

Texas GETAC Trauma System Committee

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- Lori Boyett, BSN
- Lisa Price, BSN
- Alex Ramos, BSN
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- Scott Christopher, BSN
- Brian Eastridge, MD, FACS
- Raji Gandhi, MD, MPH, FACS
- Kathy Rogers, RN, MSN
- Lori Vinson, RN, MSN
- Robert Winchell, MD, FACS
- Elmo Lopez, CEO

Trauma System Committee

- State Update
- State Legislative Update
- Trauma System Plan – Brian Eastridge, MD
- Registry Stakeholder Workgroup – Chris Drucker, PhD.

Trauma System Committee

- Trauma Medical Directors Workgroup
- Regional Advisory Council Update
 - A, B, C, D, E, F, G, H
- Trauma Registrar Workgroup

Trauma System Committee

- EMR Implementation Workgroup
- Regional PI
- Trauma Activation Process
- Standalone EDs

Texas EMS/Trauma Registry

Hospital Data Request

Injury Epidemiology & Surveillance Branch
Environmental Epidemiology and Disease Registries Section
Department of State Health Services

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Texas EMS/Trauma Registry

This summary report only includes data on hospital records that were reported to the registry through a passive surveillance system. Additionally, these data are based on hospitalizations, not patients, such that if a patient was hospitalized more than once or transferred between facilities, both hospital records will be included.

In this report:

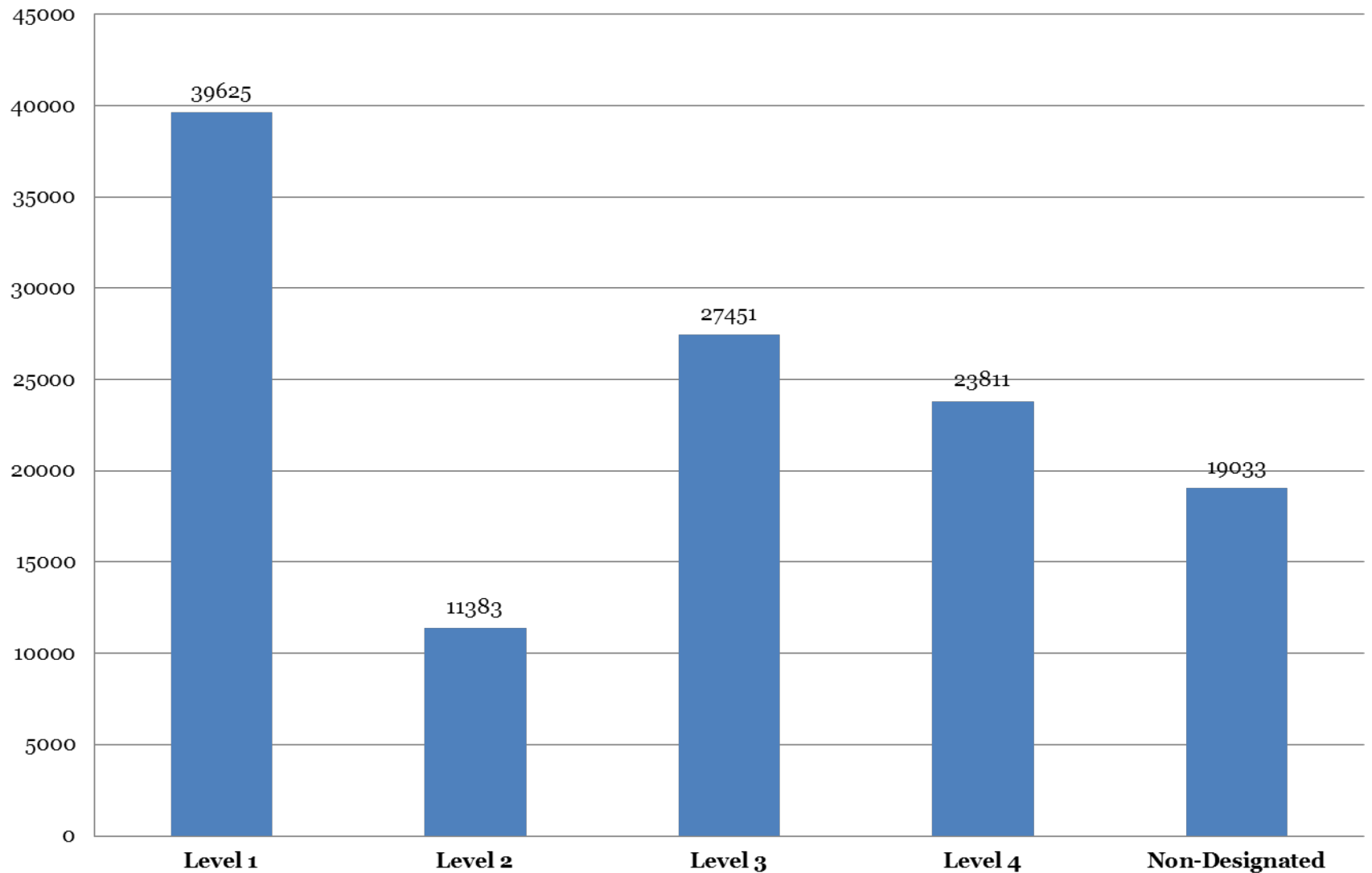
- 2013 data are provisional and may change as more reports are received

