Republic Of
Iraq
Ministry Of
Health

# Iraqi Injury Surveillance System
# Biennial Report
# 2016-2017

Edited By
Dr. Ahmed H. Radhi
F.I.C.M.S
Director Of Iraqi Injury Surveillance System

# Table of Contents

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## Summary

The Iraqi injury surveillance system provides very important information about the fatal and non-fatal injuries. Using this information will decrease the impact of injuries in society. The data collected from all governorates in Iraq except Mousel , Salahdeen and Anbar in 2016 while in 2017 Saladeen, Mousel and Douhk in sentinel hospitals for non fatal injuries and from coroner offices in case of fatal injuries . The report reveals that the male accounted for more than 75% and the most common age group was 15-29 year.

According to governorates distribution in 2016 the highest number were collected from ThiQar, Erbil and sulimanya while in 2017 ThiQar, Erbil and Baghdad/Rasafa.The report shows that the time trend was highest in between 10-14 hour.

Regarding to the mechanism of injury, the main causes of non fatal injuries was falls, road traffic, sharp and blunt injuries while regarding to fatal injury was road traffic, gun fire (insurgency related) and Burns. In road traffic the most common cause was car occupant (60%) followed by motor cycle (21%). The report reveals that injuries at home was the high percent (46%) followed by high way \street (38%).

About 19% of all non-fatal injuries received care prior to reach to hospital and about 69% treated and sent to home .

Of fatal injury, the report shows that the highest number was collected from Baghdad (Medico legal directorate) followed by Kirkuk.

## Introduction

Injuries are a major cause of morbidity and mortality in all countries. According to the World Health Organization (WHO), injuries kill more than 5 million people each year worldwide, accounting for about 9% of all global deaths.[1] Eight of the top global twenty causes of death are injury related for the age group 15-29 years of age. In the Eastern Mediterranean Region, almost half a million people die of injuries every year, accounting for about 11% of all regional deaths. Injuries disproportionately affect young, active individuals.

Global trends suggest that the burden of injuries is increasing. Road injuries are projected to be one of the top five causes of death by 2030 (currently ranked seventh). The burden of self-harm as a mechanism of injury is also expected to increase (Table 1).

**Table (1); Top 20 Leading Causes of Deaths in the Eastern Mediterranean Region, Estimated Numbers in 2015 and Projected Number in 2030[2]**

| Rank | 2015 | Rank | 2030 |
|---|---|---|---|
| 1 | Ischemic heart disease | 1 | Ischemic heart disease |
| 2 | Stroke | 2 | Stroke |
| 3 | Lower respiratory infections | 3 | Chronic obstructive pulmonary disease |
| 4 | Chronic obstructive pulmonary disease | 4 | Lower respiratory infections |
| 5 | Diarrheal diseases | 5 | Diabetes mellitus |
| 6 | HIV/AIDS | 6 | Trachea, bronchus, lung cancers |
| 7 | Trachea, bronchus, lung cancers | 7 | Road injury |
| 8 | Diabetes mellitus | 8 | HIV/AIDS |
| 9 | Road injury | 9 | Diarrheal diseases |
| 10 | Hypertensive heart disease | 10 | Hypertensive heart disease |
| 11 | Preterm birth complications | 11 | Cirrhosis of the liver |
| 12 | Cirrhosis of the liver | 12 | Liver cancer |
| 13 | Tuberculosis | 13 | Kidney diseases |
| 14 | Kidney diseases | 14 | Stomach cancer |
| 15 | Self-harm | 15 | Colon and rectum cancers |
| 16 | Liver cancer | 16 | Self-harm |
| 17 | Stomach cancer | 17 | Falls |
| 18 | Birth asphyxia and birth trauma | 18 | Alzheimer's disease and other dementias |
| 19 | Colon and rectum cancers | 19 | Preterm birth complications |
| 20 | Falls | 20 | Breast cancer |

[1]Global Health Estimates 2015

[2]Source: Projections of mortality and causes of death, 2015 and 2030: http:\www.who.int/healthinfo/global_burden_disease\projections\en\

In Iraq, injuries cause considerable morbidity and mortality. National estimates from the Ministry of Health (MOH) Annual Report 2014 suggest that deaths due to external causes of injuries were the second leading cause of death for all age groups excluding children under five. Global estimates also illustrate the disability resulting from injury, including ongoing conflict. According to the Global Burden of Disease Iraq profile, mechanical forces, interpersonal violence, road traffic injuries, fire, drowning, war and legal intervention were among the main causes of Years of Life Lost (YLL).

The Iraqi Injury Surveillance System was established to ensure systematic and ongoing data collection. The data is intended to be used for public health action. Between 2008 and 2013, the surveillance system has been piloted in Iraq. The pilot was initiated in 2008 with four provinces, scaled to eight provinces in 2009, and at the end of 2013 scaled nationally.

The surveillance system aims to determine the magnitude of the public health problem and trends, to identify risk groups in the community studied, allowing prioritization and planning of the necessary preventive programs, and enable research and assessment. Rigorous data ensures that interventions to mitigate injury can be data driven and evidence based.

This report presents the epidemiology of both fatal and non-fatal injuries. External injuries are described in terms of their magnitude, geographical distribution, time, intention, and mechanism of injury. During the period covered by this report data was collected from emergency departments in all directorates and coroner offices departments except Ninavah, Saladeen. In 2016 data was not available from Anbar, in 2017 data not available from Dohuk.

External injuries are considered as invisible epidemic across the world and as a global health problem. Particularly in countries experiencing war, injury surveillance is an important public health intervention.

The Iraqi Injury Surveillance System is implemented by the MOH in Baghdad and the MOH in Kurdistan. The project received technical support from the World Health Organization (WHO), United State Centers for Disease Control and Prevention (CDC).

Since the inception of this project, similar injury surveillance systems have been developed in the Kingdom of Saudi Arabia, Oman, Bahrain, Egypt and Uzbekistan with support of the WHO.

## Report Overview

The current report contains four sections, including:

1- Description of the injury surveillance system in Iraq including development and rationale, system goals and objectives, methodology, definitions, data flow, ethics and limitations.
2- Overview of the findings in 2016-2017 for non-fatal injuries from data recorded at sentinel emergency departments
3- Overview of key findings for 2016-2017 for fatal injuries from data recorded at governorate level coroner offices
4- Summary of key findings and recommendations for public health action based on these findings, as well as recommendations to address gaps and challenges facing the system.

# 1. Description of the Iraqi Injury Surveillance System

## 1.1 Development of the system

Iraqi Injury Surveillance System has been gradually scaled up in Iraq. Data collection was first piloted beginning December 2008. Between 2009 and 2013, data on all causes of injury were collected from coroner offices and emergency departments in eight pilot governorates Al-Anbar, Baghdad, Basrah, Erbil, Kerbala, Maysan, Ninevah, and Al-Sulaimaniya. Table 2 lists the reporting sites by governorates for all sites contributed data every month during 2014-2015. Data from the facilities listed are presented in this Report.

Over the course of 2016-2017, the Injury Surveillance System gradually scaled up to include facilities in all 18 governorates of Iraq. Facilities in newly added governorates were trained on data collection and reporting beginning in June of 2013. Data from these facilities was included in the annual reports beginning in 2016-2017.

## 1.2 Goal and objectives of the system:

The following are the goals of the Iraqi Injury Surveillance System:

- Implement a national injury surveillance system that covers all Iraqi provinces.
- Describe the epidemiology of external injuries in Iraq in terms of the overall burden, geographic distribution, and temporal trends.
- Provide an evidence base to inform public health interventions for those injured, including pre-hospital care.
- Inform prevention activities aimed at minimizing the burden of external injuries.

## 1.3 Methodology of Injury Surveillance System:

### a. Injury Surveillance Case Definition

The case definition used by the Iraqi Injury Surveillance System includes all persons killed or injured as a result of an external injury, including both intentional and unintentional injuries. For non-fatal injuries a case is defined as the first visit to the emergency department for each person with external injury, regardless of the number of injuries. The injured person with the second (or subsequent) visit due to the same external cause of injury is not considered a case. External injury includes, but is not limited to, injuries resulting from the following mechanisms – road traffic crashes, falls, fires, electricity, drowning, poisonings, natural disasters, shooting, shelling, suicide bombings and terrorist attacks. Injuries resulting from landmines or explosive remnants of war (ERWs) are included. Sexual assaults and legal intervention (action by police) are excluded.

### b. Reporting Sites

The Injury Surveillance System includes both **fatal** and **non-fatal** injury surveillance.

**Fatal injuries** are reported by the central coroner offices or forensic institute in each health directorate. Each health directorate has one, and only one, facility that is responsible for examining injuries and issuing death certificates. Therefore the surveillance system ***aims to capture all fatal injuries*** in participating directorates. Fatal injury surveillance is exhaustive.

**Non-fatal injury** surveillance, by contrast, is **sentinel** surveillance. Within each directorate, there are 1-3 hospitals reporting. Sentinel hospitals are primarily large public, general hospitals serving both urban and rural populations. Non-fatal injury surveillance ***does not aim to capture all non-fatal injuries*** however it can provide useful information on trends, and relative burden of different types and mechanisms of injury.

### c. Data Collection

The data on injuries presenting to emergency room (ER) in the sentinel hospitals are collected by trained nurses using a standardized surveillance form. Information on demographics, cause, intent and place of injury as well as the mode of transport, pre-hospital care and patient disposition was obtained through patient interviews and review of ER medical cards. The data were entered at the ER statistical units in the hospitals and transmitted to the Directorates of Health (DOH). DOH conducted preliminary analysis and transmitted the data to the project focal point at the MOH for final analysis. DOH shared the results of preliminary analysis with the reporting hospitals and other stakeholders.

For fatal injuries, data are collected by coroners using a similar standardized surveillance form. Forensic observation, police reports and interviews with witnesses are used to complete the form. The data are entered at the coroner office and transmitted to the DOH. DOH conducted preliminary analysis and transmitted the data to the project focal point at the MOH for final analysis.

The surveillance form used in coroner offices and ERs was prepared in English with the support of experts from the WHO and CDC. The form has been translated into Arabic and Kurdish. Data is entered into an electronic form (developed using the Epi-Info software) by trained technicians. The current form is provided as Annex 1.

The following variables are collected on the form:

- Health Directorate and Reporting Site
- Demographic information
- Date and time of injury
- Date and time of arrival at ER or CO
- Mode of transport to health facility or CO
- Death certificate number (CO data only)
- Mechanism of Injury
- Intention
- Place of injury
- Pre-hospital care (for ER only)
- Patient disposition (for ER only)
- Additional modules: detailed information on circumstances of injuries resulting from mines and ordnance.

  The data are transferred to the project focal point at the Ministry of Health monthly (by e-mail as well as CD), where they are merged, consolidated, processed and sent to the CDC and the WHO for review.

**d. Data Quality and Completeness**

Designated focal points in ER and CO were trained to monitor the data collection process. These individuals are the first check to ensure accuracy and completeness of the data. They review the data daily before sending the forms for data entry.

Officials at the Operations Center of DOH and/or the MOH conducted monthly visits to monitor the process. During monthly visits, surveillance forms are compared to hospital and $CO^S$ records. An external auditing team from the MOH Scientific Committee also organizes field visits to review and verify the record in each reporting site.

The injury surveillance system is a unit in the Operations Center Department; which is part of Operations Center and Emergency Medicine Directorate in the MOH.

Additionally, the data quality is reviewed during analysis by colleagues at the WHO and CDC to comprehensively check for duplicates, missing data, consistency and face validity of the findings.

**e. Ethical Consideration**

The surveillance system has been approved by the MOH. Throughout all phases, the privacy of the injured persons is kept secure and confidential even when the records are transferred to the MOH. The injured persons are kept informed that all the information provided are for the improvement of the health services and will not be shared with any other legal or judicial entities and will not be used against them in any way.

Sexual assault is not documented in order to preserve the privacy of the patient in the conservative Iraqi society. Data derived from the forensic medicine departments are treated with full confidentiality while handling and all the forms are kept protected.

**f. Dissemination and Use for Public Health Action**

The focal point at the MOH, responsible for the surveillance system, develops the annual report with the assistance of the WHO and CDC. The report is delivered to Presidency of the Council of Ministers, National Security Council, and other MOH Directorates including the Public Health Directorate and Non-Communicable Disease Control and Prevention Section of the Primary Health Care Department.

The following Ministries receive a copy of the report: Defense, Interior, Traffic Affair, Civil Defense, the Center of Health and Professional Safety, Labour, Electricity, Oil, Planning, Education, and Industry. The annual report is also disseminated to nongovernmental organizations.

The National Committee for Injury Prevention will use the data published in the report to enhance and redirect their preventive and control measures accordingly.

## 2. Overview of Key Findings – Non Fatal Injury Surveillance

### 2. 1 Overall Number of injuries and victim by governorates, 2016-17

**Table (2); Number and Percent of Reported Non-Fatal Injuries by Governorates, 2016-2017**

| Governorates | 2016 | | 2017 | |
|---|---|---|---|---|
| | N | % | N | % |
| Anbar | | | 1662 | 1.90 |
| Babil | 2777 | 3.40 | 2,032 | 2.30 |
| Baghdad, Karkh | 1,424 | 1.70 | 8,886 | 10.00 |
| Baghdad/Rasafa | 6.180 | 7.50 | 3,859 | 4.30 |
| Basra | 7,543 | 9.10 | 6,123 | 6.90 |
| Diwaniyah | 1,897 | 2.30 | 2,846 | 3.20 |
| Dohuk | 440 | 0.50 | | |
| Dyalah | 5,384 | 6.50 | 5,517 | 6.20 |
| Erbil | 13,262 | 16.00 | 14,086 | 15.80 |
| Karbala | 3,065 | 3.70 | 2,058 | 2.30 |
| Kirkuk | 2,742 | 3.30 | 3,652 | 4.10 |
| Misan | 1,428 | 1.70 | 1,581 | 1.80 |
| Muthana | 1,415 | 1.70 | 1,546 | 1.70 |
| Najaf | 5,432 | 6.60 | 5,417 | 6.10 |
| Sulaimaniya | 10,820 | 13.10 | 6,721 | 7.50 |
| Thiqar | 16,244 | 19.60 | 20,311 | 22.80 |
| Wassit | 2,713 | 3.30 | 2,762 | 3.10 |
| Total | 82,766 | 100.00% | 89,059 | 100.00% |

The number of injuries reported overall increased from 82,766 in 2016 to 89,059 in 2017; however this increase due available data from Anbar governorates and to improvement in the surveillance system. The high percent collected from ThiQar followed by Erbil and Sulaimaniya.

**Table (3); Number and Percent of Female and Male among All Non-Fatal Injuries, 2016-2017**

| Gender | 2016 | | 2017 | |
|---|---|---|---|---|
| | N | % | N | % |
| **Female** | **20813** | **25.20** | **22924** | **25.70** |
| **Male** | **61915** | **74.80** | **66126** | **74.30** |
| **Unknown** | **13** | **0.00** | **3** | **0.00** |
| **Total** | **82741** | **100.00** | **89053** | **100.00** |

Table 3; Show the highest percent 75% were male in both years.

**Figure (1); Age Distribution of All Non-Fatal Injuries, 2016-2017**

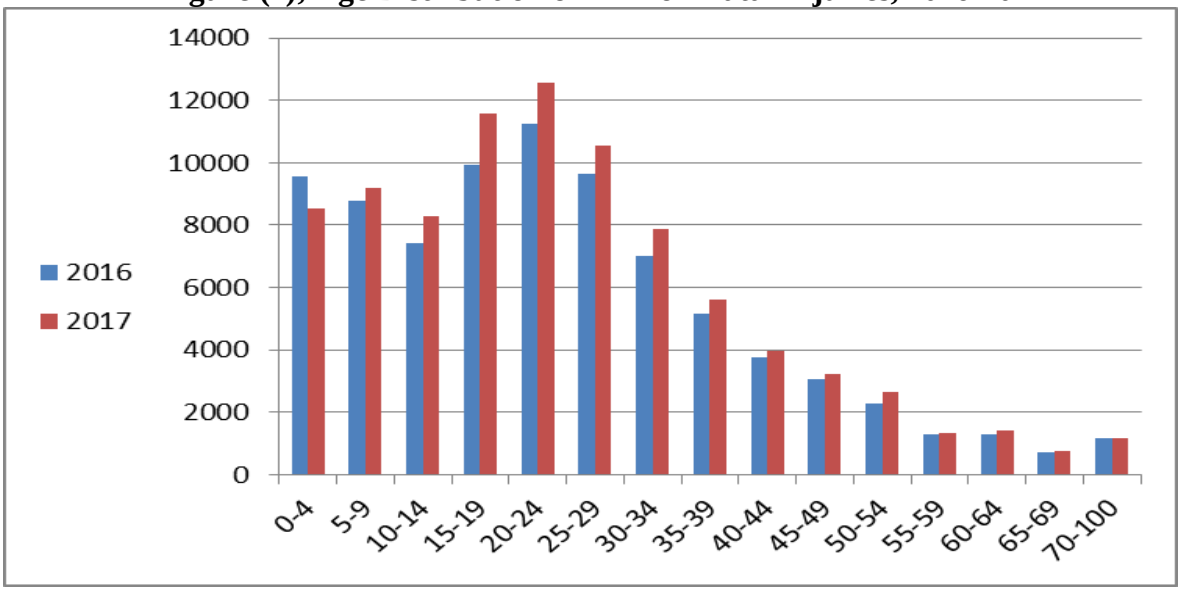



Figure1; shows the number of injuries within each five year age occurred in 2016-2017. The demographics of non-fatal injuries disproportionately affected males 15-29 years of age. There was also consistently high number of injuries in the youngest age groups (0-9 years).

