"STUDY ON PATTERN OF UNINTENTIONAL INJURY CASES AT CASUALTY OF A TERTIARY HEALTH CARE CENTRE. -A CROSS SECTIONAL STUDY"

by

REGISTRATION NUMBER-BF 0111002

Dissertation

Submitted to the
KLE UNIVERSITY, Belgaum, Karnataka,
In partial fulfillment
of the requirements for the degree of
M.D. (DOCTOR OF MEDICINE)
in
FORENSIC MEDICINE & TOXICOLOGY

DEPARTMENT OF FORENSIC MEDICINE & TOXICOLOGY
JAWAHARLAL NEHRU MEDICAL COLLEGE
BELGAUM – 590010

MAY – 2013

"STUDY ON PATTERN OF UNINTENTIONAL INJURY CASES AT CASUALTY OF A TERTIARY HEALTH CARE CENTRE -A CROSS SECTIONAL STUDY"

By

REGISTRATION NUMBER-BF0111002

Dissertation

Submitted to the KLE UNIVERSITY, Belgaum, Karnataka,

In partial fulfillment

Of the requirement for the degree of

M.D. (DOCTOR OF MEDICINE)

in

FORENSIC MEDICINE & TOXICOLOGY

DEPARTMENT OF FORENSIC MEDICINE & TOXICOLOGY
JAWAHARLAL NEHRU MEDICAL COLLEGE

BELGAUM - 590010

MAY – 2013

KLE UNIVERSITY
BELGAUM.

ENDORSEMENT BY THE HEAD OF DEPARTMENT, PRINCIPAL OF THE INSTITUTION

This is to certify that the dissertation entitled **"STUDY ON PATTERN OF UNINTENTIONAL INJURY CASES AT CASUALTY OF A TERTIARY HEALTH CARE CENTRE -A CROSS SECTIONAL STUDY"** is a bonafide research work done by **THE CANDIDATE REG.NO**. **BF0111002.**

Dr. Manjulabai K H **MD**
Professor and Head
Department of Forensic Medicine
and Toxicology,KLE University's
J. N. Medical College, Nehru Nagar
Belgaum-10

Date:
Place: **Belgaum**.

Dr. A.S.Godhi **MS,FICS**
Principal, KLE University's
J. N. Medical College,
Nehru Nagar,
Belgaum -10,

Date:
Place: **Belgaum**.

LIST OF ABBREVATIONS USED

IPC: Indian Penal Code

WHO: World Health Organisation

LMIC: Low and Middle Income Countries

CDC: Centre for Disease Control

MVA: Motor Vehicle Accidents

UI: Unintentional Injuries

US: United States

NCRB: National Crime Records Bureau

BISP: Bengaluru Injury Surveillance Programme

KMC: Kasturba Medical College

BBMP: Bruhat Bangalore Mahanagara Palike

BRSIPP: Bangalore Road Safety and Injury Prevention Programme

RTI: Road Traffic Injuries

KLEs : Karnataka Lingayat Education Society

LMV: Light Motor Vehicle

HMV: Heavy Motor Vehicle

UAE: United Arab Emirates

ABSTRACT

BACKGROUND AND OBJECTIVES:

Unintentional injuries are the largest source of premature morbidity and mortality and the leading cause of death. They are a major burden to the society all over the world in terms of both mortality and morbidity. Transportation is the largest source of these injuries. Other major causes involve fall from height, thermal injuries, drowning, and poisonings. The frequency, severity, potential for death and disability, and costs of these injuries, together with the high success potential of prevention strategies, make unintentional injury prevention a key public health goal to improve health in the future. Hence this study was aimed and undertaken to know the pattern of unintentional injuries, their morbidity and mortality burden in our set up.

METHODS:

The present cross sectional study was conducted at the casualty of our tertiary care centre from October 2011 to march 2012. A total of 753 cases of unintentional injuries were studied using a pretested proforma and the results analyzed.

RESULTS:

Out of 753 cases, maximum number of victims were in the age group of 20-39 years (51.92%) and 80.9% were males. The total mortality rate was 12%, with M: F= 4:1. Transportation injuries constituted the maximum number of cases (80.9%), with majority of the victims being two-wheeler rider and pillion rider (58.78%); most of them occurring due to hit by another vehicle (60.9%); with the common offending agent being heavy motor vehicle (39.4%); most common injury being skeletal injury (33.8%) and with a mortality rate of 8.5%. Most of the fall from height cases were seen in outside home (65%) involving stairs, balcony, and poles (67%); most common injuries being head injury (68.4%) and with a mortality rate of 15.8%. Majority of the

thermal injuries were involving dry burns (59.45%); involving body surface area of 26-75% (69%); and a mortality rate of 40.5%. Unintentional poisoning and drowning / suffocation were least and all the cases were seen in children.

CONCLUSION AND INTERPRETATION:

Various preventive measures can be employed to minimize the burden of unintentional injury cases. The results of the present study is useful in interpreting the exact burden of mortality and morbidity of the unintentional injuries, their patterns, types, causative agents, and a strategic plan can be made accordingly for the benefit of the community and people at large.

KEYWORDS: Unintentional injuries, transportation, thermal injuries, poisoning, fall from height.

CONTENTS

LIST OF TABLES

LIST OF GRAPHS

INTRODUCTION

Injury is probably the most under recognized major public health problem India is facing today. Injuries have always been part of human existence and they comprise a critical health problem throughout the world. In spite of safety legislation and attempt to raise public awareness of the injuries, the rate of motor vehicle crashes, fall from height, suicide, drowning, violence etc. still remains high.

Due to extensive research that has been done within the field of injury prevention and control, it has been proven that injuries are similar to diseases, in that injuries are not accidents, do not occur at random, and have identified risk and protective factors making them preventable.

Although modern medicine is able to withstand many of the dangerous complications, the injuries that occur without anyone's intentions i.e, unintentional injuries like transportation injuries, fall from height, thermal injuries, unintentional poisoning and drowning/ suffocation represents serious risk to health, reducing work efficiency and costing money.

Injury has been defined as any harm whatever illegally caused to any person in body, mind, reputation or property, vide sec.44 IPC[1]. According to WHO, an injury is defined as a 'body lesion at the organic level resulting from acute exposure to energy (mechanical, thermal, electrical, chemical or radiant) interacting with the body in amounts or rates that exceed the threshold of psychological tolerance'[2].

The term "unintentional injury" is preferred to "accidents" as the latter implies events are inevitable and unavoidable whereas a high proportion of these incidents are now regarded as being preventable. Unintentional injuries can occur in any age group, but children and the elderly are more vulnerable.

The growth of the motor vehicle industry, liberalized economic policies of successive governments, aggressive media promotion, increasing purchasing power of people, easy availability of loans and poor public transport systems have possibly contributed to increasing motorization and a changing transportation scenario in India[3].

Approximately 90% of the global injury-related deaths occur in low and middle income countries such as India where these issues are not recognized as a major public health issue by the local authorities because of poor availability of robust data on the injury burden, thereby inhibiting the development of effective preventive strategies[4].

Keeping this in mind the study was undertaken at the casualty of our tertiary care center. Data available in our study regarding the pattern of unintentional injury cases are mostly from the northern parts of Karnataka. This study presents evidence that unintentional injuries pose a significant health burden. Hence, the results of the present study could be useful in interpreting the types and patterns of unintentional injury cases and then strategic planning can be made accordingly for the benefit of the community at large. Comprehensive approaches combining policy implementation, environmental changes, as well as health education are needed in order for effective prevention of injuries.

Many countries, especially those with poorly developed public health infrastructures, have not prioritized injury prevention as a public health problem. Basic research to identify the burden of injuries, their causes, and consequences is critically needed in order to establish the evidence base, necessary for effective intervention and prevention programs.

AIMS AND OBJECTIVES:

1. To study the prevalence and pattern of unintentional injury cases coming to the casualty of a tertiary health care centre.
2. To know the relation between patterns of unintentional injuries and the influencing factors.
3. To know the burden of morbidity and mortality of unintentional injuries in our set up.

REVIEW OF LITERATURE:

Definition and classification of injury:

Law of India has defined Injury as any harm whatever illegally caused to any person in body, mind, reputation or property, vide sec.44 IPC, and has defined the term 'hurt' as whoever causes bodily pain, disease or infirmity to any person, vide sec. 319 IPC. To a medical man, injury means 'breach of continuity of any tissue in the body'[1].

According to WHO, an injury is defined as a 'body lesion at the organic level resulting from acute exposure to energy (mechanical, thermal, electrical, chemical or radiant) interacting with the body in amounts or rates that exceed the threshold of psychological tolerance'[2].

Definition and classification of unintentional injury:

According to the *International statistical Classification of Diseases*, unintentional injuries are classified by cause based on the type of kinetic, chemical, or other type of energy that leads to the injury[5]. Causes of unintentional injuries include transportation (land, air, and water); unintentional falls; unintentional discharge of a firearm or weapon; drowning; fire, smoke, and burns; poisoning; and other and unclassified unintentional causes[6] .

Historically, injuries have always been referred to as accidents and the term "accident" implies the inevitable nature of the event and connotes that nothing can be done about it. 'Injury' by definition means that there is a body lesion due to an

external cause, either intentional or unintentional, resulting from a sudden exposure to energy (mechanical, electrical, thermal, chemical or radiant) generated by agent - host and environmental interaction. When this generated energy is transferred and exceeds the physiological tolerance of an individual it leads to tissue damage. Apart from this, injury can also occur due to the sudden withdrawal of a vital requirement of the body like oxygen in case of drowning, asphyxiation etc. In short, injury is the damage caused to the body due to a rapid and sudden exposure to energy beyond his / her tolerance levels. It is an acute event, occurs in varying severities and with chances of repeated occurrence. Prevention of injuries is possible by acting on one or all three areas of this interaction and thus can be modified, predicted, and prevented[7].

WHO categorized the Injuries in a number of ways. However, for most analysis purposes and for identifying intervention opportunities, it is especially useful to categorize injuries according to whether or not they were deliberately inflicted and by whom, based on intent of injury occurrence. Commonly used categories are[4]:

- Unintentional
- Intentional (i.e. deliberate)
- Undetermined intent.

Unintentional injuries are also referred to as accidental injuries though not really accidental in nature, while intentional injuries are self-inflicted or caused by others. The latter include suicides, homicides, injuries due to violence against women, children and elderly, those due to wars, riots and conflicts, etc., A second common method of classifying injuries is according to the mechanism which caused the injury, like road traffic crashes, poisoning, falls, fires/burns, drowning, fall of external objects

and others. A third method of classifying injuries is according to place of occurrence like road injuries, home injuries, sports injuries and work related injuries based on place of occurrence of injury[7].

The fourth method is based on anatomical types and location of injuries depending on body organs injured like head injuries, facial injuries, injury to long bones etc. The nature and type of injuries are documented as fractures, contusions and haemorrhages for care and management. International Statistical Classification of Diseases[8] and International Classification of External Causes of Injuries[9] are commonly used for systematic and scientific classification of injuries all over the world. A particular classification chosen is primarily determined by the purpose of a (or more) programme(s), research focus and availability of resources. The term accident has been banned by the U.S. National Highway Traffic Safety Administration (National Highway Traffic safety Administration, 1997), as well as the British Medical Journal (Davis & Pless, 2001)[7].

Studies on unintentional injuries:

According to the data of the National Vital Statistics System (NVSS) from 1992 to 1999[10], which was used to calculate average annual rates for unintentional injury deaths for the United States; An average of 18,048 unintentional injury deaths occurred annually in the United States (6.83 deaths per 100,000). Unintentional injury deaths varied by age and gender, with males having higher rates of death than females (8.78 vs 4.97 per 100,000), and older adults (≥70 years) having higher rates than all other age groups. Falls (2.25 per 100,000), poisoning (1.83 per 100,000), and fire/burn injuries (1.29 per 100,000) were also the leading causes of unintentional injury death.

Death rates of fall were highest for older adults, poisoning deaths were highest among middle-aged adults, and fire/burn death rates were highest among children. Inhalation/suffocation and drowning deaths were important injury issues for young children[10].

As per a study in Canada between 1995-96[11], where they conducted the case-control study using records from 5 pediatric hospital emergency departments for the 2-year period; the 351 case subjects were children aged 7 years and less who presented with injuries from falls, burns or scalds, ingestions or choking. The distribution of injuries was as follows: falls (50.4%), burns (22.8%), poisonings (16.0%) and chokings (10.8%). Of the 177 falls, 104 (58.8%) involved stairs, 7 (4.0%) involved baby walkers, 14 (7.9%) were from changing tables, and 1 (0.6%) was through an open window; the cause was not specified for 51 (28.8%). Of the 80 burn injuries, 8 were due to exposure to hot tap water (10.0%), 27 to hot liquids or solids (33.7%), 22 to hot surfaces (27.5%) and 2 to dwelling fires (2.5%); the cause was not specified for 21 (26.3%). Of the 56 poisonings, 25 (44.6%) were due to medications and 10 to household chemicals (17.9%); for 21 (37.5%) the cause was not specified. Of the 38 choking episodes, 11 (28.9%) involved coins and 27 (71.1%) had no cause specified[11].

The data of some of the studies in United States during the period 2000 – 2006[12] on unintentional injuries showed that, the leading cause of morbidity and mortality among children is Unintentional injuries. Data used in the report were obtained from two sources. Death data from 2000 – 2005 came from the National Center for Health Statistics (NCHS), National Vital Statistics System, annual

mortality files[12]. Nonfatal data from 2001 – 2006 came from the National Electronic Injury Surveillance System - All injury Program (NEISS-AIP)[13].

Of the 73,052 deaths among children 0 to 19 years of age during 2000-2005[13], 40,374 deaths (56%) occurred among those 15 to 19 years, followed by 10,203 (14%) among those 1 to 4 years of age. The death rate for unintentional injury was 15.0 per 100,000 children. The rate was highest among those 15 to 19 years (33.1 per 100,000) followed by those less than 1, 1 to 4, 10 to 14, respectively, and lowest among those 5 to 9 years. Males had higher death rates compared to females in all age groups. The overall death rate among males 0 to 19 years was 19.3 per 100,000 and among females 10.4 per 100,000. When examining rates by sex and age group, the death rate was highest among males 15 to 19 years (rate 45.1 per 100,000). Death rates differed by cause, with the highest rates related to injuries due to transportation (9.8 per 100,000) and the lowest rates related to falls (0.2 per 100,000). A large proportion of these deaths were likely motor vehicle occupant deaths. When transportation-related injuries were examined by road user type, occupants of motor vehicles that were in crashes represented the highest death rate (death rate: 4.6 per 100,000). The death rate for transportation-related injuries was highest among those 15 years and older while the death rate for suffocation was dramatically lower after the first year of life. Injury death rates from fires or burns and drowning both peaked among children 1 to 4 years of age. Unintentional poisoning death rates peaked among the 15 to 19 year olds. Transportation-related injuries among 15 to 19 were more than 5 times the rate of those 10 to 14[13].

According to the World Health Organization analysis in 2004[5], unintentional injuries are responsible for over 3.9 million deaths, with over 90% of those occurring in low- and middle-income countries (LMIC)[5].

Five of the 15 leading causes of death in persons 15–29 years of age are unintentional injury related, including road traffic injuries, drowning, burns, poisoning, and falls. Up to 50% of young children with unintentional injuries that present to a hospital were left with some form of disability. The major unintentional injury-related causes of disability-adjusted life-years lost annually include road traffic injuries (17.5%) and falls (12.2%)[14].

The study presents the global burden of unintentional injuries based on year 2004 data from the World Health Organization Global Burden of Disease Study[15] estimates, highlighting differences in high- versus low- and middle-income countries. Overall, road traffic injuries made the largest proportion of unintentional injury deaths (33%) followed by falls (11%) and drowning (10%). With an increase in the number of vehicles on the roads, as well as vehicular speed, and as the mix of vehicles on roadways becomes more complex over time, the burden of road traffic injuries will likely increase. Projections by the World Health Organization indicate that, while road traffic injuries were the ninth leading cause of death resulting in 2.2% of deaths in 2004, by 2030 they will be the fifth leading cause of death resulting in 3.6% of global deaths[15].

Injury causes also demonstrated some regional patterns; like fire burns accounted for a higher proportion (14%) of unintentional injuries in the Southeast

Asian region, while drowning represented a proportionally higher problem (16%) in the Western Pacific region[5].

Deaths represent only the proverbial "tip of the iceberg" of the true burden of unintentional injuries; many injury events are not fatal but do result in significant sequelae that affect people throughout their lives. The rates for disability-adjusted life-years are highest in regions with many developing countries: Southeast Asia (3,065 per 100,000), Eastern-Mediterranean (2,825 per 100,000), and Africa (2,743 per 100,000). Notably, the rate for years lived with disability is highest in the Eastern Mediterranean region (1,194 per 100,000) despite its small population and relatively higher proportion of higher income countries, indicative of the nonfatal impact of injuries[5].

Road traffic injuries account for approximately one-third of unintentional injury disability-adjusted life-years in all regions. Poisoning was most significant in the European region (15% of disability-adjusted life-years vs. ≤6% in other regions), and drowning stood out in the Western Pacific region (14% of disability-adjusted life-years vs. ≤9% in other regions), which has countries like China and Vietnam with deltas, rivers, and many other water bodies[5].

The vast majority, over 3.5 million or 91%, of unintentional injury deaths occured in people in LMIC. When standardized per 100,000 population and compared with high-income countries, the death rate was nearly double in LMIC (65 vs. 35 per 100,000), and the rate for disability-adjusted life-years is more than triple in LMIC (2,398 vs. 774 per 100,000). This means that more people are injured, they suffer more nonfatal health outcomes, and more die as a result of injuries in LMIC[5].

An analysis of the injury burden in children less than 5 years of age in South Asia[16] showed a mortality rate of 33.9–850.7 deaths per 100,000 children. The overall incidence of injuries derived from community-based studies in this region was 8,870 cases per 100,000 children per year[16].

When breaking down road traffic injuries by user group, 60% of traffic fatalities occur in motorized 4-wheeled cars in high-income countries compared with 34% in low-income countries. Pedestrians accounted for an average of 45% of road traffic fatalities in low-income compared with 18% in high-income countries[17].

With the exception of fire-related deaths, the number of each cause-specific unintentional injury death was higher in males. While males have higher death and disability-adjusted life-years rates for most injury types, studies have shown that females are at higher risk of fire-related deaths than are males. Burns ranked seventh in the World Health Organization's top 10 causes of deaths and disability-adjusted life-years for women 15–44 years of age[5].

As per a study conducted by Colorado Department of Public Health and Environment in the year 2003[18], out of the injury deaths in Colorado, approximately 60 percent are from unintentional causes. They were the leading cause of death for people aged 1-44. Motor vehicle traffic crashes account for 45 percent of all unintentional injury deaths in Colorado, killing more than 600 Coloradoans each year. Falls were the leading cause of injury death among Colorado adults over age 75, with 60% of the falls occurring in the home[18].

As per CDC statistics of America in 2002-03[19], Unintentional injuries were a leading cause of death for Americans of all ages regardless of gender, race or

economic status. More than 106,000 people died in 2002 from unintentional injuries. Residential fires accounted for 76% of fire-related injuries and 79% of fire-related deaths in 2002; in this year alone, more than 401,000 home fires in the United States claimed the lives of 2,670 people and injured another 14,050 In 2003, more than 1.8 million seniors were treated in emergency departments for fall-related injuries and 421,000 were hospitalized (CDC 2004)[19].

As per national adolescent health information center, San Francisco in 2004[20], Unintentional injuries accounted for the greatest number of deaths in adolescent and young adult. Though the unintentional injury mortality rate for this age group has decreased during the past two decades, from 43.2/100,000 in 1981 to 27.0/100,000 in 2004, among young people aged between 10-24 16,989 died as a result of unintentional injuries, representing 45.5% of all deaths in this age group. Other unintentional injuries included poisoning, drowning, fires/burns, and falls. Male adolescents and young adults had a higher unintentional injury (UI) mortality rate than females. This disparity increased with age: males aged 10-14 were 1.7 times as likely to die as same-age females in 2004; among age 20-24, this figure was 3.2. Among 10-24 year-olds, rates are highest for males ages 18-24. After young adulthood, UI mortality rates decreased throughout the lifespan until age 70, when they peaked again. In 2004, motor vehicle accidents (MVAs) accounted for 31.3% of all mortality and a majority of UI mortality among adolescents and young adults[20].

Another study which was based on the evaluation of a large national database of unintentional oral ingestion poisonings involving children aged <5 years treated in US hospital emergency departments during 2004 and 2005[21], showed that there was a

significant increase in the relative likelihood of oral drug poisonings beginning at age 20-23 months that was consistent with the expected onset of complicated imitative behaviors in children. Based upon their analysis, imitative behavior have contributed to about 17,300 child poisonings treated annually in the emergency department, accounting for about 20% of poisonings involving children aged <5 years and 30% of the poisoning injuries involving children aged 20-59 months. They concluded that comprehensive efforts to prevent poisoning was needed to address the problem of imitative behavior in children[21].

A study from South Africa[22] showed that injuries accounted for 14.3% of all disability-adjusted life-years lost in the country in the year 2000.

A study of stove burn injuries in South Africa[23] showed that women had higher rates of hospital admissions (45%) and a higher mortality rate (22%) than did men.

A review of over 7,200 deaths from the United Arab Emirates in children aged less than 15 years showed that injuries comprised nearly 30% of all deaths, with road traffic injuries being responsible for 68.3% of injury-associated deaths[24].

A study based on the National Health Survey of Pakistan reported an overall annual incidence of unintentional injuries in children less than 5 years of age of 47.8 per 100,000 (95% confidence Interval: 36.6, 59.0), totaling approximately 1.1 million unintentional injuries per year[25].

A pilot surveillance study in children less than 11 years of age in Bangladesh, Colombia, Egypt, and Pakistan of 1,559 injured children found that the majority of

injuries (56%) were from falls, followed by road traffic injuries (22%) and then burns (13%)[26] .

Studies in India:

In a study conducted in India during 2001- 2003[27], Unintentional injuries were identified and contributed 7% to all causes mortality. Proportionate mortality was highest in the age group of 70+ years, with more than 60% injury deaths due to falls. The highest proportions of drowning deaths were in under 5 years (14%), the highest proportion of road traffic deaths were in the age group of 30–39 years (10%) of all unintentional deaths. Proportionate mortality due to unintentional injury in males (8%) was higher than in females (5%). Road traffic injuries (29%), falls (26%) and drowning (11%) were the leading causes of unintentional injury mortality[27].

During 2003–2004 in Andhra Pradesh a state of India[4], a morbidity survey in adults was carried out by using stratified random sampling in 20 villages. Injury was the second leading cause of death for all ages, responsible for 13% of all deaths. The leading causes of fatal injury were falls (20%), and road traffic crashes (13%). Non-fatal injury was reported by 6.7% of survey participants, with the leading causes of injury being falls (38%), road traffic crashes (25%). Falls were more common in women, with most (72.3%) attributable to slipping and tripping. Road traffic injuries were sustained mainly by men and were primarily the result of motorcycle crashes (48.8%)[4].

As per another study in 2006[28], where they calculated mortality rates and years of life lost because of unintentional injuries using community based information

obtained prospectively over a 7-year period, from 1998 to 2004, among a rural and peri-urban population of 108,000 in South India; the total mortality rate for unintentional injuries was 54.9 per 100,000 population. Of all deaths in the population 18.9% were attributable to unintentional injuries. The high burden was particularly notable in the 15-29 age group, where up to 70% of years of life lost were due to unintentional injury. The burden of unintentional injuries reported in this study was significantly higher than the figures reflected in available reports for India and was likely due to the under reporting in routine mortality statistics[28].

