of each module for Part 1 and Part 2. An overall evaluation of the student’s knowledge and skill was conducted and feedback from the students and their employers were also obtained. Visits were also made to these centres to observe the therapists in action. The impact of the programme over 5 years was evaluated.

Conclusions
Feedback from the successful students and the employers have been very positive with many of the trainees being more confident in their assessment and treatment skills, greater pride and satisfaction as they see their patients improve and gain better respect from their medical colleagues.

Implications
Such training courses have been useful to assist physiotherapists from
developing countries upgrade their skills, gain more confidence and pride in their work and raise the awareness and profile of Physiotherapy to other medical and government policy makers in the country. Such training can be replicated for other Asian countries where Physiotherapy is still seen as a support and technical job.

190  Paediatric and Neonatal Education and Care in a Maternal and Child Health Volunteer Humanitarian Mission to Myanmar

Woei Bing Poon1, Khum Chue Khong, Cheo Lian Yeo
1Consultant, Singapore General Hospital, SingHealth
Email: poon.woei.bing@sgh.com.sg

Introduction
The Department of Neonatal and Developmental Medicine and the Department of Obstetrics and Gynecology of the Singapore General Hospital embarked on a 4-day trip (7-10 November 2013) to Myanmar to provide paediatric and neonatal education and care, as part of a Maternal and Child Health initiative.

Objective
The mission aimed to (a) provide neonatal education to a tertiary maternal and child hospital in Yangon (No 1 Maternal and Child Military Hospital) (b) provide paediatric outpatient services and advice to a rural station hospital (Kayin Chaung Station Hospital, Kayin State, Irrawaddy Delta). This trip also served as a preliminary visit to understand the needs and build the relationships necessary for subsequent missions to other parts of Myanmar.

Mission implementation
The trip was divided into several phases:
- **Preparatory phase** for which logistic support was provided by the SingHealth International Medical Services (IMS) and the Embassy of Singapore at Myanmar. Medical supplies were identified for procurement by the paediatricians involved through SGH institutional funding. For purposes of education needs, communications were made with the neonatologists in the receiving Myanmar hospital. A total of 2 paediatricians and 1 nursing manager from Singapore were sent.

- **Implementation: educational teaching phase**
Two days were devoted to a visit to a tertiary hospital where education was provided to Myanmar neonatologists and their resident trainees, in both lecture and workshop formats, addressing the topics of prematurity, low birth weight, ventilatory support and basics of neonatal care, particularly neonatal resuscitation. Visits were also conducted to understand the quality of healthcare provided at the hospital in the wards.

- **Implementation: rural outreach phase**
One day was devoted to a visit to a rural station hospital, where we worked with local doctors and nurses to provide care to regional patients within the village and beyond. In addition to outpatient services and medical advice, medical supplies, nutritional and public health advice were given. Interpreters were provided by local nurses.

- **Post-implementation phase: education of rural doctors**
Rural doctors and nurses were invited to visit various SingHealth Obstetric, Neonatal and Paediatric departments for 1 week (19-23 May 2014) as part of a continuing education effort to teach patient safety, neonatal and paediatric care, hospital management and child delivery.

Conclusion
Close collaboration between different stakeholders, and communications beforehand to understand the needs of the Myanmar healthcare providers ensured the success of the mission.

199  Training Healthcare Professionals from Underserved Regions as a Long-Term Strategy to Improve their Healthcare System

Umapathi Thirugnanam1, Chong-Tin Tan
1Senior Consultant Neurologist, National Neuroscience Institute, Singapore
Email: umapathi@nni.com.sg

The lack of adequate number of trained staff is an impediment to the development of healthcare in many developing countries. Nurturing expertise and building local capacity in primary, secondary and tertiary care is a long-term foundational solution; and is likely to yield better results than the oft-applied episodic medical missions. Unfortunately, training opportunities for doctors, nurses and technical staff from developing countries are limited in countries like Singapore because of:

- Licensing. Restrictive licensing procedures of licensing bodies do not recognize the basic training of many institutions of developing countries.

- Accreditation. Training programmes under organisations such as ACGME-I and Academy of Medicine Singapore do not allow flexible educational packages that better serve the differing needs of healthcare professionals from underserved areas. Provisional licensing is also dependent on the ability of the candidate to secure a position in an accredited programme.
• Funding. The high cost of living and the fee some institutions levy for training incur considerable burdens to trainees who do not receive training stipends.
• “Poaching”. The best trainees from underserved areas frequently do not return home and settle for well-paid jobs in developed countries.

We would like to share the experience of the Department of Neurology, University Malaysia in actively nurturing trainees from developing countries. During the last few years this department has trained 45 overseas fellows in adult neurology. Seventeen came from Myanmar, 10 from Indonesia, 4 from African countries and the remainder from a number of underserved societies. The training program is flexible and largely based on the traditional apprentice system. The trainees have to be closely supervised because of the considerable variability in the depth and breadth of their basic medical training. This model allows educational goals to be tailored to the variable needs of the trainees and the type of practice they are returning to. These trainees are often supported by charity funds secured by the department. They all return to their home countries with new skills that can help develop basic neurology services.

Developed countries, while investing significant resources to develop medical tourism, spend substantially less on lifting the level of healthcare of the region. Efforts to improve medical outreach should at least be equal to activities that promote medical tourism. To paraphrase a famous adage, “Ask not what the region’s rich can do to elevate our wealth, but what we can do to improve the health of the region’s poor”.

221 Striving Towards Improving Maternal Morbidity and Mortality in Kampong Chhnang Province, Cambodia: A SCVD Initiative Collaborated by KK Women’s and Children’s Hospital (Medical Mission Trip 2013-2015)

Sharon Foo¹, Manisha Mathur, Juay Siew Ngoh, Anna Tan, Christopher Wilson, Annette Jacobsen, Shephali Tagore, Kenneth Kwek
¹Resident, Obstetrics and Gynaecology, KK Women’s and Children’s Hospital
Email: foo.sharon@gmail.com

Background
Cambodia is an agriculture country located in South East Asia with a population of about 14.8 million people. The average size of the Cambodian household is 5.1. In 1995, the Ministry of Health, Cambodia approved a “District-based health system” aimed at improving and extending primary health care. The latest Cambodia Demographic and Health Survey in 2005 revealed a decrease in infant mortality rate from 95 per 1000 live births in 2000 to 66 per 1000 live births in 2005. However, the maternal mortality ratio remained unchanged with 472 per 100,000 live births, comparable to that in 2000 (437 per 100,000 live births). In Kampong Chhnang (population 500,000), the three leading causes of maternal morbidity are post-partum haemorrhage, severe pre-eclampsia, and sepsis.

Aims
KKH Obstetrics and Gynaecology team consisting of doctors and nurses conducted the first medical mission trip to Cambodia, Kampong Chhnang province in July 2013. Our aim was to train skilled health attendants to enable them to better manage obstetric emergencies which would help in the long-term goal of reducing maternal as well as neonatal morbidity and mortality rates. The focus of the on-going training is on early recognition, rapid response, and effective management of common obstetric emergencies. We also highlighted the importance of preparedness, communication, documentation and audit of practices.

Method
The training programme, consisting of a series of didactic lectures and simulation sessions, was adapted from the Combined Obstetric Resuscitation and Emergency Training (CORE) conducted at KKH. In addition to the clinical focus on obstetric emergency care, our team also worked closely with the local health centres and hospitals to review their clinical workflow and to develop standard operating protocols tailored to the local system.

Outcome
We anticipate that training and educating the midwives in Kampong Chhnang province, Cambodia will equip them better to deal with obstetric emergencies. By “training the trainers” we hope that the programme will be sustained through the years and impact the maternal health care in the entire Kampong Chhnang Province. KKH is committed to continuing to support the programme, with another team planned to conduct a second run in July 2014. Our team will continue to work with the local authorities in data collection and analysis of the impact of the training programme.

202 Navigating the Transition from Post-Conflict Mission to Permanent Locally-Controlled Service

Genevieve Oliver¹, Rosie Dawkins, Manoj Sharma, Nitin Verma
¹Ophthalmology Fellow, National Eye Centre
Email: eyecota@gmail.com

Timor-Leste is a nation of about 1.2m people that occupies the Eastern half of the island of Timor, as well as the enclave of Oecussi. It is situated between
Singapore and Australia, in the Indonesian archipelago. After hundreds of years of occupation by Portugal, Japan and Indonesia, it was recognised as an independent nation by the UN in 2002.

The health system in Timor-Leste is currently being built, following destruction of physical infrastructure when Indonesia left in 1999, and the departure of almost the entire trained workforce at the same time.

In the year 2000, visiting teams of doctors from Australia began humanitarian missions to address the backlog of surgical and ophthalmological demand. Since then, the service has been strengthened, and today there is a partnership between non-governmental organisations (the East-Timor Eye Program, the Royal Australasian College of Surgeons, Fred Hollows Foundation NZ, and Fo Naroman Timor-Leste) and the Timor-Leste Ministry of Health to deliver eye care to the population of Timor-Leste.

We are entering a period of transition to local ownership of the service and provision of eye care. This brings with it some of the greatest challenges to date for eye care in this young nation. This presentation outlines some of the critical challenges we face in developing a sustainable local service.

222  Eye Mission Trips to Myanmar
Stephanie Ming Young1, Thet Naing, Koko Lin, Gangadhara JK Sundar
1Registrar, National University Health System
Email: stephanieyoung83@gmail.com

Roads less travelled may appear dangerous to some, but to others they are wonderful opportunities. Myanmar, once one of the richest countries in Asia, is only just slowly beginning to reopen itself to the rest of the world as prospects of democracy improve. By sending subspecialty teams to Myanmar over the past few years, the NUH Ophthalmology department has been taking eye medical missions to a whole new level, challenging past concepts of eye missions being restricted to cataracts alone, and bringing in subspecialty care to a country which needs it greatly. Over the years, we have gone on at least eight trips to Myanmar and trained several fellows in the fields of comprehensive ophthalmology, glaucoma surgery, vitreoretinal surgery, paediatric ophthalmology and oculoplastic surgery.

In each trip, cases are shortlisted and presented to the subspecialty team from NUH. Each case is discussed thoroughly with the local ophthalmology doctors and residents, those requiring surgical management are selected for surgery. Complex cases are performed with local senior experts and less complex cases independently performed by people (previous fellows) trained by us. This initiates the process of quality care by local surgeons, and gives them the confidence to take care of their local needs. Post-operative review is carried out together with the local doctors and emphasis is placed on treatment planning, principles of surgery, postoperative care, potential complications to look out for pertaining to the surgery and their appropriate management.

Myanmar has been sheltered from the external world for many years and thus its people been deprived of developments regionally and globally. Herein we feel an obligation to help without spoiling the beauty of the place and the people. Our philosophy is not to do the work for them, but to work with our colleagues and teach them how to continue with the practice.

223  Eye Mission Trips to China
Stephanie Ming Young1, Seng Chee Loon
1Registrar, National University Health System
Email: stephanieyoung83@gmail.com

Cataract mission trips are popular because of the instant positive changes they bring to the lives of many patients. Since the early 2000s, a small team of doctors, nurses, optometrists and anaesthetists have been venturing into remote parts of China such as Cang Yuan and Xi Ning. Through the many challenges faced and overcoming them, the team has put together a rigorous screening, surgery and post-operative workflow that has shown to be effective and efficient.

Commencement and setting up of the screening room is usually done within one hour. As soon as patients start turning up, registration and labelling is done. Visual acuity and refraction is performed by our optometrists. Past medical history and presenting eye complaints are elicited, followed by a slit lamp and dilated fundal examination by our eye doctors. Factors affecting surgery such as guarded visual prognosis, zonulolysis from trauma or posterior segment abnormalities have to be identified. Potential patients are listed for surgery, and the operating list for the next few days are generated, depending on the urgency of the case, and availability of intraocular lenses. A-scan ultrasonography is performed to ensure appropriate choice of intraocular lenses for the patients. As facilities are limited, all surgical and anaesthetic consumables and equipment are brought over from Singapore. All cases undergo extracapsular cataract extraction (ECCE) or small incision cataract surgery (SICS), both which can be performed without a phacoemulsification machine and with minimal equipment. All intraocular lenses used are accounted for, and attached to the patients’ notes, which will be handed over to the local doctors for their follow-ups. Postoperative rounds are done daily in the wards and in the screening room in the mornings, and all cases are...
checked carefully for possible complications such as raised intraocular pressure and managed accordingly.

By delivering on quality cataract surgeries, good medical care and compassionate gestures, the trust of these villagers are gained over the years. The leaders of our team have stressed that we do not simply go in, do good, and helicopter out. More importantly, we have tried to take the time to teach, learn and exchange skills with the locals, creating an excellent opportunity for skills transfer among healthcare workers.

**349  Project Netra – Restoring Sight in the Tribal Belt of Western Odisha**
Jayant Venkatramani¹, Jason Kian Seng Lee, Avinash Jayaraman
¹The Vision Mission
Email: jayant@thevisionmission.org

**Background**
Cambodia is an agriculture country located in South East Asia with a population of about 14.8 million people. The average size of the Cambodian household is 5.1. In 1995, the Ministry of Health, Cambodia approved a “District-based health system” aimed at improving and extending primary health care. The latest Cambodia Demographic and Health Survey in 2005 revealed a decrease in infant mortality rate from 95 per 1000 live births in 2000 to 66 per 1000 live births in 2005. However, the maternal mortality ratio remained unchanged with 472 per 100,000 live births, comparable to that in 2000 (437 per 100,000 live births). In Kampong Chhnang (population 500,000), the three leading causes of maternal morbidity are post-partum haemorrhage, severe pre-eclampsia, and sepsis.

**Aims**
KKH Obstetrics and Gynaecology team consisting of doctors and nurses conducted the first medical mission trip to Cambodia, Kampong Chhnang province in July 2013. Our aim was to train skilled health attendants to enable them to better manage obstetric emergencies which would help in the long-term goal of reducing maternal as well as neonatal morbidity and mortality rates. The focus of the on-going training is on early recognition, rapid response, and effective management of common obstetric emergencies highlighting the importance of preparedness, communication, documentation and audit of practices.

**Method**
The training programme, consisting of a series of didactic lectures and simulation sessions, was adapted from the Combined Obstetric Resuscitation and Emergency Training (CORE) conducted at KKH. In addition to the clinical focus on obstetric emergency care, our team also worked closely with the local health centres and hospitals to review their clinical workflow and to develop standard operating protocols tailored to the local system.

**Outcome**
We anticipate that training and educating the midwives in Kampong Chhnang province, Cambodia will equip them better to deal with obstetric emergencies. By “training the trainers” we hope that the programme will be sustained through the years and impact the maternal health care in the entire Kampong Chhnang Province. KKH is committed to continuing to support the programme, with another team planned to conduct a second run in July 2014. Our team will continue to work with the local authorities in data collection and analysis of the impact of the training programme.

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**305  Prevention and Healing of Cataract and Blindness in Tanzania**
Frank Klemm¹
¹Vision for Puma E.V.
Email: dr.klemm@gmx.net

With the foundation of “Vision for Puma (Tanzania) e.V.” we have set ourselves ambitious goals: To prevent and heal blindness in Puma, one of the poorest regions located in the bush in the middle of Tanzania. The idea to establish a non-profit association was born right after I came back from a two-week on-site assistance mission in Puma at the end of 2009. In a short lecture I will give you some of our impressions for the last few years.

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**218  Musings of a Volunteer Ophthalmologist**
Pauline Cheong¹
¹Ophthalmic Consultants, Gleneagles Medical Centre
Email: pcheong@eyesurgeons.com.sg

There are an estimated 285 million people worldwide who are visually impaired. Ninety per cent of these visually impaired live in developing countries. Of these, two-fifths are due to refractive errors, and another third are due to unoperated cataracts. The speciality of Ophthalmology lends itself well to the concept of humanitarian missions. Whether it involves basic eye screening or surgical missions, eyecamps can treat many with great and lasting impact on the individual and society. Each type of mission, however, carries its own logistic and planning issues. Prerequisites for a successful mission include detailed planning,
coordination with and cooperation of the local medical fraternity, careful choice of location and identification of the target population, support of the local population and understanding of the local needs and customs. Visual screening for refractive errors and medical eye conditions are useless without the backup of optometrists, a means to dispense optical aids, and a working plan for follow-up treatment of identified medical conditions. Effective and successful surgical eye missions require careful pre-selection and workup of suitable cases, an experienced team of surgeons and nurses, and also good postoperative follow-up care by the local ophthalmologists. The highs and lows of participating in such missions in India, Sri Lanka, Indonesia, and Myanmar over the past 11 years, as well as the lessons learnt, are shared in this presentation.

227 Paediatric Emergency Care Training in Myanmar – Our Experience

Chong Shu-Ling1, Irene Chan, Anette Jacobsen, Pang Nguk Lan, Lee Siew Kum, Judith Wee Geok Leng, Ng Kee Chong
1Senior Staff Registrar, KK Women’s and Children’s Hospital
Email: Chong.Shu-Ling@kkh.com.sg

Teams from KK Women’s and Children’s Hospital have conducted train-the-trainers sessions among local paediatricians in Myanmar, on a twice-a-year frequency. These sessions include lectures on the current standard of care for various paediatric emergencies, hands-on skills stations and scenario-based learning. With various assessment tools including multiple and short answer questions, we have also been able to assess the understanding and the learning yield of the local doctors.

In view of the need for a sustainable improvement in child care, the teams have placed a great importance on continuity of this training program by the local paediatricians. After teaching the core trainers, we monitor the next generation of teaching, and have witnessed the local paediatricians teaching their own colleagues, with both teachers and students greatly satisfied. Another important learning point was the need for closer collaboration between doctors and nurses. We emphasized on the need to integrate the nurses in the various assessments as well as the scenario based simulation exercises.

We have received positive feedback from the participants in particular with respect to the interactive styles of teaching, the use of mannequins with hands on experience, as well as the simulation exercises. We believe that this has helped to set up a positive relationship between medical staff from both countries, and look forward to further collaborations.

259 Maternal Health Improvement Strategies in South East Asia – ‘A Roving Core Training’

Shephali Tagore1, Anette Jacobsen, Thilagamangai, Hoon Siew Jong, Kenneth Kwek
1Consultant & Director, O&F International Medical Programme, KK Women’s and Children’s Hospital
Email: tagore.shephali@kkh.com.sg

International Medical Program (IMP) was started in the year 2005 in KK Women’s and Children’s Hospital. It matured, over the years, offering “hands on” training along with clear understanding of the relevant principles of holistic clinical care to the midwives, nurses, doctors and making a positive impact in maternal and fetal care, in areas of South East Asia, where perhaps it could make most difference.

Maternal mortality and morbidity remains a major problem, especially in the developing world. Lack of access to basic antenatal care, resources / expertise to deal with obstetric emergencies, and other diverse challenges, remain major hurdles.

Obstetric haemorrhage, sepsis, eclampsia and obstructed labor are responsible for the lion’s share of maternal deaths. Most of these deaths are potentially preventable with effective interventions. Basic obstetric with emergency clinical care, thus, remain our focus of training.

The program was based on our hospital training project, Combined Obstetric Resuscitation and Emergencies Training (CORE) with didactic lectures and simulation training sessions. Content was heavily modified to the needs of the population and existing medical facilities which we explored during our feasibility trips.

Most laboring women in these areas are mainly supported by midwives and home deliveries are the norm. In the mission trips, we trained midwives on basic antenatal care, intrapartum care and obstetrics emergencies to reduce Maternal Mortality Rate (MMR).

We travelled to Laos in 2010, 2011 and 2012. Training sessions were conducted at the Maternal and Child Hospital (MCH) in Vientiane, followed by lectures on Clinical Obstetrics to the medical students in the University. In September 2012, the team travelled to Indonesia. We focused on Balikpapan, Kotabaru and Samarinda in East Kalimantan, Indonesia. Our first medical mission trip to Cambodia, Kampong Chhnang province was in July 2013 followed by second trip in July 2014.
How to Ensure Success in Volunteer Medical Missions to Developing Countries

Lynna Chandra1
1Founder & Trustee, Rachel House, Jakarta, Indonesia
Email: lynna@rachel-house.org

The alleviation of pain and the management of symptoms for someone living with a life-limiting disease is a basic human right. Yet, many in the developing countries still have little or no access to the most basic medical care.

Volunteer medical assistance has at times been the only source of antidote to despair for many in the developing countries. However, organisations that work in this area, like Rachel House, the first pediatric palliative care service in Indonesia, face many challenges in getting the right assistance to those who need it, at the right time.

The challenges to a successful medical mission are many. Starting from the get-go at the pre-mission planning, the difficulties in getting accurate information of the available resources on the ground, and/or the complexities involved in obtaining the required government approvals is enough to deter anyone. Upon arrival in host countries, many volunteers face nerve-wracking encounters with the local immigration authorities. All these challenges seem nothing compared with the language barriers and cultural intricacies that can hamper the success of a mission.

Securing a reliable partner in the host country can help ensure a smooth and successful medical mission trip. Identifying a partner with shared mission and aligned goals will ensure a successful collaboration, while possessing knowledge of the local healthcare system and contacts within the system would be critical to help maneuver through the many challenges on the ground. However, what is often not highlighted as an equally important component to any successful mission trip is the ability for medical volunteers to stop, observe and understand a culture and how people interact, before acting and giving advice.

This presentation will elaborate on the challenges, success factors and learning points for medical volunteers, using the 2008 to 2012 collaboration between Rachel House and Singapore International Foundation (“SIF”) as a case study. This partnership that provided pediatric palliative care training to medical professionals in public health institutions in Indonesia was carried out with the support and assistance of palliative care experts in Singapore. Over 3 years, the multi-disciplinary team of medical professionals from Singapore had helped train more than 400 medical professionals who had gone on to impact over 1000 lives. Discussions are now underway to scale up the impact to a larger audience with the strong support of the provincial government in Jakarta.

The presentation will conclude with a very important learning of this collaboration - that of building trust and mutual respect and maintaining open channel of communication - as key to maintaining win-win partnerships to serve communities that require assistance.

Global Medical Outreach Management Model: Ten-Year Experience

Dean Sutphin1, Dixie Tooke-Rawlins
1Associate Professor, Via College of Osteopathic Medicine
Email: dsutphin@vcom.vt.edu

The mission of Via College of Osteopathic Medicine (VCOM) is to prepare globally-minded, community-focused physicians. With two campuses in Virginia and South Carolina and another one expected to open in 2015 at Auburn University in Alabama, VCOM will be one of the largest medical schools in the US. It is one of the few medical schools that operates full-time clinics in three countries - Dominican Republic, El Salvador and Honduras - using physicians hired in each country. The clinics serve as a base for student doctor training in the final two years of medical school and for one-week medical outreach trips to underserved communities in each country. VCOM has signed agreements with ministries of health of each country, hospitals and medical schools, and non-profit host organization partnerships. Each year over 200 student doctors and over 40 physician preceptors participate in the one-week trips to provide clinics in remote communities supplementing the continuous care provided at the base clinics. The program has received the Clinton Global Initiative award and the US Presidential Outreach Award. In addition, it has won the national research poster competition for 2 years. This presentation will describe the Medical School infrastructure and international collaboration that has a proven track record and award winning program.

22 Years Experience of Interplast Australia and New Zealand in Indonesia

Ian Carlisle1
1Board Member, Interplast Australia and New Zealand
Email: iancarlisle@mac.com

The mission of Interplast Australia and New Zealand is to provide plastic surgery to children and adults in developing countries through the provision of free health care to those in need. Over the past 22 years, Interplast has provided care to more than 20,000 patients in over 130 locations in Indonesia, helping to improve the lives of those in need.
In 1990, IANZ was invited to visit Bali by John Fawcett. Visits were made to Tabanan and Klungkung supported by Dr Asmarajaya (the sole Plastic Surgeon in Bali at the time) and funded by Rotary in Australia treating mostly Cleft Lip and Palate patients.

IANZ was surprised by the number of unrepaired clefts in Bali. IANZ felt that a more formal relationship with the Indonesian Association of Plastic Surgeons and the Ministry of Health was necessary in order to continue programs to Indonesia. IANZ felt that it was important for Indonesian Plastic Surgeons (Perapi) to be part of any IANZ team visiting Indonesia.

In 1992, after much discussion and supported by Professor Sujudi (Minister of Health RI), an MOU was signed.

Microsurgical courses have been supported in Bali. IANZ has provided guest lecturers to the PERAPI annual meetings.

IANZ also provided support and advice following Bali blast 1 and 2, the embassy blast, and the tsunami. Following the Tsunami, IANZ became a registered NGO in Indonesia in partnership with PERAPI and was asked to provide a report regarding Burns treatment following the recent eruption of Merapi.

The provision of visiting lecturers from Australia has continued as well as funding visits for PERAPI doctors to attend the annual Registrars conference in Australia or New Zealand.

The future of the relationship between IANZ and PERAPI will also be discussed.

342   Overview of Paediatric Cardiology/Cardiac Surgery in Humanitarian Missions
Sriram Shankar
Shankar Surgery
Email: sriram_lifeline@yahoo.com

Children in Asia have a 1-2% chance of undergoing corrective cardiac surgery for congenital defects. 70% of these defects although life threatening are eminently correctable with normal life expectancy. The need for improving access to care is obvious.

Paediatric Cardiac Care is a team effort. It involves bringing together a multitude of highly trained specialists to provide outstanding and compassionate care and support to patients and families. We live in an era where the treatment processes are well defined. There is an emphasis on reproducing outcomes for most procedures. Learning curves are a thing of the past and major errors are hard to wish away. This has serious repercussions on training and keeping one’s skill. This is particularly so in Singapore with its low birth rate and high expectations.