**Figure (2); Show the Distribution of All Non-Fatal Injuries Occurred in the Health Directorates by Sex in 2016**

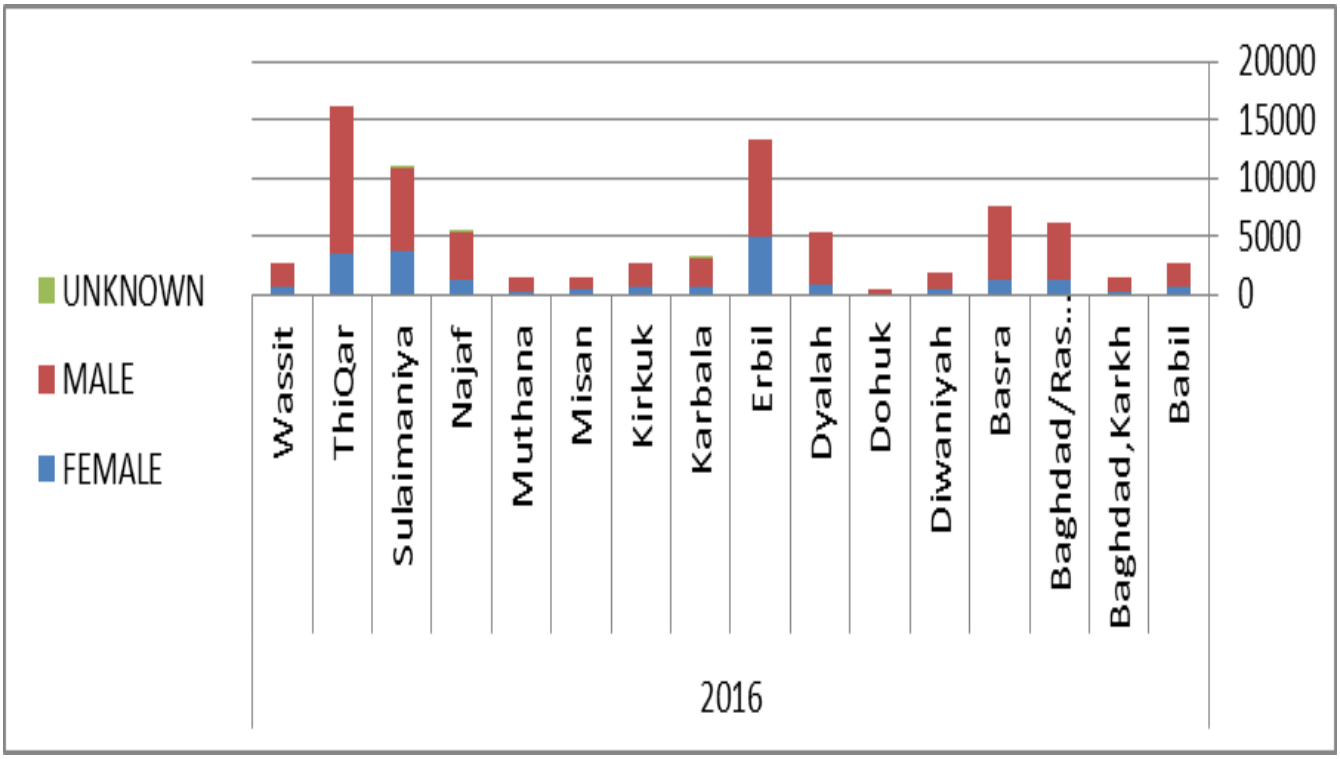



**Figure (3); Time Trend of All Non-Fatal Injuries in 2016 -2017**

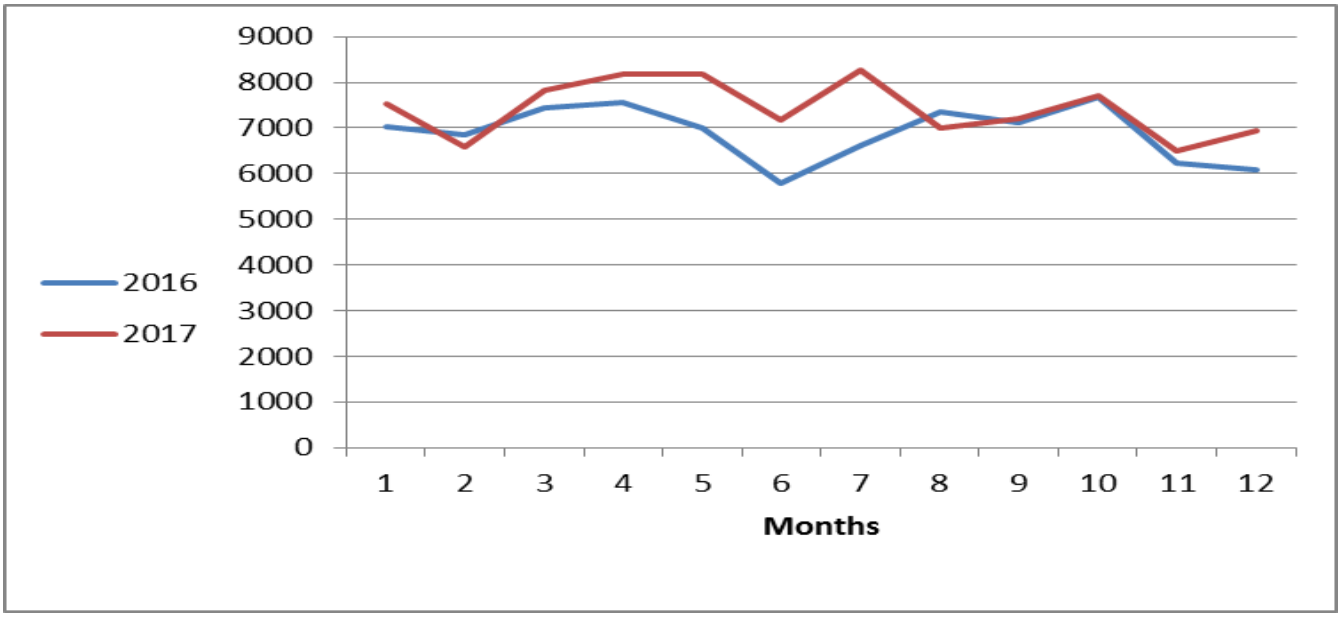


Figure 3.show the proportion of injuries recorded by months in 2016-2017. No consistent secular trends were identified for non-fatal injuries.

**Figure (4); Distribution of Non Fatal Injuries by Day in 2016-2017**

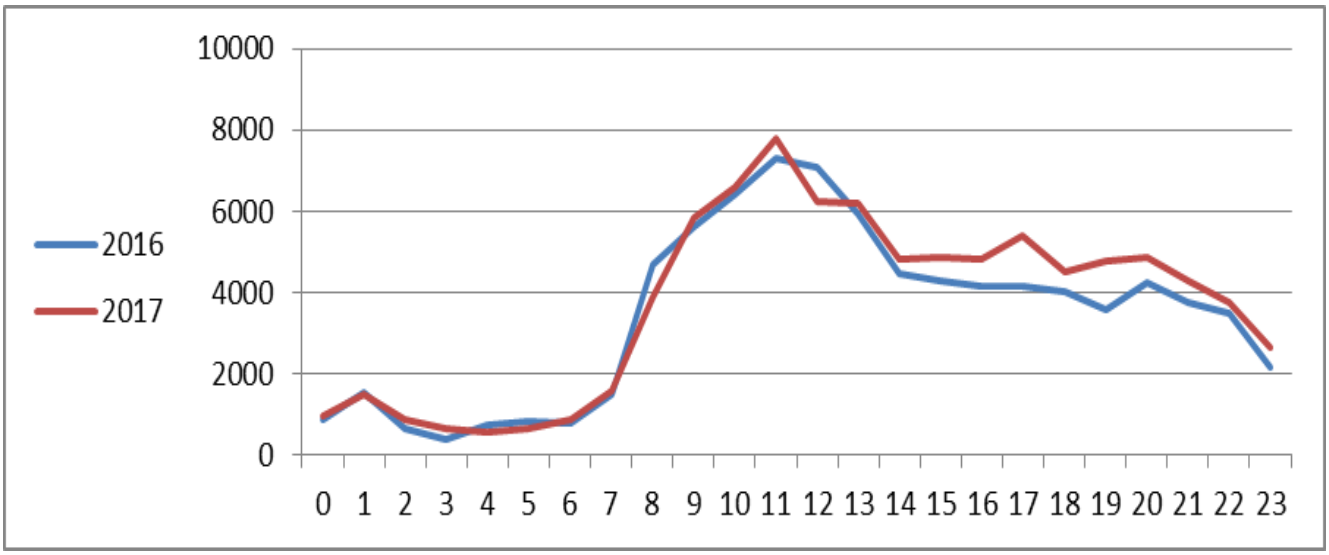



Figure (4); Shows the number of injuries by the time of injury. As reported, most injuries occurred during the day time (8am to 14pm) then decline gradually with time in both two years.

## 2.3 Distribution of Injuries by Intention

For the following analysis injuries are classified into six categories by intention— (1) unintentional – road traffic accidents, (2) intentional – insurgency related, (3) intentional – assault, (4) intentional – self-harm, (5) unintentional – other, and (6) unknown intention.

**Table (4); Percent of Injuries by Intention among All Non-Fatal Injuries, 2016-2017**

| Intentional Injuries | 2016 | | 2017 | |
|---|---|---|---|---|
| | No. | % | No. | % |
| Intentional – Assault | 5464 | 6.90 | 5526 | 6.40 |
| Intentional – Insurgency | 1964 | 2.50 | 1418 | 1.60 |
| Unintentional- Others | 50849 | 64.20 | 52744 | 60.80 |
| Intentional – Self-Harm | 1025 | 1.30 | 757 | 0.90 |
| Unintentional – Road Traffic Accidents | 19277 | 24.30 | 23571 | 27.20 |
| Unknown Intent | 684 | 0.90 | 2742 | 3.20 |
| Total | 79263 | 100.00% | 86758 | 100.00% |

Table (4); presents the number and percent of injuries by intention category in 2016-2017. Unintentional injuries cause the greatest proportion of non-fatal injuries, approximately two-thirds of all non-fatal injuries during two year. Traffic injuries are responsible for about 24.30% and 27.20% in 2016-2017 of all non-fatal injuries respectively. The proportion of injuries that were intentional remained below 10%. Low numbers of intentional injuries may be due in part to underreporting.

The proportion of intentional injuries from insurgency decreased between 2016 and 2017, while the proportion attributed to road traffic increased.

**Table (5); Number and Percent of Injuries by Intention among all Non-Fatal Injuries in 2016, Governorates**

| Governorates | Assaults | | Explosion Accidents | | Unintentional-Others | | Self-Harm | | Traffic Accidents | | Unknown Intent | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % | N | % | N | % |
| Babil | 19 | 0.3 | 5 | | 1092 | 2.1 | 30 | 2.9 | 27 | 0.1 | 0 | 0 | 1173 | 1.5 |
| Baghdad \ Karkh | 33 | 0.6 | 20 | 1 | 1198 | 2.4 | 1 | 0.1 | 124 | 0.6 | 1 | 0.1 | 1377 | 1.7 |
| Baghdad \ Rasafa | 264 | 4.8 | 200 | 10.2 | 4265 | 8.4 | 99 | 9.7 | 856 | 4.4 | 445 | 65.1 | 6129 | 7.7 |
| Basra | 93 | 1.7 | 25 | 1.3 | 5843 | 11.5 | 92 | 9 | 1467 | 7.6 | 0 | 0 | 7520 | 9.5 |
| Diwaniyah | 295 | 5.4 | 82 | 4.2 | 260 | 0.5 | 13 | 1.3 | 1242 | 6.4 | 0 | 0 | 1892 | 2.4 |
| Dohuk | 3 | 0.1 | 3 | 0.2 | 219 | 0.4 | 2 | 0.2 | 159 | 0.8 | 49 | 7.2 | 435 | 0.5 |
| Dyalah | 183 | 3.4 | 527 | 26.8 | 2886 | 5.7 | 2 | 0.2 | 1726 | 9 | 26 | 3.8 | 5350 | 6.8 |
| Erbil | 214 | 3.9 | 427 | 21.7 | 9523 | 18.7 | 157 | 15.3 | 2767 | 14.4 | 0 | 0 | 13088 | 16.5 |
| Karbala | 63 | 1.2 | 132 | 6.7 | 2329 | 4.6 | 55 | 5.4 | 399 | 2.1 | 80 | 11.7 | 3058 | 3.9 |
| Kirkuk | 346 | 6.3 | 344 | 17.5 | 938 | 1.8 | 15 | 1.5 | 1052 | 5.5 | 0 | 0 | 2695 | 3.4 |
| Misan | 10 | 0.2 | 0 | 0 | 1076 | 2.1 | 0 | 0 | 335 | 1.7 | 0 | 0 | 1421 | 1.8 |
| Muthana | 146 | 2.7 | 96 | 4.9 | 554 | 1.1 | 146 | 14.2 | 449 | 2.3 | 1 | 0.1 | 1392 | 1.8 |
| Najaf | 26 | 0.5 | 56 | 2.9 | 2859 | 5.6 | 212 | 20.7 | 1060 | 5.5 | 14 | 2 | 4227 | 5.3 |
| Sulaimaniya | 402 | 7.4 | 16 | 0.8 | 8665 | 17 | 37 | 3.6 | 1510 | 7.8 | 51 | 7.5 | 10681 | 13.5 |
| Thiqar | 2641 | 48.4 | 28 | 1.4 | 8357 | 16.4 | 137 | 13.4 | 4936 | 25.6 | 16 | 2.3 | 16115 | 20.3 |
| Wassit | 724 | 13.3 | 3 | 0.2 | 783 | 1.5 | 27 | 2.6 | 1167 | 6.1 | 1 | 0.1 | 2705 | 3.4 |
| Total | 5462 | 100 | 1964 | 100 | 50847 | 100 | 1025 | 100 | 19276 | 100 | 684 | 100 | 79258 | 100 |

Table (5); show the number and percent of injuries by intention among all non-fatal injuries in 2016, the unintentional other injuries represent the most common cause of injuries in all governorates, followed by the road traffic injuries with high percent in ThiQar 25.6 were recorded followed by Erbil 14.4% and Dyalah 9%.Regarding the assaults represent 6% from all injuries and about 50% were recorded from ThiQar governorate .26.8% from explosion injuries recorded in Dyalah.

**Table (6); Number and Percent of Injuries by Intention among all Non-Fatal Injuries, Governorates 2017**

| Governorates | Assaults | | Explosion Accidents | | Others | | Self-Harm | | Traffic Accidents | | Unknown Intent | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % | N | % | N | % |
| Anbar | 127 | 2.3 | 358 | 25.2 | 428 | 0.8 | 28 | 3.7 | 532 | 2.3 | 44 | 1.6 | 1517 | 1.7 |
| Babil | 15 | 0.3 | 2 | 0.1 | 720 | 1.4 | 17 | 2.2 | 19 | 0.1 | 0 | 0 | 773 | 0.9 |
| Baghdad\Karkh | 168 | 3 | 69 | 4.9 | 8049 | 15.3 | 27 | 3.6 | 65 | 0.3 | 0 | 0 | 8378 | 9.7 |
| Baghdad\Rasafa | 113 | 2 | 82 | 5.8 | 1761 | 3.3 | 68 | 9 | 334 | 1.4 | 1445 | 52.7 | 3803 | 4.4 |
| Basra | 93 | 1.7 | 0 | 0 | 4418 | 8.4 | 30 | 4 | 1368 | 5.8 | 203 | 7.4 | 6112 | 7 |
| Diwaniyah | 515 | 9.3 | 0 | 0 | 290 | 0.5 | 33 | 4.4 | 2002 | 8.5 | 5 | 0.2 | 2845 | 3.3 |
| Dyalah | 219 | 4 | 268 | 18.9 | 2498 | 4.7 | 1 | 0.1 | 2468 | 10.5 | 19 | 0.7 | 5473 | 6.3 |
| Erbil | 276 | 5 | 506 | 35.7 | 10612 | 20.1 | 160 | 21.1 | 2465 | 10.5 | 0 | 0 | 14019 | 16.2 |
| Karbala | 98 | 1.8 | 5 | 0.4 | 1367 | 2.6 | 91 | 12 | 483 | 2 | 6 | 0.2 | 2050 | 2.4 |
| Kirkuk | 410 | 7.4 | 37 | 2.6 | 1170 | 2.2 | 32 | 4.2 | 979 | 4.2 | 998 | 36.4 | 3626 | 4.2 |
| Misan | 0 | 0 | 0 | 0 | 1161 | 2.2 | 1 | 0.1 | 415 | 1.8 | 3 | 0.1 | 1580 | 1.8 |
| Muthana | 140 | 2.5 | 0 | 0 | 751 | 1.4 | 42 | 5.5 | 606 | 2.6 | 2 | 0.1 | 1541 | 1.8 |
| Najaf | 52 | 0.9 | 11 | 0.8 | 2142 | 4.1 | 12 | 1.6 | 3157 | 13.4 | 4 | 0.1 | 5378 | 6.2 |
| Sulaimaniya | 59 | 1.1 | 4 | 0.3 | 5847 | 11.1 | 9 | 1.2 | 789 | 3.3 | 0 | 0 | 6708 | 7.7 |
| Thiqar | 2823 | 51.1 | 76 | 5.4 | 10735 | 20.4 | 183 | 24.2 | 6372 | 27 | 12 | 0.4 | 20201 | 23.3 |
| Wassit | 418 | 7.6 | 0 | 0 | 794 | 1.5 | 23 | 3 | 1517 | 6.4 | 1 | 0 | 2753 | 3.2 |
| Total | 5526 | 100 | 1418 | 100 | 52743 | 100 | 757 | 100 | 23571 | 100 | 2742 | 100 | 86757 | 100 |

Table (6); show the number and percent of all non-fatal injuries reported in 2017 in governorates according to intention. Unintentional injuries represent about two third of non-fatal injuries. 35.7% of injuries reported in Erbil insurgency related followed Dyalah18.9%. Road traffic injuries more common in ThiQar, Diwaniyah, Dyalah and Muthana

**Table (7); Proportion of Sex among all Non-Fatal Injuries by Intent, 2016**

| Non-Fatal Injuries by Intent | 2016 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Female | | Male | | Unknown | | Total | |
| | N | % | N | % | N | % | N | % |
| Assaults | 870 | 4.3 | 4594 | 7.8 | 0 | 0 | 5464 | 6.9 |
| Explosion Accidents | 176 | 0.9 | 1787 | 3 | 0 | 0 | 1963 | 2.5 |
| Unintentional-Others | 15618 | 77.4 | 35211 | 59.6 | 12 | 92.3 | 50841 | 64.2 |
| Self Harm | 352 | 1.7 | 673 | 1.1 | 0 | 0 | 1025 | 1.3 |
| Traffic Accidents | 3040 | 15.1 | 16232 | 27.5 | 1 | 7.7 | 19273 | 24.3 |
| Unknown Intent | 110 | 0.5 | 574 | 1 | 0 | 0 | 684 | 0.9 |
| Total | 20166 | 100% | 59071 | 100% | 13 | 100% | 79250 | 100% |

Table (7); present the distribution of sex according to intention in 2016-2017 about 74% of all reported injuries were males .The road traffic injuries represent the main cause of injuries followed the insurgency related injuries .

