



**Prof. M. C. Misra**

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शरीरमाद्यं खलु धर्मसाधनम्

# Capacity Building Of Trained Human Resource To Improve Trauma Care In India: A Huge Challenge ATLS India Program-Journey so far

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# Greetings from AIIMS, New Delhi



All India Institute of Medical Sciences, New Delhi

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# AIIMS Tops Again: Ind Survey

President Obama! 50  
Go: Rampant drugs trade, unnatural deaths 36

NOVEMBER 16, 2008

Rs 20

**THE WEEK**

JOURNALISM WITH A HUMAN TOUCH

PLAY D-DAY CONTEST OR WIN 1,100 PRIZES EVERY WEEK. CONTEST CARD INSIDE



**EXCLUSIVE THE WEEK-IMRB SURVEY**

**INDIA'S TOP 10 HOSPITALS**

Swanky service ■ New treatments ■ Best medical colleges

## AIIMS tops The best medical college in India delivers on all fronts

By Cheryl D'Souza

**M**BBS aspirants show a great deal of similarity as a group. They are mostly class 12 students, fall on the brighter side of the IQ scale and are capable of grueling work schedules. They tend to show similarity in one more respect—their top choice for the place to study. In THE WEEK-IMRB International survey, a majority (64 per cent) of MBBS aspirants put AIIMS, Delhi, in their list of top three colleges in India. The Armed Forces Medical College (AFMC), Pune, came a distant second with 20 per cent of the votes.

AIIMS was also voted the best medical college in India by 74 per cent of general practitioners (GPs) in the survey. Interestingly, AFMC came at the bottom in the GPs' top ten list. Christian Medical College, Vellore, came second in the GPs' list with 28 per cent of the votes.

Some of the factors considered by both groups (MBBS aspirants and GPs) while ranking the colleges were—quality of faculty, infrastructure, number of specialisations available and job prospects. Of these both groups voted faculty as the most important factor—36 per cent of MBBS aspirants and 57 per cent of GPs. T.R. Pachamuthu, chairman of SBM Medical College—which figured among the top five medical colleges in Chennai—said the biggest challenge a medical college faced was finding the right faculty. "There is always a dearth of good staff and with medical colleges mushrooming all over, this field has become very competitive. Our biggest challenge is to see that professors are maintained in the respective facilities, especially in subjects such as anatomy, physiology and microbiology."

In the factors considered for evaluation, infrastructure (in terms of availability of latest technology and

procedures) came second in order of importance—16 per cent of MBBS aspirants and 14 per cent of GPs. Number of specialisations was unanimously voted number three in order of importance—11 per cent aspirants and 13 per cent GPs.

Consensus in both groups differed in the top ten list of medical colleges save for the choice of AIIMS as number one. Although the names of B.J. Medical College, Pune, Government Medical College, Nagpur, and Madras Medical College, Chennai, found a place on both lists, their order of ranking varied.

AIIMS topped the best hospital list and was voted the top hospital for medical tourism, as well. Whatever the parameters used, all roads led to this autonomous institution set up through an Act of Parliament in 1956. ■

### TOP 10 Medical Colleges

As voted by MBBS aspirants

1	All India Institute of Medical Sciences, Delhi
2	Armed Forces Medical College, Pune
3	B.J. Medical College, Ahmedabad
4	B.J. Medical College, Pune
5	Christian Medical College, Vellore
6	Government Medical College, Nagpur
7	Kasturba Medical College, Manipal
8	K.J. Somaiya Medical College, Mumbai
9	Madras Medical College, Chennai
10	St John's Medical College, Bangalore

Base: All MBBS aspirants (67).

As voted by GPs

1	All India Institute of Medical Sciences, Delhi
2	Christian Medical College, Vellore
3	Postgraduate Institute, Chandigarh
4	Seth G.S. Medical College, Mumbai
5	Jawaharlal Institute of Postgraduate Medical Education & Research, Pondicherry
6	Madras Medical College, Chennai
7	B.J. Medical College, Pune
8	Government Medical College, Nagpur
9	B.J. Medical College, Ahmedabad
10	Armed Forces Medical College, Pune

Base: All GPs (62).