As per a study conducted in Pune city in India, in 2009[29], which was done to evaluate the causes of unintentional injuries, nearly 28% of the households did not have a separate kitchen, 37.5% cooked at the ground level, 33.5% used a kerosene pressure stove, 12% used unprotected open fire as a source of warmth in winter, and 34.5% stored inflammable substances at home. Ninety one percent of the households reported storing poisonous chemicals in places that could not be locked. In 68.3% of the households with children below five years, these chemicals were kept in places accessible to children. Nearly 21% of the individuals, who could swim, did so in unsafe places and 25.2% of them were not trained in swimming. In 35.5% of the households, children used streets as playgrounds. Among all two-wheeled vehicle riders, 35.6% reported not having a helmet and 57.7% of those who had a helmet did not use it regularly. Socioeconomic status was strongly associated with the unsafe behaviors related to burns, drowning, and road traffic injuries[29].

As per NCRB report 2007[30], there were 15,24,034 injuries and 5,03,842 deaths in India. In Karnataka, nearly 1,95,000 hospitalizations and 34,378 deaths were reported in 2007 as per Crime Records Bureau Report[30].

In Bengaluru, as per data from Bengaluru Injury Surveillance Programme (BISP) Injury deaths have increased from 2152 in 2000 to 4334 by 2007[31]. Road traffic injuries were the leading and commonest cause of deaths (28%) and hospitalizations (46%) with Pedestrians, two-wheeler occupant and bicyclists were at an increased risk[31].

As per a retrospective study (1994–2007) done at KMC Manipal in 2007[32], all cases of fatal unintentional injuries in children were aged 10 years and below. Seventy five such cases were identified during the 14 year study period. Males accounted for 68% of cases with a male–female ratio of 2.1:1. Mean age of male and female victims was 5.3 and 4.9 years, respectively. Road traffic fatalities accounted for majority of the cases in this age group (52%), followed by those due to thermal injuries (22.7%). Flame was the cause of thermal injuries in 52.9% cases and scalds were observed in 47.1% cases. Traffic fatalities, fall and drowning were more common in school age children while toddlers and pre-school age children were relatively at a greater risk from domestic accidents (thermal injuries and poisoning). The most frequent victims of road traffic incidents were pedestrians (64.1%). Head injuries alone were the cause of fatalities in the majority of road traffic incidents (82.1%). The study highlighted on the pattern of fatalities due to unintentional injuries among young children[32].

As per data from Bengaluru Injury surveillance programme in 2007[33], there were 209 deaths and 4,986 hospitalizations in a ratio of 1 : 25 between fatal to non

fatal falls and accounting for 6% of total injury deaths in the city of Bengaluru. Males and females accounted for 83% and 17%, respectively, with a ratio of 5:1. 10% of deaths and 20% of injuries occurred among children (< 15 years), while elderly (> 60years) contributed for 6% deaths and 7% of injuries, respectively. Nearly 70 % of fall deaths were in 16 - 40 years. In both fatal and nonfatal injuries, women in younger and elderly age groups were represented in higher numbers compared to men. Home was the commonest place in 30% of deaths. Falls on road (18%) and in construction sites (17%) were the other common place of falls. Falls in agricultural areas and shopping areas contributed 2% of deaths in the total series. Similarly, for nonfatal injuries, 40% occurred at home, followed by 31% in work places and 18% on roads. Among children, more than 80% of fatal and non-fatal injuries occured at home while playing in balconies, staircases, compounds and at the entrance of home. Among nonfatal injuries, head was the commonest injured area in 53% of patients. Upper limbs (22%) and lower limbs (32%), commonly resulting in fractures were registered in more than half of injuries (54%). Among total hospital registrations, 43% were mild injuries, while 41% and 16% were moderate and severe in nature[33].

In the young population of 15 – 44 years injuries are a leading cause of deaths, hospitalizations and disabilities. Data from vital statistics division of BBMP and BRSIPP study in 2010[34], findings confirm this observation as nearly 70% (65%of male and 74% of female) of deaths were in 15 – 44 years with a male to female ratio of 2:1. Data from BRSIPP reveal that injuries were distributed across all months, even though some months registered higher numbers. Road traffic injuries were the leading cause of death in both rural and urban areas for both fatal and nonfatal injuries.

Unintentional injuries contributed for more than 2/3 of total non fatal injuries in Bangalore (70%). Nearly 50% of fatal in urban and 40% in rural were due to collision with heavy vehicles. Nearly 22% of non fatal fall injuries occurred among children less than 15 years, while 8% were in elderly beyond 60+ years. Nearly 53% of falls occurred in 15-44 years with a higher number among men. The male to female ratio was 4:1 with a male preponderance. More than half (54 %) of burn injuries among women occurred in the age group of 14-29 years with another half in 29 to 44 years[34].

According to BISP 2008[35], among the various road user categories killed in RTIs, pedestrians were the largest category to the extent of 52%. Two wheeler riders and pillions contributed for 26% and 11%, respectively. Bicyclists and car occupants had succumbed in road crashes to the extent of 5% and 3%, respectively. Auto rickshaw passengers were killed in 1.8% of deaths. In sharp contrast, among non-fatal injuries, more than half of injured brought to hospitals were two wheeler riders (42%) and pillions (9%), with pedestrians constituting one fourth of the series[35].

MATERIAL AND METHODS:

a) Source of data: Data will be collected from victims/ patients of unintentional injuries brought to casualty of KLE's Dr. Prabhakar Kore hospital & MRC, Belgaum.

b) Study design: Cross-sectional study

c) Study period: From October 2011 to March 2012.

d) Sample size: by universal sampling method.

All the victims / patients of unintentional injuries coming to the casualty of KLE's Dr. Prabhakar Kore hospital during the study period will be included in study.

e) Inclusion criteria:

1. Victims/ patients of unintentional injuries of all age groups.
2. Both sexes.

f) Exclusion criteria:

1. Cases of intentional injuries/ deaths (suicidal, assault and homicidal)
2. Industrial accidents.

g) Instruments used for data collection: Proforma:

1. General particulars including the socio- demographic profile of the victims/ patients.
2. Detailed particulars of the injury.

The cause-specific unintentional injuries examined in our study, will be those that the World Health Organization (WHO) routinely analyzes and publishes data on. These include transportation injuries (air, land, water); falls; poisonings; burns; drowning; and other unspecified group of unintentional injuries.

The unintentional injury cases coming to the casualty were identified, properly explained about the objectives of the intended study and necessary details needed for the study was collected in the proforma, which included a detailed description of all the general data of the victims/ patients. Their socio- demographic profile was taken to study the prevalence of the various types of unintentional injuries in each age group, sex, socio economic status. Detailed data with respect to the injuries was taken regarding to the type of unintentional injury, mode, place of occurrence, degree of injury, factors causing the injury by interviewing the patient / attender's and by examination of the injured.

The data thus collected was analysed and conclusions drawn. Percentage distribution of different types of injuries calculated.

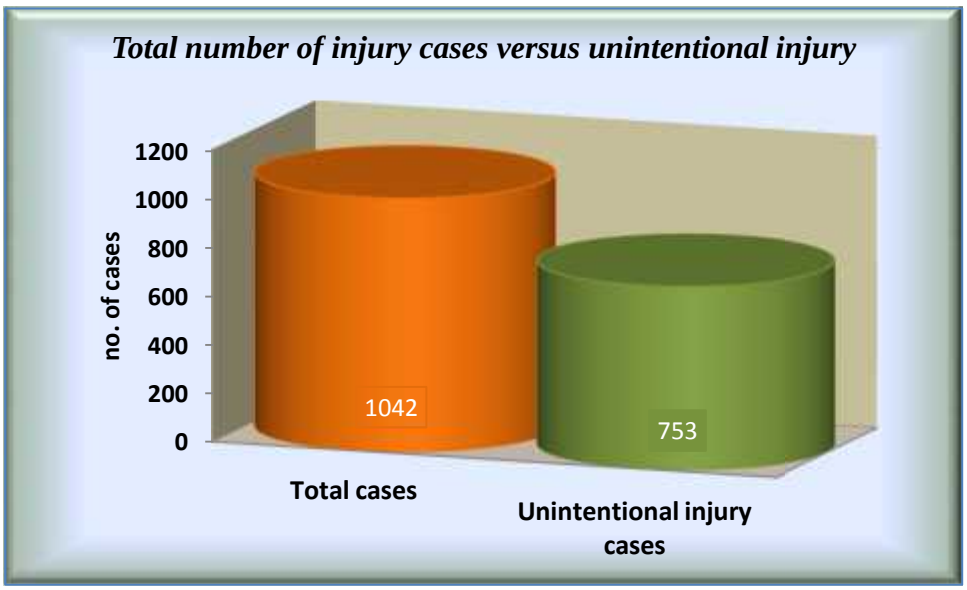
RESULTS

During the study period from October 2011 to March 2012, a total of 1042 injury cases came to the casualty of our tertiary health care centre out of which 753 cases were of unintentional injuries, constituting to 72.26% of the total injury cases. The same has been depicted in Table.no. 1, and Graph no. 1.

Table 1: Showing total number of injury cases versus unintentional injury which came to the casualty during study period:

Total number of injury cases	Total number of unintentional injury	Percentage
1042	753	72.26%

Graph 1:

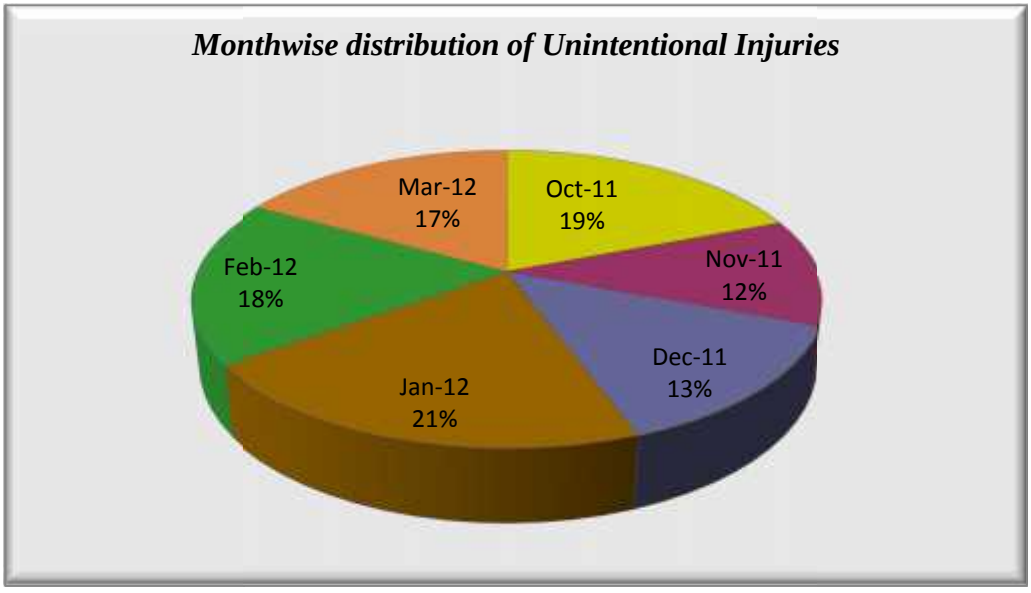


Out of the total 753 cases, maximum number of cases came in January constituting to 20.72%, and minimum no. of cases was seen in November with 11.69% (Table no.2; Graph no. 2)

Table 2*: *Showing month wise distribution of unintentional injury cases:

Month	Number of cases	Percentage
Oct 2011	144	19.12%
Nov 2011	88	11.69%
Dec 2011	102	13.55%
Jan 2012	156	20.72%
Feb 2012	136	18.06%
March 2012	127	16.87%
Total	753	100%

Graph 2:

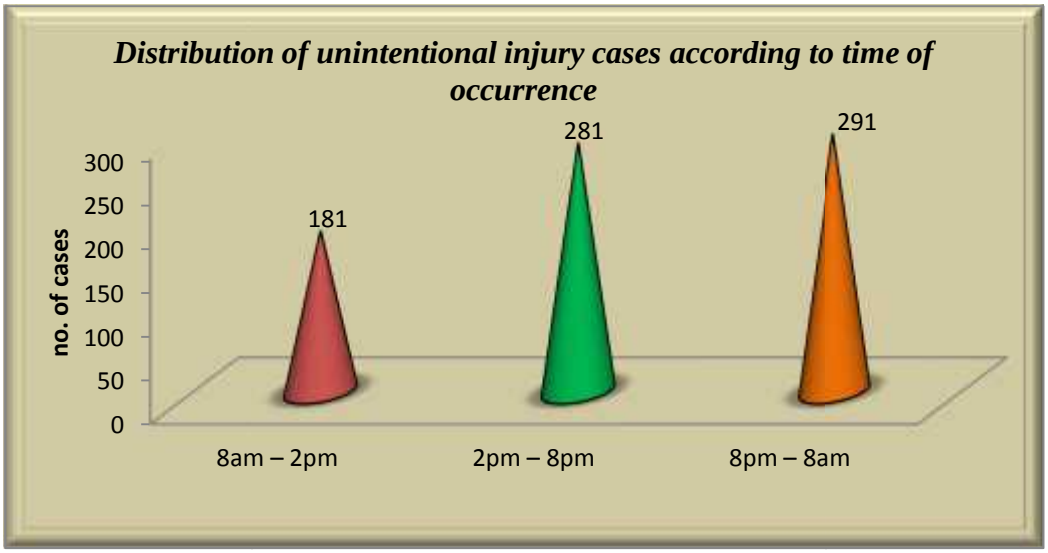


Maximum number of cases 291 (38.6%) came between 8.00 pm to 8.00 am, followed by 281 (37.2%) cases which came between 2.00 pm to 8.00 pm (Table no.3; Graph no. 3)

Table 3: Distribution of unintentional injury cases according to time of occurrence:

Time	Cases	Percentage
8am – 2pm	181	24.04%
2pm – 8pm	281	37.23%
8pm – 8am	291	38.64%
Total	753	100%

Graph 3:

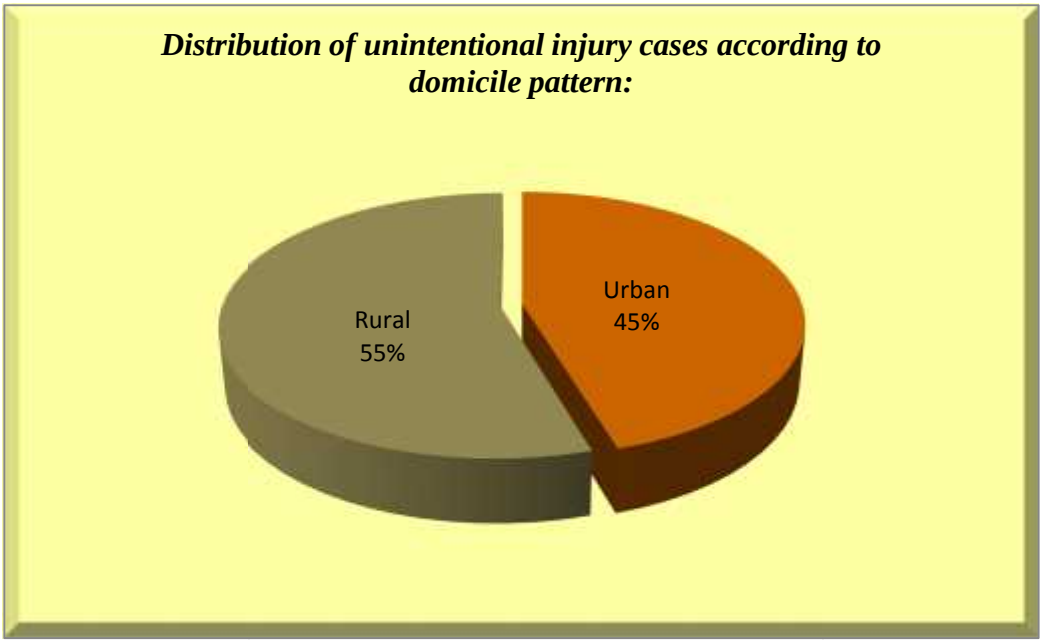


In the present study, the distribution of domicile pattern of the victims showed that 341 (45.3%) were from urban areas (within Belgaum city limits) and 412 (54.7%) cases from rural areas (Table no. 4; Graph no.4)

Table 4: Distribution of unintentional injury cases according to domicile pattern:

Area	Case	Percentage
Urban	341	45.28%
Rural	412	54.72%
Total	753	100%

Graph 4:

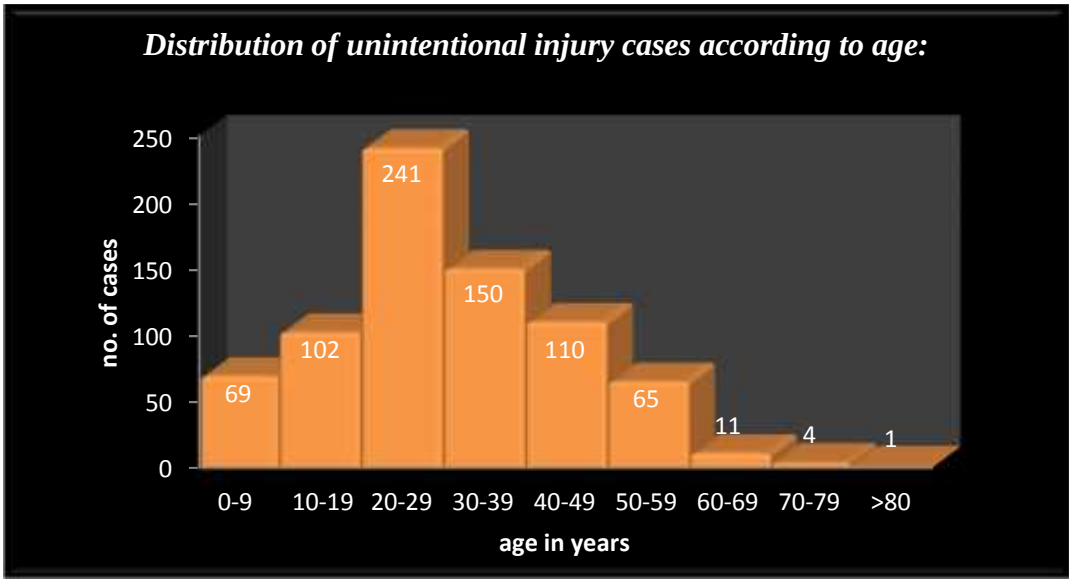


In the present study maximum number of victims 241 (32%) were in the age group of 20-29 years, followed by 150 (19.9%) were in the age group of 30-39 years (Table.no. 5; Graph no. 5)

Table 5: Distribution of unintentional injury cases according to age:

Age in years	No. of cases	Percentage
0-9	69	9.16%
10-19	102	13.55%
20-29	241	32%
30-39	150	19.92%
40-49	110	14.6%
50-59	65	8.6%
60-69	11	1.46%
70-79	4	0.53%
>80	1	0.13%
Total	753	100%

Graph 5:

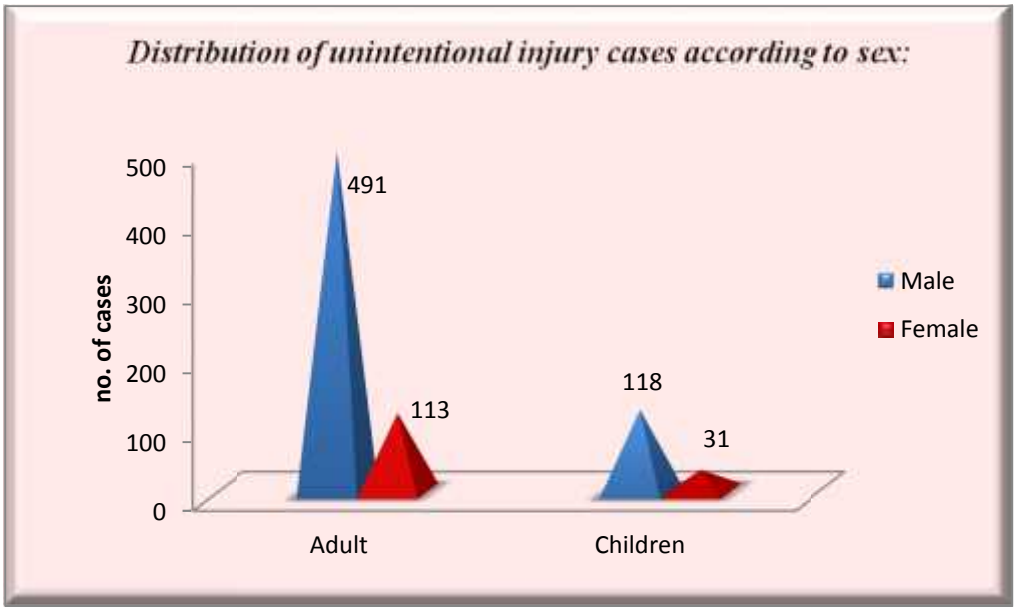


In our study out of the total, maximum number of cases 609 (80.9%) were male and 144 (19.1%) cases were female. Further among the total cases, 604 (80.2%) were adults and 149 (19.8%) children (Table no. 6; Graph no. 6)

Table 6: Distribution of unintentional injury cases according to sex:

Sex	Adult	Children	Total
Male	491	118	609
Female	113	31	144
Total	604	149	753

Graph 6:

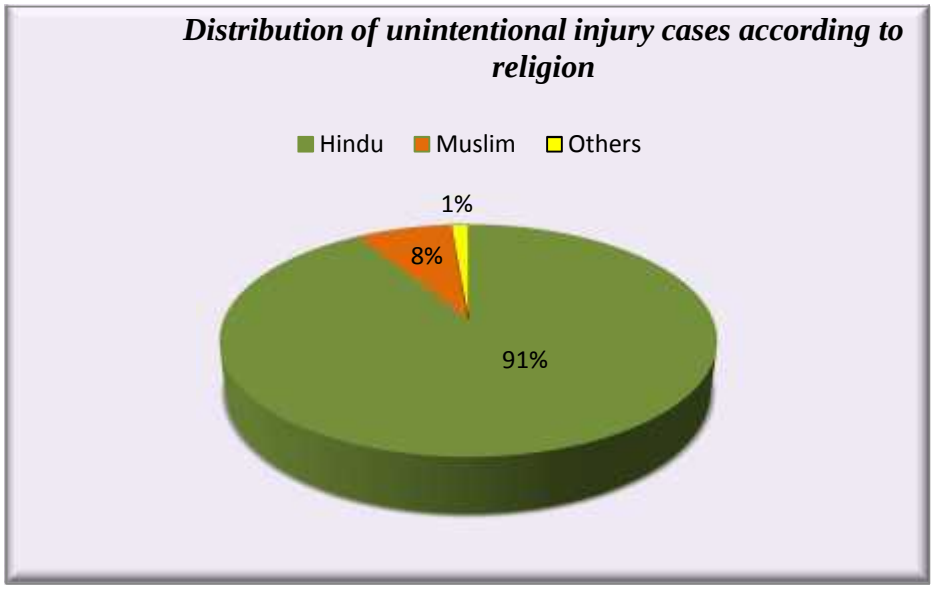


Maximum number of patients 687 (91.2%) belonged to Hindu religion, with other religions constituting to a minimal of 1.3% (Table no. 7; Graph no. 7)