Number of Hospitals Reporting Data to the EMS/ Trauma Registry 2013 by Designation Level

Designation	Number
Level 1	16
Level 2	10
Level 3	46
Level 4	177
Non-Designated	329
Total	578

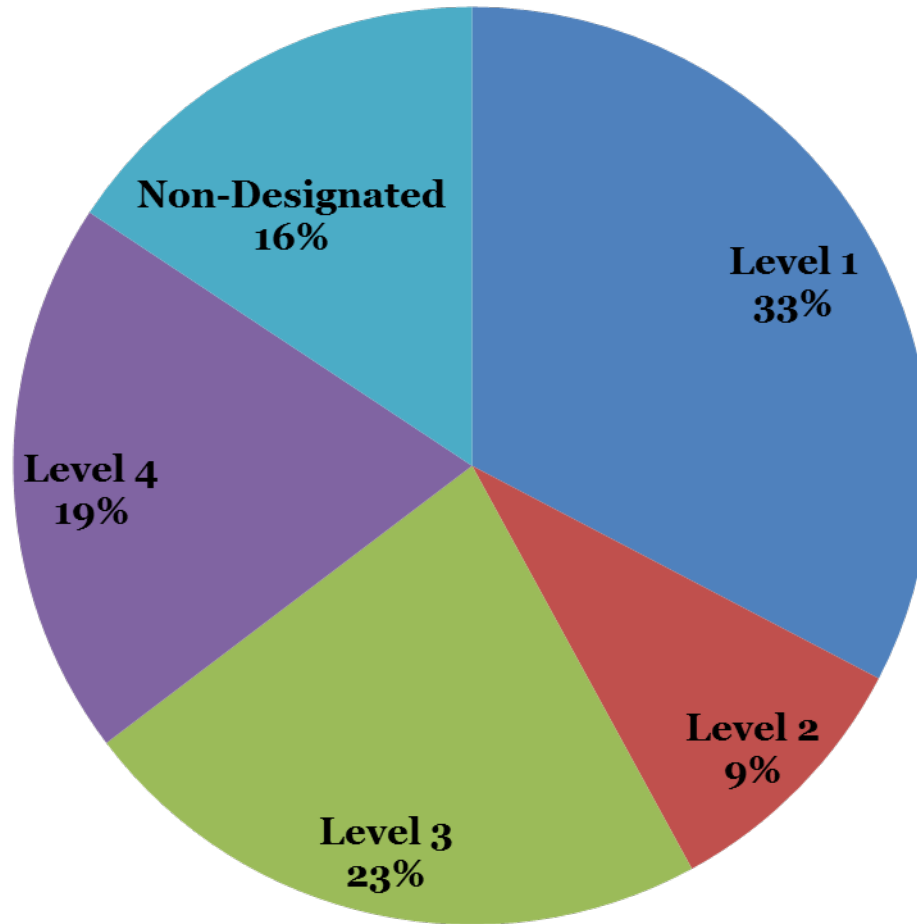
Hospitalizations by Trauma Center Level, Texas 2013

N=121,303



Hospitalizations by Trauma Center Level, Texas 2013

N=121,303



2013 Billed Hospital Charges

Sum of Charges	\$4,408,911,772.00
Average Charge	\$47,491.40
Median Charge	\$25,330.00
Minimum Charge	\$50.00
Maximum Charge	\$9,014,220.00

- Responses of \$999,999 and \$9,999,999 or less than \$50 were defined as invalid
- 23.5% or 28,467 records were missing or invalid