In 2004 we ventured into Siem Reap to undertake surgery for children with simple cardiac defects. We evaluated and undertook surgery for Ductus arteriosus, coronary artery fistulae and lung surgery. By 2007, the local team could do all these competently with no mortality.

In 2009, we started open heart surgery and to date the local surgeons can do simple repairs like defects in the atrial and ventricular septum.

In 2008 we visited the Children’s hospital No 1 in Ho Chi Minh city This hospital has a government aided Programme where all kids under the age of 6 get free surgical care. They were doing simple defects of the atrial septum then. Over the last 6 years that we have worked with them we have helped build capacity and the surgeons can now undertake neonatal surgery with outstanding outcomes!!!!! They are now the reference Centre and the Centre for teaching and training in South Vietnam.

In the process, we have helped create care platforms for children where the audit of outcomes is robust. We have also benefited by increasing our experience and understanding of Paediatric Cardiac Surgery.

196   Saving the World, One Heart at a Time
Cheng Ming Hua Jonathan, Steffi KT Chan
Resident, Singhealth
Email: jonathanchengmh@gmail.com

Save a Child’s Heart (SACH) is an Israel-based international humanitarian project, whose mission is to improve the quality of paediatric cardiac care for children from developing countries who suffer from heart disease and to create centres of competence in these countries. To date, we have provided care to over 3,000 children from Africa, South America, Europe, Asia and throughout the Middle East.

Many of our children come from areas ravaged by war and nature such as Iraw, Haiti, Sri Lanka and the Palestinian Authority. SACH is completely dedicated to the idea that every child deserves the best medical treatment available regardless of the child’s nationality, religion, race, gender or financial situation.
Since 1995, SACH has treated over 3,000 children suffering from cardiac illness. In 2013, more than 260 children were treated from lethal conditions. Care was given to children in need from 44 countries. Approximately 50% of children are from the Palestinian Authority, Jordan, Iraq and Morocco; more than 30% from Africa; the remaining are from Asia, Eastern Europe and the Americas.

The ultimate goal of SACH is to create centres of competence in developing countries so that children can be treated independently in their own communities. At Wolfson Medical Center in Israel, SACH bring medical professionals from partner sites around the world for in-depth fellowship and post-graduate training in all facets of paediatric care.

Since its inception in 1995, SACH has trained 77 physicians and nurses from a host of countries including: China, the Democratic Republic of Congo, Eritrea, Ethiopia, Kenya, Moldova, Nigeria and the Palestine Authority, Romania, Russia, Tanzania and Vietnam. As more doctors who received this training return to home, their countries will be better equipped to treat such children.

The SACH medical team travels to partner sites throughout the developing world to perform surgery and conduct cardiology clinics that evaluate pre- and post-operative patients together with local cardiologists and give local medical personnel onsite training in paediatric cardiac care.

To date, we have conducted 15 teaching missions, treating more than 180 children and evaluated more than 7500 children across the globe. In addition to pre-operative examinations, SACH clinics also provide essential follow-up care for children who were previously treated. In order to provide this continued support, Coumadin clinics have been set up in partner sites with trained personnel for children who require life-long anticoagulation.

204 First Open Heart Surgery Programme in Mauritius (A Saudi Arabian Contribution)
Fazlur Jaufeerally1, Rahindranath Modun
1Senior Consultant, Singapore General Hospital
Email: fazlur.jaufeerally@sgh.com.sg

Mauritius is a very small island in the South West Indian Ocean. Cardiac surgical patients had to travel abroad for optimal treatment until the early 1980’s. In 1984, the first open heart surgical programme was initiated thanks to the help of a Saudi Arabian surgical team from Jeddah led by Professor Hassan Raffa. The authors of this presentation witnessed first-hand the logistic and human facets of such an endeavour. Fifty patients with rheumatic and congenital heart disease were successfully operated in two weeks. The preparation that went on before this project and its subsequent history will be presented.

205 Cardiothoracic Surgery in Papua New Guinea
Noah Tapauna1, Tefiarunai Nakapi, Ycow Leng Chua, Yoong Kong Sin, Tuy Boon Keng
1National Heart Centre Singapore
Email: ntapaua@yahoo.com

Background
There has been limited success in establishing cardiothoracic surgery in Papua New Guinea (PNG) despite the high prevalence of structural heart and thoracic disease and the increasing number of Papua New Guineans traveling abroad for thoracic and open-heart surgery. The challenges, constraints and programs in place to address these challenges are discussed. The aim of this study was to review the experience with heart surgery in Papua New Guinea, highlighting the challenges encountered in developing this program, studying the impact of external visiting cardiac teams and the approach to the challenges encountered.

Methods
This is a retrospective study of patients that underwent heart surgery at the Port Moresby General Hospital, Papua New Guinea by the local team and the external cardiac teams from 2009 to 2013. The source of data was a prospectively maintained database. The data included patient demographics, indication for surgery, open or close heart operation, complications and patient outcome.

Results
Eight hundred and eighty-three patients from all regions of the country have benefited from the PNG Operation Open Heart program since its inception in 1993 with an overall mortality rate of 1.9%. Between 2009 and 2013, 293 patients received cardiothoracic surgery. Two hundred and fifteen (73.4%) were children less than 13 years of age and 167 (57%) were females. Their ages ranged between 2 months and 71 years (mean, 4 years). One hundred and fifty-eight (54%) patients had close heart procedures and 135 (46%) patients had open-heart procedures with the use of cardiopulmonary bypass. Complications were manageable and the short-term mortality for the 5-year period was 2.0% (n=6). Challenges encountered included limited number of trained staff in cardiothoracic surgery, lack of equipment, limited financial support, increasing waiting list and limited operating theatre space and ward space.
Conclusions
The heart surgery program in PNG is still being developed and the identified challenges need to be overcome in order to sustain it. The biggest challenge to our success has always been financial support with the numerous competing social priorities. But with the current backing of our government, non-governmental organizations and the support from the external cardiac teams from Australia and Singapore, we hope to achieve our goal in establishing this service locally.
318 The Role of the Military in Humanitarian Medical Missions – The SAF Perspective
Kung Wee Lee1
1RADM (Dr) Headquarters, Singapore Armed Forces Medical Corps

Over the last few decades, the extent of destruction and disruption due to major disasters and armed conflicts has grown considerably. There is, therefore, a need to tap on regional and military resources and adopt a collective, multi-agency response to large-scale disasters. There is a growing momentum towards multinational cooperation between the military medical services of regional countries, as well as with international humanitarian organisations, as was witnessed in medical relief operations after the 2004 Asian Tsunami and the 2010 Haiti Earthquake.

Military medical teams are well placed to provide humanitarian assistance and disaster relief (HADR) in the immediate aftermath of disasters. In addition to being able to mount a response of significant magnitude within a relatively short period of time, the spectrum of medical assistance capabilities - spanning primary healthcare teams and surgical teams to field hygiene teams - often addresses the most pressing needs of the affected communities.

Over the years, the SAF Medical Corps has contributed to disasters and medical socio-civic missions primarily in our region. Through these contributions, we have helped our neighbours in times of need and also strengthen the cooperation and collaboration between the regional neighbours and our militaries.

The presentation will provide an overview of the role of the military in humanitarian medical missions from an SAF perspective. It will also share examples of the progress made by the SAF in building the regional capacity and capability for HADR medical response.

319 Operational and Clinical Challenges in Humanitarian Missions: Experience from the Pariaman Earthquake
Pang Hee Nee1
1LTC (Dr) Army Medical Services, Singapore Armed Forces Medical Corps

The fast-paced work environment often results in staff fatigue, and thus appropriate work-rest cycles and shift systems should be implemented. This is necessary to maintain morale and keep up the mental and physical strength of the medical personnel for a sustained mission. The unpredictable nature of these natural disasters mandates real-time operational readiness. These include logistics preparedness, keeping operational doctrines up-to-date and ensuring that the training of medical personnel are current and maintained regularly.

In theatre, there are operational challenges that the team encounter. As an example, roads are often inaccessible; hence, it is important to obtain timely information and work with transport operators to ensure expeditious delivery of healthcare services to areas where help is needed most.

On the clinical side, liaisons play an important role in the collective effort of multinational undertakings. Interaction with orthopaedic surgeons, other clinicians, and non-medical colleagues from other countries helps achieve a consensus regarding evaluation, management and aftercare of patients. In this aspect, orthopaedic surgeons should assume an active role, as most cases involve musculoskeletal injuries. Daily ward rounds and preoperative discussions with local doctors and other volunteer doctors are important to build rapport with the locals to align patient care and ensure continuity of care when the team leaves. Collaboration with the civilian medical team enabled sharing of their expertise with the surgical team in managing earthquake-related orthopaedic injuries in the field.

This presentation highlights the various operational and clinical challenges of humanitarian medical missions. The success of a mission often depends on good preparation and training, as well as collaboration with local health care workers and other external agencies.

320 Humanitarian Assistance: The RSN Surgical Deployment Concept afloat and Peri-Operative Challenges at sea
Liow Ming Han Lincoln1
1MAJ (Dr) Navy Medical Service, Singapore Armed Forces Medical Corps

The Republic of Singapore Navy (RSN) regularly participates in regional humanitarian assistance missions such as Operation Surya-Bhaskara Jaya (SBJ) and Pacific Partnership (PP), in collaboration with various host and partner nations.
Such humanitarian assistance deployments, commonly termed socio-civic missions, often included the delivery of primary healthcare, dental, optometry and surgical services. We present the various peri-operative challenges posed by the maritime environment during such socio-civic missions.

These challenges may be broadly classified into several domains – operational, manpower, logistical as well as cultural and social. Navy Medical Service (NMS) leverages on operational concepts like modularization and adaptation to overcome some of these peri-operative challenges. By drawing from lessons learnt and experiences accrued over the years, NMS is able to overcome many of these unique challenges posed by the austere maritime environment.

321 Enhancing Inter-Operability and Coordination in Military Medical Response for Disaster Relief Operations

Gan Wee Hoe1
1COL (Dr) Air Force Medical Services, Singapore Armed Forces Medical Corps

The scale and complexity of modern day disasters heightens the risk of mass casualties. As militaries are often the first responders to disasters, it is crucial to develop a humanitarian assistance and disaster relief (HADR) architecture that will enhance regional and international military cooperation in disaster medical response. This facilitates the militaries in organising and deploying in the most efficient and effective manner, and mobilise medical assets to the disaster-stricken areas.

To this end, the Singapore Armed Forces (SAF) has been taking a leading role in strengthening the regional HADR framework involving the military medical services of ASEAN and extra-regional countries.

Through the ASEAN-Defence Ministers’ Meeting-Plus Experts’ Working Group on Military Medicine (ADMM-Plus EWG-MM), the SAF and the military medical services of other ADMM-Plus nations have collectively developed a Standard Operating Procedure to establish a common understanding and a common operating language among the 18-member countries.

The successful conduct of a multi-national exercise, hosted by Brunei in 2013, demonstrates the pivotal role of the military in delivering timely medical response in the aftermath of disasters. It also underscores the importance of enhancing inter-operability, coordination and practical cooperation among militaries to reduce further losses and alleviate suffering from disasters.

322 The Role of Aeromedical Evacuation in Humanitarian and Disaster Relief Operations

Dale Lim1
1SLTC (Dr) Air Force Medical Services, Singapore Armed Forces Medical Corps

The Republic of Singapore Air Force (RSAF) commands aeromedical evacuation (AME) assets for the Singapore Armed Forces (SAF). These AME assets have been put to good use during various SAF involvements in humanitarian assistance and disaster response (HADR) within the region. AME has a unique role in HADR and it often provides an added dimension to patient care in a disaster scenario.

In addition to understanding the advantages of AME in a HADR mission, there is also a need to consider various clinical and operational aspects of AME to ensure the smooth and safe evacuation of injured victims from the disaster area. The SAF’s HADR response during the devastating earthquake that shook Northern Sumatra in late March 2005 will help to illustrate this.

The RSAF deployed aeromedical teams and Chinook heavy lift helicopters to aid in the disaster relief effort. The aeromedical teams provided medical care to the disaster victims onboard the RSAF Chinook helicopters. Most of the injured victims suffered earthquake related injuries that required immediate air evacuation out of the disaster area for further medical care. Over nine days, 110 patients were evacuated by the RSAF aeromedical teams from Nias to Medan for further medical care. The lessons learnt from this experience may help future Humanitarian Medical Missions to better respond to future disasters.

316 Logistics in Emergency Relief Operations – Challenges and Opportunities

Robert Souza1, Jonas Stumpf2
1Executive Director, Asia Pacific, The Logistics Institute
2Managing Director, The Logistics Institute

Over the last decade, Asia has been the region most frequently hit by natural disasters and with the most number of victims. On average, since 2001, Asia was hit by 152 natural disasters per year affecting 208 million people and causing an annual damage of USD 62 billion.

Singapore, named the world’s best logistics hub, is home to academic leaders, corporate and non-profit control towers. In view of this, more needs to be done to improve logistics and supply chain management best practices when it comes to increasing preparedness, alleviating suffering and speeding recovery from the disasters in the region.
Applying the discipline of logistics and supply chain management will help to not only save lives but also to efficiently manage costs and to substantially increase the value of the humanitarian response.

The Humanitarian Logistics - Asia Pacific Centre was set up in 2012 as a collaborative effort between the Kuehne Foundation and The Logistics Institute-Asia Pacific / National University of Singapore and is aiming at equipping the various humanitarian actors such as government agencies and humanitarian organisations with exactly this discipline.

In line with its guiding concept “from/by Asia for Asia”, the Centre predominantly focuses on local and regional capacity building initiatives in the total community of practice. This encompasses a formulation of the best education initiatives facilitated by a quality research agenda and spiced by real-world best practices.

In this context, Disaster Medical Action Teams (DMATs) often need to carry large quantities of supplies for both medical care and for their operational convenience. When going into a disaster zone, what’s crucial is to understand that the host community is already suffering from a conflict between needs and availability. Expecting to rely on the host community for logistics support will, thus, be unrealistic. Rather, there needs to be careful logistics planning by any organisation intending to dispatch DMATs to a disaster site.

Due consideration needs to be given to establishing communications for tactical, regional, and long distance communications and to work out how available communications can be maintained for the duration of the disaster management effort. As a basic necessity for the survival of the DMAT, provision of food and potable water for DMAT personnel will include use of portable rations for the first few days and then gaining access to fresh rations for the rest of the time spent at the disaster site.

Depending on the specific roles and capabilities for which the DMAT team is constituted, special items of equipment and supplies, including medical supplies will need to be planned for. The challenge often is determining what illnesses or injuries would need to be managed and the necessary support for these. Historical lists and standardized scales of items for specific types of disasters can be used as references for logistics planners. These lists are best drawn up in the preparatory stages of disaster management and their sources identified and arrangements made for rapid organization and dispatch of these with the medical team.

Security considerations in DMAT logistic preparations include safeguards for the protection of DMAT personnel, facilities, and property from loss or damage. Transportation and accommodation needs for the team at the disaster site will need to be catered.

For the above to be executed it is crucial that there be designated persons responsible for logistics management in any DMAT Team.
Results
Focus on multiple casualty management and training improves the competencies of the participants, including personnel and team management. It encourages an exchange of experience and knowledge and the creation of networks amongst an interdisciplinary team. It also improves coordination of the incident response and the quality and availability of emergency management tools.

Conclusion
The TAS 3 tool can be transferred and applied to any remote area beyond borders to enhance multiple casualty preparedness and response.

As a volunteer-based organization, we face many challenges from logistics to acquisition of items to deployment of skilled medical personnel.

288 Pre-Deployment Preparation for Disasters and Humanitarian Assistance Missions
Ng Yih Yng1
1Chief Medical Officer, Singapore Civil Defence Force
Email: yihyng@gmail.com

Preparing a team to standby for a humanitarian assistance or disaster relief (HADR) mission requires careful planning in terms of managing human resources, operations planning, logistics and administration. Although every mission is unique, there are many common issues that can be anticipated and planned for to maximise the chances of launching a successful HADR mission.

Good medical force protection, administration, appropriate equipping, pre-deployment training, psychological preparations, field surveillance, mission execution and post deployment debriefing help to contribute to the success of the mission.

The author aims to share experiences gained from preparing uniformed services staff for various missions in East Timor, the South Asian Tsunami and experience from formal training as a United Nations Disaster Assistance and Coordination (UNDAC) member for the Asia Pacific region.

167 What really goes on in a Humanitarian Medical Mission – Observations and Experiences over the last decade in Singhealth Humanitarian Relief Programme
Mark Leong1
1Associate Professor & Head, SingHealth Humanitarian Relief Programme, SingHealth Services
Email: mark.leong.k.f@sgh.com.sg

Humanitarian Medical Missions are often launched in response to a devastating catastrophe which exact a toll on the health of the affected community. After close to a decade of humanitarian aid provided by volunteers from SingHealth working with Singapore based NGOs, the SingHealth Humanitarian Relief Programme was created. Since then many more teams of volunteers have delivered assistance and relief to communities in the Philippines, Myanmar, Pakistan, Indonesia and ASEAN. This presentation draws from the observations and experiences of relief teams with the aim of exploring how Singhealth can be move forwards...
in a responsible, evidence and outcome based manner with international best practices in mind.

178 Paediatric Morbidity in the Pakistan Floods 2010 – Experience of a Singapore Medical Relief Team
Ong Yong-Kwang Gene
1Consultant, KK Women’s and Children’s Hospital
Email: genecong@yahoo.com

Introduction
The 2010 Pakistan floods (aka Sial da hadh) began in July 2010 following heavy monsoons and affected nearly 21 million people (of which half were children); mostly by destruction of property, livelihood and infrastructure, with a death toll of close to 2,000.

Objectives
This paper describes the paediatric experience of a Singaporean medical team involved in a humanitarian medical mission in the chronic phase 3 months after the floods in a NGO run new refugee camp for displaced people affected by the after the floods in the agricultural city of Sukkur, Sindh province, Pakistan.

Methodology
Epidemiological and descriptive data from 11th to 18th October 2010 from paediatric patients (0-15 years old) seen in a static medical clinic were collected. The medical team’s experience and paediatric medical management in a resource-limited setting and methods for referrals and integration to local healthcare resources were described.

Results
1818 patients were seen in the static mobile clinic over 8 days of which 46% were paediatric patients. 47% were females. Respiratory conditions were the most common diseases encountered and consisted of 40% of the caseloads; followed by gastrointestinal diseases (19%). Of note, an average of 16 newly identified malnourished children (5 months to 3 years old) were seen and referred to feeding clinics for follow-up. A total 83 paediatric procedures were done (including incision and drainage of abscesses, intravenous cannulations with drug and fluid administration and wounds toilet and dressings).

Discussions and lessons learned
In a resource-limited setting, the Singapore medical team had be dynamic, role-diversify and innovate using available equipment to carry out its duties. Co-ordination with the local healthcare resources was vital to allow continuity of care and not overload the already thinly stretched local healthcare resources. Integration to available non-governmental organisations’ resources were also emphasised.

181 Ilo Ilo - Not the movie
Rahul Goswami
1Adjunct Associate Professor, Emergency Medicine, Changi General Hospital
Email: rahul_goswami@cgh.com.sg

This is a 30-minute talk recounting the experience of a disaster medical assistance team (DMAT) consisting of CGH doctors and nurses. This team was sent in conjunction with Mercy Relief to the province of Ilo Ilo on Panay Island; one month after Super Typhoon Haiyan hit. The talk relates the logistics, makeup, challenges, response and medical limitations faced by not just the team but by the other responders there as well. In one week, the team saw approximately 1800 patients in five villages.

234 Establishment of a Urological Surgical Service in a Developing Pacific Island Nation: A Review of the Vanuatu Urology Pacific Island Project
Richard Grills1, Ben Namdarian, Geoff Steele, Richard Leona
1Urological Surgeon, Barwon Health, Deakin University
Email: rgrills@westcoasturology.com.au

Introduction
In 2009, an Australian urological surgery team under the auspices of The Royal Australasian College of Surgeons (RACS) was invited by Vila Central Hospital in Vanuatu to provide a visiting urological surgery service. Since then RACS, via the Pacific Island Program (PIP), has organised a yearly Urology visit to Vanuatu to perform surgery and deliver training in the management of urological conditions, particularly focussing on transurethral resection of prostates (TURPs) - the procedure assessedas being of greatest need. The program is funded by the Australian Government (Department of Foreign Affairs and Trade) and delivered in conjunction with the Vanuatu Ministry of Health. Various industry sources and Australian hospitals have donated equipment facilitating surgery and since 2009, 84 TURPs have been performed by the visiting team. Following further training of both a local surgeon and local nurses in Vanuatu and in Geelong, Victoria, Australia, the local team has independently performed 33 TURP operations.
Aims
A retrospective review of morbidity and mortality as well as surgical outcomes was undertaken for TURP procedures performed by the PIP program and by the local surgical team.

Methods
Using local medical records, and records held by RACS, a retrospective manual audit was performed. Outcome measures comprised perioperative mortality, significant morbidity, prolonged post-operative admission, transfusion, TUR syndrome and successful trial of void (discharge from hospital without catheter). Comparisons between the Australian RACS (PIP) team and local team were made.

Results
Over the 6 years, a total of 117 TURP procedures were performed; records for 99 (85%) were available. There were two post-operative deaths: one secondary to cardiac failure and another to assumed acute myocardial infarction. At least three patients died preoperatively in hospital where urosepsis was a contributing factor. Outcomes between the local and PIP teams were similar with no significant differences. Thirty-seven patients (36%) required blood transfusion. Ten patients had prolonged postoperative admissions (>7 days.). 92% of patients passed their trial of void. There were no clinical or biochemical incidents of TUR syndrome.

Conclusions
With local enthusiasm and the support of a committed and well organised visiting team, a urological surgery service can be successfully established in a developing country. With appropriate training and ongoing support, urological surgery can be performed independently and safely by a local team with comparable outcomes to that of a team of visiting experts.

Interplast Australia & New Zealand: Microsurgical Skills Development in Bangladesh
Russell Corlett†, Jessica Howell
†Plastic Surgeon, Interplast Australia & New Zealand
Email: jess.howell@interplast.org.au

Interplast Australia & New Zealand (Interplast) was established in 1983, and is an Australian-based not for profit organisation which sends fully qualified plastic and reconstructive surgical teams around the Asia Pacific region to provide life-changing surgery and train local medical personnel. Interplast commenced work in Bangladesh in 2004, and since that time has implemented 35 short-term program activities.

These have ranged from surgical service visits, surgical mentoring and training, Emergency Management of Severe Burns (EMSB) and Essential Pain Management (EPM) courses and hand therapy training.

Interplast’s programs in Bangladesh have been broad in their scope, with many successes in the areas of hand surgery, burns management and training and general surgical programs.

One area of particular success in Interplast’s Bangladeshi programs is the microsurgical skills training project. Microsurgical skills are an essential skill for the modern reconstructive plastic surgeon, as they provide the surgeon with a much wider range of options for reconstruction.

Large defects, such as those which occur following resection of head and neck cancers, breast cancers or extensive trauma, can often be reconstructed in a single stage operation, providing restoration of function and feeling in the restored parts.

Over the past three years, Interplast has been assisting the plastic surgeons in Bangladesh to set up a training program in microsurgery which has seen the extraordinary growth in these type of cases from just 1-2 per year performed by just a few surgeons, to 20 last year and with the prospect of 3 cases per week over the next year. The number of surgeons trained in microsurgery in Bangladesh now exceeds 50.

The success of this program has been made possible by the vision and dedication of the plastic surgeons at the Dhaka Medical Hospital, as well as the dedicated Interplast volunteer teams who continue to support the training of these surgeons.

Orthopaedic Outreach: Recognising the Need for a Socially Responsible Approach to Humanitarian Aid in Developing Countries
Graham Hextell†
†Chief Operational Manager, Orthopaedic Outreach and University of Notre Dame
Email: ghextell@orthoreach.org.au

Orthopaedic Outreach is the humanitarian arm of the Australian Orthopaedic Association. Our aim is to improve the quality of orthopaedic and rehabilitative healthcare delivered by local medical and nursing personnel in their own
Orthopaedic Outreach is working increasingly with the country leaders and with the various Ministries of Health throughout the Pacific to provide an Orthopaedic surgical service delivery as well as identify ongoing educational opportunities.

This paper will address the increasing burden of surgical disease related to injury, in particular with comparison to programs targeting generic disease; outline the strength in having an open consultative approach in planning together with the benefits of collegial networking for the greater good, and will be of interest to those involved in leadership, team building and the development of a sustainable program.

297 All Ears Cambodia – A Local Health Project By Cambodians, For Cambodians
Ho Eu Chin1
1ENT Consultant, Tan Tock Seng Hospital
Email: eu_chin_ho@ntu.edu.sg

Introduction
All Ears Cambodia (AEC) is a medical aid organisation dedicated to the care of patients with ear diseases and hearing problem. The AEC clinics provide ear and hearing care, often to those who are the most vulnerable in the Cambodian society. Poverty remains a big problem after years of war and chronic ear disease tend to disproportionally affect those from the disadvantaged segments of society. Cambodia is still highly lacking in doctors, let alone specialists and AEC strives to provide a high quality, cost effective service that relies on local solutions.

Services
Initially started by an audiologist from England in 2003, this service is now largely run by Cambodians to serve their own people. AEC has 3 main clinics in Phnom Penh, Siem Reap and Kratie and run many outreach clinics to many provinces in Cambodia. They collaborate with many local and international NGOs and also the public hospitals in Cambodia. One of their main focuses is the restoration of hearing with the use of hearing aids. AEC has good facility to repair and service hearing aids. In fact, AEC provide an avenue for used hearing aids to be reused.

