

**GOVERNMENT OF INDIA  
OFFICE OF THE MEDICAL SUPERINTENDENT  
SAFDARJANG HOSPITAL  
NEW DELHI – 110029.**

**FINAL REPORT  
OF  
WHO PROJECT  
ON  
“MODALITIES  
FOR  
IMPLEMENTING  
INJURY  
SURVEILLANCE  
SYSTEM”**

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# **PROPOSED STRUCTURE FOR THE INJURY SURVEILLANCE PILOT PROJECT**

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**I STUDY SITE :**

**The study for the pilot project of WHO on the modalities for implementing injury surveillance system has been conducted in the:**

**Medical Record Department and  
Training centre for Medical records  
Safdarjang Hospital,  
New Delhi – 110029.**

**\*\*\*\*\***

## **II OBJECTIVES :**

**II.1 To study the feasibility of injury surveillance and to identify a model for sustained data collection analysis and reporting.**

**II.2 Injury cases are the important cause of morbidity and mortality in the country. The data on injury are currently available from the crime records maintained by the Police Department. The data collection on injuries from the health sector has not been addressed in a systematic manner till date. An insight into the burden and pattern of injuries presenting at hospitals, and their management is required for planning service provision.**

**II.3 Following specific objectives were identified in this pilot project for the modalities for implementing injury surveillance system in the country :**

**II.3.1 To develop a standardized format for collecting information on injuries.**

**II.3.2 To collect data on injuries attending the hospital in a retrospective manner.**

**II.3.3 To examine the feasibility of setting up a hospital based surveillance system for injuries.**

**II.3.1 A Data Capture Form was developed by DGHS and a sample of the same was provided to this hospital and all other hospital for uniform pattern of collection of data by all the Centre of this study.**

**II.3.2 The data for the period of six months has been collected ( 1.1.06 to 30.6.06 ) for all the inpatients treated in this hospital. – See Discussions.**

**II.3.3 On the basis of information available in this hospital a regular system of collection of data may be developed. – See Options for injury surveillance in the hospitals.**

**\*\*\*\*\***

### **III METHODOLOGY :**

**Methodology – mention about :**

**Content :**

- III.1 Point of Data Collection.**
- III.2 Who collected the data**
- III.3 Method of collection**
- III.4 Current Status of medical record keeping**
- III.5 ICD – 10 Coding**
- III.6 Retrieval of injury case records**
  - ( a ) From Coded sets**
  - ( b ) From ICD coded sets**
- III.7 Time taken for retrieval**
- III.8 Usefulness of the format**
- III.9 Information in the case sheet appropriate for the format**
- III.10 Time for filling the format**
- III.11 Data entry process**
- III.12 Time for data entry**
- III.13 Staff requirement for various steps**

### **III.1 Point of Data Collection.**

- Medical Record Department  
Safdarjang Hospital  
New Delhi – 110029.

The data for the injury cases admitted in the Safdarjang Hospital has been collected from the discharged case sheets maintained in the Medical Record Department of this hospital.

### **III.2 Who collected the data:**

#### **Trained Medical Record Technician:**

For collection of data for injury cases admitted in this hospital, the data has been collected by engaging special manpower from the funds provided by the WHO for this project four Data Entry Operators and four Record Attendants were deployed for this purpose.

A Trained **Medical Record Technician** has been included in the team of four Data Entry Operators. A Medical Record Technician is a paramedical staff and capable enough to study the case sheet and diagnosis written by the doctors. He has scrutinized the case sheets of injury cases for which the data is collected under the guidance of Medical Record Officer of Medical Record Department and Training Centre for Medical Records of this hospital (MRD&TC) and CMO (MRD&TC). The MRO has been consulted actively while screening and filling of the Data Capture report forms and the analysis and tabulation of this data has been done under the guidance of MRO of this MRTTC. The above report has been prepared by the MRO of MRTTC under the guidance of CMO ( MRD&TC) of this hospital.

### **III.3 Method of collection**

The data of injury cases for the period of study for the six months ( w.e.f. 1.1.06 to 30.6.06 ) has been collected from the entire discharged case sheet maintained in the Medical Record Department of this hospital. For collection of data regarding nature of injuries the Medico Legal Cases Register (M.L.C.) were also viewed.

There were total 52,299 admitted cases (including 3330 death cases) during the above period. All the said cases were screened and out said cases 4924 injury cases (including 790 death cases) were identified as injury case.

Then data entry operators first filled the predesigned Data Capture forms.

Then the said data from these forms were entered in the computer in MS Access (M.S. Excel).

### **III.4 Current Status of medical record keeping**

The Medical Record Department of this hospital is maintaining the inpatient medical record for the period of 10 years. The MLC Registers of all the medico legal cases are also maintained by this Department for the period of last 10 years. There is well organized Medical Record Department in this hospital. It is also a sample Department for all the Medical Record Department of Central and State Govt., being a Training Centre for Medical Records of Govt. of India.

### **III.5 ICD – 10 Coding**

The ICD – 10 Coding is done by the trained Medical Record Technicians of the Medical Record Department of this hospital.

The code numbers are written on all the discharged case sheets in this Department. The ICD -10 code numbers include the External Causes of Injuries also ( i.e. V to Y codes given in the ICD-10 Coding books) and code for surgical procedures ( Operations ) are also entered on the case sheets as well as computers.

Then these code numbers with date of discharge / death is entered in the computers in the Central Admitting Office this hospital where inpatient admission is entered in the computers.

On the basis date of discharge and deaths the computer generated sex wise and department / specialty wise hospital statistics similarly diagnostic data is also generated by these computers on the basis of ICD -10 code numbers entered in the computers.

### **III.6 Retrieval of injury case records**

**( a ) From Coded sets**

**( b ) From ICD coded sets**

All the inpatient discharged inpatient medical records (case sheets) were reviewed and the injury cases were identified for collection of data for injury cases.

Then the data was entered in the coded form on the pre-designed data capture formats.

From the coded sets of these forms , the data is entered in the computers, there is a column of ICD – 10 codes in the data capture formats.

### **III.7 Time taken for retrieval**

**About 700 cases were reviewed per day per person ( By a MRT) as per details given below :**

<b>Total No. of Admissions :</b>	<b>52,999</b>
<b>( 1.1.06 to 30.6.06 )</b>	
<b>Working days</b>	<b>: 76</b>
<b>( 21.6.07 to 30.9.07)</b>	
<b>Daily Average</b>	<b>: 697</b>

### **III.8 Usefulness of the format:**

This form is very useful even if it is filled after discharge of the patient.

some information about the injury which is not available in the case sheet for that purpose for further details of the injury a separate form ( **INJURY REPORT FORM** ) to be added with all the injury cases these forms may be kept to be added at the place of hospital where admission order is made and it may be **filled by the admitting doctor** after inquiring the details from the patient if unconscious from the nearest relative or the person who brought the injured to the hospital.

### **Extra columns to be included:**

On analyzing the Data capture format use in this study thoroughly some columns needs to be added which are as follows :  
For first Sl. No. 1 to 8 of Data Capture Format:

Column No. 7 ( a & b ) to be added as

7 ( a ) - Date of Admission :

7 ( b ) - Time of Admission :

( In Safdarjang Hospital when a patient report to casualty he is not admitted directly from the casualty first he is referred to Emergency Ward – A, Ward – B or Ortho Emergency Casualty and some time the patient is kept under observation up to 24 hours if he requires admission then he is referred to Central Admission office for admission some time after 12 midnight the date of admission changes and it differs from Date and Time of registration to date of admission. )

2. Personal Details of the injured :  
( Q. No. 1 to 8 )

Q.No. 3 Gender of the injured as : Male, Female, Male Child, Female Child and undetermined ( Ambiguous ).

Q. No. 5. Occupation : The most common occupation used is Govt. Service, Pvt. Service, Business , Housewife & Student needs to be added.

Q.No.6. Not applicable to be added with divorcee, widow or widower.

Q.No.7 : The activity may be added as : while going to duty and injured on duty.

Q.No. 13. In most of the cases in casualty the doctors mentions smell of alcohol present, without breath analyzer, this choice may be added as Q. No. 13 ( a )

Q.No.32 Final diagnosis with secondary diagnosis to be added as 32 ( a )

Secondary diagnosis ( i ....., ii....., iii ... )

( b ) Operations :

( c ) External causes of injury :

### **III.9 Information in the case sheet appropriate for the Format**

In the format used there are total 42 questions out of which the information for 24 questions ( 60 % ) was appropriately available in the discharged case sheet in the retrospective study.

