

ARIZONA STATE TRAUMA REGISTRY

Standard Public Report - 2005 Trauma Data - Version 4.0

Important information about 2005 Arizona State Trauma Registry (ASTR) data:

Ten hospitals contributed 2005 trauma data to the Arizona State Trauma Registry (ASTR). Seven of the reporting facilities were designated as Level I Trauma Centers at the time of data submission in 2006. The remaining three facilities were non-designated. Two of the non-designated facilities submitted only partial data for 2005.

ASTR receives data from a limited number of hospitals in Arizona. The records in this report are not representative of all Arizona trauma cases statewide. During the Phase I and Phase II Data Standardization Project, the State required data elements from hospital registries were converted to a standardized format. In 2005, not all reporting facilities were collecting every data element in this report. The quality of the data has not been assessed and there are data entry errors known to be present.

This report reflects trauma data as it exists in the ASTR database on 9/5/07. **There were 22620 records submitted to ASTR with ED Arrival Dates from 1/1/05 to 12/31/05.**

ASTR and hospital case number verifications were completed in July 2007 and discrepancies were resolved. In doing so, the 2005 ASTR total case numbers changed. Version 4.0 of the 2005 Standard Public Report reflects these new case numbers.

Report Definitions:

*BLANK or *BL in this report means that a value was not submitted by the facility for that specific data element.

*NOT DOCUMENTED or *N/D means that the registrar entered a Not Documented response for that specific data element. The ASTR Data Dictionary (revised June 2006) defines Not Documented as "no documentation in record, unknown."

*NOT APPLICABLE or *N/A in this report means that the registrar entered a Not Applicable response for that specific data element. In the ASTR Data Dictionary (revised June 2006), Not Applicable is allowed in instances where the data element does not apply to the specific circumstances of the trauma case. For example, the date of the EMS run sheet does not apply if the patient was transported to the hospital by a relative.

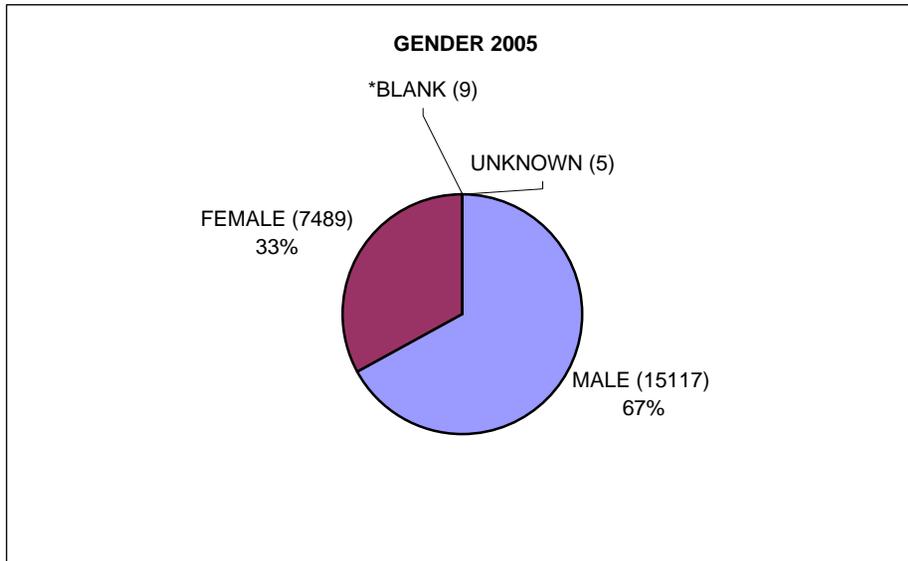
For questions regarding this report, please contact Anita Ray with the Arizona Department of Health Services at 602-542-1245, email: raya@azdhs.gov.

FACILITIES THAT SUBMITTED FULL OR PARTIAL 2005 DATA TO ASTR

(2005 DATA = ED Arrival Dates 1/1/05-12/31/05)

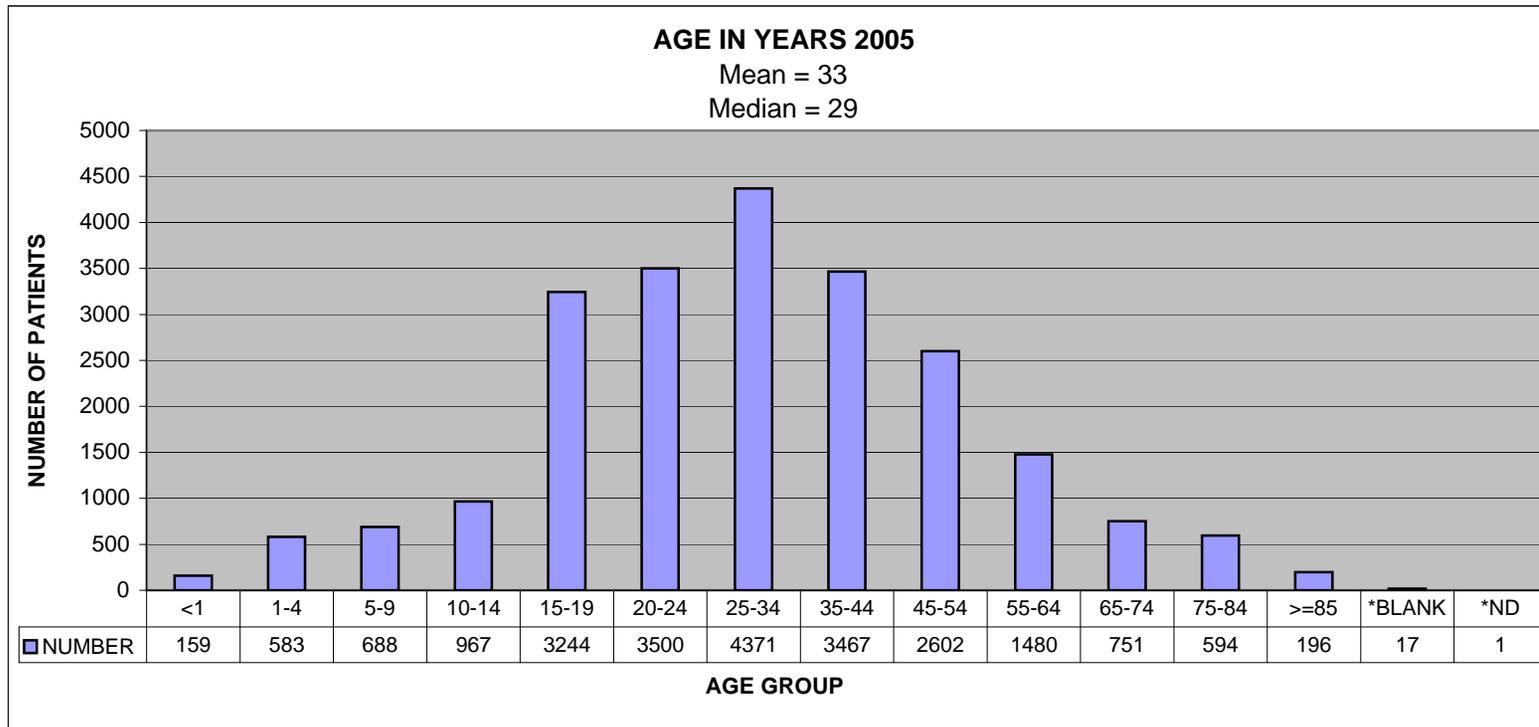
	Reporting Facility Name	Trauma Center designation level at time of ASTR data submission
1	Banner Good Samaritan Medical Center	Level I
2	Flagstaff Regional Medical Center	Level I
3	John C. Lincoln North Mountain Hospital	Level I
4	Maricopa Medical Center	Level I
5	Scottsdale Healthcare Osborn	Level I
6	St. Joseph's Hospital and Medical Center	Level I
7	University Medical Center (Tucson)	Level I
8	Whiteriver PHS Indian Hospital	Non-Designated
9	Yavapai Regional Medical Center	Non-Designated
10	Yuma Regional Medical Center	Non-Designated

GENDER 2005



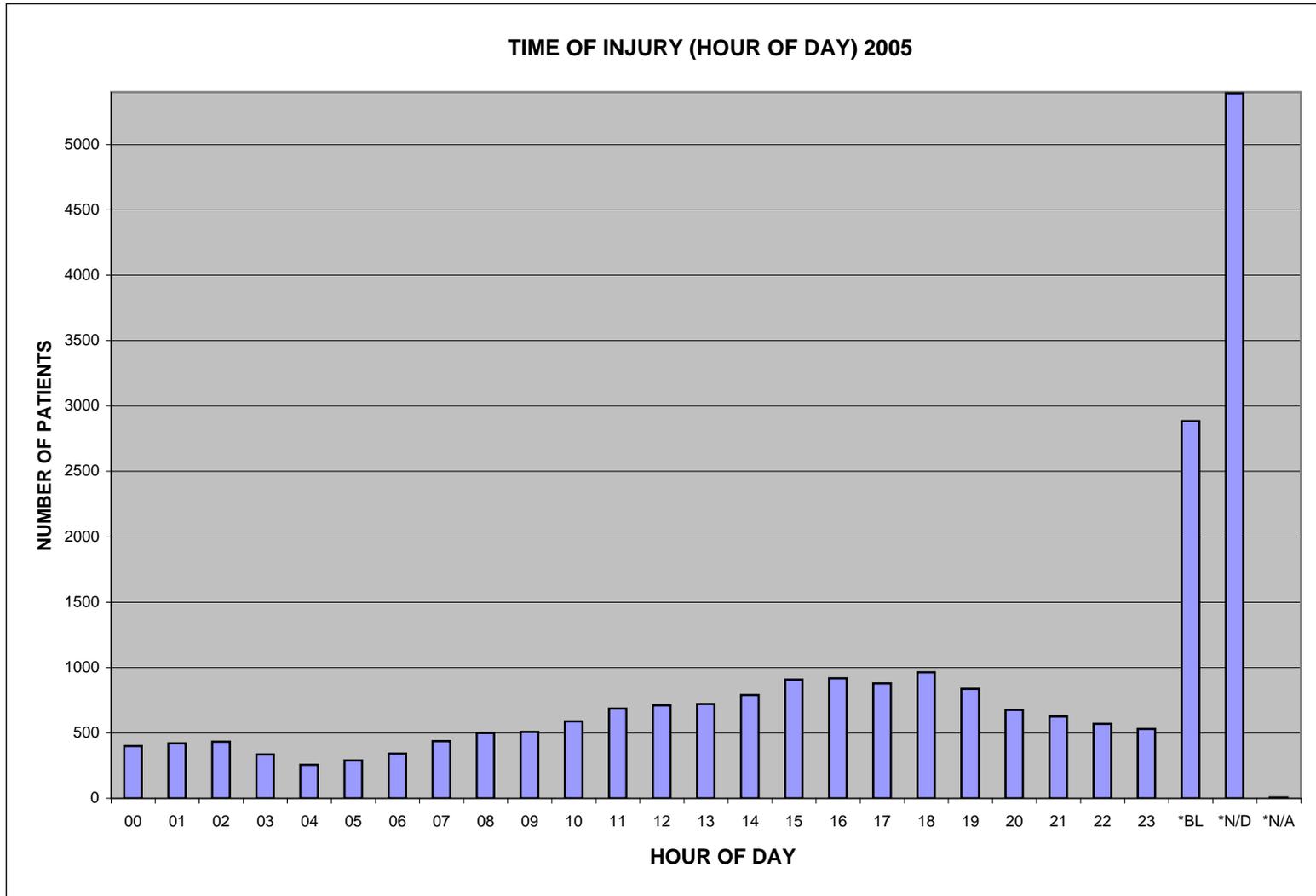
GENDER	NUMBER	PERCENTAGE
MALE	15117	66.83
FEMALE	7489	33.11
UNKNOWN	5	0.02
*BLANK	9	0.04
TOTAL	22620	100.00

