Republic of Iraq

Ministry of health

Iraqi Injury Surveillance System

Annual report, 2021

Edited by

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Summary

The Iraqi injury surveillance system provides very important information about fatal and non-fatal injuries. Using this information for public health action will decrease the impact of injuries in community.

Data collected from all Iraqi governorates in sentinel hospitals for non-fatal injuries and from forensic medicine section or coroner office for fatal injuries. This report reveals that all governorates sent data during 2021,except Sulaimaniya D.O.H

The total number of non-fatal injuries reported was (199,220), while the total fatal injuries were (12,259).

The surveillance report (2021) reveals that male accounted for more than 79 % of non-fatal injuries, the most common age group was (20-24) year, while in fatal injuries male accounted (73.4)%,the most common age group was (20-24) year.

According to governorates distribution, the highest number of non-fatal injuries was collected from ThiQar, Dayala and Baghdad (Noting that Baghdad consists of three health directorates ,Baghdad-Karkh, Baghdad-Rusafa and Medical City), while fatal injuries mainly collected from Baghdad Medico-legal Directorate, then Babil ,Kirkuk and Kerballa.

According to intention of injury , majority of non-fatal injuries and fatal injuries were unintentional, followed by intentional injuries.

According to circumstances of injury, the main cause of non -fatal and fatal injuries was traffic injuries, then other injuries including (falls, burns, drowning ,animal bites ...),followed by outside and domestic violence and lastly insurgency or explosive accidents.

Regarding traffic non-fatal injuries, the most common cause was car occupants, followed by motor cycle users, and then pedestrian, while in fatal injuries car occupants came first followed by pedestrian, then motorcycle users.

The report reveals that street/high way /roads were the main locations for non-fatal and fatal injuries , then homes and other places.

This report shows that about 66 % of non-fatal injuries treated and sent home, but only 8.2 % of them arrived by ambulance and 14.2 % got medical care before emergency departments.

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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. 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 . Source:
http:\www.who.int/healthinfo/global_burden_disease\projections\en\

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

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(2021) was collected from emergency departments in all directorates and coroner offices departments except sulaimaniya when both non-fatal and fatal injury data didn't send .

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 2021 for non-fatal injuries from data recorded at sentinel emergency departments

3- Overview of key findings for 2021 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, Misssan, Ninevah, and Al-Sulaimaniya.

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 department of DOH and/or the MOH conducted monthly visits to monitor the process. During monthly visits, surveillance forms are compared to hospital and COS 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 Department; which is part of Operations and Emergency Medical services 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, Labor, 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 victims by (D.O.H), 2021.

Table (2); number and percent of non-fatal injuries reported by directorates of health (D.O.Hs), 2021.

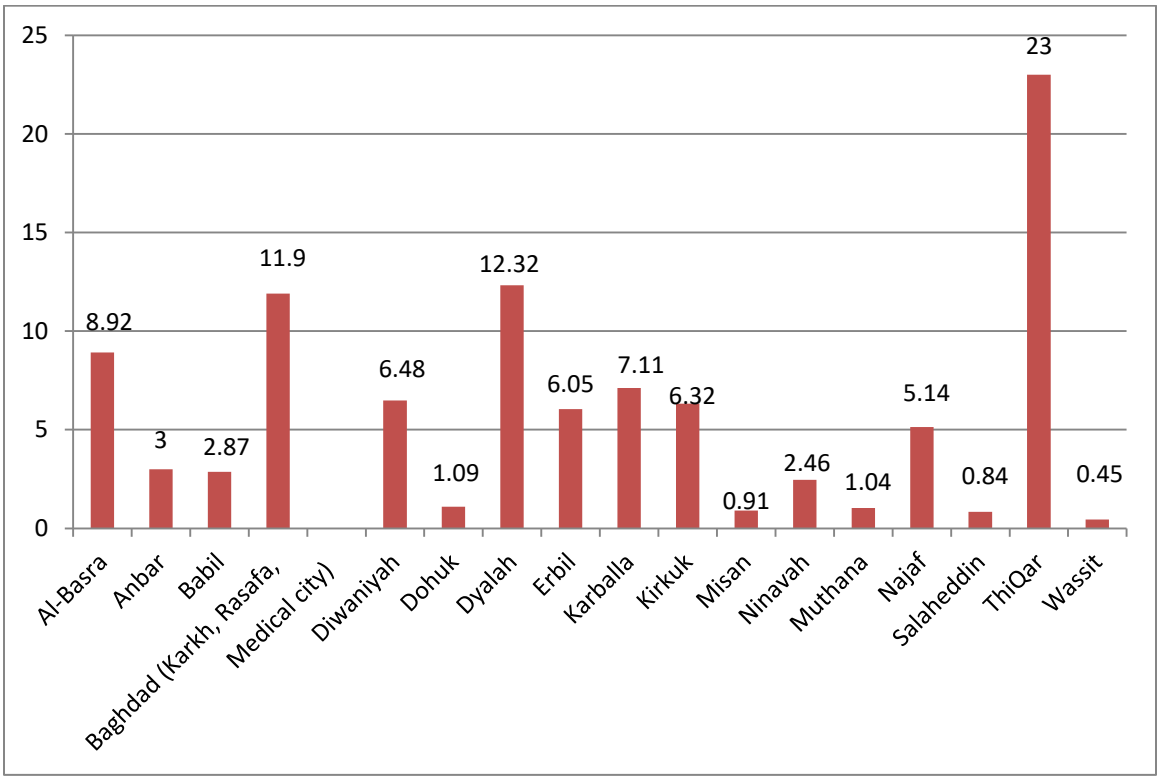
Governorates	N	%
Al-Basra	10644	8.9
Anbar	3582	3.0
Babil	3429	2.8
Baghdad (Karkh, Rasafa and Medical City)	14194	11.9
Diwaniyah	7735	6.4
Dohuk	1304	1.0
Dyalah	14697	12.3
Erbil	7219	6.0
Karballa	8483	7.1
Kirkuk	7539	6.3
Misan	1090	0.9
Ninavah	2942	2.4
Muthana	1249	1.0
Najaf	6135	5.1
Salaheddin	1007	0.8
ThiQar	27431	23.0
Wassit	540	0.45
Total	119220	100

The total number of non-fatal injuries reported in 2021 was (119220),

Data received from all directorates of health (D.O.Hs) except Sulaymania .

Non-fatal surveillance site doesn't capture all non-fatal injuries.

Figure (1); percent of non-fatal injuries reported by directorates of health (D.O.H), 2021.



This figure shows that ThiQar reported the highest percent (23)% of all reported cases, then Dyalah (12.32) % and Baghdad (10.74) % , while Wassit reported the lowest percent (0.45) %.

Every governorate represented one D.O.H, except Baghdad ,which consists of three D.O.Hs, Baghdad-Karkh, Baghdad- Rasafa and Medical City.

Although there are (18) governorates in Iraq, but there are (21) D.O.Hs.

Within each directorate, there some hospitals reporting non-fatal injuries, which are general and large public hospitals.

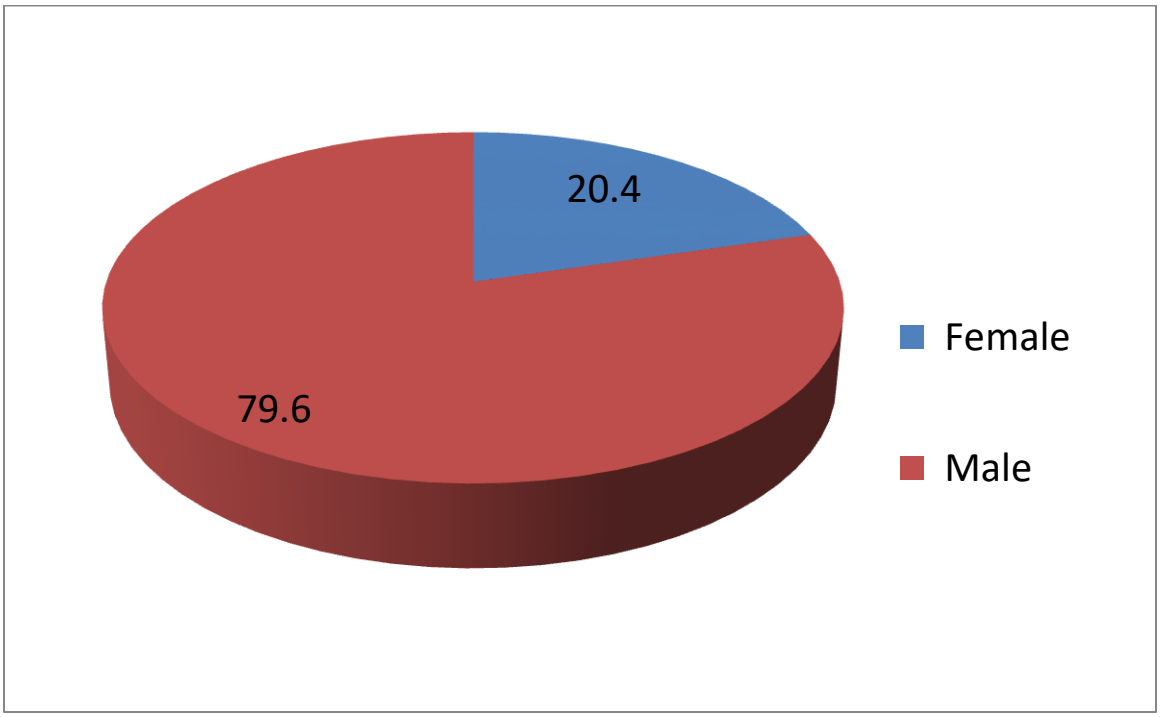
Non-fatal injury surveillance does not representative to all non-fatal injuries.

Table (3); number and percent of male and female of reported non-fatal injuries, 2021.

Gender	N	%
Female	24325	20.4
Male	94895	79.6
Total	119220	100

This table shows the highest percent in total reported non-fatal injuries (79.6) % was among male, while in female percent was (20.4)%

Figure (2); sex distribution of reported non-fatal injuries, 2021.



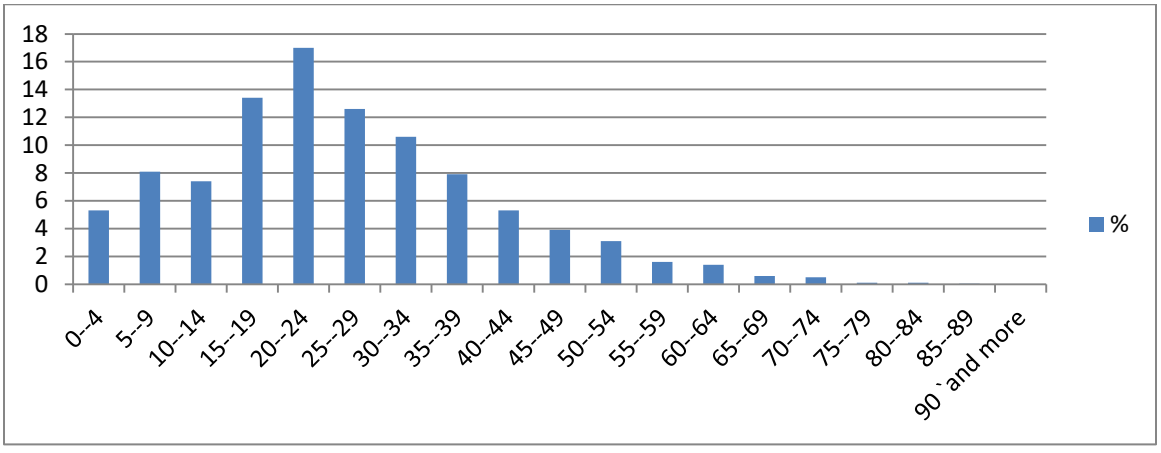
This figure shows highest percent of reported non-fatal injuries in 2021 was in male in all governorates as well as in total.

(79.6) % of all cases were male, while only (20.4) % were female.

Table (4): age distribution of reported non-fatal injuries, 2021

Age group	N	%
0--4	6348	5.3
5--9	9718	8.1
10--14	8865	7.4
15--19	16076	13.4
20--24	20296	17
25--29	15123	12.6
30--34	12743	10.6
35--39	9498	7.9
40--44	6390	5.3
45--49	4691	3.9
50--54	3737	3.1
55--59	1922	1.6
60--64	1769	1.4
65--69	773	0.6
70--74	635	0.5
75--79	193	0.1
80--84	146	0.1
85--89	70	0.05
90 `and more	20	0.01
TOTAL	119220	100

Figure (3): age distribution of reported non-fatal injuries, 2021.



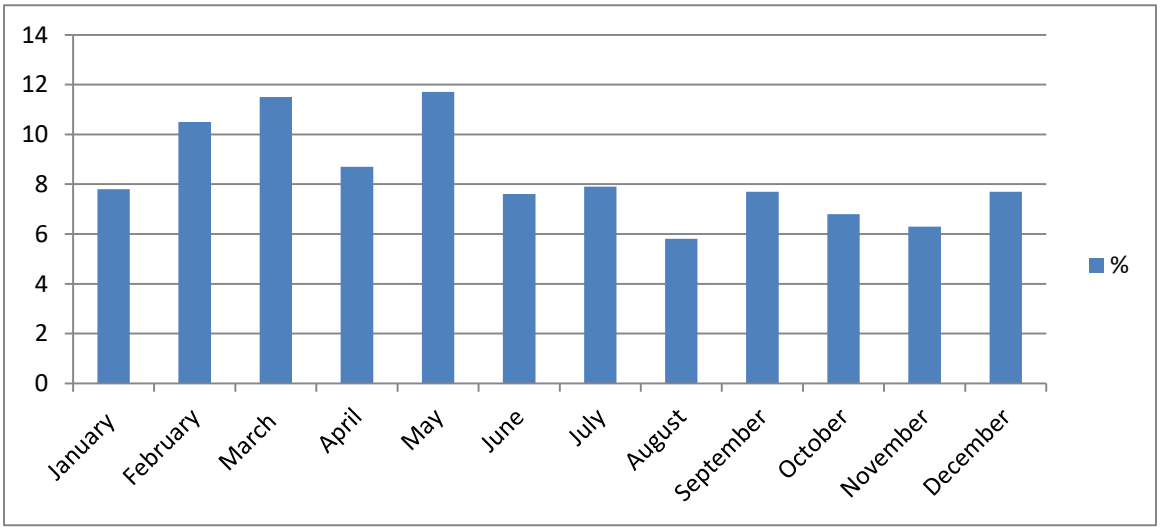
This figure shows clearly that non-fatal injuries affected younger age more than older age groups , but reproductive age (15 – 39) affected more than other age groups**.** The most common age group affected was (20-24)year ,it represented (17)%of total injuries.

2-2 Time trend

Table (5); number and percent of non-fatal injuries according to months, 2021.

Month	N	%
January	9339	7.8
February	12406	10.5
March	13655	11.5
April	10327	8.7
May	13832	11.7
June	9038	7.6
July	9474	7.9
August	7012	5.8
September	9222	7.7
October	8195	6.8
November	7512	6.3
December	9188	7.7
Total	119220	100

Figure (5); time trend of non-fatal reported injuries, 2021.



This figure shows that non-fatal injuries reported during all months .

No consistent trend were identified .The highest percent recorded during May, while the lowest percent recorded during August.

