Impact of Tsunami on Maternal & Perinatal Health Care in Southern Sri Lanka

Malik Goonewardene
Faculty of Medicine,
University of Ruhuna,
Galle, Sri Lanka

Training Course in Reproductive Health Research
WHO 2008
WHO-Sri Lanka Scholarship
Maternal mortality ratio per 100 000 live births in 2000
Sri Lanka - 2003

- Area: 65,525 sq km
- Population: 19.2 million
- Life Expectancy: 71 (M) 76 (F)
- Literacy Rate: 92 (M) 90 (F)
- Per Capita Income: USD 1355 pa
- National Poverty (< 1 USD/day): 23%
Sri Lanka - 2003

- Maternal & Child Health Cover: 94%
- Hospital Deliveries: 98%
- Neonatal Mortality Rate: 13%
- Maternal Mortality Ratio: 38 /100000 LB
- Infant Mortality Rate: 11.2 /1000 LB
- Total Fertility Rate: 1.9%
- Contraceptive Prevalence Rate: 67%
- Crude Death Rate: 5.9/1000 pop
- Annual Population Growth Rate: 1.3%
Antenatal Care
- Peripheral & institutional

Deliveries: 363549
Booking visits: 331339
Second visits: 1735978
Institutional visits: 518349
Total Visits: 2067317

National Average: 6.4 visits
Maternal Mortality Ratio – South Asia
Maternal Mortality Ratio - Sri Lanka - by district

(Family Health Bureau, Ministry of Health, Sri Lanka 2001)
Tsunami

26th December 2004
Due to the Tsunami

- > 35000 died in Sri Lanka
- Coastal region of Southern Province (Galle, Matara & H’tota) – severely affected
- 3 million (1.2 Mil Women Reprod Age)
- Teaching Hospital Mahamodera Galle damaged & evacuated (450 Obs / Gyn beds)
  - C. Section, LFD, MRP, ERPC, ..Mothers in Labour
- Emergency services provided (with great difficulty) in a near by hospital with no previous Obst / Gyn facilities
  - up to 13 Feb 2005
Entrance – Teaching Hospital
27th Dec 2004
Inside of a Prenatal Ward

Blood bank Roof
Corridor to Operation Theatre
From 13 Feb. 2005 - up-to-date

- Back at Tsunami damaged THMG (50% beds & floor space)
- Project Proposals +++
- Numerous Donations – National & International, Individual & Corporate
- Temporary Facilities:
  - Mobile Field Hospital (Sweden) – 6 Tents
    - post partum & post C. Section
  - Mobile Field Hospital (UK) – 6 Tents
    - prenatal clinic, day assessment, day surgery, student training & evaluation
- Enhanced endoscopic surgery at THMG
- Reduced – Severe congestion & overcrowding of THMG
  - bed occupancy 175%, mean Inward Stay 24hrs- 3D (1/2 - 2004)
Mobile Field Hospital - 1
Mobile Field Hospital - 2
Prenatal Clinic
Colour Doppler Sonology & Cardiotocography
Skills
Training & Evaluation
Trans Vaginal Sonology & Conscious Outpatient Hysteroscopy
Research Methodology Training
Publications: 2005 – 2008 = 9

Published in Abstract form: 2005 – 2008 = 9

Medico – Legal Implications in Obstetrics : 3rd & 4th Degree Perineal Tears
Abstract of the Professor S. Arulkumaran Felicitation Scientific Sessions of the SLCOG 2008; 48

Low Tech Obstetric Interventions in a Tsunami damaged teaching hospital
Abstracts of the 6th SAFOG Conference 2007: 203

Comparative Study of Induction of Labour and its Outcome in a Teaching Hospital
Abstracts of the 40th scientific sessions of the SLCOG 2007; 35

The Effects of Two Different Doses of Vaginal Nitric Oxide Donor Iso sorbide Mononitrate, used for Pre Induction Cervical Ripening on the Mother and the Fetus
Abstracts of the 33rd scientific sessions of the SLCOG 2007; 36

