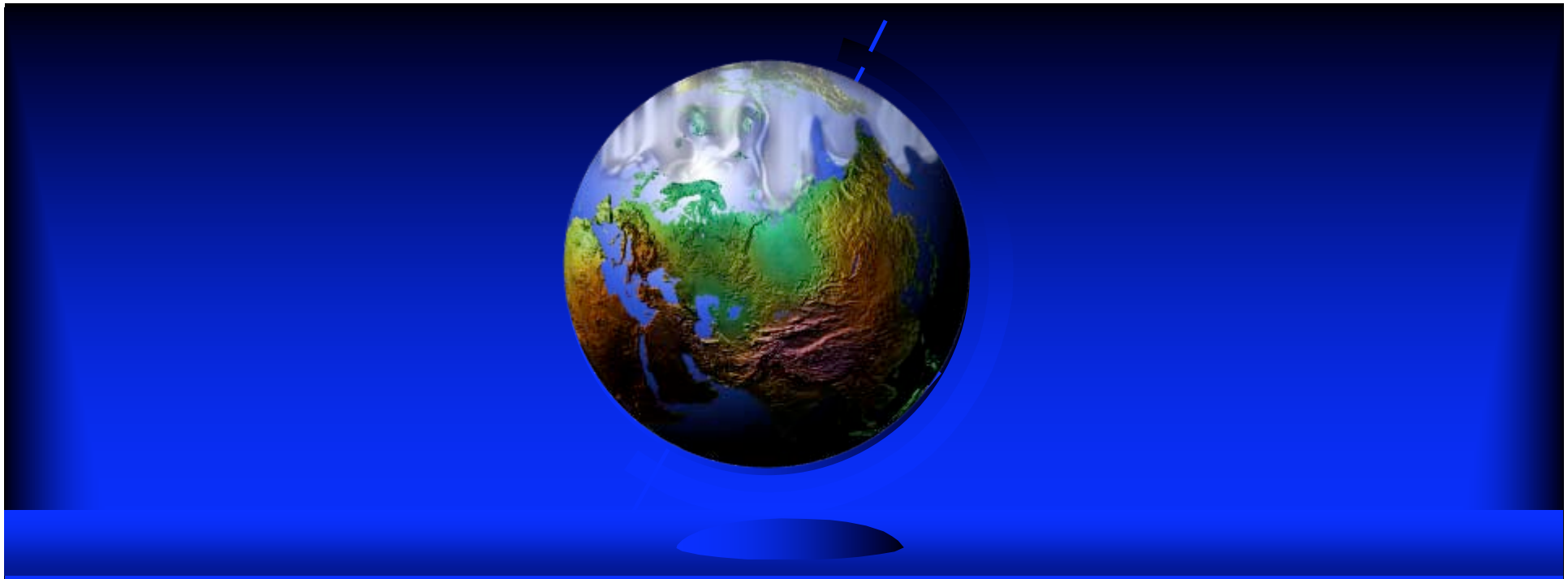


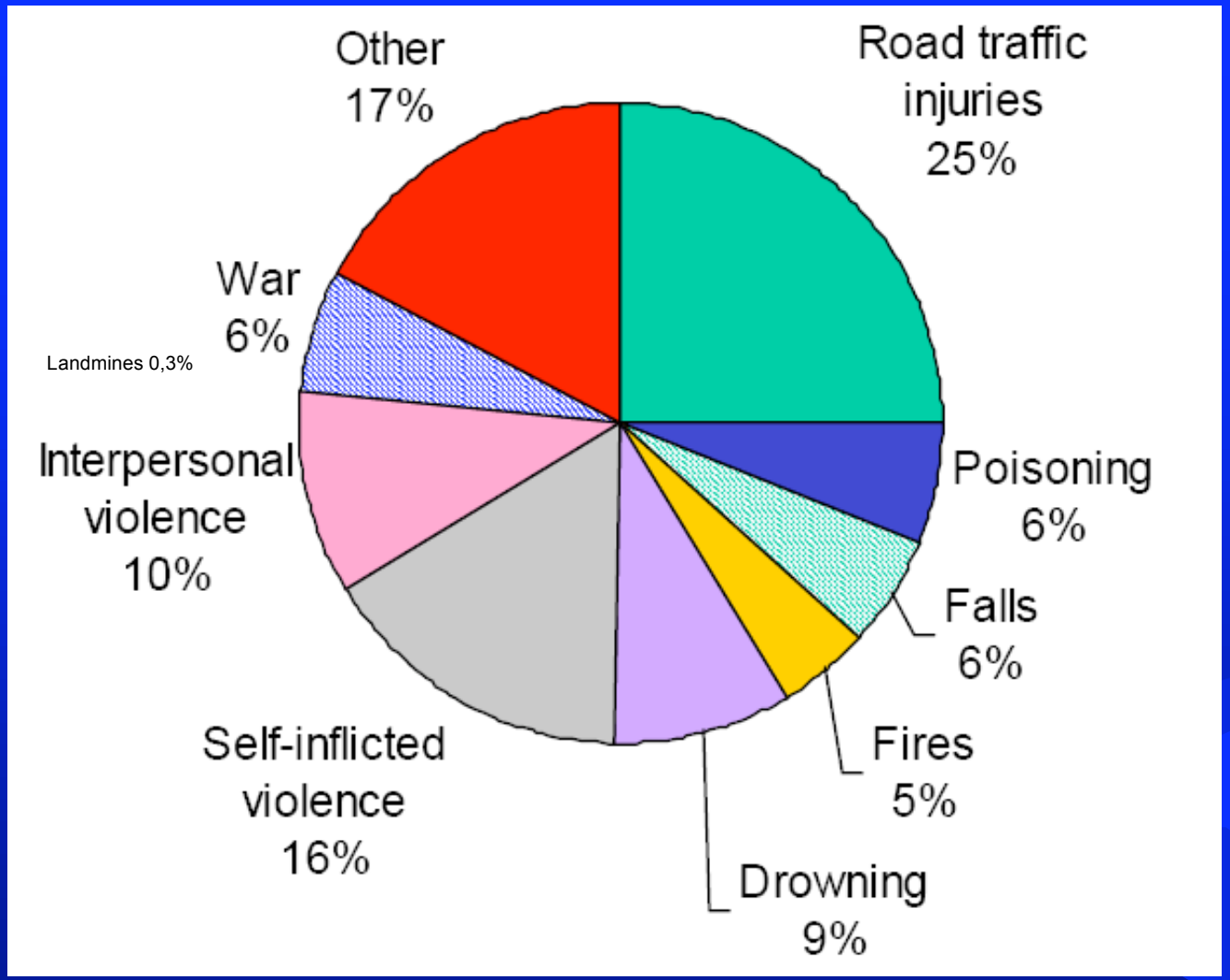
Best Education in Trauma, Resuscitation and Emergency Care - an International Perspective

Jannicke Mellin-Olsen
Asker and Bærum hospital, Norway
Member Education Committee/WFSA