Table 7: Distribution of unintentional injury cases according to religion:

Religion	Cases	Percentage
Hindu	687	91.23%
Muslim	56	7.44%
Others	10	1.33%
Total	753	100%

Graph 7:

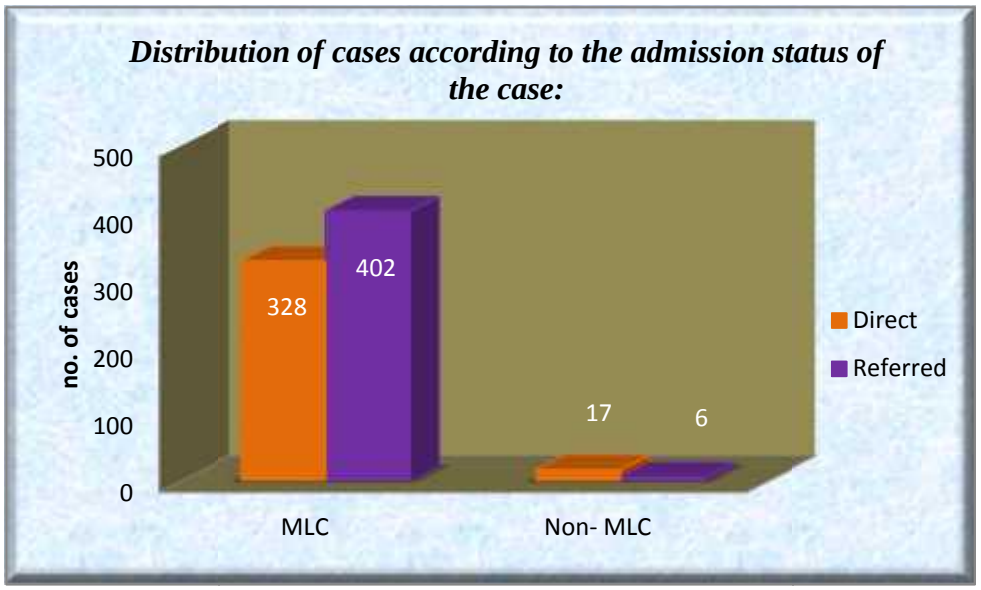


A total number of 345 cases came directly to the casualty of our hospital, out of which 328 cases were of medico-legal in nature; and majority i.e. 408 cases of unintentional injuries were referred, out of which 402 cases were of medico-legal in nature (Table no. 8; Graph no. 8)

Table 8: Distribution of cases according to the admission status of the case:

Category of admission	MLC	Non- MLC	Total
Direct	328	17	345
Referred	402	06	408
Total	730	23	753

Graph 8:

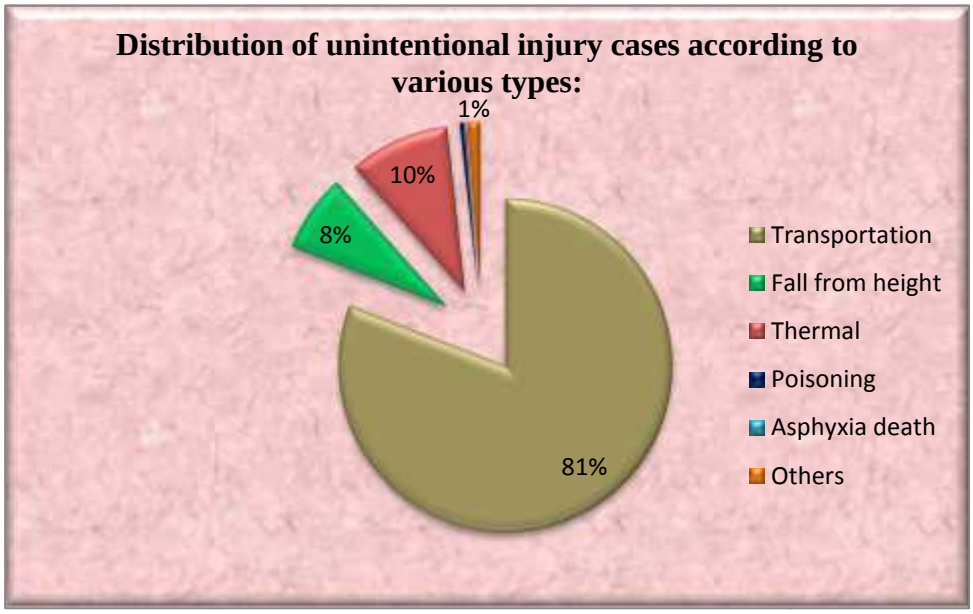


In the current study, transportation injuries constituted the maximum number i.e, 609 (80.8%) cases, followed by thermal injuries 74 (9.8%) cases, fall from height 57 (7.6%) cases; other miscellaneous group 9 (1.2%) cases; poisoning 3 (0.39%) and asphyxia 1 case (0.13%) (Table no. 9; Graph no. 9)

Table 9: Distribution of unintentional injury cases according to various types:

Type of case	Number of cases	Percentage
Transportation	609	80.87%
Fall from height	57	7.57%
Thermal	74	9.82%
Poisoning	03	0.39%
Asphyxia/ suffocation	01	0.13%
Others	09	1.19%
Total	753	100%

Graph 9:

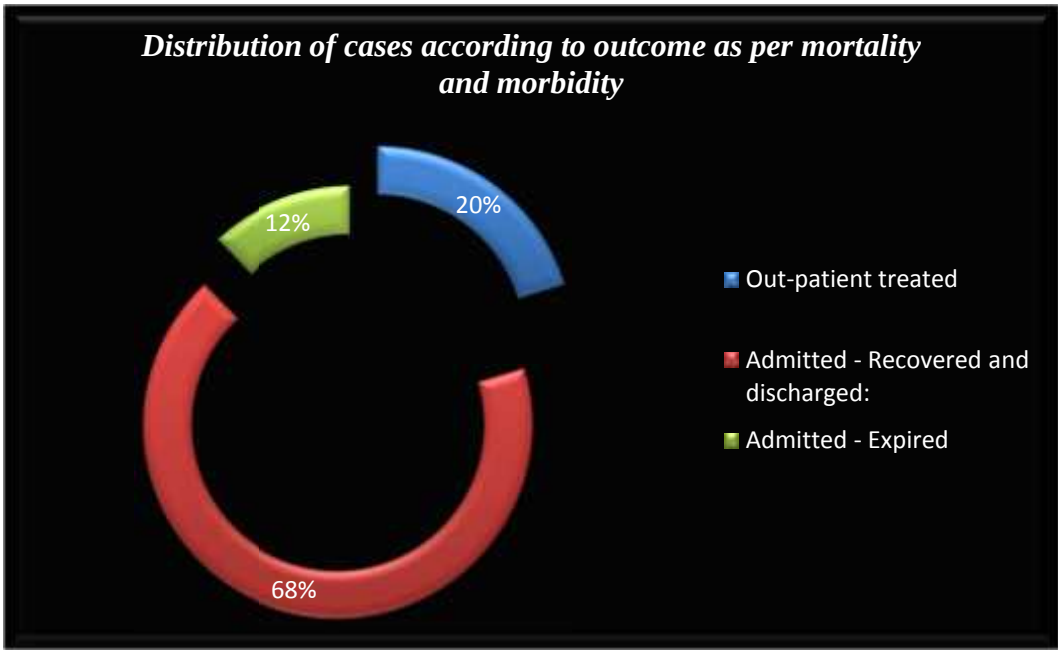


While studying the outcome of the 753 unintentional injuries in our study we came across the fact that majority of i.e 601 (79.7%) cases were admitted to the hospital and 152 (20.3%) cases were treated on out-patient basis. Among the 601 admitted cases of unintentional injuries, 510 (67.7%) cases recovered and were discharged, while 91 (12%) cases expired accounting to a mortality rate of 12% overall (Table no.10; Graph no. 10)

Table 10: Distribution of cases according to outcome as per mortality and morbidity:

Total no. of unintentional injury cases:	Out-patient treated		Admitted			
753			Recovered and discharged:		Expired	
	152	20.3%	510	67.7%	91	12%

Graph 10:

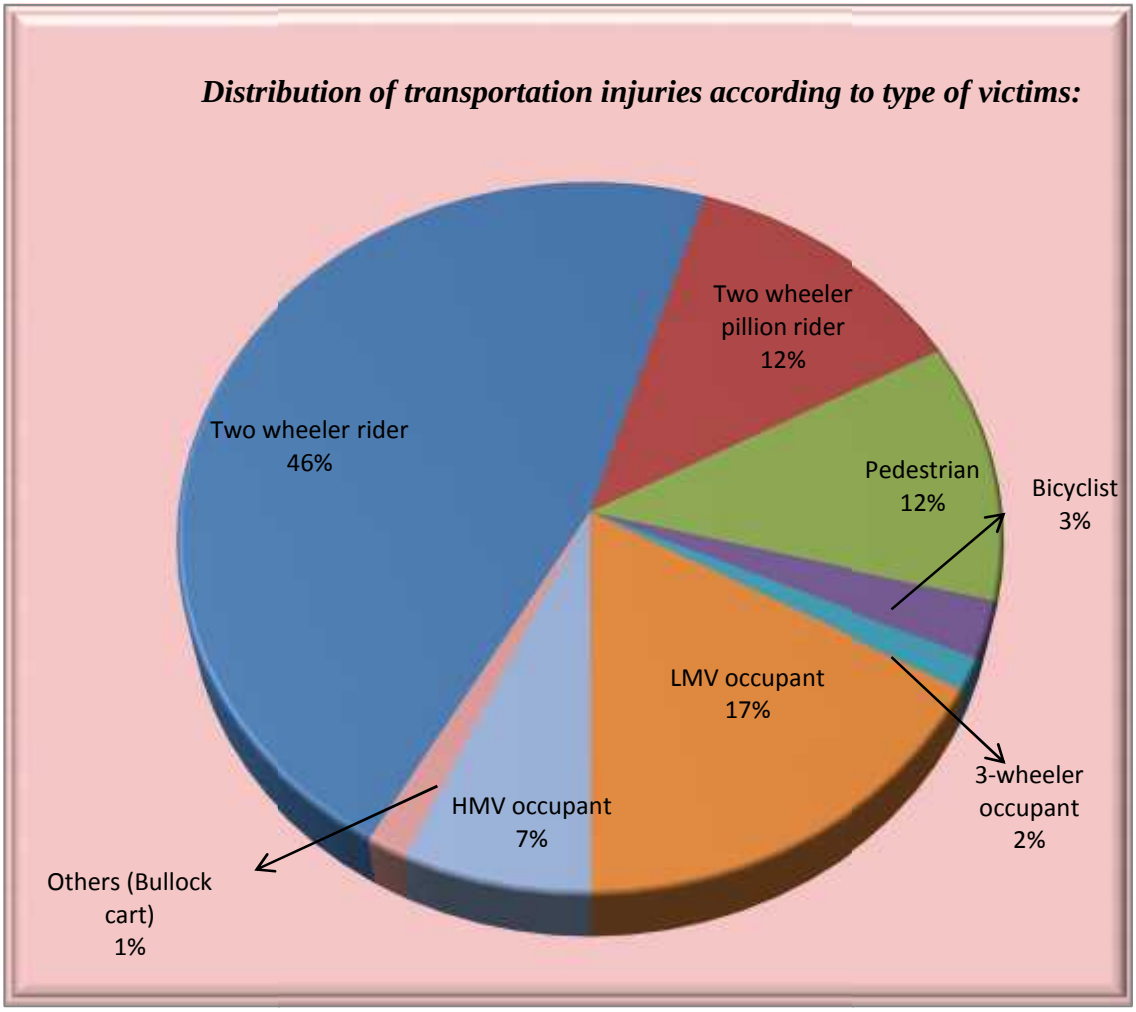


Among the victims in transportation injuries, majority of them were rider and pillion rider of a two wheeler 283 & 75 cases (58.78%) followed by occupants of LMV 103 (16.9%) cases; pedestrian 72 (11.82%) cases; HMV occupant 42 (6.89%) cases (Table no. 11.1; Graph no. 11.1).

Table 11.1: Distribution of transportation injuries according to type of victims:

Victim	Cases	Percentage
Pedestrian	72	11.82%
Bicyclist	16	2.62%
Two wheeler pillion rider	75	12.31%
Two wheeler rider	283	46.47%
Three wheeler occupant	09	1.47%
LMV occupant	103	16.91%
HMV occupant	42	6.89%
Others (Bullock cart)	09	1.47%
Total	609	100%

Graph 11.1:

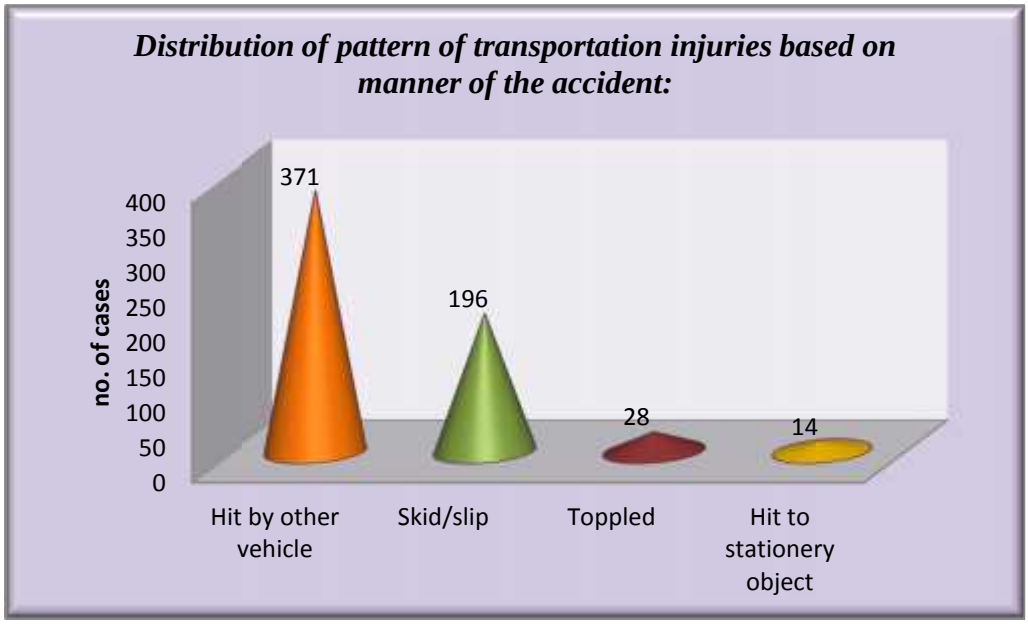

Distribution of transportation injuries according to type of victims:
Two wheeler pillion rider 12%
Two wheeler rider 46%
Pedestrian 12%
Bicyclist 3%
LMV occupant 17%
3-wheeler occupant 2%
HMV occupant 7%
Others (Bullock cart) 1%

Based on the manner of accident of transportation injuries, it was noted in our study that majority of the unintentional transportation injuries occurred due to hit by/ to another vehicle 371 (60.9%) cases, followed by skid/ slip 196 (32.18%) cases. Injuries due to toppling of the vehicle were 28 (4.59%) cases and due to hit to a stationary object were 14 (2.29%) cases. (Table no. 11.2; Graph no. 11.2)

Table 11.2: Distribution of pattern of transportation injuries based on manner of the accident:

Manner	Number of cases	Percentage
Hit by other vehicle	371	60.92%
Skid/slip	196	32.18%
Toppled	28	4.59%
Hit to stationery object	14	2.29%
Total	609	100%

Graph 11.2:

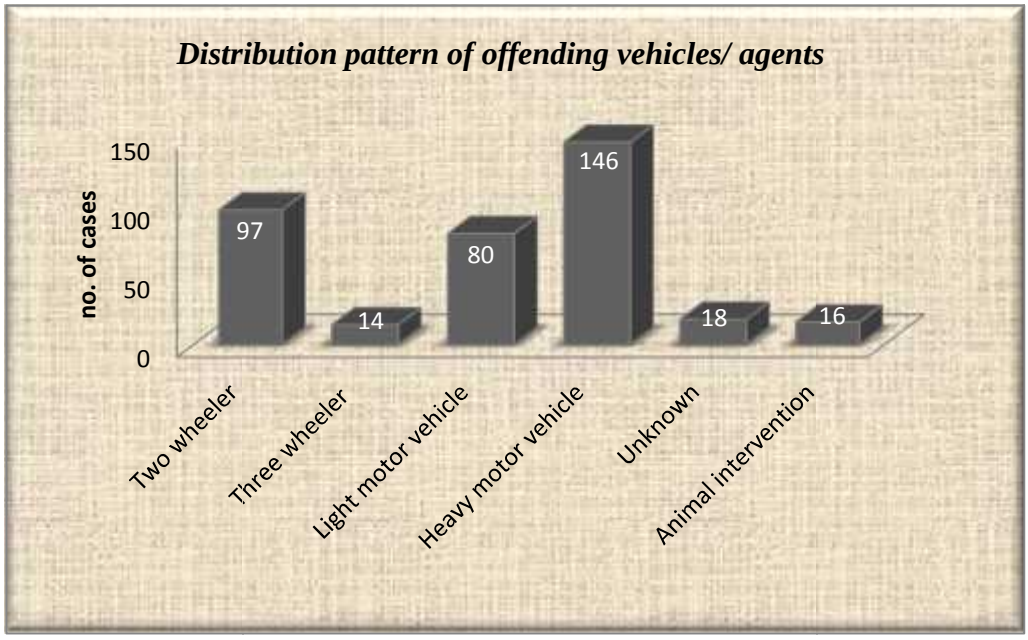


Out of the 371 cases in the transportation injuries which were due to hit by/ to another vehicle or agent, majority of the offending agent was HMV in 146 (39.4%) cases followed by 2- wheeler in 97 (26.1%) cases, LMV in 80 (21.6%) cases, unknown vehicles in 18 (4.8%) cases, animal intervention in 16 (4.3%) cases, and 3-wheeler in 14 (3.8%) cases. (Table no. 11.3; Graph no.11.3)

Table 11.3: Distribution pattern of offending vehicles/ agents involved in the transportation injury cases:

Offending vehicle	Number of cases	Percentage
Two wheeler	97	26.1%
Three wheeler	14	3.8%
Light motor vehicle	80	21.6%
Heavy motor vehicle	146	39.4%
Unknown	18	4.8%
Animal intervention	16	4.3%
Total	371	100%

Graph 11.3:



Out of the 609 transportation injury cases seen in our study 242 (39.7%) victims had superficial injuries; 206 (33.8%) victims suffered with skeletal injuries, 153 (25.1%) victims suffered with head injury among which 11 (1.8%) victims had spinal cord injury; and 49 (8%) victims had visceral injuries. The mortality rate in the transportation injuries was 8.5% (52 cases). (Table no. 11.4)

Table 11.4: Distribution of pattern of injuries in transportation injury cases:

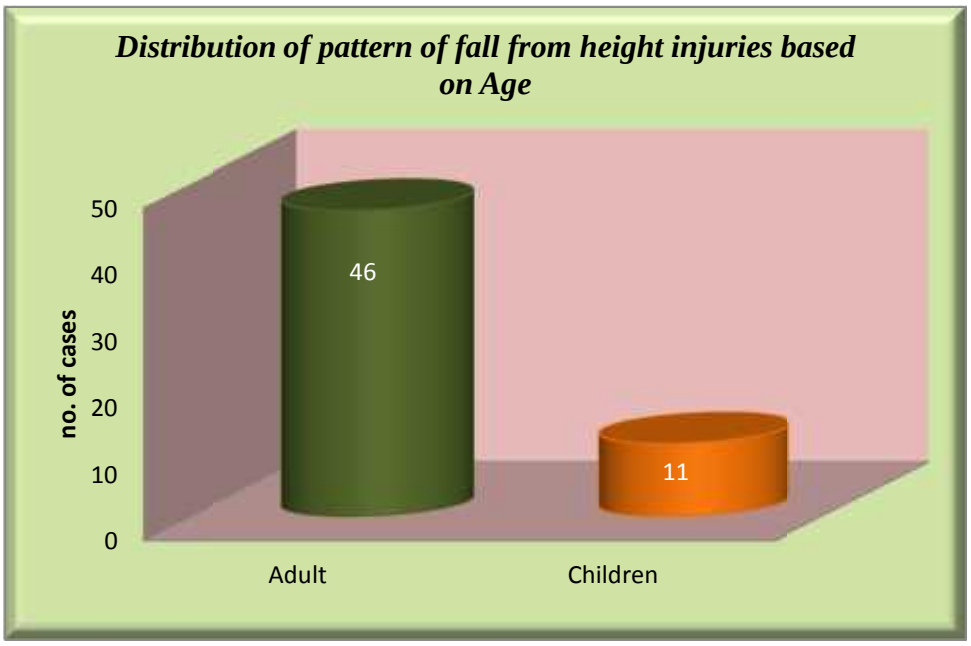
Pattern of injuries		Number of cases	Percentage	Total no. of transportation injury cases:
Superficial		242	39.7%	609
Visceral		49	8%	
Skeletal		206	33.8%	
Head injury	With spinal cord	11	1.8%	
	Without spinal cord	142	23.3%	
Mortality		52	8.5%	

In the current study, out of 753 cases of unintentional injuries 57 (7.6%) cases were due to fall from height, out of which 46 (80.7%) cases were involving adults and 11 (19.3%) victims were children. (Table no. 12.1; Graph no. 12.1)

Table 12.1: Distribution of pattern of fall from height injuries based on Age:

Age wise distribution	Number of cases	Percentage
Adult	46	80.7%
Children	11	19.3%
Total	57	100%

Graph 12.1:

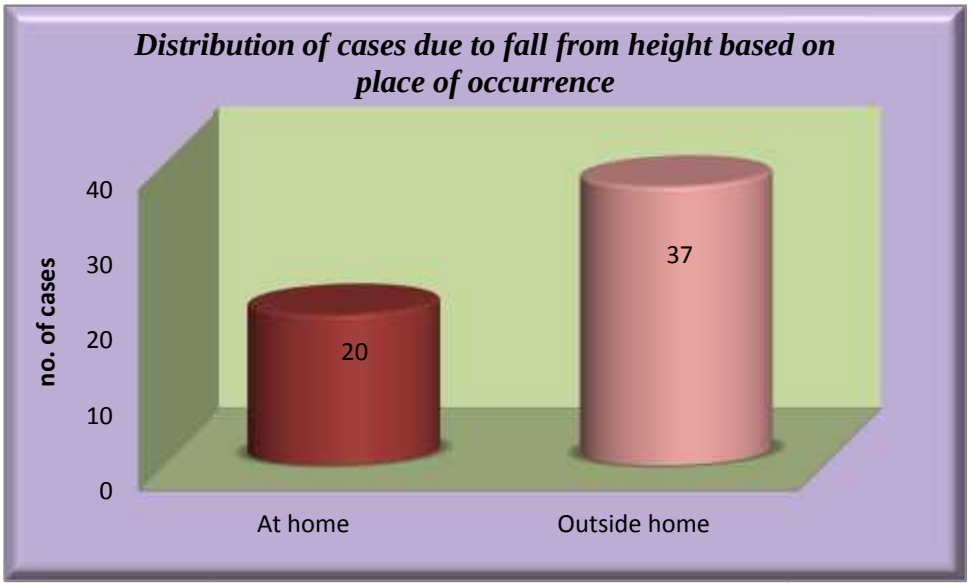


Among the 57 cases due to fall from height, 37 (64.9%) cases occurred outside home, and 20 (35.1%) cases was seen occurring at home. (Table no. 12.2; Graph no.12.2)