AEC has also set up the AEC Institute of Audiology and Primary Ear Health Care to build up local expertise to provide a sustainable service in the longer term.

How you can help
Training and education is the key for service development and quality improvement in any health care organisations. Health care professionals can arrange short-term placements with AEC to help with CPD (Continuous Professional Development) activities for their health care professionals. You can volunteer to teach their health care workers and also to provide real time clinical teaching and supervision. The learning opportunities should be both ways for us in Singapore to see how much can be achieved with so little. AEC will also welcome donations of equipment, books, hearing aids and funds to run their services. You may find out more at: www.allearscambodia.org

232 Approach to Decision-making for Operative Intervention in Orthopaedic Trauma cases in Austere Conditions – Typhoon Haiyan Experience
Shalimar Abdullah1, Nor Hazla Mohamed Haflah, Shahridan Fathil, M Ashraff M Ariff1
1Executive Committee, Emergency Response, Mercy Malaysia Medical Relief Society
Email: kelapa44@yahoo.com

Typhoon Haiyan devastated much of Leyte Island in November 2013. Ormoc is a large city on Leyte island and its only public hospital, Ormoc District Hospital (ODH), sustained 90% damage with major flooding and devastation to its wards and operating theatre. Mercy Malaysia assisted in repairing the roof the wards and operating theatre and by 1 month post-typhoon, both were functioning.

The hospital offers services in obstetrics and gynaecology, internal medicine, paediatrics, general surgery and orthopaedics. However, the one and only orthopaedic surgeon was unable to return to work immediately due to personal losses. On our arrival, the orthopaedic ward was overflowing with patients.

Our key activities were doing daily orthopaedic rounds, prioritizing of a list of operative cases, supporting the Emergency Room in dealing with orthopaedic cases and undertaking daily dressings for wounds and diabetic feet.

Operatively, we performed open reduction and internal fixation / external fixation for 10 patients, wound debridements for 15 patients, amputations for 4 patients and a severe contracture release and skin grafting for 1 patient. All cases, except the last patient, were done under spinal anaesthesia.

From 4/1/2014 till 17/1/14, a total of 33 operations were done. An average of 3 cases were done each day with the team working back to back from 8am to 8pm daily. With such a high turnover, the orthopaedic cases were nearly all mopped up. There were two teams consisting of 2 orthopaedic surgeons, 1 anaesthetist and 1 orthopaedic staff nurse. There were 11 personnel for both teams.
The operative issues for discussion included internal fixation in closed fractures, internal fixation in a semi-sterile operating theatre without air-locks, methods to increase sterility in austere operating conditions, usage of 3rd generation cephalosporins in first-line treatment, poor patient and ward hygiene with regard to internal fixation.

The challenges were unavailability of tourniquet, unavailability of blood bank or intensive care back-up. We will also discuss patients’ expectations and the ethical issues of foreign medical intervention in such a setting.

235  Mercy Malaysia Medical Relief Society Field Out-patient Clinic Deployment during Typhoon Haiyan – Lessons Learnt
Masniza Mustaffa1, Shalimar Abdullah
1Health Coordinator, Mercy Malaysia Medical Relief Society
Email: kelapa44@yahoo.com

Typhoon Haiyan devastated much of Leyte Island in November 2013. Ormoc is a large city on Leyte island and its only public hospital, Ormoc District Hospital (ODH) sustained 90% damage with major flooding and devastation to its wards, clinics and operating theatre. Mercy Malaysia assisted in repairing the roof the wards and major parts of the hospital.

Due to initial logistical problems, Mercy Malaysia was only able to deploy and set-up our Field Outpatient Clinic on November 20, 2013. The clinic function for a total of 6 weeks until December 24, 2013. We saw a total of 10,006 patients.

Our method of classifying the diseases seen were based on the local method of disease surveillance - S.P.E.E.D (Surveillance in Post-Extreme Emergencies and Disasters) reporting form developed by the local Philippines Health authorities and WHO. This is a rapid method to detect any abnormal symptom in the population signifying a possible disease outbreak. Data were reported daily to the local health authorities.

The peak number of patients seen were between 25th November 2013 and 1st December 2013. This would correspond to 17 days post-landfall of typhoon Haiyan. Females made up nearly three-quarters of the populations. This suggests implications in patient education with emphasis on women and children. The most common diagnosis was acute respiratory infection (ARI).

We will discuss the challenges in setting up our field clinic, the high volume of patients, types of diseases treated and managed, provision of free medication and treatment in the local setting and duration of operation. For example, we intended for the field clinic to operate for just 2 weeks but as the local hospital was still under construction, we had to extend our services for 6 weeks. Other challenges were data collection, continuous deployment of volunteer foreign medical personnel and continuity of care from one team to the next.

240  Management of Humanitarian Emergencies: Focus on Children
Erik Torjesen1, Karen Olness
1President, Health Frontiers
Email: etorjesen@sas.edu.sg

Addressing the special needs of children in disasters is enhanced by the existence of a cohort of trained professionals. For the past 18 years, Health Frontiers (HF) has supported training programs on the special needs of children in disasters, with a particular focus on long-term psychosocial consequences. These include the annual workshop on Children in Disasters at Case Western Reserve University, and similar workshops that have now taken place in more than a dozen countries. Volunteer health professionals who have taken this training have been vital in responding to humanitarian emergencies such as the Indian Ocean Tsunami and the Haitian Earthquake.

More recently, in January, seven volunteer professionals (from Thailand, USA, Canada and China) joined colleagues in the Philippines to conduct an HF-sponsored workshop on the psychosocial impact of the Tacloban disaster on its most vulnerable victims, the children. In March, HF volunteers conducted a unique workshop in Cuba on children in disasters. The third edition of HF’s “How to Help the Children in Disasters” is now on line at the International Pediatric Association website, and available in book form at Amazon.

255  Experience as Relief Volunteer in the Gujarat Earthquake
Jugindra S1, Sunil Kame1
1Director, Medical Services, Shija Hospitals & Research Institute, Manipur, India
Email: manjushree@shijahospitals.com

The 2001 Gujarat earthquake occurred on 26 January 2001, India’s 52nd Republic Day, at 08:46 AM local time and lasted for over two minutes. The epicenter was about 9 km south southwest of the village of Chobari in Bhachau Taluka of Kutch District of Gujarat, India and reached a magnitude of 7.6 killing 20,000 people.
A team of two doctors from Shija Hospitals, Imphal, Manipur, the easternmost state of India, reached Bhachau on 3 February 2001 to work as volunteers taking part in the relief activities in the area. Joining the Vishva Hindu Parishad volunteer group, they worked 5 days to bring medical relief to the people in the villages.

Setting out every morning at 7 am. from the base camp, 7 to 8 volunteers went on a preplanned route, in an SUV, to cover all the villages en route. The vehicle was laden with necessary medications, dressing materials and other commodities. Every night by 9 pm, the team would returned to base camp after covering about 60 to 70 km route. Each day the team would take a new route.

At each village, a temporary clinic was set up to treat the injured and the sick. In most cases, it was for removal of sutures from the wounds that had been sutured earlier. For immobile patients, house-to-house visit was conducted.

We noted that the people were very resilient. In one of the villages we observed a whole school conducting classes under the trees on the 9th day after the quake. Girls as young as 12 to 16 years were working tirelessly to provide relief work. Some of them had lost their entire family, but in the relief work found new bonding. Restoration and rehabilitation was already in progress. We also observed that the shock had totally devastated some of the villagers. On one house visit, we found an 80-year-old lady who had refused any medical help for her fractured arm because all her relatives had died.

We also observed the set up of temporary hospitals including operation theatres made by several foreign countries including Israel. The trip had been an extremely good learning opportunity and all the more significant for the team from Imphal as Manipur which is a zone of high seismic activity.

**Introduction**

ENT is a specialty that encompasses both surgical and non-surgical management of clinical conditions in the Ear, Nose, Throat and the General Head & Neck region. Patients can be in any age group, from the newborn till the very elderly, with a vast range of clinical problems. These include pathologies that affect the sensory functions, including hearing, smell and taste; and motor functions, including swallowing, speech, breathing and balance.

**Delivery of ENT services in developed countries**

Except for superficial facial and neck lesions, the examination and interventions in ENT largely require access to anatomical regions of the human body that are not readily accessible through basic clinical examination techniques and equipment. Within Singapore and many parts of the developed world, ENT outpatient services is largely delivered by specialised clinics by specially trained staff, often within a hospital or clinic setting. The clinical ENT team would include ENT trained doctors & nurses, speech & language therapists, audiologists, vestibular therapists and dieticians.

ENT clinics need to be specially equipped with a large number of portable and not-so portable equipment. The latter, including a suction device, an operating microscope, flexible naso-endoscopes, and reclining chair would be a bare minimum. Portable equipment includes auroscope with disposable ear pieces, powerful head light, tuning forks, tongue depressors, nasal speculums and various specialised instruments for aural and nasal toilets. Others include silver nitrate cautery sticks and a decongestant-local anaesthetic spray.

**Challenges in ENT humanitarian work**

As with any other medical humanitarian work, it would be impossible to provide a humanitarian service that exactly replicates a standard service within specialised units in developed countries. The logistics of providing the portable equipment is challenging enough, without even considering the not-so portable ones. Some things may never be replicated, for example having a sound proof room to get a gold standard hearing test.

Other challenges include the need to clean and sterilise equipment in between patients. A right balance is needed in bringing along sufficient amount of instruments and an efficient cleaning and sterilising service.

**Learning from our experience in the Philippines**

Through TIMA (Tzu Chi International Medical Association) medical missions, we have managed to successfully provide an ENT out-patient service in the Leyte Island region of the Philippines, which was badly ravaged by Typhoon Haiyan in late 2013. We would like to share our experiences, challenges faced and the lessons learnt.
Background
This poster highlights anaesthetic lessons learnt during a humanitarian surgical mission in aid of the Aceh Tsunami of 2004 where an estimated 166,000 people perished in Indonesia.

Materials and Methods
Anaesthetic case records of patients who underwent surgical treatment by our team, requiring an anaesthetic (excluding local anaesthesia infiltrations) were reviewed. This was over a period of 8 operating days.

The surgical mission was deployed on Day 6 after the tsunami, in Meulaboh, a coastal town where about 80 percent of the population perished. The town’s only hospital’s operating room was used until our field hospital was established and supplied with fresh water and electrical power.

Results and Discussion
There were 14 patients.

Types of anaesthesia
1. General anaesthesia, endotracheal intubation
2. Chloral / ketamine / inhalational technique (4 to 12 years old)
3. Axillary blocks with ketamine and local anaesthetic supplement (75 and 84 years old)
4. Subarachnoid blocks
5. Bier’s or intravenous lignocaine block
6. Femoral nerve block used for splint placement
7. Multiple wound infiltration for debridement, sutures

Anaesthetic lessons learnt
1. Expect much limb trauma surgery where regional anaesthesia, IV lignocaine, supplementation with local anaesthetics, nerve blocks are useful, and simple to achieve. Types of injuries managed depends on the point of time the team arrives at disaster zone.
2. Ketamine is useful in children and supplementing poor quality blocks. There may be septic and potentially unstable patients whereby the use of ketamine offers the best option.
3. General anaesthetic techniques require more hardware and monitors: may be impractical, fragile and cumbersome in situations where having simple / minimal equipment is preferred.
4. Standard of care / asepsis in a disaster zone can’t match at-home standards although ought to aspire towards.
5. Possibility of failed / patchy nerve blocks as a result of drugs deteriorating in hot environment, or equipment failure from transport.
6. Speed of deployment, short preparation time result in omission of equipment and important drugs in inventory.
7. A channel of obtaining omitted drugs / equipment eg from a reliable resupply train is invaluable. Fentanyl, vasopressors, epinephrine are important to bring along as adjuvants for regionals. They may be impossible to acquire in disaster zone.
8. Complex / high risk and definitive surgery such as internal fixation of limb fractures are triaged to better equipped faculties and cities.
9. Peripheral nerve stimulators / portable ultrasound may improve quality of regional anaesthesia, and are not difficult to bring along.
10. Personal safety/ health of team important (in Aceh there was an ongoing insurgency and aftershocks posed risk when encamped in buildings already weakened).
11. As international aid arrives there may be more medical staff than needed.

300 Tales of the Unexpected: Stories from the Surgical Mission Field
Lee Shu Ying
1 Consultant, KK Women’s and Children’s Hospital
Email: leeshuying79@yahoo.com.sg

As an anaesthetist, I have had the privilege to serve in a number of surgical missions overseas, always as part of a team. Team presence and team work are vital because these projects are resource-intensive, and require substantial logistics and infrastructure support. The spirit of the team lies in its people, of which there are 3 core groups: i) Clinicians (physicians, surgeons, anaesthetists, dentists) ii) Clinical support staff (nurses- surgical, recovery, wards, therapists) iii) Auxiliary support personnel (medical records, biomed technicians, logistics support). Not forgetting the local staff, who are often the most-value-added personnel, providing translation and conveying gratitude, to smoothen and sweeten the whole process.

The surgical mission field is a busy one; fraught with unexpected problems and challenges, but brimming with potential and hope. Unexpected situations are of four kinds: expected but absent, not expected but present, present but far below expectation, and present but far exceeding expectations. Examples of such situations are many: Life-changing projects where high-risk procedures are performed; Make-shift setups for various purposes of screening, operation, recovery and wards; Borne-out-of-need improvisations of primitive equipment; Unfamiliar equipment and drugs; Vital surgical equipment stuck in customs; Unstable or intermitent electricity supply; Impromptu protocols tailored to the local context; Highly-skilled volunteers practicing their trades outside
their comfort zones; Social barriers of all sorts - language, culture, beliefs and religion etc.

The unifying elements amidst all these are to achieve a better quality life for the local people and to bring God’s mercy to those in need. Through these ‘tales’ you will be better prepared to expect the unexpected. Alors, Bon voyage!

329 Complex Reconstruction for Neglected Facial Tumours in the Third World: Bringing Humanitarian Aid Home

James Leong
1Clinical Director, Plastic Surgery, Dandenong & Casey Hospitals, Monash Health/ Interplast Australia
Email: jcsleong22@gmail.com

Surgical volunteer programs exist to provide essential services to individuals in countries where health infrastructure, resources, and personnel are lacking. These programs provide care to hundreds of patients a year, all over the world. However, there exists a subset of patients who are deemed unsuitable for surgical care by visiting teams due to the advanced nature of their disease. We present our series of patients with advanced facial tumours who received surgical care in Australia after they were unable to receive treatment in their home countries.

Between 2009 and 2014, five patients aged between 7 and 24 underwent resection and reconstruction of complex facial tumours at Monash Health in Victoria. These patients have had good functional and cosmetic outcomes.

Our pro-bono surgical program provides a unique solution to the problem of the inoperable patient in the developing world. The program relies on generous donations from staff, the health service, and equipment companies for success.

183 Nursing Touch in an Operation Smile Mission

Goh Jie Min Jasmine
1Staff Nurse, Dept of Plastic, Reconstructive & Aesthetic Surgery, KK Women’s and Children’s Hospital
Email: jasmine.goh.jm@kkh.com.sg

This presentation serves as an introductory platform sharing specifically the experiences and roles of a pre/post-operative nurse, providing information for nurses to understand the purpose of Operation Smile and how it changes lives of children in need.

Operation Smile is a non-profitable international medical organization which operates mainly on cleft lip and palate surgeries for children in developing countries. It involves medical and non-medical volunteers, who facilitate the flow of processes from screening day till discharge.

All nursing volunteers have to be credentialed by the Operation Smile committee before participating in a mission. Pre/post-operative ward nurses, preferably pediatric trained, have to be registered under the Singapore Nursing Board (SNB), must have a valid SB license, possess the skills of Basic and Advanced Cardiac Life Support, and must have working experience in a medical or surgical ward for at least 2 years.

A pre/post-operative ward nurse plays a vital role in a mission, whose job starts from screening day, through the surgery and their stay, till discharge. She facilitates screening, carries out post-operative orders as ordered by the anesthetists, provides education to the patient/caregiver about wound care and also attends to/assists in the patient’s activities of daily living.

In conclusion, we aim to promote understanding and trigger the interest of nurses to join the inter-disciplinary team at Operation Smile on this meaningful journey to create more smiles around the world.

185 Voices from the Heart; The Use of Digital Storytelling in Education

Jackie Matthews
1Operation Smile UK
Email: jacidachtler@aol.com

Digital storytelling has emerged as a powerful teaching and learning tool, which presents personal narratives, images and music to create a unique and sometimes emotional snapshot into another person’s experience.

By offering a platform for sharing and understanding such narratives, professionals may gain insight into a perceived experience and construct their role accordingly. Used effectively, they can engage the listener and offer opportunity to reflect and consider the impact of their professional role on the storyteller. This article looks at how digital storytelling can enhance professional practice and enable vulnerable voices to be heard.

While working as a medical volunteer with the international charity Operation Smile (www.operationsmile.org.uk) in Mexico in November 2011, I was involved in assessing and caring for Mexican children with cleft lip and palates. My first experience of working in a multinational team of volunteers was challenging on
many levels. Communication was key, so written and verbal information given to the patients was in their native language. The mission was televised and the patients’ stories were used for educational and fundraising purposes.

On reflection, the experience of being part of their stories was hugely influential and caused me to question my priorities and personal values. Digital storytelling facilitates the telling and hearing of some of the unwritten and unspoken stories of ordinary people, informing professionals to provide their care in a more informed and compassionate manner. This is a key part of our responsibility as professionals and colleagues; empowering and enabling our clients, working reflexively and collectively, and listening out for the hidden messages. These stories should not be limited to confessional, self-indulgent accounts, but serve to enhance the listeners’ experience through insight into living with their experience, emotionally, practically and spiritually. Good involvement practice is inclusive and participatory, utilising a wide range of ways of working to involve the public, giving them a voice via web chat, e-panels, surveys, interviews and workshops. Actively listening to how people describe their own journey shows respect from the professional, following Rogers’ Humanistic approach - unconditional, positive regard shows support and acceptance of the person.

It is our privilege to be part of another’s story, to listen to their voices and enable them to be heard.

Methods
We established an emergency transfer service with clinical escort between SC and AHC. This was achieved by the purchase of an appropriate vehicle, development of transfer protocols and intensive training from international medical teams and our own in-house scenario training. Quality of care was evaluated two years after introduction with a review of all transfers that occurred in 2012, and continues with quarterly AHC mortality reviews.

Results
Training provided by international medical teams contributed to building the capacity of both doctors and nurses providing clinical escort, and also the ambulance drivers. When aligned with our hospital protocols and algorithms, international medical teams deliver a valuable service. The development of a follow-up and review program would further enhance the benefit of these services. In 2012 a total of 131 patients were transferred to AHC, with no mortalities on route. Since then, AHC mortality reviews show steady improvements from a mortality rate of 33% in 2012 to just 23% in the first half of 2014.

Discussion
Emergency transfer services with clinical escort are rare in the developing world. They are however necessary as hospitals and higher level services are often located away from where patients initially seek health care. We have shown that it is possible to establish and implement an effective emergency transfer service in a developing world setting with assistance from international medical teams.

Preparing for Humanitarian Medical Missions: What it Entails
Tan Moarie Grace1, Chia Chwee Sia,Ye Biyin,Cai Peishan Gloria, Rachmawati Bte Mustakim, Tan Shiwei
1Nurse Clinician, Major Operating Theatre, Singapore General Hospital
Email: tan.moarie@sgh.com.sg

Overseas medical missions are flagship activities dedicated to help Singapore’s globalization efforts, cultivation of goodwill and forging of bilateral friendly ties at the governmental, hospital management and working levels. These are congruent with SingHealth’s impetus to globalize its business, creating of opportunities for knowledge and skills transfer and providing health education to the underdeveloped/developing countries.

For the past 3 decades, medical teams from the Singapore General Hospital’s major operating theatre (MOT) have been tirelessly participating in medical mission trips to countries like Bangladesh, Cambodia, China, Laos, Indonesia,
Myanmar and Papua New Guinea. These medical trips are planned annually/bi-annually and are spearheaded by Chairman, International Medical Office.

The medical team typically consist of surgeons, physicians, nurses and physiotherapists / occupational therapists. Common orthopaedic surgical procedures performed include joint replacement, ligament reconstruction and spine surgery. As surgical techniques were demonstrated among doctors, knowledge of perioperative nursing was shared among nurses, imparting best practices in surgical skill and technical know-hows.

Extremely laborious and challenging preparation starts for the nurses when the date of the mission trip is confirmed. The participating nurse needs to work closely with key personnel within the local medical team as well her counterpart from the host country.

The nurse will have to anticipate the required instruments and supplies needed for the planned surgeries and be resourceful in preparation, such as requesting for loan of specialized consignment instruments / essential supplies from vendors. Supplies must be organized and categorized in boxes for easy access during surgeries. It is imperative to prepare documents for custom declaration as well. Transportation must also be arranged to deliver equipment/instruments from Singapore to the designated hospital in the host country.

On the intra-operative front, nurses must be able to react to unusual and ambiguous situations. Nurses should also be creative and be able to improvise as the medical facilities and resources may be mediocre. This ultimately increases the likelihood of positive surgical outcomes. Thereafter, post-operative rehabilitation will be followed up by the physiotherapist/occupational therapist. Teamwork and adaptability, and the ability to maximise the resources are essential qualities of the team members. And the support from the organisation, the Operating Theatre administrators, supervisors, nursing colleagues and collaboration amongst medical teams are the critical elements to facilitate the mission’s goal of providing safe and best clinical outcomes.

Healthcare in Myanmar
Apart from the disaster, the general level of healthcare awareness and public health education was low. Not only did the people there have limited access to drinking water, there was also a lack of medication and sanitation services.

Dispatching Team Singapore
Non-governmental organizations (The Singapore Red Cross and Mercy Relief) and healthcare institutions formed Team Singapore. Pre-departure guidelines and briefing were conducted by Foreign Affairs staff. Packing of drugs and equipment to last for a week was done. Rest of the drugs and equipment were procured in Yangon.

Arrival in Myanmar
On arrival in Yangon, there were discussions with various sub-committees formed by the local government. These committees planned a comprehensive program for reconstruction. This comprised of:
• Rescue and first aid treatment
• Rehabilitation,
• Reconstruction and resettlement
• Early warning system,
• Mechanism for mobilization
• Construction of storm resistant facilities and infrastructure

Team Singapore Responds to Twante Township
Team Singapore was stationed at the Twante Township. There was only one township hospital and a few rural health centres. The priority for the medical team was to manage those with direct effect, injuries, anxiety or depression as well as those who witnessed destruction and death.

Response Statistics
Team Singapore reached out to at least 10 villages. We ran mobile clinics daily at several locations treating a total of 4,710 patients in 9 days. Adults made up 62%, whilst pediatric patients comprised 38% of those treated. Some adults came to seek help for chronic medical problems. Post-traumatic stress disorder was seen in both adults and children, while injuries and wounds were seen in 10% and 12% of the groups respectively.

Wrapping up and Return
After the operations, issues which needed handing over were passed on to the local healthcare staff as well as the international volunteers.

Discussion
At the orphanage, the majority of the children were psychologically traumatized...
due to the deaths. Counseling was provided to children at the orphanage we visited. We also empowered the teachers at the orphanage and local volunteers on how to continue with the sessions.

**Lessons learnt**
Preparedness is the key to preserving human health in the event of a natural disaster. This would comprise activities such as risk assessment, hazards monitoring, early warning and population protection measures.

**Collaborative Culture: The Way Forward**
Singapore is also planning to improve the capabilities of Twante township hospital and to further assist with disaster preparedness planning of the local community.

**Conclusion**
The initial response was delayed due to reasons not known to us. The locals were self-reliant and resilient. Humanitarian workers had to respect local policies and not impose ideas and practice on others. However, suggestions and changes should be brought about if it help to alleviates suffering of those affected.

228  **Warmth Beyond the Cold Walls: Operating Room Nurses’ Experience on Volunteer Medical Mission**
Ong Shihui1, Amelia Tay Jia Li, Meskiah Samsudin, Michelle Ho Liping, Choo Xiuhui
1Senior Staff Nurse, Singapore General Hospital
Email: ong.shihui@sgh.com.sg

One visionary nurse’s passion and love sparked a fire that has grown in the past 21 years. Now all it takes is a promise of intangible rewards to spur the nurses from the Singapore General Hospital (SGH) major operating theatre (MOT) to participate in medical missions to various parts of Cambodia, China, Mongolia, Laos, Myanmar, Nepal, Indonesia, India, and Ubeziskan.

The operating room (OR) nurses have worked closely with surgeons from the Department of Plastic, Reconstructive and Aesthetic Surgery (PRAS) to transform the lives of many with surgical procedures for cranio-facial anomalies including cleft lip / palate repairs and reconstructive surgeries for post burns contractures.

Since the first medical mission to Myanmar in 1992, 65 humanitarian medical missions had been launched with immense benefits to both patients and the volunteer healthcare team. The experience and outcome of these trips were fulfilling. The resilience of the local people and the smiles of the post-operative patients are sufficient to spur the team to selflessly provide their specialised skills and work resourcefully to meet the needs of many patients who, in many occasions travelled from the remote villages. The volunteers surgeons and operating room nurses learned to adapt to primitive settings and overcome trans-cultural differences to forge stronger, better ties within the team and in the international landscape, forging camaraderie with the overseas personnel.