AGE IN YEARS 2005



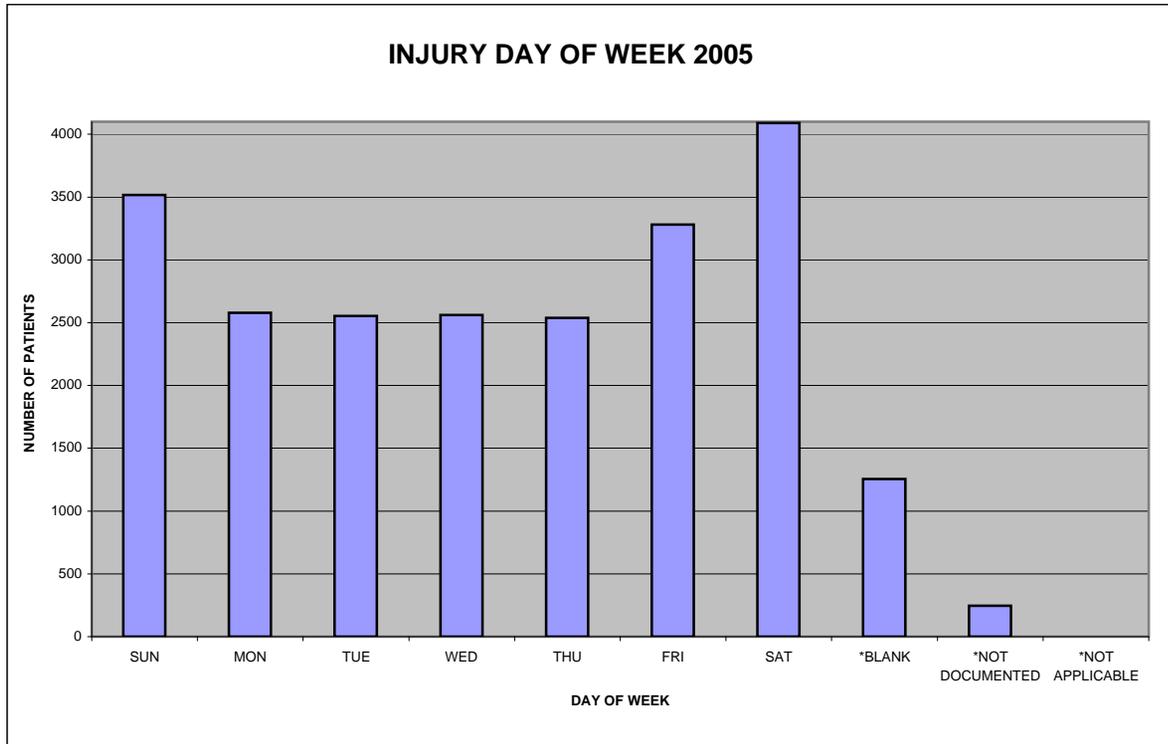
AGE	NUMBER	PERCENT
<1	159	0.70
1-4	583	2.58
5-9	688	3.04
10-14	967	4.27
15-19	3244	14.34
20-24	3500	15.47
25-34	4371	19.32
35-44	3467	15.33
45-54	2602	11.50
55-64	1480	6.54
65-74	751	3.32
75-84	594	2.63
>=85	196	0.87
*BLANK	17	0.08
*ND	1	0.00
TOTAL	22620	100.00

INJURY TIME OF DAY 2005



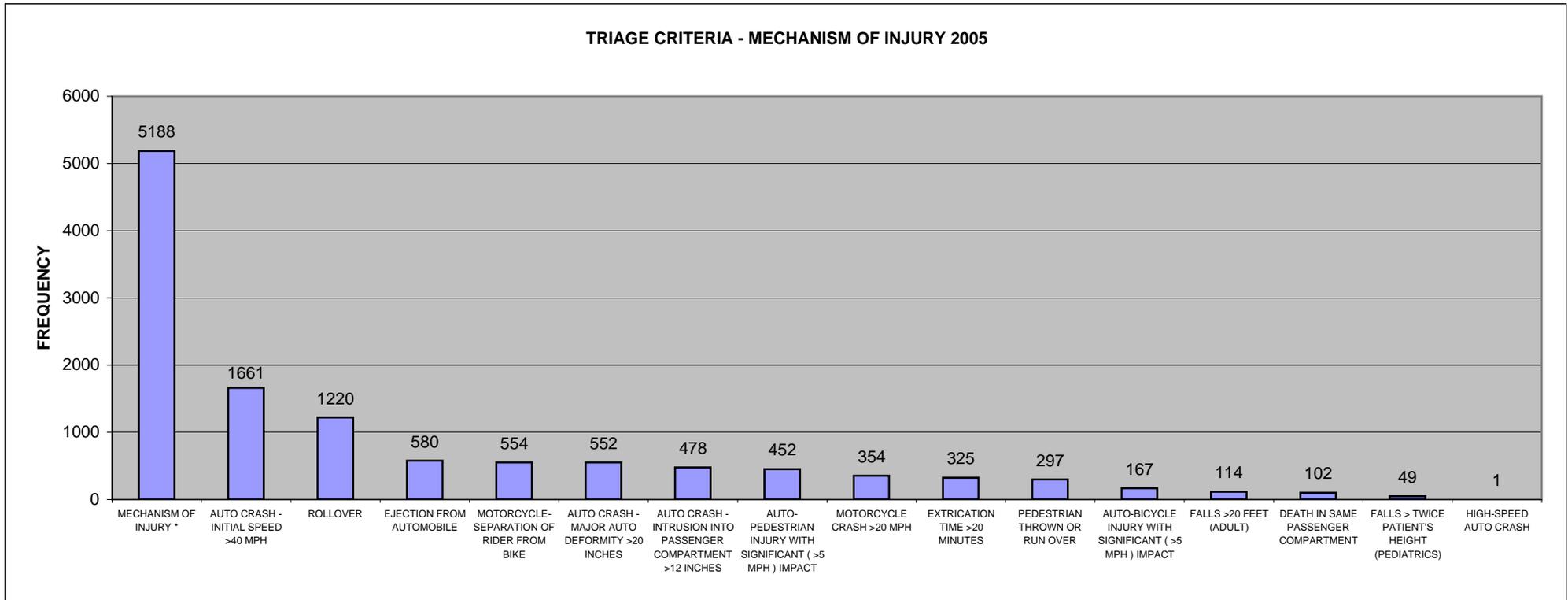
TIME OF INJURY - HOUR OF DAY	NUMBER	PERCENT
00	400	1.77
01	422	1.87
02	434	1.92
03	335	1.48
04	257	1.14
05	291	1.29
06	343	1.52
07	438	1.94
08	499	2.21
09	508	2.25
10	588	2.60
11	686	3.03
12	711	3.14
13	721	3.19
14	791	3.50
15	909	4.02
16	919	4.06
17	880	3.89
18	964	4.26
19	837	3.70
20	676	2.99
21	627	2.77
22	571	2.52
23	530	2.34
*BL	2885	12.75
*N/D	5392	23.84
*N/A	6	0.03
TOTAL	22620	100.00

INJURY DAY OF WEEK 2005



INJURY DATE - DAY OF WEEK	NUMBER	PERCENTAGE
SUN	3518	15.55
MON	2578	11.40
TUE	2553	11.29
WED	2562	11.33
THU	2538	11.22
FRI	3281	14.50
SAT	4089	18.08
*BLANK	1255	5.55
*NOT DOCUMENTED	245	1.08
*NOT APPLICABLE	1	0.00
TOTAL	22620	100.00

TRIAGE CRITERIA - MECHANISM OF INJURY 2005

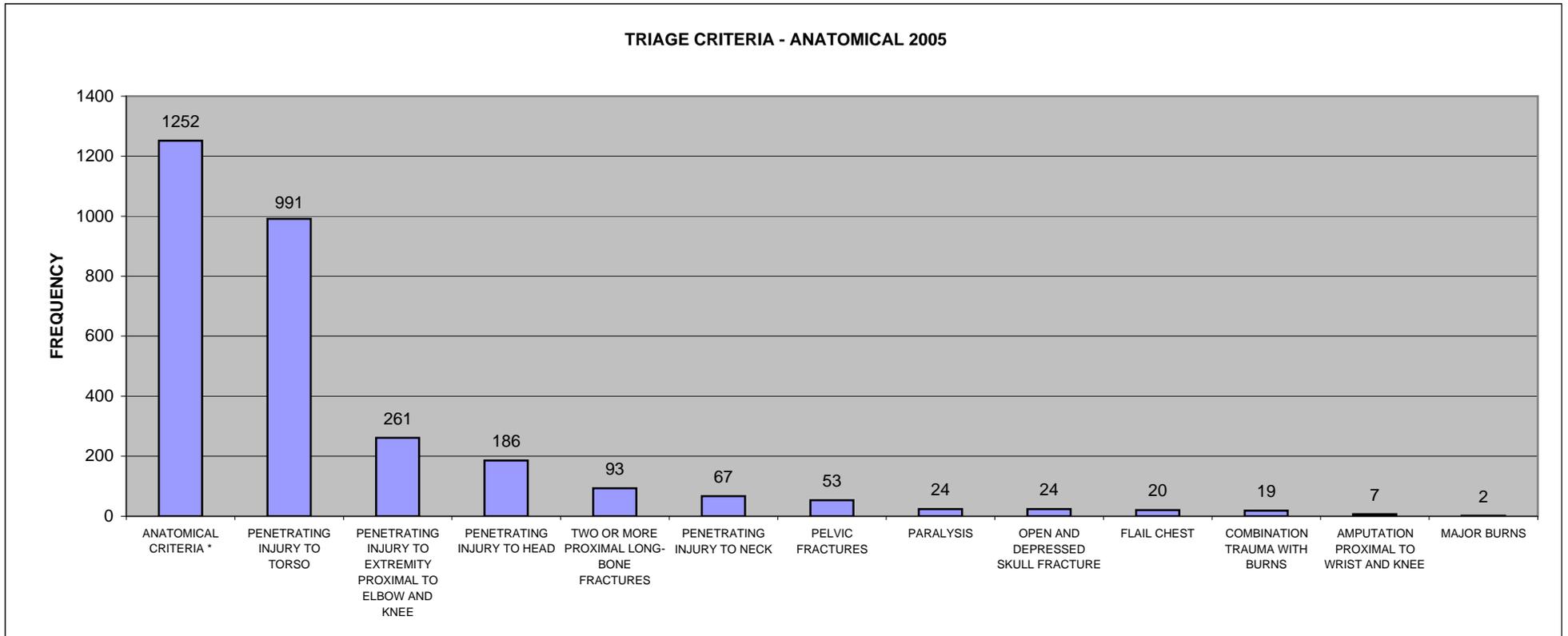


TRIAGE CRITERIA	FREQUENCY
MECHANISM OF INJURY *	5188
AUTO CRASH - INITIAL SPEED >40 MPH	1661
ROLLOVER	1220
EJECTION FROM AUTOMOBILE	580
MOTORCYCLE-SEPARATION OF RIDER FROM BIKE	554
AUTO CRASH - MAJOR AUTO DEFORMITY >20 INCHES	552
AUTO CRASH - INTRUSION INTO PASSENGER COMPARTMENT >12 INCHES	478
AUTO-PEDESTRIAN INJURY WITH SIGNIFICANT (>5 MPH) IMPACT	452
MOTORCYCLE CRASH >20 MPH	354
EXTRICATION TIME >20 MINUTES	325
PEDESTRIAN THROWN OR RUN OVER	297
AUTO-BICYCLE INJURY WITH SIGNIFICANT (>5 MPH) IMPACT	167
FALLS >20 FEET (ADULT)	114
DEATH IN SAME PASSENGER COMPARTMENT	102
FALLS > TWICE PATIENT'S HEIGHT (PEDIATRICS)	49
HIGH-SPEED AUTO CRASH	1
TOTAL	12094

Note: Total number of Triage Criteria = 27718
 The Triage Criteria field allows for multiple entries of triage criteria for each patient.

