Post crash care Indian experience

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Objective

- Burden of trauma
- Current status of Pre-hospital care
- Current Status of In-hospital care
- Way forward
Landscape of Emergency Burden

What causes the most premature death?

- Communicable, maternal, neonatal, and nutritional diseases
- Non-communicable diseases
- Injuries

Non-communicable disease: 62%
Injuries: 27%
Communicable, maternal, perinatal and nutritional conditions: 11%

1.5 lakhs Road traffic Injury deaths (MORTH-2016)

Source: ICMR, 2017

13-09-2019
Burden of Trauma

Ref: Road safety in the South-east Asia region, 2015.
Figure 14.1  Burden of Disease Potentially Addressable by Prehospital and Emergency Care in LMICs

Total addressable deaths = 24.3 million
Total addressable DALYs lost = 1,023 million
Total addressable YLL = 932 million
Total addressable YLD = 91.4 million

Source: Data from WHO 2013.
Note: DALYs = disability-adjusted life years; LMICs = low- and middle-income countries; YLD = years lived with disability; YLL = years of life lost.
Of 45 million annual deaths in LMICs, 54% are due to conditions addressable by prehospital and emergency care.

1,023 million DALYs, 932 million years of life lost to premature mortality.
Pre Hospital Care – India Lives in 2 Centuries Simultaneously
Pre-hospital care

Challenges

• Lack of pan India coverage.
• Lack of robust data based on key performance indicators
• Fragmentation of services
• Multiple number.
Pre-hospital care

*Strengths*

- National ambulance code.
- 20 out of 29 states has ambulance service.
- 23,000 ambulances (5000 ALS and rest BLS).
- Bystander Training module developed.
- Prehospital trauma technician training started.
- Response time 8 minutes in Tamil Nadu.
- Good Samaritan law enacted.
- Technology and innovation.
In-hospital Care
(Govt. Sector)

- Care provided in so called Casualty.
- Free care, but quality varies from center to centers.
  - Manned by CMOs. Or Non trained staff of junior grade.
  - Lack of equipment and infrastructure
  - University hospitals have reasonable care

*Ramanujam et al JAPI 2007*
Private Hospital

- Usually located in Urban Area.
- Well equipped.
- Staffed by Junior resident.
- Works on Fee –paying basis.
- Shift to Govt hospital if unable to pay.

*Position Statement: Academic Emergency Medicine in India: JWG: JAPI 2008*
Rural Area

- Subcentre-PHC-CHC.
- Pvt. Clinics and Hospitals.
- General Practitioners-(basic to specialist)
- Lacks emergency skills.
- Lack of Diagnostic facility, communication

*Position Statement: Academic Emergency Medicine in India: JWG: JAPI 2008*
Tertiary care

- Casualty medical officer
- Acts as a **Post man**
- Usually a non trained Junior Staff.

**Flying Birds**
- Residents rotate in Other specialty
- usually those who prepare for PG.

*Allagappan K et al Ann Emerg Med 1998*
AllIMS Trauma Centre
1980-2006

230 bedded Level-I Trauma Centre @ 200 residents @ 45 faculty @ 600 nurses

www.jpnatc.com
Leadership

Any one can hold the helm when the sea is calm.

Publilius Syrus
Making a Team
Emergency Medicine Update 2004
Team 2007
EMERGENCY DEPARTMENT
JAI PRAKASH NARAYAN APEX TRAUMA CENTRE
AIIMS

INDIA’S
Most Leading Trauma Emergency Department
Patient safety and Performance improvement Program
Digital ED

- EHR
- E- MLC
- Patient display system
- Lab Information system
- PACS
- Remote decision making by Skype round
- Trauma Registry
Task shifting concept

- Trauma Nurse coordinator
- Nurse informatics systems
- Emergency Nurses academics and research
- Patient safety Nurse
- Wound care nursing
National Initiative
INDO-US ACADEMIC COUNCIL FOR EMERGENCY & TRAUMA

The INDO-US Academic Council for Emergency and Trauma was founded in 2006. It is formed by councilors nominated by Deans of Indian Medical Colleges Recognized by the Medical Council of India.

