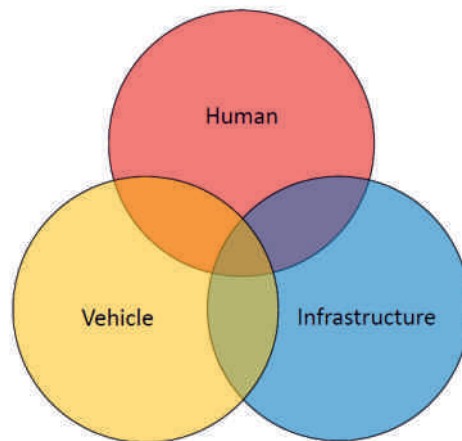


Road traffic accidents are primarily influenced by three main factors:

- Human (drivers, riders, vehicle occupants, pedestrians and cyclists)
- Vehicle (vehicle design/structure, mass, equipment such as seatbelts or tires, etc.)

- Infrastructure/Environment (hereinafter called “infrastructure” and comprising roadway, signage, weather, conditions affecting visibility, etc.)

Accidents are caused by the mal-function/failure/error by one or more of these above factors.



An accident is a man made tragedy and at some level, all accidents are preventable. There may be a lapse on the part of the driver or the victim, directly or indirectly who was unable to exercise control over self or vehicle.

However, other factors or causes also play their part in the occurrence of the tragedy. As such, there may be more than one cause responsible for an accident. There are other human interventions/reasons besides driver(s) of the vehicle in the occurrence of an accident.

- A study was conducted to identify various causes of accidents. These factors can be broadly categorised into the following:-
1. Driver’s fault.

2. Victim’s fault.
3. Vehicle mechanical fault.
4. Road environment fault.
5. Road condition / faulty road design / road engineering.
6. Other reasons.

- There may be more than one of these factors responsible for an accident.
- An analysis done on the causes of fatal accidents that have occurred during the year 2016 **found that around 45.1 % of the total causes account for driver’s fault.**
- **In 48.2% of the causes, the real cause was not known. This figure mostly comprises hit and run cases.**

- Only 2.1% causes are related to road environment factors while 1.5% are related to faulty road engineering/design.
- 2% accidents were solely due to victim's fault and only 0.6% are due to mechanical fault. {Figure 7.1 (a)}.

Figure 7.1 (a): Causes of Accidents-2016

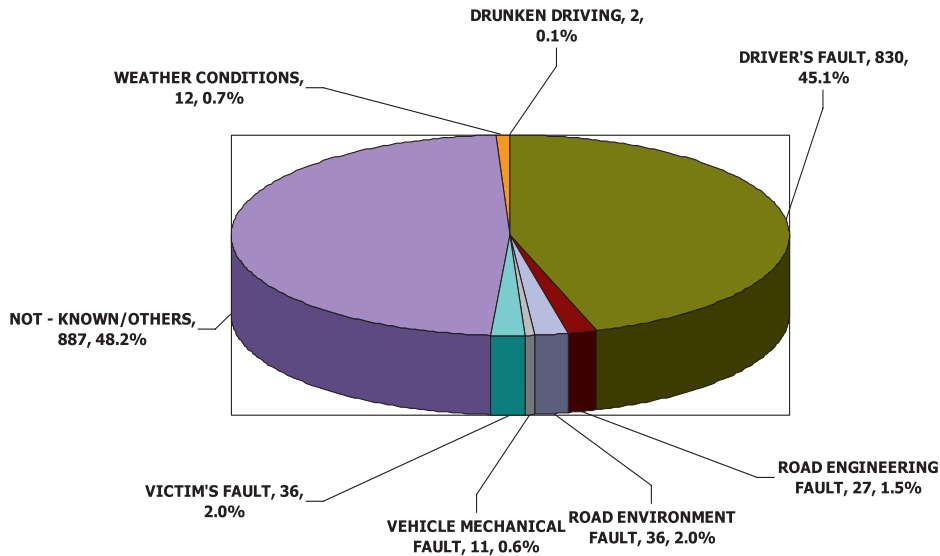
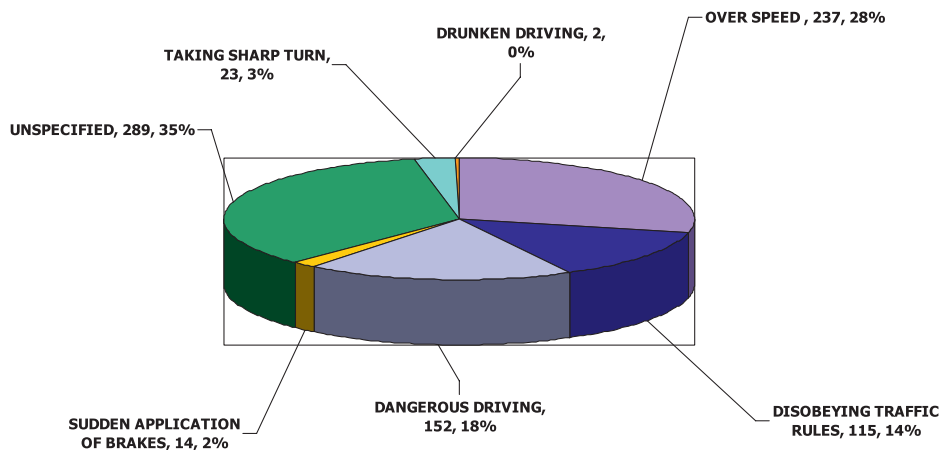


