Development of Emergency Medicine in the Far East

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Objectives

• Problems common to the developing world
• Development of Emergency Medicine in the Far East
• Specific examples
• Issues and future development
Preponderance of trauma in developing world

- 1998: 1,170,700 people killed worldwide owing to trauma
- 141,000 were in so-called industrial societies
- 90% of the remainder (or > 900,000) in so-called developing countries of Asia, Africa, South & Central America, Caribbean and the Middle East.

- Economic Development $\propto$ Burden of injury mortality

- For similar ISS, probability of survival 6 x worse in some developing countries

## Injury & Illness Outcomes

<table>
<thead>
<tr>
<th>Income Setting</th>
<th>Mortality Rate</th>
</tr>
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<tbody>
<tr>
<td>High</td>
<td>35 %</td>
</tr>
<tr>
<td>Middle</td>
<td>55 %</td>
</tr>
<tr>
<td>Low</td>
<td>63 %</td>
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Among patients surviving to reach hospital

Moderate Severity Injury (ISS 15 - 24) .... 6 x ↓ mortality

Hospital in High-income country ............ 6 %

Rural area of Low-income country .......... 36 %

The burden of disability

• For extremity injuries … burden very high in low-income countries

• In high-income countries, head and spinal cord injuries contribute a higher % of disability

• It is possible for low-cost improvements to prevent much of such disability
Range of Emergency Medicine Institutional systems

No emergency care

Attendance and basic triage ..... Casualty Rooms

Triage, Evaluation, Initial investigations and initial treatment

Admission or Discharge

Critical care centres
Objective of Emergency Medical Care

• stabilize patients with life-threatening or limb-threatening injury or illness

• emphasis is on immediate or urgent medical interventions

• time-critical medical decision making
Where is the Far East?
Two main types of EM Systems

Anglo-American model
- with trained Emergency Physicians after at least 3-year programs
- initial care up to 24 hours
- medical oversight over EMS

Continental European (Franco-German) model
- Anaesthetists as “Emergency Physicians
- Care mainly by doctor-based EMS systems
- Practice mainly confined to CPR / ALS
Anglo-American model

- Emergency Medicine recognised as a distinct medical discipline
- Structured 3-year training programs, at least
- International Federation for Emergency Medicine
- Hong Kong, China, Korea, Singapore, Taiwan, Thailand
- Malaysia, India, Indonesia, Philippines, Nepal
- Japan
ASIA - Problems in provision of Emergency Care

- Lack of responsive and time-sensitive pre-hospital care systems
- Lack of categorization of hospitals
- Minimal care provided by EDs
- Emergency Medicine -- not yet a specialised medical discipline
Why?

- Lack of infrastructure for injury and disease control
- Poor enforcement of safety regulations
- Low level of access to emergency medical care
- Inadequate emphasis on training in core-skills for first responders
- Great belief in need for hi-tech medicine as the answer

Answer: A strong foundation in basic emergency care
Sources of emergency care in developing countries

- Nepal: primary health clinics
- Sri Lanka: primary care system
- India: anyone who can do it, private / public sectors

**Concern:** High cost of hospital-based care vs primary health clinic care
Community standard of emergency care

- reflected as standard of First-aid, CPR, PAD, etc
- Coverage is low in most communities, but more so in the developing world.
- Easier to implement low-cost solutions, such as school education in community FA and CPR
- Public health education to also address issues about need to access emergency services early, especially for chest pain, breathlessness, injury and bleeding situations.
- Need for strong medical leadership for successful emergency health education efforts
EMS systems

- often no major pre-hospital emergency ambulance service provider
- no single universal access number, e.g. 118, 222, 999, 911, 995
- usage of ambulance services by public is low
- each hospital using own service with separate number -- confusing to the public
- lack of phone and data networks for effective communications across the community
- cost of ambulances and equipment prohibitive -- what are the low-cost solutions?
- Ill-equipped and large variety of transportation vehicles without co-ordinated development.
- Developed countries applying unfair pressure on developing countries to closely follow, purchase and subscribe to their own very costly systems, without due concern for adaptation.
Development of trained emergency staff / systems at the various levels of care

- primary care centres
- paramedic and other ambulance staff
- emergency medicine as a specialty
- emergency nursing
- quality management of in-hospital emergency care processes
● Busy patient loads
● Limited staffing