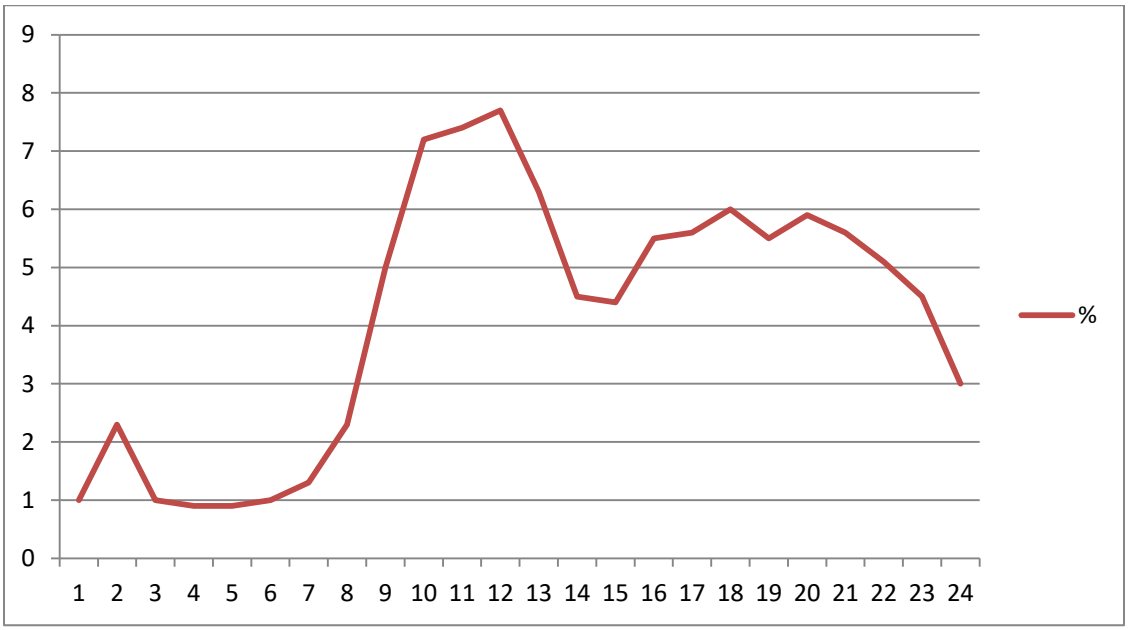
Table (6); number and percent of non-fatal injuries reported according to time, 2021.

Time	N	%
0	1258	1.0
1	2750	2.3
2	1224	1.0
3	1132	0.9
4	1059	0.9
5	1204	1.0
6	1612	1.3
7	2728	2.3
8	5954	5.0
9	8592	7.2
10	8834	7.4
11	9178	7.7
12	7453	6.3
13	5385	4.5
14	5268	4.4
15	6524	5.5
16	6659	5.6
17	7132	6.0
18	6582	5.5
19	6996	5.9
20	6643	5.6
21	6041	5.1
22	5395	4.5
23	3626	3.0
Total	**119220**	**100**

This table shows non-fatal injuries according to international time(0-23) .

Cases of Non-fatal injuries started to increase in the period (8 am -23 pm).

Figure (6); distribution of non-fatal injuries reported by day, 2021.



This figure shows number of non- fatal injuries reported started to increase after 8 am (morning) to reach peak (around 12 a.m) ,then began to decrease after 15p.m (afternoon), then number of cases became low till eight o'clock of next morning , when started to increase again.

2-3 distribution of injuries by intention

The following section presented injuries by intention of injury .

The intention of injury classified into;

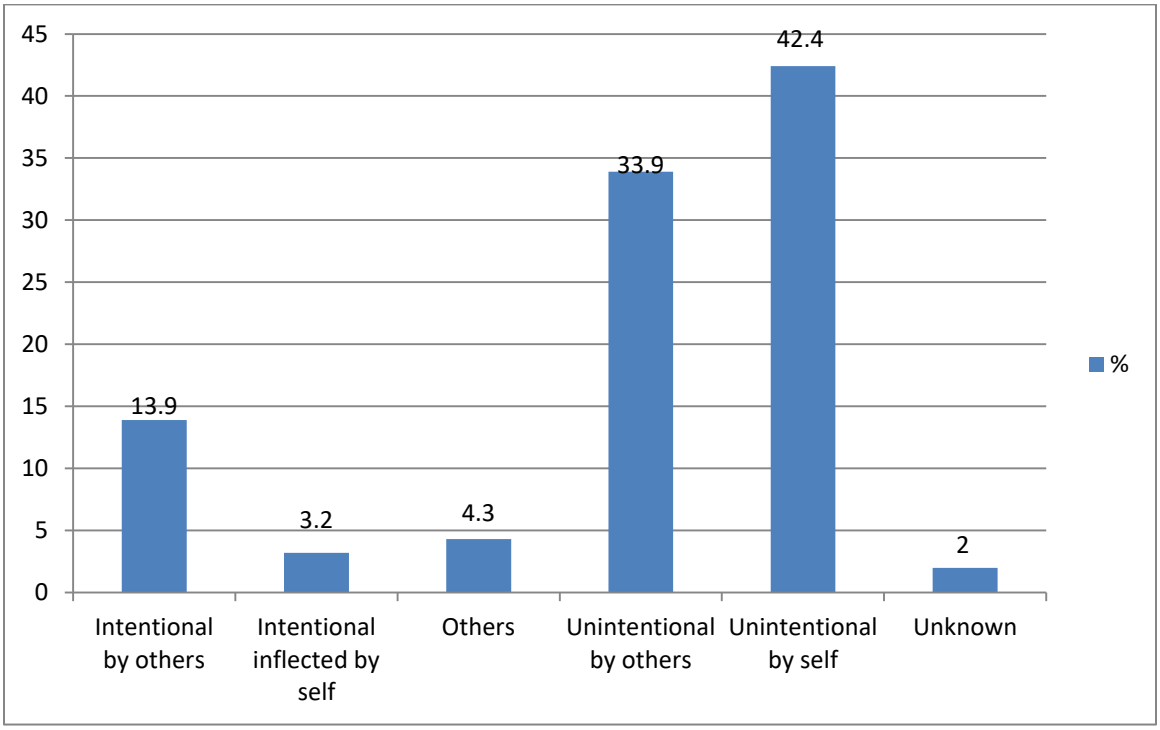
- Intentional by others
- Intentional by self (self-harm)
- Others
- Unintentional by others
- Unintentional by self
- Unknown intent.

Table (7) number and percent of injuries by intention of non – fatal injuries, 2021.

Injury by intention	N	%
Intentional by others	16583	13.9
Intentional inflected by self	3901	3.2
Others	5210	4.3
Unintentional by others	40496	33.9
Unintentional by self	50582	42.4
Unknown	2448	2.0
Total	119220	100

This table shows that according to intention, majority of non-fatal injuries were unintentional, followed by intentional then unknown intent.

Figure (7); percent of injuries by intention of reported non – fatal injuries, 2021.



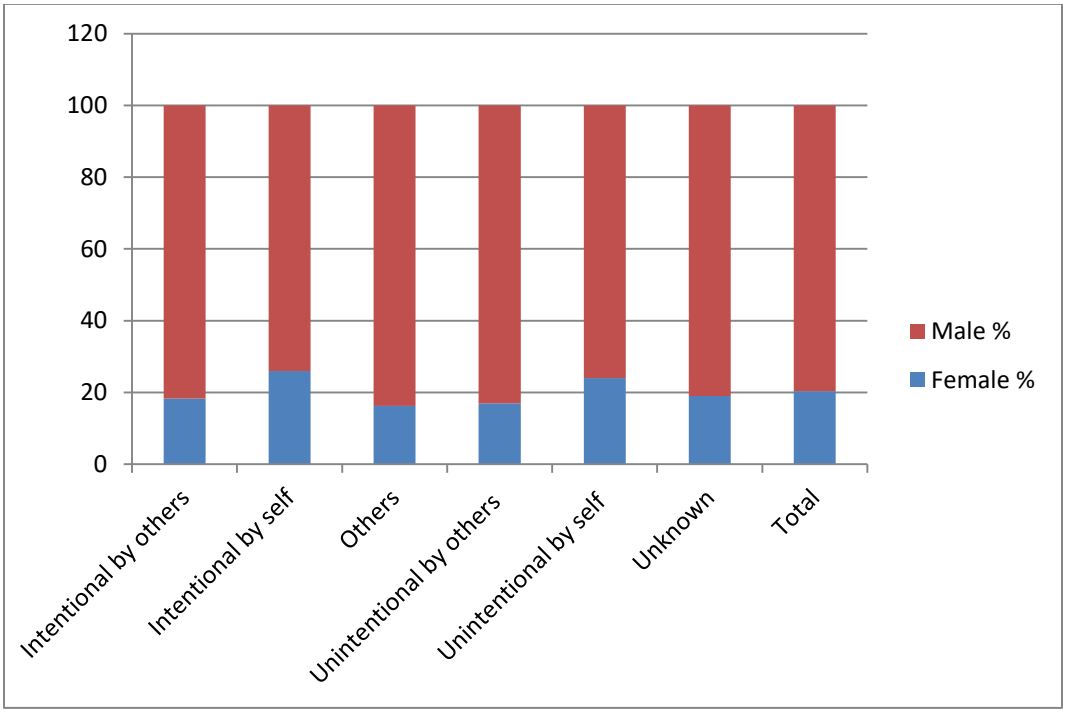
This figure shows that an un-intentional injuries , either by self or by others cause the greatest proportion of all non- fatal injuries (42.4%),(33.9 %) sequentially ,and intentional injuries wither by self or by others represents (about 17 % together), while the proportion of unknown intentional injuries(2%) and others represents (4.3%).

Table (8); percent of non-fatal injuries reported according to sex, 2021.

Intention	Female %	Male %
Intentional by others	18.3	81.7
Intentional by self	26.0	74.0
Others	16.3	83.7
Unintentional by others	17.0	83.0
Unintentional by self	24.0	76.0
Unknown	19.0	81.0
Total	20.4	79.6

This table shows that the percent of injuries among male represented (79.6) % of total, while percent of injuries among female represented (20.4) % .

Figure (8); percent of injuries reported according to sex, 2021.



This figure shows that male to female ratio is greater in male than in female in all types of injuries.

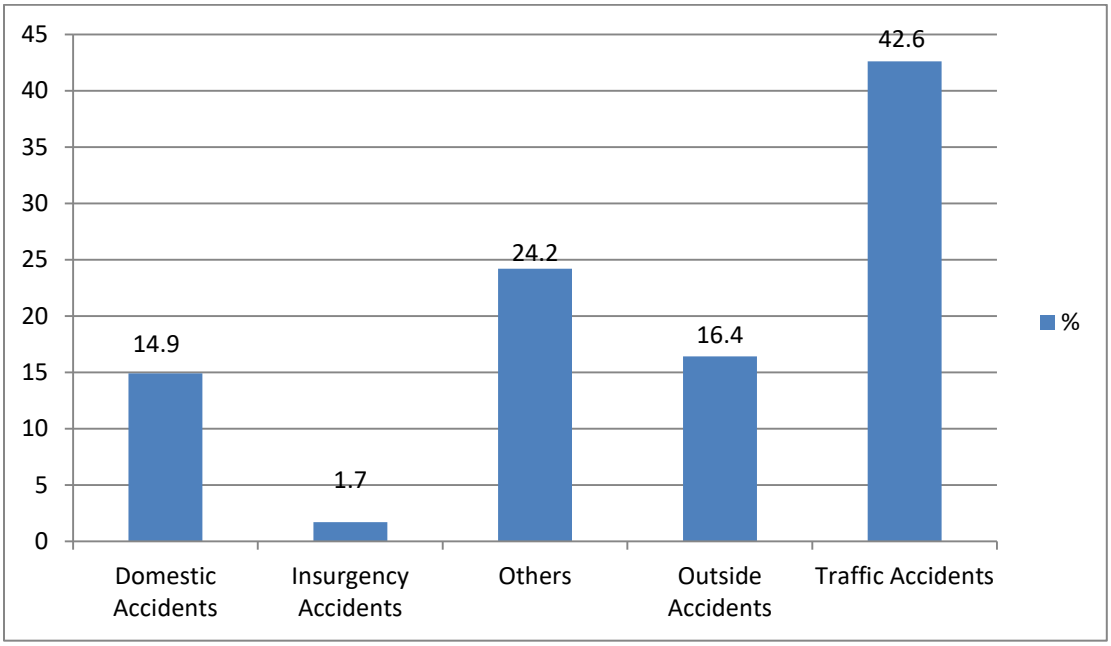
2-4 distribution of injuries by mechanism

The following section presented injuries by mechanism of injury .The mechanism of injury reflects the primary cause of non-fatal injury as classified by health care provider, while circumstances of injury reveals how was the injury inflected.

Table (9); number and percent of non-fatal injuries according to circumstances of injury, 2021.

Circumstances	N	%
Domestic Accidents	17780	14.9
Insurgency Accidents	2103	1.7
Others	28848	24.2
Outside Accidents	19588	16.4
Traffic Accidents	50901	42.6
Total	119220	100

Figure (9); percent of non-fatal injuries according to circumstances ,2021.

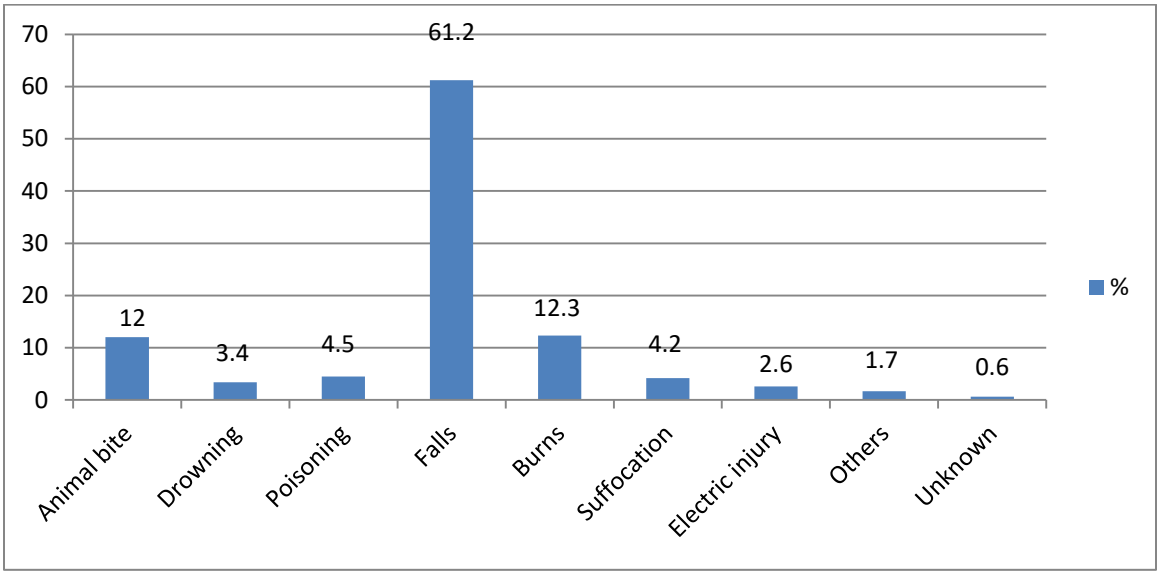


This figure shows that traffic was the main cause among non-fatal injuries, represented (42,6)% followed by others (injury other than traffic like falls, burns, animal bites...) which represented (24.2) %,then Outside accidents which represented (16.4) %.

Table (10); number and percent of unintentional (other than traffic…), injuries among all non-fatal injuries according to mechanism, 2021.

Unintentional-other injuries	N	%
Animal bite	3460	12.0
Drowning	120	3.4
Poisoning	1310	4.5
Falls	17672	61.2
Burns	3570	12.3
Suffocation	1232	4.2
Electric injury	768	2.6
Others	511	1.7
Unknown	205	0.6
Total	28848	100

Figure (10); percent of unintentional (other than traffic…), injuries among all non-fatal injuries according to mechanism, 2021.