World Federation of Societies of Anaesthesiologists

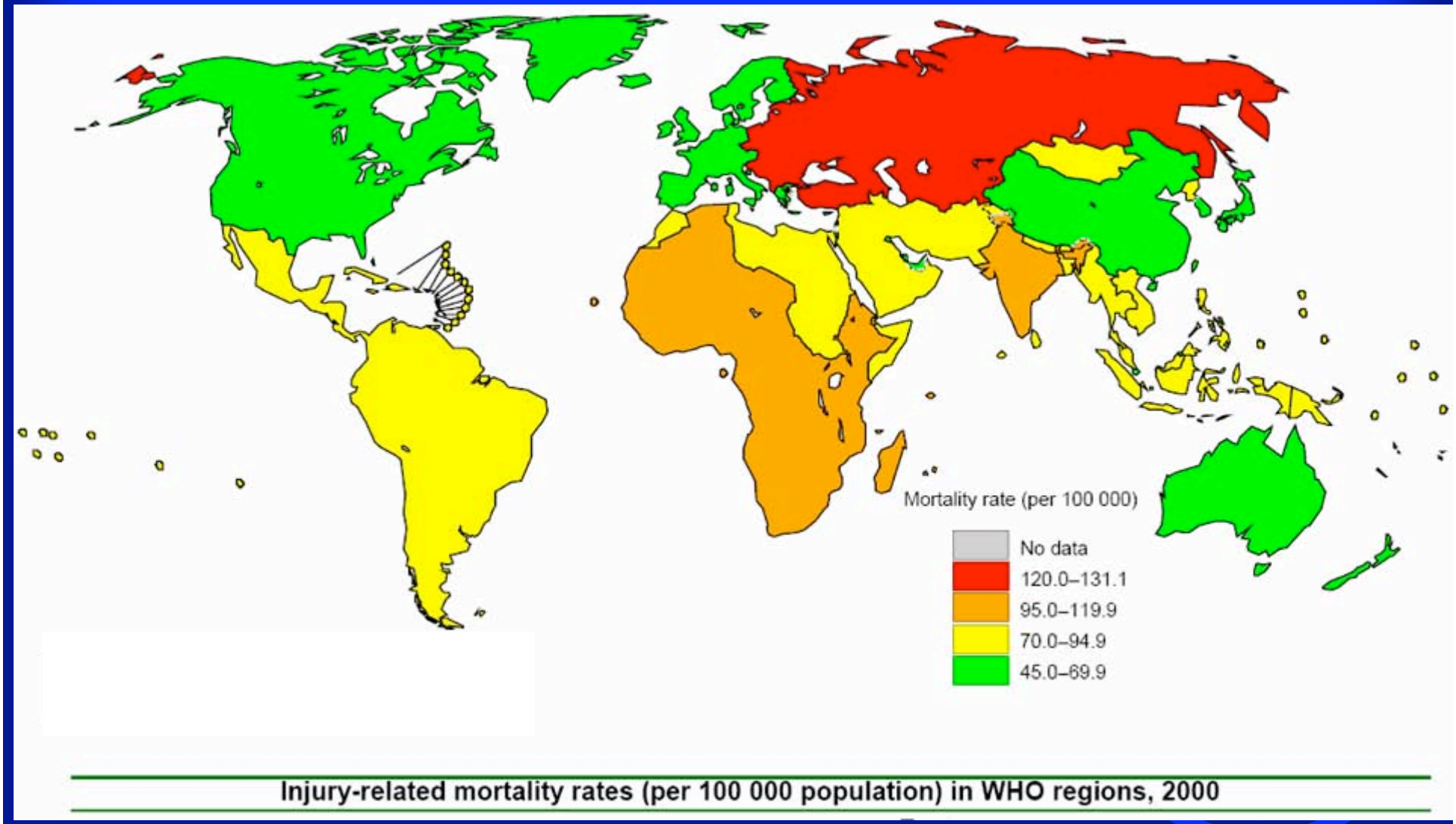
- 118 member Societies
- Education Committee – members from high/middle/low income countries

Distribution of global injury mortality by cause, 2000



16000 persons die daily; injuries account for 16% of the global burden of disease (WHO 2004)