The overall goal of the Council is to recognize individual academic faculty from various MCI recognized Medical Colleges in India to form a group who works towards Curriculum development for training Medical Students, Residents and Fellows in Emergency Medicine and Trauma Care in India.

The Council will act as a Leadership Forum which will recommend the curriculum and lead the way to develop Emergency Medicine and Trauma Systems at their respective institutions.

A Coalition of leaders from MCI Recognized Medical Colleges in India

“Acute Academic Technology & Leadership Incubator”

The Academic Council for Emergency Medicine and Trauma was set up as an initiative to foster the growth of Academic Emergency Medicine and Trauma Science in India via a collaboration of Experts who are recognized leaders in their
January-March 2011 | Vol 4 | Issue 1

Editorial

What's new in Emergencies, Trauma and Shock? Anesthesia, surgery and postoperative cognition

Raman Ramish

Post-operative cognitive dysfunction or POCID is a post-operative memory and/or thinking impairment that has been corroborated by neuropsychological testing. [1] Postoperative cognitive dysfunction sho...

[Abstract] | [HTML Full text] | [PDF] | [Mobile HTML Full text] | [EPub]

JETS Policy

JETS policy on plagiarism and academic dishonesty

Veronica Tucci, Sagar Galwarpani

A journal publication is dedicated to its ability to publish high-quality, original, and peer-reviewed articles.

Original Article

A clinical epidemiologic study of 892 patients with burn injuries at a tertiary care hospital in Punjab, India

Aashok Gupta, Sameer Uppal, Ramnee Garg, Aashid Gupta, Raniab
INDO-US Academic Research Cooperative

INDUS-ARC was established in 2009 at the 5th INDO-US Emergency Medicine Summit held at PSG Institute of Medical Sciences and Research Coimbatore India on 30th October 2009.

ARC partnership is both innovative and futuristic working towards uniformity in multi center research to facilitate faster accomplishment of investigations and recruiting higher quality research studies.

Established as a Model operating simultaneously at multiple institutions ARC will provide uniform infrastructure, IRB and QA support to studies at academic health sites across India.

ARC will promote Single Ethics approval process to be acceptable for implementation at multiple sites which are a part of the Cooperative. Studies will thus be easily conducted if common procedures are set up and training programs are instituted to build Uniform Research Capacities at Member Academic Sites which are a part of ARC.
News Letter

INDO-US Emergency & Trauma Collaborative
Advancing Academic Acute Medicine By Education & Research

Home History Academic Promoters Training Contact Us

- Academic Council (ACET)
- Fellowship (FACET)
- Education (EM-TECH)
- Newsletter (TEAMS)
- Journal (JETS)
- Research (INDUS-ARC)
- INDUS-EM Summit 2011
- ACET Assembly 2011

Teams
Academic Medicine Sentinel

Newsletter

“Proclaiming and Promoting Academic Leadership”
Good News

• 3yr MD /DNB speciality@2009

• 3yrs : MCH/DNB Trauma Surgery

• MSC Emergency Nursing

• Fellowship in Emergency Nursing
Faculty Development

FACET-INDIA
An Elite Syndicate of Academic Leaders in Indian Emergency Medicine

Fellowship of the Academic College of Emergency Teachers in India
Academic Year 2011

Tests For Apr 2011 Starting
Apr 15, 2011
Reading Assignments - Prehospital care, Disaster Preparedness, Infectious Diseases, Analgesia, Anesthesia, and Sedation, Renal/GU

Recommended Mandatory Courses:
Click Here

WELCOME To Our Website!
Emergency Medicine is a New Academic Discipline for India. It was formally recognized by the Medical Council of India in 2009.
Building blocks of body of knowledge

- ATLS @India: ACS @ 200 Course
- ATCN@India: ENA
- AIIMS-Ultrasound Trauma Life support
- AIIMS Basic Emergency care Course
- Injury Prevention Program
- National Emergency Life support Course
- WHO Trauma Quality Improvement program
Trauma Research