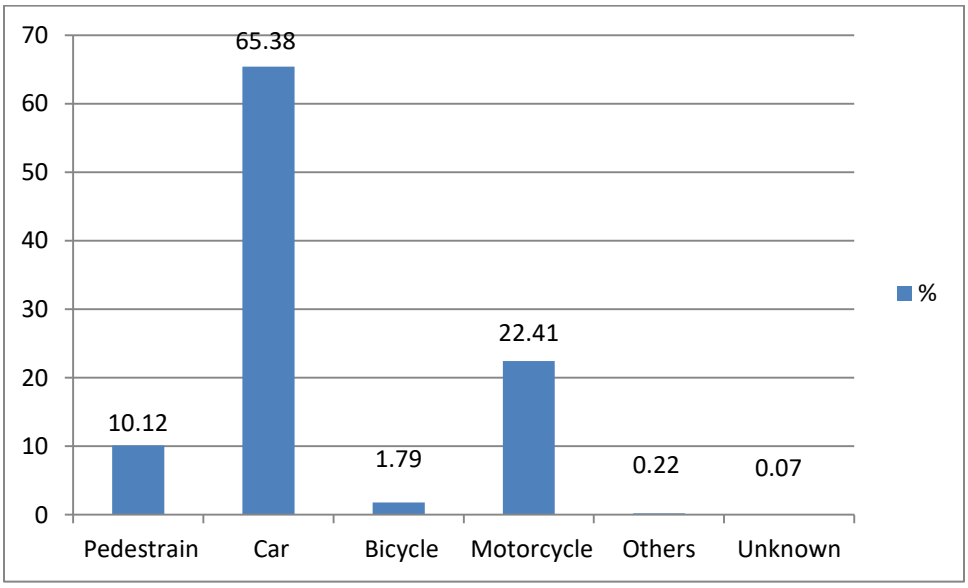
This figure shows that falls was the main cause among other (than traffic) non-fatal injuries, represented (61.2)% followed by burns which represented (12.3)%,then animal bites which represented (12) %.

Table (11); number and percent by mechanism among non-fatal traffic injuries,2021.

Traffic injuries	N	%
Pedestrian	2450	10.12
Car	15825	65.38
Bicycle	433	1.79
Motorcycle	5425	22.41
Others	54	0.22
Unknown	17	0.07
Total	50901	100

This table shows number and percent of traffic injuries classified wither (car, motorcycle bicycle …) undergo to an accident.

Figure (11); percent of injuries by mechanism among nonfatal- traffic injuries, 2021.



This figure shows that the main cause related to non-fatal road traffic injuries was car accidents (65.38) % followed by motorcycles (22.41) %, then pedestrians (10.12) %.

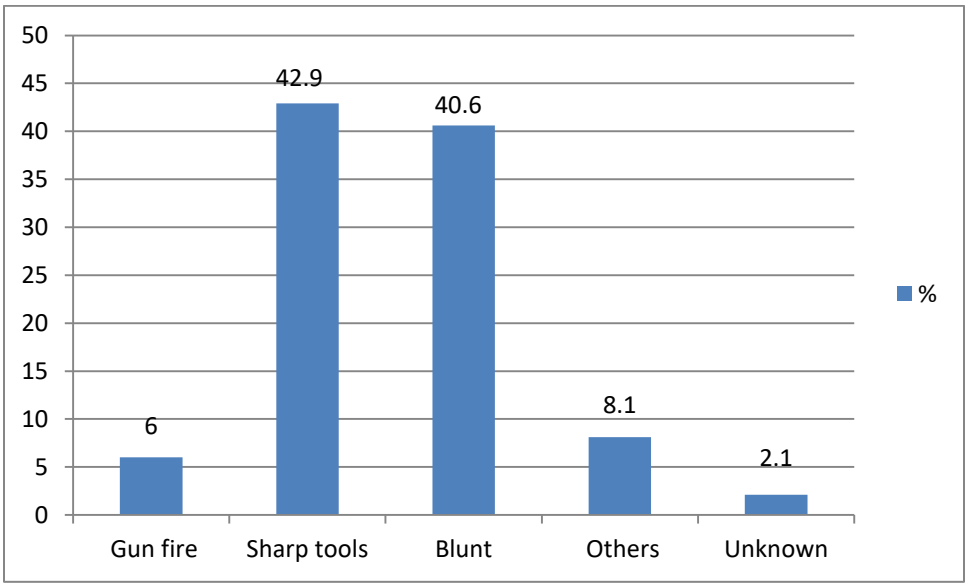
Table (12); number and percent of outside violence injuries among nonfatal injuries,2021.

Outside violence	N	%
Gun fire	1189	6
Sharp tools	8418	42.9
Blunt	7965	40.6
Others	1601	8.1
Unknown	415	2.1
Total	19588	100

This table shows number and percent of outside violence injuries according to cause.

Remember that outside violence injuries represented (16, 4) % from total non-fatal injuries as mentioned in table (9).

Figure (12) percent of outside violence injuries among nonfatal injury,2021.



This figure shows that sharp tools injuries represented (42.9) % then blunt injuries (40.6) %, while gunfire injuries represented only (6) %.

The two main causes in outside non-fatal injuries were sharp and blunt injuries.

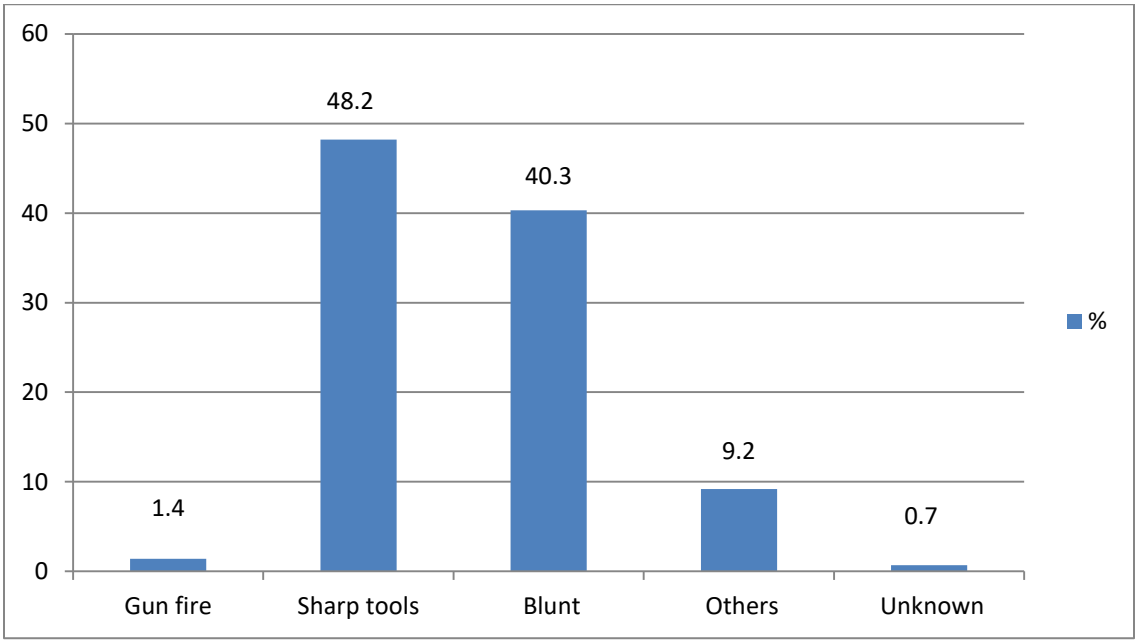
Table (13); number and percent of domestic violence among non-fatal injuries, 2021.

Domestic violence	N	%
Gun fire	250	1.4
Sharp tools	8579	48.2
Blunt	7181	40.3
Others	1651	9.2
Unknown	119	0.7
total	17780	100

This table shows number and percent of domestic violence injuries according to cause.

Remember that domestic violence injuries represented (14, 9) % from total non-fatal injuries as mentioned in table (9).

Figure (13) ; percent of domestic violence among all non- fatal injuries,2021.



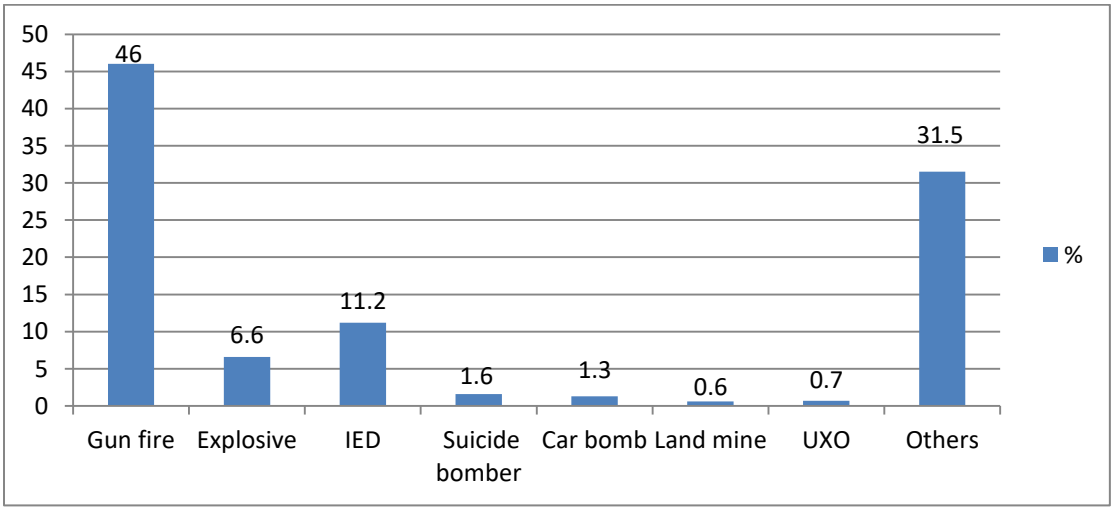
This figure shows that ,as in outside violence, sharp tools and blunt injuries represented the main causes, while gun fire represented only (1.4)% of domestic non-fatal injuries.

Table (14); number and percent of insurgency activities according to mechanism of injury among all non-fatal injuries, 2021.

Insurgency	N	%
Gun fire	968	46
Explosive	139	6.6
IED	237	11.2
Suicide bomber	34	1.6
Car bomb	29	1.3
Land mine	14	0.6
UXO	16	0.7
Others	666	31.5
Total	2103	100

This table shows number and percent of Insurgency activities according to cause. Remember that insurgency injuries represented (1, 09) % from total non-fatal injuries as mentioned in table (9).

Figure (14); percent of insurgency activity according to mechanism of injury among all non-fatal injuries, 2021.



This figure shows that gun fire represented the main cause of non-fatal insurgency activities (46) %, then improvised explosive device (IED) (11.2) % and explosive(6.6) % .

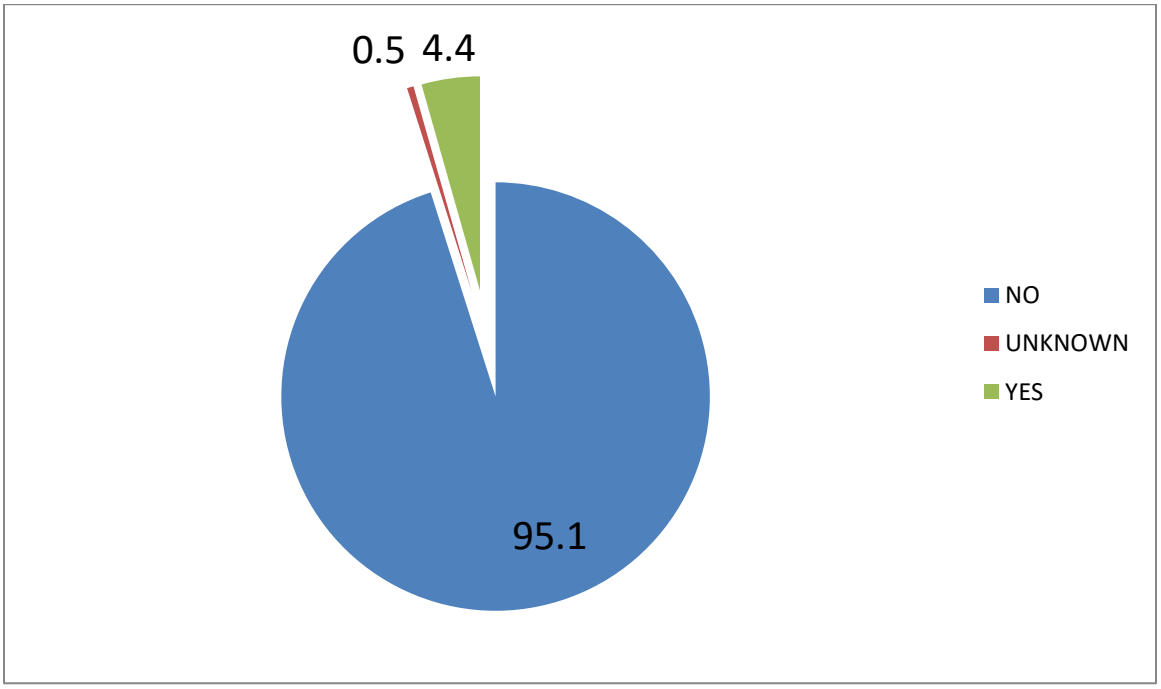
2 – 5 Mass Injury Events

In this section a mass injury event is defined as an event that causes 5 or more people injured in the accident.

Table (15); number and percent of injuries resulting from mass injury event among reported non-fatal injuries, 2021.

Mass event	N	%
NO	113430	95.1
UNKNOWN	550	0.5
YES	5240	4.4
TOTAL	119220	100

Figure (15); percent of injuries resulting from a mass injury event among reported non-fatal injuries, 2021.



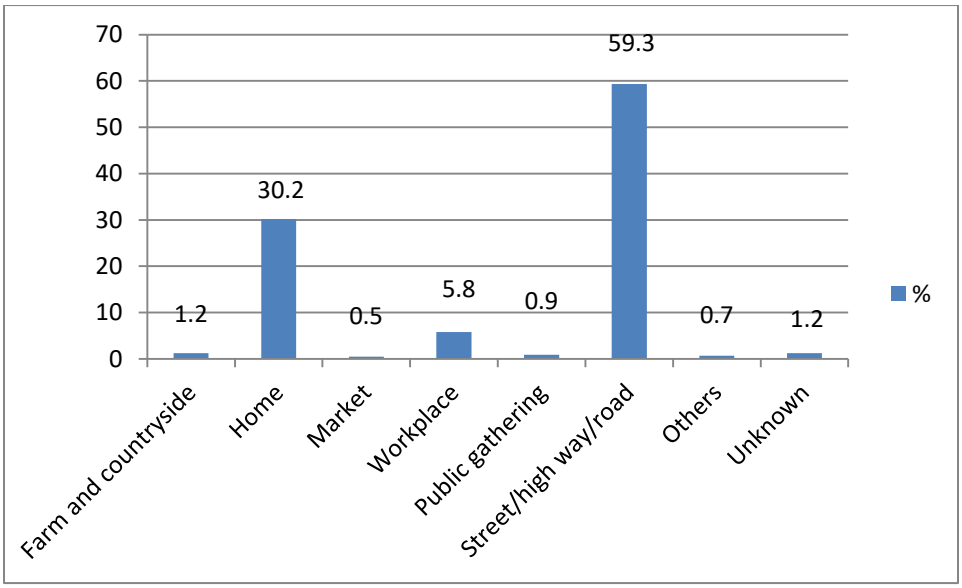
This figure shows the proportion of injuries resulting from a mass casualty event among all reported non-fatal injuries. Only (4.4) % of injuries resulted from mass casualty events.

2 – 6 Distribution according to place of injury

Table (16) number and percent of non-fatal injuries according to place of occurrence, 2021.