THE WEEK - NOVEMBER 16, 2008 83



COVER STORY

THE WEEK - NOVEMBER 16, 2008

## Surgical allure

India is becoming a hot destination for medical tourists

By Cheryl D'Souza

**G**one are the days when people flocked to the best hospitals in developed countries for treatment of major illnesses. Today, the world is flocking to India to cure its ills. The land of Ayurveda and Saurstra—the father of surgery—has gained a global reputation as one of the most cost-effective and reliable destinations for medical treatment.

Indian hospitals have the best equipment and technology available and according to THE WEEK-IMRB International survey, treatment in India comes at one-fourth of the cost abroad.

AIIMS and Apollo (in Delhi and Chennai) top the list of preferred hospitals in India. Patients come to such hospitals for heart, orthopaedic, renal and eye surgeries. Heart-related problems form 30 per cent of the bulk of treatments sought in India. Bones and joints are the next specific area

### TOP 12 hospitals for Medical Tourism

1	All India Institute of Medical Sciences, Delhi
2	Apollo Hospitals, Chennai
3	Apollo Hospitals, Chennai
4	Lilavati Hospital & Research Centre, Mumbai
5	Bombay Hospital, Mumbai
6	Christian Medical College, Vellore
7	Sri Ganga Ram Hospital, Delhi
8	Escorts Heart Institute & Research Centre, Delhi
9	Tata Memorial Hospital, Mumbai
10	Breach Candy Hospital & Research Centre, Mumbai
11	Jaslok Hospital, Mumbai
12	P.D. Hinduja National Hospital, Mumbai

Base: All specialties who answered the question (72)

contributing to 15 per cent of all treatments sought. Patients from the Middle East make up 40 per cent of medical tourists who come to India while South Asian countries contribute 36 per cent of the patients. The US and the UK send around 25 per cent of the patients.

Travel agencies, which receive 20 to 30 inquiries a month from patients abroad, treatments in India, cite low costs as the main reason for India's popularity. Cost is the deciding factor for patients from the Middle East and South Asia, while quality—in terms of mobility rate, infection rate and JCI (Joint Commission International) certification—is more important for patients from North America and Europe. On both counts India has a good track record, apart from added advantages like no waiting period for surgery, ease of elective surgery (which includes plastic surgery and gastric bypass) and English-speaking doctors and staff. Patients also prefer India because of the high levels of competence of doctors and staff. As more hospitals prepare to get international certification, medical tourism in India, which, according to estimates, is still in the nascent stage, has tremendous potential to grow further. ■

INTERVIEW/DR SANJAY AGARWALA, P.D. HINDUJA NATIONAL HOSPITAL

### How we stay clean

**C**leanliness in hospitals goes a long way in luring medical tourists. Dr Sanjay Agarwala, chief of surgery and head of orthopaedics and traumatology at the P.D. Hinduja National Hospital in Mumbai explains how the hospital maintains a lower rate of infections—less than 1 per cent.

**What infections are picked up in hospitals?**

Infections of the bones [osteomyelitis] and infections of the joints [septic arthritis] are the most common in the area of orthopaedics. Bones and joints are subject to two major groups [of bacteria]—tubercular and septic.

**What are the methods of prevention?**

Prevention involves the use of air curtains, electric fly lights, double doors, air changes and positive-pressure ventilation. In an operation theatre the temperature is reduced (19-20 degrees) to prevent the proliferation of bacteria.