*Prior to data conversion some hospitals only had the ability to select the five major categories (i.e. mechanism of injury, anatomical, physiological, co-morbidity, and other). In this figure and table, the Mechanism of Injury is the highest frequency. The frequency of this category is not a total of the more specific criteria.

TRIAGE CRITERIA - ANATOMICAL 2005

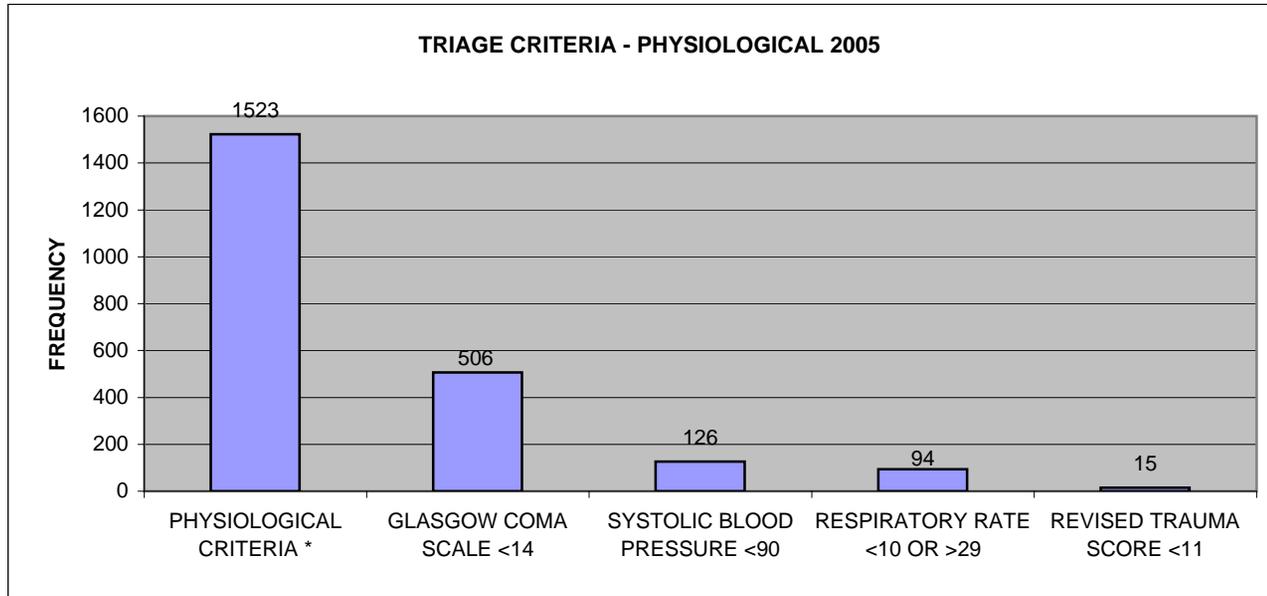


TRIAGE CRITERIA	FREQUENCY
ANATOMICAL CRITERIA *	1252
PENETRATING INJURY TO TORSO	991
PENETRATING INJURY TO EXTREMITY PROXIMAL TO ELBOW AND KNEE	261
PENETRATING INJURY TO HEAD	186
TWO OR MORE PROXIMAL LONG-BONE FRACTURES	93
PENETRATING INJURY TO NECK	67
PELVIC FRACTURES	53
PARALYSIS	24
OPEN AND DEPRESSED SKULL FRACTURE	24
FLAIL CHEST	20
COMBINATION TRAUMA WITH BURNS	19
AMPUTATION PROXIMAL TO WRIST AND KNEE	7
MAJOR BURNS	2
TOTAL	2999

Note: Total number of Triage Criteria = 27718
The Triage Criteria field allows for multiple entries of triage criteria for each patient.

*Prior to data conversion some hospitals only had the ability to select the five major categories (i.e. mechanism of injury, anatomical, physiological, co-morbidity, and other). In this figure and table, the Anatomical Criteria is the highest frequency. The frequency of this category is not a total of the more specific criteria.

TRIAGE CRITERIA - PHYSIOLOGICAL 2005

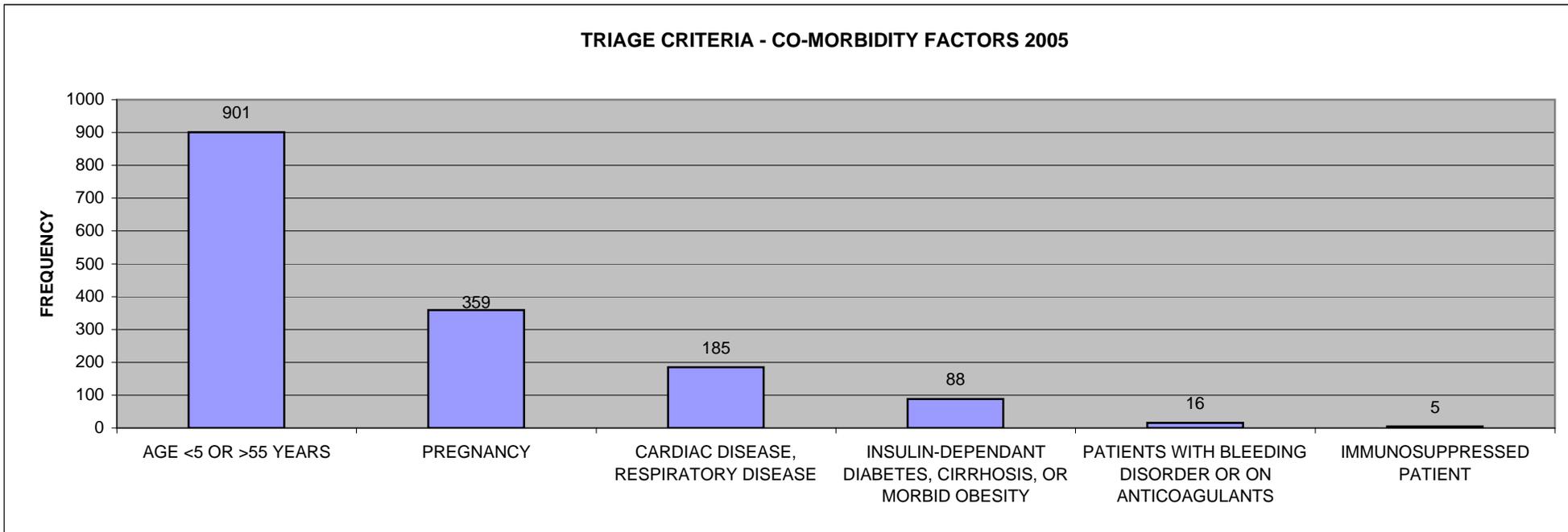


TRIAGE CRITERIA	FREQUENCY
PHYSIOLOGICAL CRITERIA *	1523
GLASGOW COMA SCALE <14	506
SYSTOLIC BLOOD PRESSURE <90	126
RESPIRATORY RATE <10 OR >29	94
REVISED TRAUMA SCORE <11	15
TOTAL	2264

Note: Total number of Triage Criteria = 27718
The Triage Criteria field allows for multiple entries of triage criteria for each patient.

*Prior to data conversion some hospitals only had the ability to select the five major categories (i.e. mechanism of injury, anatomical, physiological, co-morbidity, and other). In this figure and table, the Physiological Criteria is the highest frequency. The frequency of this category is not a total of the more specific criteria.

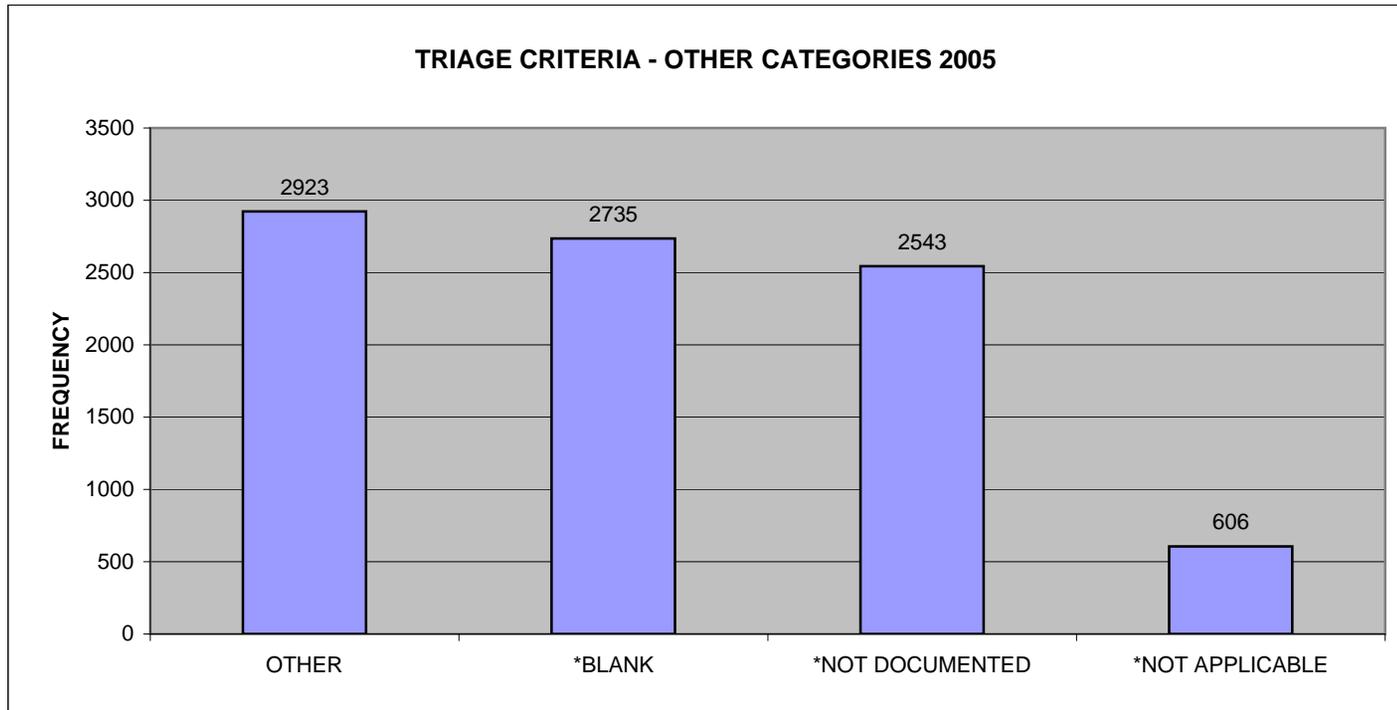
TRIAGE CRITERIA - CO-MORBIDITY FACTORS 2005



TRIAGE CRITERIA	FREQUENCY
AGE <5 OR >55 YEARS	901
PREGNANCY	359
CARDIAC DISEASE, RESPIRATORY DISEASE	185
INSULIN-DEPENDANT DIABETES, CIRRHOSIS, OR MORBID OBESITY	88
PATIENTS WITH BLEEDING DISORDER OR ON ANTICOAGULANTS	16
IMMUNOSUPPRESSED PATIENT	5
TOTAL	1554

Note: Total number of Triage Criteria = 27718
The Triage Criteria field allows for multiple entries of triage criteria for each patient.