Place of accident	N	%
Farm and countryside	1487	1.2
Home	36090	30.2
Market	539	0.5
Workplace	6952	5.8
Public gathering	1093	0.9
Street/high way/road	70731	59.3
Others	919	0.7
Unknown	1408	1.2
Total	119220	100

Figure (16); percent of non-fatal injuries according to place,2021.



This figure shows that about (59.3) % occurred in street /highway/road, while injuries occurred at home represented (30.2)% .

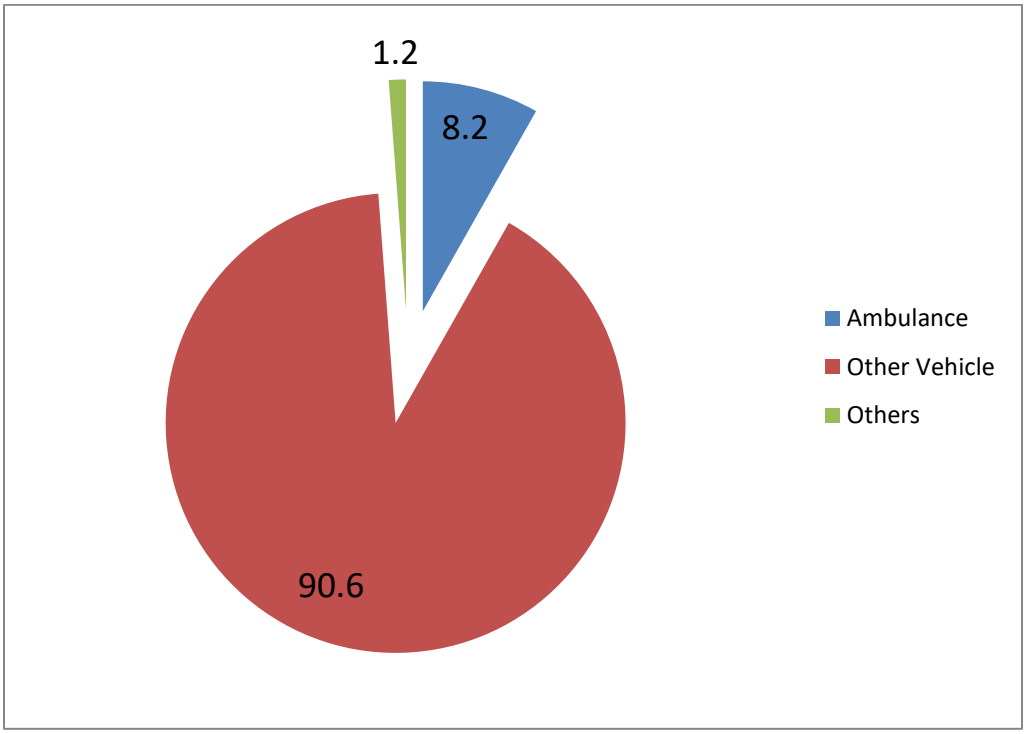
Injuries occurred in workplace came third and represented (5.8) % of total injuries reported during 2021.

2 – 7 pre- hospital care and disposition

Table (17); number and percent of reported non-fatal injuries received from (D.O.H) according to mode of arrival, 2021.

Mode of arrival	N	%
Ambulance	9640	8.2
Other Vehicle	107884	90.6
Others	1374	1.2
Total	119220	100

Figure (17); percent of reported non-fatal injuries received from (D.O.H) according to mode of arrival, 2021.



This figure shows that only (8,2)% of non-fatal injuries arrived to hospital by an ambulance ,while (90,6) % arrived by other vehicles.

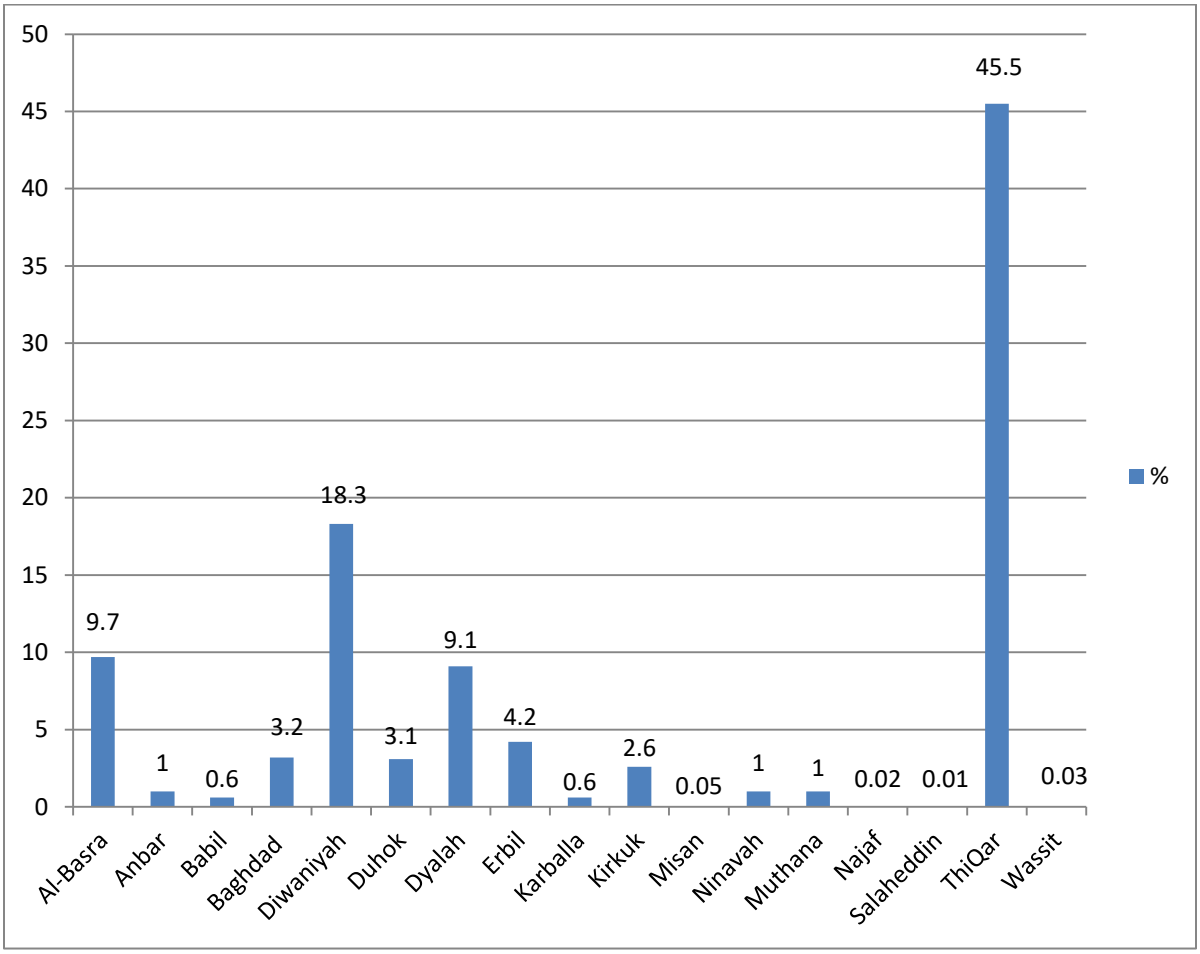
Table(18);number and percent of non-fatal injuries arrived by ambulance as reported by (DOHs),2021.

D.O.H	N	%
Al-Basra	936	9.7
Anbar	94	1.0
Babil	61	0.6
Baghdad	309	3.2
Diwaniyah	1754	18.3
Duhok	303	3.1
Dyalah	884	9.1
Erbil	377	4.2
Karballa	61	0.6
Kirkuk	256	2.6
Misan	5	0.05
Ninavah	101	1.0
Muthana	103	1.0
Najaf	2	0.02
Salaheddin	1	0.01
ThiQar	4390	45.5
Wassit	3	0.03
Total	9640	100

This table shows number and percent of non-fatal injuries transferred to hospital by ambulance. The total number (9640) ,represented only (8.2) % of total non-fatal injuries

In some D.O.H like (Salahdin , Najaf and Wassit) , the number of transferring injured cases by ambulance was very small.

Figure (18); percent of non-fatal injuries arrived by ambulance according to (D.O.H), 2021.

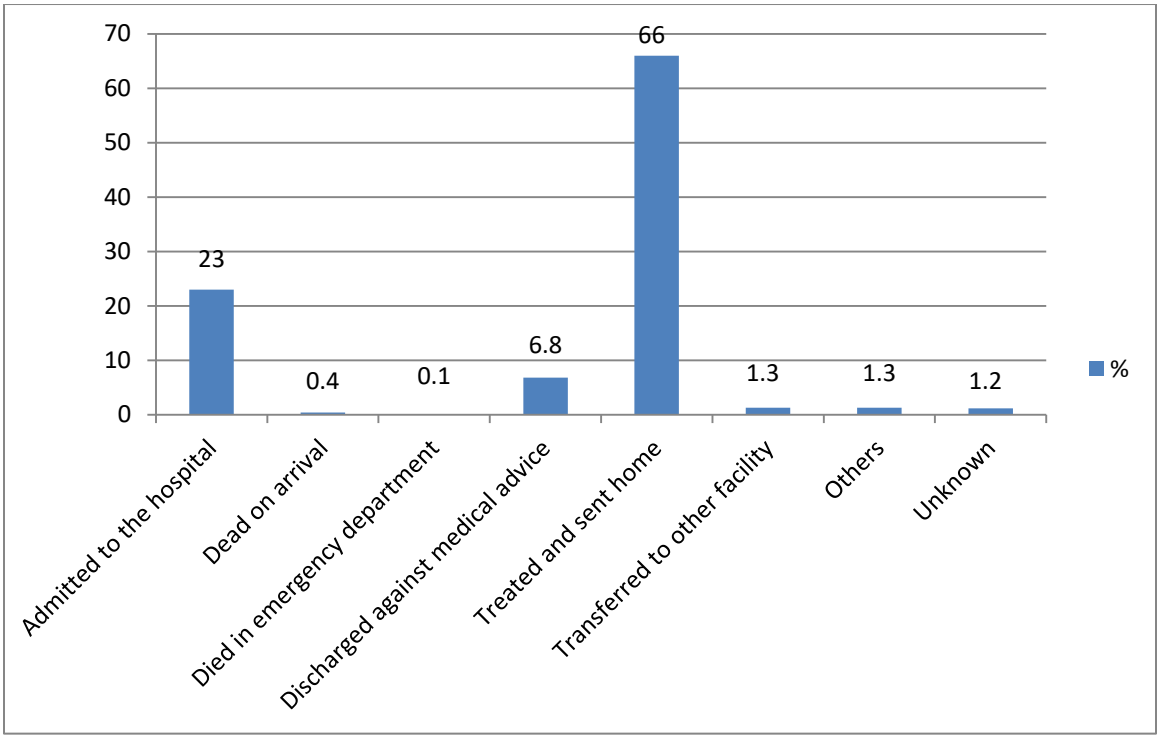


This figure shows that the highest percent of arriving to hospital by an ambulance was in ThiQar (45.5)%.,then Diwaniyah (18.3) %, ,Al-Basra (9,7) %. and Dyalah (9.1)%.

Table (19); number and percent of initial disposition of reported non-fatal injuries, 2021.

Initial patient disposition in emergency department	N	%
Admitted to the hospital	27428	23.0
Dead on arrival	457	0.4
Died in emergency department	90	0.1
Discharged against medical advice	8059	6.8
Treated and sent home	78702	66.0
Transferred to other facility	1491	1.3
Others	1599	1.3
Unknown	1394	1.2
Total	119200	100

Figure (19); percent of initial disposition of reported non-fatal injuries, 2021.



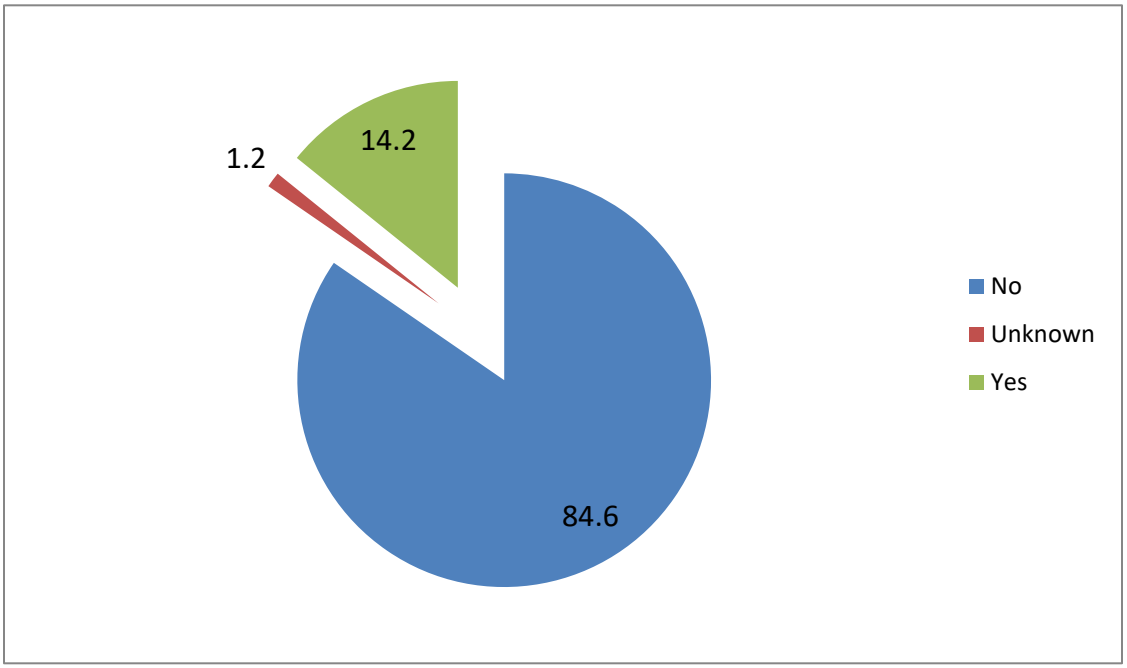
This figure shows that majority of non-fatal injuries was treated and discharged (66) % ,while (23) % was admitted to hospital and (6,8) % was left hospital against medical advice.

Table (20); number and percent of non-fatal injuries got medical care before emergency department, 2021.

If patient got medical care before ER ?	N	%
No	100889	84.6
Unknown	1377	1.2
Yes	16954	14.2
Total	119220	100

This table shows that only (14.2) % of the patients did get medical care before reaching to emergency department in hospitals. Majority (84.6) % of non-fatal injuries got no medical care before reaching ER in hospitals.

Figure (20); percent of non-fatal injuries got medical care before emergency department , 2021.



This figure shows that only (14.2) % of non-fatal injuries got medical care before reaching to emergency departments of hospitals .

3- Overview of key findings - fatal injury surveillance

3 -1 Overall numbers of fatal injuries, demographics

Table (21); number and percent of fatal injuries by D.O.Hs,.2021.

