## Road Accidents in India-How can we Save the Life

In India, 18 Road Accidents happen every hour, a worrying number that should be worked on. These fatalities are due to people not following traffic rules and inadequate medical facilities such as no nearby hospitals or ambulances reaching the place.

We will look at the case study of the state of **Uttar Pradesh** to look at the problems and the solutions we can work on to help in the case

### Why Uttar Pradesh?

Uttar Pradesh recorded the highest number of accident fatalities in 2021. With 11.3% of the total accidents that happen on the national highway and leading to the loss of 21,227 lives which is a huge number in a calendar year and can be stopped if necessary actions are taken.

A huge number of fatalities from traffic accidents recorded by UP happened on interstates and state highways. The state is ranked first in the nation for deadly traffic crashes due to a combination of poor road engineering and widespread infractions of traffic laws.

We will get a deeper look into the places which are hotspots of the accidents and the hospitals near it and whether we can do something to help it.

The top 5 districts in which the accidents happened were:-

- 1. Lucknow 1638
- 2. Kanpur City 1588
- 3. Prayagraj 1380
- 4. Agra 1273
- 5. Bareilly 1150

The Lucknow-Agra Expressway, National Highway 2, and National Highway 27, Delhi-Saharanpur Highway, National Highway 24 are some of the state's busiest accident-prone roads. Numerous accidents have occurred on these highways and roads as a result of overspeeding, irresponsible driving, and poor road conditions.

In Uttar Pradesh, it is also thought that busy crossroads, railroad crossings, and heavily inhabited regions are accident hotspots.



Let us see the 5 hospitals which cater to each of the highways and whether we can use any air transport for the same:-

# Lucknow-Agra Expressway:-



## Hospitals that are:-

- 1. Uvs hospital
- 2. Emergency Care Unit Expressway
- 3. Maa Hospital
- 4. GOGA JI Hospital
- 5. NEW RAMA HOSPITAL
- 6. Vindhya Hospital
- 7. Eshahospital1.
- 8. Lucknow Hospital
- 9. Queen Marys Hospital(GOVT)
- 10. लयबा हॉस्पिटल एंड ट्रामा सेंटर
- 11. Shree Krishna Hospital Agra
- 12. Upadhyay Hospital
- 13. Shree Krishna Hospital
- 14. Apollomedics Super Speciality Hospitals
- 15. Medwell Hospital
- 16. Shanti Ved Institute Of Medical Sciences | Super Speciality Tertiary Care Hospital
- 17. Synergy Plus Hospital
- 18. Highway Hospital & Trauma Centre Pvt. Ltd.
- 19. AYU Hospital
- 20. NEW LIFE HOSPITAL
- 21. Orion Hospital
- 22. Site of Vishal multispecialty hospital

- 23. Ujala Cygnus Rainbow Hospital Best Hospital in Agra
- 24. Sushma Hospital
- 25. SKD Hospital
- 26. Avadh Hospital & Heart Centre
- 27. Kamayani Hospital
- 28. New Agra Hospital
- 29. Regency Multi Super Speciality Hospital Lucknow
- 30. Gandhi Nagar Hospital
- 31. Jeevan Rekha Hospital
- 32. Medanta Hospital Lucknow
- 33. PGI Hospital Lucknow
- 34. St Joseph Hospital
- 35. Lotus Super Speciality Hospital
- 36. sai ambulance services Lucknow
- 37. Shakti Multispeciality Hospital
- 38. Amit Jaggi Memorial Hospital

We will look at the hospitals between Lucknow and Agra and check if we need something

Something to see is that Kanpur is also nearby on this highway so we can also look at that place

Shree Krishna Hospital and Emergency Care Unit Expressway both are **132** km away so Technically if any accidents happen it would be just **66** Km away from the nearest hospital the ssb Trauma Center in firozabad is **96** km away from Emergency Care Unit so we could use ambulances as calling the plane and transporting would lead to a long time

Goga Ji Hospital and Emergency are just **43** km away so we could use an ambulance for this also.

NEW RAMA and Goga Ji are **71 Km** away so we could use an ambulance for the road transport HOSPITAL

Uvs hospital and New Rama Hospital are just 60 Km away so we could use the ambulances.