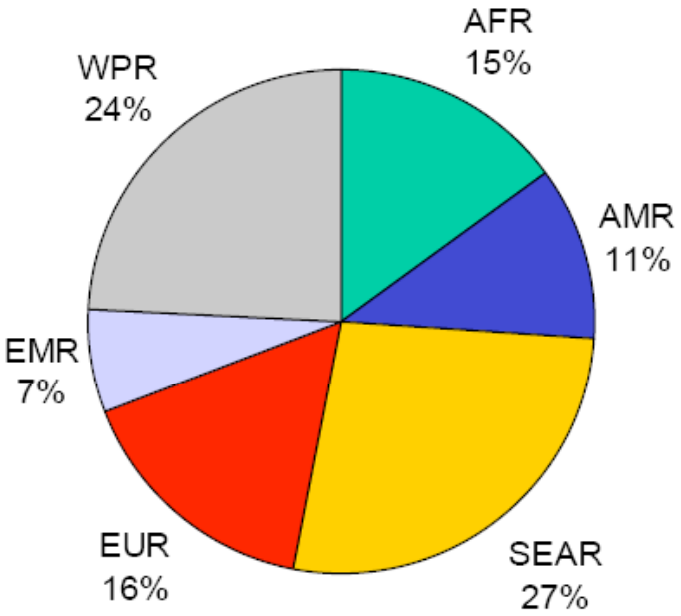
Global injury related mortality



Injury-related mortality rates (per 100 000 population) in WHO regions, 2000

Regional distribution of global injury-related *mortality*, 2000

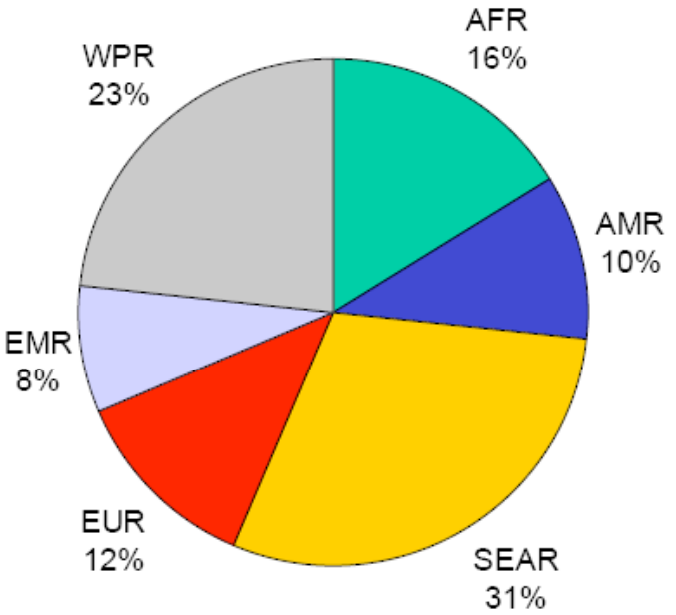
Total no. of deaths = 5 062 000



Taken together, South-East Asia (SEAR) and the Western Pacific (WPR) account for approximately one-half of the total number of injury-related deaths worldwide.

Regional distribution of the global injury *burden* (DALYs lost), 2000

Total no. of DALYs lost = 182 555 000



South-East Asia (SEAR) and the Western Pacific (WPR) combined account for more than 50% of the total number of DALYs lost globally to injury.

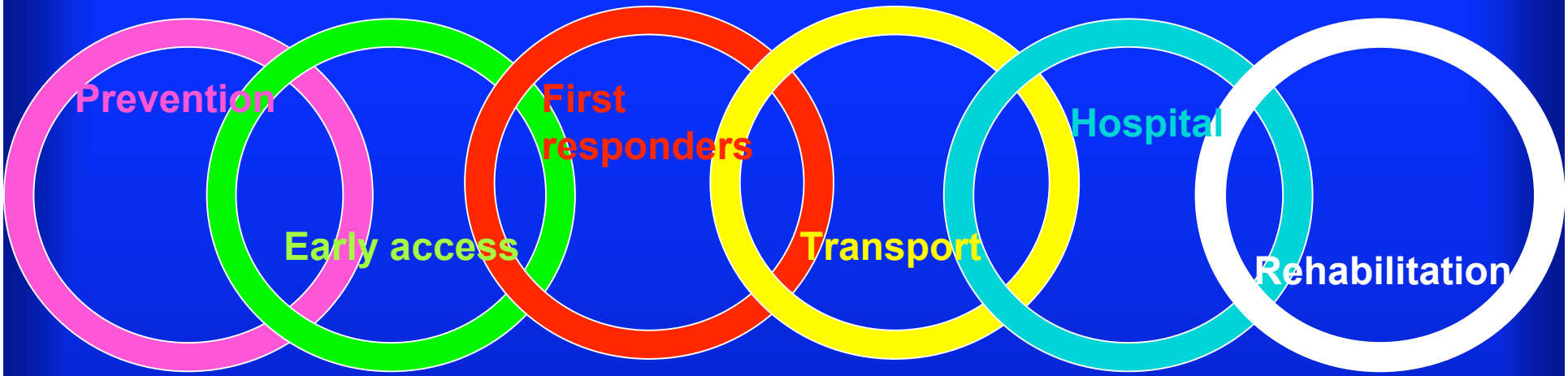
Disease burden – DALY's lost
Top 10

1998 Disease or Injury	2020 Disease or Injury
1. Lower respiratory infections	1. Ischaemic heart disease
2. HIV/AIDS	2. Unipolar major depression
3. Perinatal conditions	***3. Road traffic injuries***
4. Diarrhoeal diseases	4. Cerebrovascular disease
5. Unipolar major depression	5. Chronic obstructive pulmonary disease
6. Ischaemic heart disease	6. Lower respiratory infections
7. Cerebrovascular disease	7. Tuberculosis
8. Malaria	8. War
9. Road traffic injuries	9. Diarrhoeal diseases
10. Chronic obstructive pulmonary disease	10. HIV/AIDS

Source : **WHO, Evidence, Information and Policy, 2000**

90% RTI in low or middle income countries
By 2020: Increase by 83% in those, decrease by 27% in high income countries
→ global increase by 67%

Trauma chain of survival



What should be targeted for more training in low income countries?