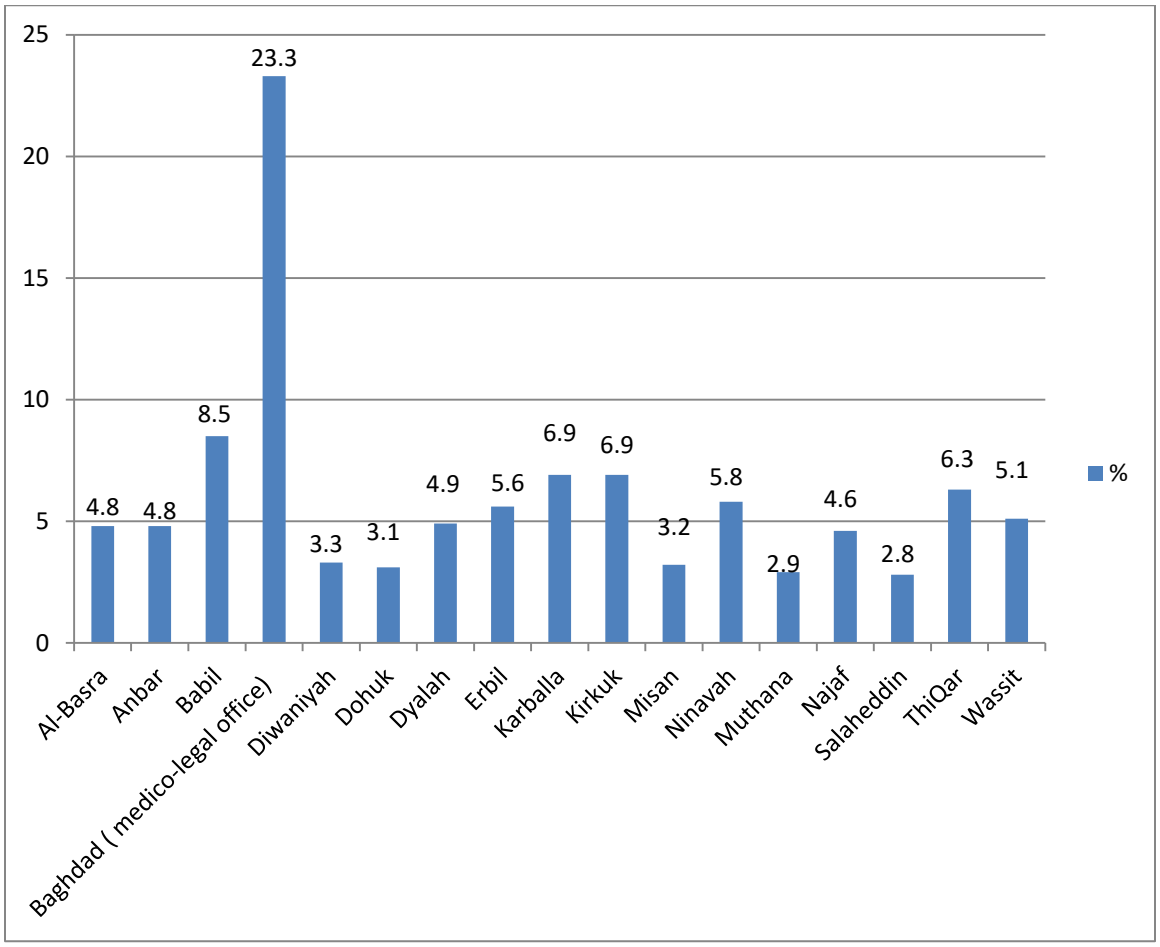
Governorates	N	%
Al-Basra	592	4.8
Anbar	585	4.8
Babil	1047	8.5
Baghdad (Medico-Legal Office)	2862	23.3
Diwaniyah	408	3.3
Dohuk	383	3.1
Dyalah	602	4.9
Erbil	684	5.6
Karballa	461	6.9
Kirkuk	852	6.9
Misan	395	3.2
Ninavah	716	5.8
Muthana	361	2.9
Najaf	570	4.6
Salaheddin	348	2.8
ThiQar	777	6.3
Wassit	621	5.1
TOTAL	12259	100

This table presents number and proportion of fatal injuries by D.O.Hs.

The total number of fatal injuries reported was (12259). These numbers are proportions, not rates, because it is not represent the difference in total population in governorates.

Sulaymania Health Directorate did not send data.

Figure (21):percent of fatal injuries according to D.O.H,2021.

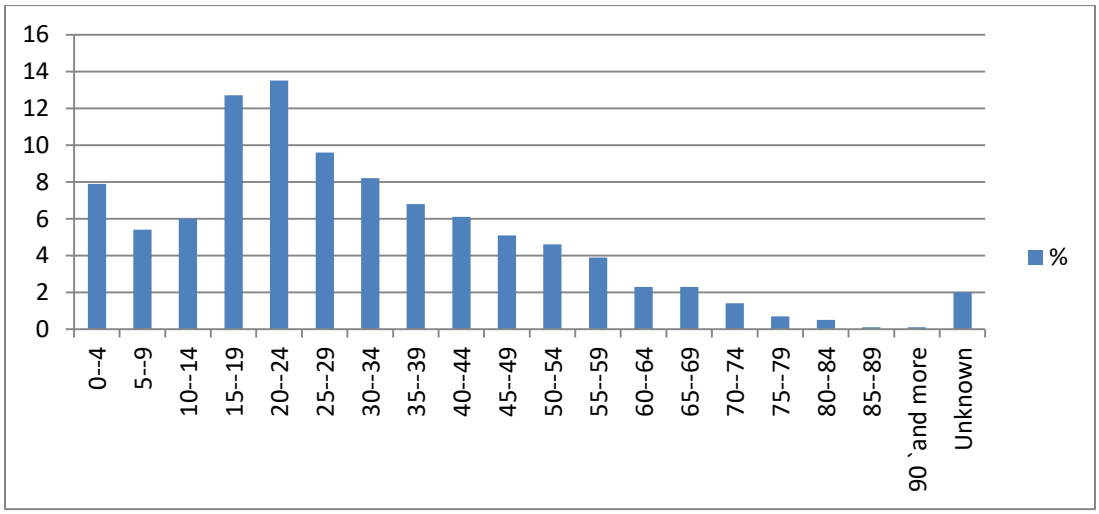


This figure shows that percent of fatal injuries as reported by forensic medicine sections in D.O.Hs. The highest percent (23,3) % was reported in Baghdad Forensic Medicine Office (Medico-legal Directorate), then Babil (8.5)% , Kirkuk (6.9) % and Karballa (6.9)%.

Table (22): age distribution of reported fatal injuries, 2021

Age group	N	%
0--4	970	7.9
5--9	664	5.4
10--14	741	6
15--19	1569	12.7
20--24	1657	13.5
25--29	1182	9.6
30--34	1012	8.2
35--39	833	6.8
40--44	749	6.1
45--49	630	5.1
50--54	570	4.6
55--59	477	3.9
60--64	293	2.3
65--69	291	2.3
70--74	178	1.4
75--79	89	0.7
80--84	67	0.5
85--89	15	0.1
90 `and more	16	0.1
Unknown	256	2
Total	12259	100

Figure (22); age distribution of fatal injuries, 2021

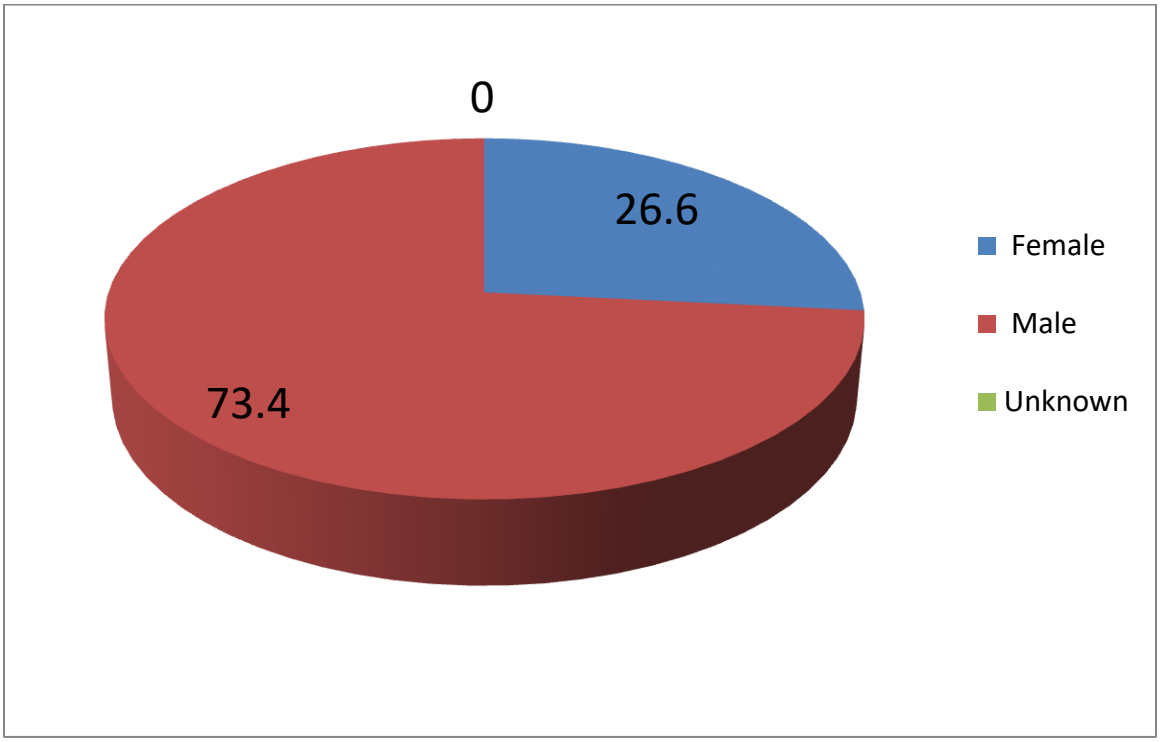


This figure shows that the most common age group affected due to fatal injuries was (20-24),which represented (13.5)%. There is important percent (7.9) % in children (0-4) years. The unknown age percent (2)%.

Table (23); sex distribution of fatal injuries,2021.

Gender	N	%
Female	3258	26.6
Male	8999	73.4
Unknown	2	00
Total	12259	100

Figure (23); age and sex distribution of fatal injuries, 2021.



This figure shows that as with non-fatal injuries males represented a greater proportion of fatal injuries (73.4) %,while female represented (26.6)%

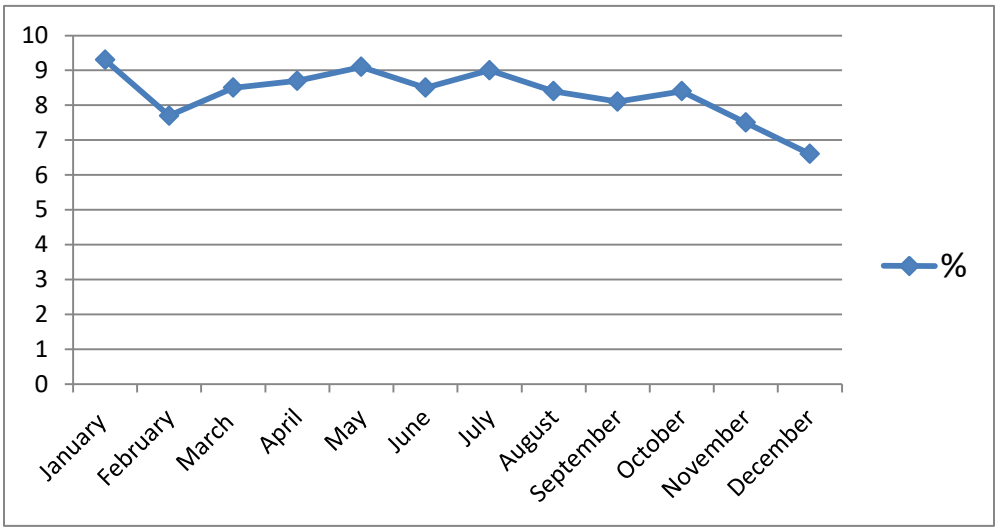
Male to female ratio is greater all age groups .

3-2 Time trend

Table (24); number and percent of fatal injuries according to months, 2021.

Month	N	%
January	1145	9.3
February	950	7.7
March	1043	8.5
April	1068	8.7
May	1117	9.1
June	1043	8.5
July	1104	9.0
August	1032	8.4
September	969	8.1
October	1026	8.4
November	924	7.5
December	811	6.6
Total	12259	100

Figure (24); percent of fatal injuries according to month, 2021.



This figure shows that fatal injuries were recorded in all months . The highest percent was reported in January(9.3)% ,while the lowest percent of fatal injuries was reported in December (6.6)%.

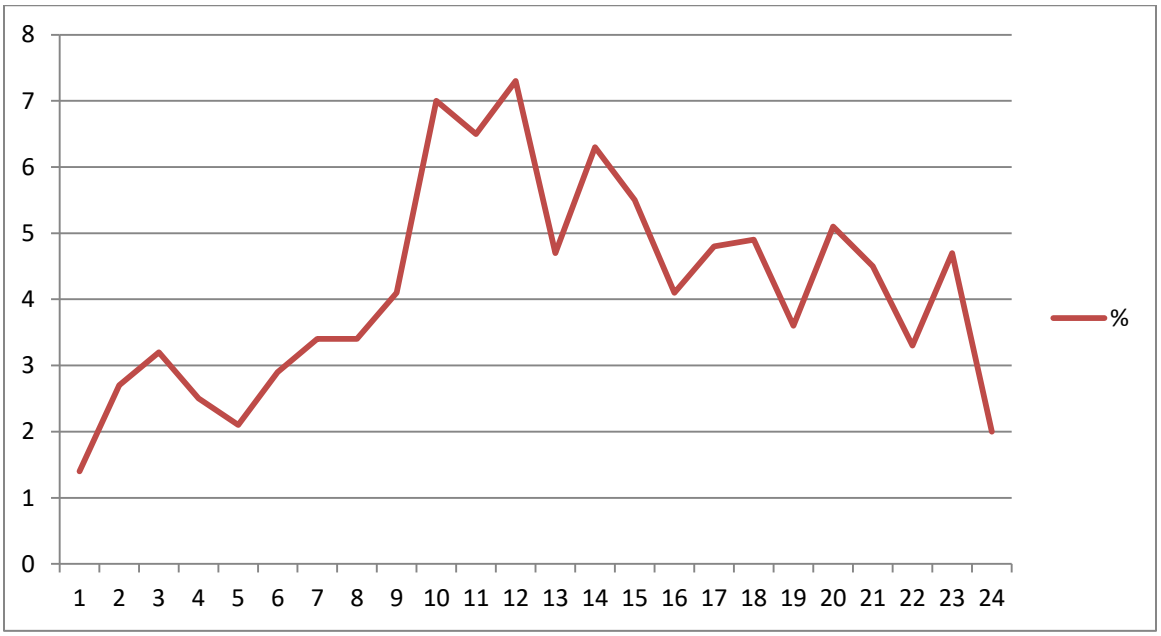
Table (25); number and percent of fatal injuries reported according to time of injury , 2021.

Time	N	%
0	131	1.4
1	251	2.7
2	290	3.2
3	227	2.5
4	195	2.1
5	268	2.9
6	314	3.4
7	316	3.4
8	373	4.1
9	644	7
10	600	6.5
11	672	7.3
12	434	4.7
13	584	6.3
14	506	5.5
15	374	4.1
16	446	4.8
17	454	4.9
18	330	3.6
19	467	5.1
20	410	4.5
21	301	3.3
22	430	4.7
23	188	2.0
Unknown	3054	------
Total	**12259**	**100**

This table shows number and percent of fatal injuries according to international time (0-23) .

Time of injury in about (25) % of fatal injuries was unknown.

Figure (25); percent of fatal injuries according to time of injury, 2021.



This figure shows the number of fatal injuries started to increase from (8 -17), reached peak at (9-11) o'clock in the morning.