**What is involved in keeping an orthopaedic OT clean?**

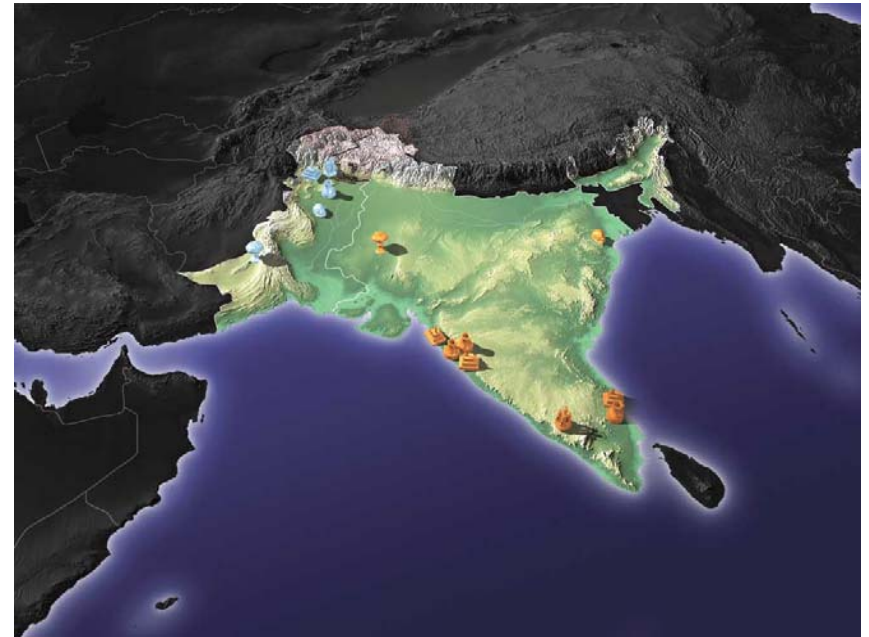
We use a laminar airflow system at the Hinduja for the orthopaedic OT. Air is blown through HEPA (high efficiency particulate air) filters that trap micro-organisms and decrease the colonisation of bacteria. Also, we have guided airflow systems in seven theatres in the hospital.

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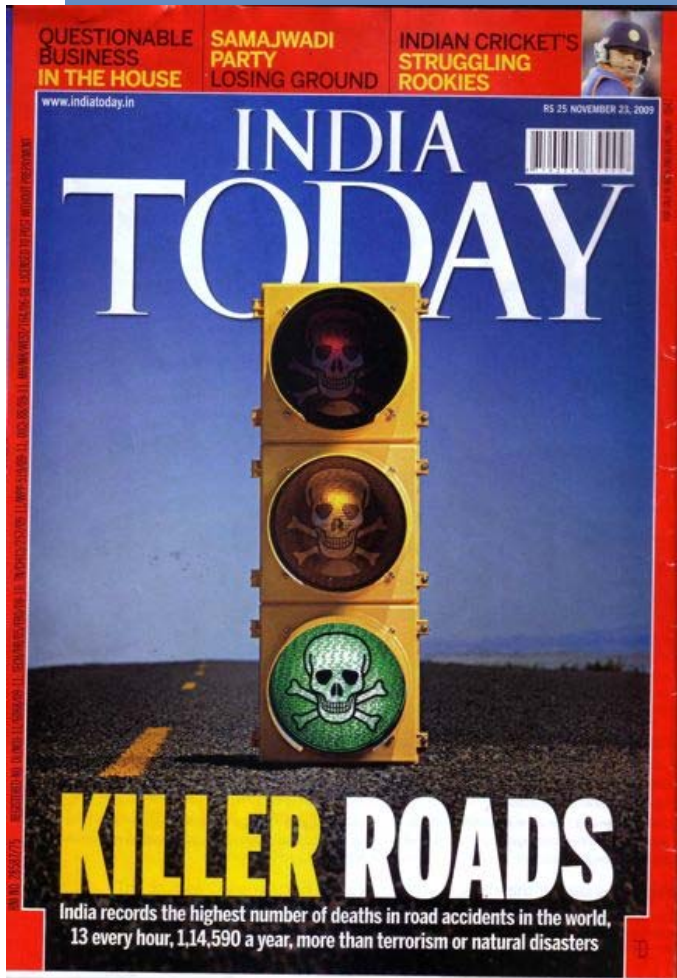


# India at a Glance

- *India's total landmass* is 32,87263 square kilometers; 2.4% Total Surface Area of the World
- 7<sup>th</sup> Largest, Russia, Canada, China, USA, Brazil, Australia
- Population - > 1.2 Billion
- 28 States & 7 UT
- 3% GDP
- Increased modernization of automobiles and highways
- Multiplicity of road users



# India Records Highest Number of deaths in RTA in World 13/hr, 1,18,500 in 2008



**ACCIDENTS** Home Des...  
 "Most people use their car as a murder weapon as they drive with intense rage. Speed thrills also calm them down."  
 RAJAT MITRA, *Criminal Psychologist*

