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“Covid 19 as the pandemic impacting Health sector in India”

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0:400hrs

- My father (known case of bronchial asthma) suddenly complains of fever, cough and shortness breath
 - Where shall I take him?
 - How shall I take him?
 - Will I get appropriate care during transport?
 - Will I get appropriate care in the casualty?
 - Are the emergency care givers trained to look after my grandpa?
 - I am not carrying enough cash at the moment?

Objective

- Burden of disease
- Issues and challenges pertaining health care delivery
- Opportunity
- Key Recommendations

Burden of Disease



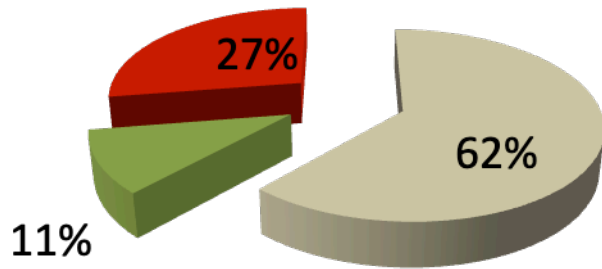
- **18 May 2020**, there have been **4,628,903 confirmed cases** of COVID-19, including **312,009 deaths** (*WHO report*)
- 100,000 confirmed cases with 3163 deaths in India
- Rapid spread has led to flooding of healthcare settings with a huge number of suspected patients

Landscape of Emergency Burden

■ Non communicable disease

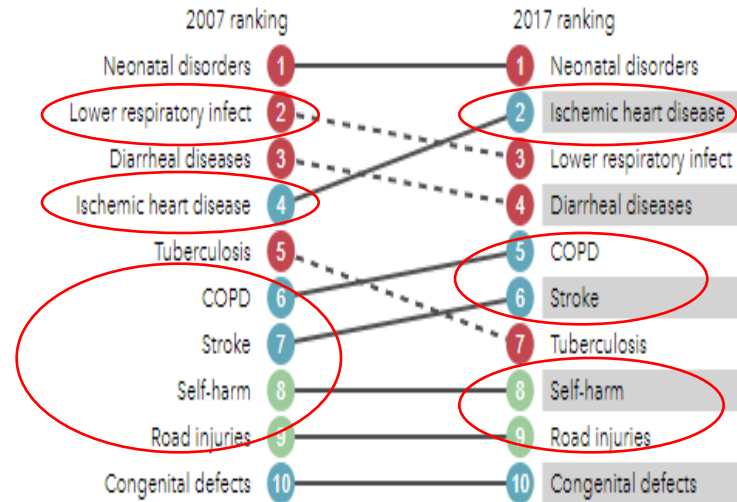
■ Injuries

■ Communicable, maternal, perinatal and nutritional conditions



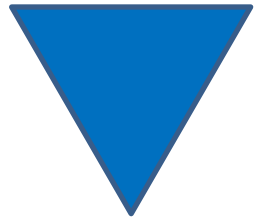
What causes the most premature death?

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



1.5 lakhs
Road traffic
Injury deaths
(MORTH-2016)