- Prevention?
- First responders?
- Early access?
- Transport?
- Hospital?
- Rehabilitation?

What should be targeted for more training in high income countries?

- Prevention?
- First responders?
- Early access?
- Transport?
- Hospital?
- Rehabilitation?

RTA prevention

- Correctly used seat-belts → crash death risk ↓61%
- Mandatory use of child restraints → child deaths ↓35%
- Helmets → fatal and serious head injuries ↓45%
- Drink/drive law WW → alcohol-related crashes ↓20%
- Simple low-cost engineering measures save lives

Prehospital care

- Dependent on infrastructure:
  - 59% of injury deaths in the field, Seattle, USA vs
  - 81% Kumasi, Ghana Mock, J Trauma 1998;44:804-14
  - → focus should be on prehospital care

Transportation

- Middle income countries vs low income countries:
  - Mexico Arreola-Risa J Trauma 2000;48:119-24
  - vs Ghana Forjuoh Pre-hospital Immediate Care 1999;3-66-70

ATLS

Advanced Trauma Life Support

- No evidence that it is effective – hospital staff

Habibula S, Sethi D, Maree-Kelly A. Advanced trauma life support training for hospital staff. The Cochrane Library (ISSN 1464-780X). : April 16. 2003

Evaluation problems

Cochrane: RCTs not suitable for educational interventions

- A cluster randomised trial design needed →
- inflated sample size (to correct for the reduction in statistical power when compared with individual patient RCTs
- significant obstetric emergencies occur infrequently and substantive poor outcomes are rare.
- Personal skills taught at courses, evaluated problems might be team dependent

Martin Cameron, Kim Hinshaw (2004)
A systematic review of training in acute obstetric emergencies
BJOG: An International Journal of Obstetrics and Gynaecology 111 (3), 288–288.

Is there a best way to learn TRE care globally?

- Yes, one method suits all
- Yes, the principles are the same, but with local variations
- Nobody knows
- No

PHTLS? ATLS?


ITACCS CHENNAI 2005
9th CONFERENCE OF INTERNATIONAL TRAUMA ANAESTHESIA
& CRITICAL CARE SOCIETY (Indian Chapter)
Venue: SAVERA HOTEL, MYLAPORE, CHENNAI
21 - 23 October 2005
Conference Secretariat :
Dhanvantri Critical Care Center,
60,Poonkundranar street,Erode - 638 003,
Tamilnadu,India.
Website : www.itaccschennai2005.com
E.mail : info@itaccschennai2005.com
Tel : +91 424 2211445, Mobile: +91 98946 78202
Fax : +91 424 2224680
A HOLISTIC APPROACH TO TRAUMA CARE
Organising Committee
Patron
Prof.Martin G.Isaac (Australia)
Chairman
Prof.N.Rangabashyam (Chennai)
Organising Secretary
Prof.G.Raghavelu (Chennai)
Convenor
Dr.N.Ganapathy (Erode)
Highlights :
PRECON Comprehensive Trauma Life Support (ATLS)
Date : 19th & 20th October 2005
Conducted by International Faculties :
David Baker (France)
Arpan Guha (UK)
Eldar Soreide (Norway)
Michael Parr (Australia)
Maureen Mc Cunn (USA)