3 – 3 Distribution of fatal injuries by intention

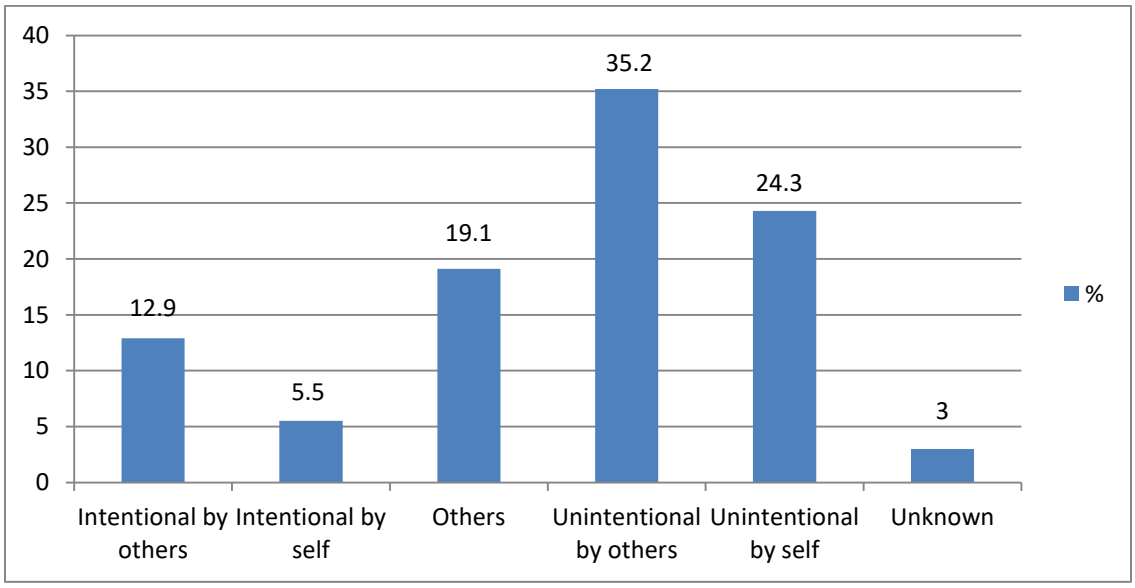
Injuries are classified into six categories according to intention

1. unintentional by others
2. unintentional by self
3. others
4. intentional by others
5. intentional by self(self-harm)
6. unknown intention

Table (26); number and percent of fatal injuries by intention, 2021.

Intention	N	%
Intentional by others	1578	12.9
Intentional by self	680	5.5
Others	2339	19.1
Unintentional by others	4316	35.2
Unintentional by self	2978	24.3
Unknown	368	3
Total	12259	100

Figure (26); percent of fatal injuries by intention, 2021.

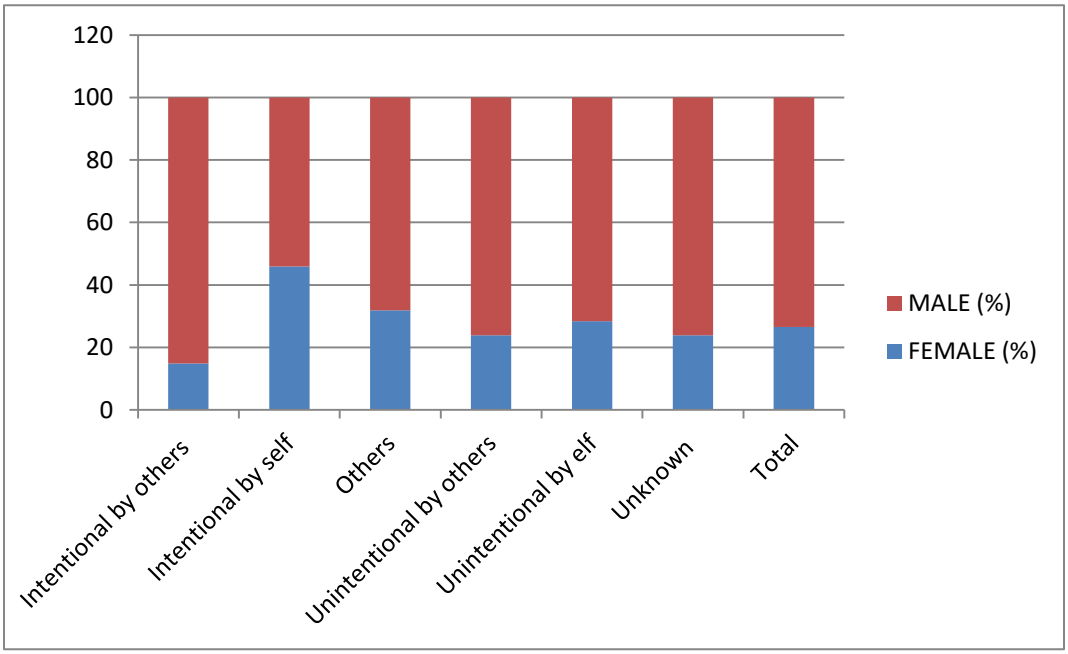


This figure shows that unintentional by others injuries (35.2) % came first, followed by unintentional by self (24.3) %, then intentional by others (12.9) % according to intention.

Table (27); number and proportion of male and female among fatal injuries by intent, 2021.

Circumstances	MALE (N)	MALE (%)	FEMALE (N)	FEMALE (%)
Intentional by others	1343	85.1	235	14.9
Intentional by self	367	54.1	313	45.9
Others	1592	68.1	747	31.9
Unintentional by others	3285	76.1	1031	23.9
Unintentional by elf	2132	71.6	846	28.4
Unknown	280	76.1	86	23.9
Total	8999	73.4	3258	26.6

Figure; (27) sex distribution among fatal injuries according to intention, 2021.



This figure shows that males represented high proportion in all categories with exception of intentional by self (self-harm) when male was nearly equal to female.

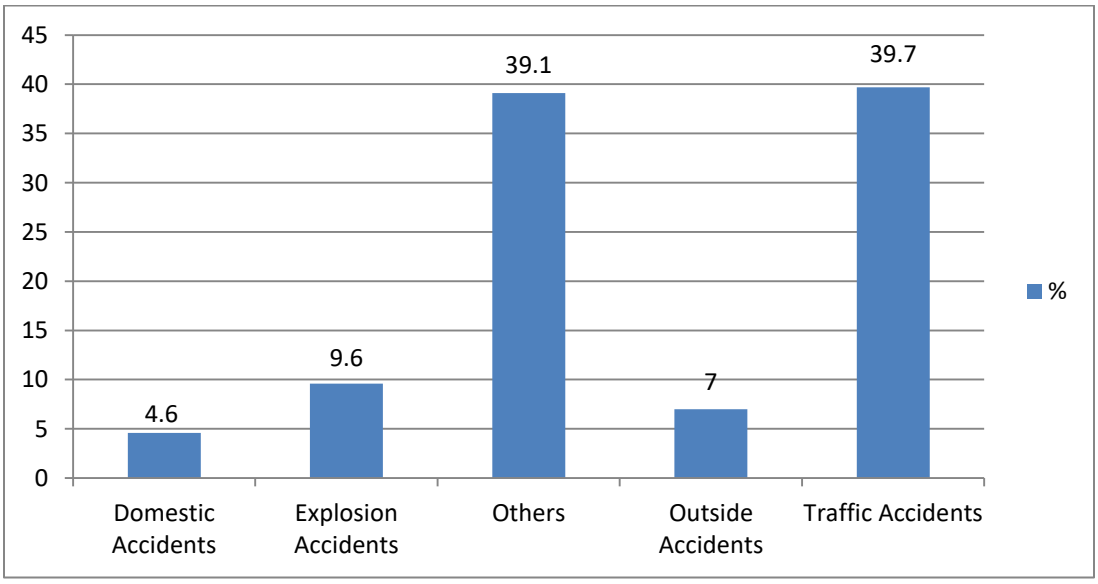
3-4 Distribution of fatal injuries by mechanism

The following section presented injuries by mechanism of injury. The mechanism of injury reflects the primary cause of fatal injury as classified by health care provider (for non-fatal injury) or by a coroner (for fatal injury), while circumstances of injury reveals how was the injury inflected.

Table (28); number and percent of fatal injuries according circumstances, 2021.

Circumstances	N	%
Domestic Accidents	561	4.6
Explosion Accidents	1176	9.6
Others	4792	39.1
Outside Accidents	867	7
Traffic Accidents	4863	39.7
Total	12259	100

Figure (28); number and percent of fatal injuries according circumstances, 2021.

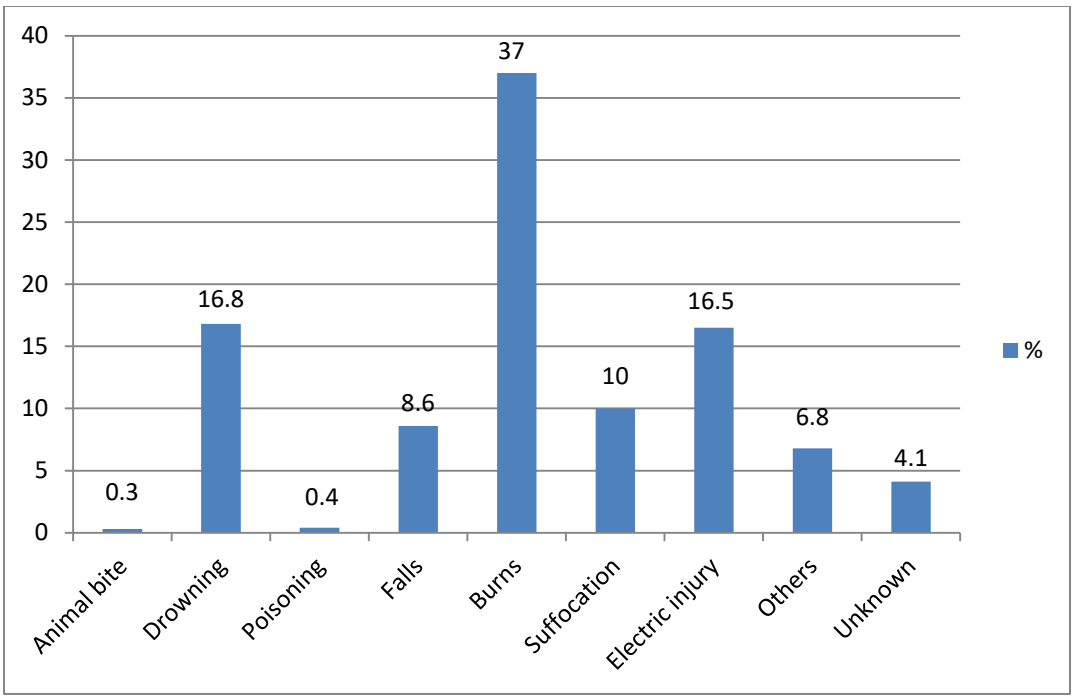


This figure shows that traffic injuries represents the main cause of fatal injuries, followed by others injuries (injuries other than traffic), then explosion accidents. Traffic injuries alone represents (39.7) % from total fatal injuries.

Table (29); number and percent of fatal-injuries according to primary cause of fatal injury other than traffic, 2021.

Causes other than traffic	N	%
Animal bite	15	0.3
Drowning	809	16.8
Poisoning	20	0.4
Falls	412	8.6
Burns	1775	37.0
Suffocation	440	10.0
Electric injury	791	16.5
Others	330	6.8
Unknown	200	4.1
Total	4792	100

Figure (29); percent of fatal-injuries according to primary cause of fatal injury (other than traffic), 2021.

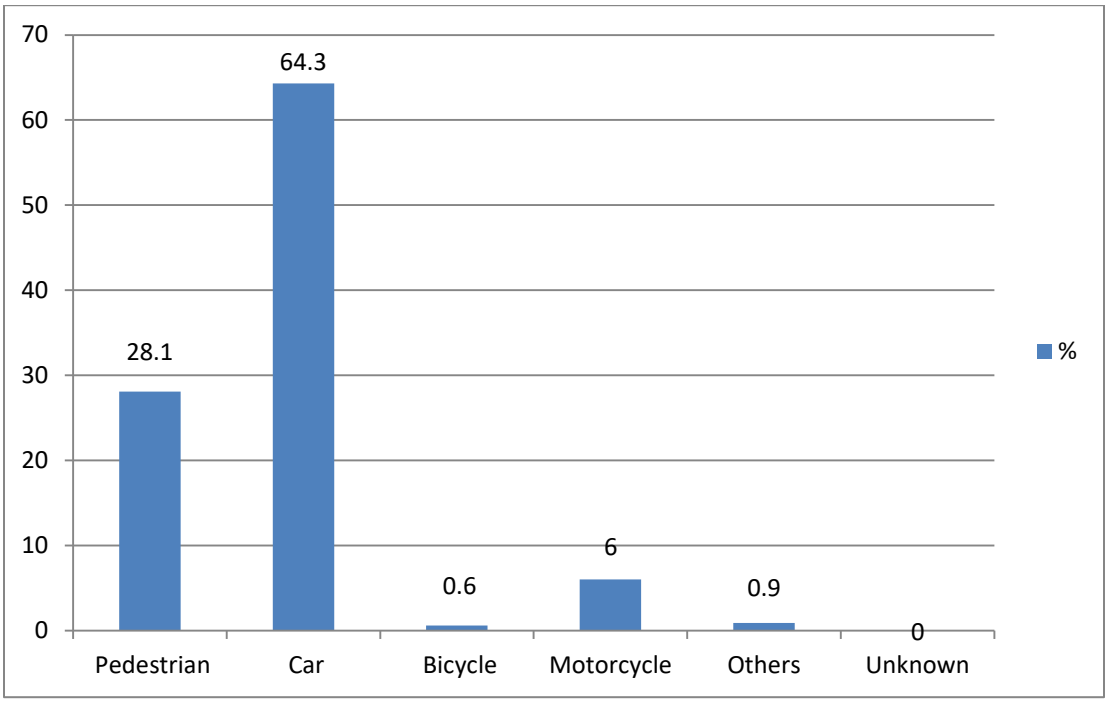


This figure shows that burns came first (37.0) %, followed by drowning (16.8) %, then electric injury (16.5) % of fatal injuries .

Table (30); number and percent of traffic injuries according to mechanism of injury among fatal- injuries,2021.

Traffic injuries	N	%
Pedestrian	1367	28.1
Car	3129	64.3
Bicycle	32	0.6
Motorcycle	296	6.0
Others	39	0.9
Unknown	0	0.0
Total	4863	100

Figure (30); percent of traffic injuries according to mechanism of injury among fatal-injuries,2021.

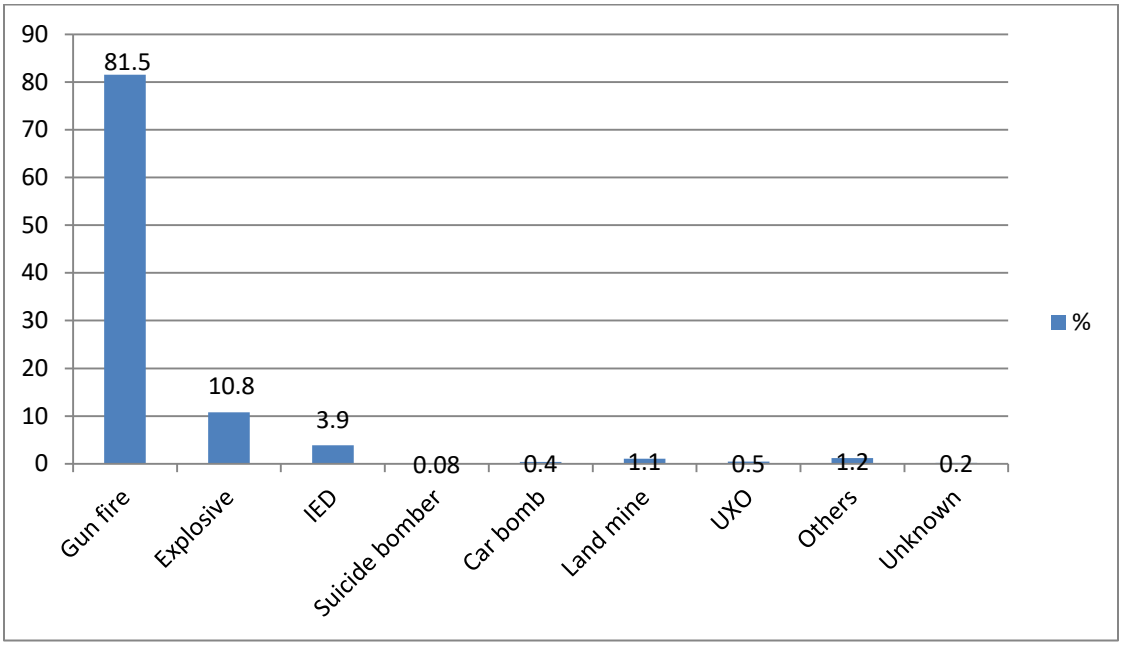


This figure shows that fatal injuries due to cars were the main cause (64.3)% ,followed by pedestrians (28,1) %,then motorcycles (6)% . Fatal injuries affected pedestrians were higher proportion than in non-fatal injuries ,when pedestrians represented (10.12) % of non-fatal injuries. See figure (11).

