Road Accidents in India
Issues & Dimensions

Ministry of Road Transport & Highways
Government of India
Country’s Profile
India

- Home to 1.21 billion people (about 1/6th of world’s population)
- Around 72% of India’s population lives in villages.
- The sex ratio has fluctuated between 927 – 934 between 1971 to 2001.
- The total fertility rate declined from 4.8 to 3.7 in rural areas and 3.4 to 2.5 to urban areas during 1982 to 1997.
- Life expectancy at birth has increased from around 30 years at independence to 60.7 years in 1996.
Road Accidents: A Snapshot

- Emergence of Road Traffic Injuries (RTIs) a leading cause of Deaths & Disabilities
- India: 2011
  - Accidents 4.97 lakh (annual) (1 every minute)
  - Deaths 1,42,485
    (one death every 3.7 minutes)
- Accidents impose significant costs
  - 3% GDP for India (1999-2000)
  - 1% GNP for low income countries
  - 1.5% GNP for middle income countries
  - 2% GNP for high income countries
- Was 9th leading cause of death in 2004 and expected to be 5th leading cause of death by 2030 worldwide.
**Number of Accidents and Number of Persons Involved: 2002 to 2011**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Accidents</th>
<th>Number of Persons</th>
<th>Accident Severity*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Fatal</td>
<td>Killed</td>
</tr>
<tr>
<td>2002</td>
<td>4,07,497</td>
<td>73,650 (18.1)</td>
<td>84,674</td>
</tr>
<tr>
<td>2003</td>
<td>4,06,726</td>
<td>73,589 (18.1)</td>
<td>85,998</td>
</tr>
<tr>
<td>2004</td>
<td>4,29,910</td>
<td>79,357 (18.5)</td>
<td>92,618</td>
</tr>
<tr>
<td>2005</td>
<td>4,39,255</td>
<td>83,491 (19.0)</td>
<td>94,968</td>
</tr>
<tr>
<td>2006</td>
<td>4,60,920</td>
<td>93,917 (20.4)</td>
<td>1,05,749</td>
</tr>
<tr>
<td>2007</td>
<td>4,79,216</td>
<td>1,01,161 (21.1)</td>
<td>1,14,444</td>
</tr>
<tr>
<td>2008</td>
<td>4,84,704</td>
<td>1,06,591 (22.0)</td>
<td>1,19,860</td>
</tr>
<tr>
<td>2009</td>
<td>4,86,384</td>
<td>1,10,993 (22.8)</td>
<td>1,25,660</td>
</tr>
<tr>
<td>2010</td>
<td>4,99,628</td>
<td>1,19,558 (23.9)</td>
<td>1,34,513</td>
</tr>
<tr>
<td>2011</td>
<td>4,97,686</td>
<td>1,21,618 (24.4)</td>
<td>1,42,485</td>
</tr>
</tbody>
</table>

* Accident Severity: No. of Persons Killed per 100 Accidents
India: Incidence of Road Accidents

- Rise in number of accidents, injuries & deaths per lakh of population
  - Reflects rise in motor vehicle population, increase in duration & number of travel trips with rise in income
- Sharp decline in number of accidents, injuries, & deaths per 10,000 vehicles
  - Reflects improved crash worthiness vehicles & occupant protection better enforcement
- Rise in number of accidents, injuries & deaths per 10,000 km
  - Reflects higher exposure to risk due to heterogeneous nature of traffic, lack of traffic separation etc.
Chart 1: Number of Road Accidents, Number of Persons Killed and Number of Persons Injured Per Lakh Population: 1970 – 2011

