INTRODUCTION:

That Aceh / Indonesia cannot manage the impact of the earthquake & tsunami is predictable, because our day to day emergency care is bad. It is clear that you cannot manage disasters properly if your day to day emergency care is bad. And we never learn from our previous disasters.

Since 1980 to 2005 there were disasters and mass casualties with short duration and long duration like the Aceh Earthquake & Tsunami:

Table 1. Mayor Disasters & Mass Casualties in Indonesia 1980 – 2005

<table>
<thead>
<tr>
<th>No.</th>
<th>Disaster Description</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Galunggung Volcano Erruption West Jawa</td>
<td>1980</td>
</tr>
<tr>
<td>2.</td>
<td>Major Food Poisening West Jakarta</td>
<td>1981</td>
</tr>
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<td>3.</td>
<td>Harbor Fire Tg Priok Jakarta</td>
<td>1981</td>
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<td>4.</td>
<td>Major Gas Poisening Tg Priok Jakarta</td>
<td>1982</td>
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<tr>
<td>5.</td>
<td>Earthquake West Jawa</td>
<td>1983</td>
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<tr>
<td>5.</td>
<td>Hotel Fire Jakarta</td>
<td>1985</td>
</tr>
<tr>
<td>7.</td>
<td>Massive Multiple Car Crashes in Toll Road Jakarta</td>
<td>1985</td>
</tr>
<tr>
<td>No.</td>
<td>Event Description</td>
<td>Year</td>
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<td>-----</td>
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<tr>
<td>8.</td>
<td>Atmajaya Hospital Massive Flood Jakarta</td>
<td>1986</td>
</tr>
<tr>
<td>9.</td>
<td>Fatmawati Hospital Evacuation because of Ammunition Dump Explosion Jakarta</td>
<td>1987</td>
</tr>
<tr>
<td>10.</td>
<td>Major Train Crash Bintaro Jakarta</td>
<td>1987</td>
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<tr>
<td>11.</td>
<td>Tg Priok Riots with Koja Hospital Isolated for 1 week</td>
<td>1987</td>
</tr>
<tr>
<td>12.</td>
<td>Factory Food Poisoning Jakarta</td>
<td>1988</td>
</tr>
<tr>
<td>13.</td>
<td>Earthquake &amp; Tsunami Flores</td>
<td>1991</td>
</tr>
<tr>
<td>14.</td>
<td>Political Parties Riots Jkt</td>
<td>1992</td>
</tr>
<tr>
<td>16.</td>
<td>Tsunami Lombok</td>
<td>1993</td>
</tr>
<tr>
<td>17.</td>
<td>Earthquake Liwa South Sumatra</td>
<td>1993</td>
</tr>
<tr>
<td>18.</td>
<td>Merapi Volcano Erruptions (3x) Jogyakarta</td>
<td>1995</td>
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<tr>
<td>19.</td>
<td>Earthquake Kerinci</td>
<td>1995</td>
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<tr>
<td>20.</td>
<td>Political Party PDI –P Riots Jakarta</td>
<td>1996</td>
</tr>
<tr>
<td>21.</td>