Participating in these missions has allowed the OR nurses to make a difference whilst improving clinical skills, executing critical thinking and learning valuable lessons about practising their skills in an unfamiliar environment. An environment that challenges their values and beliefs of how proper living standards should be and communication barriers that leaves one feeling lost at times. Besides adapting to the basic healthcare amenities, the nurse volunteers provide specialised skills and knowledge to assist surgeons, perform post-operative nursing and bedside teaching. Despite these challenges, the nurses have an immense passion to want to do more for the impoverished patients that came from all over the rural districts in large number to seek medical help from the medical mission team.

Helen Keller said “The best and most beautiful things in the world cannot be seen or even touched -- they must be felt with the heart.” This paper will describe and explore how these urban nurses prepared themselves both psychologically and physically to survive the medical missions. The benefits they had are intangibles and uniquely satisfying.

220  **Complementing the Current Healthcare Services in Poipet, Cambodia with a Referral System**
Soh Ser Yee1, Kalyanasundaram Ragavendra, Lin Zhi Min
1Yong Loo Lin School of Medicine, National University of Singapore
Email: scryce93@hotmail.com

Project Battambang (PB) is formed by a team of NUS YLLSoM medical students and doctors who head to Poipet, Cambodia to provide free medical services for the villagers yearly. Over the years, we found that many patients who visit our village clinics do not have adequate access to tertiary healthcare. The PB referral system was established with the aim of ensuring more continuity and sustainability in providing medical services for the villagers whilst complementing the services provided by their local healthcare system. The aim of our study is to identify how best we can complement the Cambodian healthcare system by setting up a referral system for the villagers who require follow-up care or more complicated procedures for which we are unable to provide at our village clinics due to resource limitations. The referral system has seen multiple patients undergo various treatments at multiple local hospitals, including Mongkul Borey Hospital and Angkor Hospital for Children.
The referred patients were identified through a screening process carried out during our village clinics. Selection was based on the services we had as well as the conditions which the patients presented with. There were 2 categories of referred patients — one for referral to the hospitals and another for long-term care (followed-up by our partners in Poipet). Those in the Hospital Referral category consisted of patients with acute or surgical conditions, as well as those with tuberculosis (under a national tuberculosis programme). For the purpose of this abstract, we will focus on this category.

Based on statistics collated from our Referrals in 2013, a total of 115 cases were referred, of which 44 received treatment. The remaining 71 were either patients from the other category or did not turn up. The patients who were referred to the hospitals were divided into 2 groups—those who needed surgical intervention (eg. cataracts, inguinal hernia) as well as those with medical problems (eg. tuberculosis, uncontrolled hypertension and DM). Of the 44 patients treated in the hospitals last year, there were 22 surgical (cataract to orthopedic surgeries), 13 medical (respiratory to hepatobiliary problems) and 9 dental cases.

With the referral system in place, we aim to see an improvement in the medical services we provide for the villagers in Poipet by ensuring a continuity of care. In the long run, we hope to work collaboratively with the local community in improving their healthcare system so as to provide tertiary healthcare services for the villagers who usually do not have access to them.

233  Galvanizing Cambodian Students to Maintain Sustainable Healthcare Services in Cambodia
Joel Chan Chee Yee1, Chen Ziyou David, Sim Meng
1National University of Singapore
Email: joelzz11@hotmail.com

Background
Project Battambang is an initiative launched in 2010 by the students of the Yong Loo Lin School of Medicine, National University of Singapore. The students made annual trips to Poipet, Cambodia to provide healthcare, education and support for Cambodian students.

Introduction
Overseas community service projects provide health services on a yearly basis which may not be sustainable in the long run. To combine the need for healthcare in the community and the desire of Cambodian students to serve their own community, Singaporean medical students collaborated with their Cambodian counterparts to run community clinic services. The aims of such collaborations are to reinforce the spirit of community service and to build up leadership skills among Singaporean and Cambodian medical students.

Methods
This was a qualitative retrospective study based on a series of informal interviews with Cambodian medical and dental students who took part in Project Battambang from 2012 to 2014. The Cambodian students were involved in administrative aspects of the project, clinical management of patients whilst working closely with the doctors, and daily debriefs to brainstorm on areas for improvement. Their knowledge, attitudes and practices were compared before and after the trip.

Results
A total of 30 Cambodian medical and dental students participated in this project over a period of 2 years. Factors for joining the community service trip included the need to serve others, to experience something different and curiosity. Before the trip, some of the Cambodian students were not familiar with how a clinic service was run. Their personal involvement in the trip helped these students gain better comprehension of such community projects, and even inspired some to run similar initiatives. In addition, 3 medical students (10%) started organizing their local community projects which included a donation drive for the homeless and a fundraiser movie screening. Two dental students (6.7%) planned and executed a one-day dental programme for children.

Conclusion
Community health projects that involve local Cambodian medical and dental students improved their understanding of running community projects and inspired some to run similar initiatives locally. Closer collaboration and involving the Cambodian students more in the early planning stages may facilitate the transfer of both knowledge and skills, which could in turn enable them to be more confident and capable in organising their own community projects independently.

172  Humanitarian Mission in Cambodia: Are we Improving after 7 Years?
Tan See Wei, Moo Ing How
1National University of Singapore
Email: zcll58@hotmail.com

The health status of many people in developing countries is often dismal compared with the norms in industrialised countries. Although volunteers hope such work will assist underserved populations, medical mission groups have been criticized for not providing sustainable health services as medical services are
often available to the community for less than a month. We discuss issues arising from the trip and use our experience in developing the Project “Lokun” to outline and illustrate several initiatives implemented over 7 years to ensure sustainability of the mission. Project “lokun” is a student-driven and faculty supported medical mission founded in 2007. Mission aims to provide free and sustainable medical services to the people living in the rural aspects of Cambodia to rectify the pressing medical problem of malnutrition, water sanitation and other health issues. The importance of partnering with the community and working within the existing medical and public health infrastructure is emphasised. Patients with chronic medical diseases are referred to local hospital for free medication and follow up. Various innovative initiatives are implemented to ensure patients are follow up with the local medical center. The main aim is to integrate the Cambodians back into their own healthcare system by helping them navigate the complex healthcare scene in Cambodia and simplifying it for them. Patients are also revisited in each subsequent mission to reinforce compliance.

The result of our venture had resulted in long-term impact to the local community in Cambodia. The initiatives outlined can be used as a model for sustainable international medical mission.

Preparing and Operating a Safe and Effective Pharmacy – A Cambodian Medical Mission
Tan Xin Zhong Timothy1, Sim Meng Ying
1Yong Loo Lin School of Medicine
Email: timothy.tbj13@gmail.com

Introduction
Pharmacies deployed in any setting should aim to operate both safely and effectively. The factors to be considered however, are slightly different in the context of medical missions that operate in the rural areas. Such pharmacies are often faced with inadequacies in vital operational and environmental variables that present as unsafe and unfavorable obstacles. Examples of these include language barriers, the lack of reliable utilities, and the locals’ inadequacy in health education resulting in preference for the use of scientifically unproven remedies. This abstract utilizes Project Battambang as a case study where several methods had been implemented at its pharmacy to improve safety and efficiency standards. Project Battambang first started in 2010 and has been making biannual trips to Poipet, Cambodia to operate clinics for the villagers ever since.

Methodology
These aforementioned measures have proven effective, and can be divided into the two main phases of pharmacy deployment – preparation and operation.

In the preparation phase, drugs were procured locally whenever possible as this meant that instructions were in the local language and that transport costs were reduced. Drug formularies were revised based on prescription data from past years, and by monitoring the regional prevalence of diseases and other medical conditions.

During operations, specially sourced collapsible shelves expanded our drug storage capacity and improved mobility. This, coupled with proper drug labeling and categorization, minimized mistakes and simplified retrieval. The operations phase also included daily stocktakes of drugs and equipment, ensuring that our doctors knew what were available and how much of each, allowing them to prescribe appropriately. Insufficient medication would then be restocked at nearby pharmacies or from different cities. As an additional safety measure, nurses were also stationed at the post-packing stage to vet all drug packages before actual dispensation to patients.

Discussion
Further improvements to safety and efficiency are being considered, and implementable methods for subsequent missions include the usage of wordless sticker prescription slips in consideration of the illiterate, and thorough relevancy checks for the local students that will assist us with medication counselling at the pharmacy, emphasizing on the dangers of polypharmacy, potential drug-drug interactions with traditional medicines, medication side-effects, and antibiotic use. As the locals have a “live by the day” mind-set, there is a strong tendency for them to discontinue antibiotic use upon symptom alleviation. Hence, more effort needs to be made to ensure proper antibiotic use.
Abstract
A Survey Committee was started as the team wanted to find out more about the conditions on the ground, to better understand the community that we were serving. Surveys can be used to find out the health seeking behaviours and specific needs of the community so that we can direct our efforts on those areas. In addition, the data collected can be used to monitor and evaluate our project and to act as a benchmark/marker of improvements within Poipet.

Method
Our questionnaire for the household surveys was adapted from the WHO Cambodian report. In our 2011/12 trip, we interviewed 80 households from the Tu Nok Kou Pram (TKNP) village and the survey findings were keyed in and analysed. A hand-drawn map of TNKP was created and the questionnaire was improved further. In the 2012/13 trip, we interviewed 108 households at a different village called Prey Koup (PK) village. These questionnaires were administered via face-to-face interviews with each interview team comprising of at least two medical students and one Cambodian translator. Houses were selected by convenience sampling while interviewees were decided by the first person above 18 years old who answered the door.

Results
Notable (not statistically significant) findings include: 1. Families prefer to self-medicate for physical injuries (45%); 2. Families do not drink ORS (63%) during acute episodes of severe diarrhoea; 3. Cost is the main reason for not seeking treatment for severe symptoms (50%); 4. Most have not visited health centres (69%) because they don’t know of its existence (55%); 5. Majority do not treat their water before consuming (56%). Learning points and challenges faced in administering surveys over the past years include: 1. The need for effective translators; 2. Early translation and familiarity of questionnaires; 3. Regular reassessment of survey questions; 4. Reliability of responses; 5. Mapping out of the village and homes; 6. Use of the National Cambodian Survey as a guide/reference, 7. Barriers in language/cultural sensitivities; 8. Better knowledge of NGOs working in the area; 9. Digitization of survey responses.

Conclusion
With these 2 years of data in hand, the team has been trying to shape our project to match the needs of the Cambodians living in Poipet. Currently, the data has been mainly used for sponsorship purposes and has also been incorporated into our health education segment. We are also trying to continuously improve on the methods of the survey within the limited resources we have and to monitor our progress.
The Genesis of Children of Cambodia – The Provision of Comprehensive Specialist Care in a Non-Governmental Hospital
Jonathan Ng Tze Chong1, Lee Seng Teik
1Medical Officer, Singapore General Hospital
Email: jnthnng@gmail.com

Background
Over the past 9 years, Children of Cambodia, a youth run society, has been actively pursuing a comprehensive model for fundraising, infrastructure establishment, and specialist training at Angkor Hospital for Children in Siem Reap, Cambodia.

After the Pol Pot regime, Cambodia, a country of 12 million people was left with a doctor population of less than 10. With the government struggling to provide even basic necessities such as clean water and infrastructure, there has been a great reliance of healthcare on non-governmental organizations such as Angkor Hospital for Children, which provides free quality healthcare for children under the age of 18.

However, with no prior hierarchy or specialist training programme, doctors are largely left unregulated and untrained, particularly in the area of specialist knowledge.

Aim
To review the experience and lessons learnt of a youth based charity organization in fundraising and partnership formations over the past decade.

Methods
Here, we take a retrospective look at the genesis and growth of a society started by a group of friends no older than 16 years old and its impact on Cambodian healthcare. We also look at the overall cost of running such programmes and its major successes and failures over the years.

Conclusion
Over the past 9 years, Children of Cambodia has successfully established some of the most celebrated and effective units in Cambodia, with outcomes in some circumstances, exceeding that of developed countries.

Relevance of Student-Led Humanitarian Medical Missions
Huang Xiaoting1, Kalyanasundaram Ragavendra
1National University of Singapore, Yong Loo Lin School of Medicine
Email: kalraga94@gmail.com

Introduction and Aim
The increase in numbers of student-led medical missions heading for lesser developed countries brings up the question of the relevance of students on these trips, considering their inability to contribute as certified medical professionals in running the clinics. As members of a student-led medical trip (Project Battambang) ourselves, we aim to draw on our own experiences to provide a view on our relevance to better tailor future trips to maximise benefits to us and the beneficiaries.

Discussion
In Project Battambang, the Singaporean and Cambodian doctors and nurses work together to provide healthcare to the locals while the students play a part in organizing and running the clinics. We contribute by providing logistical support through running the pharmacy, providing health education for the villagers and children and conducting surveys to understand the context to improve our project. This allows the professionals to concentrate on the patients whilst the students manage the rest.

Furthermore, to provide better care for the locals, it is imperative that we form local connections. As it is a student-led medical trip, we find it easy to work and connect with the local medical students who not only help us with translation but also with understanding the local healthcare context and running of the project. Their involvement in the project exposes them to the realities of poverty within their country and the project leaves a lasting impression on these students who continue to help the poor even after we have left, providing a form of sustainability. Such trips also teaches us the importance of empathy that will manifest in the students upon graduating as doctors to continue volunteering their time for such humanitarian missions as medical professionals who have a better understanding of the local context.

Since students are not involved in the actual running of the clinic, we are able to interact with the locals and through these interactions, we realised that a change must come from within. Thus, we expanded the project from only providing healthcare to providing education and scholarships to nurture youths in the society who might one day use their skills to benefit the community.

Undeniably, we are not skilled enough for the actual provision of healthcare. However, that is not to say that we are completely irrelevant as proved in the points above; thus, student-led medical trips are still very much integral.
173  The Value of Humanitarian Missions in Medical Student Training

Tan See Wei¹, Moo Ing How
¹National University of Singapore
Email: zell53@hotmail.com

Introduction
Humanitarian mission occur outside one’s usual practice setting with a primary purpose of providing health care to undeserved individuals. Project “Lokun” is a student-driven medical mission in Cambodia and had been running for 7 consecutive years. Currently only the medical students who volunteer participated in this international medical trip. All medical students participated in the humanitarian missions are surveyed to assess the value of this experience on medical student training and impact on future.

Method
All participants involved in the humanitarian mission in Cambodia are identified. The survey was distributed and data collected.

Results
The survey response rate was 100%. All participants felt missions improved the quality of medical school training. Team members receive invaluable learning experiences working in clinics with limited resources. They learn to be flexible and innovative, treating the patient in a manner so that they can continue the treatment after the team members leave.

Discussion
The humanitarian mission in Cambodia has significantly increased medical student clinical exposures to diseases. It has also provided medical students with knowledge, clinical skills, and confidence to practice medicine in underserved areas. Experiencing health care in third-world countries enhances communication skills and mutual respect for another culture. Although the mission lasted only 1 week, the result is significant and suggest that even brief clinical exposure are as effective. Medical school should consider incorporating international medical trips as part of the compulsory medical curriculum. Authors felt that one cannot return without a deeper appreciation for global health and health disparities among nations.

164  Humanitarian Assistance and Accountability: What Are We Really Talking About?

Tan Yen Siong Andrew¹, Johan Von Schreeb
¹Yong Loo Lin School of Medicine, National University of Singapore
Email: andrewtys@u.nus.edu

Background
In the past two decades, there has been a worldwide increase in the number of disasters as well as the number of people affected, and this is also accompanied by an increased number of foreign medical teams (FMTs) deployed to countries affected by sudden onset disasters. However, in the wake of the 2010 Haiti earthquake, multiple reports and anecdotes questioned the actual positive contribution of such FMTs and even the intentions behind these aid efforts. This brought on a renewed interest in the humanitarian community towards accountability. Between 2000 and 2012, the number of ‘Quality and Accountability’ initiatives and instruments more than tripled from 42 to 147. Yet, to date there is no single official definition of accountability in the humanitarian context.

Aim
To explore and assess how accountability in the humanitarian context is used and/or defined in the literature.

Methods
The electronic database PubMed and a pre-defined list of grey literature comprising 46 organizations were searched for articles that discussed about or provided a definition of accountability in the humanitarian context. The definitions found in these articles were qualitatively analyzed using a framework analysis method based on principles of grounded theory as well as using a summative content analysis method.

Results
A total of 85 articles were reviewed in-depth. Fifteen organizations had formal definitions of accountability or explained what it meant to them, including 9 that produced instruments to measure, evaluate or ensure accountability. Accountability is generally seen in two paradigms – as a ‘process’ or as a ‘goal’. A total of 16 different concepts were identified amongst the definitions, with some concepts having further divergence in terms of their focus. Accountability to aid recipients had four main themes: empowering aid recipients, being in an optimal position to do the greatest good, meeting expectations, and being liable. The concepts of ‘enforcement/enforceability’ under the last theme of ‘being liable’ received the least mention.

Conclusion
The concept of accountability is poorly defined in many humanitarian organizations. Humanitarian actors often refer to different concepts when talking about accountability in general. The lack of a common understanding is partially contributed by the semantic and practical complexities of the term. The lack of
emphasis on ‘enforcement/enforceability’ is noteworthy, because some scholars regarded these concepts as an integral part of accountability. Other aspects of accountability such as its ‘measurability’, and by whom, similarly lack a common understanding and community-wide consensus.

174 The Logistical Considerations of a Humanitarian Medical Mission
Tan Xin Zhong Timothy1
1NUS Yong Loo Lin School of Medicine
Email: timothy.tbj13@gmail.com

A quote from Benjamin Franklin reads as follows “A little neglect may breed mischief: for want of a nail the shoe was lost; for want of a shoe the horse was lost; and for want of a horse the rider was lost.” Logistics is the vital cog in every machine and any underestimation or disrespect would prove devastating to any medical mission. Drawing from experiences from medical missions to Cambodia, Vietnam, and the Philippines, the dreary, daunting, and yet compulsory task of implementing logistical infrastructure will be further explored, elaborated upon, and structured for ease of application. Firstly, when considering the parameters of the aforementioned infrastructure such as the source, type, quality, and quantity, it is important to note that while logistics set the limits on the goals of any medical mission, the aspired goals should also set the limits on the mission logistics. Other limiting factors, issues, and concerns that should be considered while drawing up the logistical list will also be brought up and discussed. Examples of these would include the budget, the nature of the location, the volume and type of medical conditions expected, and the varied skillsets that individual members bring to the team. A comprehensive list of medical logistics, coupled with photos and some of the actual items will also be presented. This will include essential medications and equipment, as well as suggested logistics that have proved to be useful in most medical missions. Lastly, several of the more common complaints and mistakes involving logistics will also be tackled, with suggested approaches and solutions provided to counter them. Examples of this include problems arising due to the locals’ unfamiliarity with western drugs, which can be resolved by re-evaluating drug formularies to include safer and more generic drugs and introducing proper medication counselling while prescribing, and also problems in the transportation of medications and equipment, which can be resolved through shipping sponsorships, or the purchase of such logistics locally.

317 Hainan Smile – Model of Multi-Disciplinary Team in Action (2009-2014)
Lee Seng Teik1
1Emeritus Consultant, Singapore General Hospital
Email: lce.seng.teik@sgh.com.sg

The multi-disciplinary cleft lip and palate (CLP) Team from the Singapore General Hospital (SGH) mounted its first 5-year programme in Malang, Indonesia in 1990 under the aegis of the Singapore International Foundation. Since then, we have carried out similar projects in Myanmar, Lao PDR, Cambodia and the latest in Hainan Province, China. This CLP Team comprises surgeons, anaesthetists, orthodontists, speech therapists, nurses and support personnel. Each project lasts for approximately 5 years, during which time, the team will offer comprehensive CLP care as practiced in SGH, and also to teach and train the local personnel in all aspects of cleft care, to take over from the team so that this model of multi-disciplinary care will be sustainable in the long term. The team members will discuss the individual aspects of CLP care from the initial organisation logistics, the team in operation to the long-term follow-up outcomes.

325 Genesis of Hainan Smiles Collaborative Project
Richard Joseph Cheng1
1Head of Youth Wing, The Singapore Hainan Hwee Kuan
Email: richard@bldrenas.com.sg

I am a second generation Singaporean Hainanese. When I visited my home county Wenchang in Hainan Province, PRC, I saw many cases of un-operated cleft and poorly operated cases. I then approached Professor Lee and asked if he could help. His response was that he will be happy to go if there is an official request for assistance from the government officials in Hainan Province to the Singapore General Hospital.

In 2009, the Governor of Chengmai County, Hainan Province wrote to the Chairman of the Medical Board of the Singapore General Hospital for assistance in dealing with their many children and adults with Cleft Lip/Palate (CLP) condition. So the project now called “HAINAN SMILE “was born.

Over the past 5 years from 2009 to 2013, ten missions have gone to Chengmai County. Each mission comprises of 10-20 doctors, dental specialist, speech therapists, anaesthetists and nurses from both the Singapore General Hospital and the private sector. To date, we have operated on and managed about 200 patients, mainly on children but adults as well.
These missions not only carried out operative and dental procedures but they are also educational in focus as well. The Singapore medical specialists teach the local doctors on the proper management of cleft lip/palate patients, emphasising on the multi-disciplinary care of these patients.

The local Chinese surgeons assist in the surgery and are taken through the operative procedures. Similarly, the orthodontist and the speech therapist will conduct teaching lessons at the same time as they are rendering aid to the patients. The nurses in the operating theatre and in the ward are given tutorials by our nurses and there is on-the-spot teaching of the anaesthetists in the operating theatre.

It is the hope of the Singapore Team that eventually the local doctors and nurses of Cheng Mai People’s Hospital will take over and carry on the work of the visiting medical team from Singapore.

Thereafter over the last 5 years from 2009 to 2013, ten more medical missions were organised. Each of these missions comprised 10-20 doctors, dental specialist, speech therapist, anaesthetists and nurses.

These missions also included an educational component in which we teach the local doctors on proper management of cleft lip/palate patients. We also emphasised the importance of multi-disciplinary care of these patients. The local surgeons who are interested starts off assisting in the surgeries and were subsequently taken through the surgical steps.

These repeated mission efforts have generated much goodwill from the residents in Hainan. There is constant cultural exchange and strengthening of bond between the people of Singapore and China.

337 Surgical Aspects in Hainan Mission

Ng Siew Weng1

1Consultant, Singapore General Hospital
Email: sweng8@gmail.com

Hainan Smiles is a humanitarian project between Singapore and Hainan Province, China for the management of cleft lip and/or palate patients. It started with a request from the Governor of Cheng Mai County, Hainan Province in May 2009 for a medical team from the Singapore General Hospital to help manage the local patients. This arrangement was made possible with the assistance from the Singapore Hainan Hwee Kuan.

The first mission was conducted from 3-11 Oct 2009. It was led by Professor Lee Seng Teik. The team comprised two doctors from the Department of Plastic Surgery (Prof Lee Seng Teik and Dr Ng Siew Weng), an orthodontist (Dr Catherine Lee), an anaesthetist (Dr Thaung Mi Kyaw), seven nursing staff and two videographers. A total of 18 procedures were done on 16 patients. These included cleft lip repair/revision, cleft palate repair and dental extractions. Post operatively all patients were managed in the general ward round the clock by our nursing team. All patients made uneventful recovery.

Our team attended a press conference together with the ChengMai provincial officials on 9th Oct 2009. It was hosted by Mdm He Yun Xia, Chairman, Hainan Provincial Federation of Returned Overseas Chinese. This event was televised on the same day in Cheng Mai County.

332 Anaesthesia for Medical Missions in Hainan

Philip Tseng1

1Anaesthetic Associates Singapore
Email: phitseng59@gmail.com

There are several challenges that are posed to the anaesthetic team during a medical mission. I highlight some of the challenges and how we have overcome them while being a member of the Hainan Smile team.

Often in previous missions, pre assessment of patients was most often not possible. In Hainan, we examine the patients 5 to 6 months prior to surgery and assess their suitability for surgery as well as anticipate clinical problems that can pose an anaesthetic risk.

The medical mission team often has to work in an unfamiliar operating environment. However, in Hainan, we have done 5 missions already, 4 of them in the same hospital, and are familiar with the staff, nurses and available equipment. Knowing the limitations of the anaesthetic machine, drugs and equipment available in this hospital, we bring our own anaesthetic drugs and equipment to enhance the operating conditions and safety of the patient. For example, we use specialized and appropriate endotracheal tubes most suited for operations on the cleft lip and palate, which the hospital we work in Hainan does not have.

In many past missions, I worked as the lone anaesthetist with minimal help. In this team, we have the presence of a second anaesthetist or anaesthesia resident/trainee to assist in managing the infants and young children. This added help is crucial in ensuring a safer anaesthetic experience for the patient.
Operating Theatre Nurses Preparation for Hainan Mission

Goh Meh Meh¹
¹Assistant Director, Nursing Division, Singapore General Hospital
Email: goh.meh.meh@sgh.com.sg

Operating Theatre (OT) nurses are essential members of the specialised surgical team. They assist in the pre-trip logistics preparations, facilitate pre-operative assessment and planning of the OT schedules and assist the surgeons in performing the reconstructive surgery as well as managing the post-operative care of these patients. Our clinical OT nursing skills and experience are put to the test as we adapt to the local conditions, respect the differences in culture and practices and make conscientious decision for optimal delivery of safe perioperative care. Prior knowledge of the patients and their surgical conditions and of the OT set-up and facilities / basic amenities will minimise the issues of insufficient surgical requisites.

At Cheng Mai County People’s Hospital, we were fortunate to be allocated two operating rooms for each mission trip. With appropriate equipment, instrument, and surgical consumables, and the support from the local nurses, our surgeries were able to proceed safely and smoothly. And with each mission, we learnt to be better equipped in resource and patient management. Best OT nursing practices were exchanged, and strong bonds were established.