**COMPARISON WITH THE US**

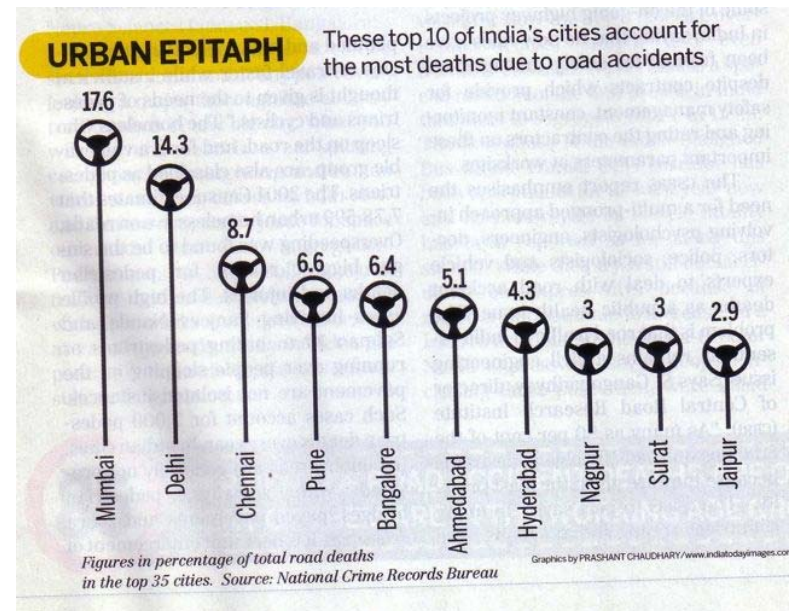
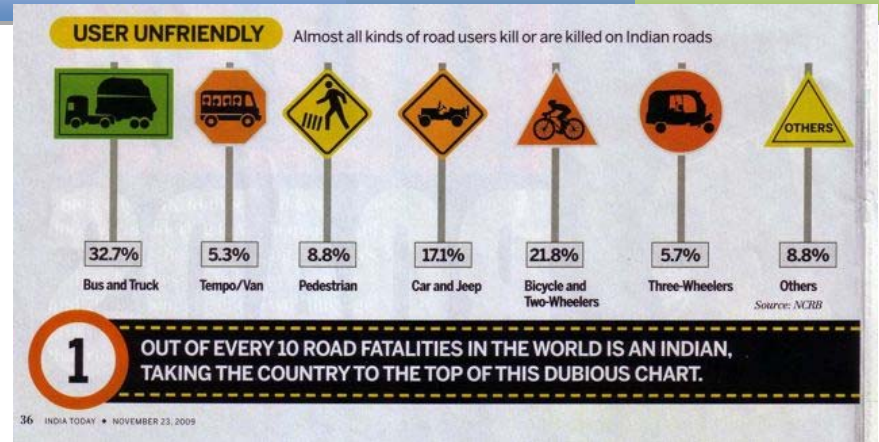
A high number of vehicles is no indicator of higher road fatality

	INDIA	USA
Population	114,79,95,904	30,40,59,724
Total vehicles	7,27,18,000	46,98,51,833
Total road accidents	4,18,600	64,20,000
Total road fatalities	1,14,590	42,636
Total road injuries	4,65,300	29,00,000
Average road fatalities per hour	13	Nearly 5
Ratio between injured and dead	5:1	69:1

The US has six times more vehicles and experiences nearly 15 times more road accidents, but its road fatality figure is 37 per cent of India's. The key difference is in the profile of victims : in India, it is primarily pedestrians, cyclists and two-wheelers while in the US it is car drivers.



