

# **ENHANCED ROAD SAFETY MANAGEMENT IN NIGERIA BY YEAR 2020**

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## ABSTRACT

World Health Organization (WHO) estimates 1.17m deaths and over 50 million injures per annum worldwide, due to traffic accidents and management, a breakdown shows that about 70% of deaths occur in developing countries like Nigeria, the increased rate of fatal accidents has been attributed to increased motorization, attitudinal factors etc., i.e. driver's error, over speeding, inexperience and so on. Currently the concept and adoption of road safety management strategies is one commonly adopted worldwide in recent time; this paper therefore examines the application of concepts in accident rate reduction in Nigeria while furthering the investigation that high level of motorization is a causal of accident

**Keywords:** Motorization, Accidents.

## INTRODUCTION

The World Health Organization (WHO) estimates that 1.17 million deaths occur each year worldwide due to road traffic accidents and poor management of what? A breakdown of the figures indicates however that about 70% of the deaths occurs in developing countries. The increased rate of fatal road traffic accident worldwide has been attributed to population explosion and increased motorization. Increased motorization may be characterized briefly as the "automotive revolution", that is the high increase of personal vehicle ownership by the urban population especially in developing countries. In Karachi, Pakistan the police in 1998 reported 544 deaths and 793 injures dues to RTA while ambulance record noted 343 deaths and 2048 injuries. The rates for the year 1994 were 184 injuries and 11.2 deaths pers 100000 population (WHO 1984).

Statistics indicated that over 90% of traffic accident situation in Nigeria can be attributed to drivers errors and poor management of roads (Aworemi et al 2009), which is why Nigeria is ranked second in road accident fatalities among 193 countries (Prof. Onyebuchi C. – Nigeria's Minister of Health said Nigeria has a mortality rate as a result of road accident of 162 deaths/100,000). This has hampered the achievement of the Millennium Development Goal (MDG) article 4 and 5. Dr. Sydney Ibeansi also said over 80% of injuries in Nigeria are traffic accident related.

The absence of proper road safety and poor management of roads remain basis of road accident which regularly occur at some flash points, such as where there are sharp bends, potholes and at bad sections of the highways. At such points, over speeding drivers usually find it difficult to control their vehicles, which then results to fatal traffic accidents especially at night (Atubi 2009). Cases of fatal road traffic accidents are reported almost daily on major highways in Nigeria. Various categories of vehicular traffic are also involved in these fatal road accidents due to poor road management etc. (Odero et al 2003, Onokala 1995, Ogunjumo 1995 and Omolaja 2004)

Road traffic safety refers to methods and measures for reducing the risk of a person using the road network being killed or seriously injured. Road safety simply means safety on the roads. It is the process of learning how to be safe on the roads.

Road safety and management remains a bedrock for effective reduction of risks on the Nigerian roads as well as ensuring free movement without any disturbance on all forms of road.

The Federal Road Safety Corps (FRSC) and the Police are the agencies saddled with the responsibility of coordinating and controlling the traffic on all categories of roads. This is very essential because transportation remains a bedrock for economic development and the need to ensure its efficiency and reliability is very important for the nation's existence.

The name "Road Safety" have conveyed that in this field the activities need to concentrate on items that properly belong to roads and by extension to the road authorities, keeping a reduce scope of activities in a number of different areas, in spite of their potentially significant contributions. For example, in the UK, Burroughs (1991) indicates that only one-third of the largest reduction will be delivered by road safety engineering measures while Koornsta (2002) indicates "The contribution of local road engineering to the fatality reductions between 1980 and 2000 are estimated to be 4% for Sweden, 10% for Britain and 5% for the Netherlands". Whereas TEC (2003), quotes a research from the Imperial College, London that indicates than the progress in medical technology and care made a significant contribution to 45% fall of fatalities during the last 20years and account for 700 lives saved annually in the UK, and further put forward that lack of consideration of the benefits coming from the medical area, suggests that road safety is probably less effective that thought.

It reflects confusion between the space where this phenomenon occurs (mainly roads) and the design of the Management systems to controls it, in what "Roads" is only a 1% of the activities.