We have an extensive network of hospitals located on the highway so if we think of air services on the Agra Lucknow highway then it would cause a waste of resources as the maximum distance between 2 tertiary hospitals are **66 Km** so it would take an hour if we call an ambulance and transport it would be around an hour so instead of using airplane services we could make the ambulance service more extensive by either improving the number of ambulances in the service or making the road more better

# **Delhi-Dehradun Highway**

These hospitals are along the side of New Delhi

- 1. Fortis Hospital Noida: This hospital is located about 20 km from the expressway and provides a range of medical services, including cardiology, neurology, and oncology.
- 2. Yatharth Super Speciality Hospital: This hospital is located about 30 km from the expressway and offers services in areas such as neurology, gastroenterology, and urology.
- Metro Hospitals and Heart Institute: This hospital is located about 25 km from the expressway and provides services in areas such as cardiology, neurology, and oncology.
- Kailash Hospital and Heart Institute: This hospital is located about 20 km from the expressway and offers services in areas such as cardiology, orthopedics, and urology.

#### Some next which are in between are

- Subharti Hospitals is the closest hospital in Meerut located just 55 km away from Delhi which means if an accident happens in between there is a good chance of saving people.
- 2. Heritage Hospitals: This hospital is located in the town of Moradabad, which is about halfway between Delhi and Dehradun. It provides a range of medical services, including cardiology, neurology, and pulmonology.
- 3. Amrit Hospital: This hospital is located in the city of Roorkee, which is about two-thirds of the way between Delhi and Dehradun. It offers services in areas such as cardiology, neurology, and orthopedics.
- 4. R G Stone Urology and Laparoscopy Hospital: This hospital is located in the city of Haridwar, which is about three-fourths of the way between Delhi and Dehradun. It specializes in urology and laparoscopy procedures.
- 5. Brij Medical Center: This hospital is located in the town of Muzaffarnagar, which is about halfway between Delhi and Moradabad. It provides services in areas such as cardiology, neurology, and oncology.
- 6. Shanti Gopal Hospital, Baghpat: This hospital is located in the town of Baghpat, which is about 60 km from Saharanpur and can be accessed from the expressway. It provides services in areas such as cardiology, neurology, and urology.
- 7. Chandan Hospital, Roorkee: This hospital is located in the city of Roorkee, which is about 40 km from Saharanpur and can be accessed from the expressway. It offers services in areas such as cardiology, neurology, and orthopedics.
- 8. K. K. Hospital
- 9. Jindal Hospital: both of them are located near Muzaffarnagar which could be connected via Meerut and Delhi and they are also near Roorkee so we could connect Dehradun and Roorkee.

#### This is located in Dehradun:-

- 1. Max Super Speciality Hospital, Dehradun: This hospital is located about 10 km from the expressway and provides a range of medical services, including cardiology, neurology, and orthopedics.
- 2. CMI Hospital, Dehradun: This hospital is located about 20 km from the expressway and offers services in areas such as cardiology, neurology, and gastroenterology.
- 3. Synergy Hospital, Dehradun: This hospital is located about 25 km from the expressway and provides services in areas such as cardiology, pulmonology, and gastroenterology.
- 4. Mahant Indiresh Hospital, Dehradun: This hospital is located about 30 km from the expressway and offers services in areas such as cardiology, neurology, and urology.
- 5. Himalayan Institute Hospital Trust, Dehradun: This hospital is located about 35 km from the expressway and provides a range of medical services, including cardiology, neurology, and oncology.

So On this route, we would have a lot of hospitals on the road but the problem in this road is that hospitals are not exactly near the highway but they are in a city located nearby so we should have more hospitals on the highway so they could be easily located into the cities like Meerut, Roorkee, Muzzafarnagar.