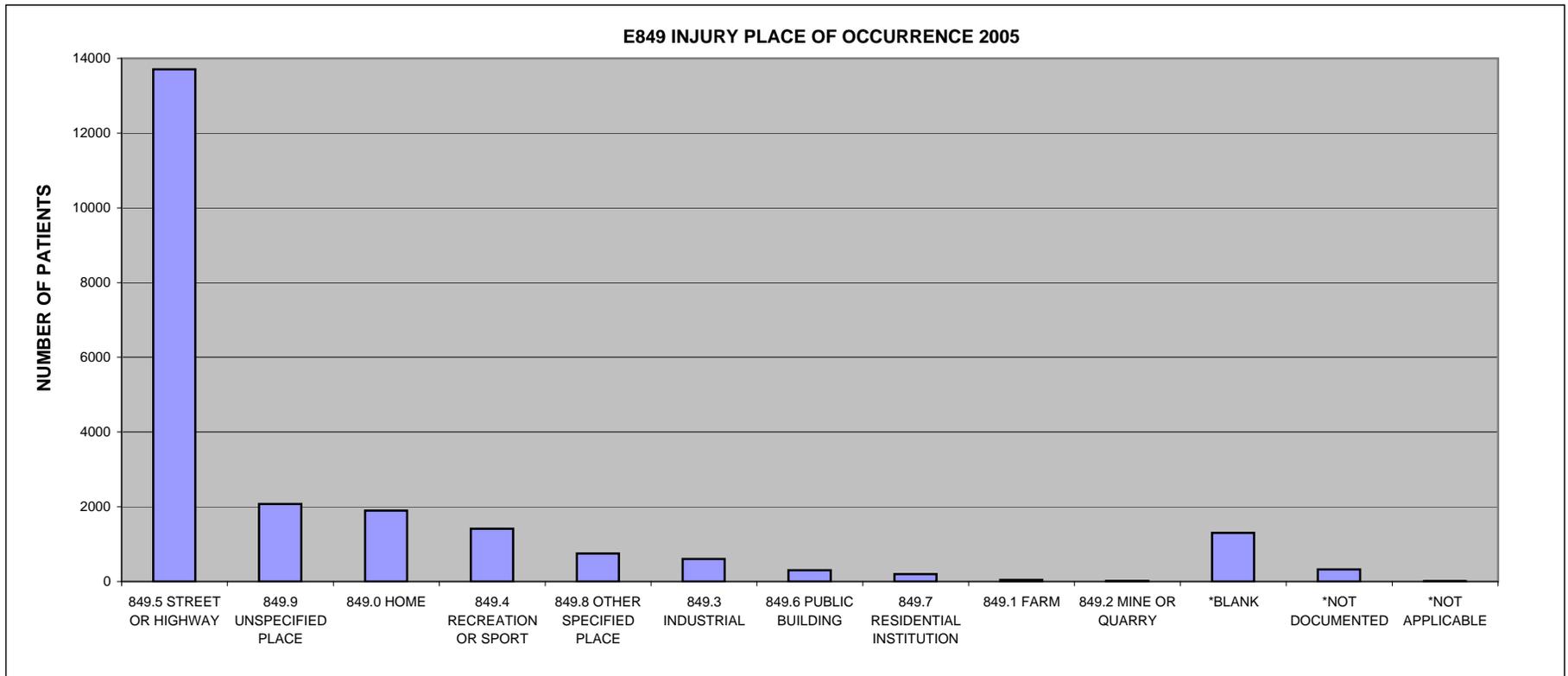
TRIAGE CRITERIA - OTHER CATEGORIES 2005



TRIAGE CRITERIA	FREQUENCY
OTHER	2923
*BLANK	2735
*NOT DOCUMENTED	2543
*NOT APPLICABLE	606
TOTAL	8807

Note: Total number of Triage Criteria = 27718
 The Triage Criteria field allows for multiple entries of triage criteria for each patient.

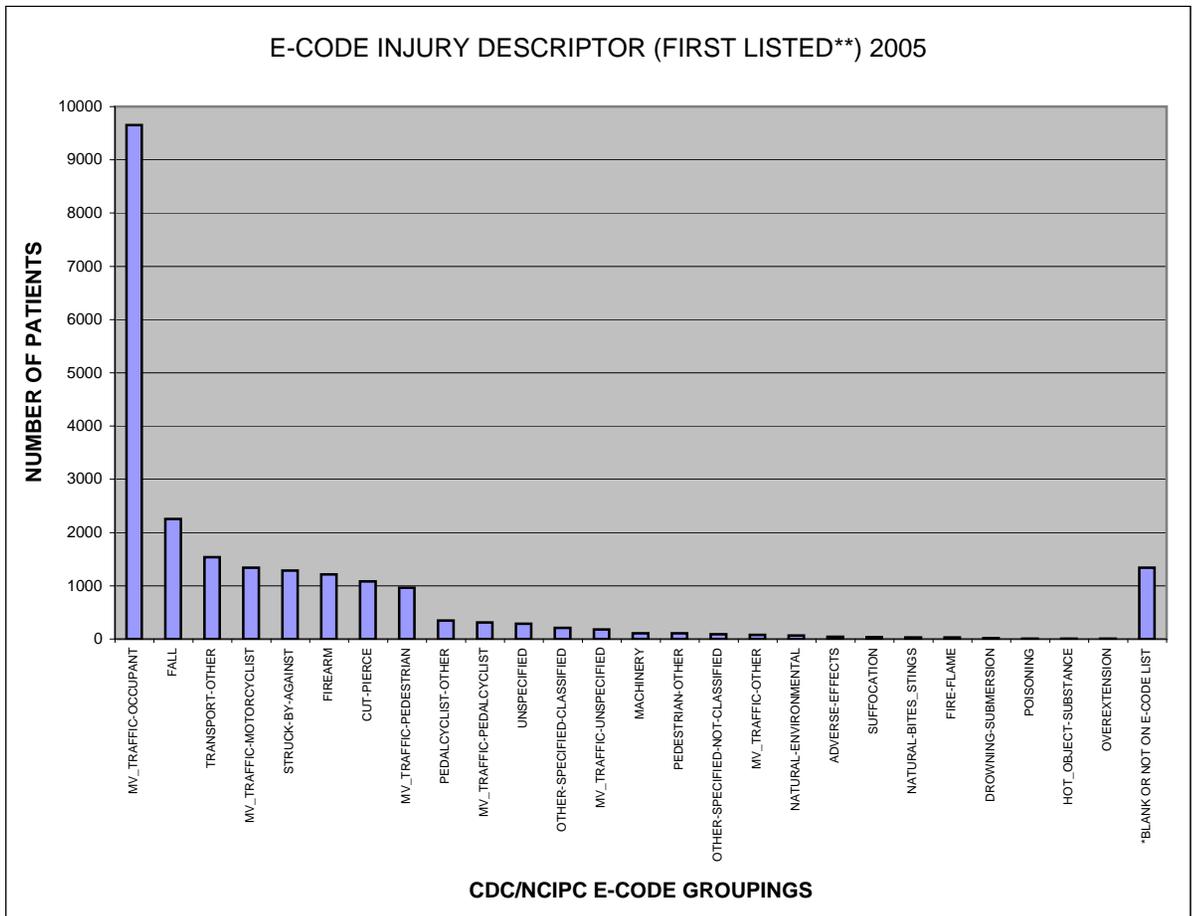
INJURY PLACE OF OCCURRENCE 2005



E849 INJURY PLACE OF OCCURRENCE	NUMBER	PERCENTAGE
849.5 STREET OR HIGHWAY	13703	60.58
849.9 UNSPECIFIED PLACE	2071	9.16
849.0 HOME	1899	8.40
849.4 RECREATION OR SPORT	1409	6.23
849.8 OTHER SPECIFIED PLACE	748	3.31
849.3 INDUSTRIAL	601	2.66
849.6 PUBLIC BUILDING	299	1.32
849.7 RESIDENTIAL INSTITUTION	201	0.89
849.1 FARM	42	0.19
849.2 MINE OR QUARRY	16	0.07
*BLANK	1303	5.76
*NOT DOCUMENTED	321	1.42
*NOT APPLICABLE	7	0.03
TOTAL	22620	100.00

ICD-9-CM PRIMARY E-CODE INJURY DESCRIPTOR 2005

CDC/NCIPC E-CODE MECHANISM GROUPINGS *	NUMBER
MV_TRAFFIC-OCCUPANT	9654
FALL	2255
TRANSPORT-OTHER	1538
MV_TRAFFIC-MOTORCYCLIST	1337
STRUCK-BY-AGAINST	1284
FIREARM	1212
CUT-PIERCE	1084
MV_TRAFFIC-PEDESTRIAN	962
PEDALCYCLIST-OTHER	348
MV_TRAFFIC-PEDALCYCLIST	310
UNSPECIFIED	287
OTHER-SPECIFIED-CLASSIFIED	210
MV_TRAFFIC-UNSPECIFIED	181
MACHINERY	110
PEDESTRIAN-OTHER	105
OTHER-SPECIFIED-NOT-CLASSIFIED	90
MV_TRAFFIC-OTHER	77
NATURAL-ENVIRONMENTAL	63
ADVERSE-EFFECTS	39
SUFFOCATION	38
NATURAL-BITES_STINGS	31
FIRE-FLAME	29
DROWNING-SUBMERSION	16
POISONING	8
HOT_OBJECT-SUBSTANCE	6
OVEREXTENSION	5
*BLANK OR NOT ON E-CODE LIST	1341
TOTAL	22620



*Groupings based on the CDC/National Center for Injury Prevention and Control's *Recommended framework of E-code groupings for presenting injury mortality and morbidity data (February 16, 2005)*, <http://www.cdc.gov/ncipc/whatsnew/matrix2.htm>.

