

# ROAD SAFETY GOOD PRACTICES IN INDIA

The following interventions were deployed across the 13 interventions included in the study



INSTITUTIONAL MECHANISM	ENGINEERING	ENFORCEMENT	EDUCATION/ ENGAGEMENT	EMERGENCY MEDICAL CARE
<p><b>Development of Plans:</b></p> <ol style="list-style-type: none"> <li>1. Development of Institutional Development and Strengthening Action Plan</li> <li>2. Creation of a Dedicated Road Safety Fund</li> <li>3. Notification of rules for Non-lapsable Road Safety Fund</li> <li>4. Establishing a State-level Center of Excellence to disseminate sector-wise knowledge</li> </ol> <p><b>Type of Private Sector Involvement:</b></p> <ol style="list-style-type: none"> <li>1. DBFOMT (Design- Build- Finance- Operate- Maintain- Transfer)</li> <li>2. OPRC (Output and Performance-based Road Contracts)</li> <li>3. Funding through CSR</li> </ol>	<p><b>Road design:</b></p> <ol style="list-style-type: none"> <li>1. 2+1 Lanes for Safe Overtaking</li> <li>2. Right Turn Protected Lanes</li> <li>3. Delineators</li> <li>4. Rumble Strips</li> <li>5. Road Studs</li> <li>6. Tactile Edge Lines (TEL)</li> <li>7. Polychrome convex mirrors</li> <li>8. Creation of Freight Parking Spots</li> <li>9. No Parking Zones</li> <li>10. Removal of Dangerous Roadside objects</li> <li>11. Street Lights for night time visibility</li> <li>12. Crash Barriers</li> <li>13 Bus-stop Redesigns with Bays</li> <li>14. Road safety considerations in the design and construction phase</li> </ol>	<p><b>Monitoring:</b></p> <ol style="list-style-type: none"> <li>1. Training of officials on the "Use of Monitoring Cameras"</li> <li>2. Deployment of Traffic Wardens at schools</li> <li>3. Active Patrolling</li> <li>4. Use of Interceptor Vehicles</li> <li>5. Automatic Detection of Missing Permits, Missing Vehicles, and Violations</li> <li>6. State-level Control Room</li> <li>7. Use of SMART Patrolling vehicles</li> <li>8. ITMS Interventions</li> <li>9. Placing Highway Outposts</li> </ol>	<p><b>Trainings:</b></p> <ol style="list-style-type: none"> <li>1. Post Crash Care and Road Safety (especially for adjacent communities)</li> <li>2. First Aid Delivery</li> <li>3. Forensic Crash Investigation (for police personnel)</li> <li>4. Training in Basic Crash Prevention Techniques (for Truck drivers)</li> <li>5. ADAPT Training for Drivers</li> <li>6. Refresher training through workshops whenever required</li> <li>7. Special training in blackspot regions for school children, bus drivers, conductors, auto drivers/2W/STU drivers/stage carriage drivers, police training constables, and LLR Applicants.</li> <li>8. Upgradation of driver training institutes</li> <li>9. Training of Contractors, Road Engineers, Concessionaires, and Consultants</li> </ol>	<p><b>Trainings:</b></p> <ol style="list-style-type: none"> <li>1. First Aid Delivery (especially for adjacent communities)</li> <li>2. Training for Doctors in District hospitals, PHCs, and Taluk Hospitals</li> <li>3. Training for medical personnel at Identified Emergency Medical Facilities</li> <li>4. Airway, Breathing, Circulation, Disability, and Exposure (ABCDE) Training for Healthcare Professionals</li> <li>5. Basic Trauma Life Support (BTLS) for police professionals</li> <li>6. First Responders Training program</li> </ol>
<p><b>Strategies:</b></p> <ol style="list-style-type: none"> <li>1. Creation of a Special Task Force on Road Safety to assess and prevent road crashes</li> <li>2. Collaboration with Local Experts known as faculty partners</li> <li>3. Survey of Enforcement Measures</li> <li>4. Survey for analyzing causes of road crashes</li> <li>5. Deployment of quantifiable measures for impact</li> </ol>	<ol style="list-style-type: none"> <li>1. Upgrading and placing Road Signages wherever required</li> <li>2. Road Markings                             <ol style="list-style-type: none"> <li>a. Yellow Stripes Painting</li> <li>b. Yellow and White Strips</li> <li>c. Ladder Lines</li> <li>d. Zig-Zag Lines</li> <li>e. Box Markings</li> <li>f. Edge Lines</li> <li>g. 3D Pavements</li> <li>h. Colored