The teamwork and commitment shown by the multi-disciplinary team members, and the strong support from the hospital staff played a part in the success of Hainan Smile. As OT nurses, we are fortunate to be able to have the opportunity to be exposed to different working conditions away from that of SGH, I believe this will improve the standard of SGH nurses in the future, both in terms of their practical skills and soft skills. And the smiles of those lovable children after surgery and from their happy parents are most gratifying.

Nurses’ Roles in Management of Cleft Lip and Palate Patients

Lew Lian Choo¹
¹Senior Staff Nurse, Singapore General Hospital
Email: lewlianchoo@gmail.com

Nurses play an important role in the multi-disciplinary care of Cleft Lip and Palate Management in the Hainan Smile Medical Missions at Cheng Mai County Hospital. We aimed to establish good professional links with our overseas healthcare counterparts in Hainan Island and to share our skills and knowledge in providing nursing care to patients as well as patients’ family education.

Teachings on pre-operative and post-operative nursing care were provided to nurses and patients as well as their caregivers. Clinical demonstrations were conducted, such as performing suture line care, feeding techniques, oral hygiene, application of arm splints and optimal positions for cleft patients. On the job trainings and lectures were delivered to the local nurses to further enhance their knowledge and skills in the care of cleft patients.

These medical missions were indeed enriching and fulfilling experiences for us. It is wonderful to be able to share our expertise with our fellow Chinese nurses. It gave us a great sense of satisfaction and achievement to see the smiles and grateful faces of the patients and their families after the operation.

Role of Speech Therapy in Hainan Mission

Phua Sin Yong¹
¹Speech Matters Pte Ltd
Email: speechmatters@gmail.com

The role of Speech therapy in the Hainan Smile mission evolved over the years. On our first trip with the Hainan Smile team, it was a challenge to get patients and caregivers of patients with cleft lip and palate the see the importance of therapy. Families had the notion that surgical intervention is the only procedure their children need to undergo. Our challenge was to educate the families and provide services for individuals with cleft lip and palate. Over time, we have seen the changes as families have benefitted from speech therapy intervention.

Carryover of therapy is limited due to the lack of local resources.

Providing speech therapy in foreign countries can be limited by the language differences or barrier. Knowledge of the local languages or dialects serves as an advantage. Preparing materials in the country’s language is crucial for communication and this also aids with families carrying over therapy tasks.

Good communication within the team is also essential. Understanding the workflow and plans for the patients help with therapy planning and scheduling in the limited time on each mission. Team work is crucial in any successful mission.
Complete management of cleft condition involves formation of a multidisciplinary cleft team. Disciplines including Plastic surgery, Orthodontics, Ear Nose and Throat surgery, Speech Therapists are the few crucial members of a multidisciplinary cleft team. Under the discipline of dentistry, practice of good standard oral hygiene for the preservation of primary and secondary dentition is required to minimize the complications associated with future cleft treatment.

Patients of all ages with varying cleft conditions were reviewed for dental and orthodontic procedures during cleft missions. General dental conditions of all cleft patients were poor as most children had rampant dental caries and dental infections. Mid-face growth deficiencies, collapsed dental arches, absent of alveolar bone grafting at cleft sites and large, un-repaired cleft palates were also noted in most of the patients.

Dental assessment, procedures and education, were all performed in a multidisciplinary manner with surgeons, anesthetist and speech therapist, under multiple settings including classrooms, out-patient clinic, sedation and general anesthesia & recovery wards.

Intravenous sedation and general anesthesia for dental/orthodontic procedures was a new experience for the Hainan Cheng Mai County Hospital. The local medical team cooperated very well with the Singapore team in this respect with favourable outcomes.

In dos and don’ts for volunteer medical missions to developing countries, the one most important aspect is appreciation of local customs and expertise. A volunteer has to bear in mind that he doesn’t go there because he/she has superior skills. He/she goes there because they have a separate set of skills. The locals also have their own set of skills, which is simply different than the volunteers. The focus has to be about knowledge sharing, rather than knowledge imparting.

Besides the obvious dos and don’ts, some other points to remember may include:

1) Do know where you’re going. Take time to read up on the area of the world where you’re headed. Look for ways to experience and understand the local culture.

2) Do observe, pay attention, and learn. You can assimilate yourself in a culture more quickly by simply watching carefully those around you.

3) Do seek to understand and then to be understood. It’s important to be as culturally neutral as you can be so that your behaviour doesn’t detract from your message. And do not be surprised when you are challenged by your local co-workers and beneficiaries.

4) Be flexible. Traveling overseas can often include last-minute changes to schedules and plans.

5) Love people, not trophies. Always remember that the people who are beneficiaries are just that: people. They’re not photo ops or trophies. They are actual people, just like you and me. They have names, families, histories, and feelings. They possess a keen detection of sincerity and superficiality.

6) Don’t overuse your own countries’ illustrations. It might be your favourite story at home, but it may not work in that country.

7) Don’t wrinkle your nose at the food. Respect the local food. If you don’t like, very politely refuse.

8) Don’t be ungrateful. No matter how it compares to what you’re used to, we can all grow and develop in our level of appreciation. No one owes us anything, and every effort is deserving of our heartfelt gratitude.

9) Don’t degrade or derogate their culture. While we live in our home culture, we are often unaware of how someone from another culture might view us. You shouldn’t be loud (including non-verbal) and appear arrogant. Leave home the tendency to assume that ‘our culture is right’.
Maintaining Quality Assurance and Governance on Humanitarian Missions...... The Operation Smile Model

WG CDR Ankur Pandya

1Deputy Chief Medical Officer and Director for Quality Assurance, Operation Smile Inc
Email: rufsurgeon@gmail.com

Surgical humanitarian missions are a necessity in our current state of play. Everything that is done is usually with an altruistic goal in life. Poor governance and preparation, however, can create problems.

There are a number of issues that may be associated with humanitarian medicine and missions. These include: failing to match technology to local needs and abilities, failure of non-governmental organizations (NGOs) to cooperate and help each other, accepting help from military organizations without proper planning, and a failure to have a follow-up plan, amongst many others.

The need for quality assurance and governance on missions stems from the need to transparently reevaluate and establish a positive feedback mechanism to ensure constant growth and improvement, ultimately avoiding mishaps as well. Operation Smile as an international humanitarian organisation established a directorate for quality assurance to ensure safety of its patients and volunteers, transparency as well as quality in the service provided both for the receiving patient as well as for the charitable donor. The need to look beyond the cost of a smile and ensure the deliverance of quality associated with the donation was recognised.

Four years on, this programme is very robust with a task force that addresses issues around the world. The outcomes that are assessed for assessing quality are closely linked with the global objectives of care set out by the organisation. In this presentation, the various outcome measures for assessing quality are described as a way of establishing good governance pertaining to any humanitarian mission.

Medico-Legal Implications in Humanitarian Medical Missions

Michael Yap Gim Chuan

1Soh Wong & Yap

What are the medico-legal implications of humanitarian medical missions? What are the best practices for such healthcare missions to adopt in view of the medico-legal implications of malpractice/medical negligence?

This Paper will look at the 3 dimensional aspect of the (a) Sender Organization, (b) the Medical Mission (Healthcare Professionals) sent by the Sender and the (c) Recipients who are provided with the best care and treatment.

Firstly, it will address some specific malpractice issues of healthcare profession and patient contract, informed consent of recipient, liability for the work of others empowered by the medical mission, shared liability issue and confidentiality.

Secondly, it will cover the concern of limiting team risk (management of risks) for such medical mission ranging from individual professional license, to providing services for which one is qualified and the related issue of healthcare professionals without license or expired license.

Thirdly, it will provide a check-list of best practices and guidelines for Humanitarian Medical Missions.

Developing Guidelines for Volunteer Medical Missions to Developing Countries – Do’s & Don’ts

Katrin Wiegmann

1International Committee of the Red Cross

Nearly one billion people around the world choose to be volunteers. More than 13 million of these join the International Red Cross and Red Crescent Movement, delivering services to vulnerable people with no expectation of financial or material gain. When an emergency strikes, they perform all kinds of medical and non-medical duties. There is a growing trend for individuals to travel to crisis-affected areas from other countries to volunteer. At the same time, volunteering is common in most local communities and cultures, with different levels of sophistication.

The challenges

No doubt international volunteers, especially when bringing in a specific knowledge and capacities not (sufficiently) existing in the context they are deploying to, can be of great added value. However, very often such individuals face serious linguistic and cultural barriers to effective work. There are significant challenges arising from having international volunteers who are not part of a coordinated response, nor having been trained for such demanding work. Their presence can also add additional stress to scarce local resources, rather than building the capacity of those who stay on long after the international volunteer has returned home. Quite often they deploy into volatile situations, and the need to understand the context – and be perceived in the appropriate way – can have an impact on their safety and well-being. Lastly, organisations deploying volunteers bear a considerable responsibility for them.
Developing guidelines
In developing guidelines for Volunteer Medical Missions, it is useful to look at different dimensions.

Firstly, looking at the responsibility of organisations deploying international volunteers towards the local communities, reference can be made to the Code of Conduct for The International Red Cross and Red Crescent Movement and NGOs in Disaster Relief, laying down ten points all humanitarian actors should adhere to in their disaster response work (e.g. related to humanity, impartiality, neutrality, respect for local action, accountability etc.). It is equally applicable to medical missions into a developing context.

Secondly, there is a responsibility of organisations towards the volunteers they are deploying. Hence, guidance should include that volunteers are appropriately trained and selected based on the necessary professional and personal skills, receive pre and post-deployment briefing, have insurance covering specific risks, and are provided with a safety net in case of medical emergencies. In-country management of volunteers and their safety and security are another key responsibility.

Lastly, there is a responsibility of the volunteers towards the communities they serve. A code of conduct signed by each volunteer should as a minimum include fundamental ethical principles of humanitarian work and medical ethics, respect of local cultures and capacities, integrity, local empowerment, and accountability.

313 Organisations Providing Medical Mission Opportunities – “SIF’S Experience of Building Healthcare Capacity in Asia with Medical Volunteers
Margaret Thevarakom
1
1Director (International Volunteerism), Singapore International Foundation
Email: margaret.thevarakom@sif.org.sg

The SIF makes friends for a better world. It builds enduring relationships between Singaporeans and world communities, harnessing these friendships to enrich lives and effect sustainable change. Under the Singapore International Volunteers (“SIV”) Programme, SIF sends more than 750 specialist and generalists volunteers a year to developing communities in Asia to raise healthcare and education standards. Our SIVs share Singapore’s strengths, knowledge and experiences in the areas of healthcare and education to train local professionals, raise service standards, enhance work processes and quality, train leaders and trainers and, in some cases, suggest policy changes to support long term improvements in these communities. Each of SIF’s 40-plus projects a year sees Singapore volunteers, government agencies, nongovernment agencies and corporations working together with overseas counterparts to share knowledge and resources with the common goal of improving lives in these developing communities.

Since 1991, more than 3,500 SIVs have served with SIF in 17 countries. The presentation will briefly cover the various types of volunteer projects that SIF carries out, where Singapore volunteers serve for varying durations of between a few days and a few weeks, and even up to a year, to train overseas professionals or provide basic services in health and education to rural communities.

This presentation will highlight the impact that SIF and its volunteers have had in improving healthcare standards in Cambodia, Indonesia and Vietnam by drawing on results of our 2012 impact research. Measured 5-10 years after the projects were completed, and drawing on feedback from more than 200 healthcare professionals in Singapore and overseas who participated in the projects, the research provided convincing evidence that Singapore volunteers’ contributions achieved sustained impact in overseas communities: improvements in professionals’ attitudes, behaviors and professional practice, improved systems & processes in partner agencies which resulted in increased efficiencies and improvements in the quality of care for patients, and policy changes in the Health sector which supported overall improvements in healthcare services for an average citizen.

The study also revealed that the friendships and professional connections fostered between Singapore and overseas professionals and partners have facilitated mutual sharing and learning and in many cases, continue to enable professional collaborations more than a decade later. The presentation will conclude with some ideas on how Singapore medical volunteers may join SIF to continue Singapore’s good work in building friendships for a better world.

339 The Future of International Humanitarian Medical Missions - Reflection from Interplast Australia & New Zealand
Prue Ingram
1
1Chief Executive Officer, Interplast Australia & New Zealand
Email: prue.ingram@interplast.org.au

The long term objective of all international development programs should be to 'do ones self out of a job' and indeed this is no different for humanitarian medical missions. Interplast works within a development philosophy which incorporates a twin-track approach of service provision and developing local capacity.
However, Interplast recognises that in some countries this is not a realistic expectation in terms of highly specialised medical services such as plastic and reconstructive surgery. For example, across the Pacific Islands, small population numbers, geographically spread and isolated populations and the fact that local surgeons are all trained in general surgery means that a regional approach is necessary and it is likely that there will always be some level of external support in service provision required. This is in contrast to other countries such as Bangladesh and Laos where certain aspects of plastic surgery are now being entirely locally managed and therefore Interplast is able to redirect it’s focus.

These contrasting examples highlight the importance of working in close and meaningful collaboration with local partners in each country to develop a program based on their needs and objectives, always building local capacity with a constant reference to a clearly stated vision and mission. Strong monitoring and evaluation systems are essential to ensuring these principles are maintained.

334 Future of International Humanitarian Medical Missions – Operation Smile Singapore
Abhimanyu Talukdar
1Executive Director, Operation Smile Singapore
Email: atalukdar@operationsmile.org.sg

International aid giving is a huge business in donor countries and humanitarian medical missions to developing countries is part of that business. Traditionally, it was mostly western aid focussed on Asian, African and the Latin American countries. Sustainability then wasn’t the primary goal. There were covert riders. Geopolitical influence, as well as preference of supplies and contractors from the donor country were some.

Over the years quite a lot had been written about these riders and beneficiary countries have grown wiser. Aid and assistance became quite controversial. Many studies, including western, highlighted that the traditional way of international aid didn’t have a long-term impact.

Add to that the changing world dynamics in the past decade or two. While there are still a large number of poor and needy people in developing countries, the opening up of their economies brought unprecedented economic growth which resulted in creation of new wealth and large sections of people got pushed to the middle and upper middle class groups. The quantum of super wealthy also leapfrogged. These groups are became more connected and knowledgeable in the world affairs. With it came pride.

From started looking at other aspects of aid giving and volunteer support, like dignity of their people, as they evolved to become smarter recipients of aid. They no longer wished the creation of that parental relationship with donor countries – “I’m helping you, so you should be guided by me. The responsibility for your future is actually on me, not on you because I have the resources to develop you.”

Around the same time, in the past decade, western economies started suffering slow growth and downturn in some cases. This impacted aid agencies’ fundraising capabilities in their home countries and they started looking at new markets. The markets happened to be some of the same countries where the aid was targeted.

Operation Smile has a ready example. Increasingly resources are raised and expended in beneficiary countries directly. Care centres built in China, Cambodia and India are some examples where entire cost of these Centres were raised from within the country, including substantial medical volunteer base.

In the next decade, it will become increasingly important for donor countries (or countries that send medical volunteers in international humanitarian medical missions) to demonstrate that the implementation of the programmes has ownership in the respective beneficiary countries. It will be important to honestly demonstrate that the international volunteers are not only there to help local professionals, they also benefit in cross learning through experience and exposure. They will have to clearly present it as a two way process, rather than patron-client, master-slave or donor-recipient relationship.

330 The Future of Rendering Humanitarian Aid – Smile Train’s Philosophy
Satish Kalra
1Smile Train
Email: skalra@smiletrain.org

Smile Train is a cleft charity founded 15+ years ago on a bedrock commitment to work only with local doctors, somewhat on the lines of “Teach a man to fish.....”. With this ‘model’ Smile Train has been able to deliver over a million safe, quality and totally free reconstructive surgeries for clefts through 1100+ partner hospitals in over 80 of the poorest countries of the world.....at a fraction of the cost that Missions would have entailed.

Smile Train however freely acknowledges the immense contribution of Humanitarian Medical Missions whilst maintaining that their role is perhaps best
limited to teaching and helping out during emergencies, rather than for elective surgical procedures like cleft lips and cleft palates.

307  Goals of International Medical Missions – Humanitarian Medical Rescue Missions in Operations

Anantharaman V.¹
¹Professor & Senior Consultant, Singapore General Hospital
Email: anantharaman@sgh.com.sg

Communities that experience disasters have multiple needs for medical care. Such needs should dictate the assistance provided by medical rescue missions. These needs include the medical care required in the initial phase (first 24 hours) of disaster management, provision of primary care to regions within the community that have lost such support systems, care for casualties who require hospitalization and further inpatient management, rehabilitative and convalescent care for disaster casualties, public health assistance and psychological support of populations in disaster areas. Most international medical teams would not be able to address all these six areas of need. There would be a need for international teams to define their capabilities clearly so that the recipient communities would have realistic expectations. Communities hit by disasters also need to categorize the types of care needed. This will better ensure the relevance of care provided by international teams.

Once goals are clearly defined, team composition may be determined. This would be important for training of the teams and their equipping and logistics preparation. Rapid response teams will need to be mobilized at very short notice and dispatched to disaster sites. The arrangements for such rapid mobilization and long-range dispatch need to be pre-determined. Early communications with local rescue coordination centres can hasten this. Once in the host country, matching of international teams with relevant local agencies will facilitate the prompt use of such assistance.

Humanitarian medical rescue missions should also include some scope for building up local expertise and systems of care in affected communities. This will allow host communities to continue further work in the relevant areas when the international teams leave.

There is a real need for the establishment for standards and guidelines for such teams. These could only be helpful to recipient communities. This will also better help to define and evolve the science of disaster response by such international teams.
The USNS Mercy is a naval hospital ship of the United States Navy, designed as a mobile tertiary trauma centre. In 2006, the Singapore Armed Forces (SAF) participated in a socio-civic mission on board USNS Mercy in the Southeast Asian cities of Simeulue, Nias and Banda Aceh. Though the initial objective of the mission was to provide elective surgeries for pre-screened patients, there were numerous surgical emergencies that called upon the coordinated efforts of all members of the team—medical staff, logistics staff, evacuation crew, administrative staff as well as the local coordinators. This synergistic collaboration can be seen in the 3 emergency cases that have been showcased in our poster presentation. Through these experiences during the USNS Mercy mission in Southeast Asia, the authors hope to emphasise to all future humanitarian mission planners on the real need for robust operational planning and preparedness for such missions. In addition, beyond infrastructural support and readiness, all members of the mission must also be mentally prepared for such emergencies in order to achieve the best possible outcome for every patient and to accomplish mission success.

Our project has developed a new basemap for the conflict zone area of Kayin State in Myanmar in order to assist humanitarian organizations to conduct cold chain analysis. Multiple data sources, including GPS locations from humanitarian and governmental organizations, verbal interviews with local residents, and publicly available map data from OpenStreetMaps were merged into one dataset. Publicly available satellite imagery was then analyzed to identify villages not found in that data. The transportation network was then analyzed for gaps, and travel times between villages were estimated. The end result is a significantly more complete spatial dataset that includes both villages and their corresponding travel linkages, which can support cold chain analysis as well as a wide range of other health mapping needs.

In our presentation, we will describe our data gathering and quality control processes, as well as efforts to evaluate the utility of the resulting maps and spatial data by humanitarian organizations operating in Kayin State. We also outline the major challenges associated with developing and maintaining these datasets, along with opportunities we see to leverage volunteer-contributed spatial data to iteratively enhance map data for challenging humanitarian relief contexts like Kayin State.
360 degree approach with a novel standardized tool was used to evaluate its quality of care, focusing on six aspects: cost, preparedness, efficiency, impact, education, and sustainability. The MANGGYAN model is a distinctive one – while its setup is similar to ad hoc missions, its regular undertaking in Pandan seem to offer certain benefits and advantages. Common perceptions of different groups of stakeholders were presented, as well as issues in efficiency. Medical missions, whether local or international, may learn from the strengths and limitations of the MANGGYAN model. It is hoped that systematic approaches will be used to improve the quality of humanitarian healthcare.

187 The War in Syria Obliged Some Hospitals to Apply Primitive Ways of Sterilization

Abdul Nasser Kaadan
Email: ankaadan@gmail.com

Old Chinese and Egyptian physicians used some chemical methods for the treatment of wounds and injuries. Although the beneficial effect of passing surgical instruments through flame was well known to ancient civilizations, the heat as a preservative method in medical industry was first introduced in 1809 in France. Joseph Lister (1827-1912) believed that it was microbes carried in the air that caused diseases to be spread in wards. Sterile gowns and caps used by Gustav Neuber. Surgical masks were applied in 1897 by Mikulicz, while rubber gloves were introduced by William Halstead in 1890.

For the last two and half years, Syria suffers from the worst kind of war. So far more than 125 thousands civilians were killed and more than four hundred thousands were injured. A lot of severe and different types casualties resulted, which were extremely above the capacity of the local hospitals to handle, especially some hospitals were used for military purposes. Some houses were transformed into field hospitals, where there were no sterilization tools. As an orthopaedic surgeon, I found myself going back to practice a primitive form of sterilization. We resorted to smoking and boiling the metal surgical instruments. Other non-metal instruments were used without being sterilized. Some surgical procedures, such as amputations, were performed with bare hands, as there is no surgical gloves. Bone saws were sterilized by flaming. The percentage of infections was very high due to in the lack of antibiotics.

The aim of this paper was to shed lights on the primitive methods of sterilization inside some hospitals in Syria, where the war in still ongoing.

193 Implementation of an Effective and Efficient Triage System in Clinic Sessions of Medical Missions – A Cambodian Case Study

Ang Qianbo Joseph, Sim Meng Ying
1National University of Singapore
Email: s-m-y-9-3@hotmail.com

Background
This article aims to explore how a triage system can be successfully implemented in clinic sessions during medical missions using Project Battambang as a case study. Project Battambang is an initiative launched in 2010 by a group of doctors and medical students from the Yong Loo Lin School of Medicine, National University of Singapore. It runs health clinics in December for up to two schools, three villages and a jail during the trip.

Issue
A clinic session often attracts a multitude of villagers, many of whom have forgone a day of work and travelled for hours to seek medical attention. There arises a need to effectively and efficiently handle this huge patient load, reaching up to 330 a day, such that critical cases are picked up. Over the years, a triage system was developed and implemented to maximise the limited manpower and resources available. Ideally, the triage should be run by fully-trained medical personnel, preferably experienced doctors with good clinical acumen. However, every doctor placed there is another doctor lost from the consultation station. Yet, stationing non-doctors at the triage may not be as effective or efficient. Thus, there is a need to develop an efficient triage system to balance both considerations and achieve the best outcomes.

Method
The triage system developed over the past 3 years involves only doctors in the first year, Singaporean nurses and senior medical students in the second year before reaching the latest system of multiple triage stations manned by senior Cambodian medical students from International University, Phnom Penh and overseen by a Singaporean doctor. After clerking, the medical students will present their cases to the doctor who then decides whether the patient requires a full consultation or is discharged at the pharmacy station with basic medications.

Outcomes
Efficient and effective allocation of resources and screening has been achieved. Translators were no longer needed for triage and a desirable level of medical competence was provided by an overseeing doctor. The number of villagers screened also increased quantitatively by 59.5% over the past three years from 1000 to 1595 as the triage system was tweaked, while waiting time was observed qualitatively to be shorter as well.
Limitations
There exists confounders that may contribute to the increase in numbers screened, including the local situation and varying profile of villages. However, others such as number of doctors, villages, season and length of screening remained the same.

Analysis of Clinical Contents of Foreign Patients in International Healthcare Center, Seoul National University Hospital from 2010-2013
Juwon Lim¹
¹Seoul National University Hospital
Email: imvacsa@gmail.com

Background
With the increasing numbers of foreign residents and tourists in South Korea, the need of international healthcare systems for foreign patients seems to be growing; however, there have been few studies relating to foreigners visiting and staying in Korea. This study was conducted to obtain a comprehensive clinical data of foreign patients for their best medical care.

Methods
This study was an analysis of 64,786 outpatients and inpatients in the International Healthcare Center of Seoul National University Hospital from 1 January 2010 to 31 December 2013. Patient medical records were reviewed and analysed.

Results
Of the total of 64,786 cases, 61,870 cases (95.4%) were outpatients and 2,916 cases (4.6%) were inpatients. By nationality grouping, Mongolians were the largest, accounting for 16,261 cases (25.1%), followed by Americans (including the U.S. army in Korea) with 14,058 cases (21.7%), Chinese with 11,402 cases (17.6%), and Russians (including CIS) with 9,912 cases (15.3%). According to departments, Family Medicine had 16,141 visits (24.9%), followed by Internal Medicine with 8,240 visits (12.7%), Paediatrics 4,596 visits (7.1%) and Obstetrics & Gynaecology 4,143 visits (6.4%). The most common diagnoses were preventive medical cares such as general medical examination (7.6%), examination for certification (3.4%), vaccination (2.3%), and special examination (2.1%), followed by acute infectious diseases such as acute upper respiratory infection including acute pharyngitis (8.7%), bronchitis (6.4%), infectious diarrhoea (4.0%), cystitis (3.2%) and otitis media (2.9%). Cardiovascular diseases such as coronary artery diseases, diabetes, hypertension were more common in Internal Medicine, and malignant diseases such as hepatocellular carcinoma, gastric cancer and colon cancer were more common in surgery departments. Preventive medical cares and acute infectious diseases were common without any differences between advanced countries and developing countries. Hospital visits due to cardiovascular disease and cancers were much more frequent among developing countries than advanced countries.