Table 12.2: Distribution of cases due to fall from height based on place of occurrence:

Place of occurrence	Number of cases	Percentage
At home	20	35.10%
Outside home	37	64.91%
Total	57	100%

Graph 12.2:

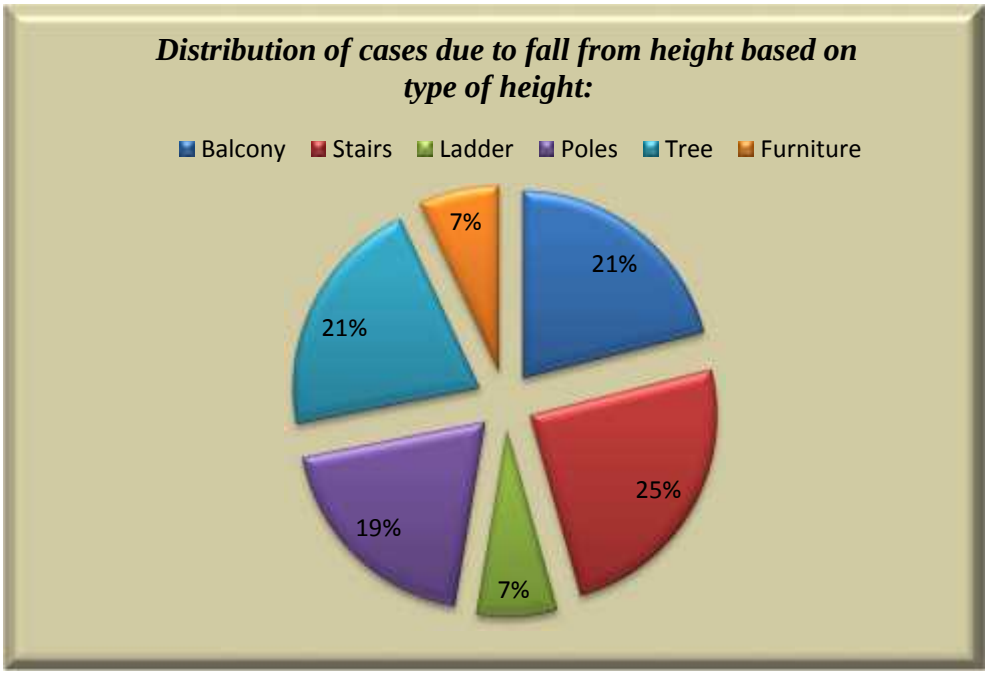


Out of the total fall from height cases encountered in the study, 14 (24.5%) cases had fallen from stairs, 12 (21.1%) from balcony and tree, 11 (19.3%) from poles, and 4 (7%) cases each from furniture and ladder. (Table no. 12.3; Graph no.12.3)

Table 12.3: Distribution of unintentional injury cases due to fall from height based on type of height:

Type of elevation	Number of cases	Percentage
Balcony	12	21.1%
Stairs	14	24.5%
Ladder	04	7%
Poles	11	19.3%
Tree	12	21.1%
Furniture	04	7%
Total	57	100%

Graph 12.3:

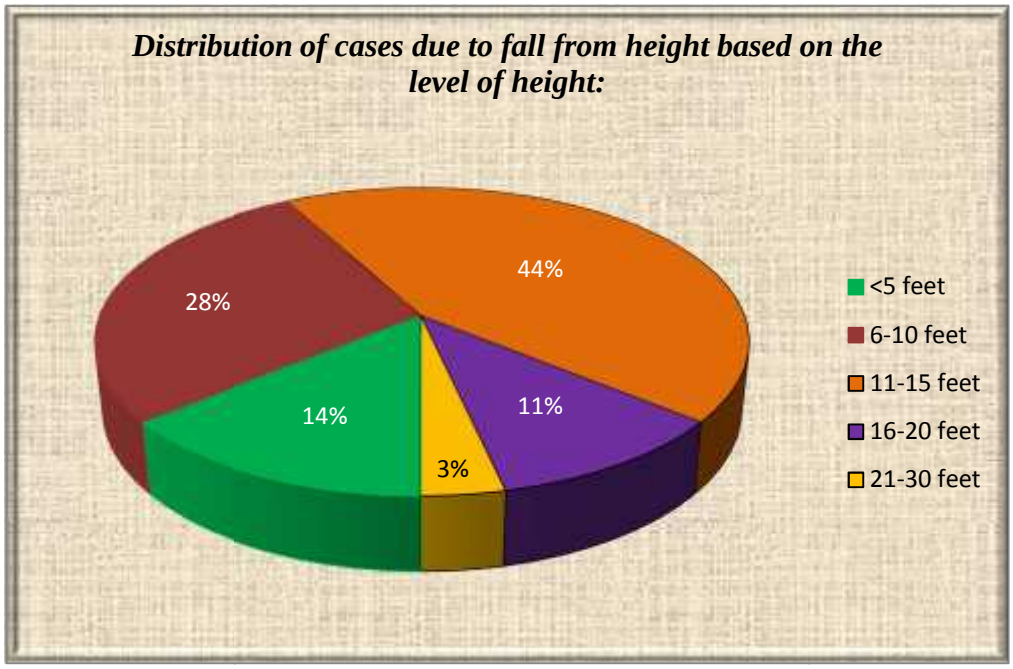


Based on the level of height, among the 57 cases due to fall from height, majority of cases 25 (43.80%) had fallen from 11-15 feet, 16 (28.10%) cases from 6-10 feet, 8 (14.10%) cases were from less than 5 feet. (Table no.12.4;Graph no.12.4)

Table 12.4: Distribution of cases due to fall from height based on the level of height:

Level of height	Number of cases	Percentage
<5 feet	8	14.10%
6-10 feet	16	28.10%
11-15 feet	25	43.80%
16-20 feet	06	10.50%
21-30 feet	02	3.50%
Total	57	100%

Graph 12.4:



Out of the 57 cases encountered due to fall from height in our study, mortality rate was seen in 15.8% (9 cases). In total 66.7% (38) of victims showed external injuries; 68.4%(39) victims suffered with head injury again out of which 8.8% (5) had involvement of spinal cord; 45.6% (26) of victims sustained visceral injuries and 8.7% (5) victims sustained skeletal injuries. (Table no. 12.5)

Table 12.5: Distribution of cases based on pattern of injuries sustained in fall from height:

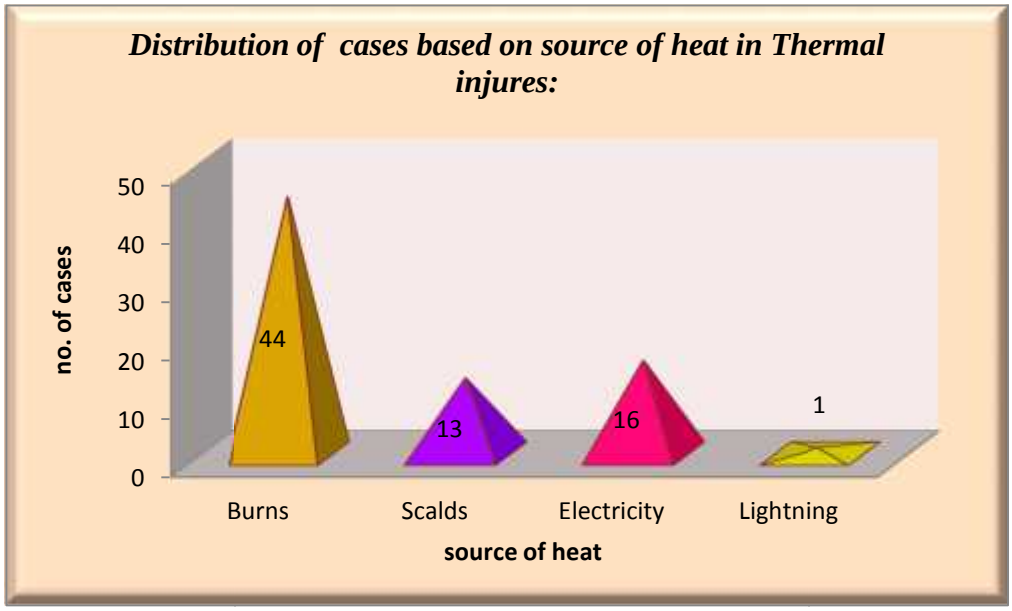
Pattern of injuries		Number of cases	Percentage	Total no. of cases
External		38	66.7%	57
Visceral		26	45.6%	
Skeletal		05	8.7%	
Head injury	With out spinal cord	34	59.6%	
	With spinal cord	05	8.8%	
Mortality		9	15.8%	

We encountered 74 cases of thermal injuries out of 753 unintentional injury cases in our set up. Of which majority 44 cases (59.45%) were due to burns; 13 (17.56%) cases were due to scalds; 16 (21.62%) cases were due to electrocution and a rare 1 (1.35%) case was due to lightning. (Table no. 13.1; Graph no.13.1)

Table 13.1: Distribution of unintentional injury cases based on source of heat in Thermal injures:

Source of Heat	Number of cases	Percentage	Total no. of cases
Burns	44	59.45%	74
Scalds	13	17.56%	
Electricity	16	21.62%	
Lightning	01	1.35%	
Mortality	30	40.5%	

Graph 13.1:

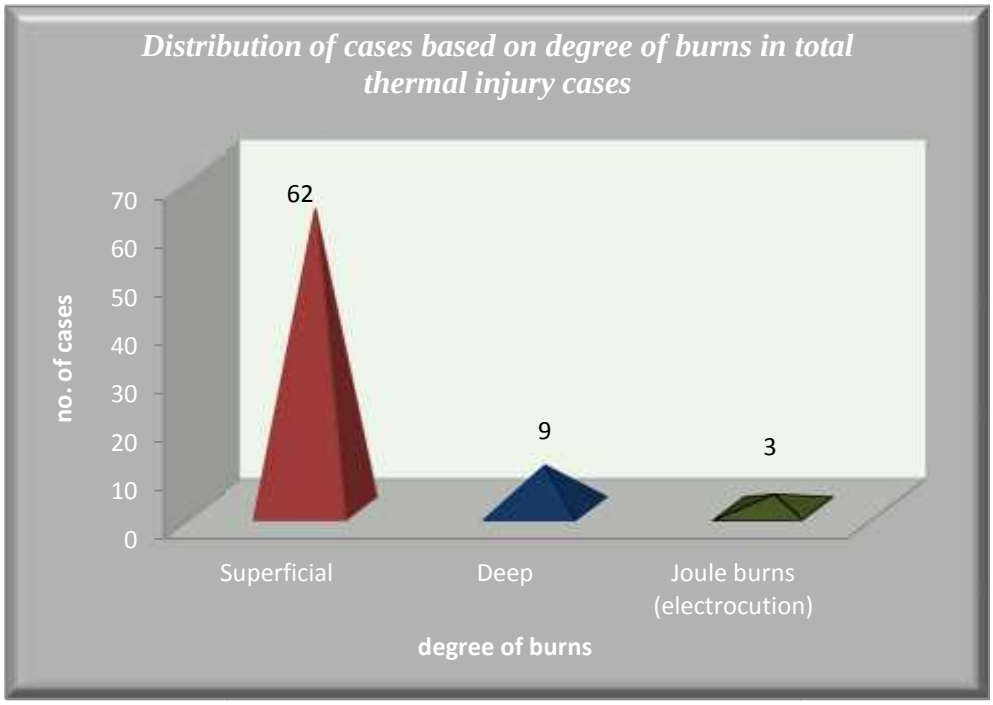


Based on degree of burns in total thermal injury cases, majority 62 (83.78%) of victims suffered superficial burns and deep burns was seen in 9 (12.16%) cases; Joule burns (due to electrocution) was seen in 3 (4.10%) cases. (Table no. 13.2; Graph no. 13.2)

Table 13.2: Distribution of cases based on degree of burns in total thermal injury cases:

Degree of Burns	Number of cases	Percentage
Superficial	62	83.78%
Deep	09	12.16%
Electrocution joule burns	03	4.10%
Total	74	100%

Graph 13.2:

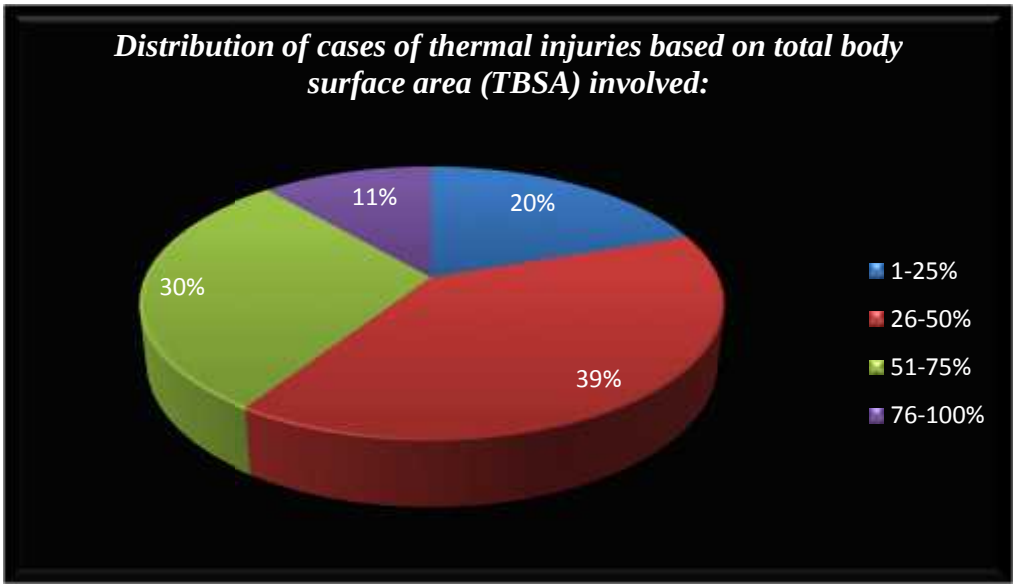


Depending on the involvement of total body surface area in total thermal injuries, 28 (39.4%) victims had burns involving 26-50% of body surface area; 21 (29.6%) victims had involvement of 51-75% of body surface area; 14 (19.7%) victims had <25% involvement and 8 (11.3%) victims had involvement of more than 76% of body surface area. (Table no. 13.3; Graph no. 13.3)

Table 13.3: Distribution of cases of thermal injuries based on total body surface area (TBSA) involved:

TBSA	Number of cases	Percentage
<25%	14	19.7%
26-50%	28	39.4%
51-75%	21	29.6%
76-100%	08	11.3%
Total	71	100%

Graph 13.3:



We encountered 3 cases of unintentional poisoning cases out of the total 753 cases. Off the 3 cases all were seen in children, 2 occurred at home and 1 at school. There was no mortality. Among the type of poison one was unknown plant poison, one was kerosene and the other was rat poison. (Table no. 14)

Table 14: Distribution of unintentional poisoning cases :

Age	Sex	Type of poison	Place of Occurrence	Outcome
12 yrs	Female	Plant	School	Recovered
06 yrs	Male	Kerosene	Home	Recovered
11 yrs	Male	Rat poison	Home	Recovered

There was only one case of asphyxial type of unintentional injury we saw in our study and that was involving an infant of 1 yr wherein drowning features were seen due to unintentional fall of the child into the open tank in its house. However the child recovered. (Table no. 15)

Table 15: Distribution of unintentional injury due to asphyxia:

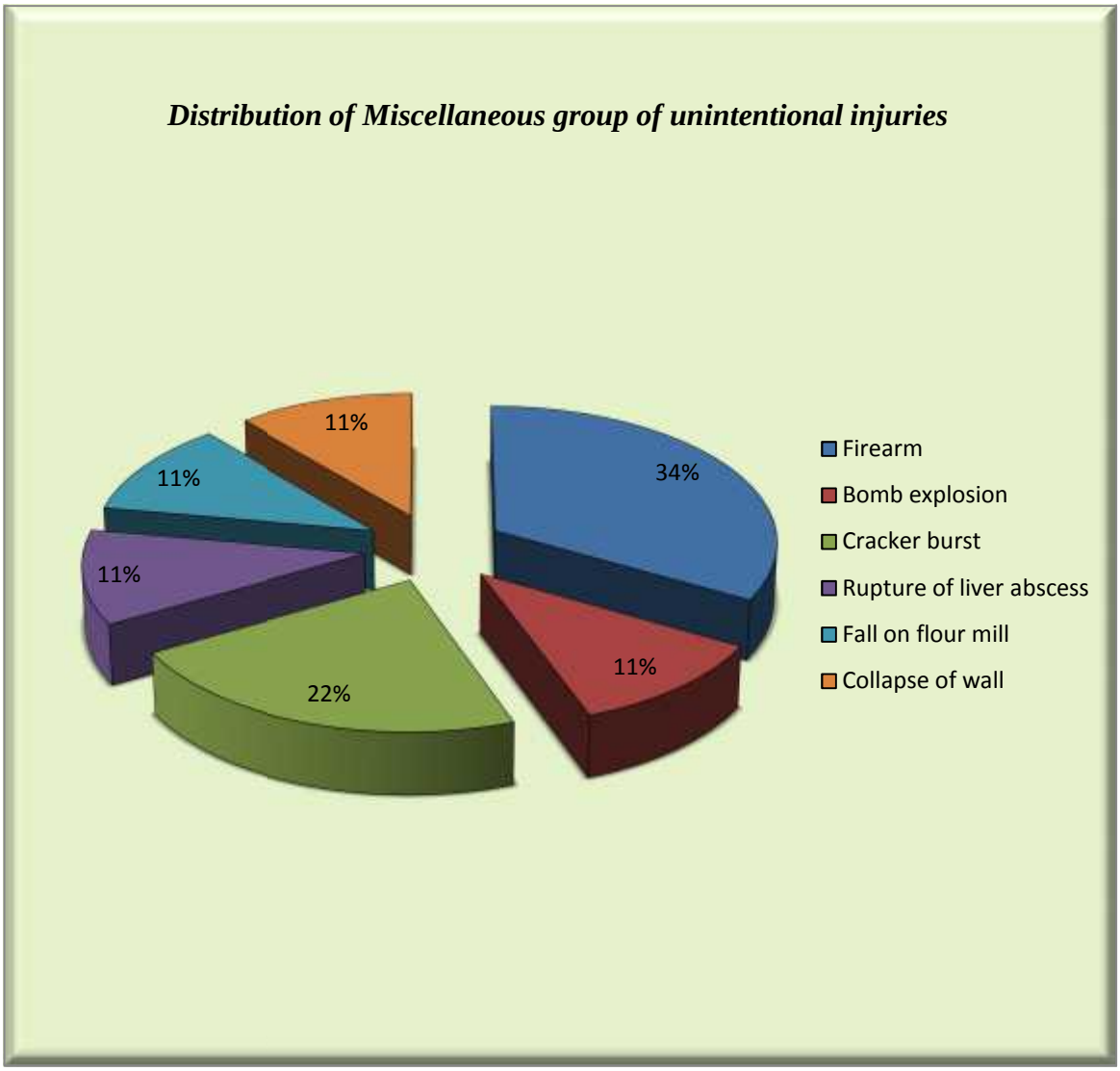
Age	Type of Asphyxia	Place of occurence
1 year	Drowning	Tank in house

Among the total number of unintentional injury cases encountered in our set up, 9 cases were rare and peculiar and were put under miscellaneous group of unintentional injuries as they did not belong to any other group of unintentional injury classification. Out of the 9 cases, 3 were due to unintentional firing of firearm and were seen in males, 2 involving military men at training; 1 case was of premature blast of a bomb again seen in training of the military personnel. 2 cases involved cracker burst one of them involving a child. One case was that of a spontaneous rupture of old liver abscess while he was driving his motorbike. Another case involving a female was seen wherein she fell on the flour mill belt and got injured and the last case involved collapse of compound wall on a male while he was asleep. (table no. 16; graph no. 14)

Table 16: Distribution of Miscellaneous group of unintentional injuries encountered in the study:

Type of injury	Adult		Children		Number of cases	Percentage
	Male	Female	Male	Female		
Firearm	03	-	-	-	03	34%
Bomb explosion	01	-	-	-	01	11%
Cracker burst	01	-	1	-	02	22%
Rupture of liver abscess	01	-	-	-	01	11%
Fall on flour mill	-	01	-	-	01	11%
Collapse of wall	01	-	-	-	01	11%
Total	07	01	01	0	09	100%

Graph 14:


Distribution of Miscellaneous group of unintentional injuries
11%
11%
11%
34%
11%
22%
Firearm
Bomb explosion
Cracker burst
Rupture of liver abscess
Fall on flour mill
Collapse of wall

DISCUSSION:

The present study involved a total of 753 unintentional injury cases out of 1042 total injury cases which came to the casualty of our tertiary care center which is a 2000 bedded hospital over a period of 6 months, making the burden of the unintentional injuries in our set up accounting to 72.26% of all injury cases (Table no.1; Graph no.1). Similar incidence of unintentional injuries forming the bulk of the total injuries was seen in the study done by Colarado department of public health in 2003[18], and from the report by BBMP and BRSIPP* in 2010[34], which is shown in table .D1.

Table no. D1: Showing comparative analysis of case burden of unintentional injuries vs total injuries:

Study / data by:	***Study in the year***	***Place***	***Unintentional injury cases/ Total injury cases***
Colarado dept of public health [18]	2003	Colarado	60%
BBMP*, BRSIPP[34]	2010	Bengaluru	>70%
Pushpa.M.G Manjulabai.K.H, present study	2011-12	Belgaum	72.26%

*BBMP –Bruhat bangalore mahanagara palike

*BRSIPP –Bangalore road safety and injury prevention programme.

It is a cautioning indicator for us notifying that the morbidity of unintentional injuries is very high in our set up too which needs more studies and evaluation for effective prevention.

Our study showed that the maximum number of cases was seen in the month of January with 21% of incidence and minimum was seen in the month of November with an incidence of 12%, with rest of the months coming in between this range (Table no.2; Graph no.2). But according to the report by BISP 2008[35], there was no month wise variation in distribution of cases.

No significant correlation was seen between the case burden and the month wise distribution since our study did not comprise of a whole year, and there was no major difference seen in the distribution pattern.

With respect to the time of occurrence, most of the cases in our study came between 2 pm to 8 pm (37.23%) (Table no.3; Graph no.3). The probable reason for this may be that in the evening times most of them are tired after the working hours compared to morning hours when they are fresh and alert, and risk for the accidental/ unintentional injury was more. However, there is no comparative data available from others' study.

Domicile pattern: Our study witnessed an almost equal number of cases from rural and urban setting of Belgaum, though there was a slight preponderance towards rural cases constituting 55% of the case load (Table no.4; Graph no.4). This may be due to the fact that ours is a tertiary referral care center.

Age: In our study it was observed that majority of the case load was in the age group of 20-49yrs constituting to 66.5% of the overall cases which is a major bulk of the productive population, followed by 23% of the total cases were seen in the age group of 0-19 years.. Above 60 years of age there were hardly 2% of cases (table no. 5; graph no.5). Adults formed the majority with 80.2% and children (<18 years) 19.8 % (Table no. 6; Graph no. 6)

This can be explained by the fact that young age people are more mobile, active and form the productive population of the society, and hence exposed to the risk of unintentional injury. Whereas old aged and children are exposed less because more precautions are taken and most of them remain indoors, risk taking behavior is less in old age.

