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# The Impact of Ambulance usage on the Conveyance of Accident Victims in Lagos State Emergency Management Agency (Lasema)

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**Abstract:** *The benefits of planning a reliable and effective ambulance and emergency service for healthcare delivery are an indicator of sustainable development. This study assessed the impact of ambulance usage on the conveyance of accident victims in the Lagos State Emergency Management Agency (LASEMA). Simple random sampling was used to sample respondents from the Agency. A total of fifty (50) structured questionnaires were administered to respondents. The questionnaire consists of twenty-one items and was prepared in such a way that it contains all the items under the survey. A simple frequency table was employed to analyze the data obtained. The research revealed that 62 % of the respondents were male and 38 % female while about 42 % accounted for insufficient ambulance vehicles which made the ambulance and emergency services not effective and efficient due to poor planning. Other factors include poor telecommunication service, negative perception that ambulances carry dead bodies, the demand for payment before patients are transported by ambulances, high cost of fuel, shortage of ambulances and the patients' renege to fulfil an agreed bills and services. At a significant level of 0.05 using Pearson Correlation, Ho calculated (0.630) was less than H1 tabulated (1) and it was inferred that the positive impact of ambulance usage by accident victims can help promote sustainable ambulance usage and good healthcare delivery. The study concluded that public education on ambulance and emergency services will help rid of false perceptions.*

**Keywords:** Accident, Ambulance, Emergency, and Management.



## **1. INTRODUCTION**

The increase in the number of motorcycle and vehicle accidents over the years is a consequence of bad roads, mechanical faults, speeding and faulty vehicles. However, this increase has grown proportionally to the number of traffic accidents, making them a significant problem for public health worldwide, since they have been considered one of the main causes of morbidity and mortality in the world [1], [2] According to [1] the highest rates of traffic accidents occur in low or medium-development countries, of which Nigeria is considered part while [3] noted that emergency medical conditions occur through a sudden injury, infection, birth and pregnancy-related complications, or chemical imbalance in the body or mind. The Health managers have emphasized that a few moments shortly after emergencies are too critical in saving patients' lives and drastically reducing the resultant effects of the conditions. Furthermore, the responsiveness of the caregivers influences the survival of the victims in an emergency. The movement of the victims from the scene of the event to the hospital facility is important in any emergency care and any shortfall of such movement will debar victims from enjoying emergency care provision. The transportation of accident victims during emergencies is preferably made by ambulances. Reference [3], emergency transportation should be accessible at short notice suggesting that ambulance services are the best means for doing this. Ambulance services should have the equipment, expertise and experience of ambulance staff in emergency intervention, assessment, management and transport of patients in various disaster environments [4]. Ambulance services are supposed to be the primary providers of a 24-hour response to medical and trauma-related emergencies and interventions. These services can be by land or air referring to a vehicle or aircraft designed for the transportation of sick or injured people to, from or between places of medical treatment. It is therefore important to determine the impact of ambulance usage in the conveyance of accident victims in Lagos State Emergency Management Agency (LASEMA)

## **2. METHOD**

### **A. The study area**

Lagos State is located in southwest Nigeria and is often referred to as mini Nigeria because of its megacities and cosmopolitan nature. Lagos State covers an approximate area of about 358, 861 hectares (3,577 square km). The population is by projection 20 million with a Population Density of 4193 persons per sq. km. The (Built-Up- Area is more than 20000 persons per square km). The Annual Population Growth Rate is 8 % meaning that Lagos will be the third largest city in the world by 2015 after Tokyo in Japan and Mumbai in India (UN) [5]. The agency used for this research is the Lagos State Emergency Management Agency (LASEMA) which is one of the agencies in charge of emergencies and responsible for rescuing accident victims with the aid of an ambulance.

### **B. Study population**

The population used for this research comprised staff and accident victims at Lagos State



Emergency Management Agency (LASEMA).

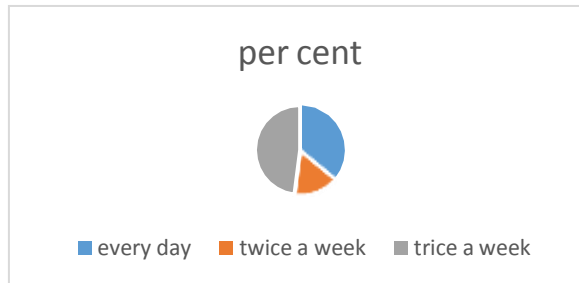
**C. Sample and sampling techniques**

A total of fifty (50) respondents including male and female were Randomly Sampled.