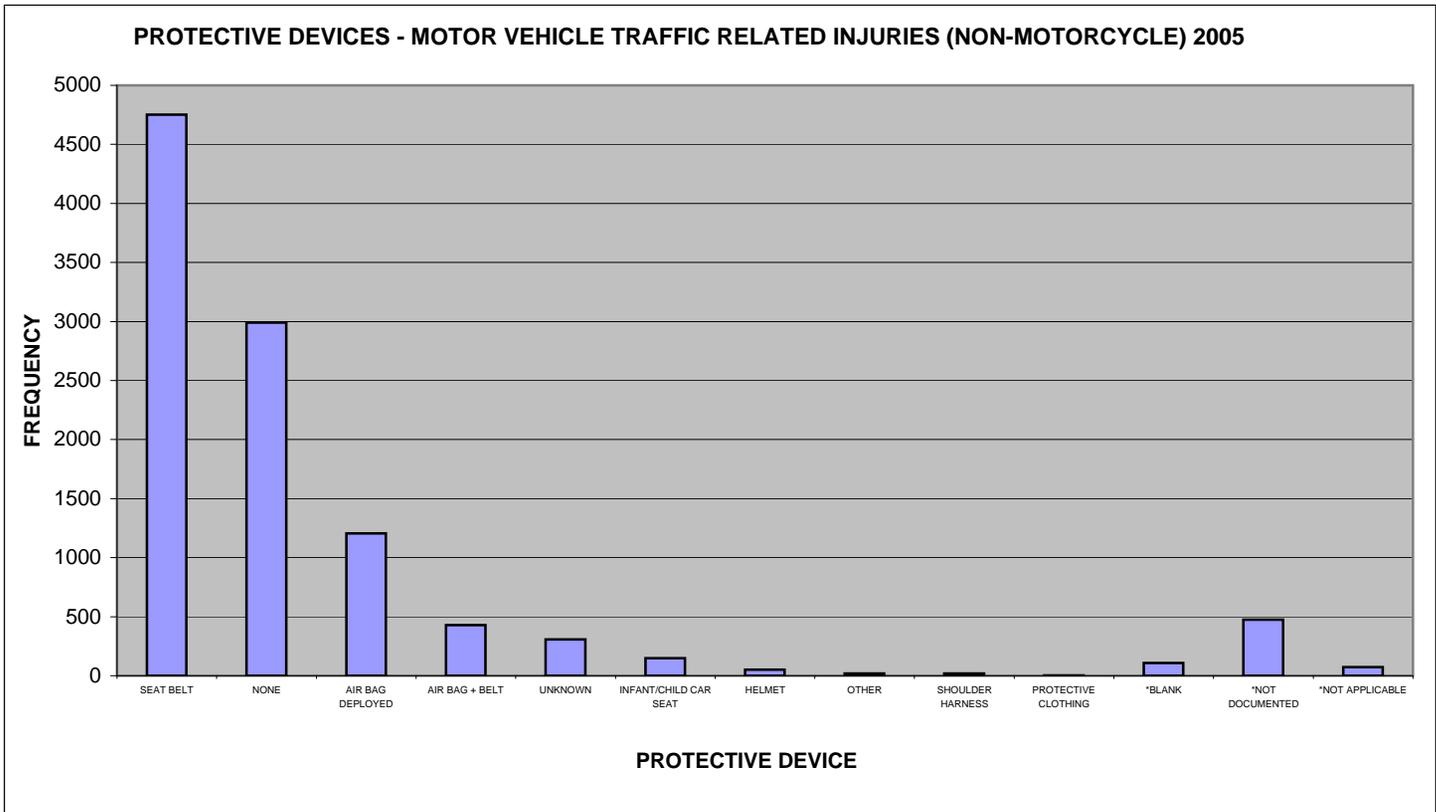
**NOTE: This report is based on the first E-code entered. ASTR requires only the primary E-code and registrars are instructed to enter the primary external cause of injury first.

ICD9-CM INJURY DIAGNOSIS 2005

ICD-9-CM INJURY DIAGNOSIS CATEGORY	Frequency
870-879 OPEN WOUND OF HEAD, NECK, AND TRUNK	9501
910-919 SUPERFICIAL INJURY	9372
920-924 CONTUSION WITH INTACT SKIN SURFACE	8793
805-809 FRACTURE OF NECK AND TRUNK	8376
850-854 INTRACRANIAL INJURY, EXCLUDING THOSE WITH SKULL FRACTURES	7137
860-869 INTERNAL INJURY OF CHEST, ABDOMEN, AND PELVIS	6388
800-804 FRACTURE OF SKULL	6219
820-829 FRACTURE OF LOWER LIMB	4238
810-819 FRACTURE OF UPPER LIMB	4230
958-959 CERTAIN TRAUMATIC COMPLICATIONS AND UNSPECIFIED INJURIES	3754
840-848 SPRAINS AND STRAINS OF JOINTS AND ADJACENT MUSCLES	3116
880-887 OPEN WOUND OF UPPER LIMB	2482
890-897 OPEN WOUND OF LOWER LIMB	1536
830-839 DISLOCATION	881
900-904 INJURY TO BLOOD VESSELS	703
950-957 INJURY TO NERVES AND SPINAL CORD	487
940-949 BURNS	277
996-999 COMPLICATIONS OF SURGICAL AND MEDICAL CARE, NOT ELSEWHERE CLASSIFIED	160
925-929 CRUSHING INJURY	138
990-995 OTHER AND UNSPECIFIED EFFECTS OF EXTERNAL CAUSES	112
930-939 EFFECTS OF FOREIGN BODY ENTERING THROUGH ORIFICE	33
905-909 LATE EFFECTS OF INJURIES, POISONINGS, TOXIC EFFECTS, AND OTHER EXTERNAL CAUSES	26
960-979 POISONING BY DRUGS, MEDICINAL, AND BIOLOGICAL SUBSTANCES	12
980-989 TOXIC EFFECTS OF SUBSTANCES CHIEFLY NON-MEDICINAL AS TO SOURCE	4
*BLANK	754
*NOT DOCUMENTED	2056
Total **	80785

** Note: The ICD9-CM diagnosis field allows for entry of multiple diagnoses per patient. The total in this report is based on the occurrence of the ICD-9-CM diagnosis and is not a total patient count. Report updated to include only the final diagnosis fields from hospital systems.

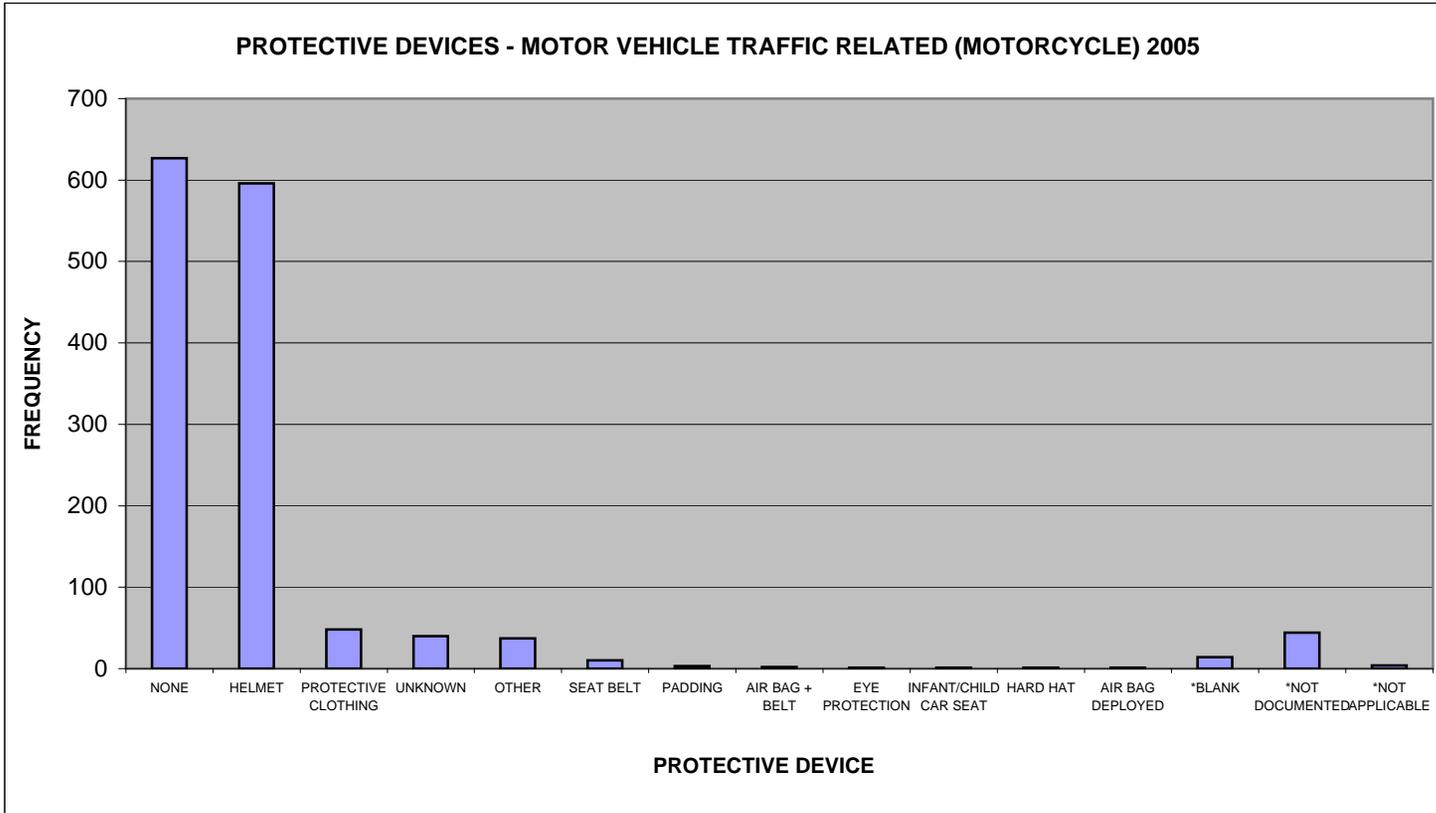
PROTECTIVE DEVICES USED IN UNINTENTIONAL MOTOR VEHICLE TRAFFIC RELATED INJURIES -MOTOR VEHICLE OTHER THAN MOTORCYCLE- 2005



PROTECTIVE DEVICE	FREQUENCY
SEAT BELT	4753
NONE	2990
AIR BAG DEPLOYED	1205
AIR BAG + BELT	428
UNKNOWN	308
INFANT/CHILD CAR SEAT	148
HELMET	52
OTHER	19
SHOULDER HARNESS	18
PROTECTIVE CLOTHING	4
*BLANK	108
*NOT DOCUMENTED	474
*NOT APPLICABLE	73
TOTAL	10580

Note: Unintentional motor vehicle traffic related injuries -motor vehicle occupant other than motorcycle- are classified by E-codes E810-E819 (.0 & .1). Field allows for multiple entry of protective devices. Data entry errors have not been corrected.