The results are similar to the results of report from BBMP and BRSSIP[34] but, few others' study had variations which are depicted in the Table no. D2.

Table no. D2: Comparative analysis of age wise distribution with other studies:

Study / data by:	***Study in the year***	***Age***	***Unintentional injuries***	***Comparison with present study***
Colarado dept of public health[18]	2003	1-44yrs	60%	Less than our study
Bose A, Konradsen F, John J, Suganthy P, Muliyil J, Abraham S[28]	South India-2006	15-29 yrs	70%	More than our study
BBMP, BRSSIP[34]	Bengaluru-2010	15-44 yrs	70%	Similar to our study.
Pushpa.M.G Manjulabai.K.H, present study	Belgaum- 2011-12	0-19 yrs	23% of cases	
		20-49yrs	65.5%of cases	
		>60yrs	2% of cases.	

Sex: In our study Males were the majority in overall comprising 80.8% of the case load (Table no.6; Graph no.6), morbidity ratio for male to female is 4:1 and mortality ratio is 2.8: 1. The reason for this can be attributed to the fact that males form a majority of the population going out for work, driving vehicles, and have an

inherent risk taking behavior, hence exposing themselves more for unintentional injuries.

A similar pattern in mortality ratio was seen in the data of National Vital Statistics System (NVSS) 1992-99[10]; BBMP & BRSIPP[34]; and study by Tanuj Kanchan, Ritesh G. Menezes, and Francis,N.P. Monteiro[32]. But compared to our study, the ratio was less in studies from Nagesh N. Borse, M.S.Julie Gilchrist et.al[13]; J Jagnoor, L Keay, R Ivers, W Suraweera, P Jha[27]; and data from National Adolescent Health Information Center[20] and WHO 2004 report[5] which is depicted in table.D3

Comparative analyses for morbidity ratio for male to female were not available except for data from WHO 2004[5], which was very less (1.7:1) compared to the ratio from our study.

Table no. D3: Comparative analysis of sex wise distribution of cases and ratio of the same with other studies:

Study / data by	***Place; study year***	***Dominance***	***Age group***	***Ratio of death rate:***	***Morbidity ratio***	***Comparison with present study***
National Vital Statistics System (NVSS)[10]	US -1992 to 1999,	M>F	All age group	2:1		Similar to our study
Nagesh N. Borse, M.S.Julie Gilchrist et.al[13]	US -2000-2006	M>F	0-19 yrs	19.3:10		Less than our study
WHO [5]	2004	M>F	All age group	2:1;	1.7:1	Less than our study
National Adolescent Health Information Center[20].	San Francisco-2003	M>F	10-14yrs	1.7:1		Less than our study
J Jagnoor, L Keay, R Ivers, W Suraweera, P	India- 2001-	M>F	All age group	8:5		Less than our study

Jha[27]	2003			(1.6:1)		
Tanuj Kanchan Ritesh G. Menezes, and Francis,N.P. Monteiro MD[32]	KMC Manipal 1994-2007	M>F	<10yrs	2.1:1		Similar to our study
BBMP, BRSIPP[34]	2010	M>F	15-44yrs	2:1		Similar to our study
Pushpa.M.G Manjulabai.K.H, (present study)	2011-2012	M>F	All age group	2.8:1	4:1	

Religion: Majority of the unintentional injury cases (91.2%) in our study belonged to Hindu religion (Table no.7; Graph no.7). No significant correlation could be drawn and there is no comparative data available from others' studies.

Referred / direct: Among the total 753 cases, referred cases accounted for 54.2% against 45.8% of direct cases. The reason probably is that, our hospital is a tertiary referral care center and that too majority (93.3%) were medico-legal cases (Table no.8; Graph no.8).

Overall injury distribution: In our study transportation injuries formed the bulk of the unintentional injuries contributing to 80.87%. Whereas thermal injuries contributed to 9.8%, fall from height 7.6%. Unintentional poisoning 0.39 %(3 cases) and asphyxia 0.13 %(1 case) were minimal and all the cases were children (Table no.9; Graph no.9). But, in the study conducted by John C. LeBlanc, Barry Pless, Canada[11] , the maximum number (50.4%). of cases were of fall from height.

The reason for transportation injuries forming the bulk of the unintentional injuries in our study could be due to the fact that urbanization and modernization have

affected the lifestyle to a great extent. Today even an average / low income family owns a two- wheeler contributing to ever increase in number of vehicles hitting the road especially in the cities, highways, etc. In other hand, the decreased usage of pump stove and increased usage of safer gas stoves has decreased the unintentional injuries due to thermal injuries.

The total mortality rate in our study is 12% (91 cases) of the total cases 753 seen (Table no.10; Graph no.10). The major contributors for this mortality were from transportation injuries 57.1% (52 cases) followed by thermal injuries 33% (30 cases); and fall from height9.9% (9 cases). Being a tertiary care center, more experienced specialists with sophisticated equipments and newer methods of treatment may be the reason for lesser mortality rate in the present study. The mortality was more due to transportation injuries, and is in accordance to the weightage of case load. Though the case burden due to thermal injuries is less (9.8%) the mortality rate is high (33%) indicating that most of the thermal injury cases referred were fatal.

A similar pattern of mortality rate due to transportation injuries was seen in the studies of Bener A, Hyder AA, Schenk E[24] and Colarado dept of public health[18]. But differed from the studies of J Jagnoor, L Keay, R Ivers, W Suraweera, P Jha[27]; M Cardona, R Joshi, R Q Ivers, S Iyengar,et.al[4] and WHO report 2007 and BISP 2007[33] . Pattern of mortality rate due to falls in WHO report 2007 is similar to present study; but are very low when compared to the results from J Jagnoor, L Keay, R Ivers, W Suraweera, P Jha[27] and M Cardona, R Joshi, R Q Ivers, S Iyengar,et.al[4] .

However, there was no available data to compare the mortality rate of thermal injuries.

Table no. D4: Comparative analysis of mortality rate of various unintentional injuries with other studies:

Study / data by	***Place; study year***	Transportation injuries	Falls	Thermal injuries	Drowning
WHO[5]	Worldwide-2004	33%,	11%,	—	10%
Colarado dept of public health [18](g)	Colarado-2003	45%	—	—	—
Bener A, Hyder AA, Schenk E[24]	UAE- 2007	68.3%	—	—	—
J Jagnoor, L Keay, R Ivers, W Suraweera, P Jha[27]	India- 2001-03	29%	26%	—	11%
M Cardona, R Joshi, R Q Ivers, S Iyengar,et.al[4]	Andhra Pradesh ; 2003-04	13%	20%	—	—
BISP[33]	bengaluru - 2007	28%	—	—	—
Pushpa.M.G Manjulabai.K.H, Present study	Belgaum; 2011- 2012	57.1%;	9.9%	33%;	—

Transportation injuries: In our study, among the total 609 transportation injuries majority of the victims were two wheeler rider and pillion riders (58.8%) followed by LMV occupant (16.9%) and pedestrians (11.8%) (Table no.11.1; graph no.11.1). While the most common offending vehicle/ agent involved was HMV (39.4%) followed by two-wheeler (26.1%) and LMV (21.6%) (Table no.11.3; graph no.11.3). Majority of the injuries occurred due to hit by another vehicle (61%) followed by self fall by slip/skid (32.2%) (Table no.11.2; graph no.11.2). Similar

results were seen according to BISP report 2008[35], where two wheeler rider and pillion formed the majority (51%) of the victims in transportation injuries. But it differed from study by Naci H, Chisholm D, Baker TD[17] wherein 60% of injuries occurred in LMV occupants in high income countries and pedestrians 45% in LMIC.

The reason for this could be the fact that due to urbanization and growing economy, easy availability of funds/ loans from the banks have made easier for a common man to afford a two wheeler. Even a low income family will be having a two wheeler for commuting. With an increase in the number of vehicles on the roads, as well as vehicular speed, along with lack of knowledge about traffic rules, rash & negligent drive, non usage of safety measures, unchecked road crossings, etc., the burden of road traffic injuries are definitely to increase.

Regarding pattern of injuries, external injuries 39.7% and skeletal injuries 33.8% formed the majority in transportation injures, followed closely by head injury (25%) (Table no. 11.4). This could be because of clothing pattern and invisibility of blunt injuries due to wheatish and dark skin complexion and deeper contusion.

However, no studies were available for effective comparative analysis.

Fall from height: In our study, adult to children ration in fall from height cases was 4:1 (Table no.12.1; Graph no.12.1), still the number of affected children is significant. Most of the fall cases were contributed by outdoor sources viz trees, poles stairs. Most of the inside home falls, were from balcony, stairs and furniture (Table no.12.3; Graph no.12.3). In children falls were mostly due to unattended children at play, curiosity of the child, not expecting the dangerousness by children, etc. The most common level of height use to be 6-15 feet (Table no. 12.4; Graph no.12.4).

These findings were similar to the findings of BISP- 2007 report[33], where fall at home was 30%. The causative agent for fall in children is very similar to the study conducted by John C. LeBlanc, Barry Pless[11], which involved furniture (7.9%) when compared to our study (7%).

Head injury formed the majority (68%) in fall cases followed by visceral injuries (45.6%) (Table no. 12.5). This was similar to the results from the study conducted by BISP 2007[33] where head injury formed 53% of the total injuries but differed in skeletal injuries where it was seen in 54% of the fall cases. This could be due to the reason that since ours is a referral center; we received serious and complicated cases of injuries.

Thermal injuries: Most of the cases seen in our study were involving dry burns (59.5%) followed by electrocution (21.6%) and scalds (17.5%) and a rare case of lightning was seen (Table no. 13.1; Graph no.13.1). Superficial burns were seen in most of the cases involving 83.8% of the cases while deep burns seen in 12.13% only (Table no. 13.2; Graph no.13.2). Most of the cases had an involvement of 26-75% of body surface area (69%), and >76% of burns seen in 11.3% of cases (Table no. 13.3; Graph no.13.3). The mortality rate in thermal injury cases was very high accounting to 40.5% of the total thermal injury cases and accounting to 33% of the overall mortality rate. This indicates that though the unintentional thermal injuries were less compared to the overall case burden, the fatality rate was more suggesting that more stringent precautions and preventive measures have to be taken to prevent the mortality and morbidity due to thermal injuries.

The incidence of burns (59.5%) is similar to the study by Tanuj Kanchan Ritesh G. Menezes, and Francis,N.P. Monteiro[32] (52.9%), but significantly more than

the results in a study by John C. LeBlanc, Barry Pless, Canada[11] (30%). However, incidence of scalds (17.56%) in our study is less than that of in the study by Tanuj Kanchan Ritesh G. Menezes, and Francis,N.P. Monteiro (27.1%)[32] and John C. LeBlanc, Barry Pless, Canada (43.7%)[11].

Unintentional poisoning: 3 cases of unintentional poisoning were encountered in our study and all involved children. It involved accidental consumption of an unknown plant's fruit by a school child, consumption of kerosene and rat poison by others. No mortality was seen (Table no.14).

But it differed from the study conducted by John C. LeBlanc, Barry Pless, Canada[11], wherein household poisons and medications were the common agents for unintentional poisoning in children.

Most of the unintentional poisoning cases will be seen in children because they will not be able to differentiate between safe and unsafe substances. School going children are also more prone because they are exposed outside without any elderly monitoring and they do venture into adventures of trying new things.

Unintentional injury due to asphyxia: One case involving an infant of 1 year was seen in our study wherein the child had accidentally fallen into the tank in the house. However, no other study was available to compare. Children by nature are more attracted by water irrespective of their source hence, more prone for unintentional suffocation/ drowning because even a small source of water at home is sufficient enough to drown them.

Miscellaneous group of unintentional injuries: In our study, among the total number of unintentional injury cases, 9 cases were encountered as rare and peculiar.

Out of these 9 cases, 4 were ammunition cases involving 3 trainee military men among which 2 were shotgun injuries and 1 case was of premature blast of a bomb while undergoing training; and 1 security personnel who sustained shotgun injury while cleaning the firearm. There were 2 cases of cracker burst; one of the victims was child. There was also a case of male with spontaneous rupture of old liver abscess while driving his motorbike; another case of female injured due to accidental fall on a flour mill belt, and a case of male injured due to collapse of compound wall while he was asleep (Table no.16; Graph no. 14).

However, this type of detail study is not found in others' studies to compare.

After going through all the various literatures and studies all over the world and in India, it was observed that though there were many studies and statistical reports on unintentional death rates in most of the countries, very minimal studies and data were available with respect to the morbidity burden of the same. There were very few studies available in India and that too in Karnataka. The morbidity burden as we could estimate was far greater in number than the mortality rate. This definitely calls for more attention, research and studies towards morbidity in addition to mortality in unintentional injuries for an effective prevention and reduction of the burden of morbidity in society.

CONCLUSION:

In the present study unintentional injury cases constituted to more than 70% of the injury cases which came to the casualty of our tertiary care centre; with majority consisting of adult males, with a total mortality rate of 12% that too seen in transportation and thermal injuries. Transportation injuries in excessive number in our study suggest that there is need for more strict legislations and implementation of rules, regulations, and safety measures. Though maximum number of cases was that of transportation injuries like in most of the studies, however there were minimal cases involving unintentional poisoning, drowning/ suffocation, firearm injuries as compared to the western population.

Our study is extended in each type of unintentional injuries whereas most of the studies are on the mortality pattern and that too on individual type of unintentional injuries. Thus there was no literature available regarding this type of study in Karnataka and India. Even though our study is compared with various piecemeal studies of others, however the results of each particular type of unintentional injury is nearly similar to others studies.

Recommendation and Suggestions:

Knowing the cause is one of the prime mottos to carry out preventive measures. Similarly for reducing the morbidity and mortality among the victims of unintentional injuries, it is essential to study the cause. Research and experience in the last few decades has shown that injuries are predictable and preventable. Broadly, the interventions could be primary (injuries will not occur at all), secondary (minimize harm in the event of an injury) and tertiary (rehabilitate after an injury) and are aimed at people, products and environment through education, engineering, enforcement and emergency care. To implement these preventive strategies, there is need for policies and programmes that are evidence based and data driven.

Preventive measures:

A major reduction in injury deaths and hospitalizations may be reduced by combined approaches of:

- Strict enforcement of stringent safety laws and regulations,
- Continuous teaching and awareness programs through social media; Increasing awareness in the society to accept safety as a pattern of life.
- Developing combinations of educational strategies, environmental modifications, legislation, and engineering techniques together with improvement of existing data sources by hospital- and population-based studies.
- Setting safety standards and strict implementation for construction of houses, factories, schools and public play areas.

- Careful (especially in kitchen and bathrooms) design of houses with antiskid flooring areas and safer stairs and steps.
- Influencing policies of other sectors (transport, urban development, highway and infrastructure growth) that have an impact on the health of people, as it is vital to understand and convey to the concerned ministries the need to incorporate a health component in all development policies.
- Parental supervision of young children in all places, specially play areas and while playing at home in balconies, staircases etc.,
- Improved safety mechanisms and supervision in public places.
- Strengthening of trauma care systems for early care, and Public awareness activities on importance of following safety standards at home and in workplaces.

A surveillance programme of the present nature provides clues on changing patterns and profiles, identifies broad characteristics and shows directions for programme implementation, monitoring and evaluation, along with identifying areas for further research.

Developing better and sustainable systems of collecting regular injury data is important and needs to go hand in hand with training of human resources personnel who can conduct and analyze such information

SUMMARY

In the present cross sectional study conducted at the casualty of a tertiary care centre, Belgaum for a period of 6 months from October 2011 to march 2012, a total of 753 cases of unintentional injury cases were studied. The aim of this study was to know the pattern of unintentional injury cases with respect to age, sex, domicile, type/ pattern of unintentional injuries, and to study the burden of mortality and morbidity of unintentional injuries in our setup.

A predesigned pretested proforma was used to collect the required data and the details were collected from the relatives, attenders, casualty medical officers, and by examination of the victims in the casualty. Adults constituted the bulk with majority of the case load in the age group of 20-49yrs. Males were the majority with morbidity ratio for male to female being 4:1 and mortality ratio is 2.8: 1. Transportation injuries formed the bulk of the unintentional injuries contributing to 80.87%. The total mortality rate in our study is 12% (91 cases). The major contributors for this mortality were from transportation injuries 57.1% (52 cases). Among the total 609 transportation injuries Majority of the victims were two wheeler rider and pillion riders (58.8%). Most common offending vehicle/ agent involved were Heavy motor vehicles (39.4%). Skeletal injuries 33.8% formed the majority in transportation injures. Fall from height contributed to 7.6% of morbidity and 9.9% of mortality. Head injury formed the majority (68%) in fall cases followed by visceral injuries (45.6%). Thermal injuries contributed to 9.8% of morbidity and 33% of total mortality. Most of the cases were dry burns (59.5%) followed by electrocution (21.6%) and scalds (17.5%). All cases of unintentional poisoning in the study and were encountered in children.

BIBLIOGRAPHY:

1. Criminal manual: Justice M R Mallick; the code of criminal procedure and Indian penal code; Professional Book Publishers. pg no. 11, 145.
2. Injury surveillance guidelines, URL: http:///www.who.int/violence _injury_ prevention/index.html: Published in conjunction with the Centers for Disease Control and Prevention, Atlanta, USA, by the World Health Organisation.
3. G. Gururaj: "Road traffic deaths, injuries and disabilities in India:Current scenario":The national medical journal of India; vol. 21, no. 1, 2008
4. M Cardona, R Joshi, R Q Ivers, S Iyengar, C K Chow, S Colman, G. Ramakrishna, R Dandona, M R Stevenson and B C Neal: "The burden of fatal and non-fatal injury in rural India": Inj. Prev. 2008;14;232-237
5. Aruna Chandran, Adnan A. Hyder and Corinne Peek-Asa: "The Global Burden of Unintentional Injuries and an Agenda for Progress": Epidemiol Rev (2010) 32 (1): 110-120.
6. Peden M, Oyegbite K, Ozanne-Smith J, et al., editors; World Health Organization, UNICEF. World Report on Child Injury Prevention. Geneva, Switzerland: World Health Organization; 2008. Chapter 1: child injuries
7. Gururaj G and Bengaluru Injury surveillance collaborators group: "Bengaluru Road safety and Injury Prevention Programme": Injury snapshots and Activity profile 2010, National Institute of Mental Health and Neuro Sciences, Publication No 72, Bengaluru, 2010
8. International Statistical Classification of Diseases and related health problems; version 2010; www.who.int/classifications/icd10/index.html.
9. International Classification of External Causes of Injuries; version 2004; www.who.int/classifications/icd/adaptation/iceci/index.html.

10. Carol W. Runyan, Carri Casteel, David Perkis, Carla Black, Stephen W. Marshall, Renee M. Johnson, Tamera Coyne-Beasley, Anna E. Waller and Shankar Viswanathan: “Unintentional injuries in the home in the United States: Part I: Mortality”: American Journal of Preventive Medicine Volume 28, Issue 1; January 2005.Pages 73-79.
11. John C. LeBlanc, I. Barry Pless, W. James King, Harry Bawden, Anne-Claude Bernard-Bonnin, Terry Klassen, and Milton Tenenbein: “Home safety measures and the risk of unintentional injury among young children: a multicentre case–control study”: Canadian Medical Association Journal, 2006 October 10; 175(8): 883–887.
12. Centers for Disease Control and Prevention. National Center for Health Statistics. VitalStats. http://www.cdc.gov/nchs/vitalstats.htm. [Accessed: April 10, 2012].
13. Nagesh N. Borse, Julie Gilchrist, Ann M. Dellinger, Rose A. Rudd, Michael F. Ballesteros, David A. Sleet, CDC Childhood Injury Report: “Patterns of Unintentional Injuries among 0-19 Year Olds in the United States, 2000-2006”: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control Division of Unintentional Injury Prevention Atlanta, GA, December 2008.
14. Krug EG,Sharma GK, Lozano R The global burden of injuries. Am J Public Health 2000; vol: 90(4):523-526.
15. World Health Organization. Violence, Injuries, and Disability: Biennial 2006–2007 Report. Geneva, Switzerland: World Health Organization; 2008.

16. Hyder AA, Wali S, Fishman S, et al . The burden of unintentional injuries among the under-five population in South Asia. Acta Paediatr. 2008; vol: 97(3):267-275.
17. Naci H, Chisholm D, Baker TD. Distribution of road traffic deaths by road user group: a global comparison. Inj Prev 2009; 15(1):55-59.
18. Jana Smith, "Unintentional Injury: Addressing the Leading Cause of Death for Coloradoans Ages 1-44" Public health update -2003, Report. Tri-County Health Department
19. CDC's Unintentional Injury Activities – 2004 is a publication of the National Center for Injury Prevention and Control, Centers for Disease Control and Prevention CDC's Unintentional Injury Activities – 2004. Atlanta (GA): CDC, NCIPC; 2005.
20. 2007 Fact Sheet on Unintentional Injury: Adolescents & Young Adults National Adolescent Health Information Center. (2007). URL.http://nahic.ucsf.edu/The National Adolescent Health InformationCenter (NAHIC)
21. Rodgers GB, Franklin RL, Midgett JD: "Unintentional paediatric ingestion poisonings and the role of imitative behavior": Journal of the International Society for Child And Adolescent Injury Prevention. 2011.
22. Norman R, Matzopoulos R, Groenewald P, et al. The high burden of injuries in South Africa. Bull World Health Organ 2007;85(9):695-702.
23. Peck MD, Kruger GE, van der Merwe AE, et al. Burns and fires from non-electric domestic appliances in low and middle income countries. Part I. The scope of the problem. Burns 2008;34(3):303-311.

24. Bener A, Hyder AA, Schenk E. Trends in childhood injury mortality in a developing country: United Arab Emirates. Accid Emerg Nurs 2007; vol: 15(4):228-233.
25. Fatmi Z, Kazi A, Hadden WC, et al. Incidence and pattern of unintentional injuries and resulting disability among children under 5 years of age: results of the National Health Survey of Pakistan. Paediatr Perinat Epidemiol 2009; vol: 23(3):229-238.
26. Hyder AA, Sugerman DE, Puvanachandra P, et al. Global childhood unintentional injury surveillance in four cities in developing countries: a pilot study. Bull World Health Organ 2009; vol: 87(5):345-352.
27. Jagnoor. J, Keay. L , Ivers. R , Suraweera. W, Jha. P: "Unintentional injury mortality in India, 2005 – estimates from a nationally representative mortality survey of 1.1 million homes": Injury Prevention, 2010.
28. Bose A, Konradsen F, John J, Suganthy P, Muliyil J, Abraham S: "Mortality rate and years of life lost from unintentional injury and suicide in South India": Tropical Medicine and International Health. 2006 Oct; vol:11(10):1553-6.
29. Roksana Mirkazemi and Anita Kar: " Injury-Related Unsafe Behavior Among Households from Different Socioeconomic Strata in Pune City":Indian J Community Med. 2009 October; vol: 34(4): pg. no. 301–305
30. National Crime Records Bureau. Accidental deaths and suicides in India. Ministry of Home Affairs, New Delhi, Government of India, 2007.
31. Gururaj et al: "Bengaluru Injury Surveillance Programme (BISP); "injury fact sheet" Final report; National Institute of Mental Health and Neuro Sciences, Publication 2007, Bengaluru,

32. Tanuj Kanchan , Ritesh G. Menezes and Francis N.P. Monteiro: "Fatal unintentional injuries among young children – A hospital based retrospective analysis": Journal of Forensic and Legal Medicine Volume 16, Issue 6; August 2009. Pages 307-311
33. Gururaj et al: "Bengaluru Injury / Road Traffic Injury Surveillance Programme: falls- fatal and non fatal injury": Final report; National Institute of Mental Health and Neuro Sciences, Publication 2007, Bengaluru,
34. Gururaj et al: "Bengaluru Injury / Road Traffic Injury Surveillance Programme: A feasibility study": Final report; National Institute of Mental Health and Neuro Sciences, Publication 2011, Bengaluru,
35. Gururaj et al: "Bengaluru Injury / Road Traffic Injury Surveillance Programme: A feasibility study": National Institute of Mental Health and Neuro Sciences, Publication No. 68, Bengaluru, 2008

INFORMED CONSENT

Date:

Time:

Place:

OBJECTIVES AND THE PURPOSE OF THE STUDY

You have been requested to participate in this study titled **"**STUDY ON PATTERN OF UNINTENTIONAL INJURY CASES AT CASUALTY OF A TERTIARY HEALTH CARE CENTRE – A CROSS SECTIONAL STUDY**."** conducted by Dr BF0111002, Post Graduate student in Forensic Medicine & Toxicology.