Figure 7.1 (b)

DRIVER'S FAULT

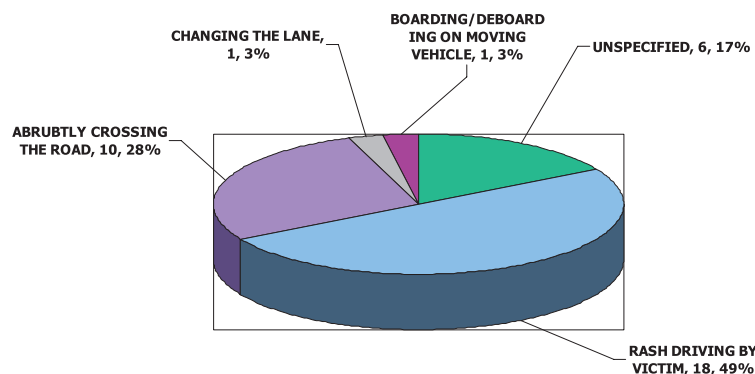


Driver's Fault:

- This category refers the accused driver's negligence that is found primarily responsible for committing an accident. This can further be broken down into:-
 - Over speed of vehicle.
 - Disobeying Traffic Signals.
 - Dangerous / rash driving.
 - Lane indiscipline.
 - Sudden application of brakes.
 - Drunken driving.
 - While reversing of vehicle.
- Of 830 total cases under driver's fault; **18% were caused due to dangerous driving, around 28% were caused due to over speeding**, around 14% were due to disobeying traffic rules, around 3% due to lane indiscipline and 2% due to sudden application of brakes. In around 35% of such causes, the fault was not specified. In 6 cases i.e. 1% of the causes of driver's fault were confirmed cases of drunken driving.

Figure7.1(c)