Conclusion
According to the results, it showed the characteristics of the high medical demand about not only cardiovascular disease and cancer, but also preventive medical care and acute infectious diseases among foreign patients visiting and staying in Korea. It also shows the need of family physicians who could play important roles in cooperating with other specialties as well as practising preventive medical care and acute common diseases for foreigners. Therefore, it is believed that further studies for foreign patients in South Korea will be necessary and should be conducted in the future.

Case of Severe Hemifacial Microsomia
Tay Wan Jing¹, Jacqueline Koh Li Tyn, David Sin Yang Ern, Zhou Lingyue, Tham Kar Mun, Chong Si Jack
¹Yong Loo Lin School of Medicine, National University of Singapore
Email: ktwanjing@gmail.com

Operation Smile is a leading children’s medical charity that provides free surgery to children with correctable facial deformities such as cleft lips, cleft palates, facial tumours and burns. The charity, which has a worldwide network, also provides education to beneficiary country medical professionals to promote multi-disciplinary care, treatment, prevention, nutrition and research.

We report a case of severe hemifacial microsomia (HFM) encountered on the Operation Smile mission screening in Mongolia in June 2014. HFM occurs in about 1 per 5600 births. Our presentation documents and highlights the key presenting features of this relatively rare condition, including auricular, mandibular, nerve and soft tissue features using the Orbital, Mandible, Ear, Nerve and Soft tissue (OMENS) classification. It was concluded that the patient has HFM and not Goldenhar syndrome.

Accordingly, a treatment plan including distraction osteogenesis and ear reconstruction was recommended for follow-up by the local medical team working on the case since the condition is likely to worsen. This case is highlighted to show that preparedness and anticipation of rare cases is necessary on humanitarian missions even though the team was unable to follow-up on the case.
**Introduction**

“Project Battambang” was launched in 2010 by students from the Yong Loo Lin School of Medicine, National University of Singapore. Since 2013, dental students from the University of Health Sciences, Cambodia have partnered their Singaporean counterparts in providing health services. In May 2014, we further developed the oral health care programme. Our primary goal was to provide oral health education and care for the children in Poipet, Cambodia.

**Methods**

Children under the age of 9 years old were selected. They were from the nearby villages, some of whom attend a kindergarten that the project works closely with.

The oral health programme was divided into 3 steps. The first step was providing basic oral health education. This included proper techniques for toothbrushing to maintain good oral hygiene, which amounted to overall health and well-being. The second step included the provision of toothpastes and toothbrushes. All the children were asked to brush their teeth under supervision to ensure proper brushing technique. Only children who do not attend the kindergarten participated in this step; children from the kindergarten were excluded because they were knowledgeable on these topics and brushed regularly under the teachers’ supervision. In the final step, all the children were given an oral health examination. Teeth with caries were documented, and pit and fissure sealant was applied on permanent first molars to prevent further decay. Children under 6 years old who do not have permanent first molars had fluoride varnish applied on their teeth to impart protection.

**Discussion**

Children who attended the kindergarten were more knowledgeable about oral care and also more cooperative. On general inspection, they had better oral hygiene. In contrast, the other children from the villages had a very low awareness of oral health and had more incidences of tooth decay. Moreover, they were less cooperative and more time and manpower were needed to manage them. In light of this situation, future oral hygiene programmes can be targeted at children from poorer villages or villages with lower schooling rates to achieve greater benefit.

**Conclusion**

In addition, more effort is needed to educate the children from villages in Poipet, Cambodia about basic oral health care, supported with proper toothbrushing and regular examination. Tooth decay and incidence of gum disease can potentially be reduced.

**Background**

In November 2013, Typhoon Haiyan swept through Leyte Island, affecting 14 million people and damaging healthcare facilities causing disruption of medical services. The Singapore Red Cross responded by deploying medical teams to assist the relief efforts of the Philippines Red Cross. Our team was deployed to run a mobile clinic in a village. With basic surgical supplies and medications, we attended to about 300 patients. We prepared a bag containing emergency medical supplies including an automated external defibrillator (AED), a nebuliser and a bag valve mask (BVM).

**Case Incident**

The triage personnel was informed by a lady that her husband was having an asthmatic attack at home. She was not able to describe the severity of his condition. The team (consisting of a paramedic and medical doctor) immediately proceeded to the location, approximately 1km away, bringing along the nebulization set, a saturation monitor, oral steroid therapy and beta agonist medications. Upon arrival, the team noted an elderly man in severe respiratory distress - he was lethargic but spontaneously breathing and tachypnoeic. There were scattered rhonchi and decreased air entry bilaterally. His central pulses were bounding and he was noted to be poorly perfused, with peripheral saturations being unreadable. The assessment was that of respiratory failure with impending cardiopulmonary collapse. Supplemental oxygen was not available to the team. As such, after positioning him to optimise his breathing, nebulisation was initiated. However, within 30 seconds the patient developed a cardiopulmonary collapse and BCLS was immediately initiated. One team member continued resuscitation while the other returned via vehicle to the clinic to obtain the AED set and BVM.
equipment. The equipment arrived within 5 minutes as back up help was already initiated before the collapse. The AED showed a non-shockable rhythm and despite 30 minutes of resuscitation, the patient died.

Discussion
We recommend medical teams to prepare an E-kit at all times, even during peacetime mobile clinic operations. The E-kit should be kept in an accessible and visible location always and all team members should be familiar with its contents. The E-kit should be portable and battery operated so that it is ready for use in the absence of electricity. It should be brought along for all house visits.

A response action should be formulated beforehand to facilitate resuscitation efforts while maintaining operation of the clinic. It is also wise to have an evacuation plan ready should the patient require further intervention and tertiary care.

211 The Srolanh Experience: Sustainable Annual Primary Health Missions in Battambang
Leonard Loh Wei Wen¹, Jocelyn Ting Zi Lin, Chuang Yi Alexander
¹Resident, Singapore General Hospital
Email: nuttylogic@yahoo.co.uk

Short-term medical missions can be effective with focused efforts. We share our experience with Mission Srolanh, a primary care medical mission in Battambang, Cambodia. The team comprised medical students from the Yong Loo Lin School of Medicine and doctor volunteers.

The mission runs annually for a week in December and partners the local Catholic Archdiocese.

Battambang suffers from underdeveloped health infrastructure. Primary healthcare at the village level is provided by non-government organisations (NGOs) as affordability and distance limit access to healthcare.

Our model is that short-term annual medical missions can be effective and sustainable by leveraging on the following:

1) Leadership and Team Formation
It is imperative that a strong team with common vision is forged from both current and inexperienced volunteers. Formation sessions before the trip bonds members and prepares them for their roles. An effective Executive Committee sets the focus and handles planning, administrative and logistical matters.

2) Management of Resources
Fund-raising through an annual bake sale defrays the purchase of medications and printing of educational materials. We found it cost-effective to purchase medications in Cambodia from reputable pharmacies and it avoids regulatory procedures to ship medications from Singapore. Identifying higher demand for specific drugs using data trending from past missions enhances preparation.

3) Partnership with Local NGOs
This focuses our efforts and resources for effectiveness within the short time frame. The Archdiocese helps arrange for transportation, accommodation, translators, reputable pharmacies; highlights needy villages and obtains permission from village authorities. Patients needing follow-up care may be referred to the Archdiocese’s health centres.

4) Engaging with Village Authorities and Sustainability
Each village chief is engaged via the local NGO for permission to run a clinic and preparation of a clinic venue. The chief also arranges transportation for villagers to the health centre for follow-up care. The Mission believes in sustainability and visits the same villages annually. Patient records are kept for follow up in subsequent years. This builds relationships with the locals, allows us to track the community’s progress and identify trends.

5) Public Health Education and Sanitation
For lasting change, we empower locals through health education on hygiene, nutrition, lice care and safe food preparation. Through modelling and repeat visits, knowledge is reinforced. Our experience shows that the locals have misconceptions about drinking water, drinking only about 500ml/day and develop frequent headaches. Water sources are frequently contaminated. By sponsoring wells in villages, water-borne diseases and the distances travelled to obtain clean water are reduced.

Beliefs on Factors Causing Cleft Lip and Cleft Palate in Mongolia
Zhou Lingyue¹, Tham Kar Mun, Jacqueline Koh Li Tyn, David Sin Yang Ern, Tay Wan Jing, Chong Si Jack, Ankur Pandya
¹Yong Loo Lin School of Medicine, National University of Singapore
Email: zhouldingyue@gmail.com

Introduction
Cleft lip and palate is a common condition which is manifested physically and can thus affect others’ perception of the child. Furthermore, cleft lip and palate...
cause problems with feeding and speech if left untreated. All of the complications of this condition can have significant functional and social implications on the patients as well as their family. As such, it is important to treat cleft lip and palate cases with sensitivity and respect. From reports on previous research, we have discovered that different cultures have different opinions on the main factors causing this condition.

Aim and Method
Previous research has uncovered cultural beliefs on factors resulting in cleft lip and palate in countries such as India, Laos, and Indonesia. To our knowledge, the beliefs of Mongolians have not yet been investigated. We aim to present the parents’ beliefs on the causative factors of their children’s cleft lips and palates in Mongolia. Furthermore, we aim to further explain the reasons behind these beliefs.

We conducted a pre-operative questionnaire with the patients’ primary caregivers and further interviewed them to understand the reasons behind these beliefs. We compared and contrasted our results with the results of similar questionnaires conducted in other countries such as India, Laos, and Indonesia and highlighted the differences.

Results
Preliminary results indicate that majority of the caregivers chose environment, specifically, air pollution, as the main cause for the condition. This could be due to Mongolia’s harsh climates, with temperatures reaching negative forty degrees Celsius in winter, which requires high levels of coal consumption. Other factors include stress and medication. Upon comparison with information collected from other countries, we concluded that the results obtained from the Mongolian mission are distinctive and different.

Conclusion
Given the sensitive nature of the condition and its social implications, this understanding will be useful in calling for greater empathy of medical volunteers when interacting with patients and their families during subsequent missions. An awareness of differing cultural beliefs in factors resulting in cleft lip and palate allows us to better allay patients’ and their families’ fears and correct their misconceptions. Our study highlighted that the Mongolians’ beliefs are different from other countries. They are more pragmatic as they believe that the cause of cleft lip and palate is more attributable to environment rather than supernatural causes, for instance. Medical volunteers can then harness this information for more effective interaction with Mongolian patients.
conditions was necessary, as the patient was screened and diagnosed with concurrent hemifacial microstomia, including mandibular hypoplasia, soft tissue atrophy, and auricular hypoplasia.

Conclusion
Macrostomia as result of Tessier Type 7 lateral cleft is the commonest of uncommon facial clefts. Our case highlights the need to screen and identify associated conditions to formulate comprehensive management, as well as the importance of preparing for the unexpected, especially while on overseas humanitarian aid missions.

216   Our Ngabang Experience
Tan Yun June Angela1, Christopher Liu Wei Yang, Andy Kong, Mavis Teo Mi Qi
1Senior Resident, Singapore General Hospital
Email: tanyunjune@gmail.com

In November 2013, the team embarked on a mission trip to the remote reaches of Ngabang in West Kalimantan, Indonesia. The objective of this mission was to provide anaesthesia for patients earmarked for cleft lip and palate surgeries. Being the first team to be deployed to the hospital in Ngabang, we left nothing to chance during the planning. Minute details were not spared and the team decided it was better to err on the side of caution rather than being caught unprepared. For instance, in anticipation of resources not being readily available locally, the team had to purchase the drugs that we intended to administer. The Diamedica drawover portable vaporiser was one of the equipment that we brought. The ease of operation of the machine coupled with its efficiency allowed us to be able to set up a second operating table. This valuable piece of machine greatly enhanced our productivity. The experience, which we would like to share, of operating out of a resource-poor area was an invaluable learning. It challenged the members out of their comfort zones and pushed us to be more prudent in our daily tasks, which we may have taken for granted in a well-stocked environment.

224   Epidemiological Studies in Short-Term Medical Missions: Patient Demographics and Clinical Presentations of Patients Attending Rural and Suburban Medical Clinics in Cambodia
Marc Ho1, Elin Lee, Miriam Tao, Terrance Chua
1Medical Officer, Ministry of Health
Email: marchozj@gmail.com

Purpose
Medical teams on short-term missions often do not keep epidemiological records, resulting in a lack of knowledge on the types of patients and clinical presentations to be expected. Such information is important for planning purposes since budgets for such trips are often tight. Here we describe patients attending rural and suburban ad-hoc clinics in Cambodia, and discuss the value of gathering, analysing and sharing such data.

Methods
In December 2013, four doctors ran ad-hoc clinics in rural and suburban settings in Cambodia over two days. Basic demographic data was collected and clinical presentations were categorised by symptoms for further analysis. Children (<18 years of age) and adults were also considered separately. Age and gender were then compared against archived data from similar clinics in 2011 for longitudinal trends. Statistical methods (Non-parametric and parametric analyses of variances, Fisher’s exact and Chi-squared tests) were used to determine differences between the various settings.

Results
327 and 321 clinical forms from rural and suburban clinics respectively were analysed. Age and gender were generally similar, showing high proportions of children (52.3% and 46.8% respectively) and adult females (66.9% and 74.8% respectively, of all adults). These were also similar to data from 2011.

Rural patients had higher body temperatures (Mean 36.9˚C vs 36.7˚C, p=<0.001) and blood pressures than suburban patients (Mean Systolic 132 vs 127 mmHg, p=0.028; Mean Diastolic 80 vs 76 mmHg, p=0.005). In terms of weight, suburban adults (Mean 49.6 vs 52.7 kg, p=0.006) and rural children (Mean 21.6 vs 19.3 kg p=0.015) weighed more than their respective counterparts.

The most common symptoms for both settings were cough (Rural 48.0%, Suburban 48.6%), feeling feverish (41.6%, 39.3%) and running/blocked nose (33.0%, 44.2%). Among adults, feeling feverish (p=<0.001), dental complaints (p=0.036), and cough (p=0.045) were more common in rural patients; while fatigue (p=0.031) and a history of hypertension (p=0.001) were more common in suburban patients.

Among children, headache (p= <0.001), musculoskeletal complaints (p=<0.001) and abdominal pain (p=0.007) were more common in rural patients; while diarrhoea (p= <0.001), feeling feverish (p=0.002), cough (p=0.028) and running/blocked nose (p=<0.001) were more common in suburban patients.
Conclusion
Although patient demographics for suburban and rural settings were similar, there were distinct differences in presenting symptoms. Female and paediatric patients were also noted to be consistently and proportionately more. Epidemiological studies play an important role even in short term medical missions to guide the judicious use of resources for similar trips in the future.

230 Humanitarian Missions for Residents: Interests, Perceptions and Enabling Factors
Chua Ying Xian1, Geraldine John (MS)
1Resident, National Healthcare Group
Email: yingxian86@gmail.com

Purpose
To survey post-graduate medical residents on their interest in humanitarian trips and explore perceived barriers and benefits of their involvement so as to guide the development of future programs in enabling their participation.

Materials and Methods
An anonymous 23-question survey was conducted in an Academic Medical Centre, National University Hospital, Singapore, which trained 406 residents across various specialties in June 2013. The survey was electronically mailed to all residents (n=393) with valid email addresses. Data were collected using online survey administered through Google Documents. Descriptive statistics, chi-square analyses and logistic regressions were subsequently performed.

Results
Two hundred fifty-two residents (64.1%) completed the survey. Of these, 128 were males (50.8%) and 124 were females, with mean age of 27 (23-40) years. Of the residents surveyed, 73 (29.0%) were from internal medicine, 49 (19.4%) from surgery (including general surgery, ophthalmology, obstetrics & gynaecology and orthopaedics), 46 (18.3%) from paediatric medicine, 30 (11.9%) from family and preventive medicine, 20 (7.9%) from emergency medicine, 20 (7.9%) from anaesthesia and 9 (3.6%) from radiology or doing transitional year. All 155 (61.5%) respondents previously involved in humanitarian projects came under the 236 (93.7%) residents who expressed interest for future involvement. The survey was terminated for 6.3% of residents who were not interested. Types of projects of interest ranged from local projects (80.5%), within ASEAN (89.4%) and international projects (11.0%). Residents with previous involvement in humanitarian projects were 8 times as likely to express an interest in participating during residency could improve their clinical (86.4%) and communication skills (86.9%), and also aid in bonding of staff (97.0%). Many were willing to use their annual (55.6%) and training leave (84.5%) and two-thirds of the residents were willing to self-fund for their trips (66.7%) in full. We identified enabling factors for residents to participate in future trips including having strong hospital administrative support (91.2%), being familiar with medical services before trips (90.1%), provision of more leave (84.9%) and understanding needs of the target community before each trip (79.0%).

Conclusion
The strong interest in local and ASEAN humanitarian missions, organizational and educational benefits that accrue from participation of these trips, and the willingness of residents to devote resources to participate suggest that efforts should be made to enable more residents to participate in humanitarian trips in future. More research is needed to determine the usefulness of such provisions via post-trip surveys.

237 The Utility of Short-Term Medical Mission Trips
Joel Foo Jyh Shyang and Audrey Han Yan Yi (Joint Main Authorship)1,
Leong Choon Kit
1Resident, Singhealth
Email: audrey.han@mohh.com.sg

The utility of short-term medical missions has often been questioned. The authors would like to share their perceptions based on work done with Agape Rural Programme (ARP), a community-based development programme founded in the Philippines.

First, we propose partnering existing local organisations of the country we work in. Coming from a different culture and way of life makes it difficult for us to identify the specific needs of the community. Coordination with locals has allowed us to direct the team’s efforts and resources efficiently. Local hosts are crucial to addressing cultural, language and logistical concerns. Furthermore, it is ideal if the host has a long-term programme in place, as in the case of ARP. This ensures that the work done by separate teams have continuity, and that consultations have an avenue for follow-up care, especially for chronic diseases such as hypertension, coronary artery disease and diabetes.

Second, we propose the inclusion of preventive programmes such as health education and primary care strategies. This increases awareness of diseases, encourages good management of diseases and increases the possibility of picking
up treatable medical conditions early. Some topics we have shared about on our trips are tuberculosis, malaria, wound care and dental hygiene. With the help of ARP, we also conducted training for appointed “health workers” among villagers who serve as liaisons between the ARP and their respective villages.

Third, we need to include befrienders in the team. They will provide emotional support and help run children programmes. This will build rapport and gain understanding for long-term work.

The authors look forward to the increased recognition of medical mission trips as an important part of training for medical staff and students. These trips offer medical students excellent training and mentoring opportunities. As a privileged country, it is important for Singapore to contribute to the region in whatever ways it can.

238  Qualities of a Successful Medical Volunteer
Adele Lee

A recent wave of altruism has sparked a rise in the number of medical missions. However, successes are debatable. Looking beyond the patient count, the success of a mission should be assessed by the quality of care provided and the long-term sustainability of healthcare. In January 2014, I participated in my first medical mission trip to Nepal. The total of 1340 patients seen over a span of 4 days speaks for itself. However the lasting impact on the locals, which validated the mission’s success, was largely due to the admirable qualities of the volunteers.

The mission could not have been possible without the doctors’ high level of skills. However it was their resourcefulness in a “rural” setting that shone through. Volunteers were able to compensate for the equipment shortage in ingenious ways; they made spacers out of used plastic bottles and turned empty drink cans into sharps containers.

In order to better address the peoples’ healthcare issues, we immersed ourselves in their culture and gained a deeper understanding of the people. Cultural sensitivity was displayed by only allowing female doctors to treat gynaecological problems in women, ensuring the patients’ comfort and trust, while sensitivity towards cultural idiosyncrasies aided in diagnoses.

The mission trip presented us with abundant learning opportunities. We learnt about local medical practices from Nepalese monks and they learnt about ours. This sharing of knowledge and willingness to learn demonstrated the respect each volunteer had for one another’s capabilities, regardless of experience or country of origin. Only with this attitude did teamwork persist to help the locals effectively.

Unfortunately, compassion and empathy are easily overlooked when dealing with a cavalcade of patients. Fatigue, frustration, and the marginalization of locals with the moral high ground that we claimed as volunteers, translated into nonchalance and even abrasive behaviour. The locals’ fear-stricken faces while acquiescing to our demands begged the need for some form of comfort, as they were confronted by the buzz of activity and their inability to comprehend what was going on. Simply holding their hands provided them with much relief. Kindness often has a greater palliative effect than medicine; it should permeate through the volunteers’ actions so we can provide the care the locals deserve.

Overall, these qualities in a medical volunteer may not be necessary for short-term provision of healthcare in a medical mission, but are imperative for the long-term collaboration necessary for the sustainability of healthcare.

241  Hospital Resource Management During Mass Casualties
Rajagopal Lakshmanan Mohanavalli, Appa Iyer Sivakumar, Stephen C Graves

Following mass casualty incidents such as the London subway transport system bombings in 2005 and the New York World Trade Center disaster in 2001, limited availability of resources in hospitals (particularly beds and associated medical staff) is a major challenge; thus, delaying treatment for victims arriving at the hospital. This study focusses on the planning and management of these resources at a hospital and trauma centre in Singapore with the aim of saving as many lives as possible for disaster victims.

The 24-hour time horizon following a mass casualty incident is considered to be the most crucial period. On arrival to the hospital, patients visit a triage station to be assessed for severity of injury; depending on the triage assessment, each patient starts on a process flow through the hospital’s treatment stations such as resuscitation, consultation, CT scan, operating theatre, intensive care units (ICU) or recovery (regular wards) for treatment and recovery. Our research focuses on re-defining existing policies and proposing new ones for
the (i) planning of staff resources at the triage station (triage specialists) and (ii) commissioning of usable beds at the ICU and regular wards to handle the influx of arriving patients.

The current disaster preparedness policy [or Standard Operating Procedure (SOP)] is to commission all beds from an empty ward when the current ward reaches half its capacity. This policy may not be optimal given the unpredictable nature of arrival of victims after a disaster, and may lead to either excess usable beds being commissioned or fewer beds being commissioned than required.

This study proposes a revised SOP for the hospital based on solving a multi-period (24 hours) mixed integer programming (MIP) model that considers two patient types (heavily wounded, P1 vs. moderately wounded P2). The model minimizes the number of patients waiting and determines how much capacity to commission and when.

The revised SOP derived from the model shows that modifying the hospital's current bed commissioning scheme from commissioning all beds from a ward to a reduced commissioning rate does not negatively affect the number of patients treated and/or waiting at the ICU and regular wards. The benefit from the revised SOP is that the slower commissioning at the ICU and regular wards temporarily allows for the reallocation of medical staff from these wards to the other stations that are low on manpower, e.g., triage staff, so as to enable a faster triage rate.

242 A Framework of Physiotherapy for Medical Aid in Developing Countries – ‘Runaperu’ A Case Study
Mcgowran, S.L.1, Pitchay, S.D.
1Physiotherapist, KK Women’s and Children’s Hospital
Email: sarahlouismcgowran@gmail.com

Introduction
In developing countries, the primary goals of charity organisations are commonly; medical aid, sanitation, basic food and/or education. However, disabled individuals require additional help to access these services. This is often neglected or misunderstood. Community-Based Rehabilitation (CBR) guidelines, introduced by the World Health Organisation (WHO), are aimed at enhancing quality of life (QOL) for individuals with disabilities.

The role of physiotherapy in international aid includes providing assessment and treatment interventions, ensuring necessary equipment and home modifications. This will allow individuals to maintain and improve their health and functional independence, and enable better integration into society. This poster aims to discuss the use of the CBR management cycle with Runaperu as a case study, exploring successes and challenges faced.

Background of the centre
Started in 2009, ‘Runaperu’ – “Peru People” is a rehabilitation centre providing predominantly paediatric physiotherapy services. Set in a small developing village, Montero, Runaperu began providing food, clothes and mobility aids. Today, it has established a positive presence for disabled individuals in this society. Currently, it employs 5 full time staff and provides a variety of rehabilitation services for children and adults, and has an informal partnership with a local school.

The CBR Framework
Situation analysis
Montero is a Spanish-speaking Catholic village with a population of approximately 7665, and an average income of 5 soles = $US 1 per day, the poverty line defined by WHO. The most commonly treated conditions include cerebral palsy, autism, epilepsy, stroke and trauma related injuries.

Planning and implementation
Time was invested to understand the needs and desires of the community to enable the development of purposeful and sustainable goals. Manpower and funding were required to ensure sufficient resources to implement the services.

Evaluation
The project is relevant and sustainable as it provides local treatment as an alternative to distant, unaffordable hospital treatment. Limitations include certain equipment which can only be used in clinical settings, and not in the home. Additionally, sustainability of funding and health worker shortage are issues to consider. Improvements can be made through skills-based teaching for existing staff, rather than increased recruitment of foreign volunteers.

Conclusion
Runaperu has impacted Montero by improving attitudes to disability and QOL. Further assessment of long-term treatment goals is necessary. Prior to expanding services, realistic and sustainable funding, goals and needs should be explored.

245 Voluntary Health Missions in Myanmar by Shija Healthcare and Research Institute, India
Jugindra1
1Director Medical Services, Shija Hospitals & Research Institute
Email: manjushree@shijahospitals.com
Manipur is the eastern most state of India bordering with Sagaing division (Western state) of Myanmar. Shija Healthcare and Research Institute is the NGO wing of Shija Hospitals and Research Institute located in Imphal, the capital of Manipur.

This NGO initiated to provide specialized healthcare to the people of Myanmar through the “Mission Myanmar” projects, providing those healthcare services which are not available in Sagaing at present. Three such missions have been successfully completed; this is an ongoing process.

**Mission Myanmar Phase I (22-29 May 2013)**
Mission Myanmar Phase I for cleft lip and palate in May 2013 was the first mission. One hundred and three operations were performed on 87 cleft patients at the Monywa General Hospital. The camp was personally attended by the Chief Minister of Sagaing, Myanmar and Chief Minister of Manipur, India.

