

ceptably high incidences of mortality/morbidity from road traffic crashes (RTC).

Objectives: The objective of this study is to analyze Nigerian crash diaries from the pre-independence era to the present date, highlight various lapses involved to minimize RTCs on the highways, and appropriate protocols for team management of such victims.

Methods: Police, the FRSC, and all SAVAN-designated centers were utilized to collate data of crashes involving vehicles and Okada, and also recorded the number of injured persons with associated mortality as a result of the crash. Diurnal variations, vehicular distributions, and geographic locations of the crash were documented. The structure of a non-governmental organization, such as SAVAN, was used to determine the biological data of the RTC victims.

Results: In comparison with other countries, Nigeria recorded one death per <3 cases, compared to countries, like France, who recorded only one death in >180 cases. Poor coordination of first responders and other stakeholders enormously contributed to high mortality.

Conclusions: Nigeria needs a constant safety training program, persistent media advocacy, enactment/enforcement of appropriate legislation against all offenders of traffic regulations, and activation of all stakeholders, prior to, during, and after traffic accidents to save more lives on the highway.

Keywords: Federal Road Safety Commission (FRSC); first responder lapses; Nigeria; traffic crashes

Prehosp Disast Med 2005;20(2):s77-s78

Prehospital Emergency Care in Severe Bus and Coach Crashes—Lessons Learned in Sweden

P. Albertsson

Umeå University, Sweden

Buses and coaches rarely are involved in severe crashes, but when they are, the numbers of casualties are usually high due to the large number of occupants traveling in the vehicles. Coach crashes in which the vehicle rolls 90° or more is a type of severe crash that exposes occupants to high risks of injury. If the post-crash position of the vehicle of a rollover is 90° on its side, this imposes a great challenge for emergency care, rescue services, and medical teams. Injured and fatally trapped occupants might be located inside, outside, and underneath the crashed coach. A number of occupants with minor injuries also need to be attended. As a consequence, there are a number of crucial tasks to deal with in a short period of time, which in turn, emphasizes the importance of a proper organization based on education and training in order to facilitate the rescue work. Systematic training of rescue and ambulance teams in cooperation at a crash site may reduce the extrication time of entrapped victims in coach crashes.

Experiences from a number of severe coach crashes in Sweden were gathered. The main findings were that: (1) normal triage had to be set aside, in favor of evacuating the passengers, starting with those closest to the exit; (2) use of ordinary equipment is not always possible inside the crashed vehicle; (3) a 90° position of a coach makes the working conditions difficult for the ambulance and fire personnel, with access only through the front and/or rear

window and the roof hatches; (4) knowledge of reading kinematics is useful; (5) occupants may be still trapped and alive under the crashed coach; (6) in situations occurring a substantial distance from hospitals, a casualty clearing station is preferable to a more rapid procedure, such as a “load and go”; and (7) previous exercises where rescue team members have worked together is valuable in real situations.

Furthermore, the gathered experiences were the start for a cooperation project between the rescue and emergency service within the area “heavy rescue”.

Keywords: buses; crashes; emergency care; rescue; Sweden; vehicles

Prehosp Disast Med 2005;20(2):s78

Role of Photography in the Management of Road Traffic Crashes in Nigeria

N. Ebigie

Save Accident Victims Association of Nigeria (SAVAN), Nigeria

Most deaths, injuries, and economic losses in Nigeria are due to preventable car crashes. The World Health Organization (WHO) estimated the annual global cost of crashes at US \$520 billion in 1998. In developed countries, those at risk of injury and deaths are vehicle occupants, while those at risk in developing countries are pedestrians, cyclists, motorcyclists, and users of informal modes of public transportation. This study highlights the growing trend in road traffic crashes and the role of photography in examining this trend and its use in identification of dead or unconscious victims in six Save Accident Victims Association of Nigeria (SAVAN) hospitals. Photography helps to translate ideas into visuals, symbols, or ideograms. Due to the lack of available forensic medicine in developing countries, identifying unknown victims of major disasters or road traffic crashes can be difficult. Hence, the use of photography has become a major approach for establishing the identity of such victims.

Cultural and religious factors have not helped facilitate the identification process because some tribes and religions do not allow post-mortem examinations or other forensic procedures, making photographic documentation very vital to assisting professionals establish the identity of the victims. Its availability and cost-effectiveness makes it readily accessible to everyone in Nigeria. Identification can be cumbersome due to the mode used for rescue, corrupt rescue officers, lack of proper identity cards, and poor information and communication management.

Keywords: culture; management; Nigeria; photography; religion; Save Accident Victims Association of Nigeria (SAVAN); traffic crashes

Prehosp Disast Med 2005;20(2):s78

Impaired Driving In Southern Nigeria Due To Alcohol

E. Ehikhamenor

Save Accident Victims Association of Nigeria (SAVAN)/ University of Benin (UNIBEN), Nigeria

Introduction: Developed countries, also regarded as highly motorized countries (HMC), recently acknowledged a decline in drinking and driving, especially during the 1980s. Improved laws, enhanced enforcement, and public

awareness brought about by citizen concern during the 1980s, led to a dramatic decline in drinking and driving in the industrialized world. Based on various degrees of impairment with special reference to automobiles on public roads, it became imperative for setting maximum, allowable blood alcohol content (BAC) levels as a tool for enforcement and prevention.