Trauma Incidents by Age Compared to NTDB 2012 Annual Report



Texas Trauma Incidents by Age

N=117,122

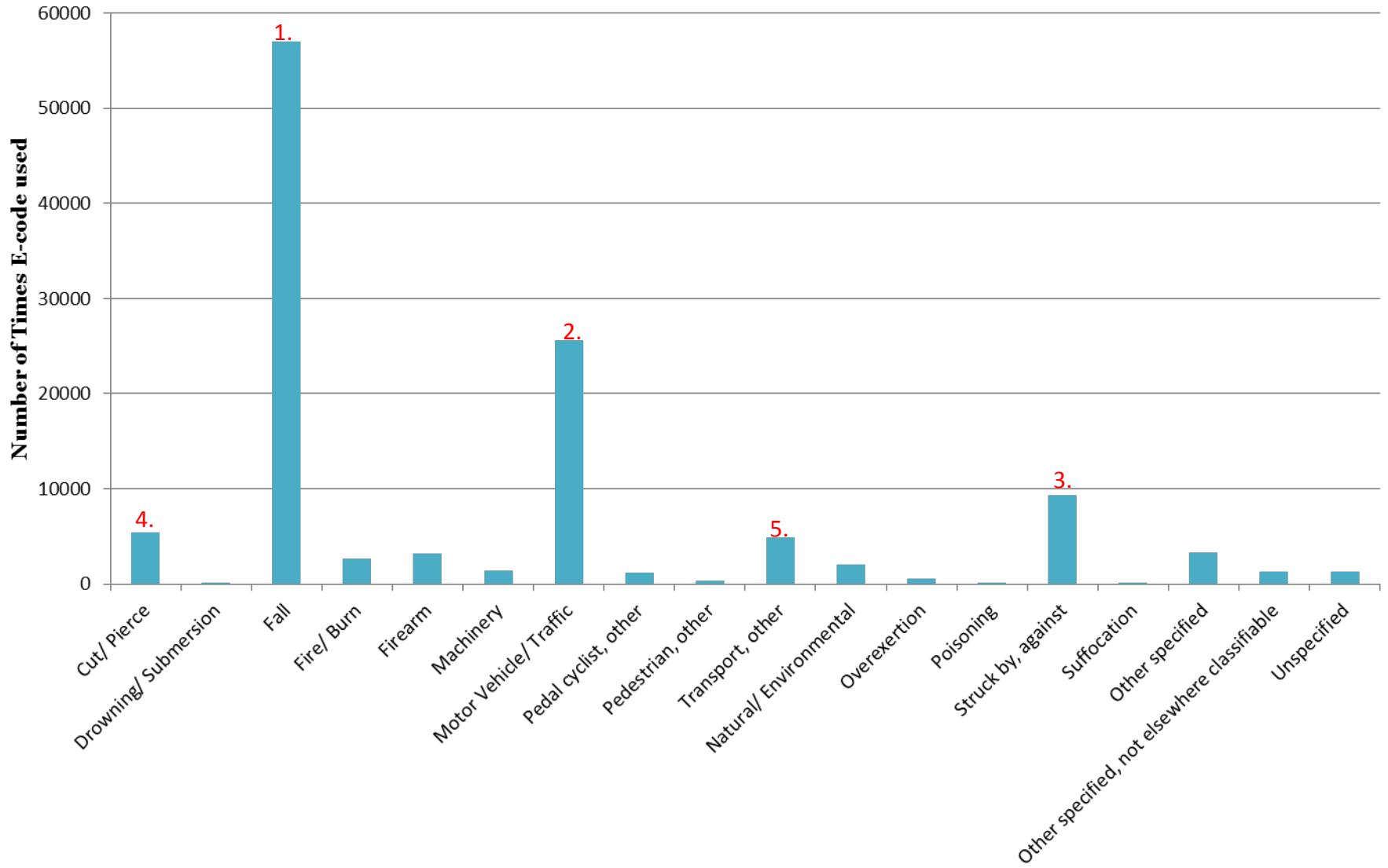
NTDB 2012 Annual Report Incidents by Age