≈3% GDP



28 Lakh deaths
Cardiovascular
Disease

10 lakh deaths
Respiratory
Diseases

11 Lakh deaths
Injuries

Pre Hospital Care – India Lives in 2 Centuries Simultaneously



Lack of trained frontline providers

- ▶ 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



Emergency Care System



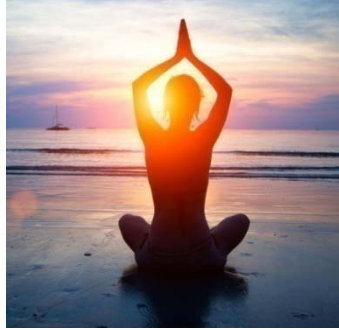
Specialized Care System



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.****



PREVENTION

**PREHOSPITAL
& TRANSPORT**

**FACILITY-BASED
CRITICAL CARE**

EMERGENCY CARE SYSTEMS



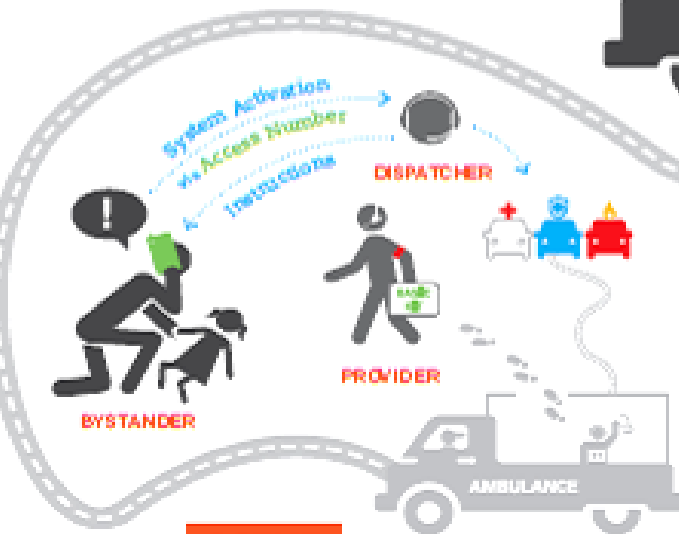
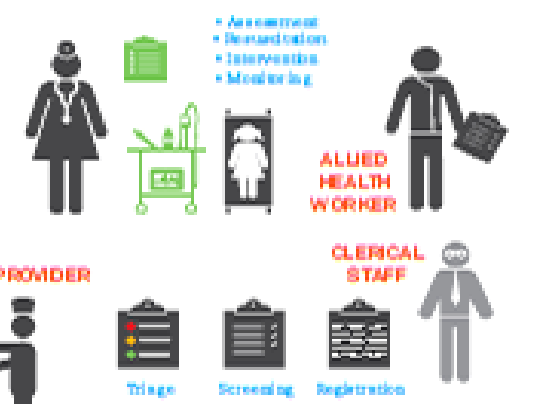
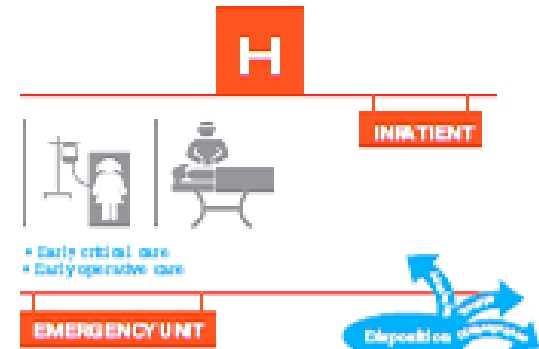
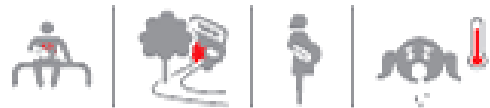
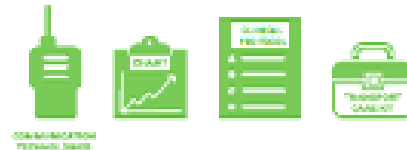
REHABILITATION



EMERGENCY CARE SYSTEM FRAMEWORK

All around the world, acutely ill and injured people seek care every day. Frontline providers manage life-threatening conditions with injuries and infections, heart attacks and strokes, asthma, and acute complications of pregnancy. An integrated approach to early recognition and management saves lives. This visual summary identifies the essential elements of a responsible emergency care system, and the key human resources, equipment, supplies, and information technologies needed to serve them.

■ HUMAN RESOURCES
 ■ FUNCTIONS
 ■ EQUIPMENT, SUPPLIES, INFORMATION TECHNOLOGIES



SCENE

- BYSTANDER RESPONSE
- DISPATCH
- PROVIDER RESPONSE

TRANSPORT

- PATIENT TRANSPORT
- TRANSPORT CARE

FACILITY

- RECEIVING
- EMERGENCY UNIT CARE
- DISPOSITION
- EARLY INITIATION OF CARE

Pre-hospital Care

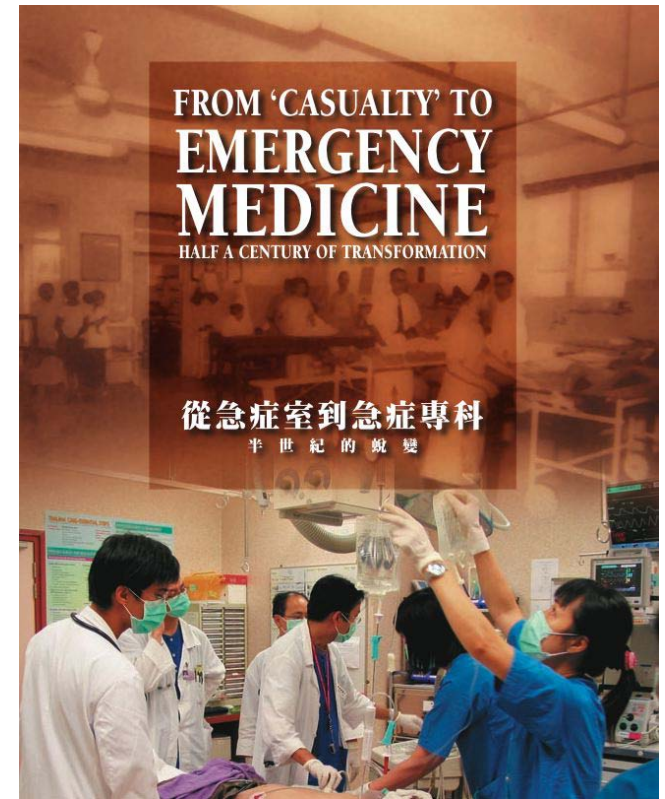
- **Ambulance Aggregator Model** like Uber
- **Prehospital notification** like Haryana model.
- **Audit of key performance indicator(KPI)**
- Develop academic prehospital care science
- The financial model of prehospital care services should be linked to KPI