The most significant aspect of the BAC value is the legal limit set in each country. While almost all developed countries adhere strictly to the BAC level limits, legislation in transition countries, including Nigeria, does not incorporate legal BAC levels and their implications. Except for South Africa and Zimbabwe, no other African country seems to have any tangible BAC research or legislation.

Methods: A premium digital alcohol Breathalyzer called AlcoScan CA2000 from Craig Medical was utilized to obtain BAC levels from three designated collation centers. The collation centers were the hospital, resting spot, and highways. A computer Excel package was used to analyze the findings.

Results: In the hospital, 73.97% of males and 26.02% of females of the total participants were screened with different BAC levels. BAC levels $>0.08\%$ were found in 43.89% of drivers or bikers, while 56.11% had BAC levels between 0.00%–0.08%.

Conclusion: The incidence of drinking and driving with specific numeric values of BAC levels was established in this study, thus confirming that several road traffic crashes were alcohol-related. Therefore, there is a need for advocacy, legislation, and sanction of impaired drivers with significant BAC levels in Nigeria.

Keywords: blood alcohol content (BAC); legislation; Nigeria; traffic
Prehosp Disast Med 2005;20(2):s78-s79

Epidemiology of Road Traffic Crashes in Ghana from 1993 to the Second Quarter of 2004: Where Do We Go from Here?

E. Okparavero
Ghana

Road traffic crashes continue to be a leading cause of death and injuries in West Africa. In Ghana, attempts have been made to curb this disastrous trend, but these efforts have been hampered by the lack of adequate data that could serve as a danger signal to appropriate authorities.

According to police data, from 1994–1998, road traffic crashes were a leading cause of death and injuries in Ghana. However, this dangerous trend seems to be receding, as indicated by data collected from the National Road Safety Commission, the Motor Traffic and Transport Unit (MTTU) of the Ghana police force, and the Building and Road Research Institute (BRRI); all which show a decline in the incidence of road traffic crashes in the years 2000–2003.

Assessment of the importance of trauma relies on accurate sources of data concerning its incidence and outcome, and this study serves to act as a clarion call to the relevant authorities to intervene before the situation becomes even more dangerous.

Keywords: Africa; assessment; data; Ghana; injuries; road traffic crashes
Prehosp Disast Med 2005;20(2):s79

Epidemiology of Traffic Crashes at Various Ages in Rafsanjan, Iran

H. Bakhsbi
Rafsanjan Medical University, Iran

Introduction: Traffic crashes are major medical problems. They are the largest factor for mortality and morbidity among individuals <45 year of age.

Objective: To understand the epidemiology of traffic crashes in order to prevent them.

Methods: A descriptive study of 936 persons injured in traffic crashes was carried out at the Ali-Ebn Abitaleb Emergency Center in Rafsanjan, Iran, over a 122-day period (366 shifts), in every season of the year 2000 in a selected stratified randomly method.

Results: A total of 82% of traffic crash victims were male, 73.29% were <30 years of age, and 34.63% were single. The mean age was 24.6 ± 16 years in males and 25 ± 16.4 years in females. A total of 33.17% of the crashes occurred in the city of Rafsanjan, 33.07% were in rural areas, and 54.35% of the crashes occurred around and outside the city. A total of 40.35% of the traffic crashes occurred in the morning. Damage to extremities (46%), head injuries (27.24%), and multiple fractures (16.55%) were the most prevalent type of body injuries. A total of 94.5% of patients were treated at out-patient clinics, 15.87% were hospitalized, and the morbidity rate was 1.5%.

Conclusions: High rates of traffic injuries for people <40 years old demands education of motor vehicle laws and regulations with the consideration of safety points in order to prevent crashes. Preventive measures should be evaluated.

Keywords: Iran, Rafsanjan, safety; traffic crashes
Prehosp Disast Med 2005;20(2):s79

Patterns of Facial Bone Fractures following Road Traffic Crashes: A Benin City Experience

O. Osaiyuru
University of Benin, Nigeria

The frequencies of fractures of the various facial bones vary from region to region. This is due partly to the most common etiologic factor obtaining in such a region. The commonest etiologic factor in this environment is road traffic crashes (RTCs). Others are gunshots, fights, falls, and industrial accidents.

This prospective study was conducted to determine the pattern of facial bone fractures following road traffic crashes in Benin City, Nigeria. During a six-month period, 89 patients with facial bone fractures as a result of road traffic crashes were studied.

Results showed that more males than females were involved, with the majority between the ages of 21–30 years. Minibuses (35%) and motorcycles (29%) were responsible for more accidents than other vehicular types. Mandibular fractures were found to be the most common (41.6%), and therefore the fracture most likely to confront the dental surgeon.

Keywords: Benin City; facial bones; fracture; Nigeria; traffic crashes
Prehosp Disast Med 2005;20(2):s79