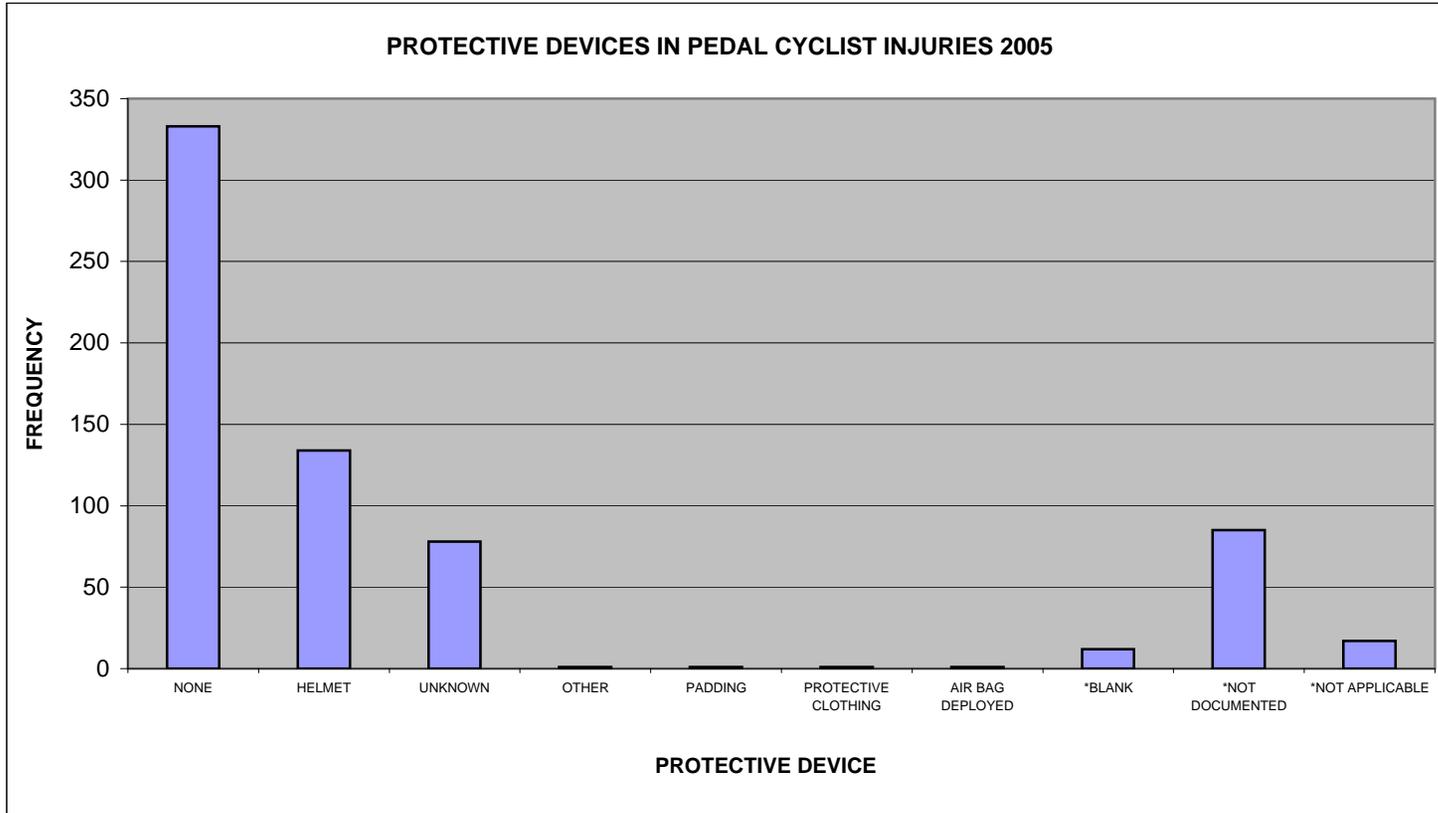
PROTECTIVE DEVICES USED IN UNINTENTIONAL MOTOR VEHICLE TRAFFIC RELATED INJURIES - MOTORCYCLE DRIVER OR PASSENGER- 2005



PROTECTIVE DEVICE	FREQUENCY
NONE	627
HELMET	596
PROTECTIVE CLOTHING	48
UNKNOWN	40
OTHER	37
SEAT BELT	10
PADDING	3
AIR BAG + BELT	2
EYE PROTECTION	1
INFANT/CHILD CAR SEAT	1
HARD HAT	1
AIR BAG DEPLOYED	1
*BLANK	14
*NOT DOCUMENTED	44
*NOT APPLICABLE	4
TOTAL	1429

Note: Unintentional motor vehicle traffic related injuries -motorcycle driver or motorcycle passenger- are classified by E-codes E810-E819 (.2 & .3). Field allows for multiple entry of protective devices. Data entry errors have not been corrected.

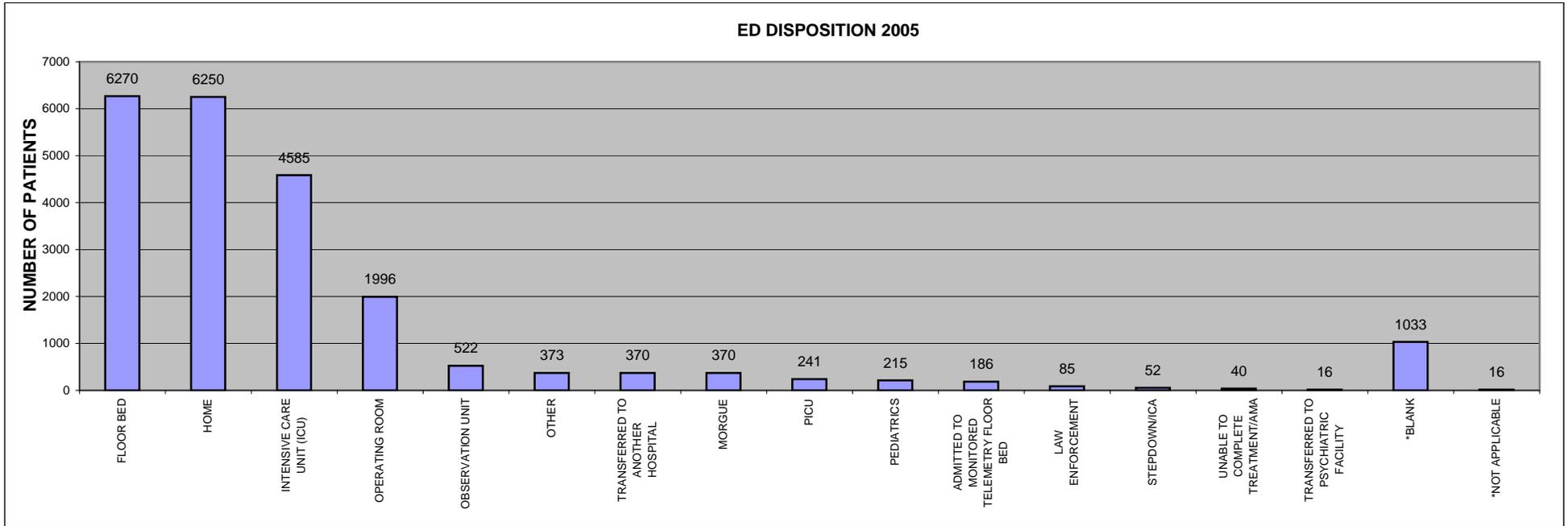
PROTECTIVE DEVICES USED IN PEDAL CYCLIST INJURIES 2005



PROTECTIVE DEVICE	FREQUENCY
NONE	333
HELMET	134
UNKNOWN	78
OTHER	1
PADDING	1
PROTECTIVE CLOTHING	1
AIR BAG DEPLOYED	1
*BLANK	12
*NOT DOCUMENTED	85
*NOT APPLICABLE	17
TOTAL	663

Note: Pedal cyclist injuries are classified by CDC E-code groupings including: E810-E819(.6), E800-807(.3), E820-E825(.6), E826(.1, .9), E827-E829(.1). Field allows for multiple entry of protective devices. Data entry errors have not been corrected.

EMERGENCY DEPARTMENT DISPOSITION 2005

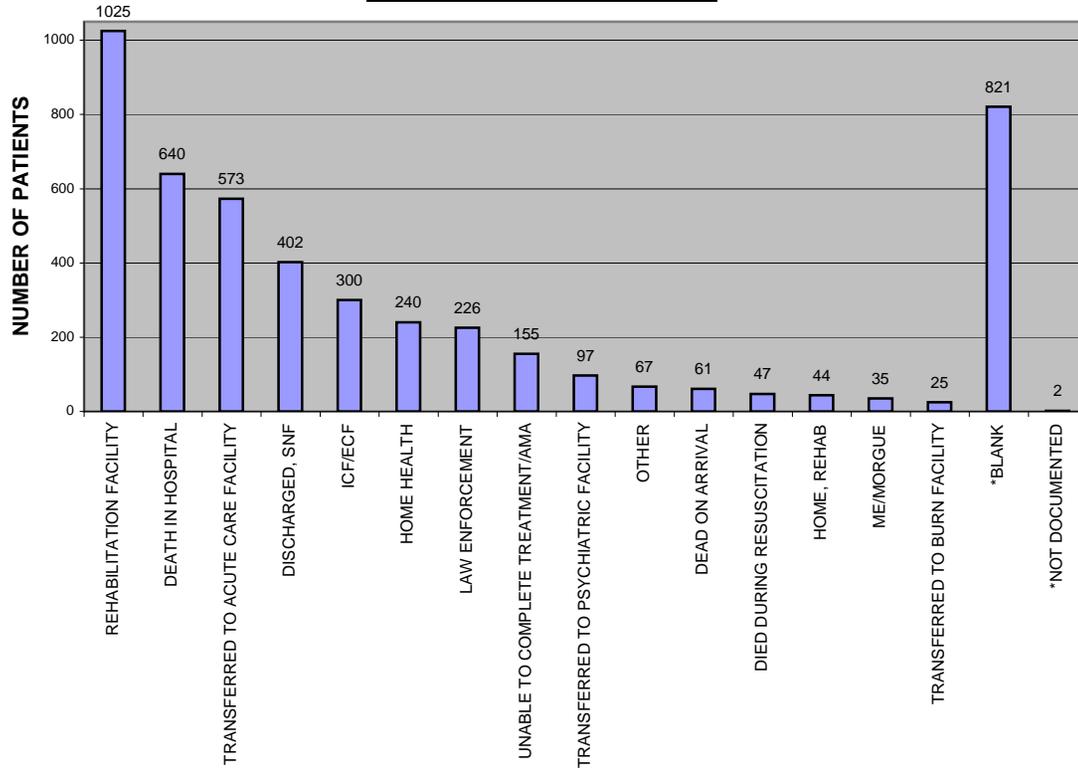


ED DISPOSITION	NUMBER	PERCENTAGE
FLOOR BED	6270	27.72
HOME	6250	27.63
INTENSIVE CARE UNIT (ICU)	4585	20.27
OPERATING ROOM	1996	8.82
OBSERVATION UNIT	522	2.31
OTHER	373	1.65
TRANSFERRED TO ANOTHER HOSPITAL	370	1.64
MORGUE	370	1.64
PICU	241	1.07
PEDIATRICS	215	0.95
ADMITTED TO MONITORED TELEMETRY FLOOR BED	186	0.82
LAW ENFORCEMENT	85	0.38
STEPDOWN/ICA	52	0.23
UNABLE TO COMPLETE TREATMENT/AMA	40	0.18
TRANSFERRED TO PSYCHIATRIC FACILITY	16	0.07
*BLANK	1033	4.57
*NOT APPLICABLE	16	0.07
TOTAL	22620	100.00