The 20 % of questions (i.e. 8 questions – Q. No. 4,9,10,13,19,20,21 & 22), only 50 % information could be obtained. This information was mostly available in all the MLC cases and maximum injury cases are covered in MLC cases.

Only 20 % of questions ( i.e. 10 questions – Q.No. 4,5,11,14,15,16,17,18,23 & 24 after first Sl. No. 1 to 8) the information was not available in the retrospective case records. But it can be collected after introducing a special format at the time of admission for future data collection if required.

Hence on the whole about more than 80 % Information in the case sheet was appropriate for the Format.

**III.10 Time for filling the format: - 18 minutes.**  
**- ( 22 formats per  
person per day )**

On an average it takes 18 minutes to fill one format from the discharged case sheet of a patient. ( Total forms filled = 4924 in 76 working days ( 21.6.07 to 30.9.07 ), daily average = 65 forms by three persons a day =  $65/3 = 22$  **formats per person per day** = 390 minutes ( working hours a day ) / 22 formats = 17.7 or 18 minutes per format.

**III.11 Data entry process:**

The data entry in the computer has been done from the duly filled Data Capture Report Format in Microsoft Access. The said formats were first filled from the discharged case sheet of the inpatients of this hospital.

**III.12 Time for data entry: 14 minutes**  
**( 28 formats per  
person per day )**

**On an average it takes 12 minutes to enter in computer one format from duly filled Data Captured Format.**

( Total forms entered = 4924 in 88 working days ( from 21.6.07 to 15.10.07 ), daily average = 56 forms by two persons a day =  $56/2 = 28$  **formats per person per day** = 390 minutes ( working hours a day ) / 28 formats = 14 minutes per format )

### **III.13 Staff requirement for various steps:**

Total No of injury cases admitted in this hospital are 4924 (w.e.f. 1.1.06 to 30.6.06) daily average works out to 28 cases per day ( 4924/180 days = 28 cases). As per details given above one Data entry operator and one MRT and one Record Attendant are required to make retrospective collection of data after discharge of the patient for working daily without any leave and Sunday/holidays. To meet the requirement for Sundays and holidays and leave reserve total staff requirement is as under:

1. Medical Record Technician - One – For sorting and coding
2. Data Entry Operator - Two – For Form filling and data entry
3. Nursing / Record Attendant - Two – For retrieval and filling

#### **PRESENT STATUS OF STAFF OF MEDICAL RECORD DEPARTMENT OF THIS HOSPITAL:**

The Medical Record Dept. of this hospital is extremely understaffed the existing staff strength is continuing since last 30 years whereas the number of inpatients has increased to more than 50% i.e. about 58.9 %. (Inpatient admissions were 72645 in 1975 and has increased to 1, 15,441 in 2006).

The ( IWSU ) Internal Work Study Team of Min. of H&FW has recommended 2 - Sr.MRT, 7 - Asst. MRT and 12 - Record Attendant, in addition to the existing MRT staff, in 2001, looking into in increase of above inpatients medical record's work load, which are still in creation / filling process. In this regards it is suggested that since it is long process of creation and filling of the above posts it may be outsourced till it is filled on regular basis, in the patient care public services interests.

**Hence in view of above, the above mentioned Staff Requirement for various steps is essential for collection, presentation and analysis of data for injury surveillance by this hospital.**

## **IV RESULTS**

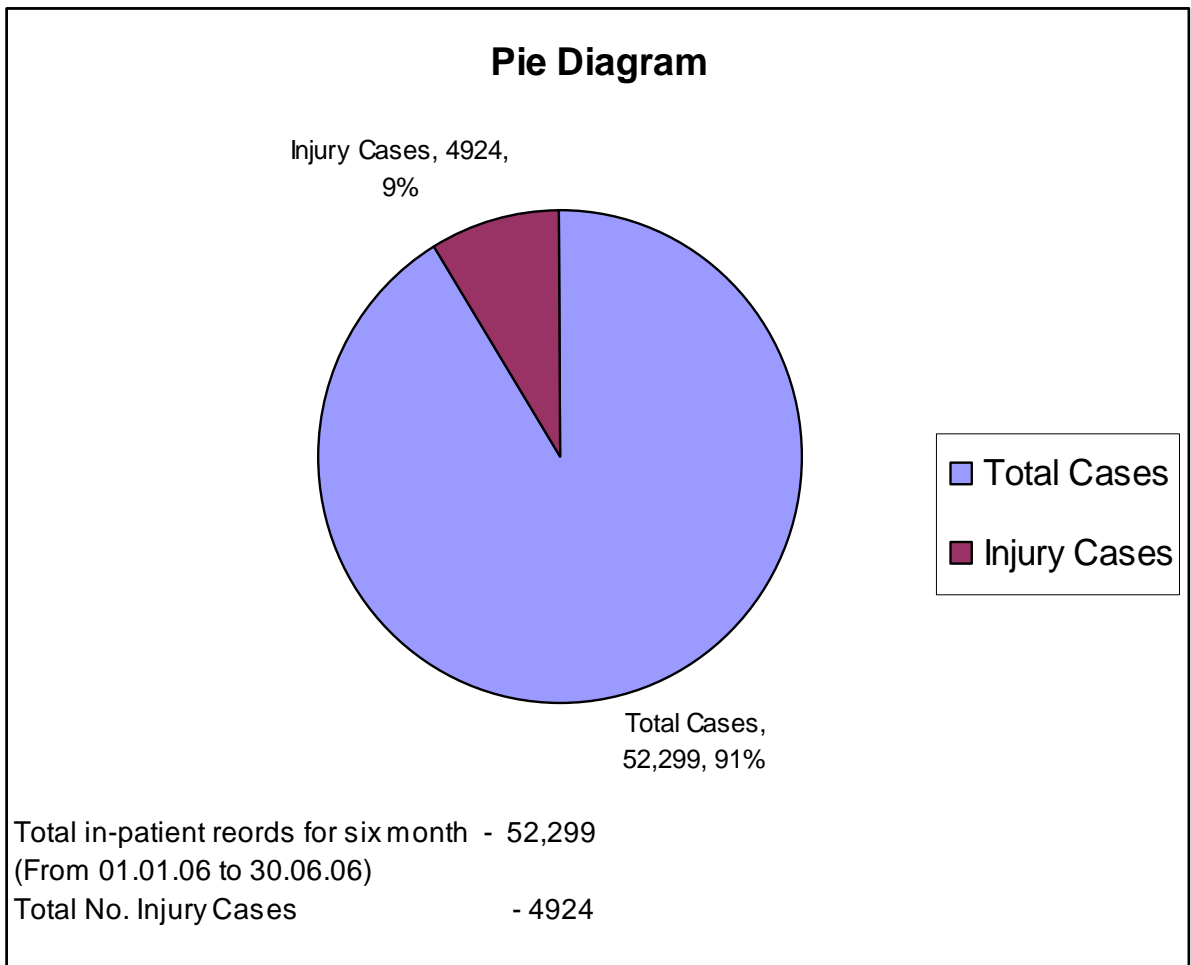
<b>IV.1</b>	<b>Hospital</b>	<b>:</b>	<b>Safdarjang Hospital New Delhi – 110029.</b>
<b>IV.2</b>	<b>Period of data collection</b>	<b>:</b>	<b>1.1.06 to 30.6.06</b>
<b>IV.3</b>	<b>Total medical records for the Period</b>	<b>:</b>	<b>52,299</b>
<b>IV.4</b>	<b>Number of records reviewed</b>	<b>:</b>	<b>52,299</b>
<b>IV.5</b>	<b>Number of injury records identified</b>	<b>:</b>	<b>4924</b>
<b>IV.6</b>	<b>Number of records coded on to Performa</b>	<b>:</b>	<b>4924</b>
<b>IV.7</b>	<b>Number for proformas entered</b>	<b>:</b>	<b>4924</b>