# Killer Roads



# Injury – A Silent Genocide



- Road traffic fatalities
- Dead at work Places – 1/Every Five Minutes
- Terrorism
- War – Low intensity



## Disease burden (DALYs) for the 10 leading causes

**1999**

### **Disease or injury**

1. Lower resp. tract infections
2. HIV/AIDS
3. Perinatal conditions
4. Diarrhoeal diseases
5. Unipolar major depression
6. Ischaemic heart disease
7. Cerebrovascular disease
8. Malaria
- 9. Road traffic injuries**
10. COAD

**2020**

### **Disease or Injury**

1. Ischaemic heart disease
2. Unipolar major depression
- 3. Road traffic injuries**
4. Cerebrovascular disease
5. COAD
6. Lower resp. tract infections
7. Tuberculosis
8. War
9. Diarrhoeal diseases
10. HIV/AIDS

**DALY = Disability adjusted life year**

# Growing Realization in India

- Injury – A Major Public Health Problem
- Planning of Trauma Centers along highways
- Upgradation of 20 Medical School Hospitals Across India for Trauma care (PMSSY)
- Introduction and implementation of Pre-hospital Emergency Services across India
- Urgent requirement for Trained Medical and paramedical manpower
  - 2000 deaths each year on Delhi Roads
  - > 118,000 persons die each year in India in Road accidents
  - Bomb blast, Gun shot, Construction site disasters
  - 26 Mass casualty Events

**Huge “GAP” Exists between  
Supply & Demand**

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**Magnitude of  
Trauma in India**



# Government of India Initiatives

## Challenges Ahead

- Planning and Building 140 Level II & III Trauma Centres along “Golden Quadrilateral”
- Pre-Hospital care covering both Rural & Urban India
  - **To engage trained medical and paramedical manpower to provide 24x7 Acute care**

## Vulnerable Pedestrian



# Apex Trauma Center at AIIMS

JPN Apex Trauma  
Center  
A Panoramic View



- Level I
- State of the art Patient Care
- Trauma Education & Training
- Trauma Research
- Design Systems
- Role Model Total Bed Strength: 180
- Triage/ ED: 25
- Recovery: 5
- Trauma ICU (Two): 35
- Wards (Four): 120
- **125-150 Patients/24hours**
- **50,000/Year ED Patients & 4000 Operative procedures**

**Started on 26 Nov 2006**

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# Demographic data 2008-09

▪ Emergency Attendance	50,000
▪ Admissions in hospital	04561
– Neurosurgery	01873
– Orthopaedics	01417
– Surgery	01271
▪ Major surgical procedures	02904
– Orthopaedics	01247
– Neurosurgery	00879
– Surgery	00778
ICU Admission	00554

# Census November 2006 - 2010

Patients	Total Number
Emergency Department Attendance	1,20,251
Indoor Admissions	15,415
Major surgeries performed	14,117
Radiological investigations (CT, MRI and others)	2,27,165
Laboratory investigations	10,74,899
Packed RBCs issued	18,757 units
Blood donations	13,535
Number of organ donors	10



# Mass Casualty Incidents

N = 26

Incidents	Red	Yellow	Green
<ul style="list-style-type: none"><li>• Mass accidents</li><li>• Building collapse</li><li>• Other Incidents</li></ul>	111	498	643

# ATLS India Program began in April 2009

- Course Directors - 06
- Faculty - 57
- Educators - 03
- Course Coordinators- 10

# Course Directors



Mahesh C Misra



Subodh Kumar



Maneesh



TS Sidhu



Nikki



Amit Gupta

# Course Coordinators



Suresh C Sangi



Gilu Mishra



Savita Shokeen



Sonia Chauhan



Tulsi Ram Gupta



Ashish Jhakar



Ramesh Yadav



Anil Kumar Sharma



Aashufta Zainab



Cicily Hau Lun



# Instructor Course Educators



Geetika Bahl



Savita Sharma



Meeta Sharma

# ATLS India Program over 18 months

Total No. of Sites - 3	Total No. Provider Courses - 36	Total No. of Instructor Courses - 6	Future prospective sites
AIIMS Trauma centre, New Delhi <b>(April 2009)</b>	Number of Participants – <b>586</b> (2009 – 176; 2010 - 410 )	2009 – 4 2010 - 2	Ahemadabad Bangalore, Karnataka
RML Hospital, New Delhi  <b>(November 2009)</b>	Number of Successful participants – <b>460</b> (2009 – 154; 2010 – 306)	Number of participants – 63 2009 – 42; 2010 - 21  Successful – 62 2009 – 41; 2010 - 21	Guwahati, Assam  Hyderabad, A P Kolkata MH, Lucknow Mumbai
Cochin, Kerala  <b>(February 2010)</b>		<b>Total ATLS Faculty in India - 57</b>	Nashik, Maharashtra  Panjim, Goa  Pondicherry  Pune, Maharashtra