**Table (8); Proportion of Sex among all Non-Fatal Injuries by intention, 2017**

| Non-Fatal Injuries by Intention | 2017 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Female | | Male | | Unknown | | Total | |
| | N | % | N | % | N | % | N | % |
| Assaults | 901 | 4 | 4625 | 7.2 | 0 | 0 | 5526 | 6.4 |
| Explosion Accidents | 245 | 1.1 | 1173 | 1.8 | 0 | 0 | 1418 | 1.6 |
| Unintentional-Others | 16825 | 74.8 | 35916 | 55.9 | 3 | 100 | 52744 | 60.8 |
| Self-Harm | 296 | 1.3 | 461 | 0.7 | 0 | 0 | 757 | 0.9 |
| Traffic Accidents | 3780 | 16.8 | 19791 | 30.8 | 0 | 0 | 23571 | 27.2 |
| Unknown Intent | 442 | 2 | 2300 | 3.6 | 0 | 0 | 2742 | 3.2 |
| Total | 22489 | 100 | 64266 | 100 | 3 | 100 | 86758 | 100 |

## 2.4 Distribution of Injury by Mechanism

The following section presented injuries by the mechanism of injuries. The mechanism of injuries reflects the primary cause of injuries as classified by a health care provider (for non-fatal injuries).

**Table (9). Number and Percent of Injuries by Mechanism among all Non-Fatal Injuries, 2016-2017**

| Mechanism | 2016 | | 2017 | |
|---|---|---|---|---|
| | N | % | N | % |
| Falls | 23076 | 29.30 | 21304 | 25.00 |
| Traffic Accidents | 19276 | 24.50 | 23562 | 27.70 |
| Sharp Objects | 14394 | 18.30 | 15228 | 17.90 |
| Blunt Objects | 9304 | 11.80 | 13106 | 15.40 |
| Burns | 2746 | 3.50 | 2389 | 2.80 |
| Insurgency | 2208 | 2.80 | 1529 | 1.80 |
| Animal bite | 2998 | 3.80 | 3365 | 4.00 |
| Poisoning | 1980 | 2.50 | 1851 | 2.20 |
| Gun fire not insurgency | 890 | 1.10 | 973 | 1.10 |
| Other | 277 | 0.40 | 241 | 0.30 |
| Suffocation | 399 | 0.50 | 599 | 0.70 |
| Electric injury | 897 | 1.10 | 692 | 0.80 |
| Unknown | 204 | 0.30 | 181 | 0.20 |
| Drowning | 61 | 0.10 | 72 | 0.10 |
| Total | 78710 | 100.00% | 85092 | 100.00% |

**Figure (5); Number and Percent of Injuries by Mechanism among all Non-Fatal Injuries, 2016-2017**

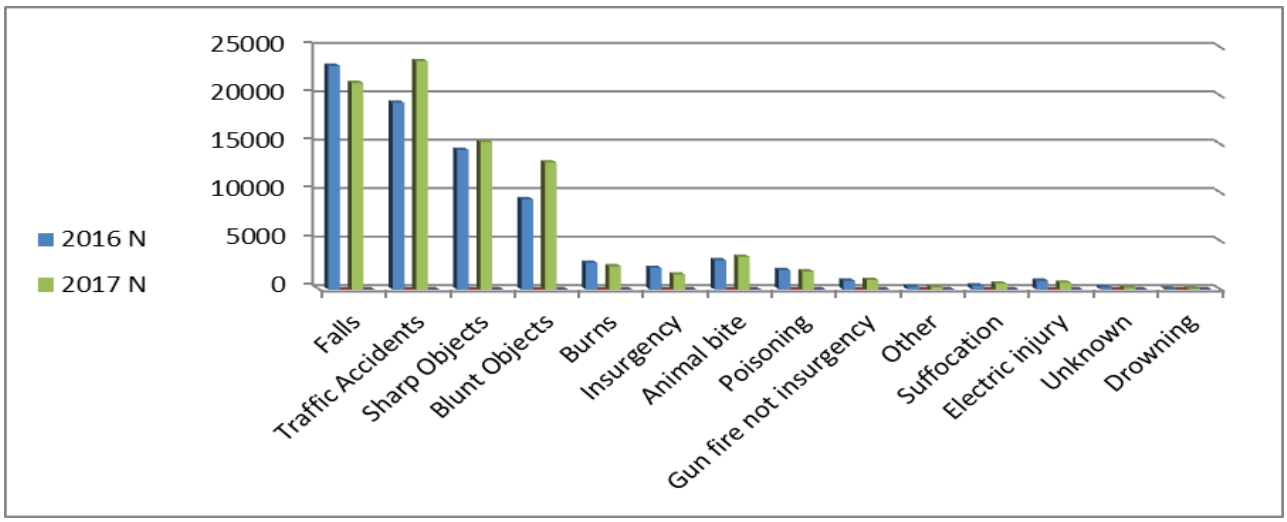


Table 9 and figure 5 show the mechanism of all non fatal injuries 2016-2017, the main cause was fall 29.3% followed by traffic accidents 24.5%,sharp and blunt objectives 18.3 and 11% respectively.

**Table (10); Percent of Injuries by Mechanism among Non-Fatal Unintentional-Traffic Injuries, 2016-2017**

| Traffic Injuries | 2016 | 2017 | Total |
|---|---|---|---|
| Car | 13216 | 15869 | 29085 |
| Motorcycle | 4704 | 5891 | 10595 |
| Bicycle | 1085 | 1166 | 2251 |
| Pedestrian | 2779 | 3312 | 6091 |
| Others | 196 | 151 | 347 |
| Unknown | 22 | 5 | 27 |
| Total | 22002 | 26394 | 48396 |

**Figure (6); Percent of Injuries by Mechanism among Non-Fatal Unintentional-Traffic Injuries, 2016-2017**

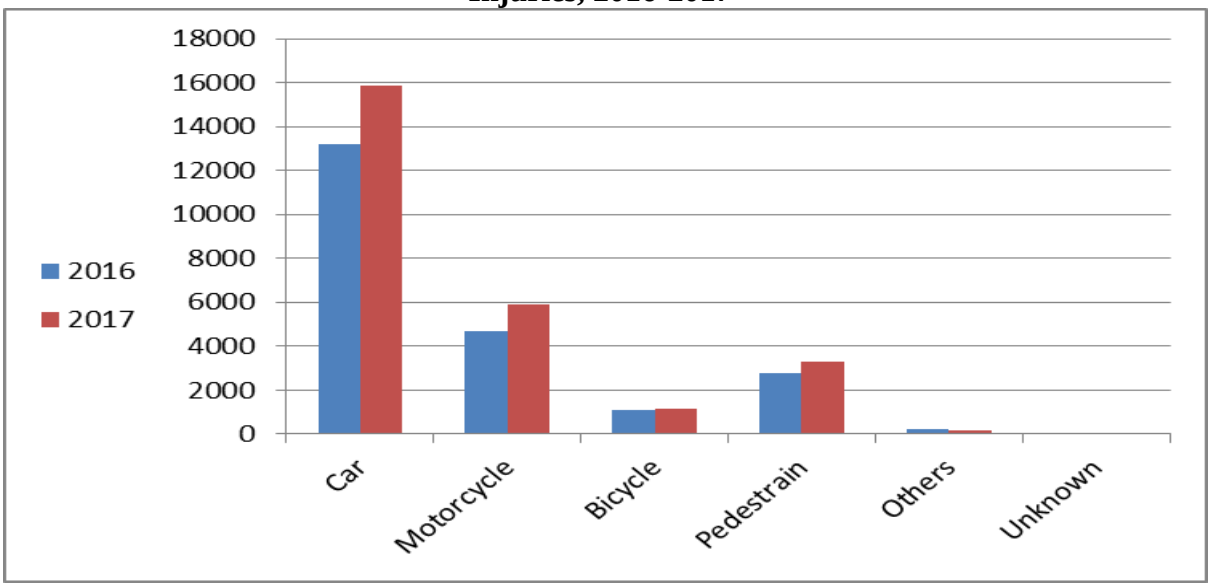



Table (10); and figure ( 6); present the mechanism of injuries for non-fatal traffic related injuries during 2016 -2017 Among traffic related injuries, the two third of victims were in car. About one third of victims were on motorcycles. Injuries among, bicyclists, pedestrian constitute about one fifth of road traffic injuries.

## 2.5 Mass Injury Events

**Table (11); Percent of Injuries Resulting from a Mass Injury Event among all Non-Fatal Injuries, 2016-2017**

| | 2016 | | 2017 | |
|---|---|---|---|---|
| | N | % | N | % |
| No | 78312 | 94.80 | 83236 | 93.50 |
| Yes | 4208 | 5.10 | 5700 | 6.40 |
| Unknown | 52 | 0.10 | 40 | 0.00 |
| Total | 82572 | 100% | 88976 | 100% |

**Figure (7); Percent of Injuries Resulting from a Mass Injury Event among all Non-Fatal Injuries, 2016-2017**

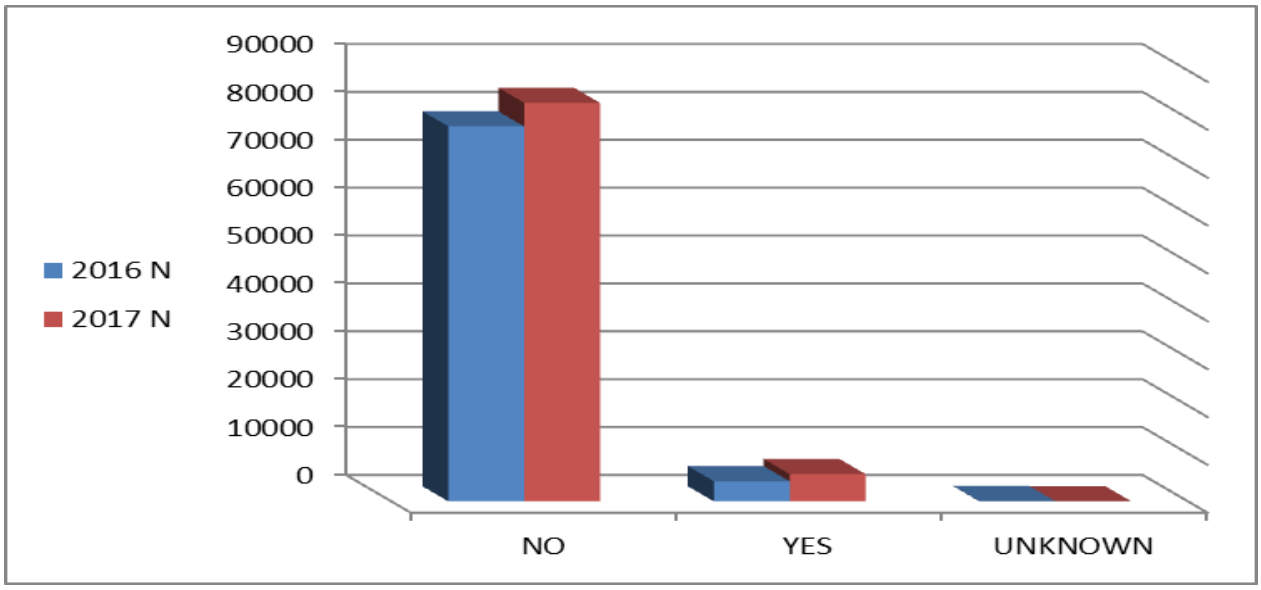
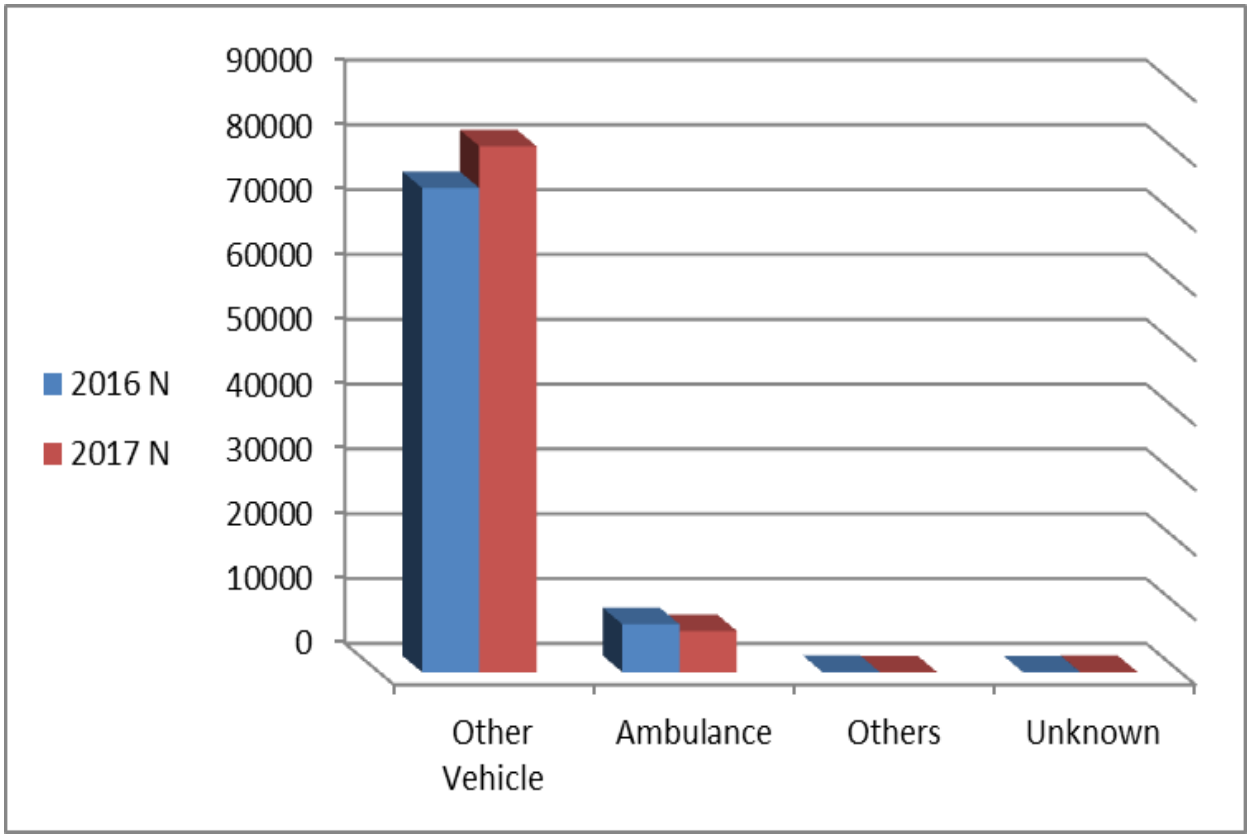



Table (11); and figure (7); shows the proportion of injuries resulting from a mass casualty event among all injuries, by intention. Mass injury event is defined as an event that caused five or more injuries. About 5% of injuries overall resulted from mass casualty events.