- **Number of Accidents per Lakh Population**
- **Number of Persons Killed Per Lakh Population**
- **Number of Persons Injured per Lakh Population**
Chart 2: Number of Road Accidents, Number of Persons Killed and Number of Persons Injured Per Ten Thousand Vehicles: 1970 – 2011
Chart 3: Number of Road Accidents, Number of Persons Killed and Number of Persons Injured Per Ten Thousand Kilometres of Road Length: 1970 – 2011
<table>
<thead>
<tr>
<th>Road Classification</th>
<th>National Highways</th>
<th>State Highways</th>
<th>Other Roads</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Accidents</td>
<td>149,732 (30.1)</td>
<td>122,239 (24.6)</td>
<td>225,715 (45.3)</td>
</tr>
<tr>
<td>No. of Persons Killed</td>
<td>52,924 (37.1)</td>
<td>39,033 (27.4)</td>
<td>50,528 (35.5)</td>
</tr>
<tr>
<td>No. of Persons Injured</td>
<td>156,008 (30.5)</td>
<td>133,435 (26.1)</td>
<td>221,951 (43.4)</td>
</tr>
</tbody>
</table>

Note: Figures within parentheses indicate share in total accidents, killed and injured in the respective road categories.
Chart 8: Road Accidents victims (other than Drivers) by Age Group: 2011

- 0-14 years, 7.4%
- 15-24 years, 30.3%
- 25-65 years, 51.9%
- 65 Years & above, 10.4%
Chart 9: Causes of Road Accidents: 2011

- Fault of Driver: 77.5
- Fault of Cyclist: 1.3
- Fault of Pedestrian: 2.4
- Defect in Condition of Motor Vehicle: 1.6
- Defect in Road Condition: 1.5
- Weather Condition: 1.0
- All Other Causes: 14.8
Road Safety (RS) Coordination: Lack of Institutional Mechanism both at Centre & States

- RS multidimensional and multi-sectoral in nature

- Existence of large number of agencies at the Central and State level makes coordination a challenging task
  - MORTH administers the MV Act but its enforcement is with States
  - Road building/engineering with DG(Roads) and NHAI but building codes/manual with IRCC
  - Vehicle testing/engineering with M/o Heavy Industry
  - Emergency/trauma care with M/o Health
  - RS awareness/education with MORTH
  - Weak institutional capacity for RS in MORTH

- NRSC presently serves as a recommendatory policy making body.
Steps taken by Central Government to improve road safety

- National Road Safety Policy approved.
- National Road Safety Council constituted.
  - All States/UTs requested to set up State Road Safety Councils and District Road Safety Committees.
- Adoption of a multi pronged strategy to address the issue of road safety based on 4 Es of Road Safety:
  (i) Education
  (ii) Enforcement
  (iii) Engineering (roads as well as vehicles)
  (iv) Emergency care.
Multi-Pronged Strategy to improve Road Safety: Steps envisaged

13th meeting of NRSC (held in Feb. 2012) discussed the following measures to improve road safety:

- Setting up of State Road Safety Councils and District Committees,
- Setting up of Road Safety Fund at State level and setting aside 50 per cent fines collected for traffic violations for this fund,
- Replication of Tamil Nadu model for implementation of Road Accident Data Management System (RADMS),
- Identification of black spots and treatment thereof,
- Action against over-loading, action against drunken driving and removal of liquor shops on NHs,
Multi-Pronged Strategy to Road Safety (Contd.)

- Enforcement of use of seat belt by & ISI helmets by 2 wheelers;
- Developing emergency medical services by having a 24X7 call centre with a dedicated common telephone number;
- Road accident crash investigation,
- Conspicuity of non-transport vehicles during night time by fixing reflective tapes,
- Accreditation of IDTRs/DTIs for issuing of permanent driving licenses,
- Compulsory training before issuance of permanent driving license for commercial vehicle drivers
- Improvement of Vahan & Sarathi software to capture legacy data, traffic violations,detection of fake licences;
- Put in place objective & mandatory system of vehicle fitness through accredited I&C Centres subject to audit.
MoRTH has notified 192 National Highways Administrators (NHAs) under the National Highway (Land & Traffic) Act 2002

- NHAs vested with statutory powers to regulate traffic and prevention of damage to NHs by vehicles
- NHAs to function as nodal officers for monitoring road safety measures
- Constitution of Task Force to address various issues on road safety.
  - Task Force to advise MoRTH with concrete suggestions so as to substantially improve road safety.
  - 2 meetings of the Task Force held so far
- Launching of a new trauma care course for doctors and paramedics.
  - 210 persons imparted training at SIMS during the current year.
Identification & Rectification of Black Spots

- Top black spots identified by 16 States:
  - Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Nagaland, Rajasthan, Tamil Nadu, Uttar Pradesh, West Bengal

- Of these States, 13 States account for more than 90% of road accident fatalities.