N=773,299

Age	Incidents	Percent	Deaths	Case Fatality Rate	Incidents	Percent	Deaths	Case Fatality Rate
< 1 year	1686	1.440%	32	1.8980%	9469	1.224%	188	1.9854%
1 - 4	5636	4.812%	81	1.4372%	26790	3.464%	431	1.6088%
5 - 9	5092	4.348%	29	0.5695%	26404	3.414%	216	0.8181%
10 - 14	4883	4.170%	35	0.7168%	29276	3.786%	279	0.9530%
15 - 19	7239	6.181%	188	2.5970%	56558	7.314%	1721	3.0429%
20 - 24	8959	7.650%	249	2.7793%	67970	8.790%	2512	3.6957%
25 - 34	14099	12.039%	433	3.0711%	100576	13.006%	3500	3.4800%
35 - 44	11436	9.765%	321	2.8069%	81537	10.544%	2560	3.1397%
45 - 54	12653	10.804%	352	2.7819%	96609	12.493%	3355	3.4728%
55 - 64	11335	9.679%	385	3.3966%	83375	10.782%	3154	3.7829%
65 - 74	9970	8.513%	306	3.0692%	60667	7.845%	2981	4.9137%
75 - 84	12895	11.011%	423	3.2803%	71492	9.245%	4322	6.0454%
85	11222	9.582%	431	3.8407%	62476	8.079%	4129	6.6089%
NK/NR	7	0.006%	2	28.5714%	100	0.013%	60	60.0000%
Total	117112	100%	3274	2.7896%	773299	100%	29408	3.8029%



Mechanism of Injury, Texas 2013



- *Not mutually exclusive*
- *Records contain up to five ICD-9 e-codes; these counts are the number of times each cause of injury code was reported, not the number of hospitalizations*
- *Based on a framework detailed by the Centers for Disease Control and Prevention. For more details, visit http://www.cdc.gov/nchs/injury/injury_tools.htm*

Top 5 Non-Fatal Injury Categories

Rank	Cause of Injury	#	%
1	Fall	54,755	47.93%
2	Motor vehicle/ traffic	23,948	20.96%
3	Struck by, against	9024	7.90%
4	Cut/ pierce	5228	4.58%
5	Transport, other	4711	4.12%