**Table (12); Show Mode of Arrival among All Non-Fatal Injuries, 2016 -2017**

| Mode of Arrival | 2016 | | 2017 | |
|---|---|---|---|---|
| | N | % | N | % |
| Other Vehicle | 74712 | 91.00 | 81152 | 92.70 |
| Ambulance | 7394 | 9.00 | 6361 | 7.30 |
| Others | 15 | 0.00 | 6 | 0.00 |
| Unknown | 11 | 0.00 | 27 | 0.00 |
| Total | 82132 | 100.00 | 87546 | 100.00 |

**Figure (8); show Mode of Arrival among All Non-Fatal Injuries, 2016 -2017**



## 2.6 Place of Injury

**Table (13); Percent of Injuries by Place among all Non-Fatal Injuries, 2016-2017**

| Place | 2016 | | 2017 | |
|---|---|---|---|---|
| Place Of Occurrence | N | % | N | % |
| Farm and countryside | 1391 | 1.70 | 1510 | 1.70 |
| Home | 38283 | 46.40 | 37950 | 42.60 |
| Market | 222 | 0.30 | 223 | 0.30 |
| Others | 571 | 0.70 | 372 | 0.40 |
| Public gathering | 1709 | 2.10 | 1650 | 1.90 |
| Street/high way/road | 31760 | 38.50 | 40357 | 45.30 |
| Unknown | 120 | 0.10 | 19 | 0.00 |
| Workplace | 8466 | 10.30 | 6961 | 7.80 |
| Total | 82522 | 100.00 | 89042 | 100.00 |

**Figure (9); Percent of Injuries by Place among all Non-Fatal Injuries, 2016-2017**

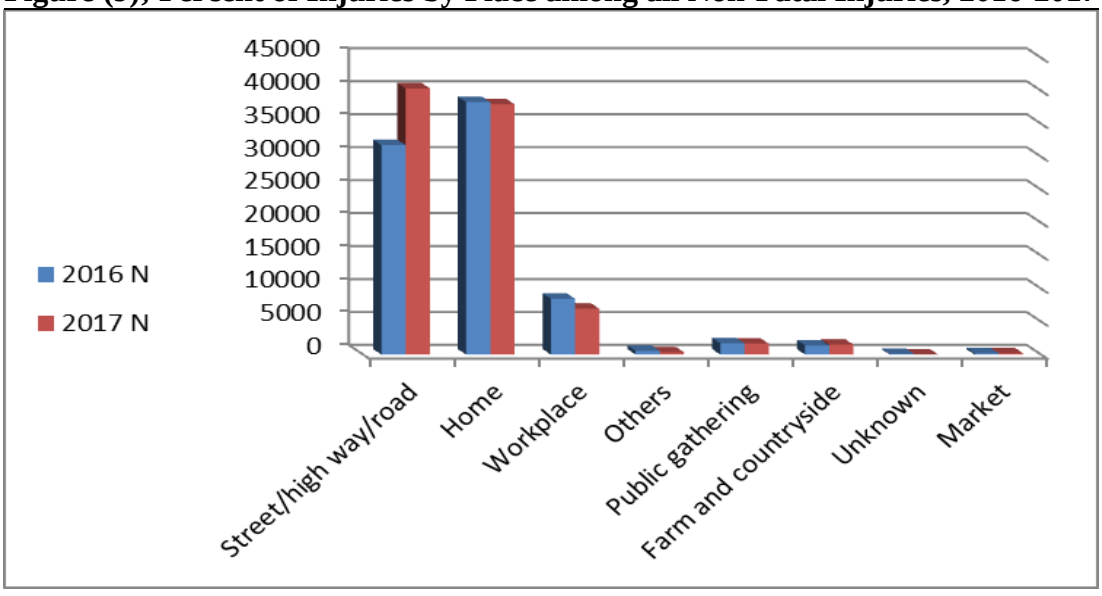



Table (13); and figure (9); present the proportion of injuries by place where the injuries occurred in 2016-2017. Nearly half of the injuries occurred at home and more than third occurred on highways or streets in 2016. While in 2017 45% occurred in street /high way and 42% at home .The third most common location of injury was the workplace.

## 2.7 Pre-hospital Care and Disposition

**Table (14); shows the Pre-Hospital Care Received, 2016-2017**

| | 2016 | | | | | | | | 2017 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No | | Unknown | | Yes | | Total | | No | | Unknown | | Yes | | Total | |
| | N | % | N | % | N | % | N | % | N | % | N | % | N | % | N | % |
| Assaults | 4056 | 6.4 | 1 | 3.3 | 1401 | 9 | 5458 | 6.9 | 4493 | 6.1 | 7 | 9 | 1017 | 7.6 | 5517 | 6.4 |
| Explosion Accidents | 1020 | 1.6 | 1 | 3.3 | 938 | 6.1 | 1959 | 2.5 | 762 | 1 | 27 | 34.6 | 628 | 4.7 | 1417 | 1.6 |
| Others | 43030 | 67.6 | 12 | 40 | 7726 | 49.9 | 50768 | 64.1 | 47283 | 64.6 | 14 | 17.9 | 5368 | 40.3 | 52665 | 60.8 |
| Self Harm | 811 | 1.3 | 1 | 3.3 | 211 | 1.4 | 1023 | 1.3 | 583 | 0.8 | 0 | 0 | 168 | 1.3 | 751 | 0.9 |
| Traffic Accidents | 14074 | 22.1 | 10 | 33.3 | 5168 | 33.4 | 19252 | 24.3 | 18357 | 25.1 | 23 | 29.5 | 5137 | 38.6 | 23517 | 27.2 |
| Unknown Intent | 633 | 1 | 5 | 16.7 | 43 | 0.3 | 681 | 0.9 | 1712 | 2.3 | 7 | 9 | 1007 | 7.6 | 2726 | 3.1 |
| Total | 63624 | 100 | 30 | 100 | 15487 | 100 | 79141 | 100 | 73190 | 100 | 78 | 100 | 13325 | 100 | 86593 | 100 |

**Figure (10); Percent of Injuries Receiving pre-Hospital Care among all non-Fatal Injuries 2016**

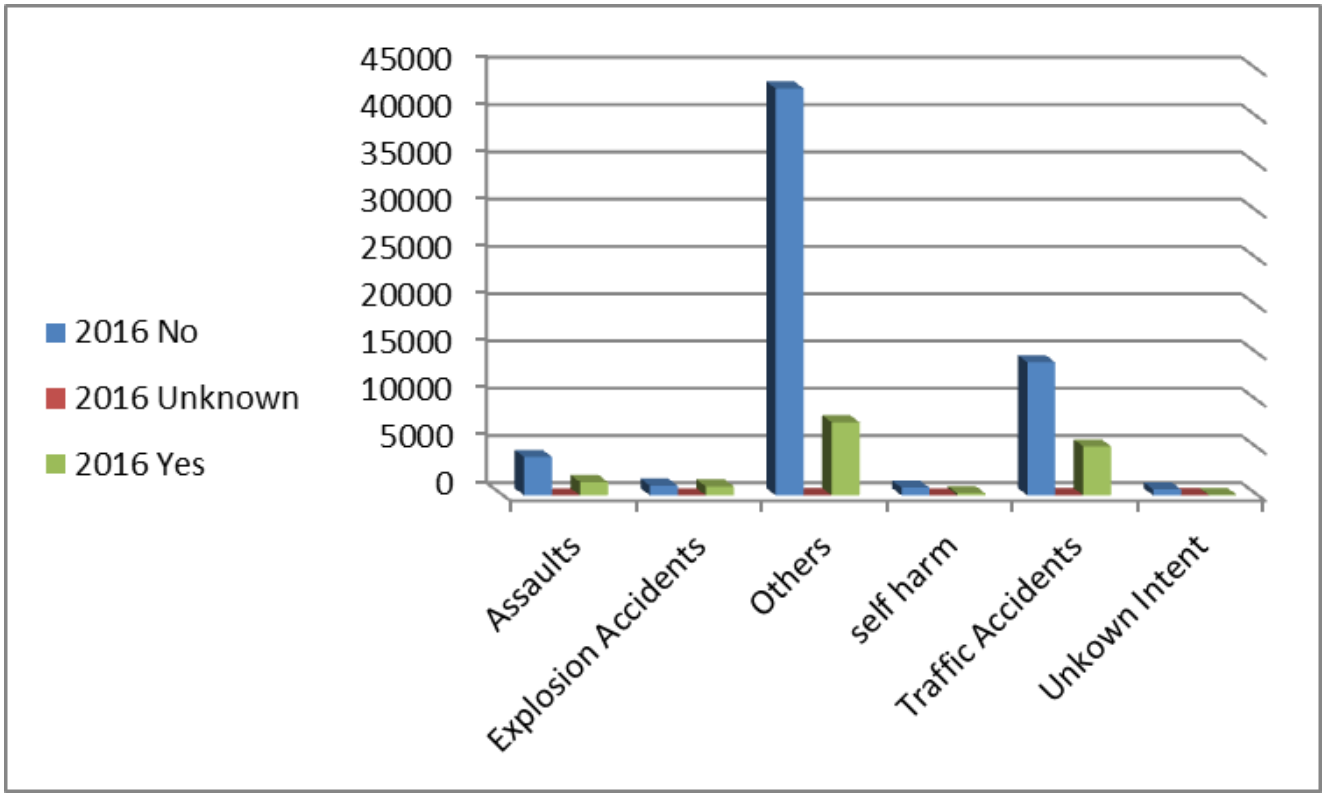


**Figure (11); Percent of injuries Receiving Pre-Hospital Care among all Non-Fatal Injuries 2017**

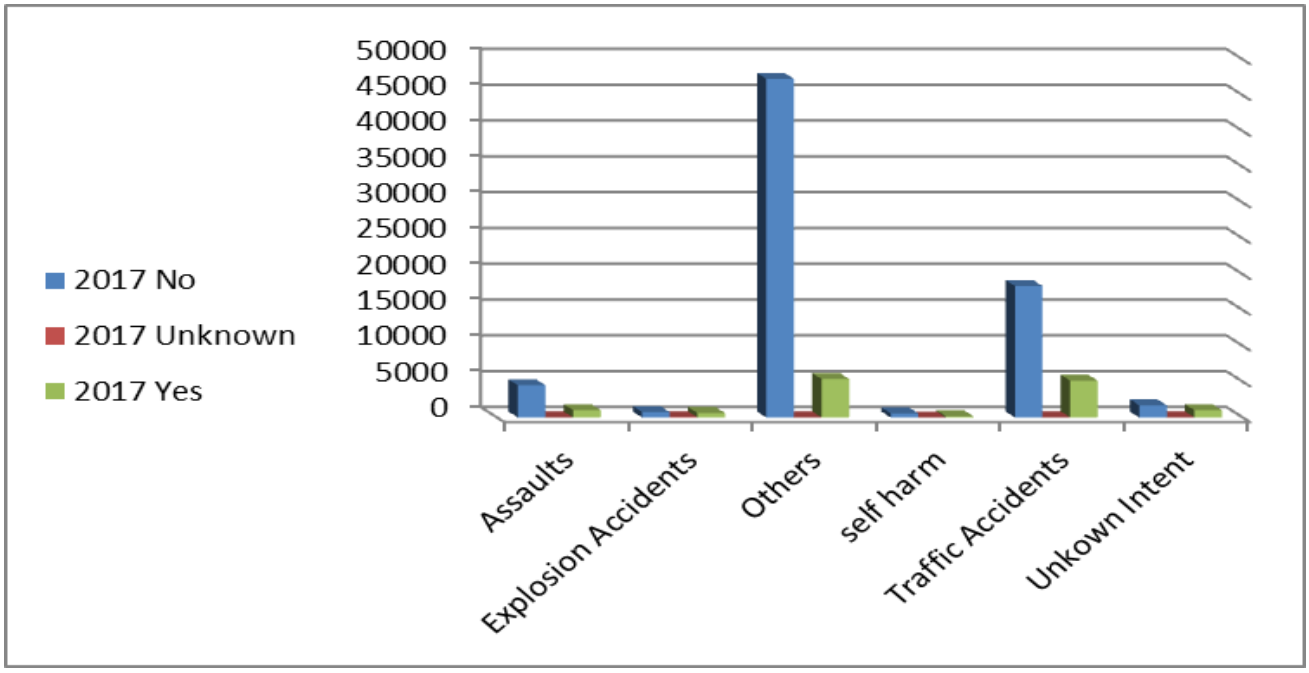



Table (14); and figure (10-11); presents data on the pre-hospital care received by victims presenting at the ER in 2016-2017. About 19% and 15% of all non-fatal injuries received pre-medical care in 2016-2017 respectively and the most cases received care reported from unintentional other injuries

**Table (15), Number and Percent of Initial Predisposition among all Non-Fatal Injuries, 2016-2017**

| | 2016 | | 2017 | |
|---|---|---|---|---|
| | N | % | N | % |
| **Admitted to the hospital** | **20053** | **24.30** | **21828** | **24.5** |
| **Dead on arrival** | **507** | **0.60** | **372** | **0.40** |
| **Died in emergency department** | **101** | **0.10** | **58** | **0.10** |
| **Discharged against medical advice** | **2204** | **2.70** | **3931** | **4.40** |
| **Transferred to other facility** | **589** | **0.70** | **481** | **0.50** |
| **Treated and sent home** | **57206** | **69.40** | **60991** | **6805** |
| **Other** | **688** | **0.80** | **322** | **0.40** |
| **Unknown** | **1092** | **1.30** | **1058** | **1.20** |
| **Total** | **82440** | **100%** | **89041** | **100%** |

Table (15); shows the majority of injuries were treated and discharged (69%). Percentage of patients who were admitted into the hospital, , or left against medical advice, increase from 27% in 2016 to 28% in 2017. Less than 1% of all injuries was dead on arrival or died within the emergency room

**Table (16); Percent of Injuries Arriving at the Hospital in an Ambulance among all Non-Fatal Injuries 2016, by Governorates**

| Governorates | Ambulance | | Other Vehicle | | Others | | Unknown | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % |
| Anbar | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Babil | 461 | 6.2 | 1727 | 2.3 | 4 | 26.7 | 0 | 0 | 2192 | 2.7 |
| Baghdad \ Karkh | 41 | 0.6 | 1375 | 1.8 | 0 | 0 | 0 | 0 | 1416 | 1.7 |
| Baghdad \ Rasafa | 141 | 1.9 | 6036 | 8.1 | 3 | 20 | 0 | 0 | 6180 | 7.5 |
| Basra | 176 | 2.4 | 7366 | 9.9 | 1 | 6.7 | 0 | 0 | 7543 | 9.2 |
| Diwaniyah | 724 | 9.8 | 1172 | 1.6 | 0 | 0 | 0 | 0 | 1896 | 2.3 |
| Dohuk | 77 | 1 | 363 | 0.5 | 0 | 0 | 0 | 0 | 440 | 0.5 |
| Dyalah | 644 | 8.7 | 4740 | 6.3 | 0 | 0 | 0 | 0 | 5384 | 6.6 |
| Erbil | 354 | 4.8 | 12908 | 17.3 | 0 | 0 | 0 | 0 | 13262 | 16.1 |
| Karbala | 242 | 3.3 | 2811 | 3.8 | 1 | 6.7 | 10 | 90.9 | 3064 | 3.7 |
| Kirkuk | 200 | 2.7 | 2540 | 3.4 | 0 | 0 | 0 | 0 | 2740 | 3.3 |
| Misan | 40 | 0.5 | 1383 | 1.9 | 1 | 6.7 | 0 | 0 | 1424 | 1.7 |
| Muthana | 225 | 3 | 1186 | 1.6 | 4 | 26.7 | 0 | 0 | 1415 | 1.7 |
| Najaf | 1219 | 16.5 | 4212 | 5.6 | 1 | 6.7 | 0 | 0 | 5432 | 6.6 |
| Sulaimaniya | 596 | 8.1 | 10187 | 13.6 | 0 | 0 | 1 | 9.1 | 10784 | 13.1 |
| Thiqar | 1799 | 24.3 | 14443 | 19.3 | 0 | 0 | 0 | 0 | 16242 | 19.8 |
| Wassit | 454 | 6.1 | 2259 | 3 | 0 | 0 | 0 | 0 | 2713 | 3.3 |
| Total | 7393 | 100% | 74708 | 100% | 15 | 100% | 11 | 100% | 82127 | 100% |