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## PIE DIAGRAM OF TOTAL RECORDS WITH INJURY RECORDS AS A SLICE

Table – 1

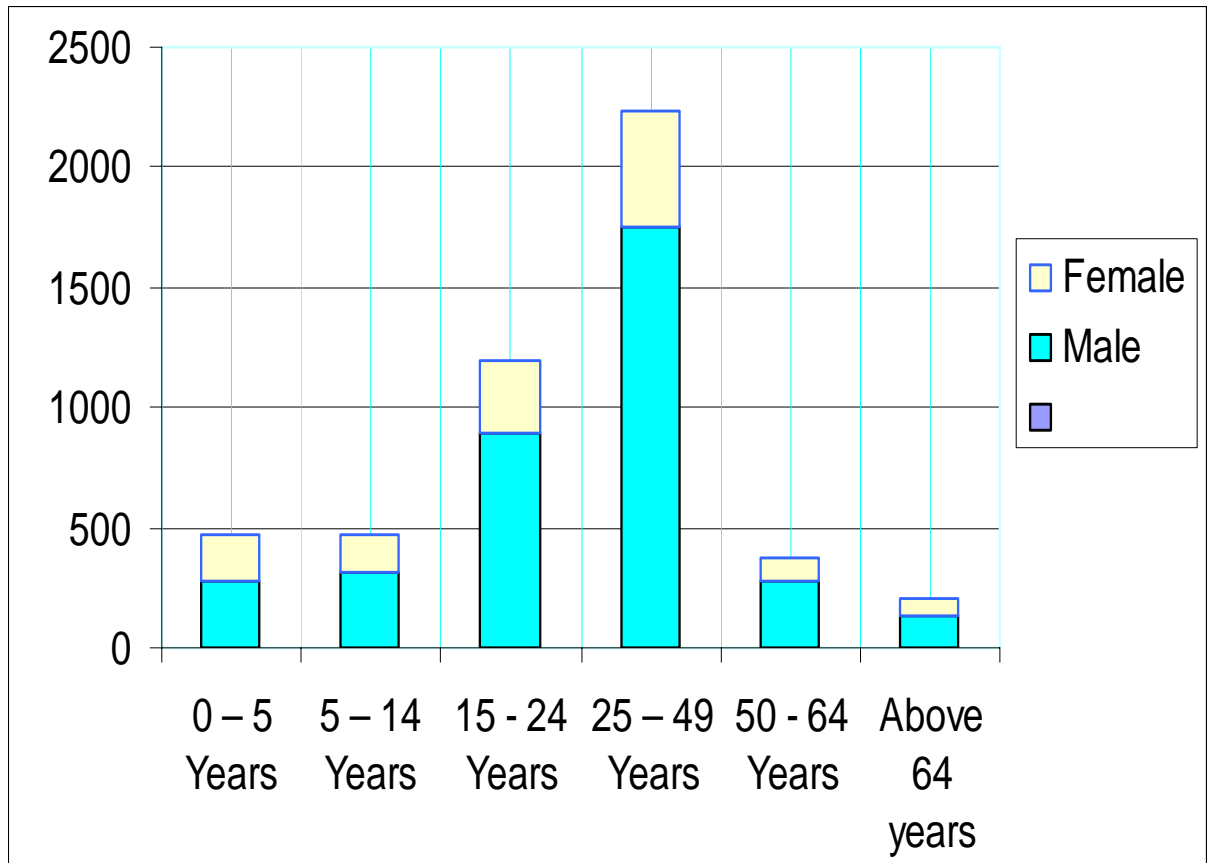


**Table - 2****DISTRIBUTION OF ALL INJURIES  
BY AGE GROUP AND GENDER**

Sl. No.	Age Group ( Age in years )	Gender			Percentages ( % )		
		Male	Female	Total	Male ( within the age group)	Female ( within the age group)	Total ( to the total no. of cases) <b>%</b>
1.	0 – 5	281	188	469	59.9	40.1	<b>9.5</b>
2.	5 – 14	317	150	467	67.9	32.1	<b>9.5</b>
3.	15 – 24	888	306	1194	74.4	25.6	<b>24.2</b>
4	25 – 49	1752	473	2225	78.7	21.3	<b>45.2</b>
5.	50 – 64	276	92	368	75.0	25.0	<b>7.5</b>
6	Above 64	129	72	201	64.2	35.8	<b>4.1</b>
	<b>Total</b>	<b>3643</b>	<b>1281</b>	<b>4924</b>	<b>74.0</b>	<b>26.0</b>	<b>100.0</b>

**Table - 3**

**BAR DIAGRAM OF DISTRIBUTION OF ALL INJURIES BY AGE GROUP AND GENDER.**



Sl. No.	Age Group ( Age in years )	Gender		
		Male	Female	Total
1.	0 – 5	281	188	469
2.	5 – 14	317	150	467
3.	15 – 24	888	306	1194
4.	25 – 49	1752	473	2225
5.	50 – 64	276	92	368
6.	Above 64	129	72	201
		3643	1281	4924

**TABLE – 4****TYPES OF INJURIES ( i.e. ALL INJURIES ) BY SITE ( Q.28 )**

Sl.	Site of Injury	Total	Percentage ( % ) ( From total no. of injuries = 4924 )
1.	Head	2464	50.00
2.	Face	453	9.20
3.	Eyes	20	0.41
4.	ENT	25	0.51
5.	Neck	260	5.28
6.	Chest	335	6.80
7.	Abdomen	796	16.20
8.	Pelvis	125	2.54
9.	Genitalia	25	0.51
10.	Upper Limbs	1027	20.90
11.	Lower Limbs	1309	26.6
12.	Spine	177	3.59
13.	Not Known	357	7.25
	Total	7373	149.71

**TABLE – 5**

**TYPES OF INJURIES ( i.e. ALL INJURIES ) BY SEVERITY ( Q.26 )**

<b>Sl. No.</b>	<b>Severity of injury</b>	<b>No. of injured cases</b>	<b>Percentage ( % )</b>
<b>1.</b>	<b>Simple</b>	<b>254</b>	<b>5.2</b>
<b>2.</b>	<b>Grievous</b>	<b>142</b>	<b>2.9</b>
<b>3.</b>	<b>Dangerous</b>	<b>462</b>	<b>9.4</b>
<b>4.</b>	<b>Not Known</b>	<b>4066</b>	<b>82.6</b>
	<b>Total</b>	<b>4924</b>	<b>100.0</b>

TABLE – 6

TYPES OF INJURIES ( i.e. **ALL INJURIES** ) BY OUTCOME ( Q.34 )  
( INDICATE DEATH/DISABILITY )

<b>Sl. No.</b>	<b>Outcome</b>	<b>No. of injured cases</b>	<b>Percentage ( % )</b>
<b>1.</b>	<b>Recovered &amp; Improved</b>	<b>4114</b>	<b>83.55</b>
<b>2.</b>	<b>Not Recovered</b>	<b>0</b>	<b>0</b>
<b>3.</b>	<b>Discharged with Residual Disability</b>	<b>20</b>	<b>0.41</b>
<b>4.</b>	<b>Dead</b>	<b>790</b>	<b>16.04</b>
<b>5.</b>	<b>Not known</b>	<b>0</b>	<b>0</b>
	<b>Total</b>	<b>4924</b>	<b>100.00</b>

TABLE – 7

TYPES OF INJURIES ( i.e. ALL INJURIES ) BY HOW WERE YOU INJURED ( Q.10 )

<b>Sl. No.</b>	<b>Outcome</b>	<b>No. of injured cases</b>	<b>Percentage ( % )</b>
<b>1.</b>	<b>RTA</b>	<b>1860</b>	<b>37.8</b>
<b>2.</b>	<b>Fall</b>	<b>1075</b>	<b>21.8</b>
<b>3.</b>	<b>Assault</b>	<b>417</b>	<b>8.5</b>
<b>4.</b>	<b>Stab or Cut</b>	<b>89</b>	<b>1.8</b>
<b>5.</b>	<b>Firearm</b>	<b>25</b>	<b>0.5</b>
<b>6.</b>	<b>Burns</b>	<b>737</b>	<b>15.0</b>
<b>7.</b>	<b>Poisoning</b>	<b>283</b>	<b>5.7</b>
<b>8.</b>	<b>Drowning</b>	<b>2</b>	<b>0.04</b>
<b>9.</b>	<b>Hanging</b>	<b>20</b>	<b>0.4</b>
<b>10.</b>	<b>Sports</b>	<b>4</b>	<b>0.1</b>
<b>11.</b>	<b>Animal Bites</b>	<b>17</b>	<b>0.3</b>
<b>12.</b>	<b>Fall of object</b>	<b>23</b>	<b>0.5</b>
<b>13.</b>	<b>Others (specify)</b>	<b>64</b>	<b>1.3</b>
<b>14.</b>	<b>Not known</b>	<b>308</b>	<b>6.3</b>
	<b>TOTAL</b>	<b>4924</b>	<b>100.0</b>