## **Accident**

The use of the word "accident" with its connotations of being an unavoidable event, weaken the resolve to intervene in order to reduce crashes and the resulting harm. Evans (1991) argues that the word "crash" indicates in a simple factual way what is observed, while "Accident" seems to suggest in addition a general explanation of why it occurred.

## **Cause of Accidents**

Road safety recognizes that crashes, and their consequences, are multifactor events, Ogden (1996) indicates: "An approach based in notions of cause and blame is simplistic in the extreme". In short, crashes have factors not causes.

## **Problem- solving**

Old approaches emphasize the concept of problem-solving in Road safety, but is more correct to recognize that Road safety activities doesn't solve problems. For instance, when a safer road design is implemented, hopefully the number of crashes, or their seriousness, will go down, but they will not disappear. It is more correct to say the implementation of correct policies, programs and measures will reduce number or consequences of crashes, but they will not be "solved".

This realization is important, because it changes the focus from a problem that will go away if we devote enough resources to it, to a situation requiring on-going management. This management in turn requires

the development of scientifically based techniques, which will enable us to predict with confidence the safety resources are well-spent and likely to be effective.

## **Conceptual Framework**

### **Why do we need road safety management?**

#### **The high cost of motorized mobility to society and public health**

Each year over 1 million people are killed and 50 million injured on roads around the world. Without new and effective action, deaths in low to middle-income countries are forecast to rise steeply. At the same time, progress has slowed in recent years in the better performing countries where investment in preventing and reducing serious health loss from road traffic injury is not commensurate with its high socio-economic cost. This cost has been estimated at around 2% of EU countries' gross domestic product – around €180 billion and twice the EU's annual budget.

#### **Road traffic injury is largely preventable**

As highlighted in the World Report on Road Traffic Injury Prevention, fatal and long-term crash injury is largely predictable, largely avoidable and a problem amenable to rational analysis and remedy. Research and experience in North America, Australia and Europe has shown that very substantial reductions in road deaths and serious injuries have been achieved through the application of evidence – based measures against the background of increases motorization.

### **Achieving Results**

As the OECD has stated, setting ambitious target is one thing; meeting them is another. The limits to improved road safety performance are shaped by a country's road safety management system which determines the results being sought and produces the interventions to achieve them.

#### **The shift to safe system – the new performance frontier**

Countries have become progressively more ambitious in terms of the results desired culminating in safe system. This concept represents the new performance frontier for road safety management in embracing ambitious long-term goals to eliminate death and serious injury and interim targets, exacting intervention strategies and strengthened institutional management.

#### **The road safety management system**

Safety is produced just like other goods and services and the production process is viewed as a management system with three levels: Institutional management functions produce interventions, which in turn produce results. Consideration of all elements of the road safety management system and the linkages between them becomes critical for any country seeking to identify and improve its current performance level.

## **Institutional Management Functions**

Seven institutional management functions are the foundation on which road safety management system are built comprising results focus – the overarching function, coordination, legislation, funding and resource allocation, promotion, monitoring and evaluation and research and development and knowledge transfer. These functions are delivered primarily by all the government agencies producing interventions, but they are also delivered in government partnerships with civil society and business entities to achieve the desired focus on results. Effective institutional management is a pre-requisite of successful results – focused intervention.

## **Interventions**

These comprise system-wide strategies and programmes of intervention to address safety targets. Interventions cover the planning, design and operation of the road network, the entry and exit of vehicles, and users into the road network, and the recovery and rehabilitation of crash victims. They seek to manage exposure to the risk of crashes, prevent crashes and reduce crash injury severity and consequences of crash injury. They comprise safety designs, standards, and rules as well as a combination of activity to secure compliance with these such as information, publicity, enforcement and incentive.