**Table (17); Percent of Injuries Arriving at the Hospital in an Ambulance among all Non-Fatal Injuries 2017, by Governorates**

| Governorates | Ambulance | | Other Vehicle | | Others | | Unknown | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % |
| Anbar | 171 | 2.7 | 1472 | 1.8 | 0 | 0 | 19 | 70.4 | 1662 | 1.9 |
| Babil | 238 | 3.7 | 1201 | 1.5 | 0 | 0 | 3 | 11.1 | 1442 | 1.6 |
| Baghdad \ Karkh | 235 | 3.7 | 7732 | 9.5 | 0 | 0 | 0 | 0 | 7967 | 9.1 |
| Baghdad \ Rasafa | 75 | 1.2 | 3780 | 4.7 | 2 | 33.3 | 2 | 7.4 | 3859 | 4.4 |
| Basra | 146 | 2.3 | 5977 | 7.4 | 0 | 0 | 0 | 0 | 6123 | 7 |
| Diwaniyah | 1056 | 16.6 | 1789 | 2.2 | 1 | 16.7 | 0 | 0 | 2846 | 3.3 |
| Dohuk | | | | | | | | | | |
| Dyalah | 776 | 12.2 | 4741 | 5.8 | 0 | 0 | 0 | 0 | 5517 | 6.3 |
| Erbil | 585 | 9.2 | 13501 | 16.6 | 0 | 0 | 0 | 0 | 14086 | 16.1 |
| Karbala | 101 | 1.6 | 1956 | 2.4 | 0 | 0 | 1 | 3.7 | 2058 | 2.4 |
| Kirkuk | 89 | 1.4 | 3560 | 4.4 | 1 | 16.7 | 2 | 7.4 | 3652 | 4.2 |
| Misan | 28 | 0.4 | 1553 | 1.9 | 0 | 0 | 0 | 0 | 1581 | 1.8 |
| Muthana | 242 | 3.8 | 1304 | 1.6 | 0 | 0 | 0 | 0 | 1546 | 1.8 |
| Najaf | 5 | 0.1 | 5412 | 6.7 | 0 | 0 | 0 | 0 | 5417 | 6.2 |
| Sulaimaniya | 81 | 1.3 | 6635 | 8.2 | 0 | 0 | 0 | 0 | 6716 | 7.7 |
| Thiqar | 1991 | 31.3 | 18319 | 22.6 | 1 | 16.7 | 0 | 0 | 20311 | 23.2 |
| Wassit | 542 | 8.5 | 2219 | 2.7 | 1 | 16.7 | 0 | 0 | 2762 | 3.2 |
| Total | 6361 | 100 | 81151 | 100 | 6 | 100 | 27 | 100 | 87545 | 100 |

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# 3. Overview of Key Findings – Fatal Injury Surveillance

## 3.1 Overall Number of Injuries

**Table (18); Number and Percent of Fatal Injuries by Governorates, 2016-2017**

| Governorates | 2016 | | 2017 | |
|---|---|---|---|---|
| | N | % | N | % |
| Anbar | 0 | 0.00% | 1116 | 8.80% |
| Babil | 1014 | 8.90% | 842 | 6.70% |
| FMD/Baghdad | 2984 | 26.20% | 3460 | 27.40% |
| Basra | 356 | 3.10% | 458 | 3.60% |
| Diwaniyah | 455 | 4.00% | 472 | 3.70% |
| Dohuk | 180 | 1.60% | | |
| Dyalah | 568 | 5.00% | 584 | 4.60% |
| Erbil | 1041 | 9.10% | 865 | 6.80% |
| Karbala | 421 | 3.70% | 368 | 2.90% |
| Kirkuk | 1253 | 11.00% | 928 | 7.30% |
| Misan | 359 | 3.20% | 434 | 3.40% |
| Muthana | 365 | 3.20% | 359 | 2.80% |
| Najaf | 531 | 4.70% | 643 | 5.10% |
| Sulaimaniya | 565 | 5.00% | 605 | 4.80% |
| Thiqar | 813 | 7.10% | 964 | 7.60% |
| Wassit | 490 | 4.30% | 538 | 4.30% |
| Total | 11395 | 100.00% | 12636 | 100.00% |

Table (18); presents the number and proportion of injuries by governorate for 2016 to 2017. The total number of injuries reported was relatively consistent during the two years with relatively increased in 2017 (range 11395-12636). More than 20% of injuries occurred in Baghdad (range 26.2-27.4%). These numbers are proportions, not rates, and do not account for the differences in total population by governorate.

**Figure (12); Age Distribution of all Injuries, 2016-2017**

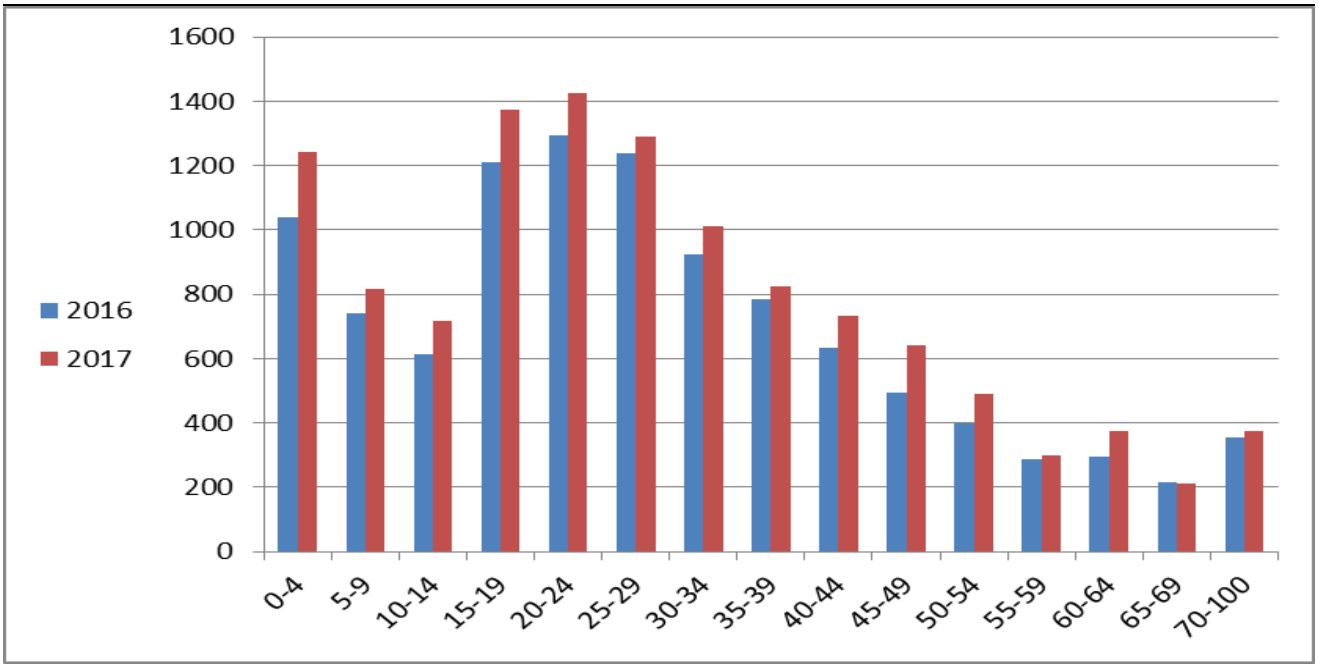



Figure (12) ; show the age distribution of fatal injuries during 2016-2017 the most common age group affected was 15-29 also there is important reported deaths related to 0-4 age group.

**Figure (13); Age and Sex Distribution of all Fatal Injuries, 2016-2017**

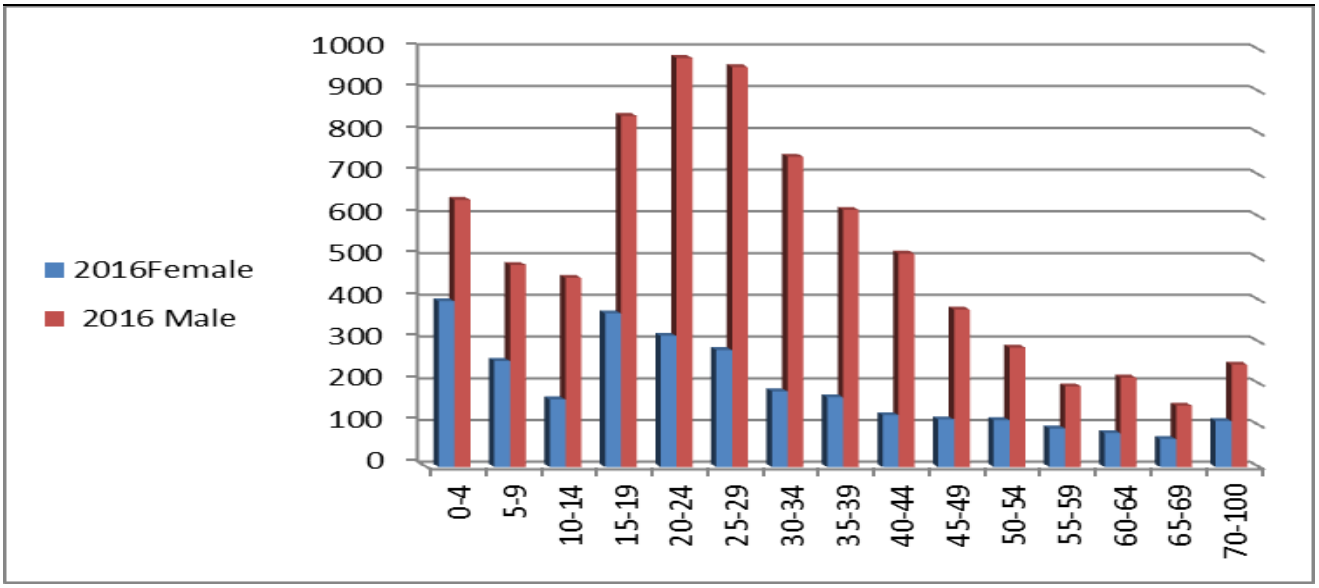


Figure (13); shows the number of fatal injuries by sex and age within each five year age cohort in 2016-2017. As with non-fatal injuries, males represented a greater proportion of injuries in every age cohort. Injuries disproportionately affected males 15-39 years of age. Similar to previous years, there were also a high number of injuries in the youngest age groups (0-9 years).

## 2.2 Time Trends, 2016

**Figure (14); Percent of Injuries Per Month among all Fatal Injuries by Intent, 2016**

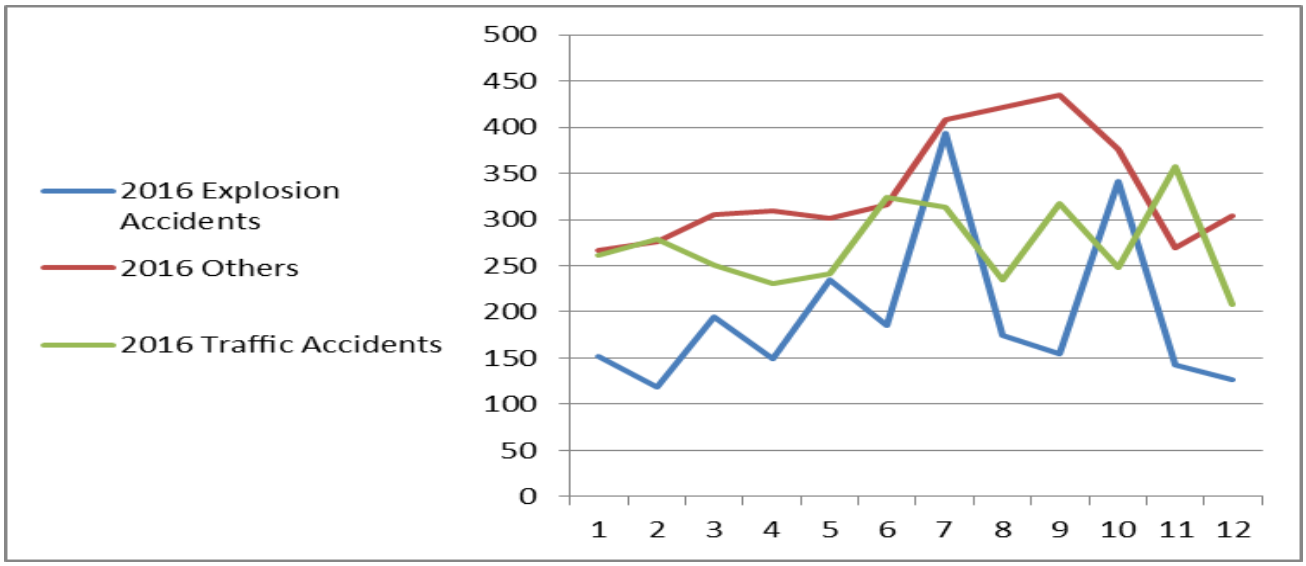



Figure 14 show the number of deaths in 2016 according to intent by months. The explosion accidents had two peak in July and October, road traffic decrease in September and October.

**Figure (15); Percent of Injuries per Month among all Fatal Injuries by Mechanism, 2017**

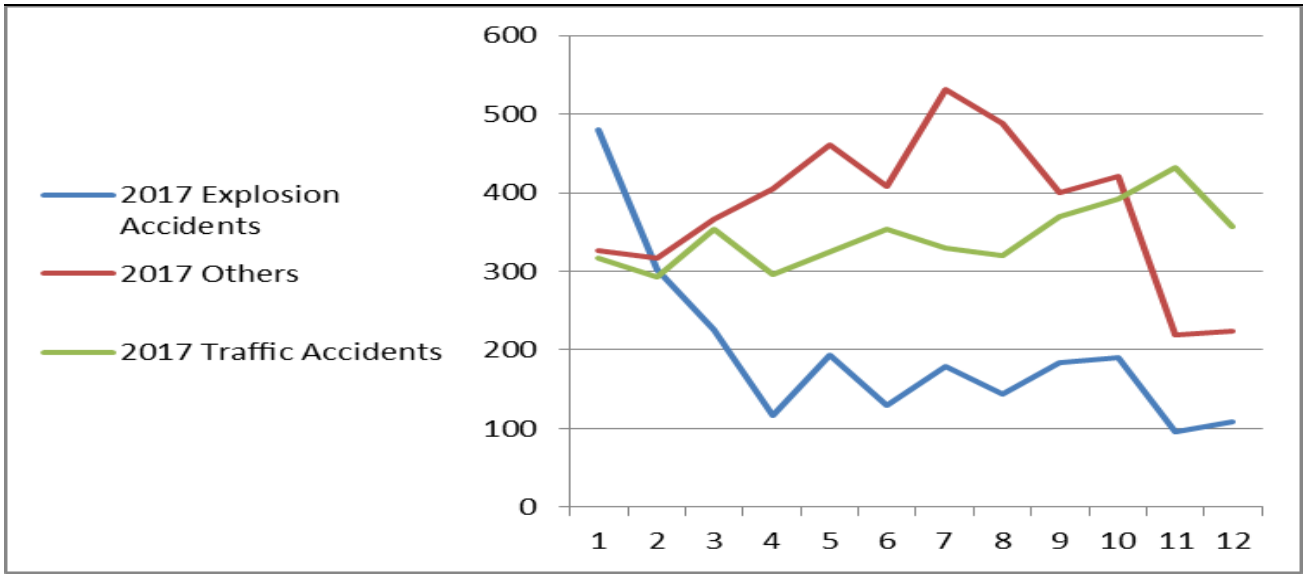


Figure 15 show the percent of fatal injuries per momths in 2017. The road traffic accidents was increase during this year ,while the the explosion injuries were sharply decrease from march to end of year .

**Figure (16); Percent of Injuries per Month among all Fatal Injuries by Months, 2016-2017**

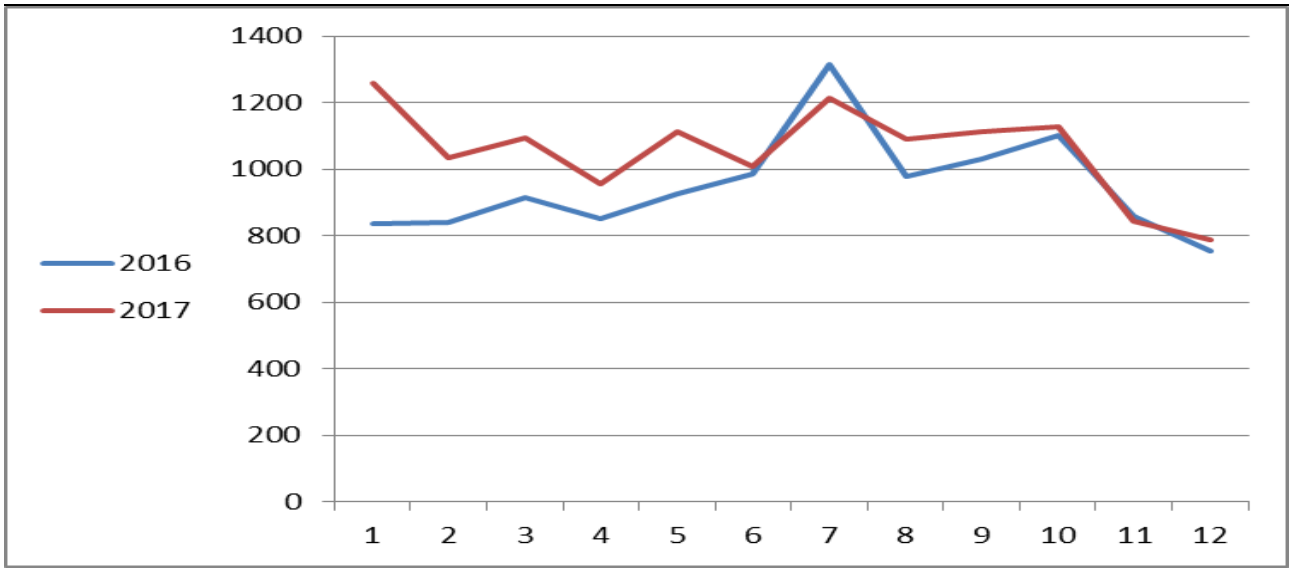



Figure 16 show the number of fatal injuries by month in 2016-2017 the highest number of deaths was in July and then decrease in the end of both years .