TABLE – 8

**TYPES OF INJURIES BY NATURE OF INJURIES ( Q.29 )**

Sl.NO.	Nature of Injury	Male	Female	Total	Percentage ( % ) ( From total no. of injuries = 4924 )
1	Fracture	1249	334	1583	32.10
2	Sprain	4	2	6	0.12
3	Cut or open wound	111	28	139	2.82
4	Sharp and penetrating cut	14	1	15	0.30
5	Haematoma	273	76	349	7.09
6	Burn	365	322	687	13.95
7	Others	1479	437	1916	38.91
8	Not Known	305	114	419	8.51
<b>Grand Total</b>		<b>3800</b>	<b>1314</b>	<b>5114</b>	<b>103.86</b>

**TABLE – 9**  
**BY AGE GROUP AND GENDER : TYPES OF INJURIES BY SITE ( Q.28 )**

S.No.	Injury	0 – 5 Years			5 – 14 Years			15-24 Years			25-49 Years			50-64 Years			65 + Years			Grand Total		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	Male	Female	Total
1.	Head	166	114	280	159	76	235	477	61	538	940	184	1124	146	44	190	71	26	97	1959	505	2464
2.	Face	23	10	33	21	14	35	67	87	154	122	88	210	10	8	18	1	2	3	244	209	453
3.	Eyes	2	2	4	0	0	0	3	3	6	6	2	8	1	0	1	0	1	1	12	8	20
4.	ENT	1	2	3	1	1	2	6	2	8	8	2	10	1	0	1	0	1	1	17	8	25
5.	Neck	9	6	15	12	10	22	32	54	86	70	46	116	12	7	19	2	0	2	137	123	260
6.	Chest	23	11	34	18	14	32	49	33	82	103	57	160	17	5	22	3	2	5	213	122	335
7.	Abdomen	34	24	58	40	29	69	140	133	273	202	149	351	21	13	34	7	4	11	444	352	796
8.	Pelvis	1	3	4	1	1	2	23	21	44	46	19	65	3	4	7	1	2	3	75	50	125
9.	Genitalia	1	1	2	1	0	1	6	3	9	5	6	11	1	1	2	0	0	0	14	11	25
10.	Upper Limbs	60	131	191	80	38	118	158	134	292	285	161	446	42	17	59	9	12	21	634	393	1027
11.	Lower Limbs	47	23	70	61	33	94	203	142	345	443	171	614	77	30	107	43	36	79	874	435	1309
12.	Spine	1	2	3	4	1	5	17	15	32	86	19	105	18	4	22	7	3	10	133	44	177
13.	Not Known	20	11	22	17	9	26	79	56	135	107	42	149	9	4	13	1	2	3	233	124	357
<b>GRAND TOTAL</b>		<b>388</b>	<b>340</b>	<b>719</b>	<b>415</b>	<b>226</b>	<b>641</b>	<b>1260</b>	<b>744</b>	<b>2004</b>	<b>2423</b>	<b>946</b>	<b>3369</b>	<b>358</b>	<b>137</b>	<b>495</b>	<b>145</b>	<b>91</b>	<b>236</b>	<b>4989</b>	<b>2384</b>	<b>7373</b>

**TABLE – 10**  
**BY AGE GROUP AND GENDER : BY SEVERITY ( Q.26 )**

Gender	Age Group	Simple	Grievous	Dangerous	Not Known	Total
Male	1 ( 0 - 5 years )	6	7	11	257	281
	2 ( 5 – 14 Years )	11	8	17	281	317
	3 ( 15-24 Years )	56	22	80	730	888
	4 ( 25-49 Years )	94	63	121	1474	1752
	5 ( 50-64 Years )	16	8	15	237	276
	6 ( 65 + Years )	3	3	4	119	129
<b>TOTAL</b>		<b>186</b>	<b>111</b>	<b>248</b>	<b>3098</b>	<b>3643</b>
Female	1 ( 0 - 5 years )	4		14	170	188
	2 ( 5 – 14 Years )	10	4	17	119	150
	3 ( 15-24 Years )	13	10	81	202	306
	4 ( 25-49 Years )	28	14	87	344	473
	5 ( 50-64 Years )	9	1	10	72	92
	6 ( 65 + Years )	4	2	5	61	72
<b>TOTAL</b>		<b>68</b>	<b>31</b>	<b>214</b>	<b>968</b>	<b>1281</b>
<b>Grand Total :</b>		<b>254</b>	<b>142</b>	<b>462</b>	<b>4066</b>	<b>4924</b>

**TABLE – 11**  
**BY AGE GROUP AND GENDER : BY OUTCOME ( Q.34 ) ( INDICATE**  
**DEATH / DISABILITY )**

**Outcome: Age & Sex Wise (Q 34)**

Gender	Age Group	Recovered & Improved	Not Recovered	Discharged with Residual Disability	Dead	Not known	Total
Male	1 ( 0 - 5 years)	250			31		<b>281</b>
	2 ( 5 – 14 Years )	286		2	29		<b>317</b>
	3 ( 15-24 Years )	768		3	117		<b>888</b>
	4 ( 25-49 Years )	1508		10	234		<b>1752</b>
	5 ( 50-64 Years )	221			55		<b>276</b>
	6 ( 65 + Years )	111			18		<b>129</b>
	<b>TOTAL</b>	<b>3144</b>		<b>15</b>	<b>484</b>		<b>3643</b>
Female	1 ( 0 - 5 years)	158		1	29		<b>188</b>
	2 ( 5 – 14 Years )	122			28		<b>150</b>
	3 ( 15-24 Years )	208		1	97		<b>306</b>
	4 ( 25-49 Years )	349		1	123		<b>473</b>
	5 ( 50-64 Years )	71		1	20		<b>92</b>
	6 ( 65 + Years )	62		1	9		<b>72</b>
	<b>TOTAL</b>	<b>970</b>		<b>5</b>	<b>306</b>		<b>1281</b>
<b>Grand Total</b>	<b>4114</b>		<b>20</b>	<b>790</b>		<b>4924</b>	

**TABLE – 12**  
**BY AGE GROUP AND GENDER: BY HOW WERE YOU INJURED ( Q.10 )**

SI .N o.	How Injured	Less than 5 years			5 - 14 Years			15 - 24 Years			25 - 49 Years			50 - 64 Years			65 years and above			Grand Total		
		Mal e	Fema le	Tot al	Mal e	Fema le	Tot al	Mal e	Fema le	Tot al	Mal e	Fema le	Tot al	Mal e	Fema le	Tot al	Ma le	Fe mal e	Total	mal e	fem ale	Total
		1	RTA	36	17	53	74	34	108	402	52	454	891	125	1016	119	35	154	51	24	75	1573
2	Fall	141	107	248	129	52	181	124	32	156	234	84	318	70	25	95	44	33	77	742	333	1075
3	Assault	7		7	13	5	18	97	16	113	197	44	241	24	5	29	8	1	9	346	71	417
4	Stab or Cut	5	3	8	14	2	16	14	4	18	26	5	31	6	4	10	3	3	6	68	21	89
5	Firearm							5	1	6	12	4	16	2	1	3				19	6	25
6	Burns	51	25	76	36	28	64	106	127	233	190	134	324	18	14	32	4	4	8	405	332	737
7	Poisoning	20	13	33	11	8	19	63	55	118	61	44	105	6	2	8				161	122	283
8	Drowning							1		1	1		1							2	0	2
9	Hanging	1	2	3		2	2	3	1	4	8	1	9	2		2				14	6	20
10	Sports				1		1	1		1	1	1	2							3	1	4
11	Animal Bites							6		6	9	2	11							15	2	17
12	Fall of object	1	1	2	1		1	5		5	10	4	14					1	1	17	6	23
13	Others	1	7	8	11	5	16	8	5	13	17	4	21	4	1	5	1		1	42	22	64
	Not Known	18	13	31	27	14	41	53	13	66	95	21	116	25	5	30	18	6	24	236	72	308
	<b>Grand Total</b>	<b>281</b>	<b>188</b>	<b>469</b>	<b>317</b>	<b>150</b>	<b>467</b>	<b>888</b>	<b>306</b>	<b>1194</b>	<b>1752</b>	<b>473</b>	<b>2225</b>	<b>276</b>	<b>92</b>	<b>368</b>	<b>129</b>	<b>72</b>	<b>201</b>	<b>3643</b>	<b>1281</b>	<b>4924</b>