Pavements</li> <li>i. Chevron markers</li> <li>j. Retro-Reflective Markers</li> <li>k. Three-set Deflector Arrows</li> </ol> </li> </ol>	<p><b>Devices:</b></p> <ol style="list-style-type: none"> <li>1. Breathalyzers (with printer)</li> <li>2. Speed Guns (laser and radar)</li> <li>3. Speed Traps (fixed and actively relocatable)</li> <li>4. Automated Number Plate Recognition (ANPR)</li> <li>5. Vehicle-activated signs (VASs)</li> <li>6. Red Light Violation Detectors</li> <li>7. Electronic Weigh-in Bridge</li> <li>8. Variable Message Signs (VMS)</li> <li>9. Digital Camera</li> <li>10. Accessible Push Buttons for Pedestrian Crossing</li> <li>11. Reflective Jackets</li> </ol>	<p><b>Awareness Methods:</b></p> <ol style="list-style-type: none"> <li>1. Media Brochures</li> <li>2. Short Films</li> <li>3. Public Announcements</li> <li>4. Street Plays</li> <li>5. Mandatory Short Films at Movie Theatres</li> <li>6. Public Meetings</li> <li>7. Pamphlets and Leaflets</li> <li>8. Radio Campaigns</li> <li>9. Multilingual Audio Messages at Toll Plaza</li> </ol>	<p><b>Emergency Medical Facilities:</b></p> <ol style="list-style-type: none"> <li>1. Mapping all Emergency Medical Facilities</li> <li>2. Identification of facility gaps</li> <li>3. Identification of existing medical colleges and hospitals for training in trauma care</li> <li>4. Establishing new facilities (TCC)</li> <li>5. Upgrading existing facilities (TCC)</li> <li>6. Designating a hospital in each District as TCC</li> </ol>
<p><b>Data-driven interventions</b></p> <ol style="list-style-type: none"> <li>1. Road Safety Audits for repeated blackspots (including manual and third-party audits)</li> <li>2. Forensic Crash Investigation for Root Cause Analysis Matrix</li> <li>3. Risk Assessment using automated iRAP techniques</li> <li>4. Crash Vulnerability Audits (CVAs)</li> </ol>	<p><b>Intersection redesign:</b></p> <ol style="list-style-type: none"> <li>1. Tactical Redesigning</li> <li>2. Creation of Refuge Islands</li> <li>3. Installation of Blinkers in Median Gaps</li> <li>4. Creation of Splitter Islands</li> <li>5. Construction of Raised (table-top) crossings</li> <li>6. Incorporating Traffic Channelization and Speed Calming Measures</li> <li>7. Installation of Retroreflective pavement markings</li> <li>8. Grade-separated Pedestrian Crossings</li> </ol>	<p><b>Risk Factor Management:</b></p> <ol style="list-style-type: none"> <li>1. Dynamic Speed limits</li> <li>2. Training Officials on Speed Management Techniques</li> <li>3. Police Counseling to non-users of helmets and seat belt</li> <li>4. Strict Rear Seat Belt enforcement on highways</li> <li>5. E-Challan system</li> </ol>	<p><b>Other Interventions:</b></p> <ol style="list-style-type: none"> <li>1. Road Safety Hackathon</li> <li>2. "No Helmet, No Petrol" rule</li> <li>3. Awareness Programs at Schools for Children and their Guardians</li> <li>4. Inclusion of Road Safety chapters in the curriculum</li> <li>5. Road Safety Fairs</li> <li>6. Road Safety Short Film Festival</li> <li>7. Traffic Education and Awareness Mobile (TEAM) Vans</li> </ol>	<p><b>Ambulance Service:</b></p> <ol style="list-style-type: none"> <li>1. Ensuring all ambulances are equipped with state-of-art-equipments</li> <li>2. Deployment and stationing of ambulances near high-fatality zones</li> <li>3. Reduction in ambulance response time by utilization of ambulance deployment tools</li> </ol>
<p><b>Database Management:</b></p> <ol style="list-style-type: none"> <li>1. IT-based Trauma Registry</li> <li>2. Road Accident Database Management System (iRAD/e-DAR 2023)</li> <li>3. Accident and Enforcement Data Collection</li> </ol>				<p><b>Other Key Interventions:</b></p> <ol style="list-style-type: none"> <li>1. Detailed Action plan for health departments</li> <li>2. Cashless Treatment of road crash victims</li> <li>3. Safe Zone Helpline</li> <li>4. Regular Eye testing and general health checkups for Truck Drivers</li> <li>5. Strengthening Emergency Care systems - e.g., Tamil Nadu Accident and Emergency Initiative</li> </ol>