

# Editorial

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## National Ambulance Code: Toward Safe Roads and Saving Lives

India records more number of deaths from road traffic accidents than most other countries in the world. In addition, with one of the highest motorization growth rate in the world accompanied by rapid expansion in road network and urbanization over the years, our country is faced with serious impacts on road safety levels. The total number of road accidents increased by 2.5% from 489,400 in 2014 to 501,423 in 2015. The total number of persons killed in road accidents increased by 4.6% from 139,671 in 2014 to 146,133 in 2015. Road accident injuries have also increased by 1.4% from 493,474 in 2014 to 500,279 in 2015. The severity of road accidents, measured in terms of number of persons killed per 100 accidents, has increased from 28.5 in 2014 to 29.1 in 2015.

To address the ever-growing concern of untimely deaths, casualty evacuation, and treatment en route, the government embarked on improving the state of ambulances in India. The Ministry of Road Transport and Highways, Government of India, had setup five Working Groups on the 4Es of road safety, i.e., Education, Engineering (Vehicles), Enforcement, and Emergency Care, on the recommendation of the National Road Safety Council. The Working Group on Emergency Care in its report had observed that the real concept of an ambulance is missing in India. Existing ambulances are more like transport vehicles, and any vehicle suitable to lay a patient is called an ambulance without consideration to the overall ambulance design. Research has shown that ambulances are more likely to be involved in motor vehicle collisions, resulting in injury or death than either fire trucks or police cars. Unrestrained occupants, particularly those riding in the patient-care compartment, are particularly vulnerable. It is, therefore, all the more necessary in an ambulance to take care of occupant safety, patient care ergonomics, medical equipment selection and placement, vehicle engineering and integration, etc.

The Working Group recommended that there is a need to formulate the "National Ambulance Code" with necessary amendments in the Central Motor Vehicle Rules (CMVR) that defines the constructional and functional requirements for road ambulances. In view of this, an Expert Committee under the Chairmanship of Dr Shakti K Gupta, Head, Hospital Administration and Medical Superintendent of the All India Institute of Medical Sciences (AIIMS), New Delhi, and comprising experts from AIIMS, Automotive Research Association of India, Ministry of Road Transport and Highways, Ministry of Health & Family Welfare, etc., was constituted by the Ministry of Road Transport and Highways to formulate the "National Ambulance Code." The following important points were highlighted during these discussions:

- There is no standardization of ambulance design across various procurements in the country and the industry is forced to reintegrate their vehicles every now and then.
- Most of the ambulance specifications are written by medical specialists who are unable to translate the user requirements in automobile terminology, thereby resulting in a huge gap between the user expectations and industry deliverability.
- There are certain inherent limitations in the existing laws, which allow goods vehicles to be converted as ambulances for passenger application without incorporating essential safety features in patient compartment like side door, forward backward seating, occupant restraints, certified electrical systems, etc.

During the preparation of the Ambulance Code guidelines, ambulance standards from across the globe were taken into consideration and a review of the existing legislation in India with regard to ambulances was done. There were few glaring observations that emerged from discussions and field research.

The National Ambulance Code classifies Road Ambulances into four types, viz:

1. Type A Road Ambulance: Medical First Responder  
Road ambulance designed to provide emergent out-of-hospital medical care to patients when stationary. This vehicle maybe any CMVR-approved Category M or L vehicle suitable for the terrain to be used in, but will not have the capability to transport patients in supine state or provide them medical care inside the vehicle.
2. Type B Road Ambulance: Patient Transport Vehicle  
Road ambulance designed and equipped for the transport of patients who are not expected to become emergency patients.

3. Type C Road Ambulance: Basic Life Support Ambulance

A vehicle ergonomically designed, suitably equipped, and appropriately staffed for the transport and treatment of patients requiring noninvasive airway management/basic monitoring.

4. Type D Road Ambulance: Advanced Life Support Ambulance

A vehicle ergonomically designed, suitably equipped, and appropriately staffed for the transport and treatment of emergency patients requiring invasive airway management/intensive monitoring.

The category of First Responder, which also includes two wheeled ambulances, has been specially introduced for the first time in India to cater to the need of providing prompt medical care in congested by-lanes and high traffic areas. Special care has been given to Care Ergonomics, Patient Safety, Oxygen System Design, Infection Control, Crash Rescue, etc., in the Code. The end objective of this code was to ensure uniformity and standardization in ambulance design and ensure the patients a minimum level of care as per the ambulance designation when appropriately staffed and equipped.

This committee submitted the draft document in April 2013 and this was subsequently approved by the Ministry as Automotive Industry Standard (AIS):125 in June 2014.

In 2016, the Ministry of Road Transport and Highways, in collaboration with the Health Ministry, launched a notification for the National Ambulance Code, i.e., applicable for all the ambulances across the country, and existing ambulances shall have to be standardized by April 1, 2018. Presently, various organizations are abiding by these guidelines and the actual impact will be seen in years to come. We are very sure that this ambulance code will pave way for safer roads and faster evacuation.

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