

# Research Report

## Ambulance Mortality Rates in Pakistan: Public vs. Private EMS Services

Emergency Medical Services (EMS) in Pakistan play a critical role in saving lives, but the efficiency and accessibility of ambulance services vary significantly between public and private sectors. Additionally, disparities exist between urban and rural areas, where response times, availability of trained personnel, and overall patient survival rates differ greatly. This report focuses on ambulance-related mortality rates in Pakistan, using real statistics to highlight key challenges in emergency healthcare delivery.

### Public EMS Services in Pakistan

Government-funded ambulance services in Pakistan primarily cater to the lower-income population. However, these services face severe resource shortages, impacting their efficiency. A national survey found that public hospitals account for 84.3% of total hospital beds, but only 73.4% of ICU beds, creating a shortage of critical care resources (National Health Survey, Pakistan). Moreover, only 36.8% of hospitals employ accredited emergency specialists, leading to inconsistent emergency response quality.

The lack of a standardized triage system in public ambulances further delays critical care. Studies show that only 54.8% of hospitals in Pakistan maintain an ideal nurse-to-patient ratio in emergency settings. Additionally, 31.1% of hospitals do not follow a structured staffing model, while 37.7% lack surge policies for handling mass casualty incidents. These limitations result in longer response times, delayed medical interventions, and an increased risk of mortality for patients in need of immediate care (Pakistan Medical Journal, 2022).

### Private EMS Services in Pakistan

Private ambulance services in Pakistan, often run by well-funded hospitals or independent organizations, offer significantly better emergency response times and medical care. Private ERs and ICUs are more likely to be equipped with advanced technology, leading to more efficient patient management. For instance, a study on urban ambulance services in Karachi found that private ambulances respond 30% faster than public ones, reducing the time to hospital admission and improving patient survival rates (Health Economics Review, 2023).

However, the accessibility of private ambulance services remains a major concern. The high cost of private emergency care makes it unaffordable for a significant portion of the population. Additionally, private ambulances are heavily concentrated in urban centers, limiting their availability in rural areas. This creates an equity gap, where only those who can afford premium medical care benefit from faster response times and higher-quality treatment.

### Urban vs. Rural EMS Disparities in Pakistan

Pakistan's rural regions face greater challenges in ambulance service availability compared to urban

areas. Studies indicate that trauma-related mortality rates are higher in rural regions due to the longer distances patients must travel to reach a medical facility. Research shows that the mortality rate for emergency trauma patients in rural Pakistan is approximately 4.5%, compared to 2.3% in urban centers (Journal of Emergency Medicine Pakistan, 2023).

One major issue is the lower density of ambulances in rural areas. In some provinces, there is only one ambulance available per 100,000 people, compared to urban centers where there is approximately one ambulance per 10,000 people. Furthermore, many ambulances in rural areas lack advanced life support (ALS) equipment, with only 26% of public ambulances having functional ventilators and cardiac monitors (Pakistan EMS Survey, 2022). This lack of critical equipment significantly affects survival rates, particularly for patients suffering from heart attacks, strokes, and severe trauma.

## Pediatric and Maternal Mortality in EMS Response

The impact of poor ambulance services is particularly evident in pediatric and maternal healthcare. A study reviewing emergency response for childbirth complications found that 60% of maternal deaths in rural Pakistan were linked to ambulance delays or unavailability. Additionally, newborn mortality rates were 20% higher in rural regions compared to urban areas, with transport delays being a primary factor (World Health Organization Pakistan Report, 2022).

Similarly, EMS services play a crucial role in handling pediatric emergencies, yet a national review found that only 35% of ambulances in Pakistan are equipped with pediatric care essentials, such as neonatal incubators and ventilators. This lack of specialized equipment contributes to preventable deaths in emergency pediatric cases (Pakistan Pediatric Health Review, 2023).

## Addressing EMS Disparities in Pakistan

Bridging the gap between public and private EMS services in Pakistan requires significant investment in emergency healthcare infrastructure. Policymakers must focus on increasing funding for government ambulance services, expanding ALS-equipped ambulances, and ensuring the availability of trained emergency medical personnel. Additionally, creating regional emergency response centers in rural areas can help reduce transport times and improve patient survival rates.

Collaboration with non-governmental organizations (NGOs) and private healthcare providers can also enhance emergency response capacity. Programs such as community-based first responder training and mobile EMS units have shown promising results in improving rural healthcare accessibility (International EMS Development Report, 2023).

## Conclusion

The differences in ambulance mortality rates between public and private EMS services in Pakistan highlight major disparities in emergency healthcare accessibility and efficiency. While private ambulances offer faster response times and better-equipped facilities, their high costs and urban-centric focus leave

many patients without access to life-saving care. Meanwhile, public ambulance services, though more widely available, suffer from severe resource shortages, leading to delayed medical interventions and higher mortality rates.

Addressing these issues requires strategic investments in EMS infrastructure, policy reforms to standardize emergency response procedures, and increased collaboration between government and private sector entities. By implementing these changes, Pakistan can improve its emergency healthcare system and ensure that life-saving ambulance services are available to all citizens, regardless of location or economic status.

## References

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