PAROS MEETING

“Pre-Hospital System in Indonesia”

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India-Australian Plate

Eurasian Plate

Pacific Plate

Ring of Fire

India-Australian Plate

Eurasia Plate

5-6 cm/yr

12 cm/yr

Indonesia; The Hypermarket of Disaster
Total population 221.41 million in the year 2005

Sumber: BPS, Statistik Kesejahteraan Rakyat 2004
Emergency cases in Malang (Haedar, 2007)

Trauma = 13,383 (49.7%) out of 26,907 total annual attendance
Trauma cases = 36 persons/day
Men = 9758 (72.92%), women = 3625 (27.08%)
The mortality rate of the period was 2.8%
Saiful Anwar General Hospital Malang:
  • 23747 (89%) were brought by other vehicles
  • 3160 (11%) were brought by ambulance:
    - 348 (11%) died < 3hrs
Probability of Survival for Trauma Pts
(Haedar, 2007)

<table>
<thead>
<tr>
<th>Probability of survival (Ps)</th>
<th>Survived</th>
<th>Died</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 0.5</td>
<td>10745</td>
<td>223</td>
<td>10968</td>
</tr>
<tr>
<td></td>
<td>97.97%</td>
<td>2.03%</td>
<td>100%</td>
</tr>
<tr>
<td>Expected survivals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unexpected deaths</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 0.5</td>
<td>1471</td>
<td>123</td>
<td>1594</td>
</tr>
<tr>
<td></td>
<td>92.28%</td>
<td>7.72%</td>
<td>100%</td>
</tr>
<tr>
<td>Unexpected survivals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expected deaths</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>12216</td>
<td>346</td>
<td>12562</td>
</tr>
<tr>
<td>Actual number of survivals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actual number of deaths</td>
<td></td>
<td></td>
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</tbody>
</table>

The actual mortality was lower than what was predicted based on TRISS norms – that is, W score of 9.93, the number of excess survivals per 100 patients
Rehabilitation
• Temporary rehabilitation
• Re-establishing Transport systems
• Re-establishing communication routes..

Response
• Alarm
• Life, property saving
• Reduction of impact of disaster
• Information dissemination
• Communication

Preparedness
• Risk forecasting
• Organization
• Planning of resources
• Emergency Planning
• Training
• Public awareness..

Disaster

Post-Disaster
• Damage Assessment
• Follow-up of rehabilitation measures,..

Reconstruction
• Permanent rehabilitation
• Infrastructures reconstruction
• Building reconstruction
• Reinforcement of structures,..

Prevention and Mitigation
• Risk assessment
• Spatial Planning
• Eco-structural measures
• Public Awareness
• Education..

disaster management cycle
**SPGDT-S** *(Daily Integrated Emergency Care System)*

<table>
<thead>
<tr>
<th>MITIGATION</th>
<th>PREPAREDNESS</th>
<th>RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safe driving</td>
<td>Human Resources</td>
<td>Multi-disciplines</td>
</tr>
<tr>
<td>- Helmet</td>
<td>First responder</td>
<td>Multi-professions</td>
</tr>
<tr>
<td>- Safety belt</td>
<td>Bystanders</td>
<td>Multi-sectors</td>
</tr>
<tr>
<td></td>
<td>Officer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ambulance</td>
<td>Doctors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nurses</td>
</tr>
</tbody>
</table>

Objectives to prevent death and disability.

Communication within the system is crucial.

**Budgeting**

*Time saving is life saving*

*Shorten response time*

*Refer the right patient, to the right place at the right time*
1. Yogyakarta (Yogyakarta Emergency Service – YES 118)
2. Medan (PSC)
3. Palembang (PSC)
4. Bandar Lampung (Pusat Panggilan Gawat Darurat - PPGD)
5. DKI Jakarta (PSC)
6. Makassar (PSC)
7. Denpasar (PSC)
8. Badung (Emergency Service Centre – ESC)
9. Banjarmasin (PSC)
10. Bangka (PSC)
11. Malang (MTS)

Source: Hasil Monev Dit. BUK Dasar
Malang Trauma Service (MTS)

MTS is a spearheading of safe community project, fuses the elements of emergency ambulance service 118, police, and rescue services (e.g., firefighters, SAR)
MTS has a main responsibility to perform emergency first aid, in order to improve pre-hospital care by ensuring rapid and correct response in saving live and limbs before advance care at the referred hospital.
WHAT DO WE DO?
Standardized Medical Record for Disaster & Pre-hospital (courtesy of Dr Ali Haedar)
Integrated Call & Dispatch System

All 118 calls will be directed to the nearest hospital with trauma centre
Training for health care providers and community

MTS has trained BLS for more than 30,000 personnel
Disaster Drill

Yearly joint exercise with multi-disciplines, multi-profession, multi-sectors
First Liner in Disaster
Thank You
Terima Kasih
ขอบคุณ
شكرا