Limitations of ATLS globally

- Cost
- Teaching methods
- Where there is no trained health personnel

Trauma Care FOUNDATION

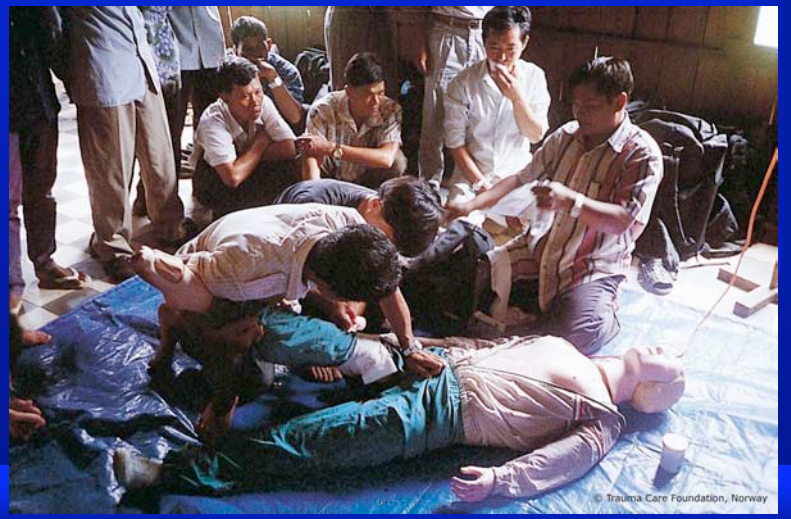
"Save lives, save limbs"

Village University

Training pre-hospital trauma care in low-income countries:

Non-graduate health workers can build efficient and sustainable rural rescue systems after trauma care training.

Husum Med Teach. 2003 Mar;25(2):142-8.



Rediger Vis Favoritter Verktøy Hjelp

Tilbake Søk Favoritter

http://www.primarytraumacare.org/PTCMain/Training/CourseObj/trainingobject.htm

Gå til

Start RS Bokmerker 5 blokkert Kontroller Send til

Innstilling

Primary Trauma Care Foundation

REGISTERED CHARITY NUMBER: 1116071

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TRAINING OBJECTIVES

BACK

Who should do a PTC Course

What do I need to run a PTC Course

THIS WEBSITE HAS BEEN CREATED WITH THE INTENTION OF BEING A USER FRIENDLY SITE WHICH ALLOWS EASY NAVIGATION AND ACCESS TO INFORMATION

Objectives of PTC Course

* Understand the basics of trauma management
* Achieve proficiency in the rapid and accurate diagnosis of treatment of trauma
* Be able to set up and teach a PTC programme in your hospital

Latest News

> Countries
TO BE ANNOUNCED

> Country Representatives
Click to view

> New Country Start-Ups
TO BE ANNOUNCED

Internet

Primary Trauma Care

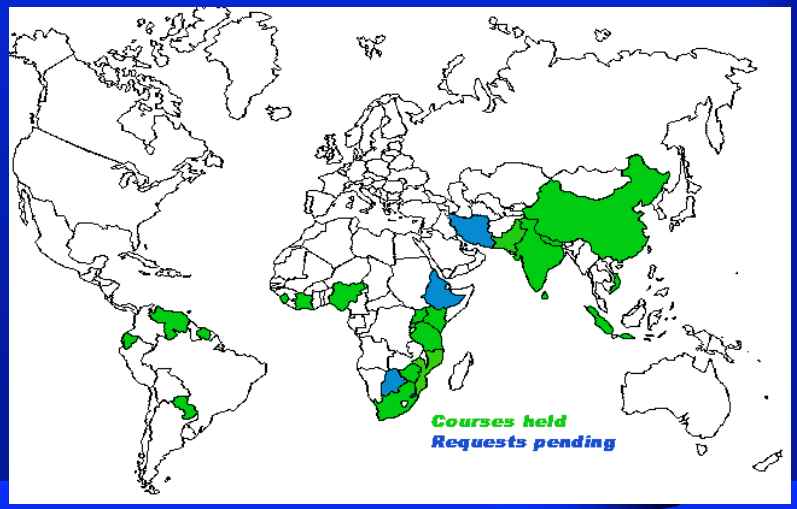
- Train health personnel to treat severely injured patients quickly & systematically
- To use what equipment is available, to prioritise and treat patients safely
- To train clinicians to teach PTC principles in their hospitals

2 day course + 1 day instructors' course

www.primarytraumacare.org

PTC System
Summary

- a systematic approach
- rapid assessment and treatment of the injured patient
- adaptability to all healthcare environments
- Training manual and slides readily available
- www.primarytraumacare.org



The Mongolian experience

Small group teaching methods
Scenario teaching
MCQ
WHO Essential Surgical Care
http://www.who.int/surgery/publications/en/SCDH.pdf

NTMC $50/trainee
National standard in India

Two day course consists of

- Core content lectures
- Case presentations
- Discussions
- Development of life saving skills
- Practical laboratory experience
- Final performance proficiency evaluation.