**Figure (17); Number Injuries per Day among all Fatal Injuries by Time, 2016-17**

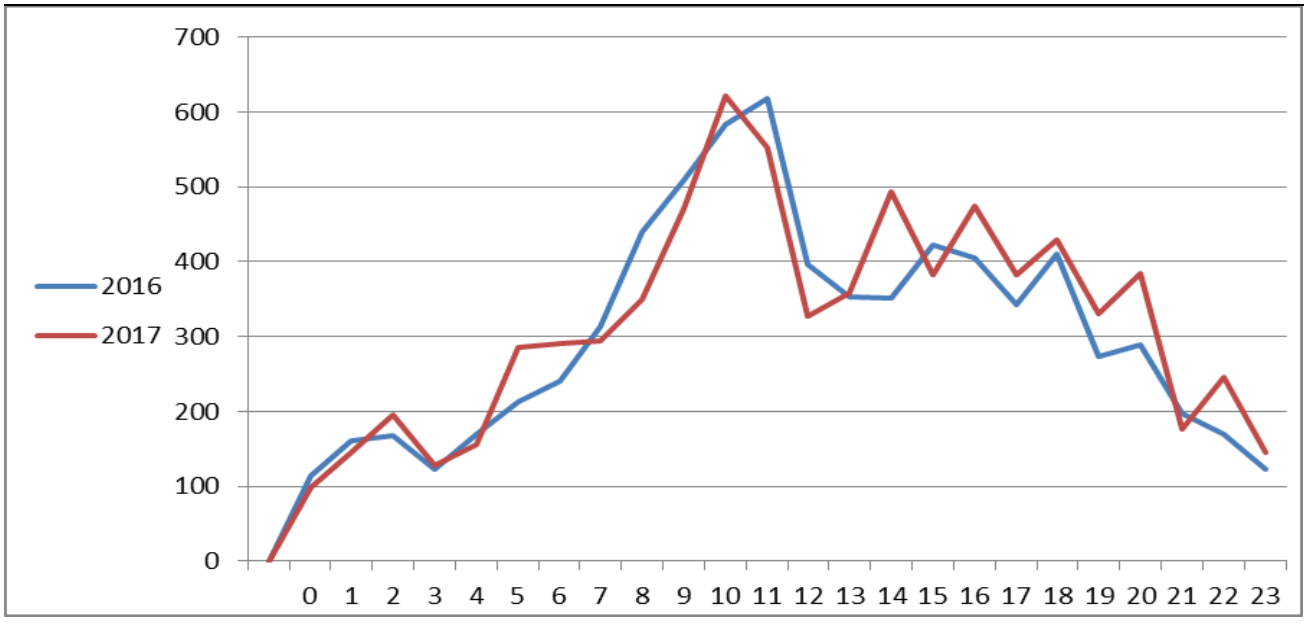


Figure (17); show the number of all fatal injuries by time, the data suggest a gradual increase in the number of fatalities reported 10-12 hour in both two years.

## 3.3 Distribution of Injuries by Intention

Injuries are classified into six categories by intention— (1) unintentional – road traffic accidents, (2) intentional – insurgency related, (3) intentional – assault, (4) intentional – self-harm, (5) unintentional – other, and (6) unknown intention.

**Table (19); Number and Percent of Injuries by Intention among all Fatal Injuries, 2016-2017**

| Intention | 2016 | | 2017 | |
|---|---|---|---|---|
| | N | % | N | % |
| Assaults | 777 | 7.00% | 718 | 5.80 |
| Explosion Accidents | 2366 | 21.40% | 2349 | 18.90 |
| Others | 3989 | 36.10% | 4568 | 36.80 |
| self-harm | 441 | 4.00% | 451 | 3.60 |
| Traffic Accidents | 3265 | 29.60% | 4136 | 33.30 |
| Unknown Intent | 206 | 1.90% | 181 | 1.50 |
| Total | 11044 | 100.00% | 12403 | 100.00 |

**Figure (18); Number of Injuries by Intention among all Fatal Injuries, 2016-2017**

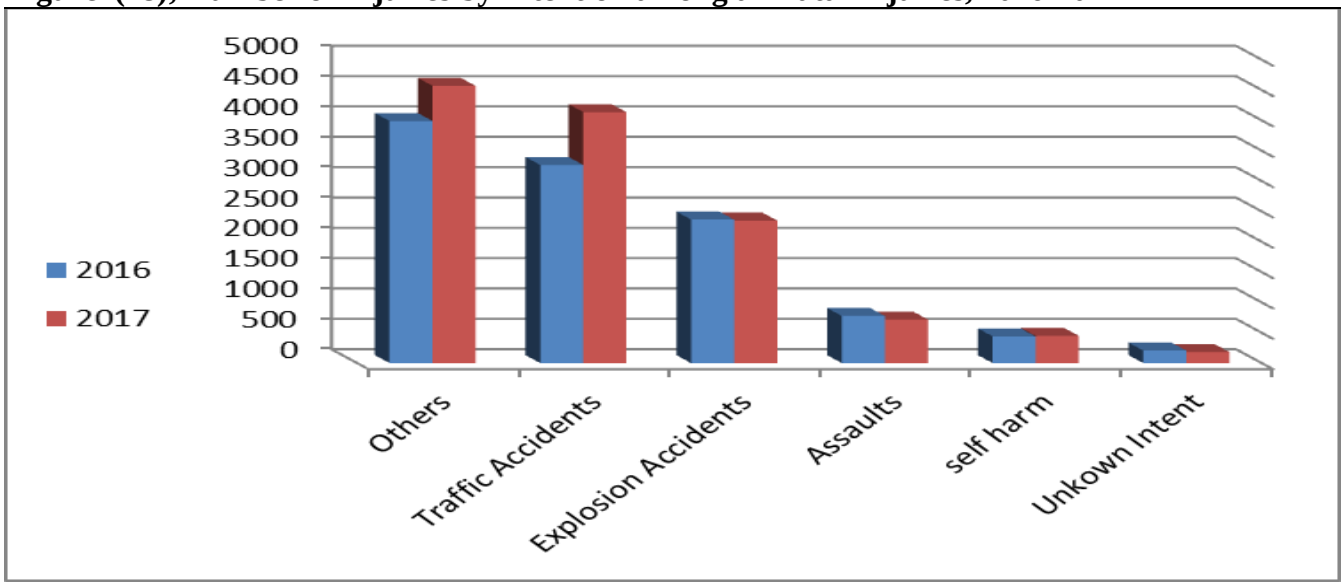



Table (19); figure (18); show the number of fatal injuries by intention .The traffic accidents increase in 2017 from 29%-33% while the explosion injuries decrease from 21%-18%.

**Table (20); Number and Percent of Injuries by Intention among all Fatal Injuries in 2016, by Governorates**

| Governorates | Assaults | | Explosion Accidents | | Others | | self-harm | | Traffic Accidents | | Unknown Intent | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % | N | % | N | % |
| Anbar | | | | | | | | | | | | | | |
| Babil | 114 | 14.7 | 33 | 1.4 | 301 | 7.5 | 12 | 2.7 | 550 | 16.8 | 2 | 1.0 | 1012 | 9.2 |
| Baghdad | 106 | 13.6 | 918 | 38.8 | 1519 | 38.1 | 53 | 12.0 | 317 | 9.7 | 1 | 0.5 | 2914 | 26.4 |
| Basra | 50 | 6.4 | 233 | 9.8 | 67 | 1.7 | 1 | 0.2 | 5 | 0.2 | 0 | 0.0 | 356 | 3.2 |
| Diwaniyah | 25 | 3.2 | 0 | 0.0 | 184 | 4.6 | 19 | 4.3 | 212 | 6.5 | 0 | 0.0 | 440 | 4.0 |
| Dohuk | 6 | 0.8 | 4 | 0.2 | 111 | 2.8 | 1 | 0.2 | 46 | 1.4 | 8 | 3.9 | 176 | 1.6 |
| Dyalah | 24 | 3.1 | 257 | 10.9 | 126 | 3.2 | 12 | 2.7 | 144 | 4.4 | 1 | 0.5 | 564 | 5.1 |
| Erbil | 83 | 10.7 | 279 | 11.8 | 241 | 6.0 | 155 | 35.1 | 275 | 8.4 | 0 | 0.0 | 1033 | 9.4 |
| Karbala | 49 | 6.3 | 6 | 0.3 | 130 | 3.3 | 12 | 2.7 | 221 | 6.8 | 2 | 1.0 | 420 | 3.8 |
| Kirkuk | 56 | 7.2 | 565 | 23.9 | 238 | 6.0 | 47 | 10.7 | 192 | 5.9 | 87 | 42.2 | 1185 | 10.7 |
| Misan | 82 | 10.6 | 0 | 0.0 | 149 | 3.7 | 9 | 2.0 | 118 | 3.6 | 0 | 0.0 | 358 | 3.2 |
| Muthana | 20 | 2.6 | 39 | 1.6 | 113 | 2.8 | 12 | 2.7 | 170 | 5.2 | 2 | 1.0 | 356 | 3.2 |
| Najaf | 0 | 0.0 | 0 | 0.0 | 239 | 6.0 | 0 | 0.0 | 287 | 8.8 | 0 | 0.0 | 526 | 4.8 |
| Sulaimaniya | 64 | 8.2 | 24 | 1.0 | 178 | 4.5 | 53 | 12.0 | 86 | 2.6 | 5 | 2.4 | 410 | 3.7 |
| Thiqar | 76 | 9.8 | 7 | 0.3 | 310 | 7.8 | 49 | 11.1 | 358 | 11.0 | 7 | 3.4 | 807 | 7.3 |
| Wassit | 22 | 2.8 | 1 | 0.0 | 83 | 2.1 | 6 | 1.4 | 284 | 8.7 | 91 | 44.2 | 487 | 4.4 |
| Total | 777 | 100 | 2366 | 100 | 3989 | 100 | 441 | 100 | 3265 | 100 | 206 | 100 | 11044 | 100 |

Table (20); show the number and percent of injuries by intention among all fatal injuries in 2016, by governorate 2016 the most common cause of road traffic deaths were recorded from Babil 16.8% followed by ThiQar and forensic medicine directorate /Baghdad 11.% and 9.7% respectively. The first three causes of death resulting from explosion were from Baghdad forensic medicine 38.8% Kirkuk 23.9% and Erbil 11.8%. The highest percent of assaults were recorded from Babil 14.7% and Erbil 10.7%

**Table (21); Number and Percent of Injuries by Intention among all Fatal Injuries in 2017, by Governorates**

| Governorates | Assaults | | Explosion Accidents | | Unintentional-Others | | self-harm | | Traffic Accidents | | Unknown Intent | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % | N | % | N | % |
| Anbar | 12 | 1.7 | 752 | 32.0 | 213 | 4.7 | 1 | 0.2 | 106 | 2.6 | 31 | 17.1 | 1115 | 9.0 |
| Babil | 77 | 10.7 | 1 | 0.0 | 218 | 4.8 | 10 | 2.2 | 532 | 12.9 | 2 | 1.1 | 840 | 6.8 |
| Forensic medicine directorate\ Baghdad | 84 | 11.7 | 566 | 24.1 | 1854 | 40.6 | 52 | 11.5 | 883 | 21.3 | 5 | 2.8 | 3444 | 27.8 |
| Basra | 54 | 7.5 | 269 | 11.5 | 80 | 1.8 | 3 | 0.7 | 51 | 1.2 | 0 | 0.0 | 457 | 3.7 |
| Diwaniyah | 34 | 4.7 | 5 | 0.2 | 197 | 4.3 | 7 | 1.6 | 215 | 5.2 | 5 | 2.8 | 463 | 3.7 |
| Dohuk | | | | | | | | | | | | | | |
| Dyalah | 30 | 4.2 | 141 | 6.0 | 177 | 3.9 | 37 | 8.2 | 189 | 4.6 | 3 | 1.7 | 577 | 4.7 |
| Erbil | 106 | 14.8 | 123 | 5.2 | 194 | 4.2 | 158 | 35.0 | 283 | 6.8 | 0 | 0.0 | 864 | 7.0 |
| Karbala | 43 | 6.0 | 0 | 0.0 | 101 | 2.2 | 8 | 1.8 | 209 | 5.1 | 3 | 1.7 | 364 | 2.9 |
| Kirkuk | 42 | 5.8 | 386 | 16.4 | 212 | 4.6 | 41 | 9.1 | 149 | 3.6 | 70 | 38.7 | 900 | 7.3 |
| Misan | 28 | 3.9 | 0 | 0.0 | 236 | 5.2 | 2 | 0.4 | 161 | 3.9 | 7 | 3.9 | 434 | 3.5 |
| Muthana | 18 | 2.5 | 2 | 0.1 | 140 | 3.1 | 8 | 1.8 | 178 | 4.3 | 5 | 2.8 | 351 | 2.8 |
| Najaf | 0 | 0.0 | 0 | 24 | 297 | 6.5 | 0 | 0.0 | 346 | 8.4 | 0 | 0.0 | 643 | 5.2 |
| Sulaimaniya | 84 | 11.7 | 1.0 | | 191 | 4.2 | 58 | 12.9 | 91 | 2.2 | 7 | 3.9 | 455 | 3.7 |
| ThiQar | 72 | 10.0 | 79 | 3.4 | 298 | 6.5 | 59 | 13.1 | 436 | 10.5 | 17 | 9.4 | 961 | 7.7 |
| Wassit | 34 | 4.7 | 0 | 0.0 | 160 | 3.5 | 7 | 1.6 | 307 | 7.4 | 26 | 14.4 | 534 | 4.3 |
| Total | 718 | 100 | 2348 | 100 | 4568 | 100 | 451 | 100 | 4136 | 100 | 181 | 100 | 12402 | 100 |

Table (21); present the number and percent of injuries by intention among all fatal injuries in 2017 by governorates. The highest number collected from Baghdad forensic directorate while the lowest number reported from Muthana. Road traffic injuries represent the highest number collected from Baghdad and lowest from Basrah. 67.4% and 58.9% of fatal injuries in Anbar and Basra related to insurgency respectively .Self harm represent lowest percent 1.5 % of all fatal injuries.

**Table (22); Proportion of Females and Male among all Fatal Injuries by intent, 2016**

| Gender | Assaults | | Explosion | | Others | | self harm | | Traffic | | unknown | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % | N | % | N | % |
| Female | 185 | 23.9 | 242 | 10.2 | 1509 | 37.8 | 218 | 49.4 | 699 | 21.4 | 54 | 26.2 | 2907 | 26.3 |
| Male | 589 | 76.0 | 1999 | 84.5 | 2477 | 62.1 | 223 | 50.6 | 2565 | 78.6 | 152 | 73.8 | 8005 | 72.5 |
| Unknown | 1 | 0.1 | 125 | 5.3 | 3 | 0.1 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 129 | 1.2 |
| Total | 775 | 100 | 2366 | 100 | 3989 | 100 | 441 | 100 | 3264 | 100 | 206 | 100 | 11041 | 100 |

Table 22 shows the proportion of female and male among all fatal injuries by intent in 2016. Males represent high proportion in all fatal injuries by intention with exception of self-harm was the female about 450%.

**Table (23); Proportion of Females and Male among all Fatal Injuries, by intent, 2017**

| Gender | Assaults | | Explosion Accidents | | Others | | self-harm | | Traffic Accidents | | Unknown Intent | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % | N | % | N | % |
| Female | 141 | 19.6 | 430 | 18.3 | 1627 | 35.6 | 241 | 53.4 | 921 | 22.3 | 60 | 33.1 | 3420 | 27.6 |
| Male | 577 | 80.4 | 1910 | 81.3 | 2940 | 64.4 | 210 | 46.6 | 3215 | 77.7 | 118 | 65.2 | 8970 | 72.3 |
| Unknown | 0 | 0.0 | 9 | 0.4 | 1 | 0.0 | 0 | 0.0 | 0 | 0.0 | 3 | 1.7 | 13 | 0.1 |
| Total | 718 | 100.0 | 2349 | 100.0 | 4568 | 100.0 | 451 | 100.0 | 4136 | 100.0 | 181 | 100.0 | 12403 | 100.0 |

Table 23 show the proportion of female and male among all fatal injuries by intent in 2017. Males represent high proportion in all fatal injuries by intention with exception of self-harm was female about 53.4%.

## 3.4 Distribution of Injury by Mechanism

The following section presented injuries by the mechanism of injury. The mechanism of injury reflects the primary cause of fatal injury as classified by the coroner.