# **National Highway 27**

NH 27, also known as National Highway 27, is a major highway in Uttar Pradesh that connects the city of Lucknow to the city of Gorakhpur. Here are some of the towns in Uttar Pradesh that are connected by NH 27:

Lucknow

Kanpur

Gorakhpur

Faizabad

Ayoyadhya

Prayagraj

These are all the cities connected

- 1. Sahara Hospital, Lucknow Located about 2 km from NH 27
- 2. Mayo Hospital, Lucknow Located about 3 km from NH 27
- 3. Vivekananda Polyclinic & Institute of Medical Sciences, Lucknow Located about 2 km from NH 27
- 4. Balrampur Hospital, Lucknow Located about 5 km from NH 27
- 5. KGMU Hospital, Lucknow Located about 3 km from NH 27
- 6. Chandra Heart & Maternity Hospital, Barabanki Located about 2 km from NH 27

- 7. Prakash Hospital, Raebareli Located about 2 km from NH 27
- 8. Janta Hospital, Amethi Located about 3 km from NH 27
- 9. Dhanvantari Hospital and Trauma Center, Sultanpur Located about 1 km from NH 27
- 10. Awadh Hospital, Faizabad Located about 2 km from NH 27
- 11. Rama Medical College Hospital and Research Centre, Kanpur Located about 15 km from NH 27
- 12. LLRM Medical College and Hospital, Meerut Located about 10 km from NH 27
- 13. Rohilkhand Medical College and Hospital, Bareilly Located about 15 km from NH 27
- 14. Hind Institute of Medical Sciences, Barabanki Located about 3 km from NH 27
- 15. Moti Lal Nehru Medical College, Allahabad Located about 7 km from NH 27
- 16. SRMS Institute of Medical Sciences, Bareilly Located about 10 km from NH 27
- 17. Maharana Pratap Group of Institutions, Kanpur Located about 5 km from NH 27
- 18. Teerthanker Mahaveer Medical College and Research Centre, Moradabad Located about 8 km from NH 27
- 19. Shri Ram Murti Smarak Institute of Medical Sciences, Bareilly Located about 12 km from NH 27
- 20. GSVM Medical College and Hospital, Kanpur Located about 10 km from NH 27
- 21. Ayodhya Medical College, Ayodhya Located about 7 km from NH 27
- 22. Nav Jeevan Hospital, Ayodhya Located about 5 km from NH 27
- 23. Jeevan Jyoti Hospital, Ayodhya Located about 3 km from NH 27
- 24. Aastha Hospital, Firozabad Located about 2 km from NH 27
- 25. Shanti Gopal Hospital, Ghaziabad Located about 3 km from NH 27 (near Delhi) We can see that there is a good hospital distribution on this highway so we could expect good services whenever an accident happens.

dhiana garh Kurukshetra Delhi Nepal Bareilly Kathmandu Lucknow Ban P Dha Ranchi Bhopal India Raipur Nagpur

NH 19 (connecting Delhi and Kolkata)

#### Lucknow:

Sanjay Gandhi Postgraduate Institute of Medical Sciences - Distance from NH-2: 5 km Dr. Ram Manohar Lohia Institute of Medical Sciences - Distance from NH-2: 6 km

KGMU Hospital - Distance from NH-2: 7 km

Sahara Hospital - Distance from NH-2: 6 km

Kanpur:

Rama Medical College Hospital and Research Centre - Distance from NH-2: 10 km

GSVM Medical College - Distance from NH-2: 8 km

Regency Hospital - Distance from NH-2: 12 km

Kanpur Medical Centre - Distance from NH-2: 9 km

Etawah:

Jai Hospital and Research Centre - Distance from NH-2: 3 km

Dr. Sudhir Chandra Sur Degree Engineering College and Hospital - Distance from NH-2: 5 km

T. D. C. Hospital - Distance from NH-2: 7 km

Samanvay Hospital - Distance from NH-2: 8 km

Agra:

Pushpanjali Hospital and Research Centre - Distance from NH-2: 4 km

SN Medical College - Distance from NH-2: 8 km

Sarvodaya Hospital - Distance from NH-2: 7 km

Bhagwan Mahaveer Cancer Hospital and Research Centre - Distance from NH-2: 8 km Firozabad:

C. M. Hospital - Distance from NH-2: 2 km

Life Line Hospital - Distance from NH-2: 5 km

Jain Hospital - Distance from NH-2: 6 km

Prasad Hospital - Distance from NH-2: 3 km

tertiary hospitals located between Lucknow and Kanpur, along NH-2:

- 1. Ganesh Shankar Vidyarthi Memorial Medical College (GSVM), Kanpur 4 km from NH-2, 80 km from Lucknow, 10 km from Kanpur
- 2. Rama Medical College Hospital & Research Centre, Kanpur 2.5 km from NH-2, 75 km from Lucknow, 18 km from Kanpur
- 3. Jwala Hospital and Trauma Center, Unnao 5 km from NH-2, 40 km from Lucknow, 35 km from Kanpur
- 4. Saraswati Hospital, Rania, Kanpur Dehat 9 km from NH-2, 85 km from Lucknow, 20 km from Kanpur

Kanpur and Lucknow are connected well by the highway.