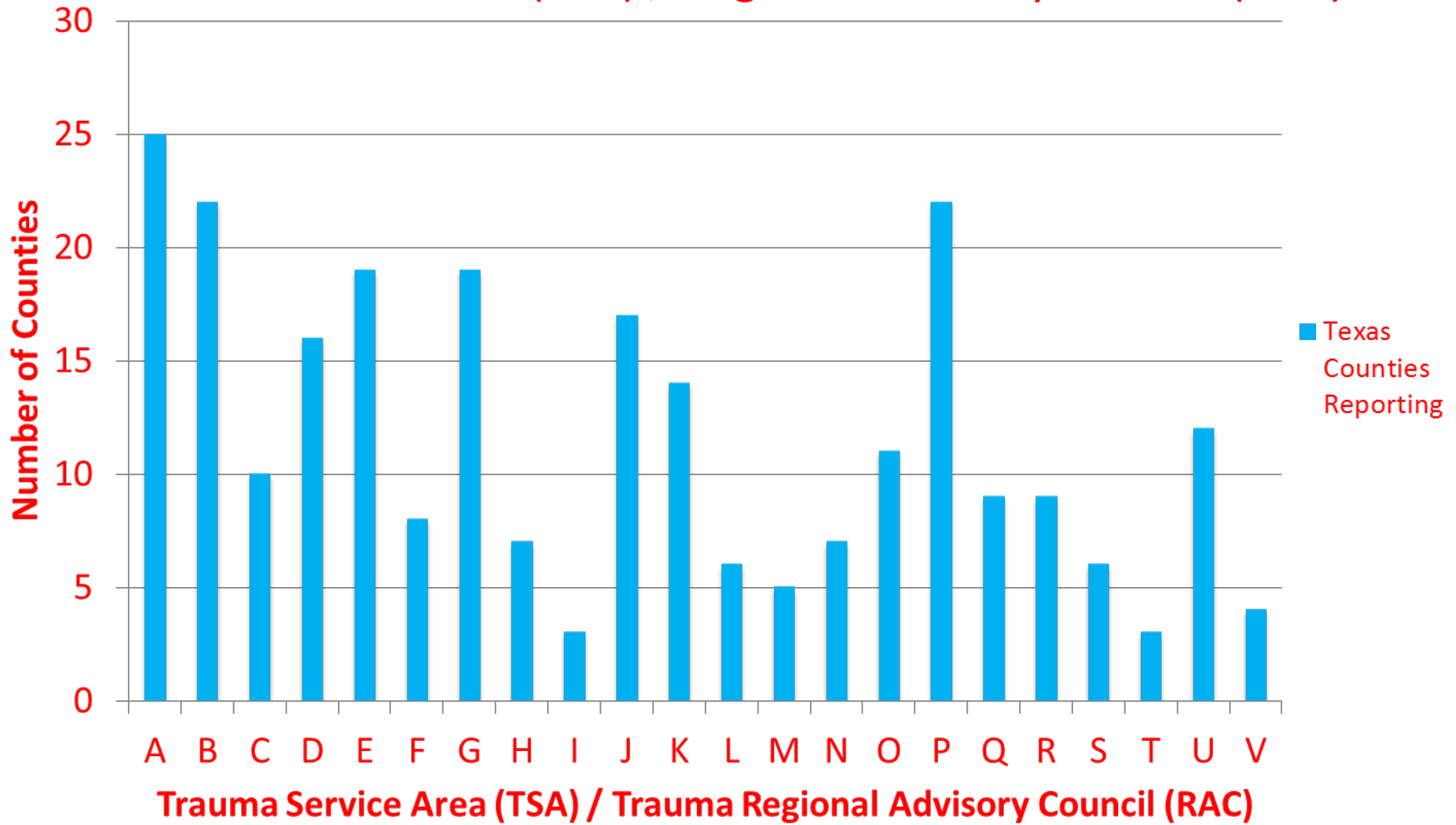
Top 5 Fatal Injury Categories

Rank	Cause of Injury	#	%
1	Fall	1132	35.18%
2	Motor vehicle/ traffic	1110	34.49%
3	Firearm	457	14.20%
4	Struck by, against	127	3.95%
5	Other, specified	72	2.24%

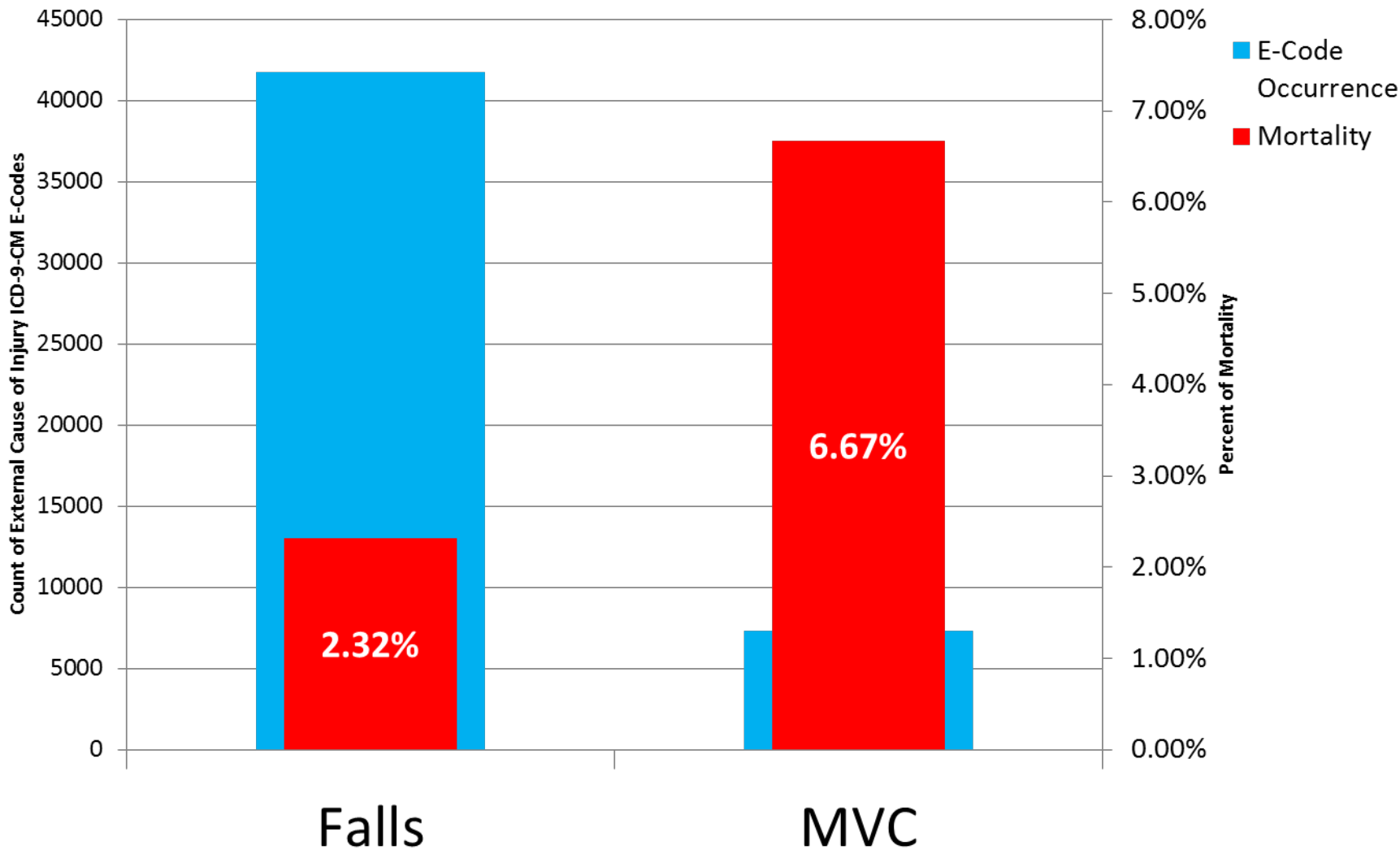
- *Not mutually exclusive*
- *Records contain up to five ICD-9 e-codes; these counts are the number of times each cause of injury code was reported, not the number of hospitalizations*
- *Based on a framework detailed by the Centers for Disease Control and Prevention. For more details, visit http://www.cdc.gov/nchs/injury/injury_tools.htm*