**Mission Myanmar Phase II (24-29 Dec 2013)**
Mission Myanmar Phase II for sight was performed by the Shija Eye Care Foundation, a unit of Shija Hospitals, in December 2013. The mission was also a successful - 179 cataract blind patients were operated on.

**Mission Myanmar Phase III (17-24th March 2014)**
A 14-member team from Shija Hospitals, assisted by local staff and doctors, performed 32 laparoscopic (key hole) and 27 cleft lip and palate surgeries at the Monywa General Hospital, Sagaing in 3 days. His Excellency, Chief Minister of Sagaing, U Thar Aye, Union Minister of Health, Myanmar, Dr. Pe Thet Khin and Indian Consul General, Dr. Nanda Kumar, visited the operation theatre on 22nd March 2014, appreciated and encouraged the good work.

At the invitation of the Indian Consulate General, similar missions are being planned in Mandalay and Kale. At invitation of Shija Healthcare, 2 surgeons and 6 nurses from Myanmar will undergo intensive laparoscopic surgery training at Shija Hospitals for a period of 3 months, totally free of charge, starting July 22, 2014.

The mission has been largely successful in fulfilling its objectives of serving the people of Myanmar and building closer ties between the neighboring states and nations.

The project is a collaborative effort of the Smile Train Inc. USA, the Government of Manipur, AMASI (Association of Minimal Access Surgeons of India) and Shija Hospitals and also the governments of India and Myanmar, particularly the governments of Manipur and Sagaing.

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**Exercise Elang Indopura**

**Muruges Mekkappan**
1Nurse Clinician, Tan Tock Seng Hospital
Email: muruges_m@ttsh.com.sg

**Exercise Elang Indopura**
Participating in the EX Elang Indopura has always caused great excitement. The exercise co-hosted by Singapore and Indonesia was aimed not only as a contribution to the local community in Pekan Bahru, but also to improve the close cooperation between the militaries of ASEAN. Personnel from the Singapore Armed Forces (SAF) and Tentera Nasional Indonesia (TNI) were tasked to provide basic health, surgical and dental care. Around 1000 families living around the SIABU airbase in Pekan Bahru benefited from the exercise by receiving medical/nursing aid and advice.

**Planning and Execution**
The entire exercise was well planned and executed, right from day one when everyone gathered at the Changi Airbase before departure. The team comprised surgeons, dentists, anaesthetists and nurses. Upon arriving at the SIABU airbase in a Falker plane, we were immediately welcomed by officials from TNI. The area was well prepared with the polyclinic having been converted into an operating theatre and the organized crowd-control by TNI personnel. Despite being little nervous while assisting a surgeon in an initial surgery, I quickly gained the required skills and went on to assist in simple surgeries. The exercise concluded with an R&R session of durian feast and a sumptuous dinner. It provided a great platform to mingle with the TNI personnel away from the stresses of the exercise and to form bonds that will last a lifetime.

**Reflections**
I count myself extremely lucky to be able to participate in the exercise which is in alignment to the values and morals I believe in; to save lives and alleviate suffering. The general feeling among the personnel from both countries was that the work being done is surely making the world a better place. It was a feeling not lost on me; it provided tremendous power and motivation to persevere and complete the task at hand throughout the exercise.

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**Karuna Medical International: The Journey to a Sustainable Delivery of Healthcare**

**Sathisvaran Kanavathy**
1Monash University
Email: sathisvaran02@hotmail.com

**Karuna Medical International: The Journey to a Sustainable Delivery of Healthcare**

**Sathisvaran Kanavathy**, Low Mun Hon, Chong Chia Li, Clarisse, Chan Mei Yoke, Fong Pol Him

**Sathisvaran Kanavathy**, Low Mun Hon, Chong Chia Li, Clarisse, Chan Mei Yoke, Fong Pol Him

Email: sathisvaran02@hotmail.com
Introduction
Sir William Osler said that “the value of experience is not in seeing much, but in seeing wisely”. This resonates with medical teams that organize short-term medical missions (STMM). Tight budgets and timeframes can impact on optimal healthcare provision. Extensive planning and collaboration with local community organisations are essential in ensuring efficiency and continuity in healthcare provision during peacetime.

Goals
In January 2014, a 34-strong Karuna Medical International (KMI), in partnership with Thrangu Monastery, and comprising medical (including specialist doctors) and non-medical volunteers, arrived in Nepal for a 4-day STMM. The main goal was to provide primary healthcare, namely outpatient services, general screening and education with a long-term view to teach local partners on treatment and management of common ailments in local villagers.

Results
1,340 patients were seen over 3.5 days, typically presenting with pain, gastrointestinal and respiratory tracts infections. Over 80 types of locally-sourced medicines, estimated to cost SGD 6,000, were dispensed or donated.

Despite limited resources, the mission surpassed expectations. The mission’s success was mainly due to various processes that provided high quality care despite high patient turnover. These processes included pre-trip operational plans that would meet the villagers’ medical needs in a cost-effective and logistically feasible way, while maximizing the team’s capabilities. Roles for various team members were specified and the operating model was established.

At the monastery’s request, an easily accessible school was converted into a medical clinic. On-site planning included room allocation for triage, screening, examination, investigations (laboratory and ultrasound) rooms and pharmacy. This was strategically planned for smooth and systematic patient movement.

A team of local volunteer teachers and students were also engaged to help with daily administrative and logistical needs including Nepalese translation. The local police were also involved for crowd-control.

Conclusion
Teamwork between local and KMI non-medical volunteers ensured efficient delivery of healthcare by the doctors. KMI was also able to teach and encourage a monk, a locally-trained medic, as well as young local volunteers to be primary healthcare and volunteerism advocates. Their fresh perspectives and enthusiasm helped ensure continuity of healthcare provision.

The local partnerships and intensive planning resulted in the sustainable and efficacious healthcare delivery. KMI will return to Nepal in 2015 to provide improved and more extensive medical and dental services.

251 The Craniofacial Foundation of the Philippines: A Hard Worker Among Many
Xenia P. David¹, Yolanda Q. Abad
¹Changi General Hospital
Email: drxeniapdavid@gmail.com

The Philippines is a nation of almost 99 million people. Orofacial clefts occur frequently at 1 in 500 births, compared to the overall prevalence of 1 in 1,000; this has been attributed to genetics and poor nutrition. Out of around 77,000 people with orofacial clefts, 64,000 are unrepaired. Surgery can cost as little as $300, but most patients are from the 45% who earn less than $2/day.

Operation Smile, Smile Train, and many other organizations are dedicated to the reduction of the global burden of unrepaired orofacial clefts. The Craniofacial Foundation of the Philippines, Inc. (CFFP) is one of these groups.

CFFP is a non-profit, non-government organization founded by Dr. Teresita Tongson, Philippines’ first female plastic surgeon. It started in 1989 as the Craniofacial Center at the St. Martin de Porres Charity Hospital. Dr. Tongson steadfastly served as CFFP’s founder and chairman until her death in March 2014.

CFFP provides free surgery to the cleft community courtesy of Smile Train. It partners with private donors, the U.S. Embassy Club and the Liliane Foundation of the Philippines for its non-cleft surgeries, such as release of burn contractures, oral and maxillofacial surgery, and meningocele repair.

The mission of CFFP is to provide an integrated interdisciplinary approach to the complete habilitation/rehabilitation of persons with orofacial and craniofacial anomalies and communicative disorders. This is made possible both through a centre-based ambulatory surgical clinic affiliated with other institutions, and a mission mobilization program which extends to all regions of the Philippines.

CFFP has performed 1341 surgeries from 2010 to 2014. The majority (76%) of the patients were infants and young children. Most of the surgeries were done during outreach missions (71.3%), while the rest were done at the main clinic and through its partners in Metro Manila (28.7%).
Missions to Western and Eastern Visayas produced the highest volume (22.0% and 18.6%, respectively), followed by Central Luzon (8.7%), Northern Mindanao (5.8%), Cagayan Valley (3.2%) and Mimaropa (2.5%). Surgeries included cheiloplasties (57.9%), palatoplasties (30.2%), closure of oronasal fistula (5.9%) and excisions of various facial cystic lesions (1.3%).

CFFP’s surgeons, anaesthetists, dentists, paediatricians, and nurses continue to provide their services for free, in the spirit of volunteerism inculcated by Dr. Aleli Quirino, founder of the St. Martin de Porres Charity Hospital. CFFP strives to reach out to those who do not have access to a relatively simple, yet life-changing surgery.

Psychiatry in International Humanitarian Medical Missions
Clarabella Liew1, Sean David Vanniasingham
1MOHH
Email: clarabella.liew@mohh.com.sg

Psychiatry is an often much-said overlooked medical specialty and it continues to remain so in our world today. Unlike Medicine and Surgery, Psychiatry is not glamorous and has a constant war against cultural stigmatisation. Psychiatry works through understanding social circumstances and observing mental states to help the affected rehabilitate back into society. Results will never be instantaneous nor guaranteed. It is no wonder then that few would dedicate any time and effort to mental illnesses in humanitarian medical missions.

This subject matter stumbles both the strongest and richest country and thus Psychiatry definitely deserve more attention in areas of need. This study was borne out of the hearts to encourage, attract and justify more resource allocations to Psychiatry in international humanitarian medical missions. At the same time, this study aims to refute certain myths and limitations that have stood in the way of advancing care for people with mental health problems.

Disaster brings along destruction of property, loss of jobs and loved ones, which inadvertently affect the incidence and thus management of mental illnesses. A surge in mental illnesses that range from adjustment disorder to anxiety to suicidality can occur. Without a supportive infrastructure and preparedness, one’s mental state may deteriorate or be ignored, subjecting to the risks of developing mental illnesses.

Through reviewing of existing literature in PubMed and MEDLINE, special attention will be placed on plausible interventions in the post-disaster relief management of particular psychiatric conditions such as Depression, Post-traumatic Stress Disorder, Substance Abuse and Learning Disabilities in children. Alternative approaches for the future of Psychiatry in international humanitarian medical missions will also be discussed based on the collated research data.
In total, WSF has performed pullthroughs for 115 IA and 98 HD, and 14 colonic interpositions. However, at least 100 colostomies need to be closed in children who had prior surgery. Patients need long-term care to achieve normal bowel function and avoid major urologic and gynaecologic complications. There must be a dedicated ARM Clinic which includes a paediatrician, paediatric surgeon, nurse, stoma therapist, dietician, urologist, and gynaecologist.

Future objectives include the education of WHO, WHA, and big funders on the importance of surgery in the global burden of disease. An “Umbrella Organization” can be useful in order to get proper funding. Surgical missions must be incorporated in surgical training programs. Collaboration with local partners in the LICs and MICs is essential for a successful mission.

258 Of Mountains, Medicine and Madness
Gayathri Nadarajan and Kumaran Rasappan
1Singhealth Emergency Medicine and Orthopaedic
Email: gayathri.nadarajan@gmail.com

In 2012, my husband, Kumaran Rasappan (orthopaedic resident in TTSH) and I organised a medical mission trip to the villages in Nepal, at the region where Mt Everest resides. We both organised and executed this medical mission. He then climbed Mt Everest while I stayed in the villages for 2 months, travelling between them and conducting health education (hygiene, children and maternal health) as well as training the healthcare workers there to treat various ailments (rather than prescribe paracetamol for most conditions, which was the situation then).

It was a successful project and we plan to return next year. We still keep in touch with the villagers currently to find out what is happening in the clinic.

As a result of Kumaran’s successful summit of Mt Everest as well as this medical mission, there was a bit of publicity. Many people showed interest in finding out more. We were then asked to present a poster summary of this project at one of the conferences for the health minister to view.

There are 3 posters called, “Of mountain, madness and medicine” which summarises our project—Kumaran’s year out climbing mountains to train for Everest as well as for the TTSH charity fund (poster “Mountain”), the actually climb up Mt Everest (poster “Madness”) and our medical mission (poster “Medicine”).

There is nothing really scientific about the posters but I thought I would like to share it at this conference as it shares the theme of this conference.

Our experiences are depicted in greater detail on our blogs (which needs to be updated). My blog talks about the clinic- http://gaya3ramblings.blogspot.sg/. Kumaran’s blog talks about the climb and the charity fund- http://climbeverest2012.wordpress.com

I have attached the posters to this email.

Please do let me know if we can place it at the conference. It would be an honour to do so.

It would be a great way to create awareness amongst us about the Sherpa population (special tribe of Nepalese ppl who are originally from Tibet) residing in the Khumbu Valley. It would serve as a tribute to them- who are the true heroes behind Mt Everest. Without them, ppl will not be able to scale Mt Everest.

Khumbu Valley is mainly known for the region where Everest is located. There are many villagers but only one hospital. Hence 1 hospital covers about 8000 over people. There is no transport allowed at such high altitudes (above 2000m). People get from one place to another by foot. Most villagers take at least 1 day to walk to the nearest hospital.

Hence our aim was to create something more convenient and sustainable within the villagers itself so that things can be tended to much more quickly. Hence we embarked on this journey.

Looking forward to hearing from your team.

Yours Sincerely,
Gayathri Nadaraja

263 Leaving a Legacy
Winifred Jackson Yap
1General Practice
Email: wjacksonyap@gmail.com

I am excited about an upcoming conference at the end of this year. It is the first International Conference on Humanitarian Medical Missions ever organised and it is going to be happening in Singapore.

Humanitarian outreach is one way in which one can give back to society for what society has done for you.
I read about a survey of centenarians (people who have reached 100 years old) and they were asked what they would do differently if they were given an opportunity to live their lives all over again. Three answers that were common with the group were these. They would take more risks. They would reflect more. They would pursue doing the things that will stand the test of time. They were referring to wanting to leave a legacy.

In 2009, my husband joined an Operation Smile medical team to Tashkent in Uzbekistan. The surgical team consisted of plastic surgeons from Singapore and they teamed up with plastic surgeons from Uzbekistan. Over five days, the surgeons operated to correct hare lips and cleft palates.

So what was my husband, a gynaecologist, doing in the team? Being skilled with a camera, he was their recording photographer. Every patient with cleft lip and/or palate had to be registered and photographed before surgery, and patients ranged from infants in arms to adults. He also made friends with the Russian and Uzbek doctors and they had an enriching interaction in the operating theatres.

The philosophy behind Operation Smile is simply that even a small cleft lip disadvantages the person for life. By correcting the deformity, the person not only gains self-esteem but immediately has a better future. And who would not smile at that? Five years on, my husband still has a good memory of that country and the people that he met and recorded on camera. Although he is unlikely to meet them again, the trip has enriched a phase of his life and probably left behind a legacy.

There are many goals in International Medical Missions. A willingness to serve as a volunteer and a heart for fellow humans are essential to serve successfully in some capacity in humanitarian medical missions.

265  KK Hospital Regional Outreach to Kids Program and More
Anette Jacobsen¹
¹Associate Dean, Paediatric Surgeon, Clinical Education Lead
(Medicine), KK Women’s and Children’s Hospital
Email: anette.jacobsen@kkh.com.sg

Purpose
The aim of this paper is to describe my experience in outreach missions. I will also describe the current projects led by KKH. In concluding I will try to look into the future.

Materials and Methods
The author has participated in Paediatric Surgical missions since 2001. Since 2010 the author has also built up paediatric and obstetric emergency care programs and connected sponsors, teams and regional trainees in an administrative role.

Discussion/Conclusion
Paediatric surgical missions have been fruitful and surgeons have been trained. In order to leave a "bigger footprint" and address the Millennium Development Goals, more recent ventures into Paediatrics and Obstetrics have followed. These have all been following a ‘train-the-trainer’ model. Sometimes local politics hamper the collaborations and progress, but overall the volunteering experience is a nurturing experience.

266  Singhealth Makassar Disaster Management Project
Pek Jen Heng¹, V. Anantharaman
¹SingHealth Emergency Medicine Residency Program
Email: jenheng_@hotmail.com

Background
Singhealth is conducting a disaster medicine education programme from February 2014 to November 2015 in Makassar, Indonesia.

Objectives
The aim is to strengthen capabilities of hospitals and the local disaster management team to deal with emergencies during disaster, with particular focus on preparedness, response and recovery in order to lessen the impact of disasters. Such partnerships will also strengthen our relationships with neighbouring countries, and give us the opportunity to better evaluate and improve our disaster medical education programmes.

Methods
Through a series of didactic lectures, interactive workshops and disaster symposia, participants are exposed to and taught the principles of disaster management from the disaster site to the hospital. Skills such as basic resuscitation and initial management of chemical casualties, are incorporated into the curriculum. Emphasis is placed on the role of the community responder during disasters. As the program develops, the participants are to take on roles as master trainers, training and developing their own community in the disaster management systems. This allows the host community to gain the expertise and confidence in better managing the initial phase of disasters in their own communities.
Conclusion
Medical and community health professionals should be equipped to develop disaster management systems. Communities can then be better trained to respond in the eventuality of disasters.

267 Beyond Mere Doctoring
C C Khong
Senior Consultant, KK Women’s and Children’s Hospital, Singapore
Email: dankhong@gmail.com

“He is no fool who gives what he cannot keep to gain what he cannot lose” - Jim Elliot (1927-1956)

Human civilisation has come a long way since the last 5000-6000 years. The human race has reached a station in its progress that it might be possible to ask, “Is there such a thing as a modern civilised Man?” I think there is and his attributes are in possessing a heart of philanthropy, a caring love for animals, and a passionate concern for his environment. So it is possible that the rich, powerful and famous that many look up to in this world are not necessarily modern civilised men.

Medical science has trained many people who have become good and famous in their skills, amazing in their ability in accumulating wealth, and having good brains for medical discoveries. However, if one is of the belief that beyond this life exist a next in which what one gives in this life matters, then the love of mankind and a heart to give without gain ultimately counts.

Humanitarian Medical Missions outreach provides each and every doctor the opportunity to give back to society what society has done for him.

Paradoxically, many who have given of themselves in medical missions have been greatly blessed in return, and sometimes beyond expectations. When I was working with the Karen tribes not far from the Thai-Myanmar border, I observed that while parasitic worm infestations and skin diseases were common, there were almost no cases of hypertension, obesity, asthma and myopia which are so prevalent in urban Singapore. One might like to reflect and ponder as to who is actually more fortunate.

The notion of serving in humanitarian missions need not deter those who feel they do not fit in for as long as one has the heart to serve. In 2009, when I followed a team of plastic surgeons on an Operation Smile missions outreach trip, I served as a recording photographer even though I am a gynaecologist and hare lips are anatomically quite far from my area of work. The greatest hurdle is usually a psychological one moving forward out of one’s comfort zone.

This International Conference may well give many medical folks the launching opportunity to leave behind a legacy.

268 Development Outcomes of Thai Children with Cleft Lip/ Palate at Age 5
Niramol Patjanasoontorn, Somjit Rongbuddsi, Suteera Pradubvong, Bowornsil Chauchuen
Khon Kaen University, Thailand
Email: npnirpat5@gmail.com

Introduction
Helping children with cleft lip and palate (CLP), and the need to promote child health including the development of the children as well as their physical health.

Objective
To measure the development outcomes among Thai children with non-syndromic cleft lip and/or palate treated at the Tawanchai Center 5 years after birth.

Materials and Method
Using a developmental screening test, Thai children with CLP were followed up at the centre.

Results
Nearly two-thirds (62.5%) of the 24 Thai children with CLP had delayed development. Eight of the children had more than one delayed category and 13 both “delayed” and “caution”. Delayed language, personal, social and fine motor skills occurred in 54.2%, 20.8% (5/24) and 20.8% (5/24) of cases, respectively.

Conclusion
An understanding of the incidence of the different types of delays will help our centre to improve our treatment standards and place more emphasis on psychosocial and development outcome.
270 Humanitarian Service in Cleft Care of Tawanchai Center
Suteera Pradubwong1, Sutthighan Kosakul2, Niramol Patjanasoontorn3, Bowornsilp Chowchuen4
1Division of Nursing, Srinagarind Hospital, Faculty of Medicine, KhonKae University, Thailand, 2Social Welfare Department, Srinagarind Hospital, Faculty of Medicine, KhonKae University, Thailand, 3Department of Psychiatry, Faculty of Medicine, KhonKae University, Thailand, 4Department of Surgery, Faculty of Medicine, KhonKae University, Thailand

Background
There were many of Children with unrepaired cleft lip and palate left because of poverty, uneducated, homeless illegal immigrant in Thailand.

Objective
To present on a case narrative about humanitarian care was given by Tawanchai cleft center, KhonKae University Thailand.

Material and method
On 8/02/2013 a 13 year old girl with unrepaired cleft lip and palate selling balloon for her living was found by a couple with good Samaritan during she sold balloon at a local agriculture fair, at KhonKae Province. The couple reported to Tawanchai cleft center to help her. After that we tried to reach her, we found her in a village 60Km far away. We went to assess her needs.

Result
She was exploited by using her deformities. Our team, surgeon, speech pathologist, ENT, and audiologist evaluated her on 28/02/2013. The cheiloplasty and palatoplasty was performed on 25/03/2013 by B.C. the operation was successful and satisfy by the patient. Our team also funding her living cost and returning her to school again. We also are training her parents to raising her appropriately. Now she is ready to grown up for future and she said “I have new life”.

Conclusion
Our team at Tawanchai cleft center was very proud in humanitarian work to safe the child with cleft lip and palate, we hope all children with cleft lip and palate could receive operation.

273 Tawanchai Foundation Role in Helping Persons with Cleft Lip and Palate
Salita Prawitkarn1, Suteera Pradubwong, Niramol Patjanasoontorn, Bowornsilp Chowchuen
1Khon Kaen University, Thailand
Email: nisa_ni@hotmail.com

Background
The mission of the Tawanchai Foundation for cleft lip and palate craniofacial anomalies, Faculty of Medicine KKU Thailand is to help persons affected by these facial deformities especially for those living in North east region of Thailand, where most of people have low income. We assess their medical needs including surgical, aesthetic, dental, speech and psychosocial cares.

Objective
To present our work in helping patients with special needs at Tawanchai foundation.

Method
My jobs begin with the intake of children with these deformities at the Foundation: making hospital registration, completing the registration form, contacting the relevant health organization for coverage of patients, scheduling the patients and families to meet with the surgeon, special nurse, speech therapist, dentist, developmental nurse. etc, and assessment by nurse and doctors. After the surgery, I continuously do follow up until they grow up.

Results
Our work begins with reaching cases, making hospital appointment, giving information books, and discussion with the families to assess their needs and educate them to prepare and giving them gift set for making connection with us. The satisfaction rate was 90%.

Conclusion
Helping systems for medical care of the patients and families with cleft lip and palate are necessary to develop because they have to meet many people to provide the care and need one middle person to communicated with and to meet their needs and satisfaction results.
Post-Traumatic Stress Disorder Among Children Following Natural Disasters in Asia: A Systematic Review

Kirk Hui Ping Angela, Lee Jan Hau
1Staff Nurse, KK Women's and Children’s Hospital, Singapore
Email: angelakirkhp@gmail.com

Background and Aims
Natural disasters are often unpredictable, life-threatening and highly destructive. Asia is often frequently afflicted with these disasters. Children are predisposed to post-traumatic stress disorder (PTSD) after a natural disaster. The epidemiology and risk factors of PTSD after natural disasters in children are not well described. Hence, the aim of this systemic review is to critically evaluate the literature on PTSD among children following natural disasters in Asia.

Materials and Methods
A literature search of studies published between 2000 and 2014 was conducted. We searched the following databases: CINAHL, Medline and the Cochrane Library databases. The keywords that we used were “disaster”, “posttraumatic stress disorder”, “paediatrics” and “children”.

Results
We identified 16 studies from 8 natural disasters. The 8 natural disasters include earthquake (n=4), earthquake and tsunami (n=2), typhoon (n=1) and cyclone (n=1). The participants (total number: 38238) included in the studies ranged in age from 1 to 19 years. The time of assessing the presence of PTSD ranged from 1 month to 3 years post-disaster.

The prevalence of PTSD reported in victims ranged from 2.5%-70.7%. Eight studies measured the prevalence of PTSD at different time points; 4/8 (50%) studies reported that the prevalence of PTSD does not significantly decrease over time. With regard to the association between age or gender and PTSD symptoms, the results have been inconsistent across studies. Some studies indicated that age was not significantly related to PTSD after traumatic events, whereas other studies demonstrated that older children had more severe symptoms. Similarly, although some studies found that female survivors had a greater risk than male survivors to develop PTSD symptoms, this association was not consistent across all studies.

All studies demonstrated that children who had more number of traumatic exposure experience with natural disasters were more likely to have PTSD. Two studies reported that the role of social or family support was not significant in predicting PTSD. Three studies reported a strong association between PTSD and depression.

Conclusions
Across Asia, PTSD is common in children who experienced natural disaster. There were different findings with regard to PTSD across a single continent. These differences may be due to differences in culture, severity of the disaster, nature of the disaster, method of assessing PTSD, extend of relief effort and the time of assessment. Culturally sensitivity and appropriate clinical screening is needed to identify children with PTSD so as to be able to meet the psychological needs of these children.

A Public Health Problem: Syrian Refugees and Health Services Support
Unal Demirtas, Mehmet Cetin, Turan Fedai, Yusuf Ziya Turk
1Gulhane Military Medical Academy
Email: drunalde@gmail.com

A refugee is defined as ‘Any person who, owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership in a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it’. Since the outset of the conflict in March 2011, the Republic of Turkey, with its historical, cultural and neighbourhood ties, followed an open door policy to Syrian refugees. Turkey is hosting nearly 620 thousand Syrian refugees: 220 thousand of these are located in the camps and 400 thousand are located outside the camps. Thirty-six percent of the total Syrian refugees in Turkey came from Aleppo and 20%came from Idlip. The reasons for the large share of refugees from Aleppo are: first, it is very close to the Turkish border and, second, it is one of the centres of intense conflict.