# Specialty wise Distribution

Specialty	Number	Specialty	Number
Emergency Medicine	38	Trauma Surgeon	03
		Plastic Surgeon	02
General Surgery	37	Critical care	02
Orthopaedics	24	Forensic Medicine	01
Anaesthesia	14	Transplant Surgeon	01
Medical Officer	14	Dental	02
Neurosurgery	06	Other Specialties	Obst & Gynae, Radio
Other Specialties	Paed,card,		

# ATLS Provider Courses: [www.atls.in](http://www.atls.in)



Advanced Trauma Life Support® (ATLS®)  
Course of American College of Surgeons - India Program

ATLS® Course,  
Jai Prakash Narayan Apex Trauma Centre  
All India Institute of Medical Sciences  
New Delhi

Dear Friends,

It gives me immense pleasure to announce that we are organizing (ATLS®) Courses at JPN Apex Trauma Centre, All India Institute of Medical Sciences, New Delhi.

I take the opportunity to invite you to participate in the course.

The Ministry of Health & Family Welfare, Govt. of India, National Disaster Management Authority, Govt. of India, and the All India Institute of Medical Sciences are supporting the ATLS - India Program to develop trained medical manpower in trauma care.

The detailed registration form and other details regarding course fee etc are given here in.

Acceptance of the registration for participation for provider and instructor courses is strictly on first come first serve basis. Once the participation is accepted, the course fee is non-refundable. You will be allotted the course depending on the availability of the seats in a particular course. Once a particular course is full, your application will be included in subsequent course.

Looking forward to your participation.

[www.atls.in](http://www.atls.in)

M.C.MENBA  
Program Director  
ATLS - India

TRAUMA 2009

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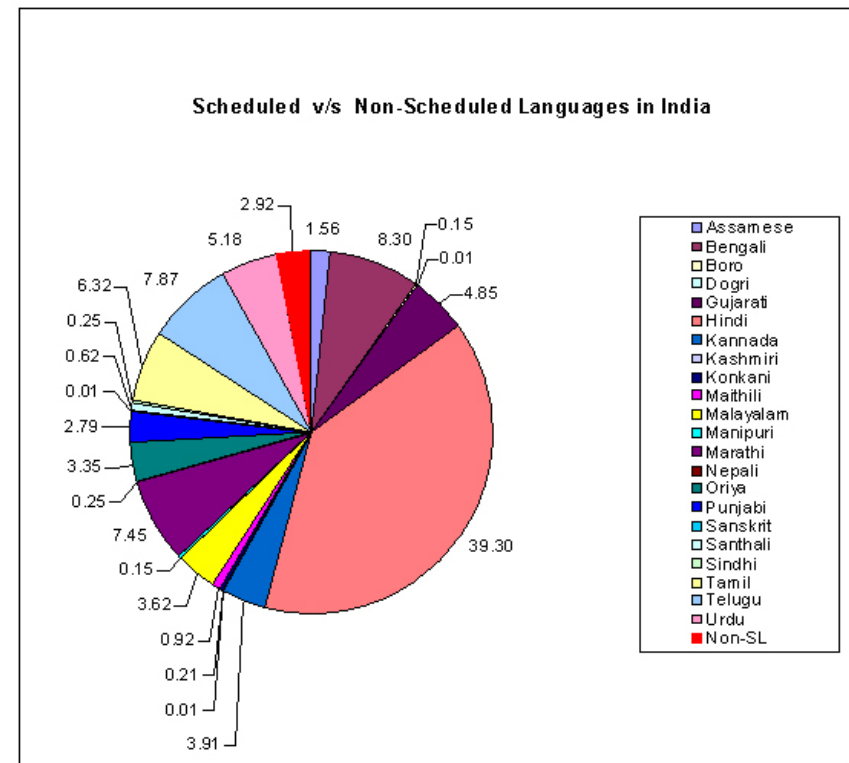


# 2<sup>nd</sup> ATLS Site in India



# Challenges Ahead

- Trained 200 doctors for New Delhi Commonwealth games (2nd to Olympics, 70 countries) by September 2010
- 28 states, 7 – UT, 35 languages,
- Per capita income less than \$250
- Average salary of doctor 600\$-2000\$/Month
- Animal Protection groups proactive!!