Counties within Reporting by

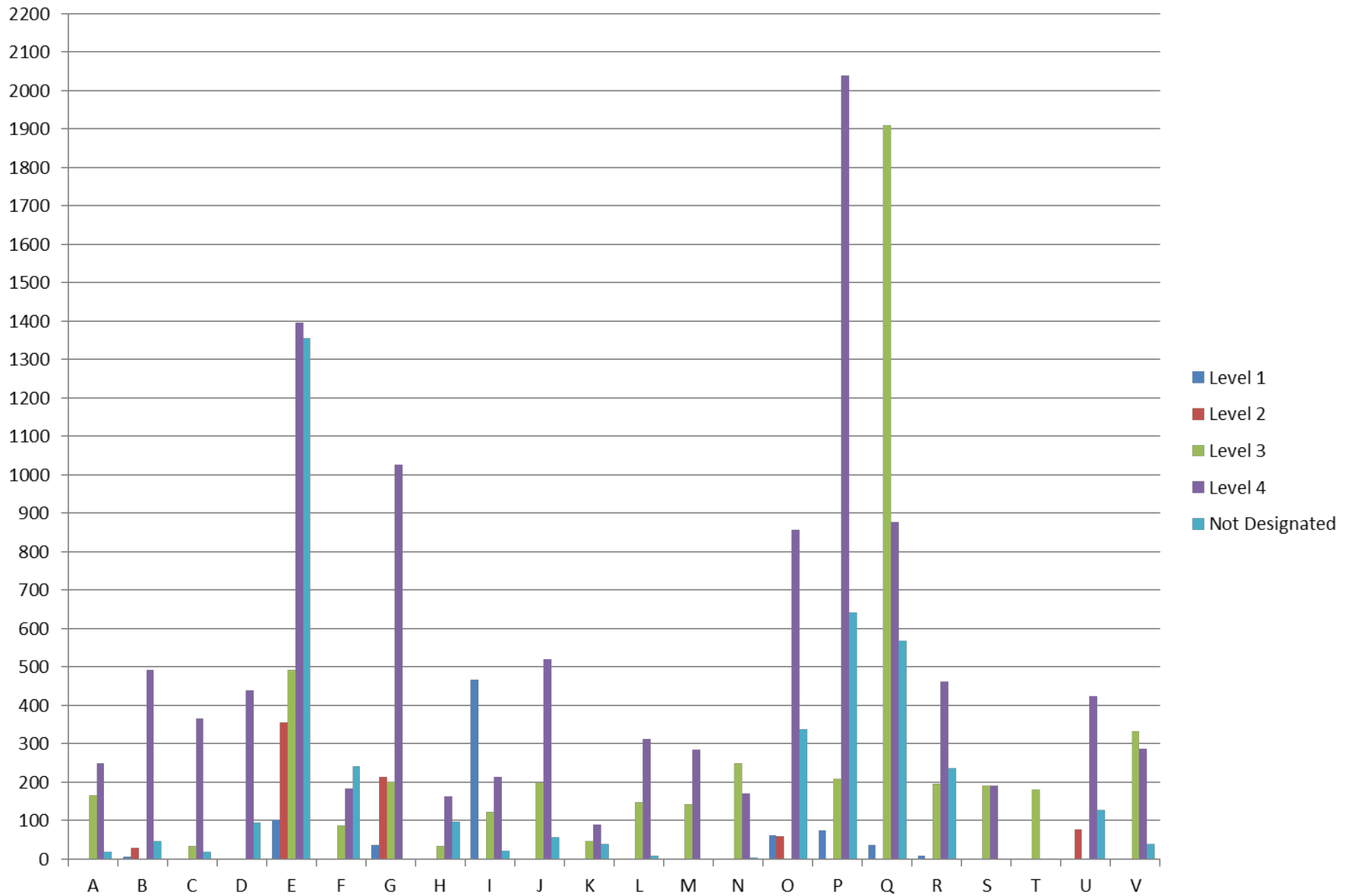
Trauma Service Area (TSA) / Regional Advisory Council (RAC)