Academic College of Emergency Experts in India's INDO-US Joint Working Group (JWG) White Paper on the Integrated Emergency Communication Response Service in India: Much more than just a number!

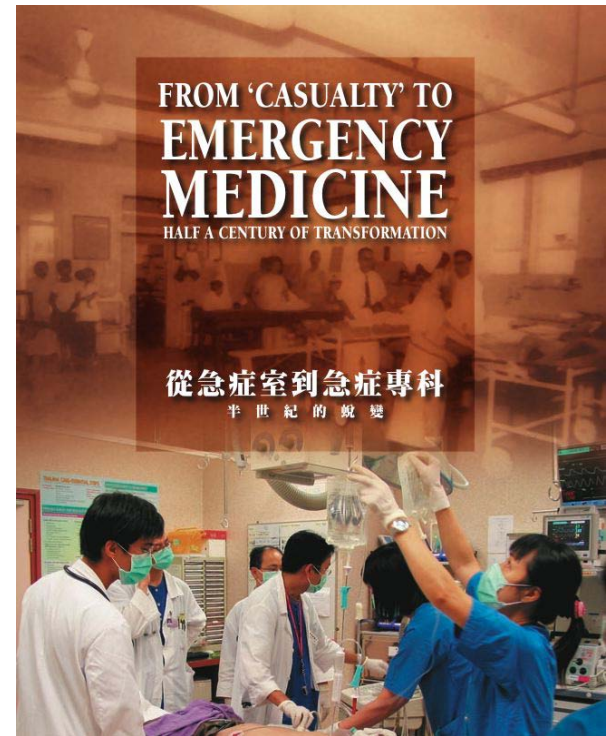
Immediate

- Create Department of Emergency Medicine.
- **Capacity building** of acute care providers
- Dedicated manpower in ED
(Based on annual patient inflow)
- **Restructure ED** based on existing models to address COVID-19



Long term Measures

- **Mandatory** creation of Emergency Department (ED) in all health facility/ academic ED medical college
- **Postgraduate program** in Emergency Medicine, Trauma surgery, critical care medicine, pediatric emergency medicine
- **Academic program**
 - **Emergency Nursing**
 - **Emergency Medical Technician**



*White Paper on Academic Emergency Medicine in India: INDO-US Joint Working Group (JWG)
Journal of Emergency trauma and shock 2008*

Key recommendations (COVID-19)

Short term

- Create dedicated COVID facility within the health facility with a balancing act to address other emergency/elective conditions
- Quarantine at home / isolation facility for asymptomatic cases
- Training of Health care workers on triage, hospital infection control practices and hospital preparedness and clinical management
- Address surge capacity by rearrangement of trained human resource, equipments, supplies and diagnostic testing including PPE
- Public education

Key recommendation

Short *term*

- Use telemedicine
- Research and innovation (drugs, devices, diagnostics etc)
- CME for care providers in a hub and spoke model
- Psychological support to provider and care seeker

Key Recommendations

long term

- Establish a robust Emergency care system with a lead agency in a hub and spoke model
- Protected funding
- National stock pile for mitigating CBRNE and emerging infections (drugs, devices, diagnostics)
- Epidemic Intelligence service program
- National Health audit agency

Key Recommendations

long term

- 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
- Performance indicators of the facility should be in public domain
- **Ayushman Bharat scheme** should be funnelled through this agency and linked to KPI

References

- Stawicki, et al.: Joint ACAIM-WACEM Statement on COVID-19 *Journal of Global Infectious Diseases* 1(12)2020
- 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
- White Paper on Academic Emergency Medicine in India: INDO-US Joint Working Group (JWG)
- Academic College of Emergency Experts in India's INDO-US Joint Working Group (JWG) White Paper on the Integrated Emergency Communication Response Service in India: Much more than just a number!
- 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”
- The 2015 Academic College of Emergency Experts in India's INDO-US Joint Working Group White Paper on Establishing an Academic Department and Training Pediatric Emergency Medicine Specialists in India

Journal of Emergency Trauma and shock