<td>Earthquake &amp; Tsunami Biak Papua</td>
<td>1997</td>
</tr>
<tr>
<td>22.</td>
<td>Earthquake South Sulawesi</td>
<td>1997</td>
</tr>
<tr>
<td>23.</td>
<td>Ethnic Conflict Pontianak Borneo</td>
<td>1997</td>
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<tr>
<td>24.</td>
<td>Earthquake Bengkulu</td>
<td>2000</td>
</tr>
<tr>
<td>25.</td>
<td>Ethnic Conflict Sampit Borneo</td>
<td>2001</td>
</tr>
<tr>
<td>26.</td>
<td>Displaced Persons caused by ethnic &amp; religious conflicts in Madura, Poso, West Nusa Tenggara, East Nusa Tenggara, Papua, West Jawa, Middle Jawa, North Maluku, Maluku, North Sulawesi</td>
<td>2001</td>
</tr>
<tr>
<td>27.</td>
<td>Ethnic Conflict in Sampang Borneo</td>
<td>2001</td>
</tr>
<tr>
<td>28.</td>
<td>Papandayan Volcano eruption West Jawa</td>
<td>2002</td>
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<tr>
<td>29.</td>
<td>Major Train Crash in Brebes</td>
<td>2002</td>
</tr>
<tr>
<td>No.</td>
<td>Event Description</td>
<td>Year(s)</td>
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<tr>
<td>-----</td>
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</tr>
<tr>
<td>31.</td>
<td>Massive Flood in North Sumatra</td>
<td>2002</td>
</tr>
<tr>
<td>32.</td>
<td>Massive Flood in Semarang &amp; Pekalongan</td>
<td>2002</td>
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<tr>
<td>34.</td>
<td>Religious Conflicts Palu</td>
<td>1999 – 2002</td>
</tr>
<tr>
<td>35.</td>
<td>Papua Riots</td>
<td>1999 – 2002</td>
</tr>
<tr>
<td>37.</td>
<td>Jakarta 3 weeks Massive Flood</td>
<td>2002</td>
</tr>
<tr>
<td>38.</td>
<td>Nunukan Displaced Migrant Worker</td>
<td>2002</td>
</tr>
<tr>
<td>39.</td>
<td>Terrorist Bombing Bali</td>
<td>2002</td>
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<tr>
<td>40.</td>
<td>Terrorist Bombing Htl Marriott Jakarta</td>
<td>2003</td>
</tr>
<tr>
<td>41.</td>
<td>Chemical Factory Explosion Gresik</td>
<td>2004</td>
</tr>
<tr>
<td>42.</td>
<td>Earthquake in Nabire 2x</td>
<td>2004</td>
</tr>
<tr>
<td>43.</td>
<td>Australian Embassy Terrorist Bombing Jakarta</td>
<td>2004</td>
</tr>
<tr>
<td>44.</td>
<td>Aceh Earthquake &amp; tsunami</td>
<td>2004 – 2005</td>
</tr>
<tr>
<td>45.</td>
<td>Earthquake in Palu</td>
<td>2005</td>
</tr>
<tr>
<td>46.</td>
<td>Earthquake West Jawa</td>
<td></td>
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<tr>
<td>47.</td>
<td>Trash Dump Landslide Bandung</td>
<td>2005</td>
</tr>
<tr>
<td>48.</td>
<td>Nias Earthquake</td>
<td>2005</td>
</tr>
<tr>
<td>49.</td>
<td>Padang Earthquake &amp; Volcano activity</td>
<td>2005</td>
</tr>
<tr>
<td>50.</td>
<td>Anak Krakatau, T Perahu, Lokon volcano activity</td>
<td>2005</td>
</tr>
</tbody>
</table>