I am fully aware that this research, "Study on pattern of unintentional injury cases at casualty of a tertiary health care centre – a cross sectional study**"** conducted by Dr. BF0111002, is a dissertation topic required for partial fulfillment of her degree in Forensic Medicine and Toxicology (MD). I also understand the importance of such pioneering research work, results of which have got prime importance in studying the factors causing unintentional injuries, and formulate various measures useful in preventing such injuries and deaths.

I am very much aware that Dr. BF0111002, is the chief investigator and this entire project is being done by her along with the help of the casualty medical officers, at her own expense.

Dr. BF0111002 has explained to me the importance of study of the burden of unintentional injuries on our society, more so because these are the ones which can be prevented. Hence by studying the exact numbers, the various factors causing, she will be able to study and propose various protective and preventive measures, which in turn will be very helpful for the welfare of the society.

PROCEDURE:

I have been explained that there is no intervention involved. Only the details of my socio- demographic status will be taken, details of the injuries and the causative agents, circumstances will be taken, by interviewing and the results will be analysed.

POSSIBLE BENEFITS / RISKS**:**

There are no any extra risks involved in becoming a participant in this study. The method employed for conducting the study is safe and as such are not likely to cause any harm to.

VOLUNTARY PARTICIPATION / WITHDRAWAL:

Your participation in the study is completely voluntary. You are free to withdraw your consent and discontinue your participation in this study anytime.

ALTERNATIVE

The procedure explained to me is one of the simplest one's. I understand that I find no reason whatsoever to withdraw from such a simple study and more over the question of penalty or removal from the study does not arise at all as it is a questionnaire.

PRIVACY AND CONFIDENTIALITY

Dr. BF0111002 has whole heartedly expressed to me that my privacy is a matter of serious concern to her, she has explained to me in very clear terms that no circumstances, however inevitable, she would reveal the data of my study or my identity, by whatever means.

INSTITUTIONAL / SPONSORS POLICY

I totally agree with Dr. BF0111002 view point that even a layman understands that question of injury does not arises in such a noble kind of study.

FINANCIAL INCENTIVES FOR PARTICIPATION

I am totally conscious that as my investment as participant in the study is just 5 min. of my time in the hospital, I have no right to claim any embursment whatsoever from Dr BF0111002as I have enrolled in this study solely as matter of professional interest and not to have financial or other gains.

CONTACT DETAILS

If any doubts your rights as a study participant you can contact Dr. BF0111002 Post graduate student, Dept of Forensic Medicine, J N Medical College, Belgaum at any time. Also can contact Dr. ******, Professor and head, Dept of Forensic Medicine & Toxicology, JNMC who is the guide to this study and Dr****** Principal, J N Medical College, Belgaum (0831-2471350).

AUTHORIZATION TO PUBLISH RESULTS

As long as my privacy and identity are respected, I fully and voluntarily give consent to publish this research work at any time, across the globe as I consider this a very useful and needed work in the field of Forensic Medicine and Toxicology. Publishing such seminal works is the need of the hour.

I Mr./ Ms.…….aged …… years was first explained about the project in a clear and a very simplest possible way regarding each and every aspect of the project in my own language, all my doubts were cleared and I have personally gone through this written consent form. I am fully aware of my rights as a study participant.

Whatever acceptances, gestures and signatures I make voluntary and totally by my own will.

I give my free and voluntary consent to Dr. BF0111002 postgraduate student at JNMC Belgaum.

Signature or left thumb print of participant or legally authorized representatives

……. Participant's name ...…… Participant's signature/ thumb print

……..Experimenter's name …….. Experimenter's signature

……. Witness's name …… Witness's signature

…… Guardians name ……. Guardian's signature/ thumb print

…… Date

If the patients/ victims are minors (less than 18yrs) the consent of the parents or guardians will be taken.

STUDY ON PATTERN OF UNINTENTIONAL INJURY CASES AT CASUALTY OF A TERTIARY HEALTH CARE CENTRE

-A cross sectional study.

Sl.no.

I. GENERAL:

1. **Name :** **OP/IP.no:**
2. **Age :** **MLC: came as/ made MLC**
3. **Sex :** **Date & time of incident:**
4. **Marital status:** **Date of admission:**
5. **Address :** **Date of discharge/expiry:**
6. **Occupation :** **Consent : Y/N**
   - **Unemployed :student/ housewife/ retired**
   - **Employed : agriculturist/ labourer/ service/ professional/ self employed**
7. **Socio demographic status: urban/ rural**
8. **Educational status: uneducated/ school/ college/ degree/ post-graduate**
9. **Religion : H / M /C**

II . PARTICULARS ABOUT THE INJURY:

1. ***Transportation injuries:***	Victim : pedestrian/ pedal cyclist/ motor cyclist- driver,pillion/ LMV/ HMV	Offending vehicle: pedal cycle/ motor cycle/ LMV/ HMV/ train	Mode: self fall: skid/road hump/ ✓ hit to a stationary object: tree/ pole/ barricade/ median/ others ✓ hit by/ to a vehicle:	Injuries
2. *Fall:*	Place of occurrence: home/ public place/ working place	Mode: slip /skid /stairs / roof /attic/ ladder/ tree/ poles/ building- 1/2/3/4 floors Type of floor fallen: smooth/ rough/ stony	If children: cot/ crib/ chair/ furnitures/ wall/ compound	Injuries :
3. ***Poisoning***	Place of occurrence: home/ public place/ working place	Type of poison: food/ plants/ drugs/ insecticides/ cosmetics/ unknown/ others		
4. ***Thermal injuries:***		Burns: gas/ kerosene/ inflammable liquids Scalds : water/ oil/ milk/ others Electricity/ lightening	Degree of thermal injuries: superficial/ deep. TBSA: <25/ 25-50/ 51- 75/ 76-100%	
5. ***Drowning/ Suffocation***	Place of occurrence:	Mode: pit/ sump/ water tank/ well		
6. Others				

III . OUTCOME OF THE CASES: RECOVERED: OPD/ ward

EXPIRED: CAUSE OF DEATH:

KEY TO MASTER CHART:

A: Serial number

B: OPD/ IPD number

C: Date of incidence

Time:

D: 8am- 2pm

E: 2pm -8 pm

F: 8pm -8am

Age:

G: 1st decade

H: 2nd decade

I: 3rd decade

J: 4th decade

K: 5th decade

L: >6th decade

M: In Belgaum

N: Out of Belgaum

O: Male

P: Female

Q: Hindu

R: Muslim

S: Others

Y: Yes

L: Light motor vehicle

MV: motor vehicle

D: driver- motor vehicle

P: pillion rider

H: heavy motor vehicle

PA: passenger

3W: three- wheeler

U: unknown vehicle

T: toppled

A: animal

C: pedal cycle

SC: spinal cord

BA: balcony

PO: pole

TR: tree

STR: stairs

LD: ladder

EP: electric pole

FUR: furniture

STE: steps

S: scalds

FA: firearm

BO: bomb explosion

T: Referred

U: Non M.L.C

V: OPD

W: Admitted

X: Expired

W: wall collapse

ABS: abscess

BC: burst of crackers

LI: lightning

FMILL: flour mill

Transportation Injury

Y: Victim

Z: Offending Vehicle

Mode

AA: Hit by other Vehicle

AB: Skid/Slip

Pattern of Injury

AC: Superficial injury

AD: Visceral injury

AE: Skeletal Injury

AF: Head injury

Fall from height

AG: At home

AH: Public places

AI: Mode

AJ: Height fro where fell down

AK: Children

Pattern of Injury

AL: Superficial injury

AM: Visceral injury

AN: Skeletal Injury

AO: Head injury

Poisoning

AP: Place of Occurence

AQ: Type of Poison

Thermal

AR: Burns

AS: Scalds

AT: Electricity

Degree of Burns

AU: Superficial

AV: Deep burns

AW: Total Body Surface Area

Mechanical Asphyxia

AX: Drowning place of occurrence

AY: Source of water

AZ: Suffocation

BA: Others

ANNEXURE-I

CONSENT FORM

ANNEXURE-II

PROFORMA

ANNEXURE-III

MASTERCHART

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA
SL.NO.	OP/IP no.	DOI	Time			AGE						ADDRESS		SEX					MLC S					TRANSPO								FALL FROM HEIGHT									POISONIN		THERMAL INJ						ASPHYXIA		OTHE
			8am -	2pm -	8pm -	0-1	2	3	4	5	>6	IN BO	OUT	M	F	H	M	OTH	REF	NON	OPD	ADM	EXP	victim	off veh	mode		injuries				POO		mode	ht	child	injuries				POO	type	source		degree		TBSA	drowning		suffocatio	
			2pm	8pm	8am														hit								skid/	supe	visc	skelet	hd	home	public			supe	visc	skel	hd			burr	scal	elect	sup	deep		poo	source		
1	1802120	1.10.2011							1			1			1	1						1		L	H	1		1																								
2	1802130		1					1				2			2	2					1			L	H	2		2																							
3	1802108		2				1					3		1		3						2		L	H	3				1																				
4	1802200		3				1	2					1	2		4			1			3		D	L	4					1																			
5	1802730			1				3				4			3	5			2			4		D	H		1	3																						
6	1802733			2					2			5		3			1					5		H	H	5		4		2																				
7	1802735			3				4				6		4		6						6		H	H	6			1																				
8	1802732			4					3			7		5			2					7		H	H	7			2																				
9	1802746			5					4				2	6		7			3			8		L	3W	8		5																						
10	1802764			6				5				8		7		8					2			D	U	9		6																						
11	1802770				1					1			3	8		9			4			9		P			2	7	3																					
12	1802778				2		2					9		9		10						10		PE	MV	10			4	3																				
13	4392481				3		3					10		10		11						11											1		1		1			1										
14	1802794	2.10.11	4				4					11		11			3		5			12		P	H		3	8																						
15	1802842		5					6					4	12		12			6			13		P	H	T			5	4																				
16	1802849		6					7					5	13		13						14		L	H	11					2																			
17	1802847		7					8					6	14		14					3			L	H	12		9																						
18	1802850		8				5						7	15		15					4			L	H	13		10																						
19	1802848		9					9					8	16		16					5			L	H	14		11																						
20	1802852				4				5			12		17		17					6			D	U	15		12																						
21	1802861	03.10.11	10						6				9		4	18			7				Y	P	MV	16					3																				
22	1802862		11					10					10	18		19			8			15		D			4				4																				
23	1803753		12			1						13		19		20						16		PE	3W	17				5																				
24	1804104		13					11				14		20		21						17																						1			1		2				
25	1804117			7					7				11	21		22			9			18		D			5	13																						
26	1804288			8				12					12	22		23						19										2		1		2			2										
27	1804311			9						2			13	23		24			10			20		D			6	14																						
28	1804312			10				13					14	24		25			11		7			P	MV	18		15																						
29	1804328				5				8				15	25		26			12			21		D	MV	19				6																				
30	1805546	04.10.2011			6					3			16	26		27			13				Y									3		3		3		Y											
31	1805800				7						1	15		27		28				1		22		L	L	20		16	6																					
32	1805851		14						9				17	28		29			14		8			L	L	21		17																						
33	1805799		15								2		18	29		30			15			23		L	L	22				7																				
34	1805804		16							4				30		31			16			24		P	MV	23		18																						
35	1805805				8			14				17			5	32						25		L	L	24					5																			
36	1805842	05.10.11			9					5		18		31		33						26		D	MV	25		19																						
37	1805845		17						10				19	32		34			17			27		D	MV	26				8																				
38	1805851			11			6					19		33		35				2	Y			D			7	20																						
39	1794199			12				15					20	34		36			18			28																						1		2		1				
40	1806652				10					6			21	35		37			19		Y			D			27		21																						
41	1806675	06.10.11			11			16					22	36		38			20		Y			D	MV	28		22																						
42	1806704		18				7					20		37		39						29		PA	H		8	23																						
43	1806707			13						7		21		38		40	4						Y																				2		3		3				
44	1806720	07.10.11	19							8		22		39		41				3	Y			D			9	24																						
45	439949			14					11			23		40		42					Y			D	MV	29		25																						
46	1808160	08.10.11			12						3		23	41		43			21			30																												CRK
47	13678		20					17					24	42		44			22			31		D	H	30				9	6																			
48	1809413		21					18					25	43		45			23		Y			D			10	26																						
49	1809779				13	2						24		44		46			24			32									1		BA	1	1	4		Y										
50	1809809	09.10.11			14			19				25		45			5						Y	D	3W	OT				7																				
51	13684			15						9		26		46		47						33		p	H	31				10																				
52	1809847			16			8					27		47		48					Y			L	MV	32		27																						
53	1809848			17						10		28		48		49					Y			L	MV	33		28																						
54	1809872	09.10.11			15		9						26	49		50			25			34																							LI	4		1				
55	1809873				16					11			27	50		51			26			35		H	H	34			7	11																				
56	1810792	10.10.11	22							12		29		51			6					36		PE	3W	35					8																				
57	13692			18					12			30			6	52			27			37		D	H	36			8																						
58	1811292			19						13			29	52		53			28			38		L	H	37		29																						
59	1811289			20				20					30	53		54			29			39		L	H	38		30																						
60	1811525			21						14			31		7	55			30		Y			PE			11	31																						
61	1811533			22				21					32	54		56			31			40									4	PO	12		5		Y											
62	1811579	11.10.11			17					15			33	55		57			32			41		D	MV					9																				

63	1812840		23								4	31		56		58						42											5	TR	12		6			sc												
64	1812967			23						16			34	57		59			33				Y		BCART		12				10																					
65	1812969			24			10						35	58			7		34			43		L-P	T						11																					
66	9304				18				13				36	59		60			35			44		PE	U	39				12																						
67	1813002	12.10.11			19		11					32		60		61			36		Y			D			13	32																								
68	1813003				20		12					33		61		62					Y			P			14	33																								
69	1814239		24					22				34		62		63						45		D			15	34																								
70	1814448			25				23					37		8	64			37		Y			PE	L	40		35																								
71	1814508	13.10.11	25				13					35		63			8					46		H	H	41				13	12																					
72	181569		26						14				38	64		65			38			47		H	H	42				14	SC																					
73	181591			26				24				36		65		66						48		D	A		16	36																								
74	1815953	14.10.11	27						15				39	66		67			39			49		CY	H			37																								
75	1817369			27						17			40		9	68			40			50										2			15		7			Y												
76	133952			28			14					37		67		69			41			51		D	U	43			9																							
77	1817386				21				16				41	68		70			42		Y			D	L	44		38																								
78	1817387				22			25					42		10	71			43		Y			P	L	45		39																								
79	1818913	15.10.11		29						18			43	69		72			44			52		D			17				13																					
80	1818953			30				26					44	70		73			45			53		D	H	46				15																						
81	1818954			31				27					45	71		74			46			54		P	H	47		40																								
82	1818978			32	23								46	72		75			47		Y			P			18	41																								
83	1818999	16.10.11	28						17				47	73		76			48			55		L	L	48				16																						
84	1819000		29						18				48	74		77			49			56		L	L	49				17																						
85	1819866	17.10.11			24					19			49	75		78			50			57										3			15		8			Y												
86	1820527		30					28					50	76		79			51			58		L	H	50		42		18																						
87	182541				25	3							51		11	80					Y			PE	MV	51		43																								
88	1821917	18.10.11			26						5		52		12	81						59		L	H	52				19																						
89	1821944				27				19				53		13	82					Y			L	H	53		44																								
90	1821948				28				20				54	77		83					Y			L	H	54		45																								
91	1821924				29				21			38		78		84						60		L	L	55		46																								
92	1821926				30			29					55	79		85						61		L	L	56				20																						
93	1821976				31				22			39		80		86					Y			PE	MV	57		47																								
94	1823372	19.10.11		33				30					56	81		87			52			62																							1		1					
95	1824870	20.20.11		34					23				57	82		88			53		Y			3W			19	48																								
96	442082				32			31				40		83		89							Y																													
97	1824879				33			32					58	84		90			54			63		D			20	49																								
98	1824877										24				59		14	91			55		Y			P			21	50																								
99	1824886	21.10.11			34		15						60	85		92			56			64		D			22	51																								
100	1824888				35			33					61	86		93			57			65		P			23			21																						
101	1824887				36			34					62	87		94			58			66		P			24			22																						
102	93691			35		4							63	88		95			59				Y																				3			5		3				
103	1826363			36				35				41		89		96						67										4			15		9	Y	Y													
104	1826442				37				25			42		90		97					Y											5		STR	10		10															
105	1827756				38			36				43			15	98					Y			D	H	58		52																								
106	1827995	22.10.11		37		5							64	91		99			60			68		PE	MV	59			10	23																						
107	1827994			38		6							65		16	100			61			69		PE	MV	60					14																					
108	9376			39				37					66		17	101			62			70		D		61		53																								
109	1828010			40			16						67	92		102			63		Y			P			25	54																								
110	1828013				39			38					68	93		103			64			71		D	H	62				24																						
111	1828070	23.10.11	31								6		69		18	104			65			72		P	MV	63					15																					
112	1828086			41					26				70	94		105			66			73		D	L	64			11		16																					
113	1828085			42		7							71	95		106			67				8	L	L	65			12	25																						
114	1828087			43		8							72	96		107			68			74							13	26																						
115	1828084			44				39					73		19	108			69			75		P	L	66		55			17																					
116	1828097			45				40					74	97		109			70		Y			D			26	56			18																					
117	1828107				40			41					75	98		110			71			76																														FA
118	1828120	24.10.11			41		17						76	99		111			72		Y			P			27	57																								
119	1829164		32					42				44		100		112			73			77		D	3W	67				27	19																					
120	1829190		33								7	45		101		113			74			78		P	3W	68		58			20																					
121	1829600			46							8	46		102		114			75			79		BCART		run	28			28																						
122	1829613				42				27				77	103		115			76		y			d			29	59																								
123	1831349	26.10.11	34								9	47		104		116			77		y			d	L	69																										
124	1832038	26.10.11	35							20			78	105		117			78				Y	D	L	70				29																						
125	1832065			47		9							79		20	118						80		PE	MV	71				30																						
126	1832101	27.10.11			43		18						80	106		119						81		D			30	60																								
127	1832120		36							21		48			21	120					Y			P		72	31	61																								
128	1832151			48						22			81	107		121			79			82		D		73	32				21																					
129	1832450			49						23			82	108			9		80		Y			P		74	33	62																								

130	1832152				44	10						49		109		122						83																					CRACKER			6		1				CRK
131	1832666	28.10.11	37					43					83	110		123			81			84		D	L	75				31																						
132	1833343		38					44				50		111			10					85		3W			34				SC																					
133	1833825	29.10.11	39			11							84	112		124			82			86		C			35		14																							
134	1835202			50			19						85	113			11		83			87		D	H	76				32																						
135	1835201			51							10	51			22		12		84			88		L		77	36			33																						
136	1835210			52	45			45				52		114		125							Y	D			37				22																					
137	1835285	30.10.11		53		12						53		115			13					89		PE	MV	78					23																					
138	1836828	31.10.11		54			20						86	116		126						90		D	H	79				34																						
139	1836835			55					28				87	117		127			85			91																							2	7		1				
140	1836855			56				46					88		23	128			86				Y																				5			8		3				
141	1836945	1.11.11	40						29			54		118		129							Y										6		7		11	Y		Y												
142	1836948				46		21					55		119		130					Y			BCART			38	63																								
143	1836957	2.11.11			47					24			89	120			14		87			92		D	U	80					24																					
144	1838321			57		13							90		24	131						93										6			10	2	12			Y												
145	1838330			58			22					56		121		132					Y			D			39	64																								
146	1838333			59					30			57			25	133						94		PE	L	81		65																								
147	1841250	4.11.11	41				23						91	122		134							Y																				6		3	9		2				
148	1841272			60				47					92	123		135			88			95		PE	MV	82				35																						
149	1841479				48					25			93	124		136			89			96		P			40	66																								
150	1842061	5.11.11	42							26			94	125		137			90			97		P	3W	83				36																						
151	1842823		43						31			58		126		138						98		D	MV	84		67																								
152	1842913	6.11.11			49	14							95	127		139			91			99											7	TR	8	3	13		Y													
153	1842999				50		24					59		128		140						100		D		85				37																						
154	1843002	7.11.11			51	15							96	129		141			92			101		PA	H	86					25																					
155	1845513	8.11.11			52			48					97	130		142			93			102													10		14		Y				7		4	10		1				
156	1895904			61					32			60		131		143						103		D			41			38																						
157	1845931	9.11.11			53		25						98	132		144			94				Y	3W	H	87				39																						
158	1847334			62						27			99	133		145			95			104		D			42	68																								
159	1847602	10.11.11	44					49				61		134		146						105		D	L	88				40																						
160	1847561		45							28		62		135		147					Y			D	L	89		69																								
161	1848738			63							11	63		136		148						106		P	U	90		70			26																					
162	1849813	11.11.11	46					50				64		137		149					Y			D	H	91		71																								
163	1850140			64						29			100	138		150			96		Y			D	MV	92		72																								
164	1850141			65				51				65		139		151						107		D	H	93		73	15		27																					
165	1850162				54				33				101	140		152			97		Y			D			43	74																								
166	1850164	12.11.11	47					52				66		141		153					Y			D		A	44	75																								
167	1850172				55					30			102	142		154						108		D			45	76		41																						
168	1851682			66		16						67		143		155						109		C	MV	94				42																						
169	1851691				56			53				68		144		156					Y			P			46	77																								
170	1851697				57					31		69		145		157						110		D	H	95				43																						
171	1851696				58				34				103	146		158			98			111										7			10		15		Y	Y												
172	1851700	13.11.11			59					32		70			26		15				Y			PA	H		47	78																								
173	1851740		48						35			71			27	159					Y			L	TREE	96		79																								
174	1851737			67					36			72		147		160							15	D	H	97		80		44	28																					
175	1851743	13.11.11		68			26					73			28	161						112		L	TREE	98		81		45																						
176	1851745			69			27					74			29	162						113		L	T	99		82																								
177	1851764		49								12		104	148		163			99			114		L					16																							ABS
178	1853106	14.11.11	50			17						76		149		164						115		PE	MV	100		83																								
179	1853163			70					37				105	150		165			100			116		L	T						SC																					
180	1853294			71							13		106	151		166			101			117		H	T			84			29																					
181	1854860	15.11.11		72				54					107	152		167					Y			C			43	85																								
182	1856354	17.11.11			60				38			77		153		168						118		L	H	101		86			30																					
183	1857688			73						33			108	154		169			102			119		BCART			44	87			31																					
184	1857771			74					39				109	155		170			103			120		D	L	102		88			32																					
185	1857795	18.11.11			61		28					78			30	171					Y			C	MV	103		89																								
186	1859006		51					55				79		156		172				4		121		D			45	90			33																					
187	1859327		52					56				80			31	173				5	Y			P			46	91																								
188	1859336			75						34			110	157		174			104			122		D	L	104				46																						
189	1859338			76				57				81		158		175					Y			D			47	92																								
190	186091	19.11.11	53					58					111	159		176			105		Y			D			48	93																								
191	1860838	20.11.11		77				59					112	160		177			106			123		H		105				47	34																					
192	1862411	21.11.11		78					40			82		161		178						124		D	L	106		94		48																						
193	1862472				62					35		83		162		179						125		D			49	95		49																						
194	1862488	22.11.11			63			60					113	163		180			107			126		D	H	107		96		50																						
195	1863927	23.11.11			64				41				114	164	32	181			108			127																					8			11		3				
196	1864436		54					61					115	165		182			109			128		D			50			51																						