**TABLE – 13**  
**BY AGE GROUP AND GENDER : BY NATURE ( Q.29 )**

Sl.N O.	Nature of Injury	Less than 5 years			5 - 14 Years			15 - 24 Years			25 - 49 Years			50 - 64 Years			65 years and above			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1	Fracture	83	69	152	126	29	155	254	51	305	611	105	716	118	34	152	57	46	103	1249	334	1583
2	Sprain	0	0	0	0	0	0	1	0	1	3	2	5	0	0	0	0	0	0	4	2	6
3	Cut or open wound	5	2	7	11	2	13	38	8	46	52	11	63	5	4	9	0	1	1	111	28	139
4	Sharp and penetrating cut	1	1	2	1	0	1	4	0	4	8	0	8	0	0	0	0	0	0	14	1	15
5	Haematoma	18	13	31	18	14	32	70	11	81	136	31	167	20	4	24	11	3	14	273	76	349
6	Burn	48	21	69	30	27	57	98	125	223	167	133	300	18	13	31	4	3	7	365	322	687
7	Others	97	70	167	108	72	180	383	76	459	733	164	897	108	35	143	50	20	70	1479	437	1916
8	Not Known	37	20	57	35	11	46	81	40	121	122	35	157	21	6	27	9	2	11	305	114	419
Grand Total		289	196	485	329	155	484	929	311	1240	1832	481	2313	290	96	386	131	75	206	3800	1314	5114

**TABLE – 14**  
**BY AGE GROUP AND GENDER : ACTIVITY AT THE TIME OF INJURY ( Q.11)**

Sl. No.	Activity	Less than 5 years			5 - 14 Years			15 - 24 Years			25 - 49 Years			50 - 64 Years			65 years and above			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	
1.	Traveling in vehicle	5	2	7	10	4	14	62	7	69	117	19	136	16	4	20	3	3	6	213	39	252
2.	Walking	4	4	8	3	1	4	8	1	9	20	5	25	2	1	3	3	2	5	40	14	54
3.	Standing on road				2		2	3		3	1		1	1		1				7	0	7
4.	Working		2	2	4	3	7	21	12	33	49	12	61	5		5				79	29	108
5.	Going / Coming from school	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	2	0	2
6.	Working at home	1	1	2		2	2	17	23	40	16	29	45	2	1	3	1	3	4	37	59	96
7.	Playing	27	17	44	26	6	32	9	3	12	3	1	4	1		1	2		2	68	27	95
8.	Others	3	2	5	2	5	7	11	6	17	32	12	44	2	2	4	5	3	8	55	30	85
9.	Not Known	241	160	401	270	129	399	757	254	1011	1512	395	1907	247	84	331	115	61	176	314	1083	4225
	Grand Total	281	188	469	317	150	467	888	306	1194	1752	473	2225	276	92	368	129	72	201	364	1281	4924

**TABLE – 15**  
**BY AGE GROUP AND GENDER : PLACE OF INJURY ( Q. 9 )**

Place of Injury	Less than 5 years			5 - 14 Years			15 - 24 Years			25 - 49 Years			50 - 64 Years			65 years and above			Grand Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	total
Road	36	18	54	76	32	108	393	53	446	867	126	993	118	33	151	49	23	72	1539	285	1824
Home	35	21	56	15	18	33	30	54	84	61	61	122	9	7	16	6	10	16	156	171	327
Work Place				1		1	9		9	24	1	25	1		1	1	1	2	36	2	38
School				3	1	4	4		4	5		5	1		1				13	1	14
Others	4	4	8	14	1	15	13	9	22	31	7	38	2	1	3				64	22	86
Not Known	206	145	351	208	98	306	439	190	629	764	278	1042	145	51	196	73	38	111	1835	800	2635
<b>Grand Total</b>	<b>281</b>	<b>188</b>	<b>469</b>	<b>317</b>	<b>150</b>	<b>467</b>	<b>888</b>	<b>306</b>	<b>1194</b>	<b>1752</b>	<b>473</b>	<b>2225</b>	<b>276</b>	<b>92</b>	<b>368</b>	<b>129</b>	<b>72</b>	<b>201</b>	<b>3643</b>	<b>1281</b>	<b>4924</b>

**TABLE – 16**  
**BY AGE GROUP AND GENDER : INTENT OF INJURY ( Q.12 )**

	<b>Less than 5 years</b>			<b>5 - 14 Years</b>			<b>15 - 24 Years</b>			<b>25 - 49 Years</b>			<b>50 - 64 Years</b>			<b>65 years and above</b>			<b>Grand Total</b>		
<b>Intent</b>	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
<b>Unintentional</b>	136	109	245	164	82	246	374	119	493	812	188	1000	100	39	139	58	34	92	1644	571	2215
<b>Self harm</b>				1		1	11	8	19	8	12	18		1	1	1		1	21	21	40
<b>Intentional / Assault</b>	6	1	7	8	3	11	95	30	125	195	49	246	26	4	30	5	1	6	335	88	422
<b>Not known</b>	139	78	217	144	65	209	408	149	557	737	224	961	150	48	198	65	37	102	1643	601	2244
<b>Grand Total</b>	281	188	469	317	150	467	888	306	1194	1752	473	2225	276	92	368	129	72	201	3643	1281	4924

**TABLE – 17****SEVERITY OF INJURY ( Q.26 ) BY EDUCATIONAL STATUS ( Q.4 ) IN BOTH GENDER.**

Table 17

Severity of Injury (Q 26) by educational status in both genders(Q.4)

S.NO.	Severity	EDUCATIONAL STATUS		Grand Total
		Male	Female	
1.	Simple	186	68	254
2.	Grievous	111	31	142
3.	Dangerous	248	214	462
4.	Not Known	3098	968	4066
	Grand Total	3643	1281	4924

**TABLE – 18**  
**SEVERITY OF INJURY ( Q.26 ) BY OCCUPATION FOR BOTH GENDER**

Sl. NO.	Severity	Occupation Not Known		Grand Total
		Male	Female	
1.	Simple	186	68	254
2.	Grievous	111	31	142
3.	Dangerous	248	214	462
4.	Not Known	3098	968	4066
5.	Grand Total	3643	1281	4924

**TABLE – 19****SEVERITY OF INJURY ( Q.26 ) BY PLACE OF RESIDENCE (Q.8) FOR BOTH GENDER**

Severity	Urban			Rural			Not Known			Grand Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Simple	159	57	216	23	11	34	4		4	186	68	254
Grievous	80	23	103	30	8	38	1		1	111	31	142
Dangerous	154	130	284	91	84	175	3		3	248	214	462
Not Known	2442	787	3229	599	171	770	57	10	67	3098	968	4066
Grand Total	2835	997	3832	743	274	1017	65	10	75	3643	1281	4924

**TABLE -20**  
**SEVERITY OF INJURY (Q.26) BY PLACE OF INJURY (Q.9)**

Sl.No.	Place of Injury	Simple	Grievous	Dangerous	Not Known	Total
<b>1</b>	Road	112	80	54	1578	<b>1824</b>
<b>2</b>	Home	10	11	102	204	<b>327</b>
<b>3</b>	Work Place		1	12	25	<b>38</b>
<b>4</b>	School		1	1	12	<b>14</b>
<b>5</b>	Others	3	3	12	68	<b>86</b>
<b>6</b>	Not Known	129	46	281	2179	<b>2635</b>
	<b>TOTAL</b>	<b>254</b>	<b>142</b>	<b>462</b>	<b>4066</b>	<b>4924</b>

**TABLE – 21**  
**SEVERITY OF INJURY ( Q.26 ) BY HOW WERE YOU INJURED ( Q.10 )**

Sl. No.	How Injured	Simple	Grievous	Dangerous	Not Known	Total
1	RTA	117	83	54	1606	1860
2	Fall	52	14	25	984	1075
3	Assault	51	9	5	352	417
4	Stab or Cut	2	2	5	80	89
5	Firearm	1	3	0	21	25
6	Burns	4	19	354	360	737
7	Poisoning	13	2	7	261	283
8	Drowning	0	0	2	0	2
9	Hanging	0	2	5	13	20
10	Sports	0	0	0	4	4
11	Animal Bites	1	0	0	16	17
12	Fall of object	1	2	1	19	23
13	Others	1	1	2	60	64
14	Not Known	11	5	2	290	308
	<b>TOTAL</b>	<b>254</b>	<b>142</b>	<b>462</b>	<b>4066</b>	<b>4924</b>