Since 1980 to 2005, every year there were 1 or 2 major disasters / mass casualties in the country. The medical relief response to these disasters & mass casualties are not as good as how it should be.

According to the 1986 & 1991 National Family Health Survey, cardiovascular disease is the No 2 cause of death, while trauma is No 4.

- National Family Health Survey 1986:
  2.5 million Indonesians was injured and poisoned.
  125,000 was admitted to hospitals
  50,000 of them died. But only
  4000 died in hospitals.

WHERE DID THE REST DIE?
National Family Health Survey 1991, Trauma is the No 4 cause of death. According to the age group:
5 - 14 years -------------No 4.
15 - 24 years -------------No 1.
25 - 34 years -------------No 2 (also pregnant women).
35 - 44 years -------------No 4
45 years older died because of cardiovascular disease and other
diseases.

60 years older died because of degenerative diseases.

Maternity Mortality ----------- 390 / 100.000 -----------
--> 20.000 / year.

Perinatal Mortality ------ 40 / 1000 -----------> 160.000 / year.

Cardiovascular mortality in Jakarta:
1991-------- 2535 pts. 1996 ------1003 pts
1992-------- 2746 pts. 1997------ 1419 pts
1993-------- 2961 pts. 1998-------1455 pts
1994 ------ 3255 pts. 1999-------1114 pts
1995--------1475 pts.

Hipertension mortality in Jakarta:
1993 ----1027 pts. 1997 ------564 pts.
1996 -------215 pts.

Cerebrovascular accident mortality in Jakarta:
1993 ------1074 pts. 1997 ------1133 pts.
1996 -------1400 pts.

Traffic Accident mortality in Indonesia:

Traffic accident mortality in Jakarta:

<table>
<thead>
<tr>
<th>Jakarta Police HQ</th>
<th>Morgue</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>345</td>
</tr>
<tr>
<td>1992</td>
<td>444</td>
</tr>
<tr>
<td>1993</td>
<td>511</td>
</tr>
<tr>
<td>1994</td>
<td>1,349</td>
</tr>
</tbody>
</table>
Every year there were 751 to 1069 young men who had a traffic accident in Jakarta and were alive when the police arrived, but died on the way to the hospital or in the hospital, because the management was not optimal.

In the year 2000, the Indonesia have Medical Resources:
- 7000 Public Health Centers.
- 1500 Hospitals.

In Banda Aceh now there are 6 functioning hospitals, in Sigli, Bireun, Langsa, Takengon & Meulaboh, each has 1 functioning hospital, while Lhokseumawe have 3 functioning hospitals. The whole Aceh province have only 14 hospitals. There is no accurate data for how many population.

In Jakarta, which can represent the situation for other cities in Indonesia, in the year 2004, there were:
- 330 Public Health Centers.
- 109 Hospitals.

So total in Jakarta there are 439 Emergency Departments for a total 10 million population, which is not so bad.

In Jakarta, the 118 Emergency Ambulance Service Foundation have only 50 ambulances on station and 10 motorcycles ambulances, which is not enough for Jakarta with 10 million population and its traffic situation.
Beside Jakarta, Palembang, Bandung, Jogjakarta, Surabaya & Malang, Denpasar and Makassar have the 118 Integrated (we use what we have) Emergency Medical Service System (118 IEMSS). And these cities was able to dispatch their medical teams to Aceh, but they arrived days later not within hours because of the distance. While the other cities in aceh which were relatively intact cannot help because their day to day emergency care is bad and have no system. These medical teams (Medical Support) performed perfectly in Aceh because our surgeons were trained in ATLS, DSTC (Definitive Surgery for Trauma Care – Damage Control) and Peri Operative Critical Care (This was also proven in the Bali Bombing, where our colleges performed +/- 200 surgical procedures within one night with only one mortality). In the Bali Bombing and in Aceh the Managements Support collapsed, and chaos develops.

These Medical Teams was organized and controlled by the INDONESIAN DISASTER MEDICAL RELIEF COMMITTEE (Supported by more than 20 Medical Colleges) - IDMRC in collaboration with the Dept of Health.

Beside those resourches, Indonesia have Post Graduate Emergency Care Courses available with International standard. The ATLS course was introduced in 1995, and it has changed the we manage our trauma cases. The ACLS, ANLS and APLS courses followed.

We also develop the BLS for the layman course,

The training center for paramedics in the 118 Emergency Ambulance Service Foundation Headquaters in Jakarta (MFR, CSSR, PHTLS, PHCLS, PHNLS, PET & NET and Disaster Management).

Training programs for the “Emergency Nurse” (BTLS, BCLS, BNLS, BPLS & Disaster - Mass Casualties Management) and “Emergency Physician” (ATLS, ACLS, ANLS, APLS & Disaster – Mass Casualties Management) who are going to work in the Emergency Departments & Public Health Centers.

We have also introduced the Hospital Preparedness for Emergencies & Disasters (HOPE) for hospital management with the help of USAID. HOPE is a combination of MIMMS & HEICS for developing countries.
DISCUSSION:

To apply the EMS & Disaster management systems of developed countries to Aceh, Indonesia or other developing countries, will not work because we do not have the infrastructure. We do not have the Prehospital emergency system and the emergency departments of hospitals are not up to standard.