197	1865296			79				62					116	166		183			110			129		D			51				35																					
198	1865302			80			29					84			33	184						130		C	H	108					36																					
199	1865325			81							14		117	167		185			111			131		L	L	109		97			37																					
200	1865326			82							15		118	168		186			112			132		L	L	110			17																							
201	1865333	24.11.11	55								16		119	169			16		113				Y	L	H	111		98			38																					
202	1865334		56			18							120	170			17		114			133		L	H	112					39																					
203	1866418			83				63				85		171		187					Y			D			52	99																								
204	1866699	24.11.11			65			64					121		34	188			115				Y																				9			12		4				
205	1867914	25.11.11			66						17	86		172			18						Y	D	L	113		100	18																							
206	1851724	26.11.11			67		30					87		173		189						134		D			53	101		52																						
207	1869032		57				31						122	174		190						135		L			54	102		53																						
208	1869059		58								18		123	175		191						136		L			55	103		54																						
209	1869029		59				32						124	176		192						137		L			56			55																						
210	1869055		60				33						125	177		193						138		L			57	104			40																					
211	12851			84					42				126	178		194			116				Y																				10			13		3				
212	1869419	26.11.11		85						36			127	179		195			117			139		BCART			58				41																					
213	1869313				68	19						88		180		196						140		pe	3W	114					42																					
214	1869421				69				43				128	181		197						141		D	MV	115		105																								
215	1869423				70			65					129	182			19				Y			P	MV	116		106																								
216	1869434	27.11.11			71					37			130	183		198			118			142		BCART	H	117		107		56																						
217	1869475			86							19		131	184		199							Y	D	H	118					43																					
218	1869480			87					44				132	185		200			119			143										8		LD	12					SC												
219	1869498	28.11.11			72			66					133	186		201			120			144		H	TREE	119			19																							
220	187105			88					45			89			35	202				6		145										9		STR	10		16			Y												
221	1871066	29.11.11	61					67					134	187		203			121		Y			D			59	108																								
222	1871067			89						38			135	188		204			122			146		D	L	120				57																						
223	1871047			90							20	90		189		205						147		D	U	121					44																					
224	1872285				73			68				91		190			20				Y			D			60	109																								
225	1873618	30.11.11			74				46			92		191		206						148		D			61	110		58																						
226	1873655		62					69				93		192		207						149		H			62			59																						
227	1873895	30.11.11			75		34					94		193			21				Y			D			63	111																								
228	1873900				76		35					95		194	36	208					Y			PE	L	122		112																								
229	1873906	1.12.11	63			20						96			37	209					Y			P			64	113																								
230	1876599	2.12.11			77			70				97			38	210						150																					11			14		4				
231	1876732		64					71					136	195		211			123			151		D	A	123				60	45																					
232	1876918	2.12.11		91				72					137	196		212			124			152		D	L	124		114																								
233	1876926	3.12.11		92				73					138	197		213			125				Y	PE	H	125			20	61																						
234	1876934				78		36						139	198		214			126			153		P	H	126				62																						
235	1878482	4.12.11			79					39		98		199		215					Y			D	L	127	65																									
236	10904	6.12.11	65					74					140	200		216					Y			P			66	115																								
237	10905		66					75					141	201		217						154		D			67	116			46																					
238	10906			93				76				99		202		218			127				Y	D	L	128		117	21		47																					
239	1881520			94				77					142	203		219			128				Y	D	H	129			22																							
240	1881517			95				78					143	204		220			129			155		P	H	130		118																								
241	1882730	7.12.11	67					79				100	144	205		221					Y			D			68	119																								
242	1882710		68					80				101		206		222						156		P			69			63																						
243	1821778		69						47				145	207		223			130			157											8	EP	11		17		Y						5	15		4				
244	1883035			96			37					102		208		U						U										10			12		18		Y													
245	10918			97			38					103		209		224					Y			C		131	70	120			48																					
246	1883052	8.12.11			80				48			104		210		225							Y	D	MV	132		121			49																					
247	1884483		70			21							146		39	226						158		PE	L	133				64																						
248	1884485			98				81					147	211		227			131			159		D			71	122																								
249	1884499			99					49			105		212		228						160		D	H	134			23																							
250	1885376	9.12.11		100							21		148	213		229																											12			16		2				
251	1885712				81				50			106		214		230						161		D	L	135					50																					
252	1887255	10.12.11			82						22		149	215		231						162		P	H	136				65																						
253	1887256				83				51				150	216		232						163		D	H	137				66																						
254	1887398	11.12.11			84			82					151		40	233																											13			17		3				
255	1887403	11.12.11		101					52				152		41	234																											14			18		2				
256	1887424	12.12.11			85				53				153	217		235			132			164		D			72				51																					
257	1887443		71							40			154	218		236						165		D	L	138				67																						
258	1888964	13.12.11			86		39					107		219		237			133			166		D	L	139		123		68																						
259	1888970			102						41			155	220		238						167		D	A	140		124																								
260	1889995			103			40						156	221		239						168		D			73	125																								
261	189372			104		22						108		222		240						169		PE	MV	141				69																						
262	189330				87			83					157	223		241			134			170		D	3W	142		126																								
263	1890342				88			84					158	224		242			135			171		P	3W	143		127			52																					

264	189386			105			41					109		225		243						172										11			20		19			Y												
265	1891730	14.12.11		106						42			159		42	244						173		PE	U	144					53																					
266	1893372	15.12.11		107				85					160	226		245			136			174		D	L	145		128		70																						
267	1893396				89		42						161		43	246																											15			19		3				
268	1893397				90			86					162	227		247						175																					16			20						
269	1893476	16.12.11			91					43		110		228				1				176		L		146	74	129																								
270	1894624		72					87					163		44		22		137			177		L			75			71																						
271	1894823			108						44		111		229		248						178		PE	MV	147		130			54																					
272	1894853				92				54				164	230		249			138			179		PE	H	148			24																							
273	1894851				93			88					165	231		250			139			180		PE	H	149					55																					
274	1894864	17.12.11			94				55				166	232		251			140			181		D			76	131																								
275	1896416				95		43						167	233		252			141				Y	PA			77				56																					
276	10972	18.12.11	73							45			168	234		253			142			182		D			78	132																								
277	10973			109					56			112		235		254						183		3W			79	133			57																					
278	1896550			110					57				169	236		255			143			184		D			80	134			58																					
279	1896541				96				58				170	237		256			144			185		H		T		135			59																					
280	1896540				97				59				171	238		257			145			186		H		T					SC																					
281	1611787				98				60				172	239		258			146			187		H		T		136			60																					
282	1896546	19.12.11			99				61				173	240		259			147			188		D						72																						
283	1897497		74					89					174		45	260			148																								17			21		2				
284	1897748	19.12.11		111						46			175	241		261			149			189		L	H	150				73																						
285	1897874			112							23		176	242		262			150			190		L	L	151				74	61																					
286	1898065				100					47		113		243		263						191		C	MV	152		137		75																						
287	1898063				101				62				177	244		264			151				Y										9	EP	12					Y					6							
288	1898077	20.12.11			102				63			114			46							192		H		T		138																								
289	1898076				103					48		115		245								193		H			81	139																								
290	1898080				104					49		116			47	265						194		H			82	140																								
291	1898081				105			90				117		246		266						195		H			83	141																								
292	1898079				106	23						118			48	267							Y	H			84		25																							
293	1898081				107			91				119		247								196		H		T		142																								
294	1899406	20.12.11	75					92					178	248		268			152			197											10		12		20															
295	1899089			113				93					179	249		269						198		D	L	153		143																								
296	1899695			114							24	120		250		270						199		D	H					76																						
297	1899710	21.12.11	76						64			121		251		271						200		D	U	154				77																						
298	1900963			115				94					180	252		274			153			201																						2		22		1				
299	1901020	22.12.11	77								25	122		253		275						202		PE	H	155					62																					
300	1901967		78			24						123		254		276						203		P	H	156					63																					
301	1902153		79						65			124		255		277						204		D	H	157				78																						
302	1902442	22.12.11		116							26		181	256		278			154			205		D			85	144																								
303	1900571			117			44					125		257		279						206		PE	MV	158		145		79																						
304	1902579				108			95				126		258		280						207		D			86	146		80																						
305	1902583	23.12.11			109						27	127		259		281						208		3W	T	T		147																								
306	1902587				110						28		182	260		282			155			209		L	H	159		148		81																						
307	1903521				111				66		29		183	261		283						210											11		30				Y	SC												
308	1903692			118							30	128			49	284							Y	PE	MV	160				82																						
309	1903810			119				96				129		262		285						211		PA	H					83																						
310	1903816			120		25							184	263		286							Y									12			8	4	21		Y	Y												
311	1904606	24.12.11			112			97					185	264		287						212		D	MV	161				84																						
312	451618	25.12.11			113				67				186	265		288			156			213		D	A	162				85																						
313	90261	25.12.11		121					68				187	266		289			157			214		D	U				26		64																					
314	1905362				114			98				130		267		290							Y	D			87	149	27		65																					
315	1905376	26.12.11			115		45						188	268		291			158			215		L		T		150	28																							
316	1905372				116		46						189	269		292			159			216		L		T				86																						
317	19032			122							31		190	270		293			160			217		PE	H	163					66																					
318	1907169	27.12.11			117						32		191	271		294			161			218																					18			23		2				
319	19035				118			99				131		272		295					Y			L		T		151																								
320	1909087	28.12.11	80								33		192		50	296			162			219																					19			24		3				
321	1909736				119			100				132				297						220		P			88				SC																					
322	1911256	29.12.11			120		47						193	273		298			163			221		TR		T				87																						
323	1911774	30.12.11	81								34		194	274		299			164			222		P			89				67																					
324	1912320		82								35	133		275		300		2			y			D			90	152																								
325	1912254			123						50					51	301			165		Y	223																					20			25		2				
326	1912692			124						51		134				302			166		Y			D			91	153															21									
327	1912700				121			101				135			52	303			167			224																					22			26		3				
328	1912701				122				69			136		276		304			168			225																					23			27		1				
329	1912724	31.12.11	83	125							36	137			53	305						226		PE	MV	164					68																					
330	1913666				123		48					138		277			23		169			227																														FA

331	1913663				124		49					139		278			24		170			228																														FA
332	1914084			126					70			140		279			25					229		D	L	165					69																					
333	1914038				125		50							280		306			171			230													15				1													
334	1914094				126			102						281		307						231		3W	H	166		154																								
335	1914106	01.01.2012			1		1						1	1		1							1	D	H	1		Y		Y	Y																					
336	1914107				2			1					2	2		2			Y			Y		D			Y	Y		Y																						
337	1914290		1				2					1		3		3						Y		D			Y	Y			Y																					
338	1914375		2						1			2			Y	4						Y										Y		STR	20					Y												
339	1797028			1							1	3		4		5			Y				Y	PE	MV	2				Y	Y																					
340	1914382			2		1Y						4		5		6			Y			Y										Y		FUR	6		Y															
341	1914395				3			2					3	6		7			Y		Y			P			Y	Y																								
342	1914400	02.01.12	3					3					4	7				C				Y		D			S	Y		Y																						
343	1915231		4			1Y							5		Y	8			Y			Y														Y							Y		Y		2				
344	1915524			3				4					6	8		9			Y			Y											Y	EP	10				Y						Y		Y					
345	1915652			4			3					5		9		10					Y			P			Y	Y																								
346	1223626				4				2				7	10		11			Y			Y		D			Y			Y																						
347	1917306	03.01.12		5				5					8	11		12						Y		L	H	3		Y																								
348	1917316				5		4						9	12		13			Y			Y		D	H	4		Y		Y																						
349	1917327			6				6				6		13		14					Y			D			Y	Y																								
350	1917326			7				7				7		14		15						Y		D			Y			Y																						
351	1917339				6	10							10	15		16			Y			Y		PE	3W	5		Y		Y																						
352	1917354	04.01.12			7						2	8		16		17						Y		D			Y	Y			Y																					
353	1917363				8			8					11	17		18			Y			Y		3W		T		Y	Y																							
354	1918804				9					1		9		18		19				Y		Y										Y			6		Y															
355	1918811				10			9				10		19		20			Y			Y		H	H	6		Y		Y	Y																					
356	1918812				11			10				11		20		21			Y			Y		H	H	7				Y																						
357	1918815	05.01.12			12						3		12	21		21				Y		Y		D			Y	Y			Y																					
358	9089			8						2			13	22			Y		Y			Y		D	MV	8		Y																								
359	1919883			9				11					14	23		22				Y		Y		D			Y	Y			Y																					
360	1920270	05.01.12				11					4		15	24		23						Y		P			Y				SC																					
361	1920280	06.01.12			13				3				16	25		24			Y		y			D	MV	9		Y																								
362					14			12					17		Y	25						Y																			Y	PL										
363	1920286				15			13					18		Y	26			Y				Y																				Y			Y		3				
364	1921714			10					4				19		Y	27			Y			Y		3W		T		Y																								
365	1921713			11				14					20	26		28			Y		Y			3W		T		Y																								
366	1923173	07.01.12		12				15					21		Y	29						Y																					Y			Y		3				
367	1923176				16				5			12		27		30								D		10					Y																					
368	1923183				17				6				22	28		31			Y			Y		D			Y			Y																						
369	1923188	8.01.12			18						5		23	29		32			Y			Y											Y		12		Y		Y													
370	1923214		5					16					24	30		33			Y			Y		D			Y			Y																						
371	19216601	9.01.12	6					17				13		31		34				Y		Y		D			Y			Y																						
372	1901056		7							3		14			Y	35						Y		PE	MV	11		Y		Y																						
373	1924772			13		12							25	32		36			Y			Y											Y	TR	15				Y	Y												
374	1925989			14				18					26	33		37						Y		D	BCART	12		Y			Y																					
375	1924988			15				19					27		Y	38						Y		P	BCART	13		Y		Y																						
376	1924987			16				20					28	34		39						Y											Y		12					SC												
377	1925082				19					4		15			Y	40					Y			P	MV	14		Y																								
378	1924933				20	13						16		35		41			Y			Y		PE	MV	15		Y		Y	Y																					
379	10513	10.01.12			21			21					29	36			Y		Y			Y											Y		50				Y	Y												
380	1925754		8			14						17		37		42			Y			Y																						Y		Y		2				
381	10515			17			5						30	38		43						Y		D	H	16				Y																						
382	1926368			18				22					31	39		44			Y			Y		D			Y	Y																								
383	1926493	11.01.12			22				7				32	40		45			Y			Y		D		17		Y																								
384	1927831				23				8			18			Y	46			Y			Y		P	MV	18		Y																								
385	1927854	`12.01.12			24			23					33	41		47			Y			Y			H	19				Y																						
386	1928609		9						9				34	42		48						Y		BU			Y	Y																								
387	1928779		10						10				35	43		49			Y		Y			D			Y	Y																								
388	1928783			19				24					36	44		50			Y			Y		L	L	20			Y																							
389	4542169			20						5			37		Y	51					Y			P			SH	Y																								
390	1929085			21							6	19			Y	52						Y		L		T		Y		Y																						
391	1929083			22							7	20			Y	53						Y		L		T			Y																							
392	1929087			23							8	21		45		54						Y		L		T				Y																						
393	1929088			24						6		22		46		55						Y		L		T		Y		Y																						
394	19290901			25				25				23			Y	56						Y		L		T		Y																								
395	1930118	13.01.12	11				6					24			Y	57			Y			Y		PE	U	21				Y																						
396	1930467			26					11				38	47		58						Y																														W
397	10543				25					7			39	48		59			Y			Y											Y	EP	15				Y						Y							

398	1930543				26	15						25		49		60						Y										Y		FUR		Y																
399	1930546				27			26					40	50			Y				Y			D			Y	Y																								
400	1930550				28						9	26		51		61					Y			PE	MV	22		Y																								
401	1930555				29				12			27		52		62							Y	D	TR BRAN						Y																					
402	10548	14.01.12	12								10	28		53		63						Y		D	MV	23		Y		Y																						
403	1931159		13					27				29			Y	64						Y		D	H	24				Y																						
404	1931783			27							11		41	54		65			Y			Y		D	H	25	Y				SC																					
405	1931809				30			28					42	55		66						Y		L	TREE	26		Y		Y																						
406	1124283	15.01.12	14						13				43	56		67			Y			Y		D	H	27		Y																								
407	1931969			28				29				30			Y	68						Y		D		28					Y																					
408	1931968			29		16						31		57		69						Y		P		29					Y																					
409	1931970			30					14				44		Y	70			Y			Y																						Y		Y		2				
410	1931972			31		17							45	58		71			Y			Y														Y										Y		2				
411	1931804			32							12		46	59		72			Y			Y		D			Y				Y																					
412	1931977			33				30				32			Y			C			Y			PE	U	30		Y																								
413	1931973			34							13	33		60		73			Y			Y		PE	U	31					Y																					
414	1931979				31				15				47	61		74			Y			Y		D	MV	32					Y																					
415	1931979			35				31					48	62		75			Y		Y			PE	MV	33		Y																								
416	1931988	15.01.12			32			32					49		Y	76			Y			Y		P			Y	Y																								
417	1931987				33					8			50	63		77			Y			Y		PE	MV	34				Y																						
418	1339130	16.01.12			34			33				34			Y		Y					Y																					Y			Y		3				
419	1931990				35					9		35		64		78																Y			12					Y												
420	1809838		15				7					36		65			Y					Y		C	MV	35				Y																						
421	1933243			36					16			37			Y	79			Y			Y		L		36					Y																					
422	1933236			37		18						38		66		80			Y			Y		L		37		Y																								
423	1933234			38					17			39		67		81			Y			Y		L		38					Y																					
424	1933272			39							14	40		68		82			Y			Y		C	H	39				Y																						
425	1933394			40						10		41		69		83				Y		Y		PA	H	40				Y																						
426	1933398			41							15		51	70		84					Y			D			Y	Y																								
427	1933394			42							16		52		Y	85					Y			P			Y	Y																								
428	1933402	16.01.12		43							17		53		Y	86			Y			Y		L	H			Y			Y																					
429	1933972	17.01.12	16						18			42		71		87				Y	Y			D	L	41		Y																								
430	1933970		17			19						43			Y	88				Y	Y			D	L	42																										
431	1934136		18					34					54	72		89			Y		Y			D	H	43				Y																						
432	1934780			44		20							55		Y	90			Y				Y																				K			Y		3				
433	1934783			45					19				56	73		91			Y		Y			D			Y	Y																								
434	1934824			46			Y						57	74		92						Y		D			Y				Y																					
435	1935649	18.01.12		47			8					44		75		93			Y			Y										Y			12	Y				Y												
436	1935997			48						11		45		76		94					Y			D			Y	Y																								
437	1936002	19.01.12			36		9					46			Y	95						Y																					S			Y		1				
438	1936023		19								Y		58		Y	96				Y		Y																											H	WELL		
439	1937048			49			10						59	77		97			Y		Y			D			Y	Y																								
440	1937325			50					20			47		78		98				Y		Y		PE	MV	44		Y			Y																					
441	1937333			51				35					60	79		99			Y				Y	D	H	45					Y																					
442	1937351				37	21							61		Y	100			Y			Y		PE	MV	46		Y		Y																						
443	1938188	20.01.12	20						21				62	80		101			Y			Y		L	H	47		Y		Y	Y																					
444	1938273			52				36				48			Y	102						Y		D	H	48		Y		Y																						
445	1928487			53				37					63	81		103			Y			Y		D		49		Y		Y																						
446	1938911			54							Y		64	82		104					Y			PE	L	50		Y																								
447	1938925			55							Y	49		83		105					Y			P	H	51		Y																								
448	1938927				38			38					65	84		106						Y		D	MV	52				Y																						
449	1938928				39			39					66	85		107					Y			P	MV	53		Y																								
450	1939814	21.01.12	21						22				67	86		108			Y			Y		D	H	54					Y																					
451	1939809		22						23				68		Y	109			Y			Y		P	H	55		Y																								
452	1940039			56						12		50		87		110			Y		Y			D			Y	Y																								
453	13913				40					13		51			Y	111				Y		Y										Y			10				Y													
454	1940088	22.01.12			41			40				52		88		112						Y		D	H	56					Y																					
455	1940083				42			41					69		Y	113							Y																				S			Y		3				
456	1677658		23						24			53			Y			C			Y			D			Y	Y																								
457	1327590	23.01.12		57				42					70	89		114			Y			Y		D	L	57		Y		Y	Y																					
458	1941755			58			11					54		90		115						Y		C	H	58				Y	Y																					
459	1941766				43		12					55		91			Y					Y		C	L	59		Y	Y																							
460	13924				44	22							71		Y	116						Y																					Y			Y		2				
461	1942761	24.1.12		59				43				56		92		117			Y			Y		D	H	60				Y																						
462	1943083			60					25			57			Y	118						Y		D			Y				Y																					
463	1943158	25.01.12			45				26				72		Y	119							Y																				S			Y		3				
464	1943159				46			44				58		93		120						Y		H		T			Y																							