**Table (24); Number and Percent of Injuries by Mechanism among all Fatal Injuries, 2016-2017**

| Mechanism | 2016 | | 2017 | |
|---|---|---|---|---|
| | N | % | N | % |
| Assaults | 777 | 7.00 | 718 | 5.80 |
| Explosion Accidents | 2366 | 21.40 | 2349 | 18.90 |
| Others | 3989 | 36.10 | 4568 | 36.80 |
| self-harm | 441 | 4.00 | 451 | 3.60 |
| Traffic Accidents | 3265 | 29.60 | 4136 | 33.30 |
| Unknown Intent | 206 | 1.90 | 181 | 1.50 |
| Total | 11044 | 100% | 12403 | 100% |

**Figure (19); Number of Injuries by Mechanism among all Fatal Injuries, 2016-2017**

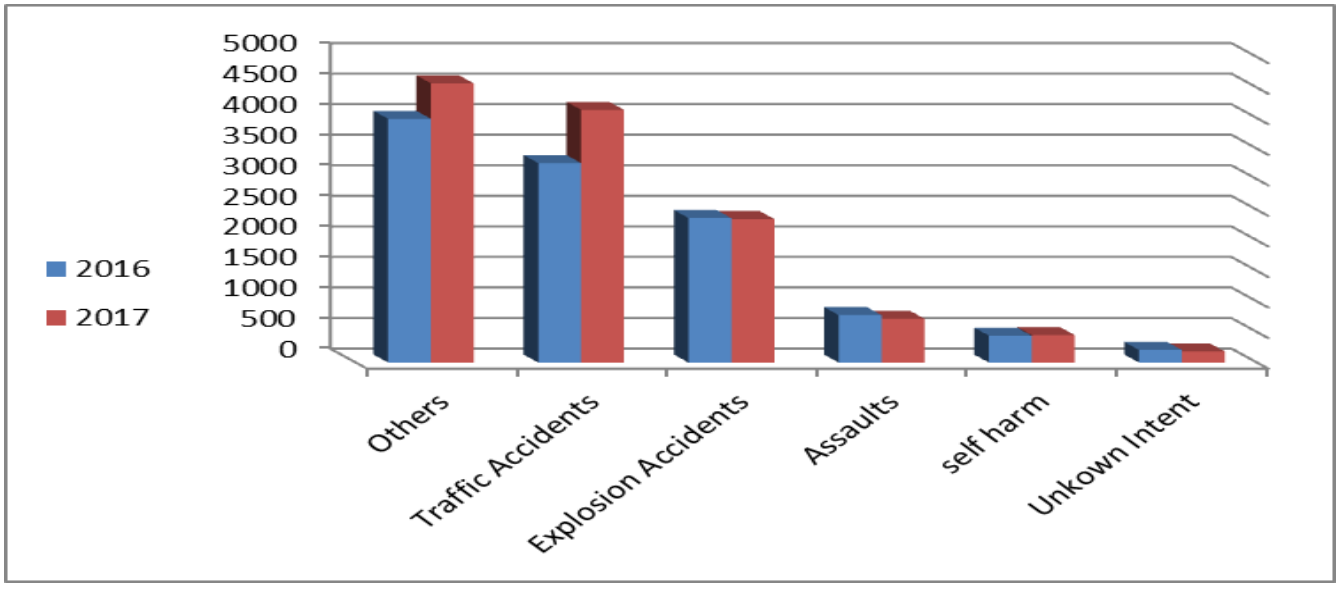
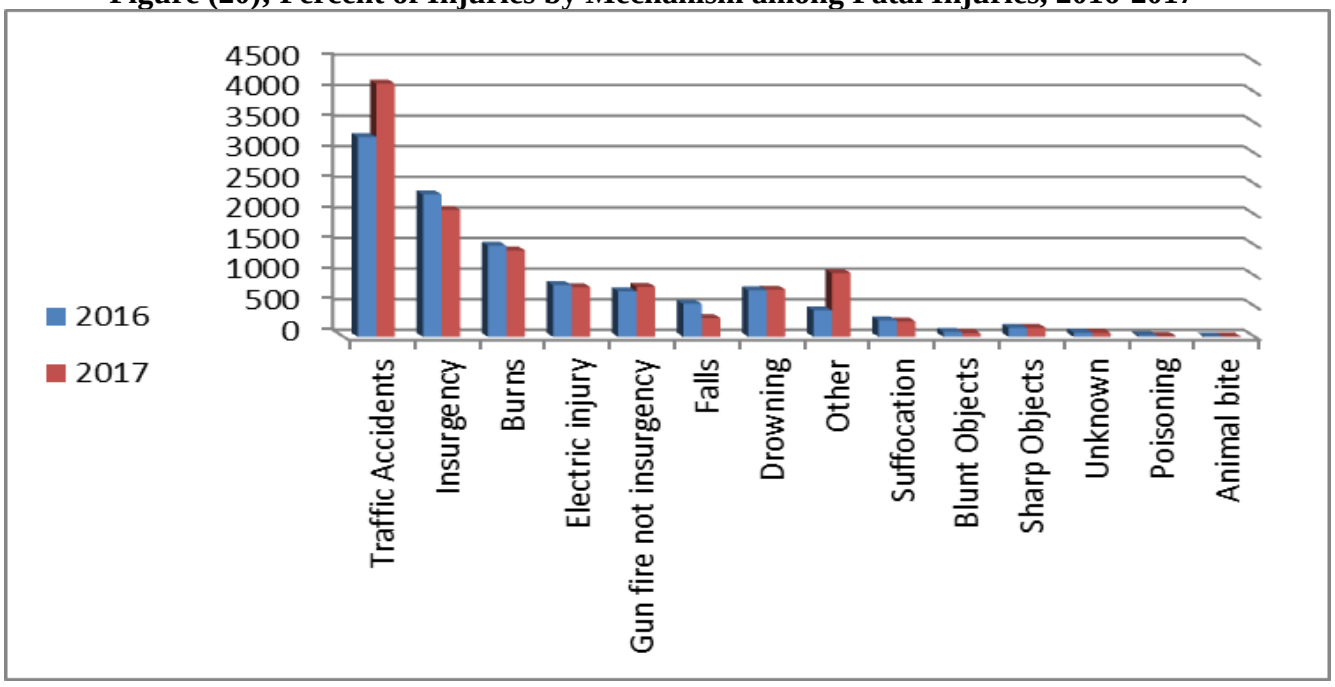



Table (24); and figure (19); show the mechanism of fatal injuries.

**Table (25); Percent of Injuries by Mechanism among Fatal Injuries, 2016-2017**

| Mechanism | 2016 | | 2017 | |
|---|---|---|---|---|
| | N | % | N | % |
| Animal bite | 10 | 0.10% | 7 | 0.10% |
| Blunt Objects | 80 | 0.70% | 62 | 0.50% |
| Burns | 1488 | 13.50% | 1411 | 11.80% |
| Drowning | 760 | 6.90% | 770 | 6.50% |
| Electric injury | 848 | 7.70% | 812 | 6.80% |
| Falls | 540 | 4.90% | 306 | 2.60% |
| Gun fire not insurgency | 743 | 6.80% | 817 | 6.90% |
| Insurgency | 2327 | 21.10% | 2075 | 17.40% |
| Other | 431 | 3.90% | 1043 | 8.70% |
| Poisoning | 25 | 0.20% | 16 | 0.10% |
| Sharp Objects | 148 | 1.30% | 148 | 1.20% |
| Suffocation | 268 | 2.40% | 253 | 2.10% |
| Traffic Accidents | 3265 | 29.70% | 4136 | 34.70% |
| Unknown | 71 | 0.60% | 66 | 0.60% |
| Total | 11004 | 100.00% | 11922 | 100.00% |

**Figure (20); Percent of Injuries by Mechanism among Fatal Injuries, 2016-2017**




The table (25); and figure (20); show the mechanism of all fatal injuries in 2016-2017, the road traffic represent the first cause of death followed by insurgency, burns, electric shock and gun fire.

**Table 26 Percent of Injuries by Mechanism among Fatal Unintentional-Traffic Injuries, 2016-2017**

| Mechanism | 2016 | | 2017 | |
|---|---|---|---|---|
| | N | % | N | % |
| Pedestrian | 784 | 22.50 | 1003 | 23.20 |
| Car | 2551 | 73.30 | 3125 | 72.20 |
| Bicycle | 8 | 0.20 | 15 | 0.30 |
| Motorcycle | 125 | 3.60 | 179 | 4.10 |
| Others | 12 | 0.30 | 6 | 0.10 |
| Unknown | 1 | 0.00 | 2 | 0.00 |
| Total | 3481 | 100% | 4330 | 100% |

## 3.5 Mass Injury Events

**Table (27); Percent of Injuries Resulting from a Mass Injury Event among all Fatal Injuries, 2016**

| Five Or More | Assaults | | Explosion Accidents | | Others | | Self-Harm | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | N | % |
| No | 638 | 82.1 | 1443 | 61.0 | 3631 | 91.0 | 428 | 97.1 | 8944 | 81.0 |
| Unknown | 114 | 14.7 | 35 | 1.5 | 301 | 7.5 | 12 | 2.7 | 1016 | 9.2 |
| Yes | 25 | 3.2 | 888 | 37.5 | 57 | 1.4 | 1 | 0.2 | 1082 | 9.8 |
| Total | 777 | 100% | 2366 | 100% | 3989 | 100% | 441 | 100% | 11042 | 100% |

**Table (28); Percent of Injuries Resulting from a Mass Injury Event among all Fatal Injuries, 2017**

| Five Or More | Traffic Accidents | | Unknown Intent | | Total | |
|---|---|---|---|---|---|---|
| | N | % | N | % | N | % |
| No | 2602 | 79.7 | 202 | 98.1 | 8944 | 81.0 |
| Unknown | 551 | 16.9 | 3 | 1.5 | 1016 | 9.2 |
| Yes | 110 | 3.4 | 1 | 0.5 | 1082 | 9.8 |
| Total | 3263 | 100.0 | 206 | 100.0 | 11042 | 100.0 |

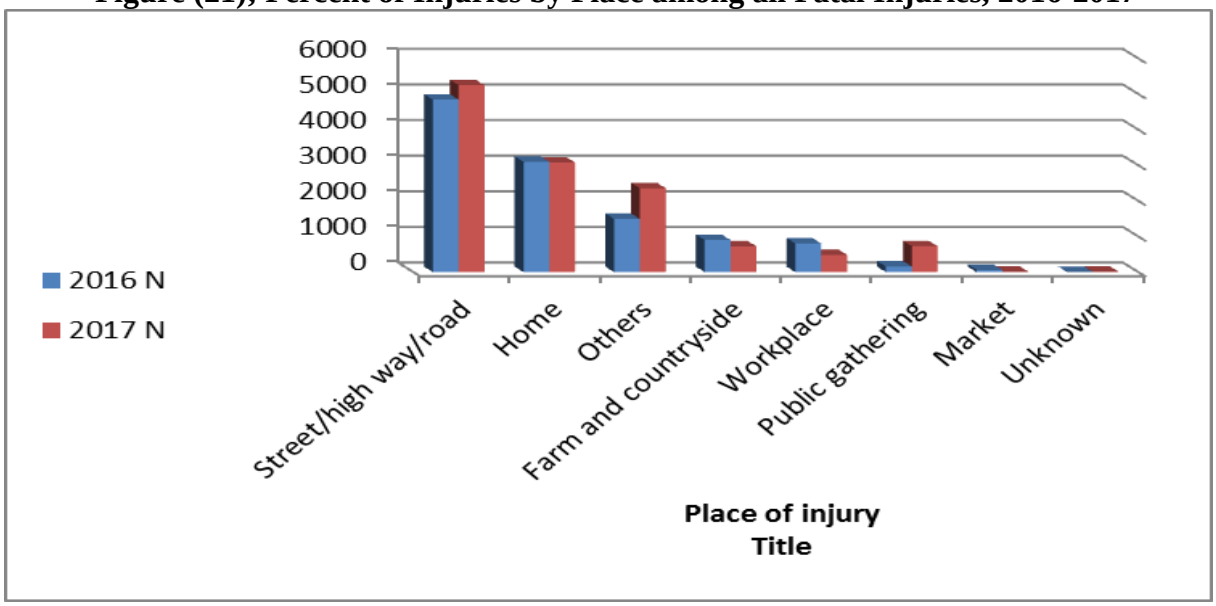
The proportion of deaths resulting from mass injury events are presented in Table 27 and 28. Mass injury event is defined as an event that caused five or more injuries. Overall, the proportion of fatal injuries resulting from mass injury events was highest among insurgency related injuries.

## 3.6 Place of Injury

**Table (29); Percent of Injuries by Place among all Fatal Injuries, 2016-2017**

| Place | 2016 | | 2017 | |
|---|---|---|---|---|
| | N | % | N | % |
| Street/high way/road | 4843 | 42.60 | 5249 | 41.50 |
| Home | 3100 | 27.30 | 3074 | 24.30 |
| Others | 1492 | 13.10 | 2354 | 18.60 |
| Farm and countryside | 900 | 7.90 | 724 | 5.70 |
| Workplace | 805 | 7.10 | 485 | 3.80 |
| Public gathering | 160 | 1.40 | 726 | 5.70 |
| Market | 61 | 0.50 | 14 | 0.10 |
| Unknown | 4 | 0.00 | 10 | 0.10 |
| Total | 11365 | 100% | 12636 | 100% |

**Figure (21); Percent of Injuries by Place among all Fatal Injuries, 2016-2017**




The place of injuries for all fatal injuries is presented in Table 29 and Figure 21. The most common location of fatal injuries was on streets or highways followed by, home and others. Public spaces – including markets and public gatherings – were relatively uncommon locations of fatal injuries. For injuries among males, the majority of injuries occurred on streets or highways whereas for females the majority of injuries occurred in the home.

## *4. Discussion*

**Non-fatal injury**

Iraq Injury surveillance system is very important source to provide information about all fatal and non-fatal injuries in Iraq. Using this information will help decrease the impact of injuries on community. This report reveals that the number of non-fatal injuries was increased in 2017 . As in previous years the high proportion of injuries was among adult males about 75% aged from 15-29 year over all health directorates. Road traffic injuries (RTIs) represent the main mechanism of injuries. The most common reported number was from ThiQar followed by Erbil and sulaimaniya in 2016. road traffic legislations or laws such as reduce speed, belt seat, helmet wearing and other should be in action. According to injury mechanism among all non-fatal injuries the most common cause was road traffic, fall, and sharp object. About 19% of all non-fatal injuries received pre hospital medical care. trauma care system must be reinforce to decrease severity and complications of injuries. Pedestrian remain the highest proportion of road traffic injuries. The home, street and high way reveal more than 80% place of all non-fatal injuries. Nearly 10% of all non-fatal injuries reached to hospital by ambulance and about 70% received treatment and sent home.

**Fatal injuries**

The highest number (6,444) of deaths was collected from Baghdad forensic directorate during 2016-2017. As non-fatal injuries, adult males represented more than 72 % of all deaths. The common age group was 15-29 year. The data suggest a gradual increase in number of fatalities reported in the day between 8-11 hours. According to intention the main cause of fatal injuries was road traffic injuries followed by Explosion accidents .In 2016 the highest number by intention among all fatal injuries were collected from Baghdad, Kirkuk , and Erbil while in 2017, Baghdad, Anbar and ThiQar were reported majority of deaths.

The report reveals that the main cause of death by mechanism in all governorates was traffic, followed explosion and burn.

Regarding unintentional- traffic injuries, pedestrian and cars represent more than 90% of victims of traffic related injuries. Among The mechanisms of injury for fatal unintentional injuries other than traffic the largest proportion of injuries are attributed to insurgency followed by burns 13% and electric 7.70%.

## 4.1. Limitations of the Current Surveillance System

The Injury Surveillance in Iraq is now among one of the most robust systems globally, capturing routine data useful for public health programming. The most common limitations of the system are the following.

- **Use of Sentinel Hospitals:** One limitation of the design of the system is that not all hospitals in the governorates are participating in the injury surveillance system. In most governorates there are only 1-2 hospitals participating. The catchment area of these hospitals is unknown. Given that the non-fatal surveillance is not exhaustive calculation of rates is not appropriate.
- **Access:** the security situation in Iraq deteriorated. Monitoring and supervision by the national team was therefore not feasible in some of the governorates with greatest insecurity. Insecurity also resulted in delays in sending data or silent sites as well.
- **Limited Data/ Variables:** The current surveillance form is intentionally short to limit the burden on the health system. Information on the nature of the injury (fracture, amputation, etc.) and the body region (s) injured (head and neck, torso, etc.) are not collected.
- **Underreporting of intentional injuries:** Intentional self-harm injuries and intentional assaults accounted for a smaller proportion of injuries than seen regionally or globally. This may in part due to under-reporting due to social and cultural reasons. Additional training may be needed so that the intent of the injury can be accurately ascertained.

- **Funding:** Inadequate funding and lack of human resources, particularly skilled personnel, were perceived as challenges to the system in some hospitals. At the national level, additional staff with capacity to analyze and critically review the data is needed. The system is supported by only one full time MOH staff.
- **Monitoring and Evaluation:** Ideally, monitoring and evaluation would be a regular activity to ensure high quality data. Each participating hospital was supposed to evaluate the sensitivity of the surveillance system by comparing the number of injury cases picked by the system with the number of cases registered by the hospital. To date, M&E activities have not been implemented as planned. Sensitivity of the surveillance system is expected to be high but is not known.
- **ICD Codes:** The external cause or mechanism of injury is not coded according to ICD codes. Given the limitations of ICD codes, this may not be an immediate priority.