Madhuraj Hospital, Firozabad: Distance from Agra - 54 km, Distance from Etawah - 75 km, Distance from NH2 - 2 km

## Kanpur and Etawah also have hospitals

Saraswati Hospital and Trauma Centre is located in the Firozabad district. It is about 73 km from Kanpur and about 70 km from Etawah and is located near the NH-2 highway at a distance of about 5 km.

Etawah and Agra are also connected.

So the maximum distance is 73 km so if we use an air ambulance it would be quite a hassle and we have to keep one ready so only due to this connectivity I don't think so we would need extensive air ambulance services.

## **National Highway 24**

a list of tertiary hospitals in each major city connected by NH24 in Uttar Pradesh, along with their distances from each other and from NH24:

Ghaziabad

Yashoda Hospital (12 km from NH24)

Columbia Asia Hospital (5 km from NH24)

Kailash Hospital (3 km from NH24)

Pushpanjali Crossley Hospital (9 km from NH24)

Hapur(Just 40 min away from Ghaziabad)

Sarvodaya Hospital (6 km from NH24)

Yashlok Hospital (1 km from NH24)

Chandralok Hospital (4 km from NH24)

Anand Hospital (2 km from NH24)

Moradabad(107 KM away from Hapur)

Fortis Hospital (10 km from NH24)

Prakash Hospital (3 km from NH24)

Suman Hospital (5 km from NH24)

KMC Hospital (2 km from NH24)

Bareilly(98 Km from Moradabad)

Shri Ram Murti Smarak Hospital (6 km from NH24)

Rohilkhand Medical College and Hospital (9 km from NH24)

Akash Ganga Hospital (4 km from NH24)

MM Jauhari Hospital (2 km from NH24)

Sitapur(88km from ShahJahanPur)

Eram Hospital (4 km from NH24)

Tulsi Hospital (2 km from NH24)

Dr. Ved Prakash Memorial Hospital (1 km from NH24)

Shree Ram Hospital (3 km from NH24)

Lucknow(90 Km from Sitapur)

Sanjay Gandhi Postgraduate Institute of Medical Sciences (7 km from NH24)

Dr. Ram Manohar Lohia Institute of Medical Sciences (5 km from NH24)

Sahara Hospital (2 km from NH24)

Vivekananda Polyclinic and Institute of Medical Sciences (8 km from NH24)

Shahjahanpur(78 Km from Bareilly)

Saraswati Hospital (5 km from NH24)

Sahara Hospital (3 km from NH24)

Goyal Hospital (6 km from NH24)

Dr. Rajendra Prasad Memorial Hospital (2 km from NH24)

We saw that all the cities were well connected with each other having only a distance of 90 to 100 km so if we use air ambulance it would not be very feasible,

First, if each is 90-100 then the maximum distance which needs to be covered will be 50 km but the major thing will be the availability of ambulances on the highways the thing is people don't die due to hospitals being far they die due to untimely response so instead of introducing air services I should think we can go for robust ambulance system.

Even if we take the example of an air ambulance for an accident happening between Sitapur and Lucknow

Amausi Airport, Lucknow: It is the major airport serving Lucknow and is located around 70 km from Sitapur and 25 km from NH24 can be used for serving it would take it approximately , assuming that everything is optimal and there are no delays or issues, a flight on a small aircraft such as a Cessna 172 could be ready to take off in as little as 10 to 15 minutes after completing the pre-flight checks and clearance from air traffic control and take another 15 minutes to reach and another 15 mins to come back making it 45 minutes

The nearest tertiary care hospital Medanta Lucknow Hospital is 7km far which would take another 10-15 min so in total this would be around an **hour** compared to the 1hr 20 or 1hr 30 the road travel would take so according to me the ambulance network can be made more robust rather than air services.