**D. Data collection**

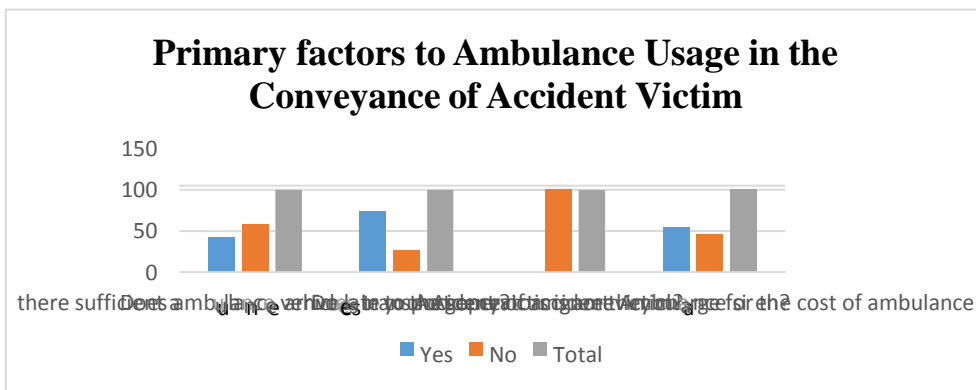
Data for this study was collected using a questionnaire titled “impact of ambulance usage in accident victim in LASEMA”.

**3. RESULT AND DISCUSSION**



**Frequency**  
**Figure 1: The frequency of alert calls**

Figure 1 showed that 16%, 48% and 36% of phone calls were received twice a week, thrice a week and every day respectively by the agency from accident victims. The failure of functionality and connectivity of some of the telecommunication service providers was indicted for being unable to reach out to the ambulance services through telephone calls. This corroborates with the findings of [6] in their research on An Analysis of Emergency Healthcare Delivery in Ghana, Lessons from Ambulance and Emergency Services. In addition, reliable telephone and communication systems are critical ingredients that explain success stories of ambulance and emergency services and healthcare delivery in many developing countries [7].



**Figure 2: Primary factors ambulance usage in the conveyance of accident victim(s)**

The result in Figure 2 indicated that 29 (over 55 %) of the respondents testified that there were insufficient ambulance vehicles for conveying accident victims. Based on the findings,



this can have a negative impact on conveying accident victims to various hospital facilities for emergencies. Similarly, 37(74 %) and 13(26 %) of the respondents acknowledge Yes and No to ambulances arriving late to the accident victims' scene while 100 % do not agree that transport operators ignore Ambulance sirens during emergency services. This was a bit different from the findings of [6] who reported that among the reasons given by the residents and corroborated by health staff were that the ambulance arrived too late; the ambulance could not be reached and unprofessional handling of accident victims by both ambulance staff and onlookers who would like to offer genuine help. The need for the professional handling of accident victims is adequately documented [8]; [9]. It is noted that passersby often tender help out to accident victims but the situation may be worsened due to inexperience. Planning for effective use of ambulance and emergency services in healthcare delivery at the agency was evident in transporting patients needing emergency care to health facilities. The respondent's responses if accident victims were charged for the cost of transporting them by ambulance indicated that 54 % accounted for Yes while 46 % accounted for No.