Indonesia is a poor Developing Country, so in choosing the right system for the Trauma Care / Emergency Care or The Management of Disasters, we must be able to develop it as cheaply as possible but the Quality of Care must be the same as in a Developed Country.

Some conditions we must be aware of:

1. We will not be able to Manage Disasters properly if we are not able to manage the day to day Trauma / Emergencies cases properly.
2. Trauma / Emergency Care in Indonesia – Developing Countries are of poor Quality / Standard.
3. In Indonesia / Developing Country there is no pre hospital Emergency Medical Service (EMS).
4. We must develop the 118 IEMSS, Networking between Emergency Departments and improve the quality care.

As shown in table 1 and the data above, we did not learn and develop a proper system to manage disasters / mass casualties. There were no improvement in our day to day mortalities of trauma – traffic accidents victims or other non trauma emergencies in Jakarta the capital city of Indonesia.

If we can integrate the medical resources (Ambulances & Emergency Departments) in Aceh and the other parts of the country and train them, then we will have the Integrated Emergency Medical Service System (IEMSS) and Aceh and the other parts of the country will become a Safe Community which is also a WHO Program.

The Committee On Trauma Idonesian Surgeons Association (COT ISA) in November 2000 declared the Safe Community Concept at the Makassar Declaration 2000 which is: we must be able to guarantee that any Indonesian Citizen whether he is in the Urban or Rural areas, he will be Healthy & Safe. We manage to do this in Palembang, Jakarta, Jogyakarta,
Surabaya, Denpasar (after the Bali Terrorist Bombing) and in Makassar. If these Medical Resources are integrated with the Post Graduate Courses like the ATLS, ACLS, ANLS, APLS, MFR, CSSR, BTLS, BCLS, BNLS, BPLS, HOPE and the Disaster Management, we will have the SAFE COMMUNITY.

**Integrated Emergency Medical Service System (IEMSS)**

The IEMSS Consist Of:

<table>
<thead>
<tr>
<th>LAYMAN WARDS</th>
<th>POLICE 118 EAS</th>
<th>ED/ER ICU</th>
</tr>
</thead>
<tbody>
<tr>
<td>F.B. SEC. GUARD</td>
<td></td>
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</tbody>
</table>

**Disaster**

- 110-Security
- 113-Rescue
- 118-Ambulance
- Emerg.Telph.No

**Rehabilitation**

**Public Health Center**

**PRE – HOSPITAL PHASE**

**HOSPITAL PHASE**
If we can improve these 6 components in Aceh and Indonesia, then we will be able to manage our day to day trauma / emergencies and disaster response properly.

I. The Layman
II. The Emergency Telephone number.
III. The Fire Brigade, Police, Security Guard, Red Cross Volunteers, Scouts Etc.
IV. The Pre Hospital Ambulance Service.
V. The Emergency Dept. of Hospitals, or 24 hrs Clinics, Public Health Centers.
VI. Disaster Planning and Training.

A. The Layman:
Any layman should be able to help anybody who is injured or suffering from acute life threatening disease. They should be able to recognize and able to free the Airway, Support Breathing with the mouth to mouth technique, Stop Bleeding and Splint & Bandage, Transport Patient safely. The COT has a course for layman which consist of:
1. How to Call For Help. 2. How to do Cardio Pulmonary Resuscitation without equipment or drugs. 3. How to stop Bleeding. 4. How to Splint & Bandage. 5. How to transport patients safely.

B. The Emergency Telephone Number:
A National Emergency Telephone Number (Preferably a three digit number) which is easy to remember and toll free is the most important factor in this system. This the access of the people to the system. However good the system is, if it is inaccessible to the people, it is of no good. This number should be used not only for the IEMS, but also as an access number for help in hotels, factories, public buildings like the airport, train station, high rise buildings etc. Indonesia has three emergency telephone numbers:
- 113 for the Fire Brigade – Rescue.
- 118 for the 118 IEAS.