# How to spread ATLS\* Gospel

- Dedicated Team of Instructors
- Dedicated Team of Co-ordinators
- Dedicated team of Educators

# How to train Doctors for games

- Two sites in Delhi-
- AIIMS-TRAUMA CENTER
- RML Hospital New Delhi

Above sites already approved

- One course per month in Delhi sites until September 2010



# How to spread ATLS\* In INDIA

- Site Visit completed in April 2010 – Pune (Maharashtra)
- Identify – other willing sites with competent Prospective Instructors (Enquiries from Kolkata, Bangalore, Hyderabad, Mumbai and Nashik)
- Pre promulgation course in Delhi with – proposed coordinator
- Training of Provider and Instructor course and training of Co-ordinator in New Delhi
- Promulgation course with Course Director, Co-ordinator and senior Instructors with local faculty

# Spread ATLS\* In INDIA

- Plan to start more sites every year after October 2010
- First site Out side New Delhi -  
**Cochin- Kerala, Started February 2010**

# Proposed Sites for 2011 - 12

## Pune & Goa Site Visits Over

- Ahmedabad – Site visit pending
- Bangalore – Karnataka
- Guwahati - Assam
- Hyderabad – Andhra Pradesh
- Kolkata – Site visit pending
- MH, Lucknow
- Mumbai – Maharashtra

## Pondicherry

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# Problems



- Logistics
- Cost of holding courses: How to reduce?
- Alternative to Animals in surgical skill
- Can we afford costly manikins ?

# How cost can be reduced



- Alternative to costly manikin
- Help from charity organizations, Corporate, insurance companies



# Bigger Challenge in India

- To produce statistics in India (already done By Prof Ali and others-it reduces morbidity and even mortality)
- Recommendation: To make ATLS compulsory for trainees in Surgery, Orthopaedics, Anaesthesia and Emergency Medicine During PG Training (approximately 10,000 per year)

# Other Initiatives

- ATCN – March 2010
- PHTLS



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- Jasmine, ACS
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- DGHS, Ministry of Health & FW, Govt. Of India
- AIIMS
- National Disaster Management Authority
- Faculty & Nurses at JPN Apex Trauma Center, AIIMS

# Containing Injury Epidemic



## ***Accident/Injury Prevention: A huge challenge & A Social Responsibility***

# Vision



- Injury Prevention
- Taking ATLS/ATCN Philosophy to across India/ Subcontinent
- Expand ATLS Philosophy to SAARC Countries – Nepal, Srilanka, Bangladesh, Maldives, Bhutan



# Adamo's discharge from TC



# JPNATC Tops in Trauma care

56 COVER STORY THE WEEK - NOVEMBER 16, 2008

## III? Indulge!

Get well soon in a five-star environment. Hospitals are changing and fast

THE WEEK-IMRB SURVEY

### top 10 hospitals in India

All India Institute of Medical Sciences, Delhi	1
Apollo Hospitals, Delhi	2
Apollo Hospitals, Chennai	3
NIMHANS, Bangalore	4
Christian Medical College, Vellore	5
Postgraduate Institute, Chandigarh	6
Tata Memorial Hospital, Mumbai	7
Lilavati Hospital, Mumbai	8
Sankara Nethralaya, Chennai	9
Bombay Hospital, Mumbai	9

Methodology: THE WEEK-IMRB International survey was conducted in 15 cities. A total of 936 specialists, 614 general practitioners (GPs), 605 MBBS aspirants, 319 Ayurvedic doctors, 17 travel agents and 10 patient coordinators took part in the survey.