Table (31); number and percent by mechanism among unintentional–other fatal injuries,2021.

Insurgency	N	%
Gun fire	959	81.5
Explosive	128	10.8
IED	46	3.9
Suicide bomber	1	0.08
Car bomb	5	0.4
Land mine	13	1.1
UXO	6	0.5
Others	15	1.2
Unknown	3	0.2
Total	1176	100

Figure (31) ; percent by primary cause among insurgency fatal injuries, 2021.

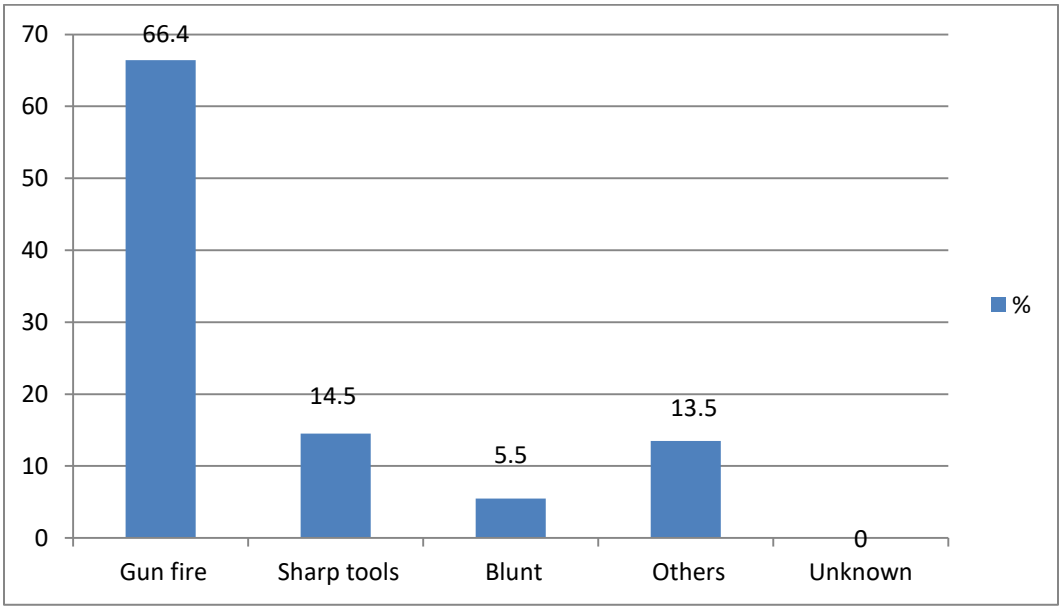


This figure shows gun fire represented the highest percent (81.5) % as mechanism among insurgency fatal injuries, followed by explosion (10.8) %, then improvised explosive device – IED – (3.9) %.

Table (32); number and percent of primary causes among fatal outside violence injuries, 2021.

Outside violence	N	%
Gun fire	576	66.4
Sharp tools	126	14.5
Blunt	48	5.5
Others	117	13.5
Unknown	0	0.0
Total	867	100

Figure (32); percent by mechanism among outside -assault fatal injuries, 2021.

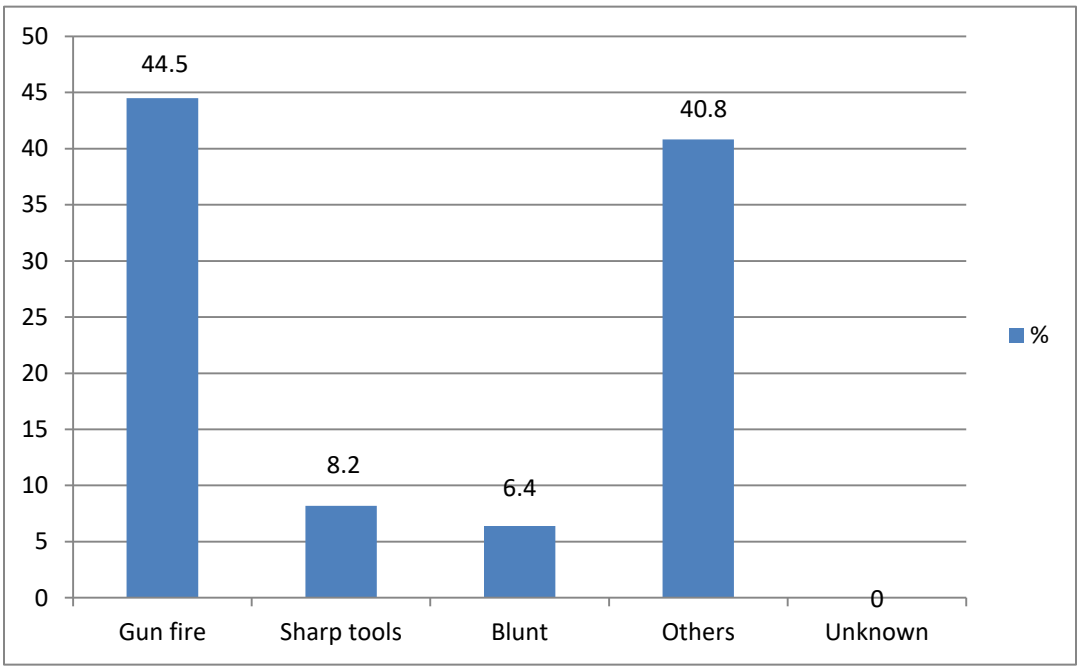


This figure shows that gun-fire (66.4) % represented the main cause of outside violence fatal injuries, followed by sharp tools (14.5) % ,then others and blunt injuries, while in non-fatal injuries the majority of outside violence was due to blunt and sharp tools.

Table (33); number and percent of primary causes among domestic violence fatal injuries, 2021.

Domestic violence	N	%
Gun fire	250	44.5
Sharp tools	46	8.2
Blunt	36	6.4
Others	229	40.8
Unknown	0	0.0
Total	561	100

Figure (33); percent of primary cause among domestic violence fatal injuries, 2021.



This figure shows that majority of domestic violence injuries are due to gun- fire (44.5)% , while in non-fatal injuries majority was due to sharp tolls and blunt injuries.

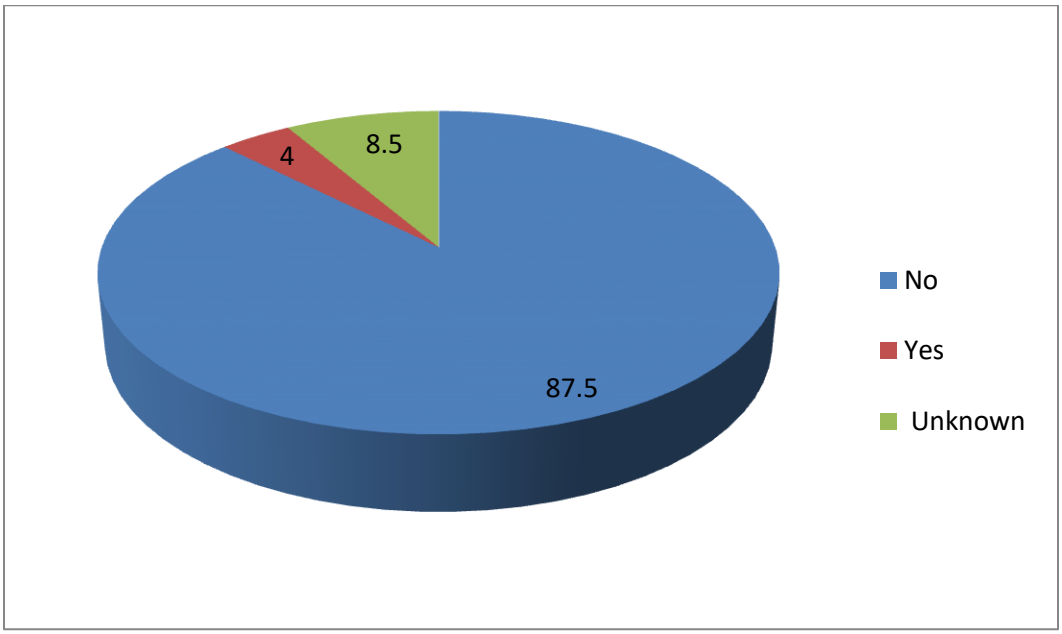
3 – 5 Mass Injury Events

Mass injury event is defined as an event that caused five or more injuries.

Table (34); number and percent of injuries resulting from mass injuries among fatal injuries 2021.

Mass injury	N	%
No	10737	87.5
Yes	477	4.0
Unknown	1045	8.5
Total	12259	100

Figure (34), percent of injuries resulting from mass injuries among fatal injuries recorded in 2021.



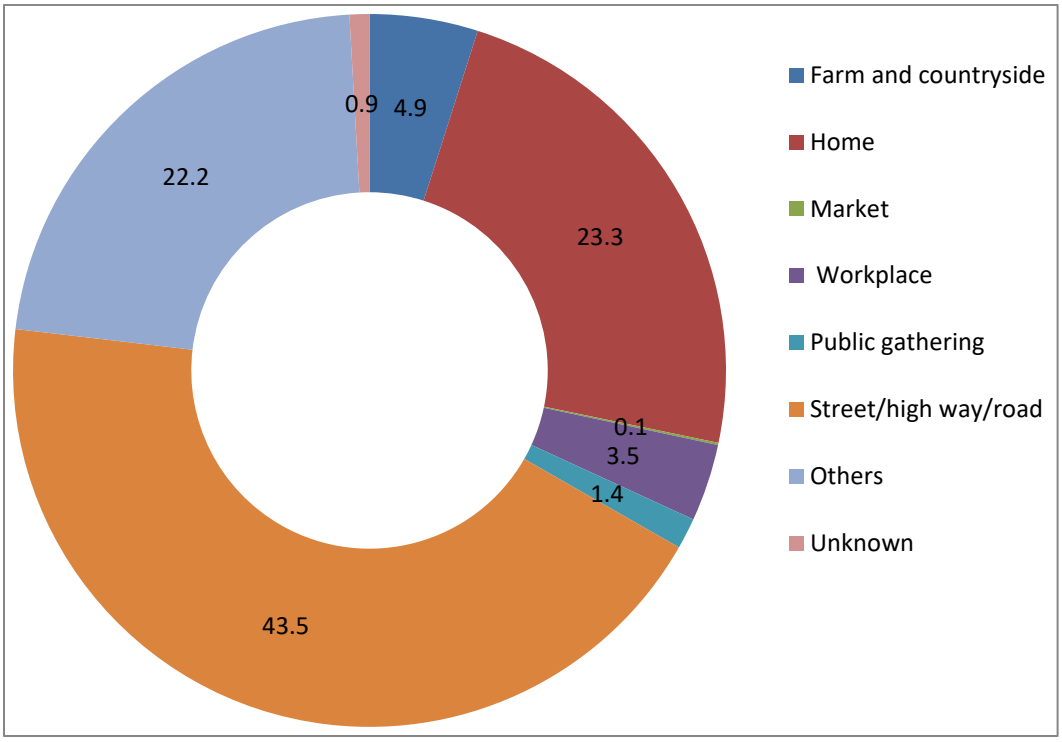
This figure shows about (8.5) % of all fatal injuries resulted from mass events.

3 – 6 Distribution according to place of injury

Table(35); percent of fatal injuries according to place among fatal injuries,2021.

Place	N	%
Farm and countryside	601	4.9
Home	2854	23.3
Market	16	0.1
Workplace	435	3.5
Public gathering	177	1.4
Street/high way/road	5341	43.5
Others	2726	22.2
Unknown	109	0.9
Total	12259	100

Figure (35): percent of fatal injuries according to place of among fatal injuries,2021.



This figure shows the most common location of fatal injuries was streets / highways/ roads (43.5) %, followed by homes (23.3) %.Farms and countryside, work place, public gathering and markets reported less fatal injuries than streets and homes

About (22.2) % of fatal injuries occurred in places other than that mentioned.

4.discussion

4.1. key findings and recommendations

1- The injury surveillance report 2021 reveals that, external injury is a major public health problem, because it leads to many morbidities and mortalities. The report mentions that the total fatal injuries were (12259), in addition to (119220) non-fatal injuries.

The health effects of injury needs great efforts from governmental and non-governmental sectors to decrease the impact of this problem.

A national multi-sectorial strategy for management ,control and prevention is essential, this strategy should be implemented by ministry of health in collaboration with other ministries and international partners (WHO).

2- During 2021 , although covid 19 pandemic still affect the health system in Iraq , many hospitals returned to receive usual patients and majority of health directorates sent data.

Some heath directorates did not send data like Sulaymaniah health directorate.

3- This report reveals that, road traffic accidents (RTAs) represents the main primary cause (42.6) % from all reported non-fatal injuries and (39.7)% from fatal injuries. About (4863) persons lost their life due to RTAs.

Car's occupants represented majority in non-fatal RTAs ,followed by motorcycle users, then pedestrians .

Majority of victims in fatal RTAs was car's occupants , followed by pedestrians then motorcycle users, so legislations and prevention programs should concentrate on : providing streets with areas for pedestrian's uses and crossing, controlling streets by cameras for monitoring speed and implementation of safety lows .

4- The report reveals that intentional fatal injuries (whether self-harm or by others) resulted in (2658) persons losing their lives, so this need psychological programs for prevention and control of intentional injuries and violence especially self-harm and suicides.

5- The report illustrates that about (66)% of non-fatal injuries treated in emergency departments and send home ,trauma care centers should be reinforced and emergency departments must be supported to decrease severity an complications of injuries.

6- According to the report ,about (8.2)% of non-fatal injuries arrived to emergency department by ambulance ,and (14.2) % got medical care before reaching hospitals. This needs advertising programs for ambulance no.122 and programs for training drivers , policemen and others on first aids and Basic Life Support (BLS) and transferring of injured patients to decrease complications.

7- Regarding location of injuries, the report reveals that home represents second place after streets, so heath education for prevention risks at home is important. Work place represents other location for external injuries ,so preventive measures and occupational safety in factories and places of work is essential.

8- According to mechanism of injury, the report reveals a difference between unintentional non-fatal and fatal injuries other than traffic injuries.

The top mechanisms for non-fatal injuries, were falls, burns and animal bites , while, for fatal injuries the top mechanism was burns , drowning and electrical injuries.

There is another difference in the cause of injury when comparing non-fatal and fatal injuries. The common cause in outside and domestic injuries was blunt and sharp tools in non- fatal injuries, while the main cause was gun-fire in fatal injuries, so this needs multisectorial programs in collaboration with other sectors and ministries.