C. The Fire Brigade, Police, Security Guard, Red Cross Volunteers, Scouts Etc:
They are people / personel who are on the streets / public buildings. And they are people who are trained to protect and help people. They lack only in the training how to help people injured or acutely ill. They are the best candidates to be trained in the Medical First Responder (MFR) program. This is a program from the Office For Foreign Disaster Assistance (OFDA) the USA. This is a two weeks course and is available in Nepal, India, Philippines and Indonesia. We also teach this course to our Paramedics -EMT Basic.
D. **The Pre Hospital Ambulance Service:**

The Fire Brigade, Police, Security Guards, Red Cross Volunteers, Scouts etc can be organized into an Integrated Emergency Medical Service System – 118 IEAS. Sometimes they even have their own ambulances. Even Hospital ambulances (Hospital based, manned by the nurses from the Emergency Dept and maintained by the hospitals) and Public Health Center / Clinic ambulances can be included and organized into an Emergency Medical Service with a **One System and One Command** but different ownerships. These ambulances used to be transport ambulances, but they can be upgraded into a Basic Emergency Ambulance by having basic equipment for the Airway like the Oropharyngeal Airway and Suction using the vacuum from the engine intake manifold, Breathing equipment like the Bag & Mask with O2, War dressing / pressure dressing can be used to stop bleeding and infusion to control the circulation. Wooden splints and long spine boards can be made cheaply to splint fractures. We train our Paramedics in:

1. Defensive driving.  
2. MFR.  
3. Exposure to the ER, OT, ICU, ICCU, SICU, PICU / NICU, Burn Unit, Stroke Center, Kidney Unit.  
5. Pre Hospital Trauma Life Support (PHTLS).  
6. Pre Hospital Cardiac Life Support (PHCLS).  
8. Pre Hospital Neurologic Life Support (PHNLS).  
10. Major Incident Medical management Support (MIMMS).

E. **The Emergency Department of Hospitals, Public Health Center & Clinics:**

The Emergency Depts, Public Health Centers and 24 hrs Clinics in Aceh, Indonesia and Developing Countries sometimes operates independently and that is why the care for emergency cases and multiple casualities in case of disasters are very poor. They can be organized and regionalized with each Emergency Dept., Public Health Center and 24 hrs Clinic responsible for a certain area with a system of refferals like the public health center & clinic as the lowest level and the teaching hospitals as the highest level. We cannot afford to have a residency training for Emergency Physicians, because it takes time and expensive to train them while the existing Emergency Depts., Public Health Centers and 24 hrs Clinics have the emergency cases. Because the majority of emergency cases are Trauma, Cardiac, Stroke and Pediatric cases, we can use the existing post graduate courses like the ATLS, ACLS, APLS and the ANLS to train the doctors working in those organizations / institutions as “Emergency Physician”.

These “Emergency Physicians” will take care about the The Primary Survey (A, B, C & D) only and the Specialist will handle the Secondary Survey – Definitive Therapy. Even the nurses can be trained as “Emergency Nurses”. If these nurses go with the hospital based ambulance, then the ambulance is the same level as the Basic Emergency Ambulance.

F. **Disaster Planning and Training:**
To have a good Disaster Plan the Disaster Plan must be comprehensive and in continuoum with the National Disaster Plan. This is such that the Disaster Plan of each province, city, Pre Hospital Emergency Service and Hospitals is using the same format. This can be done if each organization / agency sets up a committee which is responsible to make the Disaster Plan. This committee must consist of all aspects of the organization / agency. These committees will identify and discuss all risk / type of disaster faced by the hospital (In Aceh and Indonesia the most common risk are Earthquake, Volcano, Flood, Fire, Riots, Terrorist Attack etc), resources available, training & exercises etc.