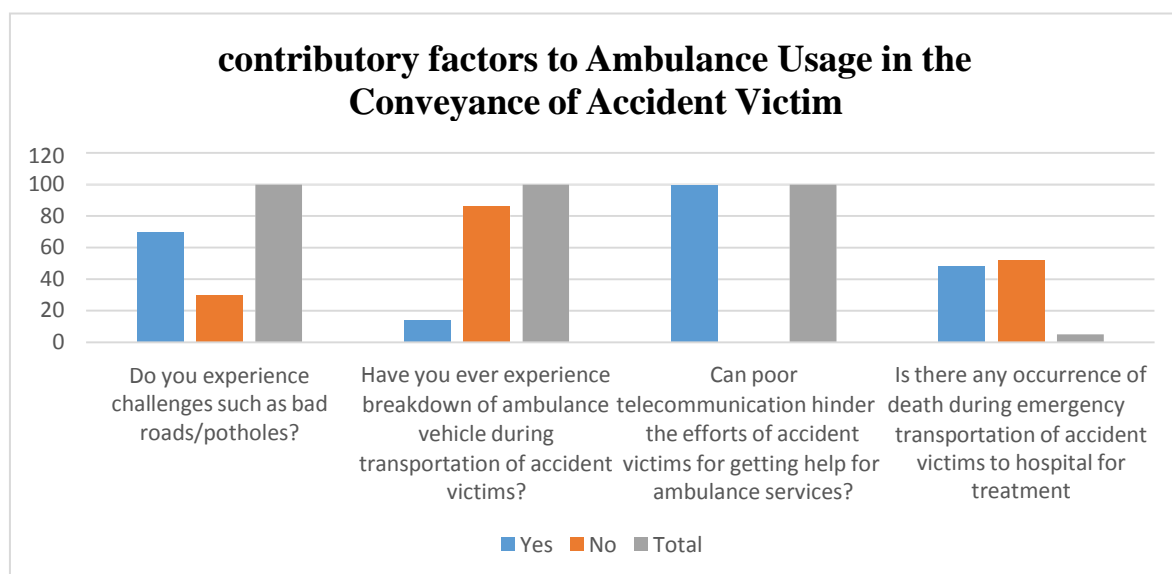


Figure 3: contributory factors to Ambulance Usage in the Conveyance of Accident Victim

Figure 3 some of the factors and challenges experienced by ambulance services. Most people agreed that bad roads and potholes are some of the challenges experienced by ambulance services in transporting accident victims while less than 14 % acknowledge the breakdown of ambulance vehicles during the transportation of accident victims. According to some of the respondents, the few ambulance vehicles worked within the numerous challenges to save lives and their efforts need to be acknowledged. In addition, it was revealed that 100 % per cent of respondents agreed that poor telecommunication can hinder the efforts of accident victims for getting help from ambulance services. Similarly, 48 % accounted for the occurrence of death during emergency transportation of accident victims to hospitals for treatment while 52 % accounted for not (Figure 3). It was deduced that high proportions of deaths were recorded



during the time that ambulance services were being sought and in some cases, death occurred in the process of transporting accident victims to the nearest health facility.

#### **4. CONCLUSION**

Emergency medical services are public services that provide the first line of response to urgent healthcare needs within a community. Emergency care needs should be an integral component of public health systems.

#### **Conflict Of Interest**

We declare that we have no conflict of interest.

#### **Acknowledgment**

The staff at the selected emergency facilities were acknowledged for given sincere information as regard the research.

#### **5. REFERENCES**

1. Martins ET, Boing AF, Peres MA. "Mortality from motorcycle accidents in Brazil: temporal trend analysis, 1996-2009". *Rev Public Health*. Vol 47(5), pp. 931-41. Oct 2013.
2. Sant'Anna FL, Andrade SM, Sant'Anna FHM, Liberatti CLB. "Accidents with motorcyclists: comparison between the years 1998 and 2010. Londrina, PR, Brazil". *Rev Public Health*. Vol 47(3), pp. 607-15. 21. 2013.
3. Kobusingye, O. C., Hyder, A. A., Bishai, D., Eduardo, R. H., Mock, C. and Joshipura, M, *Emergency medical services: Disease Control Priorities in Developing Countries 2<sup>nd</sup> ed.* Jamison DT, Breman JG, Measham AR, et al., editors. Washington (DC): The International Bank for Reconstruction and Development / The World Bank; New York: Oxford University Press; 2006.2(68): 626-628.
4. [Gaston, C. (2007). How an ambulance service can contribute to the health care continuum in health. Center for Policy Development (CPD). <http://cpd.org.au>. Accessed: 10th July 2022.
5. Abosede and Sholeye "Strengthening the Foundation for Sustainable Primary Health Care Services in Nigeria". *Primary Health Care* 4:167. 2014.
6. Ronald Adamtey, Josephine Frimpong & Romanus D. Dinye. "An analysis of emergency healthcare delivery in Ghana". *GJDS*, Vol. 12, No. 1 & 2: 71-87. 2015.
7. Kate Curtis, Clair Ramsden, Ramon Shaban, Margaret Fry, Julie Considine, *Emergency and Trauma Care for Nurses and Paramedics*. 3rd ed. Elsevier Health Sciences, 2019.
8. WHO (2004). *World report on road traffic injury prevention*. World Health Organization. 287pp.
9. Gopalakrishnan S. "A public health perspective of road traffic accidents". *J Family Med Prim Care*.1(2):144-50. 2012.