Intra umbilical vein injection of oxytocin for retained placenta: comparison of two doses
Abstracts of the 40th scientific sessions of the SLCOG 2007; 38

Induction of labour and its outcome in a teaching hospital
SLJOG 2006; 28: (sup 1) : 48

Aggressive & expectant management of labour
SLJOG 2006; 28: (sup 1) : 42

Fetal Acoustic Stimulation Test for early intrapartum felt monitoring
SLJOG 2006; 28: (sup 1) : 41

Intraumbilical vein injection of oxytocin for retained placenta: comparison of two doses
GMJ 2006; 2 (1): 82
Ongoing Research Projects at THMG

- Comparative Study of Restricted Episiotomy Vs Routine Episiotomy
- Expectant Care Vs Surgical Management in Incomplete Miscarriage
- Symphysiofundal height charts customized according to parity and body mass index
- Gestational age specific birth weights in singleton male and female babies delivered after normal pregnancies.
Adverse effects on Maternal & Perinatal Outcomes
Southern Province
Objective

To study the impact of the 26\textsuperscript{th} December 2004 Indian Ocean Tsunami on maternal and perinatal health care services in the southern province of Sri Lanka and identify any adverse effects.
Specific Objectives

Method

- Data re: availability of maternal & perinatal services & resources - Regional Offices of G, M & H: 2003 vs 2005-8


- Data re: Deaths of Women of Reproductive Age
  District Secretariats G, M & H 2003 vs 2005-6

- Data re: availability of maternal & perinatal services & resources, their utilisation, and maternal & perinatal mortality & morbidity
  All Hospitals in G,M & H: 2003 vs 2005-6
Data to be collected

- Number of Institutions
  - Type
  - Number of beds
  - Availability of Basic or Comprehensive Em.Obst.Care

- Availability of Human Resources
  - Different Categories of Staff

- Utilisation of ANC & PNC
<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of Live Births</td>
<td></td>
</tr>
<tr>
<td>Age &amp; Parity of Mothers</td>
<td></td>
</tr>
<tr>
<td>No of Maternal &amp; Perinatal Deaths</td>
<td></td>
</tr>
<tr>
<td>Mothers: Duration of Inward Stay</td>
<td></td>
</tr>
<tr>
<td>No Admitted to HDU / ITU</td>
<td></td>
</tr>
<tr>
<td>Duration of Stay in HDU / ITU</td>
<td></td>
</tr>
<tr>
<td>Reason for admission to HDU / ITU</td>
<td></td>
</tr>
<tr>
<td>Babies: No admitted to the SCBU</td>
<td></td>
</tr>
<tr>
<td>Duration of Stay in HDU / ITU</td>
<td></td>
</tr>
<tr>
<td>Reason for admission to HDU / ITU</td>
<td></td>
</tr>
</tbody>
</table>
Data – Maternal & Perinatal Deaths

- Age & Parity
- Distance from ANC / Hospital & Utilisation of ANC
- Place, Mode of delivery & Babies’ details
- Cause of death (Categories + Details)
- Any delays? (1, 2, 3)
- Preventable?
- Under reporting?
Time Periods of Analysis

- Pre Tsunami: 2003
- Post Tsunami: Jan - Mar 2005
  April - June 2005
  July - Dec 2005
  2006 - 2008
Ethical Considerations

- Data will be entered onto an ongoing computer data base
- Confidentiality will be ensured
- Only grouped data will be presented
- Ethical approval will be obtained from the Ethical Review Committees of
  - Medical Faculty, Galle
  - Ministry of Health, Sri Lanka
If any adverse outcomes are detected, possible remedial measures will be identified and appropriate measures will be adopted in order to facilitate improvements in the situation.

A Regional Research Methodology Training Center will be established in Galle.
Thank You