A Disaster can be an internal or external disaster. A Disaster is internal if the hospital itself is involved in a disaster or in a disaster area. A disaster is external if the disaster is outside the hospital and multiple casualties are taken to the hospital or the hospital must dispatch a team (Mobile Medical Team) to the disaster site / area. So there are seven types of disaster plan which a hospital must have, which is specific to seven types of occasion:

a. **The Hospital itself is involved in a Disaster**:
   The disaster could be an Earthquake, Volcano, Fire, Flood, Food Poisoning etc. Location of the hospital should be studied whether that area is prone to disasters according to the disaster geo mapping. The structural building should be immune to the threatening disaster and personnel should be aware and trained for such events. The Hospital Management must prepare the hospital against the specific disaster that can happen in his area so that the hospital will not experience an Structural Collapse or an Functional Collapse.

b. **Multiple Casualties come to the Emergency Department**:
   This is the most common Disaster / Multiple Casualties faced by a hospital Emergency Department. The Emergency Department should plan so it is able to escalate its resources and absorb more casualties than planned with a drainage area for these patients & cooperation with other hospitals. The patients can be victims of any kind of Disaster Earthquake, Flood, Fire, Plane Crash, Terorist Attack (Bomb, Biologic etc), Riots, Chemical & Nuclear contamination etc. Beside these trauma cases the patients could be also victims of Outbreaks like diarrhoea, Dengue Haemorrhagic Fever, Viral infection during floods etc. In this Disaster Plan there should be The Medical Support & The Management Support.

Medical Support is the quality of care of the disaster victims. This can be achieved if we work according to the Concepts of ATLS, Definitive Surgery For Trauma Care (DSTC) and the Peri Operative Critical Care. The Management Support is the responsibility of the Hospital management to make sure there is no Functional Collapse of the hospital. This can be achieved if the management makes sure that:

   i. **Security Guard in cooperation with the Police about security in the Hospital and makes sure that the Access to the hospital is free of traffic jams.**
ii. The kitchen provides enough food and drinks for the personel and patients.

iii. No shortage of Logistics to the needs of the ER and Wards.

iv. The escort of personel from the hospital & to The Hospital. And tasking of personel called in.

v. Support the Incident Commander Decision and Responsibilities in the Operational Process of Disaster Management.

vi. Good Data / Information Collection, Recording, Debriefing and Analysis.

vii. Good Handling of the Media, Relatives & VIP.

c. Urban Disaster:
Even with the Integrated Emergency Medical Service System, Emergency Depts., should plan together with the Pre Hospital Ambulance Service, how to dispatch their personnel and equipment (Mobile Medical Team) to the Disaster area to set up an Field Hospital if it is necessary.
The Pre Hospital Setting, the most important thing is to have a Command & Control between the three agencies:


ii. Fire Brigade – Rescue and

iii. 118 IEAS.

This can be achieved if there is a Vertical & Horizontal Control between these three agencies On Site & Off Site.

d. Rural Disaster:
In this situation the main problem is the distance. Hospitals or the Integrated Emergency Medical Service should have an contingency plan how to respond to situations like this. That is transportation of personnel, logistics so that an Field Hospital can be set up.

e. Regional & National Disaster:
Regional and National Disaster (Aceh Earthquake & Tsunami) have the same problems like: Distance, availability of transportation (road, rail, airplane, Helicopter and ship which mostly are controlled by the military). The problem is how to get a functioning hospital (personel, Emergency Dept, OT, Lab, X-ray, ICU, Pharmacy, Wards, Food etc) in the disaster area as soon as possible.

f. Riots:
With riots there is a unique problem: dangerous for medical personnel, short or long duration, casualties sometimes are considered criminals / subversive, Riot are sealed off, Opposite side might be the Military / Police, Medical personnel are neutral and communicate with the medical personnel
of the opposite side. The Emergency Dept. should be able to send a medical
team to the riot area, receive casualties (Gunshot wounds, stab wounds and
blunt injuries and tear gas) and function (stockpile of drugs & food,
personel can be escorted in or out of the hospital or know the police
security code so they can pass through check points) if the hospital is
located in an sealed off area.

