

## Problem Statement:

### Identify the Problem:

The main problem is the delay in patient transportation to hospitals in emergency situations, especially in rural areas where main hospitals are approximately 45-60 km away. In emergencies such as lung disease, patients need immediate hospitalization. Currently, when a patient calls 108, the ambulance takes 35-40 minutes to reach the location and another 1:30 minutes to reach the hospital, significantly increasing the risk of patient mortality.

### Context and Background:

Traditional ambulances are often insufficient in number and located far from the main hospitals. This is particularly problematic during peak demand periods or in remote areas, leading to delays in response times and potentially compromising patient outcomes.

### Scope of the Problem:

This problem affects residents and visitors of [specific geographical area], including both urban and rural populations. Patients in critical conditions, such as accidents or medical emergencies, are directly impacted by the delays in receiving timely medical transportation.

### Current Solutions and Their Limitations:

Existing solutions include a fleet of traditional ambulances operated by healthcare providers and emergency response services. However, these solutions have several limitations:

- \*Insufficient number of ambulances to meet peak demand.
- \*Inadequate geographical coverage, particularly in remote or underserved areas.
- \*Lack of real-time tracking and coordination, leading to inefficiencies in dispatching ambulances.
- \*Extended duration of travel from the hospital to the patient location and back.
- \*Lack of criteria for identifying the most suitable hospital based on the patient's current condition.

### Proposed Solution:

Our proposed solution is an integrated ambulance management system that includes not only traditional ambulances but also local vehicles like Omni, Tata Sumo, and other suitable local cars. This system will:

- \*Collaborate with local village vehicles such as Omni, Tata Sumo, and other suitable local vehicles.
- \*Allow patient relatives to book the nearest available local vehicle and select the patient's current condition through our website.
- \*Enable the driver to automatically accept the request, with the user receiving the vehicle number and further details on their mobile device.
- \*Suggest the best nearby hospital based on the patient's current condition.
- \*Provide a mobile app interface for users to request emergency transport, track vehicle arrival times, and receive real-time updates.

### Goals and Objectives:

The key goals of this system are to:

- \*Improve response times for emergency medical transport by [specific percentage].
- \*Enhance geographical coverage to ensure access to emergency services across [specified area].
- \*Reduce dependency on traditional ambulances alone and leverage local vehicles to improve overall emergency response efficiency.

The measurable objectives include:

Achieve an average response time of [specific time frame] minutes across all emergency calls.  
Increase the availability of emergency transport services by [percentage].  
Implement the system within [timeline], ensuring operational readiness and stakeholder training.