**TABLE – 22****ALCOHOL CONSUMPTION BY (Q.13)**

S. NO.	How Injured	Injured	Counterpart	Both	Not Applicable	Not Known	Grand Total
1	RTA	100	0	0	650	1110	1860
2	Fall	24	0	0	587	464	1075
3	Assault	25	0	0	137	255	417
4	Stab or Cut	1	0	0	26	62	89
5	Firearm	0	0	0	8	17	25
6	Burns	10	0	0	431	296	737
7	Poisoning	10	0	0	164	109	283
8	Drowning	1	0	0	0	1	2
9	Hanging	0	0	0	8	12	20
10	Sports	0	0	0	2	2	4
11	Animal Bites	0	0	0	7	10	17
12	Fall of object	0	0	0	16	7	23
13	Others	0	0	0	37	27	64
14	Not Known	2	0	0	111	195	308
Total		173	0	0	2184	2567	4924

**TABLE – 23**  
**PLACE OF OCCURRENCE BY AGE AND GENDER ( Q.14 )**

Place Of Occurrence	Less than 5 years			5 - 14 Years			15 - 24 Years			25 - 49 Years			50 - 64 Years			65 years and above			Grand Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1. City / Municipal roads	1	1	2	4	3	7	31	8	39	61	15	76	7	1	8	2	1	3	106	29	135
2. Highway	1		1				1		1	1		1							3	0	3
3. Inner Roads				1		1	2		2	3		3							6	0	6
4. Rural Roads	2		2	2	1	3	2		2	7	1	8	1		1	1		1	15	2	17
5. Others	4	2	6	2	1	3	14	4	18	15	3	18	1	1	2	1		1	37	11	48
6. Not Known	273	185	458	308	145	453	838	294	1132	1665	454	2119	267	90	357	125	71	196	3476	1239	4715
Grand Total	281	188	469	317	150	467	888	306	1194	1752	473	2225	276	92	368	129	72	201	3643	1281	4924

**TABLE – 24**  
**ROAD USER CATEGORY ( Q.15 ) BY SEVERITY OF INJURY ( Q.26 )**

S. NO.	Road User Category	Simple	Grievous	Dangerous	Not Known	Total
1	Pedestrian	3	2	0	37	42
2	Pedal cyclist	5	0	0	24	29
3	Two Wheeler Rider	6	3	1	95	105
4	Two Wheeler Pillion	2	0	1	13	16
5	Three Wheeler Driver	0	0	0	4	4
6	Three Wheeler Occupant	0	1	0	9	10
7	Car Driver	0	0	0	5	5
8	Car Occupant	1	1	0	11	13
9	Bus / Truck Driver	2	0	3	14	19
10	Bus / truck Occupant	0	0	0	24	24
11	Other 4 Wheeler Driver (Taxi/Cab/Tempo etc.)	0	0	1	10	11
12	Other 4 wheeler Occupant	0	0	0	7	7
13	Others	9	4	1	80	94
14	Not Known	226	131	455	3733	4545
	<b>Total</b>	<b>254</b>	<b>142</b>	<b>462</b>	<b>4066</b>	<b>4924</b>

**TABLE – 25**  
**TYPE OF COLLISION ( Q.16 ) BY SEVERITY OF INJURY ( Q.26 )**

S. NO..	Collision	Simple	Dangerous	Grievous	Not Known	Total
1	Head on collision	2			12	14
2	Hit Pedestrian	1		2	31	34
3	Hit from the back	5	5	3	62	75
4	Hit from the Side angle collision			1	22	23
5	Overturn	2			20	22
6	Hit a fixed object		1		20	21
7	Run off road			1	9	
8	Others	10	2	3	116	131
9	Not Known	234	454	132	3774	4594
<b>Grand Total</b>		<b>252</b>	<b>462</b>	<b>142</b>	<b>4066</b>	<b>4924</b>

**TABLE – 26**  
**TYPE OF COLLISION ( Q.16 ) BY PART OF BODY ( Q.28 )**

S. No.	Body Part	Hit Pedestrian	Head on Collision	Hit From the Back	Hit from the side	Overturn	Hit a fixed object	Run Off road	Others	Not Known	Grand total
1.	Head	21	11	42	13	13	14	8	66	2266	2454
2.	Face	1	0	5	0	2	0	0	11	433	452
3.	Eyes	0	0	0	0	0	0	0	2	18	20
4.	ENT	0	0	0	0	0	1	0	5	56	62
5.	Neck	0	0	0	0	0	0	0	2	43	45
6.	Chest	0	0	2	0	1	1	0	11	320	335
7.	Abdomen	1	0	3	1	0	1	0	1	173	180
8.	Pelvis	0	0	3	0	1	0	0	0	33	37
9.	Genitalia	0	0	0	0	0	0	0	0	5	5
10.	Upper Limbs	2	0	5	1	1	1	1	12	406	429
11.	Lower Limbs	7	3	13	8	4	1	0	13	495	544
12.	Spine	1	0	1	0	0	1	0	0	1	4
13.	Not Known	1	0	1	0	0	1	1	8	345	357
<b>GRAND TOTAL</b>		<b>34</b>	<b>14</b>	<b>75</b>	<b>23</b>	<b>22</b>	<b>21</b>	<b>10</b>	<b>131</b>	<b>4594</b>	<b>4924</b>

**TABLE – 27**  
**HELMET USE ( Q.17) BY PART OF BODY ( Q.28 )**

S. no.	Body Part	Helmet Use			Total
		Yes	No	Not Known	
1	Head	3	42	2419	2454
2	Face	0	11	480	491
3	Eyes	0	2	48	50
4	ENT	0	8	133	141
5	Neck	0	2	257	259
6	Chest	0	13	673	686
7	Abdomen	0	11	790	791
8	Pelvis	0	1	124	125
9	Genitalia	0	1	57	58
10	Upper limbs	1	20	1008	1029
11	Lower limbs	0	27	29	1308
12	Spine	0	1	178	179
13	Not Known	0	13	344	357
Total		4	152	6540	7928

**TABLE – 28**  
**HELMET USE ( Q.17) BY PART OF BODY ( Q.26 )**

Sl. No.	Severity	Helmet use			
		Yes	No	Not Known	Total
1	Simple	-	-	254	254
2	Grievous	-	-	142	142
3	Dangerous	-	-	462	462
4	Not Known			4066	4066
	Total	-	-	4924	4924

**Note : A present this information is not colleted as per existing procedure.**

**TABLE – 29**  
**SEAT BELT USE ( Q.18 )**

Sl. No.	Severity	Use of seat belt			
		Yes	No	Not Known	Total
1	Simple	-	-	254	254
2	Grievous	-	-	142	142
3	Dangerous	-	-	462	462
4	Not Known			4066	4066
	<b>Total</b>	-	-	4924	4924

**Note : A present this information is not colleted as per existing procedure**

**TABLE – 30****FIRST AID GIVEN ( Q.19) BY PLACE ( AREA ) OF RESIDENCE (Q.8)**

Sl. No.	First Aid given before the hospital	Urban	Rural	Not Known	Grand Total
1.	Yes	1311	470	25	1806
2.	No	147	15	7	169
3.	Don't Know	2374	532	43	2949
Grand Total		3832	1017	75	4924

## FIRST AID GIVEN IF YES ( Q.21 ) BY HOW WERE YOU INJURED ( Q.10)

S. No.	How Injured	Health Worker	Doctor	Nurse	Police	Public	Not Known	Total
1	RTA	1	814	7	3	3	1032	1860
2	Fall	0	310	0	0	2	763	1075
3	Assault	1	177	0	0	0	239	417
4	Stab or Cut	0	9	0	0	0	80	89
5	Firearm	0	11	0	0	0	14	25
6	Burns	0	297	2	0	2	436	737
7	Poisoning	0	41	1	0	0	241	283
8	Drowning	0	1	0	0	0	1	2
9	Hanging	0	6	0	0	0	14	20
10	Sports	0	3	0	0	0	1	4
11	Animal Bites	0	2	0	0	0	15	17
12	Fall of object	0	7	0	1	0	15	23
13	Others	0	24	0	0	0	40	64
14	Not Known	0	25	0	0	0	283	308
GRAND TOTAL		2	1727	10	4	7	3174	4924

**TABLE – 32****NO OF HOSPITALS VISITED BEFORE ATTENDING  
THIS HOSPITAL (Q.23) BY SEVERITY ( Q.26)**

S.No.	Severity	No of Hospital visits before attending this hospital				Grand Total
		0	1	2	3	
1.	Simple	224	30			254
2.	Grievous	103	36	3		142
3.	Dangerous	341	117	4		462
4.	Not Known	2555	1445	65	1	4066
Grand Total		3223	1628	72	1	4924