• Translational Research on trauma hemorrhagic shock (30)
• AIIMS critical ultrasound study group 20
• TITCO project (4)
• AIIMS-IRTE-United Nations study on Helmet Standards (1)
• AIIMS- Australia Trauma System Development (under review)
WHO SEAR Project
Strengthening Emergency and trauma care in primary health care setting in the South East Asian region

Participating Member States

Srilanka@Myanmar@Bhutan @Thiland@Indonesia @Bangladesh@Maldives Arunachal@Goa@Odisha@Jharkhand@Haryana@Bihar@Meghalaya@Assam
In-hospital

- Defined Levels of care-I/II/III
- Defined Standard treatment guidelines
- Defined Key performance indicators
- Trauma care system assessment
- Supplies provided
- Infrastructure – 300 trauma centres

Still Fatality rates are high 2018
Trauma care

- National Road safety policy
- Trauma care program
- Emergency Response division
- GOM Ministers in Road Safety
- Injury Prevention Initiatives
- National Injury surveillance Initiative
- National Emergency Life support course

Still Fatality rates are high 2018
Revisiting

Rapid Survey of Trauma care program.

Facility based assessment of emergency and trauma care in secondary and tertiary care level

WHO framework for system assessment and facility cased assessment
Strategic Directions

- Leadership/Governance/policy
- Integration
- Financing
- Trauma Care delivery
- Data and Quality Assurance
- Professional Culture
National Lead agency of Emergency and Injury Care

• Statutory body
• Unified approach
• Policy framework for care delivery
• Financial aggregation
• Multisectoral coordination/Professional culture
Pre-hospital Care

• Locate ambulance as per black spot map
• Ambulance Aggregator Model like Uber
• Pre-hospital notification
• Audit of key performance indicator (KPI)
• Develop academic pre-hospital care science
• The financial model of pre-hospital care services should be linked to KPI

Immediate Measures

In-hospital

- Manpower
- Capacity building of Care providers
- Provide Supplies and equipments
- WHO Trauma checklist
- WHO Trauma quality improvement program

WHO Essentials of Trauma care guidelines
Capacity Building

• Create Integrated model of emergency and trauma.
• Adequately funded
• Upgrade facility
• Define minimum standards for trauma care.
• Define standard treatment and referral guidelines
• Injury Prevention program
• National organ donation program

WHO-SEAR Regional strategy on Strengthening Emergency and trauma care in Primary health care setting Bangkok 2018
Out of pocket expenses

• Ayushman Bharat/ National Health Protection Scheme: 10 crore poor and vulnerable families (approximately 50 crore beneficiaries)/ coverage upto 5 lakh rupees per family per year for secondary and tertiary care
Long term Measures

- Postgraduate program in Emergency Medicine, Trauma surgery, critical care medicine,
- Academic program
  - Emergency Nursing
  - Emergency Medical Technician
  - PhD

Journal of Emergency trauma and shock 2008
Research capacity building

• Centres for advance research in Acute care
  – Research capacity building
  – Cost effective care models (drugs, devices), educational models (manikins, simulators)
  – Creating registries (national data bank on acute care
  – translational research
  – Innovation lab concept
Regulatory framework

- National body with its framework on acute care
- Enact Laws : National EMS
- Notify : Clinical establishment act, good Samaritan law
- Develop Paramedic council of India
National heath audit agency

• Audit of all acute care facility based on key performance indicators (KPI)
• Make the data available by implementation of National EMR.
• Incentive link to performance of acute care facility
• Funding scheme should be funnelled though this agency and linked to KPI
Conclusion

• National Policy of integrated acute care system
• Enact Law and notify existing laws
• Capacity building of emergency care givers in a hub and spoke model
• Establish Prehospital care system
• Monitoring and evaluation for Quality of care
Position Papers

- The 2014 Academic College of Emergency Experts in India’s Education Development Committee (EDC) White Paper on establishing an academic department of Emergency Medicine in India – Guidelines for Staffing, Infrastructure, Resources, Curriculum and Training


- The 2014 Academic College of Emergency Experts in India’s INDO-US Joint Working Group (JWG) White Paper on “Developing Trauma Sciences and Injury Care in India”


*Journal of Emergency Trauma and shock*