Other courses

- DSTC (India): Definitive surgical Trauma Course
- Essential Surgical Skills (CNIS Canada – African countries)
- Primary Trauma Care
- KNUST – Ghana
- TNCC – nurses
- TTT – Trauma Team Training – Canada – Uganda/Mozambique

Team work – www.bestnet.no

best

Injury Control Center - Uganda

Reducing the incidence and impact of injury ...

Search GO

Mon - May 14 - 2007

Navigation

On going Projects .:

i) Training Project

a. Trauma Team Training (TTT)

Trauma Team Training (TTT)

It involves working with hospitals to develop and train teams of personnel who manage injured patients. TTT has trained personnel in 11 regional referrals hospitals in Uganda.The project is a highly developed course with a trainers manual and supplimentary aid of transparencies to go with the manual. The training strategy is to train teams as well as trainers. Persons in charge in Mulago Hospital include: Dr. Cephas Mijumbi, and Dr. Robert Wangoda.

Injury Control Center-Uganda (ICCU) with its partners, the Canadian Network, for International Surgery (CNIS) developed a Trauma Team Training Manual for health workers. The Manual was reviewed and revised to improve on the instruction of the training. TTT manual has been translated to French and Portuguese.

The first care one receives after an emergency is

What should general health providers know WW?

- Manual manoeuvres?
- Insertion of oral airway?
- Mask- bag ventilation?
- Endotracheal intubation?
- Cricothyroidotomy?