Thirty-five thousand tents and 15 thousand containers are located in the 20 camps in the 10 cities. There are field hospitals located inside the camps equipped with doctors and nurses for giving health services and serves about 150 local and foreign doctors. The patients are transferred to state hospital for advanced diagnosis and treatment. Syrian refugee children are vaccinated against polio and measles. Seventy-four percent of children in the camps and 55% of children out of the camps are vaccinated against polio. Seventy-two percent of children in the camps and about 59%of children out of camps are vaccinated against measles. Potable water systems are supplied from the public main water supply. Refugees can make their own meals. A study reported that 33% of refugees were seen for
post-traumatic stress disorder. The health services in these camps are provided by the Ministry of Health and, for entirely political reasons, the military health services cannot be part of it.

279  Disaster Recovery: Natural Disasters Search and Rescue Battalion

Unal Demirtas1, Caglar Unlu, Aslan Ozden, Turan Fedai
1Gulhane Military Medical Academy
Email: drunalde@gmail.com

In many countries, militaries are natural partners of Disaster Management Systems and, play key roles in humanitarian relief operations. In fact, disaster response has not been the main task of the armed forces. The events in recent years have revealed the necessity of the armed forces to take part in disaster response. The Turkish Armed Forces Natural Disasters Search and Rescue Battalion (NDSAR) was established, with the direction of General Staff, on 31 May 2001 (after the 17 August 1999 earthquake) to carry out special tasks for natural or man-made disasters such as earthquake, conflagration, flood, avalanche, erosion or SAR missions for the missing personnel, catastrophes (ships, trains, vehicles or planes), weapons of mass destruction (WMD) - chemical, biological, radiological and nuclear (CBRN) attacks. NDSAR is well equipped and trained to carry out any assigned mission worldwide. NDSAR Bt. is organized as a Headquarter and three SAR units. And also each SAR unit has a headquarter, six SAR teams and a search Dog Section.

SAR TEAM

6 personnel in total; including team commander, listening & search specialist, rescue specialist (2 Per.) and medics (2 Per.)

Search Dog Section

7 personnel and 6 search dogs in total; including, section commander, specialist trainer (6 Per.) and search dog (6).

The NDSAR has many facilities and capabilities, such as being able to conduct three different missions concurrently in irrelevant areas, being able to conduct missions without requiring any logistic support including transportation, being able to carry out the first aid and emergency application to a victim and the capacity to deploy the victim to a medical facility, and being able to communicate in any weather and terrain conditions by all means, to carry out SAR missions under extreme weather conditions such as heavy snow and extreme cold temperatures, etc.

280  Development of an Online Registration for Babies with Cleft Lip, Cleft Palate in Four Provinces of the Northeastern Region of Thailand

Supachai Wongchurn1, Suteera Pradubwong, Kuniitha Volrathongchai, Chaiwit Thanapaisal, Bowornsilp Chowchuen
1Tawanchai Foundation for Cleft lip, Cleft Palate and Craniofacial Deformities, Faculty of Medicine, Khon Kaen University, Khon Kaen, Thailand
Email: tumdiv2@hotmail.com

Background

There are no studies being done on the number of babies with cleft lip, cleft palate in the Northeast region of Thailand. This study reflects on the treatment, healthcare, surgery and late rehabilitation, especially in the following 4 provinces: Khon Kaen, Roi-Ét, Mahasarakham, and Kalasin, which are under the responsibility of the Tawanchai Center, Srinagarind Hospital and Tawanchai Foundation.

Objectives

To develop an online registration for babies with cleft lip, cleft palate.
To determine the number of babies with cleft lip, cleft palate in order to pass them for immediate treatment.

Materials and Method

A multidisciplinary team meeting was arranged to gather information. Php, Javascript and Mysql were used to develop the online registration system. The system was evaluated by nurses from the labor wards of 76 hospitals (in 4 provinces), such as community hospitals, government hospitals and private hospitals.

Results

Two meetings were arranged in preparation for the release of the online registration system. The Tawanchai Center received good feedback from the nurses. To recognize the number of new born patients can become an actual treatment plan for the further treatment. The families were also satisfied with the quick and continual referral system.

Conclusion

This online registration system for babies with cleft lip, cleft palate is a pilot program to determine the number of patients immediately. Therefore, they can coordinate and prepare the treatment guideline. This program is modifiable. It can be modified, connected, and developed in the future for covering individual health system.
Establishing International Fellowship Program: Ascan Cleft and Craniofacial Center
Phornphimon Inthong¹, Suteera Pradubwong, Chaiwit Thanapaisal, Bowornsilp Chowchuen
¹Tawanchai Foundation for Cleft lip, Cleft Palate and Craniofacial Deformities, Faculty of Medicine, Khon Kaen University, Khon Kaen, Thailand
Email: palmy8514@gmail.com

Background
Craniofacial deformities are complex disorders. The treatment of cleft lip, cleft palate and other craniofacial deformities requires the expertise and long-term care of specialists from a variety of medical fields. In response to this need, Tawanchai Foundation was set up to treat patients with cleft lip, cleft palate and other craniofacial deformities.

Objective
To link and exchange knowledge amongst surgeons from Southeast Asian countries in order to investigate effective treatment guideline and to enable Khon Kaen medical staff to become a leader in treating patients with cleft lip, cleft palate and craniofacial deformities.

Materials and Method
The fellowship is a 1-year training program for surgeons who wish to receive comprehensive training with a large clinical volume and abundant clinical and basic scientific research opportunities. Fellows will also be exposed to a comprehensive teaching curriculum and undergo a 3-month mentorship in research. Afterwards, fellows will continue their work for 8 months and undertake clinical research. The medical team from Khon Kaen will encourage and mentor the craniofacial fellow towards contributions in research as a follow-up visit while the fellows go back to their work. At the end of program, fellows are required to participate in a month long project summary at Srinagarind Hospital, Khon Kaen University.

Results
Establishment the network for treatment of craniofacial deformities in Southeast Asian Countries and build up the new knowledge for comprehensive cleft care for patients with cleft lip, cleft palate and craniofacial deformities. The Khon Kaen medical staff can be a leader in treatment of patients with craniofacial deformities in Southeast Asian Countries.

Conclusion
The training program for surgeons in Southeast Asian Countries can deliver a great advantage to patients with cleft lip, cleft palate and craniofacial deformities in this region. Not only, increase the proficiency but also open up the collaboration’s view with other interdisciplinary team.

Monitoring and Evaluation
Caglar Unlu¹, Unal Demirtas, Pelin Ozmen, Mehmet Cetin
¹Gulhane Military Medical Academy
Email: drunalde@gmail.com

Monitoring and evaluation shouldn’t be confused with each other. Monitoring is the routine, daily assessment of ongoing activities and progress, while evaluation is the periodic assessment of overall achievements. Monitoring looks at what is being done, whereas evaluation examines what has been achieved or what impact has been made. The purpose of monitoring is to determine whether disaster response program is organized, implemented as planned and the desired results are achieved. Good monitoring provides to implementation of disaster program a fixed orientation and strengthen the performance, transparency, accountability, and quality of reporting. Reporting is the main tool of monitoring activities and monitoring reports should be objective. Monitoring should consider the framework of program, the objectives, the work done, the expected results and which scales will be used as an indicator of development. Good indicators are the ones that are directly, neutral, practical, sufficient and maybe repeated. The combination of qualitative and quantitative indicators should be used to execute a balanced response program. While quantitative data usually provides information about deployment, the results committed and access to victims, the qualitative data ranks the confidence level, behaviors and changes about the attitudes. The main monitoring tools to collect data are reports of contributors, interviews with news sources, group discussions, randomized studies and direct observation. The purpose of evaluation is to examine the results of committed, the impact and lessons learned in disaster response program. Evaluations consider performance and access to victims. The results often evaluates disaster response program options and are used in future strategic and funding plans. With the experience gained before, the following issues should be considered when evaluating: relevance, effectiveness, efficiency, impact, coverage, coherence, sustainability and connectedness/coordination.

What I Have Learned From Outreach Plastic Surgery Mission in Myanmar
Moe Thuzar¹
Yangon General Hospital, University of Medicine¹, Yangon
Email: thuzar.moe1@gmail.com

The training program for surgeons in Southeast Asian Countries can deliver a great advantage to patients with cleft lip, cleft palate and craniofacial deformities in this region. Not only, increase the proficiency but also open up the collaboration’s view with other interdisciplinary team.
Myanmar is a developing country. There are a few plastic surgeons and they are not appointed at every city. So we have to go there and give voluntary service to those who need reconstructive surgery. Since 2002, we have started our outreach mission - with 2-3 missions a year. At every mission, we have to focus on cleft lip and cleft palate but there would be some other deformities and burn reconstruction. After many missions I have learned a lot to get better outcome.

The Logistical Experience of the Davao Medical School Foundation (DMSF) Humanitarian Medical Mission Teams During Typhoons Pablo (I.N. Bopha) & Yolanda (I.N. Haiyan)

Fitzgerald Arancel1, Perpetita Socorro Mercader, Carlos Capitan
1Field Medical Director and Full-time Faculty, Davao Medical School Foundation
Email: fitziebong@yahoo.com

The DMSF is a medical education institution that envisions healthy communities enjoying quality life. And it is during disaster situations that we more than stand true to our community-oriented vision & mission.

Our institution has sent humanitarian mission teams to victims of typhoons Pablo (December 2012, ComVal Province, Island of Mindanao) and Yolanda (November 2013 & January 2014, Ormoc City, Island of Leyte in the Visayas). As a medical school and the lead agency in these volunteer missions, we had logistical experiences which were unique to our institution. We recognize that our greatest asset in undertakings like this will be our medical doctors, dentists, nurses and medical students. However, in order to achieve this mission, we have to coordinate with various government and private institutions.

Through our Alumni and External Relations Office, we have planned and coordinated with the following:

1. Philippine Military, for security & mobility in our areas of assignments;
2. Center for Health Development Offices, for logistical data of the affected areas & population;
3. Representatives of Congress & Local Government Units, for support staff;
4. Transworld Education Academy - India & DSM - Belgium, for financial assistance;
5. Operation Smile - USA & Yakkum - Indonesia, for logistical support; and
6. Cebu Pacific & Bachelor Bus Company, for transportation & cargo services.

It is our experience that logistics are simpler and an immediate coordinated response can happen if land trips are done (after 3 days for Typhoon Pablo).

However, they become more complicated & delayed for inter-island trips (after 12 days for Typhoon Yolanda).

Moreover, the bulk of our volunteers were students who are on their senior year in medical school. With adequate supervision from volunteer doctors, a venue of learning outside the four walls of the classroom and hospitals have been provided. As a means of assessment, our student-volunteers have proved to be capable of providing primary health care services, medical, surgical and dental interventions and health teachings for the community.

As a medical education institution engaged in disaster relief missions, we took advantage of our unique position to gather a strong and positive collective experience from our partner agencies and have possibly opened wider networking avenues to work for in the future.

Cleft Missions in Mongolian Rural Areas: 15 Years Experience

Ayanga Gongorjav1, Erdenetsogt Jargaldavaa, Tserendulam Dashnyam, Bayarsgalan Rentsen
1National Centre for Maternal and Child Health of Mongolia
Email: ayanga67@yahoo.com

Mongolia is located in Central Asia, which borders with China and the Russian Federation. It has a territory of 1.5 million square kilometers and a population of 2.9 million.

The N. Gendenjamts'sMemorial Mongolian National Center for Maternal and Child Health (MCMCH) located in Ulaanbaatar (UB), which is the capital of Mongolia, is the only paediatric hospital providing a comprehensive paediatric tertiary service for Mongolia. Nationwide team care management of congenital cleft lip and/or palate (CL/P) is carried out only in the MCMCH in UB, including adults who present to the adult tertiary hospitals. Surgeons also visit rural areas (provinces) to do weekly CL/P surgery.

The nationwide prevalence of congenital cleft of the lip and/or palate was one in 1072 live births.

The main problem of the care of patients with clefts is connected to its geographical location, and health care system.

In Mongolia, it is not unusual for patients to present in their late teenage years or early adulthood for CL/P management. The reasons for late presentation
are lack of access to medical services for ongoing referral, inadequate surgical services to the remote areas and the high costs associated with travel. These problems are significant for remote dwelling Mongolian nomadic families, who must self fund the trip to their province capital and then to Ulaanbaatar for the necessary treatment.

Since 1999, the cleft team from NCMCH has been organizing cleft missions 3-4 times a year to Mongolian rural areas for free cleft treatment. Until 2006, we provided only surgical treatment; however, since then we have included an orthodontist and a speech therapist to our team.

In total, we have organized 54 cleft missions, and performed over 1000 cleft surgery, and 250 orthodontic treatment, speech treatment for almost 250 patients.

During our mission, we also organized trained the local medical staff and the patients’ parents on cleft and related facial abnormalities. 1300 person have attended in our seminar.

289  Multisectoral Approach to Disaster Preparedness
Grace Sardual-Burgos
1Nurse, Houston Royal Oaks Lions Club
Email: mikegrace61@yahoo.com

A disaster is defined as a sudden, unexpected, overwhelming and unmanageable event, which destroy lives and properties, and would require outside assistance. Disasters can be caused by forces of nature or can be man-made. Floods, hurricanes, typhoons, earthquakes, tsunamis, and volcanic eruptions are natural disasters, while acts of terrorism, wars, chemical spill and explosions are man-made disasters due to human behaviour, negligence and errors. Regardless of the cause of the disaster, the damage is irrevocable and has debilitating economic impact. In this regard, disaster preparedness is imperative and should be implemented and reinforced not only to those hazardous or vulnerable areas and population, but to the country as a whole. Disaster preparedness and management is not solely the responsibility of the medical responders or the government, but should be everyone's concern. Societies do have the capability to take measures to protect the vulnerable and reduce the risk and improve the condition of those affected by the disasters. An organized, coordinated effort from the different levels in the community such as family units, the academe in all levels, local, regional and national government, professional regulatory boards, private sectors, telecommunications and international organizations can help in mitigating the serious outcome of disasters. Prevention and preparation for natural disasters is an important goal, but unattainable when there is no serious commitment of coordination, accountability, and implementation of these measures. Implemented measures should be evaluated for its strength, weakness and areas to improve in order to achieve a more organize sustainable and resilient community. After every disaster, organizations involved should examine their disaster preparedness actions to see how effective they were, and devise strategies on what could be done to improve their effectiveness in responding to future disasters.

290  Creation of a Functional Taskforce Before Disaster Strikes: Philippine Setting
Grace Sardual-Burgos
1Nurse, Houston Royal Oaks Lions Club
Email: Mikegrace61@yahoo.com

Disaster has no boundaries and can strike at anytime, anywhere, resulting in death, injuries, illness, loss of livelihood and infrastructures and disruption of services. For health providers, disaster is defined by its impact on the health of the people affected, including its health care services. When destruction is extreme, outside assistance will be warranted to meet these health care needs. Philippines is not immune to disasters and had experienced an unprecedented devastation in November, 2013 brought by Typhoon Haiyan - otherwise known as “Yolanda” in the Philippines. Organized international agencies promptly provided humanitarian assistance and deployed medical teams such as Doctors Without Borders, a Singaporean medical team, Australia Field Hospital and the United States for assistance on logistic operations, to name a few. Local health organizations, non-government agencies and private sectors hurriedly solicited volunteers to be deployed. Most local organizations that responded were medical teams comprising medical doctors and nurses only. Some individuals, without any affiliation, traveled on their own to help. Fragmented manpower during disaster response can sometimes be a liability than an asset. Creation of functional taskforce before a disaster occurs, is an organized proactive aspect of disaster preparedness and should be implemented seriously. For a task force to be functional, it should consist of social workers, priest/ministers, engineers, paramedic,nurses, medical doctors, electricians and plumbers. Each member of the task force has a special skill, a well defined designated function in the team and should be willing and ready to be deployed when the call comes and without delay. The team is expected to be competent in delivering assistance. Disaster preparedness through creation of this task force mitigates the devastating effects of disaster. Evaluation of the task force will be vital to assess its efficacy for its future disaster response.
Medical or surgical mission requires thorough planning and preparation not only by the sponsoring organization but also the host. Planning and preparing for a medical mission can take between six months and one year. As part of the preparation, there is a need for a well-defined, workable and attainable objectives to be set by the sponsoring organization, and the willing host of the medical mission. Commitment and partnership with the host organization with regard to logistics such as facilitating in obtaining legal requirements and contracts, provision of local transportation and accommodation, safety and security, screening of qualified clients or patients, procurement of medicines and equipment to defray freight and shipment cost, and the assurance and commitment of providing follow-up care of the clients by the host. Budget allocations have to be explicitly identified by the host and the sponsor. Host organizations might have limited financial resources, and needs to be honestly conveyed and addressed to the sponsor so that necessary adjustments can be done. Constant open communication between the two organizations is required to monitor the progress of the planning. A designated committee or a coordinator from each party can assume the role of providing updates to the team members. Granting all requirements are obtained and satisfied, the visiting medical team and the host need to physically convene, days before the actual date of the mission, for a dry run not limited to general orientation of the medical mission detail of activities, the set up and site and final screening of patients. Post medical mission evaluation by both teams is highly recommended to evaluate points that need to improve to benefit future medical missions as well as proper endorsement and case conference of those that need close follow up.

The devastation resulting from a disaster can be emotionally overwhelming for the responders and the survivors. Eight days after Yolanda hit Tacloban, I witnessed the unimaginable effects of the typhoon. It really bring Tacloban down to its knees and it was difficult to imagine how the people can recover. As a health care provider, I have to regroup myself on how I will relate to the people I will be working with, more so because I do not know anybody and this was my first time in Tacloban. The very basic principle that I learned when providing care to a patient or a client is privacy. Such standard was compromised when I saw a medical doctor delivering a baby at the entrance of a hospital, on a narrow plastic bench, as the hospital structures were damaged particularly at the Labor and Delivery department. Inside, the hospital was full of mud, debris, and was totally pitch-black. The staff tried to screen the postpartum mother the best they could. I noticed that there was a lack of leadership and no system was in place to facilitate the flow of patients. One major delay was in the dispensing of medications. This was resolved when we were able to secure and clean the cubicles; and nurses were assigned to label the cubicles and display the medicines for easy dispensing. On succeeding days, I was assigned to the MSF (Doctors Without Borders) and functioned as triage nurse and facilitated the flow of patients as well as coordinated transfer of patient’s higher of care to the Australian Field Tent Hospital. Though we were attending to their medical needs such as incision and drainage of abscesses, wound care, prenatal care, vaccinations, and respiratory treatment to those who were wheezing, there was that palpable feeling and visible anguish on how they will rebuild their lives in the long run. They still have continuous need for food, shelter and clothing. As a nurse, I was reminded by this medical mission that dealing and identifying the health care needs of the survivors should be a wholistic approach not just physical, emotional, social but also spiritual.
2014 with Tulong Mula sa Puso, in partnership with the Rotary Club of Leyte Gulf. Organizations such as this and their advocacy should be supported. The mere fact that they encourage volunteerism, signify that these organizations serve as beacon of hope and health to the people.

304 Patient Satisfaction in the Iraq Health System Using the Emergency Department as an Example
Shakir K Katea1, Ayad Jassim Matar
1EM Physician, President, Iraqi Society for Emergency Medicine
Email: shakirkatea@yahoo.com

Introduction
Patient-centred healthcare is the corner stone of any healthcare system and patient satisfaction is one of the most important indicators that can influence the direction of the healthcare, which can be influenced by many factors. No more focusing on disease management as the main target of our healthcare, it is the time to redirect our steps.

The study was done to show the real relationship between patient and health staff from patient and/or relative point of view. It’s very important that healthcare providers to play the role of patients to imagine the magnitude of their needs.

Method
Data were collected using a structured questionnaire. Random sample was taken from 2100 patients/or relatives from Emergency Departments of 3 teaching hospitals (AlYarmuk, Alkindy and Basrah teaching hospitals) and 2 general hospitals (Imam Ali and Sadr general hospitals), All these are public hospitals.

Results
The majority of patients and/or relatives were less or not satisfied with the communications they received from healthcare providers (doctors, nurses and others) including information exchange, medication instructions, follow up of their conditions important issues such as procedures that need to be done, the prognosis and the need for follow-up.

Conclusion
More efforts should be done to improve family-staff communication and psychological support training for staff to deal with patients and relatives with violent tendencies.

311 Guidelines for Student Participation in Medical Missions to Latin American Countries
Dean Sutphin1
1Vice President for International and Appalachian Outreach, Via College of Osteopathic Medicine
Email: dsutphin@vcom.vt.edu

Each year, the Edward Via College of Osteopathic Medicine (VCOM) provides an elective opportunity for medical student doctors to participate in a one-week medical outreach trips in a Latin American country. This presentation will describe how VCOM medical outreach trips, following WHO guidelines, provide continuous care and develop sustainable communities. In addition, the guidelines will illustrate how we work within each country medical system rather than around or on top of the local medical care. The guidelines to meet requirements for entry of medications into each country show how the medical outreach program is complementary and within international standards. Contrasts will be drawn with medical mission trips that are one-time community interventions.

VCOM operates full-time clinics in each country; one-week trips are supplemental medical care to full-time clinics and provide an immersion experience for medical student doctors and their preceptors. Outreach trips typically include 25 students and 4-7 physician preceptors along with volunteers and 10-15 translators from the receiving country. In the past 5 years, the guidelines have been tested on approximately 8-12 trips involving over 200 student doctors and 40 physicians per year; thus, clearly establishing credibility through experience, strong conceptual and theoretical base, and recognition of service in each country. This presentation will provide participants with information, skills and materials that are transferable and adaptable across countries.

312 Global Health and Environment Seminar for Medical School Shared Live Interactive Education
Dean Sutphin1
1Vice President for International and Appalachian Outreach, Via College of Osteopathic Medicine
Email: dsutphin@vcom.vt.edu

Medical schools teach in isolated units while disease and medical problems have no borders and require international resolution. Infectious agents are transmitted in hours or days through global travel and shipping. Why do we teach in isolation when managing environmental risk, prevention of disease and public health policy require a team approach across countries and health services such as clinical care, medicines and in some cases animal health?
To develop global health leadership for world-wide problems, the Global Seminar brings together students in US and Latin American medical schools in a shared curriculum and an interactive teaching and learning protocol across a three week cycle. In week one, each participating medical school in the US, Dominican Republic, El Salvador and Honduras receive a public health case along with accompanying reading materials, guiding questions and a protocol to present their solution. In week two, each school independently develops their solution. In week three, each student doctor scholars from each school presents their solution over live interactive video conferencing IP split screen viewing and full discussion. Each school has 10 minutes to present their solution, followed by open discussion to determine common solutions and differences because of culture, technology, environment, social structure, economics, ethics, training and other intervening factors. The project has a 15 year history, over $2 million external funding and recipient of the ADEC national award for excellence in electronic learning environments. Those attending the presentation may express interest in participating or adapt the model for collaborative medical education.

328  Surgery in the Gaza Strip

Suheal A Khan1
1Director, MiST Foundation and KTPH
Email: orthosak1@gmail.com

Mobile International Surgical Teams (MiST Foundation, www.misthealth.co.uk) specializes in Trauma and Limb Reconstruction. Following the hostilities in the Gaza Strip (2008/2009) many civilians were injured and killed. As part of a Humanitarian response, MiST sent specialist Limb Reconstruction Teams (LRT’s) to help with the injured. We report our experience in the Gaza strip from February 2009 to December 2010. During this 22-month period, MiST Foundation sent 7 teams from Egypt, Greece, South Africa and the UK spending a total of 20 weeks in the Gaza Strip, treating new patients and following-up patients treated by previous teams. From November to December 2010, the senior author spent this 8-week period working as head of Orthopaedics at Nasser Hospital in southern Gaza Strip.

A total of 172 patients were treated of which, 32 had Ilizarov/TSF for acute fractures, non-unions and mal-unions; 140 patients were treated with IM nails, plates and soft tissue procedures.

All 32 patients treated with the Ilizarov technique have completed their treatment with no serious complications.

The use of Ilizarov technique in developing countries is a cost-effective but labour intensive treatment. MiST has established a Limb Reconstruction Unit in the Gaza Strip and will continue to send teams to educate the local surgeons in the Ilizarov technique.

348  Timor Leste Cleft Surgery – Cost Beneficial Transition of Aid into Development

Mark Moore1
1Royal Australasian College of Surgeons
Email: mhmoore@internode.on.net

In 1999, Timor Leste became the newest and poorest nation in South East Asia. Beginning in June 2000 a small reconstructive surgical team has provided an ongoing, consistent, comprehensive cleft surgical service in Timor Leste.

After 39 short-term volunteer missions, over almost 15 years, the team has completed more than 800 cleft procedures. More importantly in a nation of approximately 1 million people, with only 3 qualified surgeons, we have identified a local surgical trainee to develop as a cleft and reconstructive surgeon. Despite the challenges of such short-term training interactions, he can now independently perform the simpler cleft repairs to the highest standard.

Introduction to and expansion of the multidisciplinary cleft team concept has similarly commenced with the incorporation of speech pathologists and orthodontists in the team and identification of local counterparts.

By adopting an accurate, centralised database of the visiting cleft team activities it has been possible to better measure the financial benefit and savings to the recipient country during this nation building process. Demonstrating the cost - benefit of cleft surgery in international aid programmes such as this is increasingly important at this time of contracting developed nations foreign aid budgets.
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