HOSPITAL DISCHARGE DISPOSITION 2005

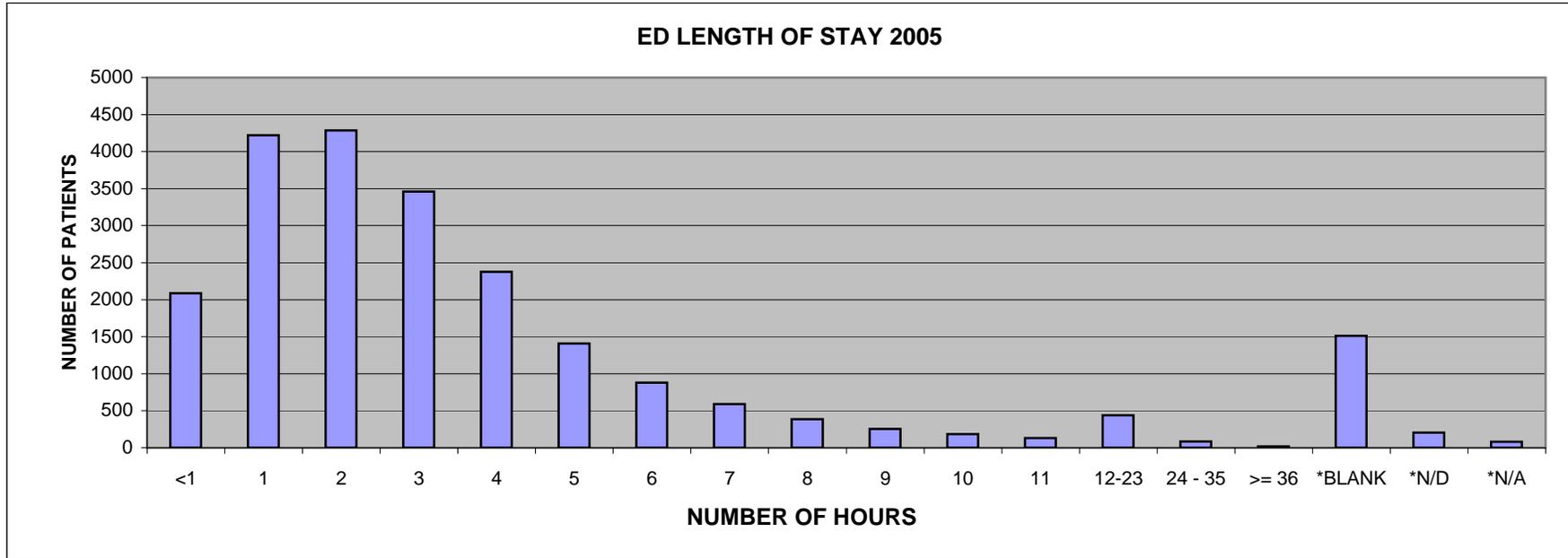
HOSPITAL DISCHARGE DISPOSITION 2005

Dispositions not represented on chart below:
HOME, NO ASSISTANCE = 13,811 patients
NOT APPLICABLE = 4,049 patients



DISCHARGE DISPOSITION	NUMBER	PERCENT
HOME	13811	61.06
REHABILITATION FACILITY	1025	4.53
DEATH IN HOSPITAL	640	2.83
TRANSFERRED TO ACUTE CARE FACILITY	573	2.53
DISCHARGED, SNF	402	1.78
ICF/ECF	300	1.33
HOME HEALTH	240	1.06
LAW ENFORCEMENT	226	1.00
UNABLE TO COMPLETE TREATMENT/AMA	155	0.69
TRANSFERRED TO PSYCHIATRIC FACILITY	97	0.43
OTHER	67	0.30
DEAD ON ARRIVAL	61	0.27
DIED DURING RESUSCITATION	47	0.21
HOME, REHAB	44	0.19
ME/MORGUE	35	0.15
TRANSFERRED TO BURN FACILITY	25	0.11
*BLANK	821	3.63
*NOT DOCUMENTED	2	0.01
*NOT APPLICABLE	4049	17.90
TOTAL	22620	100.00

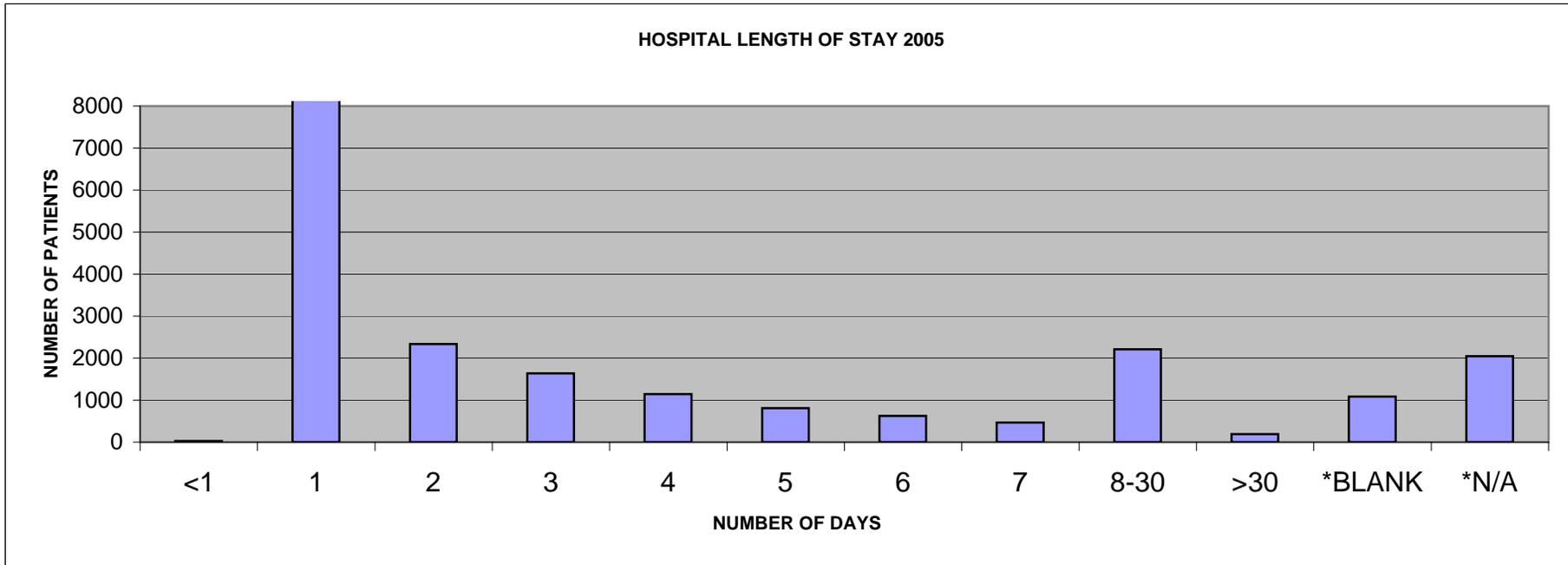
LENGTH OF STAY (HOURS) IN EMERGENCY DEPARTMENT 2005



LENGTH OF STAY (HOURS) IN ED	NUMBER	PERCENTAGE
<1	2086	9.23
1	4220	18.67
2	4288	18.97
3	3460	15.30
4	2378	10.52
5	1407	6.22
6	878	3.88
7	589	2.61
8	387	1.71
9	253	1.12
10	187	0.83
11	132	0.58
12-23	440	1.95
24 - 35	85	0.38
>= 36	20	0.09
*BLANK	1513	6.69
*N/D	203	0.90
*N/A	82	0.36
TOTAL *	22608	100.00

*Note: Length of stay is calculated from ED Arrival Date/Time to ED Exit Date/Time. Data entry errors are present in this field. LOS values range from -22 to 8777 hours. 12 negative values exist in the 2005 data and are not included in report numbers.

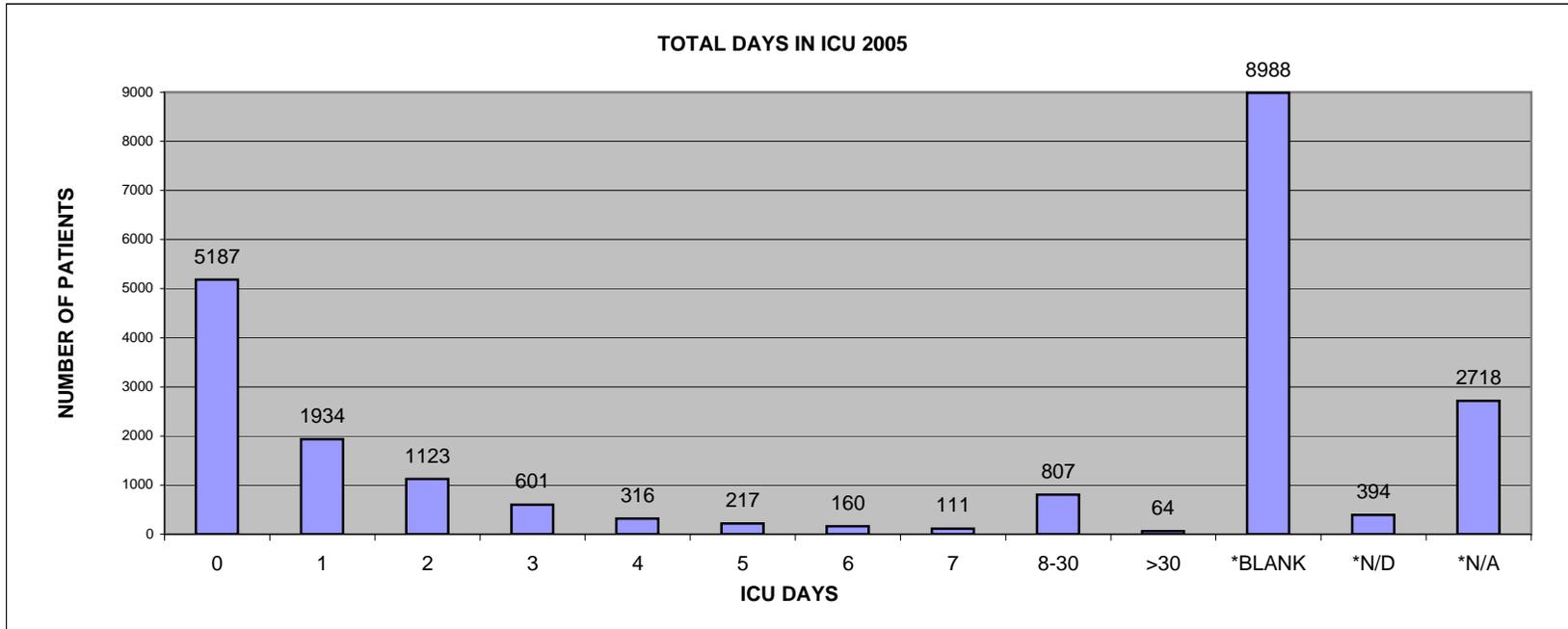
HOSPITAL LENGTH OF STAY (DAYS) 2005*



HOSPITAL LENGTH OF STAY (DAYS)	NUMBER	PERCENTAGE
<1	28	0.12
1	10031	44.35
2	2335	10.32
3	1641	7.25
4	1147	5.07
5	806	3.56
6	626	2.77
7	469	2.07
8-30	2211	9.77
>30	190	0.84
*BLANK	1088	4.81
*N/A	2048	9.05
TOTAL	22620	100.00