The goal of a good disaster plan is to be able to:
Response Rapidly / Rapid Response (Response of the day to day Pre Hospital IEMS to
the scene) and Assess Rapidly / Rapid Assessment (Needs Assessment & Health
Assessment). According to these assessment reports, we can decide the need for
Escalation of response. That is the Pre Hospital resources, the Hospital resources and
the other hospitals integrated in the system / networking.
Beside Command & Control on The Disaster Site, it is important to have the Medical
Support and Management Support on the Disaster Site and in the Hospitals
For all of this to succeed, the most important persons are the hospital directors /
managers because the hospital ambulances and the emergency departments are under
their control. So all of them should be trained in the HOPE course.
If all cities in Aceh and Indonesia can be organized into Safe Communities, they can
respond to their day to day emergencies properly and can help as soon as possible if a
neiboring city is involved in a disaster like Banda Aceh where we arrived after 24 hours.
The problem now in aceh is how to deliver specialistic care to the refugee camps, because
the governments is only able to provide the primay health care, rebuilt and reequipt the
hospitals, train the medical personel and organize the hospital networking so that the
Safe Communiti can be established in Aceh

CONCLUSION :
I.ACEH :
1.MOBILE CLINIC :

Into the second month after the earthquake & tsunami,we enter the chronic phase after
the disaster, where chronic cases like heart deseases, stroke, hypertension, kidney,
diabetes will come because the patients have no more drugs and their doctors are dead.
Beside that, PTSD, need for glasses etc will be problems. The refugees now enter the
refugee camps (42 refugees centers each with 5000 – 10.000 people). The Dept. of Health
will provide the basic primary health care and the INDONESIAN DISASTER MEDICAL RELIEF COMMITTEE will provide the spesialistic care (MOBILE CLINICS) in these refugee camps by specialists visiting these refugee camps.
The need is for 3 MOBILE CLINICS

2.IEMSS & Safe Communityt:
Develop / organize the IEMSS & Safe Communityt for every city in Aceh. So that there
will be an organized network of Pre Hospital 118 Emergency Ambulance Service and a
good up to standard Emergency Department in each hospital. Aceh will be a model for
other cities and province in Indonesia.
3. **HOSPITAL**
Rebuilding and reequipment of damaged hospitals.

4. **TRAINING**
a/. Layman (BLS).
b/. Paramedic – EMT Basic (MFR).
e/. Hospital management (HOPE).

II. **FUTURE DISASTERS**
In Aceh we were lucky that the Banda Aceh Military Hospital and the Meulaboh Hospital were intact so the Medical Teams can work immediately. We were not so lucky in Liwa and Kerinci Earthquake, where we had to built a temporary hospital from plastic sheets. In a disaster there is always an Acute Surgical Phase where patients are surgical cases. The second week is the Acute Non Surgical Phase, where patients are nonsurgical & Infectious cases. After that is the Chronic Phase, where the chronic cases and PTSD cases are the main problem.

1. For the Acute Surgical Phase we need a Rapid **RAPID RESPONSE DISASTER AMBULANCE** : a 4 wheel drive ambulance with 9 personel (Paramedics & Surgeons) which can changed into an 118 Paramedic type Emergency Ambulance, with a trailer which can be transformed into a six table for Life Saving Procedures like Airway, Breathing, Circulation and Disability procedures and an inflatable tent for 20 – 40 patients. 2 Rapid Response Ambulances can become a Basic Field Hospital.

2. For the next phase we need a fully equipped **FIELD HOSPITAL**.

3. For the Chronic Phase we the **MOBILE CLINICS**.

These 3 facilities should be available in Makassar (responsible for east Indonesia), Surabaya, Malang, Denpasar (responsible for East Jawa & the Nustenggara Islands), Jogyakarta (responsible for Middle Jaw) Jakarta (responsible for West Jawa), Palembang (responsible for Sumatra). These cities are chosen because they already have the IEMSS 118 Emergency Ambulance System and the Medical Schools can provide the medical personels.