## 4.2. Recommendations for Strengthening Surveillance

The following activities are recommended to improve the surveillance system in the upcoming year:

- **Successful return for out of the surveillance Governorates:** Beginning 2017, at least CO and one ER from liberated governorates reported on injuries. Successful training, monitoring and mentorship will be needed to ensure the quality remains as the program expands.
- **External Evaluation:** The need for an in-depth evaluation of this surveillance system was identified in 2012 but was not feasible given increased insecurity and violence. This evaluation by an external team remains a priority so that partners have a better understanding of the accuracy and completeness of reporting by facility.
- **Regular Quality Assurance:** To ensure quality, a team of trained personal have begun monitoring data quality. As the system scales up, having more of these teams able to perform routing monitoring visits will be even more essential. This group can also support with training and re-training activities.
- **Enhanced Training:** All individuals involved with collecting the data received some training on how to report. However, we note that problems in coding persist. Targeted trainings to address data quality problems as they are identified can help improve data quality. Some common themes to emphasize include: how to best identify the intention of an injury: when to suspect self-harm or assault (a difficult task given the social and culture realities in Iraq); distinguishing between assault and insurgency activity.
- **The forms:** development of one page form, paper and electronic, may ease the work.
- **Use of the Data:** To date analysis is performed only at the national level. Basic analysis at the governorate level on a more frequent basis (ideally real time) is feasible given that many governorates already enter their own data. Support to build the capacity of governorate level MOH staff to analyze and interpret data could help translate the information into public health action.
- **Collaboration:** Collaboration with international partners (WHO and CDC) should continue in order to maintain high standards of data collection, analysis and reporting.

# 5. Annexes

## 5.1 Injury Surveillance Form – Arabic

وزارة الصحة
دائرة العمليات الطبية والخدمات المتخصصة/ مركز العمليات
نظام الرصد الوطني العراقي للحوادث
ردهات الطوارئ / الطب العدلي

| | | | | | | |
|---|---|---|---|---|---|---|
| **A** | **معلومات عن المؤسسة الصحية** | | | ? 1 ردهات الطوارئ | ? 2 الطب العدلي | |
| A1 | اسم دائرة الصحة _____ | | A2 | اسم المؤسسة الصحية _____ | A3 | رقم المريض/الحالة _ _ _ _ _ _ _ |
| **B** | **معلومات عن المريض / الحالة** | | | | | |
| B1 | اسم المريض/الحالة _____ _____ _____ | | B2 | الجنس ? 1 ذكر ? 2 أنثى ? 9غير معروف | B3 | العمر _ _ _ سنوات |
| B4 | عنوان المريض/الحالة (المحافظة) _____ | | B5 | رقم شهادة الوفاة _ _ _ _ _ _ _ _ | B6 | تاريخها _ _/ _ _/ _ _ _ _ |
| **C** | **سلسلة الوصول** | | | | | |
| C1 | تاريخ الإصابة _ _/ _ _/ _ _ _ _ | ? 9غير معروف | C2 | زمن الإصابة _ _ | C3 | تاريخ العثور على الجثة _ _/ _ _/ _ _ _ _ |
| C4 | تاريخ الوصول إلى المؤسسة الصحية _ _/ _ _/ _ _ _ _ | | C5 | زمن الوصول _ _ | | الزمن (0-23) بالتوقيت العالمي |
| C6 | وقت الإصابة المتوقع | ? 1 خلال ساعة | ? 2 خلال 24 ساعة | | ? 3 أكثر من 24 ساعة | ? 9غير معروف |
| C7 | هل حصل المصاب على إسعاف أولي قبل الوصول للطوارئ في المستشفى | ? 1 نعم | ? 2 لا | | ? 9 غير معروف | |
| C8 | وسيلة الوصول(اختيار واحد) | ? 1 سيارة إسعاف | ? 2 سيارة أخرى | | ? 8 وسيلة أخرى | ? 9 غير معروف |
| **D** | **معلومات متعلقة بالإصابة** | | | | | |
| D1 | ظروف الحادثة: كيف حدثت الإصابة (اختار إجابة واحدة فقط) | في حالة اختيار(1.6 و 1.7) يعبأ حقل E | | | | |

| 1 نشاط إرهابي أو عسكري | | 2 حوادث مرور | | 3 عنف منزلي | | 4 عنف خارجي | | 5 حوادث أخرى | |
|---|---|---|---|---|---|---|---|---|---|
| 1.1 | ? طلق ناري | 2.1 | ? راجلاً | 3.1 | ? أسلحة نارية | 4.1 | ? أسلحة نارية | 5.1 | ? عضة حيوان |
| 1.2 | ? انفجار | 2.2 | ? سيارة | 3.2 | ? الآت جارحة | 4.2 | ? الآت جارحة | 5.2 | ? غرق |
| 1.3 | ? عبوة ناسفة | 2.3 | ? دراجة هوائية | 3.3 | ? الآت راضه | 4.3 | ? الآت راضه | 5.3 | ? تسمم |
| 1.4 | ? انتحاري | 2.4 | ? دراجة نارية | 3.8 | ? أخرى | 4.8 | ? أخرى | 5.4 | ? سقوط |
| 1.5 | ? سيارة مفخخة | 2.8 | ? أخرى | 3.9 | ? غير معروف | 4.9 | ? غير معروف | 5.5 | ? حروق |
| 1.6 | ? ألغام أرضية | 2.9 | ? غير معروف | | | | | 5.6 | ? اختناق |
| 1.7 | ? مخلفات حربية | | | | | | | 5.7 | ? صعق كهربائي |
| 1.8 | ? أخرى | | | | | | | 5.8 | ? أخرى |
| 1.9 | ? غير معروف | | | | | | | 5.9 | ? غير معروف |

| | | | | |
|---|---|---|---|---|
| D2 | عدد المصابين 5 أو أكثر في الحادثة | ? 1 نعم | ? 2 لا | ? 9 غير معروف |
| D3 | القصد | ? 1 مقصودة من قبل الآخرين | ? 2مقصودة من قبل المصاب | ? 3 عرضية من قبل الآخرين |
| | | ? 4عرضية من قبل المصاب | ? 8 أخرى | ? 9 غير معروف |
| D4 | المكان الجغرافي للحادث | المحافظة: _____ | أحيل من مركز شرطة: _____ | المنطقة: _____ |
| D5 | مكان وقوع الحادثة (اختار واحدة) | ? 1 المسكن | ? 2 الشارع | ? 3 مكان العمل |
| | | ? 4 تجمع سكني | ? 5 السوق | |
| | | ? 6 الريف أو المزرعة | ? 8 أخرى | ? 9 غير معروف |
| D6 | الإجراء الأولي للمريض في ردهة الطوارئ | ? 1تمت المعالجة و أرسل إلى المنزل | | ? 2 خرج على مسؤوليته الخاصة |
| | | ? 3 ادخل المستشفى | ? 4متوفى عند الوصول | ? 5توفي في ردهة الطوارئ |
| | | ? 6 نقل إلى مستشفى آخر(حدد): _____ | | |
| | | ? 8 أخرى | | ? 9 غير معروف |

| | | | |
|---|---|---|---|
| ملئت بواسطة: _____ | _ _ _ _ | تاريخ الإملاء _ _/ _ _/ _ _ _ _ | التوقيع |
| دققت بواسطة: _____ | _ _ _ _ | تاريخ التدقيق _ _/ _ _/ _ _ _ _ | التوقيع |

| E إذا كان الشخص مصابا نتيجة الألغام أو القذائف غير المنفلقة المتروكة، اسأل المريض الأسئلة الآتية | | | | |
|---|---|---|---|---|
| E1 | عنوان المصاب الكامل | المحافظة: _____ | القضاء: _____ | الناحية: _____ |
| | | الحي: _____ | المحلة: _ _ _ | زقاق: _ _ رقم الدار: _ _ |
| | | أقرب نقطة دالة: _____ | | |
| E2 | النشاط في وقت الإصابة ( اختار إجابة واحدة فقط) | □ 1 يمشي على قدميه | □ 2 كان في العمل | □ 3 زراعة |
| | | □ 4 متنقل بالسيارة | □ 5 تعليم | □ 6 رعي |
| | | □ 7 إزالة ذاتية للألغام و المخلفات الحربية | | □ 8 التسوق |
| | | □ 9 جمع السكراب | □ 10 اللعب | □ 11 نشاط ديني |
| | | □ 12 عبر حدود | □ 88 أخرى | □ 99 غير معروف |
| E3 | كيف فجّر اللغم أو القذيفة المتروكة؟ | □ 1 عبث (لاحظ المادة) | □ 2 حادث عرضي عن طريق اللمس أو التخلي عليها (لم يلاحظ المواد) | |
| | | □ 8 أخرى | □ 9 غير معروف | |
| E4 | من فجّر المتفجّر؟ | □1 من قبل الشخص نفسه | □ 2 من قبل شخص آخر | □ 3 سيارة □ 9 غير معروف |
| E5 | هل كان الضحية يعلم أن المنطقة ملغومة بالألغام؟ | □ 1 نعم لكنه ذهب لأسباب اقتصادية | | □ 2 نعم لكنه ذهب لأسباب أخرى |
| | | □ 3 لا | | □ 9 غير معروف |
| E6 | هل جرح أو قتل أشخاص آخرين في الانفجار نفسه؟ | □ 1 نعم | □ 2 لا | □ 9 غير معروف |
| | إذا كان الجواب نعم | عدد المصابين: __ __ | عدد المتوفين: __ __ | □ 9 غير معروف |

## تعليمات ملء الاستمارة

١- يرجى قراءة التعليمات جيداً قبل الإملاء.

٢- وضع علامة ☒ داخل المربع المناسب و عدم وضع علامات أخرى مثل √ أو ○ ... الخ ذلك لتوحيد الأجوبة لمدخل البيانات

٣- الحرص على ملء جميع حقول الاستمارة بدقة وكما يأتي: اللون الأزرق خاص للطوارئ واللون الأحمر للطب العدلي والأسود مشترك بينهما.

٤- يجب على الأشخاص الذين يملؤون الاستمارة أن يكتبوا أسمائهم بوضوح و توقيعهم و تاريخ المليء و المصادقة.

٥- يملأ حقل A من قبل مسؤول البرنامج.

٦- (B) المقصود ب ( الحالة) هو المتوفي أو المصاب المحال إلى المعهد.

٧- (B1) إذا كان الاسم غير معروف يدون غير معروف و لا يترك فارغاً.

٨- (B3) إذا كان العمر أقل من سنة يكتب ثلاثة أصفار ( ٠٠٠ ) و يقدر عمر المصاب في حالة عدم معرفته و أن لم تتمكن من ذلك أكتب ( ٩٩٩ ) .

٩- الوقت حسب التوقيت العالمي من (٠٠-٢٣) و بالساعات فقط و تهمل أجزاء الساعة و بالنسبة للساعة ١٢ ليلاً فتكتب(٠٠).

١٠- الانتباه إلى التسلسل المنطقي بين تاريخ الإصابة و تاريخ الوصول و تاريخ الإملاء و أن لا يقدم تاريخ الإملاء أو الوصول قبل تاريخ الإصابة.

١١- (C8) يعني بالوسيلة الأخرى أية وسيلة غير الإسعاف والسيارات (عربة، دراجة، طيارة،...الخ) تذكر.

١٢- (D1) في حالة اختيار فقرة ١.٦ ألغام و ١.٧ مواد قابلة للانفجار يجب مليء حقل E

١٣- ( D1 ١.٢ ) عبارة ـ انفجار ـ تتضمن كل الانفجارات غير معروفة السبب و المقذوفات عن بعد مثل صواريخ ، هاونات، طائرات أو أي مقذوف آخر.

١٤- ( D1 ٢.٨ ) أخرى يقصد بها آلية حدوث الإصابة مما لم يذكر أعلاه مثل (عربة دفع، حيوان، قطار أو غيرها).

١٥- (D5) تجمع سكني يشمل دور العبادة ( مسجد, كنيسة.. الخ) أو التجمعات لأغراض التطوع أو لأغراض التدريب ...الخ.

١٦- ينبغي بذل الجهد للتفريق بين النشاط الإرهابي و العنف خارج المنزل.

## 5.2 Injury Surveillance Form – English

| | | | | | |
|---|---|---|---|---|---|
| CO □2 | ER □1 | A Reporting Site **HEALTH FACILITY INFORMATION** | | | |
| Patient / Case number _ _ _ | **A3** | Name of Health Facility _____ | **A2** | Name of Health Directorate _____ | **A1** |
| PATIENT DEMOGRAPHIC INFORMATION **B** | | | | | |
| Age _ _ _ **Years** | **B 3** | **Gender** □ **1** Male □ **2** Female □ **9** Unknown | **B2** | Patient\ Case full Name_____ | **B1** |
| **Date of Death Certificate**_ _ / _ _ / _ _ | **B 6** | **Death Certificate No** _ _ _ _ . _ _ _ _ | **B5** | Patient\ Case Address )Governorate_____ ( | **B4** |
| C ARRIVAL SEQUENCE | | | | | |
| Date of Cadaver Found _ / _ _ _ _ / _ | **C3** | Time of Injury _ _ | **C2** | □ Date Unknown **9** | Date of injury _ / _ _ / _ _ _ _ _ **C1** |
| **Time** ) **0-23** (**International time** | | Time of arrival_ _ | **C5** | Date of arrivall to the health facility _ _ / _ _ _ _ _ / | **C4** |
| □Unknown **9** | □3 More than 24 hours | □2 within 24 hours | | □1 within 1 hour | Time from injury to arrival **C6** |
| □Unknown **9** | □2 No | □1 Yes | Patient got medical care before coming to ER? | | **C7** |
| □Unknown **9** | □ 8) Others(not a car( | □ Other vehicle 2 | | □1 Ambulance | Mode of Arrival) one choice( **C8** |
| D INJURY RELATED INFORMATION | | | | | |
| **fill field E selected )1.6 و 1.7 ( If** | | | | Circumstances (How was the injury inflicted ( )one choice( | **D1** |

| **Others 5** | | **4 Outside Violence** | | **3 Domestic Violence** | | **2 Traffic Accidents** | | **1 Explosion Accidents** | |
|---|---|---|---|---|---|---|---|---|---|
| □Animal bite | **5.1** | □Gun fire | **4.1** | □Gun fire | **3.1** | □Pedestrian | **2.1** | □Gun fire | **1.1** |
| □Drowning | **5.2** | □Sharp tools | **4.2** | □Sharp tools | **3.2** | □Car | **2.2** | □Explosive | **1.2** |
| □ Poisoning | **5.3** | □Blunt | **4.3** | □Blunt | **3.3** | □Bicycle | **2.3** | □IED | **1.3** |
| □Falls | **5.4** | □Others | **4.8** | □Others | **3.8** | □Motorcycle | **2.4** | □Suicide bomber | **1.4** |
| □Burns | **5.5** | □Unknown | **4.9** | □Unknown | **3.9** | □Others | **2.8** | □Car bomb | **1.5** |
| □ Suffocation | **5.6** | | | | | □Unknown | **2.9** | □Land mine | **1.6** |
| □Electric injury | **5.7** | | | | | | | □UXO | **1.7** |
| □Others | **5.8** | | | | | | | □Others | **1.8** |
| □Unknown | **5.9** | | | | | | | □Unknown | **1.9** |

| | | | |
|---|---|---|---|
| □**9** Unknown | □**2** No | □**1** Yes | **Were 5 or more people injured in this incident** **D2** |
| □**3** Unintentional inflected by others | □**2** Intentional inflected by self | □**1** Intentional inflected by others | **Intention** **D3** |
| □Unknown **9** | □ Others **8** | □**4** Unintentional inflected by self | |
| District_____ : | Police Station_____ : | **Governorate :** _____ | **Geographical location of incident** **D4** |

| | | | | | | |
|---|---|---|---|---|---|---|
| □ 5 Market | □**4** Public gathering | □**3** Workplace | □**2** Street | □**1** Home | **Place of occurrence)** one choice**(** | **D5** |
| □Unknown **9** | | □**8** Others | □**6** Farm and countryside | | | |
| □2 Discharged agianst medical advice | | □**1** Treated and sent home | | | **Initial patient disposition in emergency department** | **D6** |
| □5 Died in emergency department | | □4 Dead on arrival | | □**3** Admitted to the hospital | | |
| □**6** Another Hospital) specify_____ :( | | | | | | |
| □Unknown **9** | | □**8** Others | | | | |

| | | |
|---|---|---|
| Sig. | Date of Filling_ _ _ _ / _ _ / _ _ | Filled by__ __ _____ **:** |
| Sig. | Date_ _ _ _ / _ _ / _ _ | Checked by__ __ _____ **:** |

**Instructions how to fill the form**

1- **Read the instruction carefully before filling.**
2- **Use the mark ☒ inside the suitable square and do not use other marks like √ or ° in order to standardize the answers for data entry.**
3- **Care on filling all the fields in the form, the red color is used for special fields for C.O.**
4- **Data collectors and supervisors should write clearly their name, signature and date of filling.**
5- **Section A should be fillet by supervisor.**
6- **In section (B), a (Case) means the dead person or the injured transferred to C.O.**
7- **In section (B1), if the name is unknown should be written unknown and not left blank.**
8- **In section (B3), if the age less than one year will be written (000) and estimate the age of the case, if not possible will be write (999).**
9- **Time upon international time is between (0 – 23) should be written in hours and ignore the minutes, for 12 o'clock at midnight should be written (00).**
10- **Attention on the logic consequences between the date of injury, date of arrival and the date of filling.**
11- **In section (C8) others means any facility other than ambulance and cars (carriage, motorcycle, plane,…etc).**
12- **In section (D1) if the answers 1.6 Land mine or 1.7 UXO section (E) should be filled.**
13- **In section (D1 choisw 1.2 includes all unknown explosive matters and projectiles, mortar rockets, planes,….**
14- **In section (D1) choice 2.8 *others* means mode of injury that not mentioned like ( carriage, animal, train,…)**
15- **In section (D5) public gathering includes ( Church, Mosque, …) or other gathering for training purposes.**
16- **Emphasize on distinguish between *Explosion Accidents* and *Outside Violence*.**