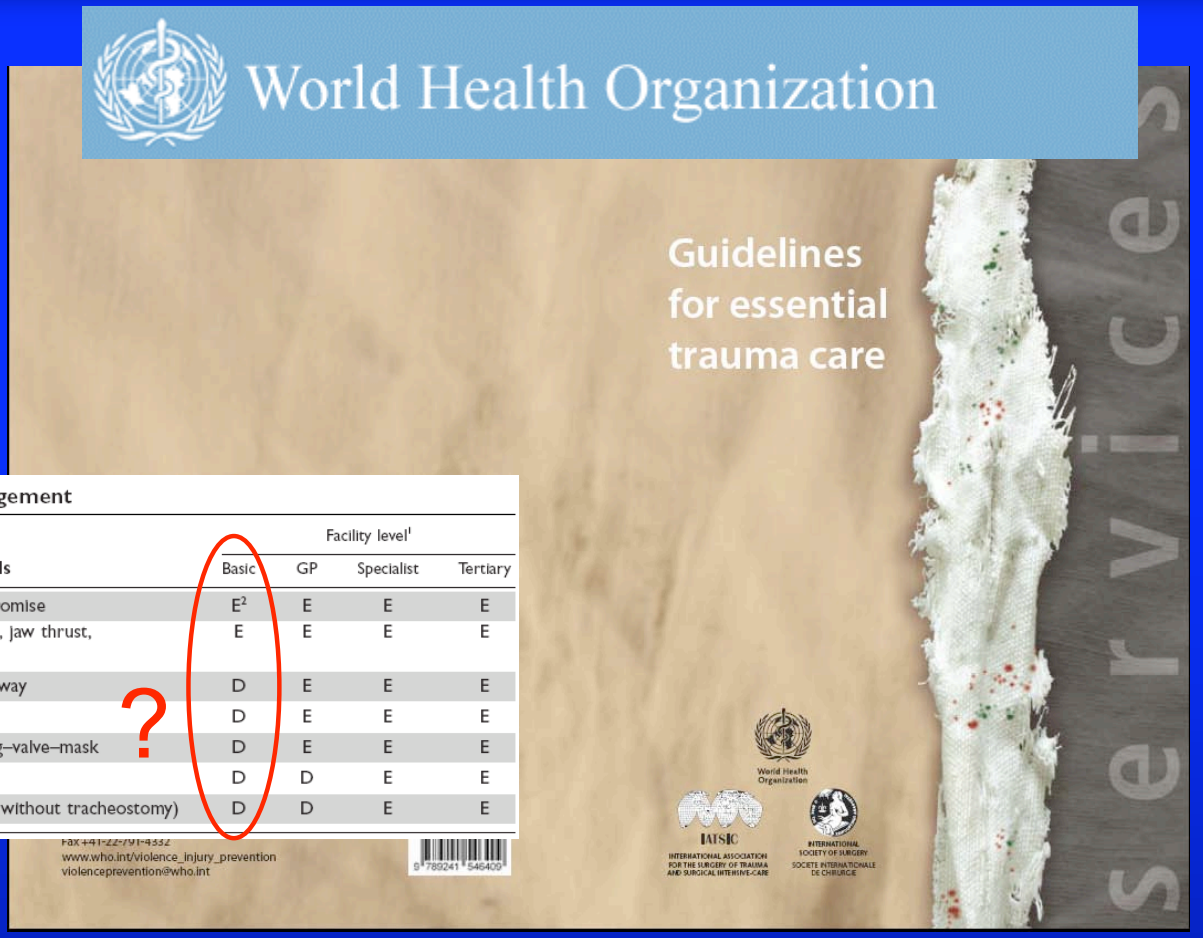


TABLE 1 **Airway management**

Airway: knowledge & skills	Facility level[1]			
	Basic	GP	Specialist	Tertiary
Assessment of airway compromise	E[2]	E	E	E
Manual manoeuvres (chin lift, jaw thrust, recovery position, etc.)	E	E	E	E
Insertion of oral or nasal airway	D	E	E	E
Use of suction	D	E	E	E
Assisted ventilation using bag–valve–mask	D	E	E	E
Endotracheal intubation	D	D	E	E
Cricothyroidotomy (with or without tracheostomy)	D	D	E	E

?

?

Airway equipment available ww?

- Nasal airway?
- Oesophagal detector device?
- Magill forceps?
- Capnography?

Airway: equipment & supplies				
Oral or nasal airway	D	E	E	E
Suction device: at least manual (bulb) or foot pump	D	E	E	E
Suction device: powered: electric/pneumatic	D	D	D	D
Suction tubing	D	E	E	E
Yankauer or other stiff suction tip	D	E	E	E
Laryngoscope	D	D	E	E
Endotracheal tube	D	D	E	E
Oesophageal detector device	D	D	E	E
Bag–valve–mask	D	E	E	E
Basic trauma pack	D	E	E	E
Magill forceps	D	D	E	E
Capnography	I	D	D	D
Other advanced airway equipment (Annex 1)	I	D	D	D

[1] In this and subsequent resource matrices, the following key is used to indicate different levels of facilities: Basic: outpatient clinics, often staffed by non-doctors; GP: hospitals staffed by general practitioners; Specialist: hospitals staffed by specialists, usually including a general surgeon; Tertiary: tertiary care hospitals, often university hospitals, with a wide range of specialists.

[2] Items in the resource matrices are designated as follows:
E: essential; D: desirable; PR: possibly required; I: irrelevant (not usually to be considered at the level in question, even with full resource availability).

Breathing basic health providers ww?

- Needle thoracotomy?
- Chest tube insertion?
- Arterial blood gas measurement?

TABLE 2 **Breathing—Management of respiratory distress**

Breathing: knowledge & skills	Facility level			
	Basic	GP	Specialist	Tertiary
Assessment of respiratory distress and adequacy of ventilation	E	E	E	E
Administration of oxygen	D	E	E	E
Needle thoracostomy	D	E	E	E
Chest tube insertion	I	E	E	E
Three-way dressing	E	E	E	E
Breathing: equipment & supplies				
Stethoscope	E	E	E	E
Oxygen supply (cylinder, concentrator or other source)	D	E	E	E
Nasal prongs, face mask, associated tubing	D	E	E	E
Needle & syringe	D	E	E	E
Chest tubes	I	E	E	E
Underwater seal bottle (or equivalent)	I	E	E	E
Pulse oximetry	I	D	D	D
Arterial blood gas measurements	I	D	D	D
Bag–valve–mask	D	E	E	E
Mechanical ventilator	I	I	D	D

Limiting factors:

- Lack of basic education
- Security
- Psychological stress

Conclusion

- The principles of teaching methods are the same globally – modern educational methods are superior to didactic lectures.
- The content should be adjusted to the resources and context in the surroundings.


Thank you!