Workshops on Road Accidents Data

- Conducted by Transport Research Wing

**Objectives:**
- To ensure accurate and comprehensive data on road accidents.
- To ensure timely release of data on road accidents.

**Participants:** Police personnel involved in collection/consolidation/reporting of road accident data

**5 workshops in Delhi,** attended by 22 States/UTs: 30\textsuperscript{th} June 2011 to 8\textsuperscript{th} July 2011:
- Arunachal Pradesh, Chhattisgarh, Goa, Gujarat, Haryana, Himachal Pradesh, Jharkhand, Kerala, Manipur, Madhya Pradesh, Maharashtra, Meghalaya, Nagaland, Odisha, Punjab, Rajasthan, Sikkim, Uttarakhand, West Bengal, Chandigarh, Delhi, Puducherry

Contd….
• **11 State/district level workshops:** 30th July 2011 onwards:
  – Bihar, Chandigarh, Chhattisgarh, Delhi, Gujarat, Haryana, Himachal Pradesh, Madhya Pradesh, Rajasthan, Uttarakhand and West Bengal

• Training and workshops have helped reduce time lag in compilation and release data from about 2 years to less than 6 months from the close of reference year
Road Accident Data Management System, Tamil Nadu

- Introduced by Tamil Nadu Government under the aegis of World Bank
- a comprehensive traffic-management system
- RADMS software w.e.f 1.1.2009
  - Create GIS data base
  - Web based access and data flow
  - Seamless report generation/plot results on maps
  - Black Spots identification and analysis
Institutional Mechanism in Tamil Nadu to address Road Safety issues

• The Government of Tamil Nadu has constituted a 19-Member Apex Body known as State Road Safety Council under Section 215 of MVA
  – Members include Minister of Transport, Departments of Transport, Finance, Home, Highways, Municipal Administration, Police and Medical Service.

• Similarly, under MVA District Road Safety Councils (13 members) have been constituted in each district
  – Members include District Collector, Departments of Police, SRTU, Highways, Municipality, NGOs.
Enforcement

• Strengthen penalties/fines (amendment in MVA)
• Stringent check of overloading
  - Empower police to check overloading
  - Mandatory registration of criminal cases in overloading
• Ensure use of road safety devices (helmets, belts, etc.)
• Heavy penalty for drunken driving
  - conviction under section 185 of MVA should lead to imprisonment and suspension of driving licences
• Overcrowded passenger vehicles should culminate in cancellation of permits.
• School buses annual fitness checks to be mandatory.
Emergency Medical Services

• Need for a National Accident Relief Policy to ensure:
  - prompt relief
  - free trauma care
  - training of police, teachers, paramedics etc
• Unified Free National Medical Distress Call Number
• Monitoring and periodic audit of Accident Relief Services
• Provide crash rescue vehicles.
Education (Driver Training)

- Vital for success of road safety as 78% of road accidents caused by drivers fault
- Present driver training infrastructure inadequate
- MORTH provides financial assistance for IDTR
  - 13 such institutes were set up during 10th Plan and 9 in the 11th Plan
  - setting up more IDTR proposed in XII FYP
  - viable option to set up such institutes under PPP mode
- Make issue of driving licence objective/non discretionary
Road Design/Vehicle Fitness

- Make road design standards and guidelines consistent with safety requirements & international best practices.
- All State/National Highways to carry pavement markings and road signs as per IRC standards
- Institutionalize courses for RS Auditors
  - Certification courses for RS Auditors
- Subject entire network of NH/SH to RSA
- Accident investigation
  - streamline data collection through GPS/computer interface
  - need for road accident reconstruction/investigation.
- Introduce mandatory Inspection & Certification (I&C) for all categories of vehicles in use in a phased manner
Thank you