**TABLE – 33****MODE OF TRANSPORT (Q.24) BY AREA OF RESIDENCE (Q.8)**

S. No.	Mode of Transport	Urban	Rural	Others	Not Known	Grand Total
1	Private Ambulance	4	4	0	0	8
2	Govt. Ambulance	18	4	0	1	23
3	CATS	5	1	0	2	8
4	Police Van/Govt. Vehicle	10	4	0	2	16
5	Private Vehicle / Taxi	1	0	0	0	1
6	Auto rickshaw (3 Wheeler)	14	3	0	0	17
7	Others	3	0	0	0	3
8	Not Known	3777	1001	0	70	4848
Grand Total		3832	1017	0	75	4924

**TABLE – 34****TREATMENT (Q.30) BY SEVERITY (Q.26)**

Sl. No.	Treatment	Simple	Grievous	Dangerous	Not Known	Grand Total
1	Treated in Emergency room & sent home	0	0	0	0	0
2	Treated in emergency room & referred to another Hospital	0	0	0	0	0
3	Admitted for definitive care	254	142	462	4066	4924
4	Not Known	0	0	0	0	0
Grand Total		254	142	462	4066	4924

**TABLE – 35****TREATMENT ( Q.30 ) BY PART OF BODY (Q.28)**

S. No.	Body Part	Treated in emergency room and sent home	Treated in emergency room and referred to another hospital	Admitted for definitive Care	Not Known	Grand total
1.	Head	0	0	2464	0	2464
2.	Face	0	0	453	0	453
3.	Eyes	0	0	20	0	20
4.	ENT	0	0	25	0	25
5.	Neck	0	0	260	0	260
6.	Chest	0	0	335	0	335
7.	Abdomen	0	0	796	0	796
8.	Pelvis	0	0	125	0	125
9.	Genitalia	0	0	25	0	25
10.	Upper Limbs	0	0	1027	0	1027
11.	Lower Limbs	0	0	1309	0	1309
12.	Spine	0	0	177	0	177
13.	Not Known	0	0	357	0	357
<b>GRAND TOTAL</b>		<b>0</b>	<b>0</b>	<b>7373</b>	<b>0</b>	<b>7373</b>

**TABLE – 36****TREATMENT ( Q.30 ) BY TYPE OF INJURY (Q.10)**

Nature of Injury	Treated in emergency room and sent home	Treated in emergency room and referred to another hospital	Admitted for definitive Care	Not Known	Grand Total
	0	0	1581	0	1581
Fracture	0	0	6	0	6
Sprain	0	0	139	0	139
Cut or open wound	0	0	15	0	15
penetrating injury	0	0	352	0	352
Haematoma	0	0	687	0	687
Burn	0	0	1913	0	1913
Others	0	0	419	0	419
Not Known	0	0	5112	0	5112
Grand Total					

**TABLE – 37**  
**TREATMENT ( Q.30 ) BY OUTCOME ( Q.34)**

Sl. No.	Outcome	Treated in Emergency room & sent home	Treated & referred to another Hospital	Admitted for definitive care	Not Known	Grand Total
1.	Recovered & Improved	6	0	4114	0	4114
2.	Not Recovered	0	0	0	0	0
3.	Discharged with Residual Disability	0	0	20	0	20
4.	Dead	0	0	790	0	790
5.	Not known	0	0	0	0	0
Grand Total		0	0	4924	0	4924

## DISCUSSIONS

### Procedure :

1. The data for injury Surveillance Project has been collected in the Medical Record Department of this hospital for the period of six months w.e.f. 1.1.06 to 30.6.06.
2. There are total 1,15,441 admission ( including 6802 deaths) for the year 2006 out which there are 52,299 admission ( including 3330 deaths) for the period of study of six months.
3. All the said 52,299 inpatient case records ( case sheets ) were reviewed and total no. of 4924 injury cases ( including 790 deaths ) were identified.
4. Data Capture Report Form has been filled for all the 4924 cases and the same has been entered in the computer in MS Access ( Microsoft Access ).
5. 37 data tables has been generated from the said data entry from table 1 to Table – 37 ( from Page No. 17 to 53 of this report )

### Manpower :

1. Looking into the work load of injury cases on going through the work it has been decided to collect the data for six months of this hospital and the same was discussed in the last meeting held under the chairmanship of Dr. H.C. Goyal, Addl.D.G in DGHS wherein the representative from WHO was also invited and it was also decided in the above meeting that a unique pattern for data tables will be provided by the WHO, in which above data has been collected and submitted in this report.
2. In screening the 52,999 records, 4924 injury cases has been identified. The process of filling the data capture report forms and entering the same in to the computers , is a big help to get the work done by the extra manpower employed by the funds provided by the WHO. In addition to this manpower the MRTC MRO and MRT trainees were also used to fill the data capture report forms which were all checked by the trained MRT of the project staff.
3. Hence for collection of retrospective injury data after the discharge of data the staff requirement is given at page no 14 of this report.

### Problems :

1. Technically we did not found any problem in making the retrospective study of the record as sufficient data was available in the case records.

### Usefulness of the Data Capture Report format :

1. It has sufficient information to study the pattern of injuries except some socio economic data viz. Education and Occupation status of the injured which was not collected during hospitalization or at the time of admission. But if still it is required, it can be collected as a census or sample survey by follow-up from the address available in the records.
2. Similarly some information viz. details of injury, Q.9 to Q. 11 and Q.14 to 24, can be collected at the time of admission or during hospitalization by introducing a separate Form of Medical Records in all the surgical specialties in injury cases and in all medical specialties in poisoning cases.

### Result:

The data on injury cases collected in this project has given the pattern of types of injuries and causes of injury, in depth, it is very useful for planning purposes to avoid the injuries in the society.

On analyzing the data it has been found that out of 4924 case of injuries in a period of six months, the **four major causes of injuries** are : Road Traffic Accident -36.3 %, (RTA), Fall from height – 14.2 %, Fall on the same level 3.6 %, Assault – 8.1 %, Poisoning – 4.9 % and by Burn 14.5 %, which covers 81.6 % of all the injury cases admitted in this hospital.

Hence it is good database for interpretation of data, for all types of injuries and external causes of injuries prevailing in the society and suitable measure may be suggested to avoid the injuries in the society by the health planner to improve the health services of the country.

**OPTIONS FOR INJURY SURVEILLANCE  
IN HOSPITALS:**

**Inpatient Injury Cases Data:**

The data for injury cases for inpatients of this hospital can be collected in the centralized Medical Record Department of this hospital, after discharge of the inpatients. The data will be collected in the Data Capture Report Format from the information available in the inpatient medical record ( case sheets )of injury cases. A separate detail of Injury Form may be introduced in the IPD record and to be filled by the treating doctor of the ward during the hospitalization positively, so that the details of injury could be analyzed retrospectively after the discharge of the patients in Medical Record Department by the staff. **The separate staff ( 5 ) as required as per details given at page no. 14 i.e. One MRT, two DEO and two Record Attendants may be provided for this purpose.**

**Out-patient Injury Cases Data:**

In this regards it is further added that lot of accident and injury cases are reported to the hospital in the Accident and Emergency Services Department of the hospital ( Casualty ) and treated in the emergency as an out-patient and does not require the hospitalization.

In this hospital the registration of all the emergency cases including injury cases is done by the doctors available in the Accident and Emergency

Services Department of the hospital ( Casualty ) and this form may also be filled at the same time while making the OPD Ticket or MLC Report.

**A manpower ( 3 ) for data entry is also required separately for these emergency cases. Two data entry operator and one Record Attendant is required to analyze and make computer entry of this data on regular basis.**

**Compilation of Data at state / National level.**

The data for injury cases for inpatients may collected regularly by the hospitals and may be supplied to the office of CBHI ( DGHS ), a statistical wing of DGHS, for compilation of data for all the hospitals of Delhi. A unique Performa may be developed and distributed to all the hospitals.