VICTIM'S FAULT

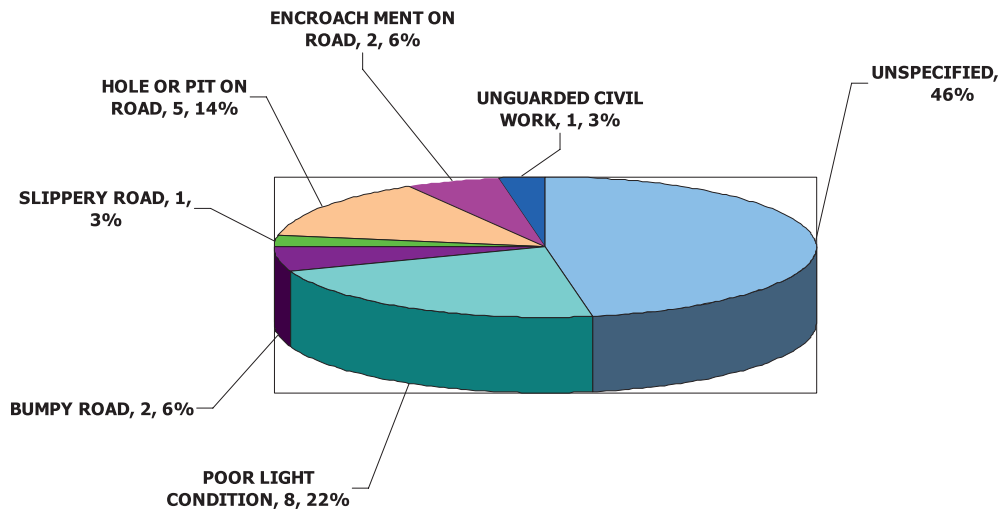


Victim's Fault:

- Victim's fault relates to an act/omission/lapse etc. on the part of either driver/rider of the vehicle who has sustained damage/injury (or death). This factor can further be broken down as:-
 - Rash driving by victim.
 - Abruptly crossing the Road.
 - Lane indiscipline.
 - Boarding/de-boarding a moving vehicle.
 - Sudden application of brakes.
 - Victim vehicle without light.
 - Drunken driving.
- In the analysis of 36 cases (2% of total causes) of 'victim's fault', it was found that in **49% cases the victims were responsible for rash driving, 28% cases were found to be abruptly crossing the road** while around 17% causes were not specified.

Figure 7.1 (d)

ROAD ENVIRONMENT FAULT



Road Environment Fault:

- 'Road Environment Fault, refers to ad-hoc or temporary factors/conditions that existed on road which are not congenial to smooth and safe road traffic and that may lead to an accident. This factor can further be broken down as:-

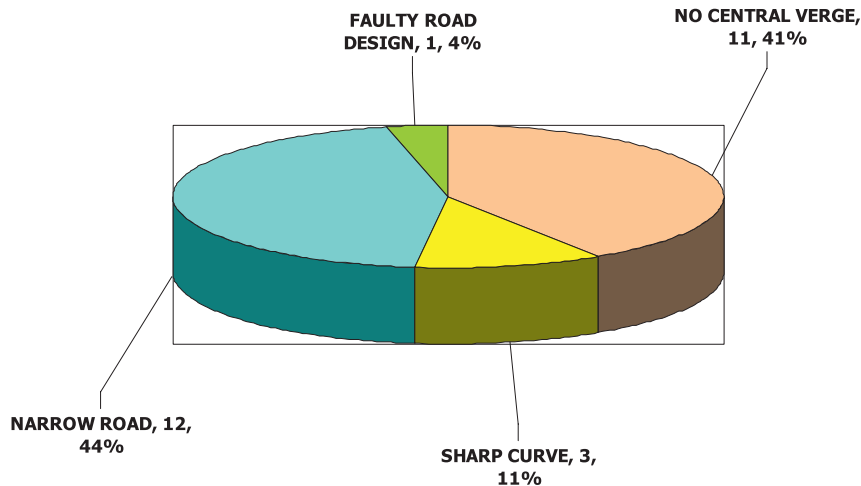
1. Poor Light Condition
2. Weather condition.
3. Unguarded civil work etc.

4. Slippery road.
5. Light reflection from front.
6. Encroachment on road.

- An analysis of 36 cases (**2% of total causes**) of 'road environment fault' showed that 22% cases were due to poor light condition, 3% cases were due to slippery road, 6% due to bumpy road condition,. Around 46% cases of 'road environment fault' were not specified.

Figure 7.1 (e)

FAULTY ROAD CONDITION / DESIGN



Faulty Road Condition / Design:

- 'Faulty Road Condition / Design', refers to factors or conditions which are either **part of lay out or design or defects in the construction of road**. These factors/conditions may arise before or after construction of the road which are not congenial to smooth and safe road traffic and may, therefore, lead to accident. This factor can further be broken down as:-
 1. No central verge etc.
 2. Hole or pit on road.
 3. Faulty road design.
 4. Narrow road.
 5. Sharp curve.
- **Faulty road engineering/design are responsible for 27 i.e. 1.5% of total causes of fatal accidents in the year 2016.** Out of these causes, around 44% fatal accidents were caused due to narrow road, 41% fatal accidents were due to no central verge on road, 11% were due to sharp curve on the road.