## **Results**

In good practices, road safety results are expressed as long-term goals and interim quantitative targets. Targets specify the desired safety performance endorsed by government at all levels, stakeholders and the community. To be credible, interim targets must be achievable with cost-effective intervention

## **Methodology**

The study essentially relied on secondary information from internet articles, journals and text books. Semi- secondary data in respect of the number of vehicles plates produced in Nigeria, being the most statistically relevant proxy for Nigeria's level of motorization and record of yearly cases of car accident, were gotten from Federal Road Safety Commission. The data which spanned 14 years (between 1996 – 2009) was subjected to Pearson correlation testing in order to establish the significance of the relationship between increase in vehicle density on road and road accident cases. SPSS (version 15.0) was employed in carrying out the parametric statistical testing.

## **FINDINGS**

Table 1: Records of yearly production of vehicle plates and the cases of accidents on Nigerian roads

YEARS	NUMBER OF VEHICLES	YEARLY CASES OF ROAD
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	PLATE PRODUCED IN NIGERIA	ACCIDENTS
1996	1175905	16442
1997	746979	17488
1998	388816	16138
1999	371768	15865
2000	473881	16606
2001	770189	20530
2002	730280	14544
2003	550014	14364
2004	520438	14274
2005	659271	9062
2006	652311	9114
2007	459976	8477
2008	847839	11341
2009	725109	10854

**Source: Federal Road Safety Commission (2012)**

### Hypothesis Formulation

Null Hypothesis (H<sub>0</sub>): There is no relationship between yearly increase in vehicular density on roads represented by the number plates yearly produced in Nigeria and Road accidents cases.

Alternative Hypothesis (H<sub>1</sub>): There is relationship between yearly increase in vehicular density on the roads represented by the number of vehicles plates yearly produced in Nigeria, and Road accidents cases.

### Hypothesis Testing and Interpretation

Table 2: Text statistics on yearly increase in vehicular density on roads represented by the number of vehicle plates yearly produced in Nigeria, and Road accidents cases occurring in Nigeria between 1996 to 2009.

	Number of plates yearly produced in Nigeria	Road accidents yearly occurring in Nigeria
Number of Pearson	1	.091
Plates yearly Correlation produced in sig. (1-tailed)		.379
Nigeria N	14	14
Road Accident Pearson		
Yearly Correlation	.091	1
Occurring in Sig. (1-tailed)	.379	
Nigeria N	14	14

The Pearson correlation coefficient was obtained as 0.091. This implies that there is a very weak correlation between yearly increase in vehicular density on roads represented by the number of vehicle

plates produced yearly in Nigeria and road accident cases occurring in Nigeria from 1996 to 2009. Moreover, the calculated P value = 0.379, while the level of significance is taken as 0.05. Since the P value (0.379) is greater than the stated level of significance (0.05), the null hypothesis which states that there is no significant relationship between the yearly increase in vehicular density on roads annotated by the number of vehicle plates yearly produced in Nigeria, and Road accidents cases occurring in Nigeria from 1996 to 2009 is therefore accepted. This results thereby implies that accidents on Nigerian roads are not exactly a function of high level of motorization, but more probably owing to human factors like over speeding, drunkenness, mechanical faults in vehicles and poor state of roads engineering and maintenance.

## **Conclusion and Recommendations**

### **Recommendations**

To enhance the road safety and management in Nigeria the following measures must be put in place to improve its overall road safety.

- ❖ The drivers are to be constantly trained to ensure smooth operation of vehicles and comply with traffic regulations at all times,
- ❖ Provision of more road infrastructure and adequate maintenance of the existing measures.
- ❖ Learn from other countries with better traffic management systems e.g. USA etc.
- ❖ Rationalize the use of traffic police check points and ensure adequate funding for the Federal Road Safety Corps.
- ❖ Invest in the repair of most Lagos roads, many of which are currently in need of repairs and maintenance. For all these to happen the Institutional machinery needed to ensure the timely construction and repair of roads should be strengthened.

### **Conclusion**

This research work has examined the activities of road safety and management on Nigerian roads taking into cognizance the various accidents occurring on them. While the paper has empirically disproved the positive correlation between high level of motorization and accidents on Nigerian roads, it has aptly captured more realistic factors that may cause accidents on Nigerian roads and have pertinent recommendation.

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