Availability

Aspirations

- Triage correctly
- Correct assessment
- X-Ray & review
- Correct Treatment

Expectations

- Immediacy
- High level of professionalism
Asian Society for Emergency Medicine

- 1993 1\textsuperscript{st} South & East Asian Conference on Emergency Medical Care -- Singapore
- 1995 2\textsuperscript{nd} South & East Asian Conference on Emergency Medical Care -- Singapore
- 1998 1\textsuperscript{st} Asian Conference on Emergency Medicine -- Singapore
- 2001 2\textsuperscript{nd} Asian Conference on Emergency Medicine -- Taiwan
- 2004 3\textsuperscript{rd} Asian Conference on Emergency Medicine -- Hong Kong
- 2007 4\textsuperscript{th} Asian Conference on Emergency Medicine -- Malaysia
Asian Society for Emergency Medicine

Objectives:

1. To assist in training and establishment of guidelines in Emergency Medical Care

2. To represent the views of the members of the Society and to acquaint the Asian, international community and other bodies of such views whenever necessary and appropriate

3. To encourage and assist in co-ordination of activities of Emergency Medicine in Asia

4. To promote the science and art of Emergency Medicine in Asia

5. To promote, study, research and engage in discussion in all areas of Emergency Medicine
Asian Society activities

- Web page at www.asiansem.org
- Singapore, Taiwan, HK, China, Malaysia, Korea, Japan, Indonesia, Brunei, Philippines, Saudi Arabia, United Arab Emirates
- New EM countries in Asia: Thailand, India, Pakistan, Nepal
- 2001: Pan Asian Resuscitation Council, now called "Resuscitation Council of Asia" (RCA)
- Soon: Asian Chapter of Emergency Nursing
- Directory of Emergency Medicine Training Programs
- Directory of Asian EMS systems
- ? Asian Journal of Emergency Medicine
Within the Far East we have:

- Korean Society for Emergency Medicine
- Society for Emergency Medicine, Singapore
- Malaysian Association for Trauma & Emergency Medicine
- Hong Kong Society for Emergency Medicine
- Chinese Association for Emergency Medicine
- Japanese Association for Emergency Medicine
- Indian Society for Emergency Medicine
- Nepal Society for Emergency Medicine
- Taiwan Society for Emergency Medicine
- Thailand Association for Emergency Medicine
- .......... and others
Singapore EM International

- 1993 – 1st South & East Asian Conf on EM + launch of SEMS
- 1995 -- MASTEM
- 1995 – 2nd South & East Asian Conf on EM and agreement to start Asian Society
- 1998 – 1st Asian Conf on EM and launch of Asian Society for Emergency Medicine
- 1997 -- initiated project with East Java, Indonesia to begin a Trauma Care system
- 2000 -- launch of first EM post-grad program in Indonesia and also EM undergrad education there
- 1999 -- helped launch Indian Society for Emergency Medicine
- 2000 -- joined as full member of IFEM
- 2001 -- helped initiate formation of Pan Asian Resuscitation Council (PARC)
- 2000 onwards -- provide external examiners to post-graduate exams in Malaysia and Indonesia
- from 1990 onwards -- sent Disaster Medical Action teams to Philippines, Malaysia, Taiwan, Mongolia, India, Afghanistan, Vietnam
Academic Emergency Medicine

• EM as a distinct medical specialty
• Undergraduate training
• Post-graduate training -- 3 to 4 years
• State / National EM training committee
• Problems of protectionism in the west
Advanced Post-graduate training

• Concept of advanced training

• Sub-specialty areas in EM
  – Emergency Cardiac Care
  – Emergency Trauma Care
  – Emergency Toxicology
  – Emergency Paediatrics
  – Emergency Pre-hospital care
  – Disaster Medicine
  – Emergency Observation Medicine
Emergency Nursing

• equally important members of the emergency care team
• Advanced Diploma program in EN
• In house EN training programs
• ? Asian Society for Emergency Nursing
Emergency Medicine -- the future in the Far East

• consultant-based EM practice

• local and regional training centre for basic, advanced and fellowship training in EM and sub-specialty areas

• establishing stronger academic links within the Region and also with Australia and the United States

• working towards cross-recognition of training programmes with international sister societies and colleges

• performance of more outcomes studies in various areas of Emergency Medicine

• keen to see active sub-specialty development in EM

• greater co-operation in a rapidly shrinking world.
International Conferences on Emergency Medicine (ICEM)

- 1986 – Britain
- 1988 – Australia
- 1990 – Canada
- 1992 – USA
- 1994 – Britain
- 1996 – Australia
- 1998 – Canada
- 2000 – USA
- 2002 – Britain
- 2004 – Australia
- 2006 – Canada
- 2008 – USA
- 2010 – Singapore
Thank you