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**WHO PROJECT ON INJURY MODALITIES FOR IMPLEMENTING INJURY  
SURVEILLANCE SYSTEM  
STUDY TEAM**

**Administrative Head :**

1. **Padam Shree Dr. Jagdish Prasad, Addl.D.G. & Medical Superintendent.**
2. **Dr. N.K. Khadiya, Addl. M.S., MRD&TC , Safdarjang Hospital, New Delhi.**
3. **Dr. Mrs. Usha Chawla, CMO, MRD&TC, Safdarjang Hospital, New Delhi.**

**Technical :**

4. **Shri Vijay Kumar Harnal, MRO, Safdarjang Hospital, New Delhi.**

**WHO Project Staff :**

5. **Shri Sewa Ram, Ex-MRT, Safdarjang Hospital, New Delhi.**
6. **Shri Mukesh Kumar, DEO**
7. **Ms. Anita, DEO**
8. **Ms. Savitri, DEO**

**WHO Project Supporting Staff :**

9. **Shri Birendra Mishra, Record Attendant**
10. **Shri Naresh Kumar, Record Attendant**
11. **Shri Sanjay Yadav, Record Attendant**
12. **Shri Rajiv Kumar, Record Attendant**

**Other Supporting Staff :**

**MRO / MRT Trainees of 27<sup>th</sup> MRO and 68<sup>th</sup> MRT course of this MRD&TC, who are working in the Medical Record Department of various Central / State Govt. Hospital of India, has assisted in filling the Data Capture Report Forms and Data entry in the computers.**

**Shri A. K. Dubey, MRO Trainees from Medical Directorate of Indian Air Force has provide his contribution to use of computer techniques in MS Access for analyzing the data for this project.**

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**ROAD TRAFFIC AND INJURY SURVEILLANCE IN INDIA**

GOI – WHO Collaborative Programme 2006-07

**DATA CAPTURE FORMAT**

1.	Name of the hospital 1. AllMS 2. Safdarjang 3. LHMC 4.RML	<input type="checkbox"/>
2	Hospital Identification number	OP Casualty No.
3.		IP NO.
4	Brought by: 1. Family member 2. Known persons 3. Police 4. Unknown	<input type="checkbox"/>
5	<input type="checkbox"/>	
6	Date of occurrence (DD/MM/YY/)	<input type="checkbox"/> <input type="checkbox"/> / <input type="checkbox"/> <input type="checkbox"/> / <input type="checkbox"/> <input type="checkbox"/>
6	Date of registration (DD/MM/YY/)	<input type="checkbox"/> <input type="checkbox"/> / <input type="checkbox"/> <input type="checkbox"/> / <input type="checkbox"/> <input type="checkbox"/>
7	Time of registration : (Hrs:Min)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
8	Place of injury (address of the place of injury ) .....	
<b>PERSONAL DETAILS OF THE INJURED</b>		
1	Name of the injured :	
2	Age (in completed years ) of the injured	<input type="checkbox"/> <input type="checkbox"/>
3	Gender of the injured : 1. Male 2. Female	<input type="checkbox"/>
4	Education : 1. Illiterate 2. Primary 3. Middle	4. Secondary & High school 5. Graduate 6. Post graduate & above
		8. Others 9. Not known
5	Occupation 1. Unemployed 2. Retired 3. Homemaker	4. Unskilled laborer 5. Skilled laborer 6. Clerical
		7. Business 8. Executive 9. Other 10. not known
6	Marital status : 1. Married 2. Single 3. Not applicable 4. Not known	<input type="checkbox"/>
7	Address for correspondence : ..... .....	
8	Area of residence: 1. Urban 2. Rural 3. Others 4. Not known	<input type="checkbox"/>
<b>DETAILS OF THE INJURY</b>		
9	Place of injury 1. Road 2. Home 3. Workplace 4. School 5. Others (Specify ) : ..... 6. Not known	<input type="checkbox"/>
10	How were you injured 1. Road Traffic injury 2. Fall 3. Assault 4. Stab/Cut/ 5. Firearm	6. Burns 7. Poisoning 8. Drowning 9. Hanging
		10. Sports 11. Animal bites 12. Fall of object 13. Others (Specify) 14. Not known
11	Activity at the time of injury 1. Traveling in vehicle 2. Walking 3. Standing on road	4. Working 5. Going/Coming from school 6. Working at home
		7. Playing 8. Others 9. Not known
12	Intent 1. Unintentional 2. Self harm 3. Intentional /assault 4. Not known	<input type="checkbox"/>

13	Alcohol consumption by: (breath analyzer if available) 1. Injured 2. Counterpart 3. Both 4. Not applicable 5. Not known	<input type="checkbox"/>
	<b>DETAILS OF ROAD TRAFFIC INJURED</b>	<input type="checkbox"/>
14	Place of occurrence : 1. City/ Municipal road 2. Highway 3. Inner roads 4. Rural Roads 5. Others, specify.... 6. Not known	<input type="checkbox"/>
15	Road User category 1. Pedestrian 2. Pedal cyclist 3. Two wheeler rider 4. Two wheeler pillion 5. Three wheeler driver 6. Three wheeler occupant 7. Car driver 8. Car occupant 9. Bus /truck driver 10. Bus /truck occupant 11. Other 4 wheeler driver (Taxi, cab, tempo, etc) 12. Other4wheeler occupant 13. Other 14. Not known	<input type="checkbox"/> <input type="checkbox"/>
16	Type of collision: 1. Hit pedestrian 2. Head on collision 3. Hit from the back (rear end Collision) 4. Hit from the side (side angle collision) 5. Overturn 6. Hit a fixed object 7. Run off road 8. Other 9. Not known	<input type="checkbox"/>
17	It two-wheeler rider , use of helmet: 1.Yes 2. No, 3. Don't know	<input type="checkbox"/>
18	If car driver/occupant use of sear belt: 1. Yes, 2. No, 3. Not known	<input type="checkbox"/>
	<b>PREHOSPITAL CARE DETAILS</b>	
19	Fist Aid given before reaching the hospital 1.Yes, 2. No, 3. Not known	<input type="checkbox"/>
20	If Q19 is yes , then where was First aid: 1. Health worker 2. Near by govt. hospital 3. Near by Pvt .hospital /clinic 4. Police 5. Other .....6. Not known	<input type="checkbox"/>
21	If Q19 is yes ,who gave the first aid: 1 . Health worker 2. Doctor 3. Nurse 4. Police 5. Public 6. Not known	<input type="checkbox"/>
22	Source of referral: 1. General practitioner 2. PHC, 3. Dist. Hospital 4. Other Govt. hospital ,5. Pvt. Hospital /Nursing home 6. Directly on their own 7. Other specify,.....8. Not known	<input type="checkbox"/>
23	Number of hospital /health facilities visited before attending the registering hospital	<input type="checkbox"/> <input type="checkbox"/>
24	Mode of transportation : 1. Pvt. Ambulance 2. Govt. ambulance 3. CATS van /Govt. vehicle, Pvt. Vehicle or taxi 5. Auto rickshaw 7. Other specify.....8. Not known	<input type="checkbox"/>
	<b>INJURY, MANAGEMENT &amp; OUTCOME</b>	
25	Status of the injured at the time of entry: 1. Unconscious, 2. Conscious 3. Brought dead 4. Not known	<input type="checkbox"/>
26	Severity of injury 1. Simple 2. Grievous 3. Dangerous 4. Not Known	<input type="checkbox"/>
27	If head injury then GCS	<input type="checkbox"/> <input type="checkbox"/>

28.	Part of the body injured: (1=Yes, 2.no)		
	1. Head <input type="checkbox"/>	5. Neck <input type="checkbox"/>	9. Perineum& Genitalia <input type="checkbox"/>
	2. Face <input type="checkbox"/>	6.Chest <input type="checkbox"/>	10. Upper limbs <input type="checkbox"/>
	3. Eyes <input type="checkbox"/>	7. Abdomen <input type="checkbox"/>	11.Lower limbs <input type="checkbox"/>
	4. ENT <input type="checkbox"/>	8.Pelvis <input type="checkbox"/>	12. Spine <input type="checkbox"/>
			13. Not known <input type="checkbox"/>

29	Nature of injury (1-Yes,2.NO.) 1.Fracture <input type="checkbox"/> 2.Sprain <input type="checkbox"/> 3.Cut or open wound <input type="checkbox"/> 4. Sharp/Penetrating Cut <input type="checkbox"/>	5. Haematomas <input type="checkbox"/> 6. Burn <input type="checkbox"/> 7.% of (burns) <input type="checkbox"/> <input type="checkbox"/> 8. Other <input type="checkbox"/> 9.Not known <input type="checkbox"/>	
30	Treatment: 1. Treatment in emergency room and sent home 2. Treated in emergency room and referred to another hospital 3. Admitted for definitive care 4. Not known		<input type="checkbox"/>
31	Investigation . (1=Yes, 2. =No) 1.Radiological <input type="checkbox"/> 2.USG <input type="checkbox"/> 3.CT <input type="checkbox"/> 4.MRI <input type="checkbox"/>		
32	Final diagnosis:		
33	ICD -10 classification		
34	Outcome 1.Recovered & improved 2. Not recovered 3. Residual disability 4. Dead 5. Not Known		<input type="checkbox"/>