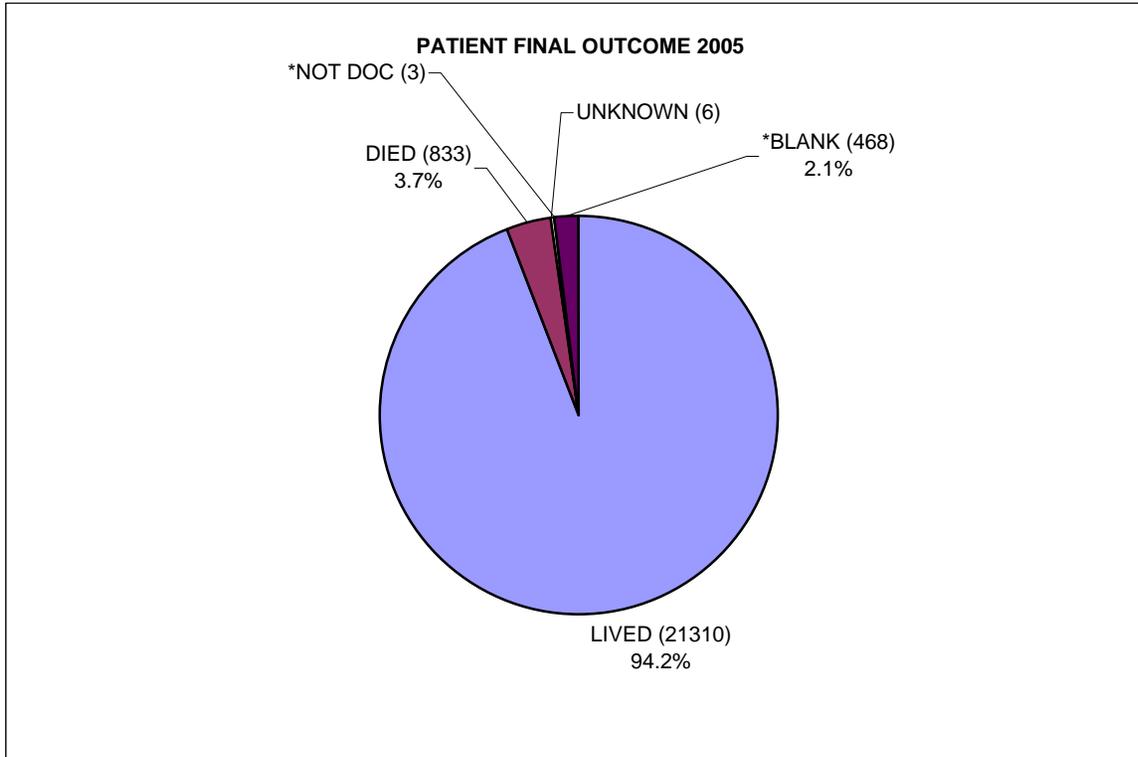
*Note: Hospital length of stay is calculated in Trauma One from Admit Date to Hospital Discharge Date, which represents an in-patient length of stay. Length of stay is approximate, as it is based on dates. Times are not used in this calculation.

TOTAL DAYS IN ICU 2005



TOTAL DAYS IN ICU	NUMBER	PERCENTAGE
0	5187	22.93
1	1934	8.55
2	1123	4.96
3	601	2.66
4	316	1.40
5	217	0.96
6	160	0.71
7	111	0.49
8-30	807	3.57
>30	64	0.28
*BLANK	8988	39.73
*N/D	394	1.74
*N/A	2718	12.02
TOTAL	22620	100.00

PATIENT FINAL OUTCOME 2005

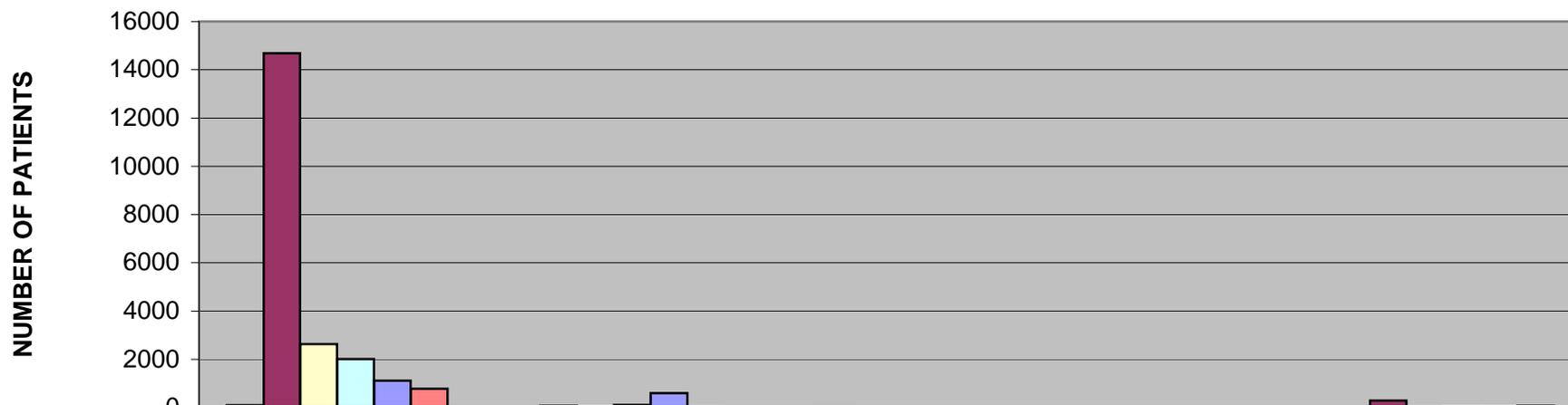


OUTCOME	NUMBER	PERCENT
LIVED	21310	94.21
DIED	833	3.68
UNKNOWN	6	0.03
*NOT DOC	3	0.01
*BLANK	468	2.07
TOTAL	22620	100.00

Note: *NOT DOC means Not Documented

INJURY SEVERITY SCORE BY PATIENT OUTCOME SUMMARY 2005

ISS BY PATIENT OUTCOME SUMMARY 2005



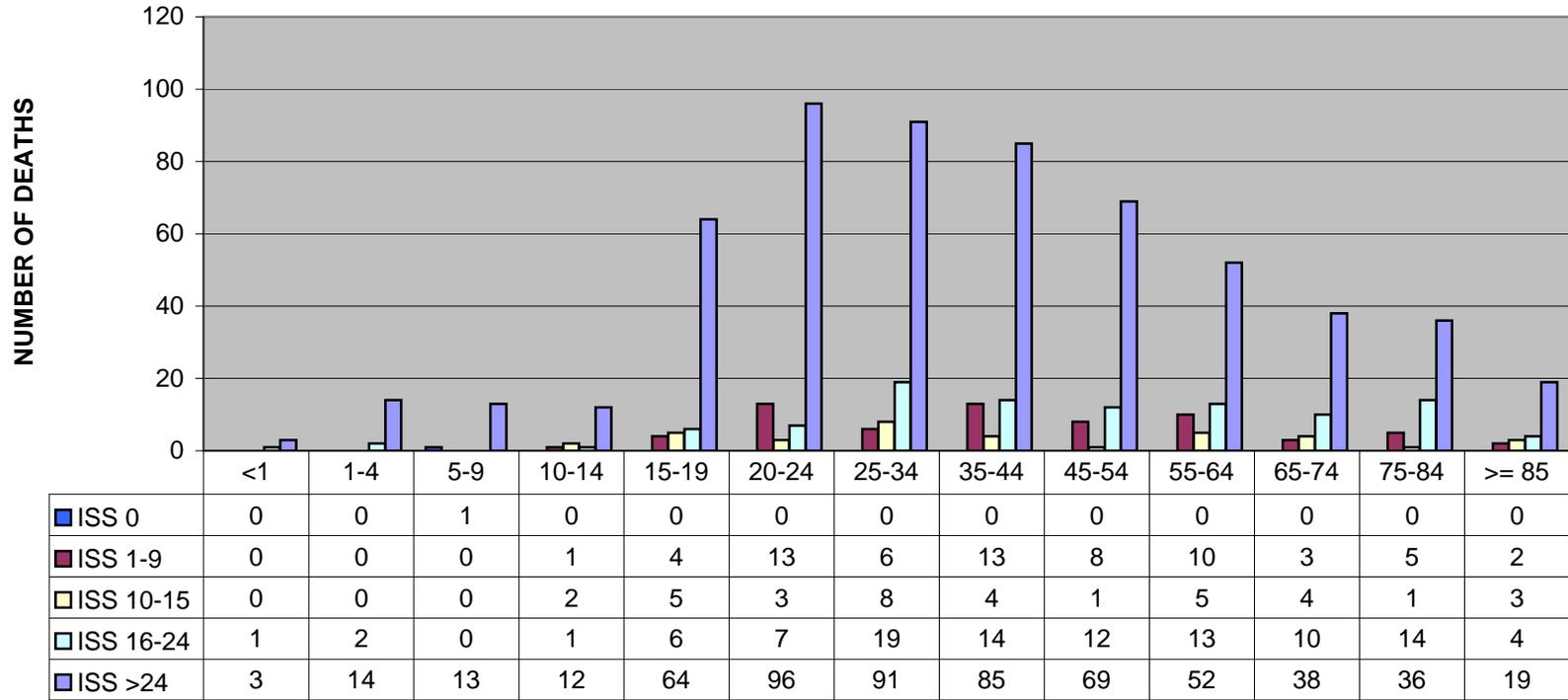
	LIVED	DIED	UNK	*NOT DOC	*BLANK
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ISS 1-9	14684	66	6	0	291
ISS 10-15	2634	37	0	0	29
ISS 16-24	2013	106	0	0	36
ISS >24	1107	594	0	0	41
*BLANK	776	29	0	3	71

ISS	LIVED	DIED	UNK	*NOT DOC	*BLANK	TOTAL
ISS 0	96	1	0	0	0	97
ISS 1-9	14684	66	6	0	291	15047
ISS 10-15	2634	37	0	0	29	2700
ISS 16-24	2013	106	0	0	36	2155
ISS >24	1107	594	0	0	41	1742
*BLANK	776	29	0	3	71	879
TOTAL	21310	833	6	3	468	22620

Note: *NOT DOC means Not Documented.

DEATHS BY INJURY SEVERITY SCORE AND AGE 2005

DEATHS BY ISS SCORE AND AGE 2005



AGE	ISS 0	ISS 1-9	ISS 10-15	ISS 16-24	ISS >24	TOTAL
<1	0	0	0	1	3	4
1-4	0	0	0	2	14	16
5-9	1	0	0	0	13	14
10-14	0	1	2	1	12	16
15-19	0	4	5	6	64	79
20-24	0	13	3	7	96	119
25-34	0	6	8	19	91	124
35-44	0	13	4	14	85	116
45-54	0	8	1	12	69	90
55-64	0	10	5	13	52	80
65-74	0	3	4	10	38	55
75-84	0	5	1	14	36	56
>= 85	0	2	3	4	19	28
TOTAL	1	65	36	103	592	797*

*Note: Patient count = 833 (deaths). Patients processed = 797. 36 patients not included due to missing entries for ISS or Age.