9- The results in non-fatal injuries should be interpreted with caution as reporting sites are sentinel sites and not comprehensive , so expanding of surveillance program to all general hospitals is important for generalization of results.

10 - The percent of arriving to hospital by an ambulance in some DOHs was very few , the reason for this may be due the fact that patients were transferred to hospitals by ambulances belongs to Directorate of Operations and Emergency Medical Services (especially in Baghdad) with no recording in surveillance system.

4.2. 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:** Because of situations in Iraq ,monitoring, supervision and visiting all sites of collecting data is difficult . Delaying in sending data or silent sites are major limitations of program,.

• **Limited Data/ Variables:** The current surveillance form is intentionally short to limit the burden on the health system. Information on the nature and severity 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. The national team besides external monitoring from other teams from universities or world health organization or others is very important to insure quality of data obtained.

• **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.

4.3. 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 has 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- Annex
5.1 injury surveillance form(Arabic)

وزارة الصحة
مديرية العمليات والخدمات الطبية الطارئة
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 □ 9 غير معروف	B3 العمر _ _ _ سنوات
B4	عنوان المريض/الحالة (المحافظة) _____		B5	رقم شهادة الوفاة _ _ _ _ _ _ _ _	B6 تاريخها _ _/ _ _/ _ _ _ _
C	**سلسلة الوصول**				
C1	تاريخ الإصابة _ _/ _ _/ _ _ _ _	□ 9 غير 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 ٢٤ ساعة	□ 3 أكثر من ٢٤ ساعة	□ 9 غير 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 ٥ أو أكثر في الحادثة**		□ 1 نعم	□ 2 لا	□ 9 غير معروف					
D3	**القصد**	□ 1 مقصودة من قبل الآخرين	□ 2 مقصودة من قبل المصاب	□ 3 عرضية من قبل الآخرين						
		□ 4 عرضية 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 سكاني	□ 5 السوق				
		□ 6 الريف أو المزرعة	□ 8 أخرى	□ 9 غير معروف						
D6	**الإجراء الأولي للمريض في ردهة الطوارئ**	□ 1 تمت المعالجة و أرسل إلى المنزل	□ 2 خرج على مسؤوليته الخاصة							
		□ 3 ادخل المستشفى	□ 4 متوفى عند الوصول	□ 5 توفى 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 القنابل 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 فجر اللغم أو القنبلة المتروكة؟	☐ 1 عبث (بقصد العمد)	☐ 2 حادث عرضي عن طريق اللمس أو التخطي عليها (تم بجهله ضرره)	
		☐ 8 أخرى	☐ 9 غير معروف	
E4	من فجر المتفجر؟	☐ 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 لغرض توحيد الأجوبة لمدخل البيانات

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

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

٥- يملأ حقل A من قبل مسؤول البرنامج.

٦- (B) المقصود بـ (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 يتقدم تاريخ الإملاء أو الوصول قبل تاريخ الإصابة.

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

١٢- (D1) في حالة اختيار فقرة ١,٦ ألغام و ١,٧ مواد قابلة للانفجار يجب ملء حقل E

١٣- (D1 ١,٢) عبارة - انفجار - تتضمن كل الانفجارات غير معروفة السبب و المقذوفات عن بعد مثل صواريخ - هاونات، طائرات أو أي مقذوف آخر.

١٤- (D1 ١,٨) أخرى يقصد بها آلية حدوث الإصابة مما لم يذكر أعلاه مثل (عربة دفع، حيوان، قطار أو غيرها).

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

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

5-2.Iraqi 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 inflected) (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*.

جمهورية العراق

وزارة الصحة

مديرية العمليات والخدمات الطبية الطارئة

تقرير برنامج رصد الاصابات الخارجية العراقي عام 2021

اعداد:

الدكتور: جاسم محمد خويف

مدير برنامج رصد الاصابات الخارجية العراقي

فريق العمل:

ت	فريق العمل	العنوان الوظيفي
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2	د.جاسم محمد خويف	مدير قسم العمليات – مسؤول البرنامج
3	احمد عباس عبدالكاظم	مبرمج اقدم

الخلاصة:

يوفر برنامج رصد الاصابات الخارجية العراقي **Iraqi Injury Surveillance** معلومات هامة جدا حول الاصابات الخارجية التي تراجع اقسام الطوارئ في المستشفيات والوفيات الناجمة عنها والمسجلة في دائرة الطب العدلي وشعب الطب العدلي في المحافظات.

ان استخدام هذه المعلومات الموثقة سيقلل من عبء الاصابات وما تسببه من وفيات واعاقات في المجتمع.

- يتم جمع البيانات من خلال دوائر الصحة في كافة محافظات العراق ، حيث تستلم البيانات من اقسام الطوارئ في المستشفيات للإصابات غير المؤدية الى الوفاة ، بينما تستلم بيانات الاصابات المميتة من دائرة الطب العدلي في بغداد وشعب الطب العدلي في دوائر الصحة ، وبعد جمع البيانات في اقسام العمليات التابعة الى دوائر الصحة ترسل شهريا الى برنامج رصد الاصابات في قسم العمليات / مديرية العمليات والخدمات الطبية الطارئة في وزارة الصحة.

- يتم استلام البيانات من قبل العاملين في البرنامج وادخالها الكترونيا وفق استمارة خاصة اعدت بواسطة برنامج Epi-Info ، حيث تتضمن الاستمارة المعلومات الديموغرافية وتاريخ الاصابة ونوعها والاجراءات المتخذة وغيرها من المعلومات.

وفيما يلي ملخص التقرير السنوي لرصد الاصابات الخارجية لعام ٢٠٢١:

- كافة دوائر الصحة في العراق ودائرة الطب العدلي ارسلت بيانات عام ٢٠٢١، ماعدا دائرة صحة السليمانية (لم ترسل بيانات الطوارئ والطب العدلي).
- خلال عام ٢٠٢١ عاد عدد كبير من المستشفيات العامة لاستقبال الحالات المرضية بشكل اعتيادي بعد أن تم تحويلها الى مستشفيات تستقبل المرضى المصابين بكورونا. وبذلك تحسنت عملية جمع البيانات عن الإصابات والحوادث من ردهات الطوارئ مقارنة"بالسنة السابقة.
- يوضح التقرير السنوي لرصد الاصابات الخارجية في العراق لعام ٢٠٢١ ، ان العدد الكلي المسجل للإصابات غير المميتة هو (١١٩,٢٢٠) حالة، بينما العدد الكلي للإصابات المميتة هو (١٢٢٥٩) وفاة
- يوضح التقرير السنوي لعام ٢٠٢١ ان الذكور يمثلون نسبة أكثر من ٧٩% من الإصابات غير المميتة ،ونسبة ٧٣,٤% من الإصابات المميتة ،كما يوضح أن الإصابات والوفيات تحدث في كافة الفئات العمرية والفئة العمرية الاكثر تعرضا في الإصابات غير المميتة والمميتة هي (٢٠-٢٤) سنة.
- حسب البيانات التي جمعت من دوائر الصحة عام ٢٠٢١ فأن العدد الاكبر من حالات الاصابات غير المميتة كان في ذي قار ثم ديالى ثم بغداد(علما" أن بغداد تتكون من ثلاث دوائر صحة وهي بغداد-الكرخ وبغداد- الرصافة ومدينة الطب) ، اما ما يخص الاصابات المميتة فأن عدد الوفيات الاكبر سجلت من دائرة الطب العدلي بغداد ثم بابل ثم كركوك وكربلاء.
- حسب استمارة البرنامج تم توزيع الاصابات الى:

اولا: الاصابات غير المقصودة سواء بسبب الشخص نفسه او بسبب الاخرين.

ثانيا: الاصابات المقصودة (العمدية) سواء من قبل الشخص نفسه او من قبل الاخرين.

ثالثا: الاصابات غير معروفة القصد.

من خلال تحليل البيانات لعام ٢٠٢١ بحسب القصد (النية) جاءت الاصابات غير المقصودة اولا ثم الاصابات المقصودة (العمدية) وبعدها الاصابات غير المعروفة القصد.

- وبتحليل البيانات حسب ظروف الحادث للإصابات غير المميتة والمميتة فأن اصابات الطرق جاءت اولا ثم الاصابات الاخرى (كالسقوط والحروق وعضة الحيوان والغرق. الخ)، ثم إصابات العنف الخارجي والعنف المنزلي وأخيرا" الإصابات الناجمة عن الحوادث الإرهابية

- ان التقرير النهائي عام ٢٠٢١ للإصابات غير المميتة الناتجة عن اصابات الطرق يوضح ان اكثر المعرضين للإصابة هم مستخدمو السيارات ثم الدراجات النارية ثم المشاة واخيرا مستخدمي الدراجات الهوائية ،اما ما يخص الاصابات المميتة فأن مستخدمي السيارات كانوا اول الضحايا ثم المشاة ثم مستخدمي الدراجات النارية وبنسبة قليلة جدا مستخدمي الدراجات الهوائية.

- ان حوادث الطرق وما تسببه من اصابات مميتة في تزايد واضح من خلال المقارنة مع ارقام السنوات السابقة كما ان تسجيل اصابات لأنواع مركبات غير خاضعة للسيطرة النوعية (التك تك) مثلا في تزايد.
- ظهر من خلال التقرير لعام ٢٠٢١ ان (حوالي٦٦ %) من الاصابات غير المميتة وبكافة انواعها تم علاجها في ردهات الطوارئ وخرجت متحسنة.
- كما ظهر من التقرير ان حوالي (١٤,٢%) من المصابين بإصابات غير مميتة فقط قد تلقوا نوعا من العناية الطبية او الصحية قبل الوصول الى ردهات الطوارئ.
- يبين التقرير ان ترتيب الاصابات غير المميتة والمميتة حسب مكان وقوع الحادث على النحو التالي : اولا الطرق الخارجية والشوارع ، وثانيا المنازل ثم اماكن العمل ثالثا.
- يوضح التقرير ان حوالي (٨,٢ %) فقط من المصابين بإصابات خارجية غير مميتة نقلوا الى ردهات الطوارئ بسيارات اسعاف بينما النسبة الاكبر تم نقلها بواسطة وسائل نقل اخرى.

التوصيات:

١- استنادا الى المعلومات الواردة في تقرير رصد الاصابات ٢٠٢١ فأن عبء الاصابات لايزال مشكلة صحية في العراق ،حيث يوضح التقرير ان عدد الوفيات الناجمة عن الاصابات كان (١٢٢٥٩) وفاة بالإضافة الى (١١٩٢٢٠) اصابة غير مميتة ، ولغرض الحد من الوفيات والاصابات والاعاقات الناجمة عن الاصابات ينبغي القيام بفعاليات وبرامج علاجية وتأهيلية ووقائية وبما ان مشكلة الاصابات تمثل مشكلة متعددة والقطاعات من حيث التخطيط والتنفيذ والوقاية فأن تبني استراتيجية وطنية لوزارة الصحة بالتعاون مع الوزارات الاخرى وباشتراك منظمة الصحة العالمية بات امرا ضروريا.

٢- يوضح التقرير النهائي عام ٢٠٢١ ان اصابات الطرق تمثل السبب الرئيسي للإصابات حيث تمثل نسبتها ٤٢,٦ % من الاصابات غير المميتة و٣٩,٧ % من الاصابات المميتة وأن حوالي (٤٨٦٣) شخص قد فقدوا حياتهم خلال عام ٢٠٢١ بسبب حوادث الطرق المميتة. كما يبين التقرير بأن مستخدمي السيارات والمشاة يمثلون النسبة الأعلى من الإصابات المميتة يليها مستخدمي الدراجات النارية وان الاصابات المميتة تؤثر بشكل اكبر على المشاة مما في الاصابات غير المميتة وعلى ضوء ذلك ينبغي العمل على تشريع القوانين التي تحمي المشاة وتنظم السير واماكن خاصة للعبور مع مراقبة الشوارع بالكاميرات للحد من السرعة والالتزام بوسائل السلامة والامان.

٣- يوضح التقرير بأن الاصابات المميتة الناجمة عن العنف ، سواء ايذاء النفس او الاخرين قد سببت فقدان حياة اكثر من ٢٦٥٨ شخص مما يحتم تبني برامج نفسية للحد منها خصوصا ايذاء النفس والانتحار.

٤- يبين التقرير ان حوالي ٦٦ % من الاصابات غير المميتة قد تم علاجها وخرجت متحسنة بعد زيارة اقسام الطوارئ في المستشفيات وهذه نسبة جيدة ومشجعة تتطلب الاهتمام بردهات الطوارئ وانشاء مراكز العناية بالحوادث (trauma center) للحد من الاصابات وتقليل مضاعفاتها. بالإضافة الى دعم اقسم الطوارئ في المستشفيات.

٥- بحسب التقرير فأن ٨,٢% فقط من الاصابات غير المميتة قد تم نقلهم بسيارات اسعاف وان ١٤,٢% فقط من الاصابات قد تلقوا عناية صحية وطبية قبل الوصول الى ردهات طوارئ وهذا يتطلب جهود كبيرة سواء في التعريف بخدمة ١٢٢ للإسعاف الفوري او تدريب السائقين

الاخرين وعموم المجتمع على الاسعافات الاولية والاساليب الصحيحة لنقل الاصابات لغرض تقليل المضاعفات.

٦- يوضح التقرير بأن البيوت تمثل السبب الثاني بعد الطرق والشوارع لحدوث الاصابات وعليه فأن التوعية والتثقيف بالمخاطر المنزلية مهم جدا خصوصا ان نسبة لابأس بها من الاصابات للفئة العمرية (صفر-٤) سنوات اما الاماكن الاخرى لحدوث الاصابات فهي اماكن العمل مما يتطلب التنسيق مع الجهات المعنية ووزارة العمل والشؤون الاجتماعية لتفعيل برامج السلامة المهنية والوقائية من اصابات العمل

٧- يبين التقرير وحسب الية الاصابات ،ان اكثر الاصابات غير المميتة (عدا اصابات الطرق) هي (السقوط ، الحروق ، وعضة الحيوان ...الخ) بينما في الاصابات المميتة فان اكثر الأسباب هي (الحروق ،الصعقات الكهربائية وحوادث الغرق ...الخ)،كما ان اكثر الأسباب في اصابات العنف الخارجي والعنف المنزلي غير المميتة هي (الآلات الحادة والآلات الراضة)، بينما السبب الرئيسي في الاصابات ا لخارجية والمنزلية المميتة هي الاطلاقات النارية. وللحد من هذه الاصابات فأن هناك جهدا كبيرا يجب بذله من كافة الاطراف.

٨- ان الاصابات غير المميتة وبسبب تسجيلها في اماكن رصد مختارة في بعض المستشفيات وليس جميعها، ينبغي توخي الحذر عند المقارنة بينها للسنوات المختلفة لصعوبة تعميم النتائج وعليه فان توسيع البرنامج ليشمل كافة المستشفيات العامة امر هام جدا.

٩- يوضح التقرير بأن نقل الاصابات بواسطة سيارات الاسعاف قليل جدا وربما كون الحالات (خصوصا في بغداد) تنقل بسيارات تابعة الى قسم الاسعاف الفوري التابع الى مديرية العمليات والخدمات الطبية الطارئة وليس الى دوائر الصحة وبالتالي عدم تسجيلها ضمن البرنامج وعلى قسم الاسعاف الفوري تحري سبب ذلك ووضع الحلول المناسبة.

جمهورية العراق

وزارة الصـــــحة

مديرية العمليات والخدمات الطبية الطارئة

تقرير برنامج رصد الاصابات الخارجية العراقي عام 2021

اعداد:

الدكتور: جاسم محمد خويف

مدير برنامج رصد الاصابات الخارجية العراقي

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