## top 5 hospitals in Trauma Care

% of doctors ranking among top 3 hospitals

All India Institute of Medical Sciences, Delhi	61
Christian Medical College, Vellore	15
Sri Ganga Ram Hospital, Delhi	13
Apollo Hospitals, Chennai	11
Postgraduate Institute, Chandigarh	11

Base: All Trauma care specialists-64

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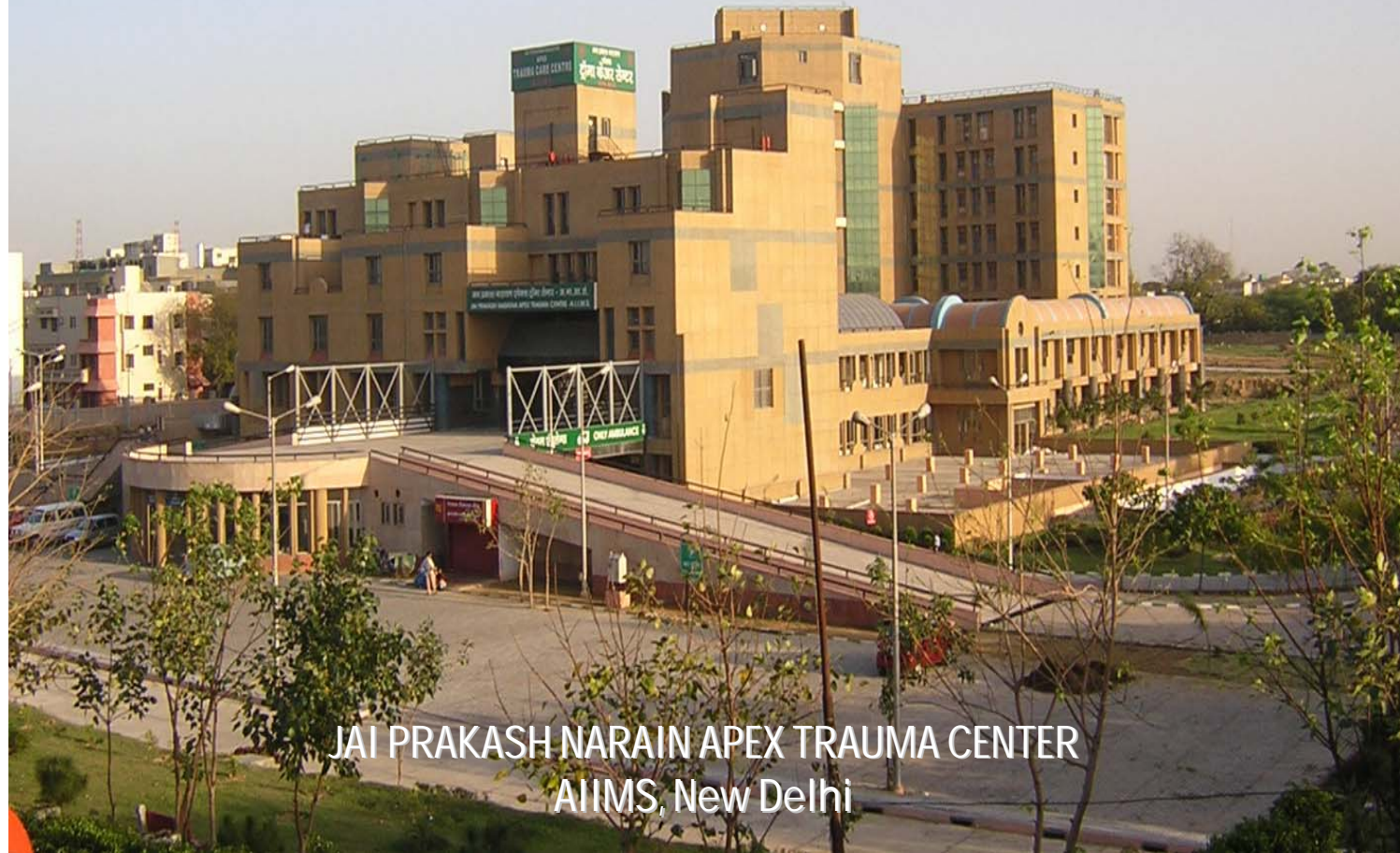


Prime Minister of India  
Dr. Man Mohan Singh  
Visits  
JPN Apex Trauma center



To Commend the  
Services rendered by  
Security Personnel  
Injured in a blast at  
Indian Embassy, Kabul  
On  
7<sup>th</sup> July 2008

# Thank you



JAI PRAKASH NARAIN APEX TRAUMA CENTER  
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Thank you



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**Come Visit Us...**

*Thank You*