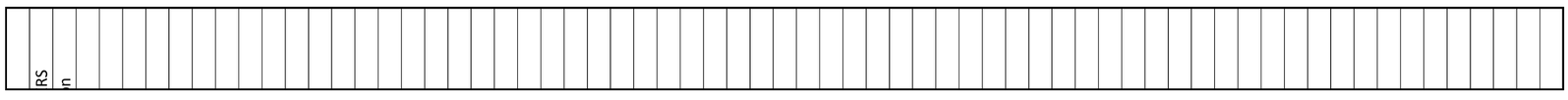
465	1943789		24								Y	59		94		121			Y			Y		D	L	61		Y																								
466	1944165	26.01.12			47			45				60		95		122			Y			Y		D	H	62					Y																					
467	13934				48						Y		73	96		123			Y			Y		BU						Y																						
468	1944209	26.01.12			49		13					61		97		124					Y			PE	MV	63		Y																								
469	1946369	28.01.12	25								Y	62			Y			C				Y		L	H	64				Y																						
470	1946456		26						27			63		98		125						Y		L	H	65					Y																					
471	1946468		27						28			64		99		126						Y		L	H	66				Y																						
472	1946788		28				14						74	100		127						Y		PE	MV	67		Y																								
473	1945827			61		23						65		101		128																									H											
474	1947138			62				46					75	102		129			Y			Y		D			Y			Y																						
475	1947145			63				47					76	103		130			Y			Y		H		68					Y																					
476	13946			64				48					77	104		131			Y		Y			D	MV	69		Y																								
477	1947297	29.01.12	29				15						78	105		132			Y			Y		PE	MV	70		Y		Y																						
478	1947307			65		24							79	106		133			Y				Y			71																		Y		Y		3				
479	1947310			66						14		66			Y	134						Y																						Y		Y		2				
480	1947338				50				29				80	107		135						Y		D	H	72		Y		Y																						
481	1947342		30								Y		81	108		136			Y		Y			D			Y	Y																								
482	1947347	30.01.12			51		16						82	109		137			Y			Y											Y		20					SC												
483	1948363			67				49				67		110		138			Y			Y										Y			12					Y												
484	1875414				52						Y	68		111		139					Y			PE	MV	73		Y																								
485	1949036				53		17					69		112		140						Y		L	H	74				Y																						
486	1949039				54				30			70		113		141						Y		H	H	75				Y																						
487	1949032				55		18					71		114		142						Y		L	H	76				Y																						
488	1949040				56			50				72		115		143					Y			PE	MV	77		Y																								
489	13969	31.01.12		68			19					73			Y		Y					Y																						Y		Y		2				
490	1950347			69					31			74		116		144						Y		H	H	78		Y		Y																						
491	1951685	01.02.12		70			20						83	117		145			Y			Y		D			Y				Y																					
492	1951798				57			51				75			Y	146						Y		PE	MV	79					Y																					
493	1951808		31					52				76		118		147					Y			P			Y	Y																								
494	1951809				58	25						77		119		148						Y		PE	MV	80		Y																								
495	1951813	02.02.12			59						Y	78		120		149							Y	D			Y	Y	Y																							
496	1952563		32							15			84	121				C	Y			Y		D		81		Y		Y																						
497	1953083		33					53					85	122			Y		Y			Y		D	MV	82		Y																								
498	13977			71			21						86	123		150			Y			Y											Y	TR	12	Y			Y													
499	13978			72				54					87	124		151			Y			Y																						Y		Y		4				
500	1953468	03.02.12	34						32			79		125		152						Y		D	H	83		Y	Y																							
501	1954001	03.02.12	35					55					88		y	153							y	P	H	84					Y																					
502	1954536				60					16		80		126		154					Y			D	M	85		Y																								
503	1671329	04.02.12	36							17		81		127			Y				Y			D	L	86		Y																								
504	1955160		37				22					82		128			Y				Y			P	L	87		Y																								
505	1955408		38				23					83		129		155					Y			P			Y	Y																								
506	195600	05.02.12			61				33			84			Y	156			Y			Y		L		T		Y																								
507	1956055				62				34			85		130		157						Y		L		88					Y																					
508	1958070	06.02.12			63	26							89		Y	158						Y		P		89		Y																								
509	13999	07.02.12	39					56				86		131		159				Y		Y		D			Y	Y																								
510	1249723			73							Y		90	132		160			Y			Y		D	H	90				Y																						
511	1959370			74				57				87		133		161						Y		L		T					SC																					
512	1959386				64					18			91		Y	162					Y			P			Y	Y																								
513	1959402	08.02.12	40					58					92	134		163						Y		D	L	91		Y																								
514	1959960		41						35			88		135		164			Y			Y		PE	L	92				Y																						
515	1960480	8.02.12		75				59				89		136		165			Y			Y											Y		10					Y												
516	1960801	09.02.12			65					19			93	137			Y		Y			Y		PE	MV	93				Y																						
517	1962144				66			60				90			Y		Y				Y			D			Y	Y																								
518	1962154				67					20			94	138		166			Y				Y	D		94		Y		Y																						
519	1963040	10.02.12	42						36			91		139		167			Y		Y			D			Y	Y																								
520	1963315			76				61				92		140		168						Y											Y	TR	12					SC												
521	1963225			77					37				95	141		169						Y										Y			6				Y													
522	13421	11.02.12			68				38			93		142		170					Y			D	U	95		Y																								
523	1963479				69			62				94		143		171					Y			D	U	96		Y																								
524	1963482		43							21		95			Y	172						Y																					S			Y		2				
525	1964713			78						22		96		144		173						Y										Y		STEPS	6		Y															
526	1964763			79				63					96	145		174			Y			Y		D	MV	97		Y																								
527	1964827	12.02.12			70		24					97		146		175			Y				Y	D	L	98		Y	Y																							
528	1965009				71		25						97	147				C	Y			Y		D			Y	Y																								
529	1965013	12.2.12			72						Y	98		148		176							Y	D	U	99					Y																					
530	1965015	13.02.12			73			64					98	149		177					Y			D			Y	Y																								
531	1965017		44					65				99		150		178			Y			Y		D			Y				Y																					

532	1966208		45				26						99	151		179			Y			Y		P	H	100				Y	Y																					
533	13433			80				66				100		152		180					Y			D	BCART	101		Y																								
534	13434				74	27							100	153		181			Y				Y																				Y			Y		2				
535	1967898	14.02.12	46					67				101		154		182					Y			D	L	102		Y																								
536	1968186			81			27						101	155		183			Y			Y		D	H	103					Y																					
537	1968204				75			68					102	156		184			Y			Y		D	MV	104				Y																						
538	1968203	15.02.12		82				69					103	157		185			Y					P	MV	105					Y																					
539	1968208				76					23		102			Y		Y					Y																					S			Y		2				
540	13443		47					70				103		158		186					Y			D	L	106		Y																								
541	1969405			83						24			104		Y	187			Y			Y		PE	MV	107				Y																						
542	1969804			84				71					105	159		188			Y			Y																						ACID		1						
543	1969807	15.02.12		85				72					106	160		189			Y			Y		H	H	108					Y																					
544	1969815				77						Y		107	161		190			Y			Y		H		109		Y																								
545	1969817				78		28						108		Y		Y		Y		Y			P			Y	Y																								
546	1969823				79			73					109	162		191			Y			Y		PE	L	110					Y																					
547	1970621	16.02.12	48				29					104		163		192						Y		L		T				Y																						
548	1971107			86					39				110	164		193			Y			Y											Y	WELL	12					Y												
549	1971161	17.02.12	49					74					111		Y		Y		Y				Y	D	H	111					Y																					
550	1972062		50				30						112	165		194						Y		C	H	112					Y																					
551	1972616				80			75				105			Y	195							Y																				S			Y		4				
552	13460				81				40			106		166		196						Y																					S			Y		1				
553	1972621				82			76					113	167		197			Y			Y		D			Y	Y																								
554	1972623				83		31						114	168		198			Y		Y			P			Y	Y																								
555	1957385	18.02.12	51								Y	107		169		199				Y		Y		PA	H	113		Y																								
556	1973532		52							25		108		170		200					Y			C	MV	114		Y																								
557	1973531		53					77				109		171		201					Y			D			Y	Y																								
558	1973760			87				78					115		Y	202			Y				Y																				S			Y		3				
559	1973914			88			32					110		172		203				Y	Y			D			Y	Y																								
560	1973920			89		28						111			Y	204						Y		PE	MV	115		Y																								
561	1973923			90				79				112		173		205			Y			Y																														BO
562	1973930				84			80					116	174		206			Y				Y	D	H						Y																					
563	1973940	19.02.12			85			81				113		175		207			Y			Y		D			Y		Y																							
564	1974050		54				33					114		176		208						Y		PE	H	116				Y																						
565	1974161			91						26			117	177		209			Y			Y		PE	L	117		Y																								
566	1974168				86		34					115		178		210							Y	L	L	118					SC																					
567	1974660	20.02.12	55							27		116		179		211					Y			D			Y	Y																								
568	1974657			92					41			117		180			Y					Y		D			Y	Y		Y																						
569	13478	20.02.12		93					42			118		181		212				y	Y			D			Y	Y																								
570	1974683			94			35					119		182		213						Y		P	H	119				Y																						
571	1974686				87				43				118	183		214			Y			Y		P	H	120					Y																					
572	1974688				88						Y		119	184		215			Y				Y	D	H	121					Y																					
573	1974692				89				44				120	185		216			Y			Y		D			Y				Y																					
574	1974698	21.02.12			90		36						121	186		217			Y			Y										Y		LD	12					Y												
575	1975059		56			29						120			Y	218						Y		PE	MV	122				Y																						
576	1975741		57						45				122	187		219			Y			Y		L	H	123			Y																							
577	1975735		58								Y		123		Y	220			Y			Y		L	H	124				Y																						
578	1975750		59							28			124		Y	221			Y				Y	L	H	125				Y																						
579	1975716		60								Y		125	188		222			Y			Y		L	H	126				Y																						
580	195728		61								Y		126		Y	223			Y			Y		L	H	127				Y																						
581	1975725		62					82					127	189		224			Y				Y	L	H	128				Y	Y																					
582	1975733		63				37						128		Y	225			Y			Y		L	H	129				Y																						
583	1975718		64							29			129		Y	226			Y			Y		L	H	130				Y																						
584	1975771	21.02.12		95						30		121		190		227			Y			Y		D	MV	131				Y																						
585	1976014				91	30						122		191			Y					Y																						Y		Y		2				
586	1976025	22.02.12			92			83				123		192			Y		Y			Y		L	H	132					Y																					
587	13499			96				84				124		193		228						Y		D	H	133		Y		Y																						
588	1978020	23.02.12	65							31		125		194		229						Y		D	MV	134				Y																						
589	1978270				93				46				130	195		230			Y			Y		D		135				Y																						
590	9903		66							32			131	196		231			Y		Y			D	A	136		Y																								
591	9904		67							33			132		Y	232			Y			Y																	Y													FMIL
592	1979018			97				85				126		197		233			Y				Y	L		137				Y																						
593	1979048				94					34		127		198		234						Y		D	MV	138		Y		Y																						
594	1979051				95			86				128		199			Y		Y		Y			D	MV	139		Y																								
595	1979065	24.02.12			96			87					133	200		235			Y			Y											Y	TR	15		Y	Y		SC												
596	9910		68						47			129		201		236						Y											Y	TR	12		Y		Y													
597	1979792		69						48			130			Y	237						Y		D	3W	140	Y																									
598	9912			98						35			134		Y	238			Y		Y	D		D			Y	Y																								

599	1980458				97		38						135	202		239			Y			Y		D	MV	141				Y																						
600	1980466	25.02.12			98		39						136	203		240			Y			Y		L	L	142		Y	Y																							
601	1980907		70					88					137	204		241					Y			D	MV	143		Y																								
602	1981654			99					49				138	205		242			Y			Y		D		144				Y																						
603	1981657			100							Y	131			Y	243						Y			BCART					Y																						
604	1981720				99					36		132		206			Y		Y		Y			D			Y	Y																								
605	1981719				100					37			139	207		244						Y		L	H	145				Y																						
606	1981718				101					38			140	208		245					Y			L	H	146		Y																								
607	1981727				102		40					133		209		246			Y			Y		D	MV	147				Y																						
608	1981728	26.02.12			103				50				141	210		247			Y		Y			D	MV	148		Y																								
609	1981729				104		41						142	211		248			Y		Y			P	MV	149		Y																								
610	460929	26.02.12	71					89					143	212		249			Y			Y		D	MV	150		Y			Y																					
611	460933			101		31							144		Y	250			Y			Y																					Y			Y		1				
612	1981887			102			42						145	213					Y			Y										Y			12	Y				Y												
613	1981889			103					51			134		214		251			Y			Y		H						Y																						
614	1981892			104									146		Y	252			Y			Y		L	H	151		Y		Y																						
615	9934			105					52				147		Y	253			Y			Y		L	H	152					Y																					
616	1981891			106					53			135		215		254			Y			Y		D	H	153					Y																					
617	1981899				105			90					148	216		255			Y			Y		D			Y	Y																								
618	1983150	27.02.12			106		43					136			Y		Y			Y	Y			D			Y	Y																								
619	1983658			107				91				137		217		256						Y																					Y		Y							
620	1983666			108				92					149	218		257			Y			Y		D	3W	154				Y																						
621	1983682				107			93				138		219		258			Y			Y		D	L	155			Y																							
622	1983686	28.02.12	72							39		139		220		259			Y			Y			TRAIN	156		Y		Y																						
623	1984935			109		32						140		221				C	Y			Y		PE	MV	157				Y																						
624	1743644	29.02.12		110				94					150	222		260			Y			Y		D	H	158				Y																						
625	1986333			111				95				141		223		261				Y	Y			D			Y	Y																								
626	1986468				108	33							151		Y	262					Y			PE	3W	159		Y																								
627	1987861	01.03.12		112					54				152	224		263			Y				Y	D	L																		Y			Y		4				
628	1987899				109		44						153	225		264			Y		Y			D			Y	Y																								
629	1987897				110					40			154	226		265			Y			Y																					S			Y		3				
630	1987905	02.03.12			111			96					155	227		266			Y			Y		D			Y			Y																						
631	1989811	03.03.12			112		45						156		Y	267			Y			Y																					Y			Y		2				
632	1990662	04.03.12			113						Y		157	228		268			Y				Y																				Y			Y		3				
633	1990669				114			97				142		229			Y							D	MV	160		Y																								
634	1992384	05.03.12		113				98				143		230		269					Y			D			Y	Y																								
635	1993919	06.03.12		114			46						158	231		270			Y				Y	H		161		Y	Y	Y																						
636	1993929			115				99				144		232		271						Y		L	H	162				Y																						
637	1993928			116				100				145		233		272						Y		L	H	163		Y																								
638	1993935			117				101				146		234		273						Y		L	H	164					Y																					
639	1993930			118					55			147		235		274						Y		L	H	165				Y	Y																					
640	1170060				115						Y		159	236		275							Y	PE	MV	166					Y																					
641	1993955				116				56			148		237		276			Y			Y		D	MV	167		Y																								
642	1994598	07.03.12	73								Y	149		238		277			Y			Y											Y	EP											Y							
643	1994747		74							41		150		239		278							Y																				Y		Y							
644	1994953			119					57				160		Y	279			Y			Y		D			Y				Y																					
645	1994980				117			102					161	240		280					Y			D			Y	Y																								
646	1994979				118				58				162	241			Y				Y			P			Y	Y																								
647	1994985	08.03.12			119					42		151		242		281					Y			D			Y	Y																								
648	1994996		75					103					163		Y	282					Y			PE	MV	168		Y																								
649	1995017			120				104					164	243		283							Y	D		169					Y																					
650	1995018			121				105					165	244								Y		P		170				Y																						
651	1995029			122						43			166	245		284			Y				Y	H	H	171				Y																						
652	1995030			123							Y	152		246		285			Y			Y		D	L	172				Y																						
653	1995047	09.03.12			120			106				153		247		286						Y		PE	MV	173					Y																					
654	1995123		76						59				167	248		287					Y			D	MV	174		Y																								
655	1996763	10.03.12			121				60				168	249		288			Y		Y			D			Y	Y																								
656	1998108			124						44			169	250		289			Y				Y										Y	STONE	20					Y												
657	1998118				122					45			170	251		290			Y			Y		H	H	175				Y																						
658	1998119				123					46			171	252		291			Y			Y		C	MV	176				Y																						
659	1998125	11.03.12			124				61			154			Y	292			Y		Y			P	A	177		Y																								
660	1998130				125			107					172	253		293			Y		Y			D	A	178		Y																								
661	1998305	11.03.12	77					108				155		254		294			Y		Y			D		179		Y																								
662	1005414		78							47		156		255		295			Y		Y			P			Y	Y																								
663	1998315		79							48			173	256			Y		Y				Y	P			Y		Y	Y																						
664	1998326			125				109				157		257		296			Y			Y		PE	MV	180				Y																						
665	11703				126				62				174		Y	297			Y			Y		P	H	181					Y																					

666	11704				127				63				175	258		298			Y			Y		D	H	182				Y																						
667	1725539	12.03.12		126				110				158		259		299			Y		Y			D	MV	183		Y																								
668	1999914			127				111					176	260		300			Y				Y	D	MV	184		Y			Y																					
669	1999938				128			112				159		261		301			Y			Y		D	L	185		Y																								
670	1999945				129	34							177	262		302			Y		Y			P	MV	186		Y																								
671	1999943	13.03.12	80					113					178	263		303			Y				Y	D	H	187			Y	Y																						
672	1999951				130	35							179	264		304			Y			Y		L		188					Y																					
673	2000661		81			36						160		265			Y		Y			Y		PE	SH						Y																					
674	2001330			128				114					180	266		305			Y			Y		D	L	189		Y																								
675	2002391	14.03.12	82				47					161		267		306			Y			Y		D	L	190				Y																						
676	2002391		83							49		162		268		307			Y			Y		D	L	191					Y																					
677	2002469		84					115				163		269		308			Y			Y		D	L	192					Y																					
678	2002805	15.03.12			131						Y		181	270		309			Y			Y		D			Y	Y		Y																						
679	2004123			129				116				164		271		310			Y			Y		D	L	193		Y																								
680	2004051			130						50			182	272		311			Y			Y		D	MV	194				Y																						
681	711316	16.03.12	85								Y	165			Y	312			Y			Y		PA	H	T					SC																					
682	2005569			131				117				166		273		313					Y			D	L	195		Y																								
683	2005460		86			37							183	274		314						Y		P			Y	Y																								
684	2005579	16.03.12		132					64				184		Y	315			Y			Y		P	A	196		Y		Y																						
685	1395731			133					65				185	275		316			Y		Y			D	A	197		Y																								
686	2005586			134				118				167		276		317						Y																					Y		Y							
687	2005594			135				119				168		277		318					Y			D	A	198		Y																								
688	2006346	17.03.12	87							51			186		Y	319			Y				Y																				Y			Y		4				
689	2007108		88						66				187		Y	320			Y			Y		L	H	199		Y																								
690	2006758		89			38							188	278		321			Y			Y		L	H	200					Y																					
691	2007110			136				120				169			Y	322			Y				Y																				Y			Y		3				
692	2007119				132				67				189		Y	323			Y			Y		P	MV	201				Y																						
693	2007127				133	39							190	279		324			Y			Y																					Y		Y							
694	2007128				134	40							191	280		325			Y				Y																				Y		Y							
695	11752	18.03.12	90							52		170		281		326					Y			D			Y	Y																								
696	2007276	18.03.12	91								Y		192	282		327			Y			Y		BCART			Y				SC																					
697	2007360				135	41							193	283		328			Y			Y											Y		15					Y												
698	2007294				136			121				171		284		329			Y			Y																						Y		Y		1				
699	2007304				137						Y	172		285		330			Y			Y		D	U	202		Y																								
700	11760	19.03.12	92					122				173			Y	331						Y																					S			Y		2				
701	2008932			137					68				194	286		332			Y			Y		D			Y	Y																								
702	2008931			138					69				195		Y	333			Y			Y		P			Y	Y	Y																							
703	1322826	20.03.12	93							53			196	287		334			Y			Y		L		T					SC																					
704	2010008		94							54		174		288		335						Y		PE	L	203		Y		Y																						
705	2010300			139			48						197	289		336			Y			Y																			H	RAT										
706	2010446			140							Y		198	290			Y		Y		Y			D			Y	Y																								
707	2010450			141				123				175			Y			C				Y		D	A	204		Y																								
708	2010463				138						Y	176		291		337			Y		Y			D			Y	Y																								
709	2010464				139	42							199		Y	338			Y			Y																						Y		Y		2				
710	11773	21.03.12			140			124					200	292		339						Y		BCART	T	205		Y	Y																							
711	2011805			142					70				201	293		340			Y			Y		L	H	206				Y																						
712	2011889			143							Y	177		294		341			Y			Y											Y	EP	15		Y		Y				Y		Y							
713	2011900				141						Y		202		Y	342			Y			Y		D			Y	Y																								
714	2011901				142			125					203	295		343			Y		Y			D	A	207		Y																								
715	2013201	22.03.12			143		49					178		296		344					Y			C			Y	Y																								
716	2013224	23.03.12	95			43						179		297		345						Y		PE	L	208				Y																						
717	2013254			144				126					204	298		346			Y			Y		D	MV	209					Y																					
718	2013279				144	44						180			Y	347			Y		Y											Y		FUR	4	Y	Y															
719	2014939	24.03.12			145			127					205	299		348			Y			Y		D			Y			Y																						
720	2014940				146			128					206	300		349			Y		Y			P			Y	Y																								
721	2014952	25.03.12			147						Y	181		301		350						Y		L		T		Y		Y																						
722	201495				148					55		182		302		351						Y		L		T				Y																						
723	2014950				149					56		183		303		352						Y		L		T					Y																					
724	2014949				150			129				184		304		353						Y		L		T				Y																						
725	2015090		96						71				207	305		354							Y										Y	STONE	20		Y			Y												
726	11799			145				130					208		Y	355			Y			Y																					Y			Y		4				
727	12003	26.03.12			151			131					209	306		356			Y			Y		H			Y						Y	LD						Y												
728	2016926			146							Y	185		307			Y		Y			Y		D	MV	210		Y																								
729	2016925			147				132				186			Y		Y		Y		Y			D	MV	211		Y																								
730	2016933				152		50					187			Y	357			Y			Y										Y		LD	12				Y													
731	2016942	27.03.12			153			133				188		308		358						Y		D			Y	Y																								
732	2016941				154			134				189			Y	359					Y			P			Y	Y																								

733	20177889	27.03.12	97					135				190		309		360			Y			Y		REPAIR	L		Y		Y	Y	Y																				
734	2018174			148				136				191		310			Y					Y		PE	H	212		Y	Y																						
735	2018185				155		51					192		311		361						Y		PE	H	213					Y																				
736	2019281	28.03.12		149						57			210	312		362						Y		PA	H		Y	Y																							
737	2019673				156						Y		211	313		363						Y		D	L	214		Y	Y																						
738	2019678				157				72			193		314		364						Y		D	H	215					Y																				
739	2020901	29.03.12		150					73			194		315		365	Y		Y			Y		L	L	216				Y																					
740	2020904			151					74			195		316		366			Y			Y		L	L	217				Y																					
741	2020902			152					75			196		317		367			Y			Y		L	L	218				Y																					
742	2020909			153				137					212	318		368			Y			Y		D			Y	Y		Y																					
743	2020912				158				76				213	319		369			Y			Y											Y	EP	18					SC			Y		Y						
744	2020917				159				77				214	320		370			Y			Y		D	MV	219		Y			Y																				
745	2020923				160				78			197		321		371			Y			Y											Y	PO	15		Y	Y													
746	2020930	30.03.12	98						79				215	322		372			Y			Y		D	L	220		Y																							
747	2020937				161				80				216	323		373			Y			Y		D	H	221		Y		Y																					
748	12034			154						58			217	324		374			Y			Y		PE	H				Y	Y																					
749	2022344				162			138					218	325		375					Y			D	A	222		Y																							
750	2022346				163						y	198		326		376					Y			D			Y	Y																							
751	2022350				164			139				199		327		377					Y			D	U	223		Y																							
752	2022352				166		52					200		328		378						Y		P	U	224		Y			Y																				
753	2023725	31.03.12		155						59		201			y	379						Y		PE	L	225		Y		Y																					
TOTAL	753	6 MTH	181	281	291	69	102	241	150	110	81	341	412	609	144	687	56	10	402	23	152	510	91	609	371	371	196	242	49	206	153	20	37			11	38	5	26	39	3		44	13	17	62	9		1		0	9


RS
n