Trauma Hospitalization Mortality Percentage of Top 5 External Cause of Injury ICD9CM E-Code and Occurrence



Number of Transfers by Trauma Center Level and by Reporting Entity TSA, Texas 2013



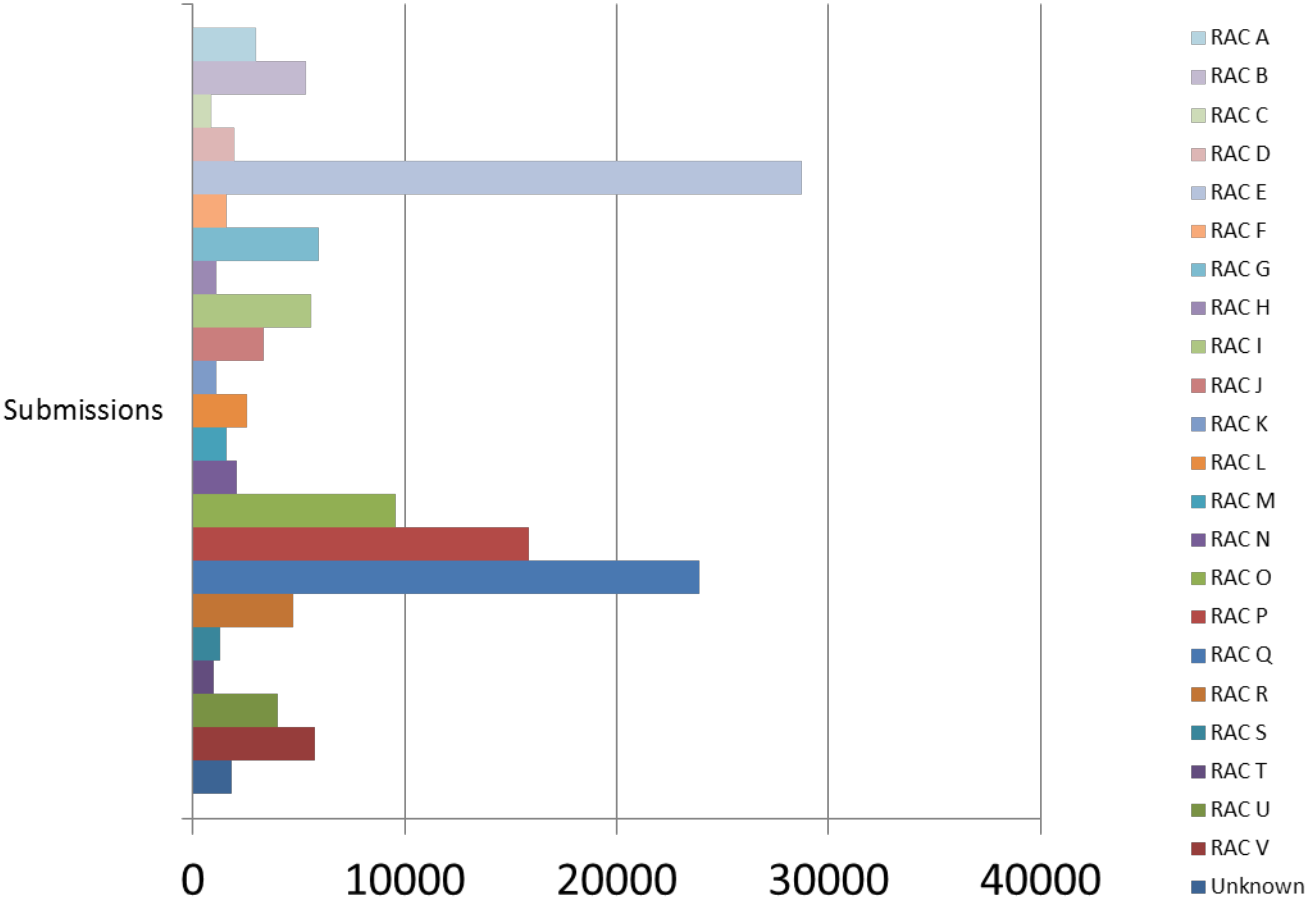
EMS Runs By RAC

The FREQ Procedure		
TSA_ID	Frequency	Percent
A	5095	1.45
B	11687	3.32
C	1595	0.45
D	3759	1.07
E	101327	28.81
F	5102	1.45
G	21476	6.11
H	4513	1.28
I	4118	1.17
J	4891	1.39
K	1382	0.39
L	5503	1.56
M	192	0.05
N	5193	1.48
O	38471	10.94
P	36947	10.51
Q	43589	12.39
R	28151	8
S	1752	0.5
T	5046	1.43
U	15752	4.48
V	6167	1.75

Pediatric(Age<18)		
TSA_ID	Frequency	Percent
A	784	0.82
B	1850	1.94
C	181	0.19
D	435	0.46
E	36782	38.66
F	544	0.57
G	2556	2.69
H	845	0.89
I	609	0.64
J	634	0.67
K	223	0.23
L	949	1
M	21	0.02
N	723	0.76
O	4519	4.75
P	8570	9.01
Q	12858	13.52
R	13324	14.01
S	259	0.27
T	1095	1.15
U	5853	6.15
V	1516	1.59

Elderly(Age>64)		
TSA_ID	Frequency	Percent
A	1592	2.11
B	3324	4.41
C	540	0.72
D	1271	1.69
E	16346	21.69
F	1900	2.52
G	7240	9.61
H	1306	1.73
I	645	0.86
J	1408	1.87
K	383	0.51
L	1008	1.34
M	68	0.09
N	1544	2.05
O	8974	11.91
P	8637	11.46
Q	7934	10.53
R	5395	7.16
S	534	0.71
T	1075	1.43
U	2802	3.72
V	1447	1.92

RAC Registry Submission 2013



Trauma Hospitalizations by Payer and by Reporting Entity TSA, Texas 2013

Trauma Service Area	Payer											Total	
	Auto Insurance	Auto Insurance, no fault	BCBS	Medicaid	Medicare	Private Insurance	Self Pay	Workers Comp	Other Government	Not Billed	Other		Missing/Unknown
A	256	0	308	126	1021	338	432	146	52	1	268	27	2975
B	61	2	274	637	1587	639	682	410	107	2	811	105	5317
C	12	4	77	51	251	45	98	26	16	0	27	244	851
D	93	12	172	120	875	124	281	83	61	0	91	52	1964
E	569	0	2468	2985	7117	3136	6062	445	968	0	3480	1512	28742
F	74	0	254	174	635	29	259	67	25	0	87	7	1611
G	1279	0	504	408	2366	24	37	130	938	0	258	12	5956
H	40	0	92	50	477	167	163	23	11	1	23	80	1127
I	223	0	378	1246	1229	202	1119	109	359	0	722	3	5590
J	367	12	359	215	790	221	676	306	71	0	303	46	3366
K	51	0	132	83	414	26	165	66	25	0	144	8	1114
L	8	0	97	91	414	167	132	36	361	0	400	851	2557
M	2	1	127	132	652	95	288	51	161	0	44	34	1587
N	7	0	265	135	773	191	440	87	12	1	164	20	2095
O	35	0	929	736	2879	1465	1931	210	168	0	781	436	9570
P	148	0	1426	2263	4039	1631	4121	492	731	0	858	135	15844
Q	145	4	1537	2725	5143	3570	5200	838	535	18	503	3666	23884
R	11	0	340	498	1507	420	1087	118	302	0	317	122	4722
S	88	0	241	66	501	59	196	65	18	0	53	1	1288
T	5	0	103	142	36	121	511	31	7	0	40	3	999
U	0	0	352	642	956	407	1087	128	53	0	384	6	4015
V	172	0	300	1077	1330	227	1274	63	447	0	859	13	5762
missing/ unknown	17	3	158	163	535	156	276	59	15	6	67	405	1860
Total	3663	38	10893	14765	35527	13460	26517	3989	5443	29	10684	7788	132796

Number of Transfers by ISS Categories and by Reporting Entity TSA, Texas 2013

TSA	ISS Categories					
	1 to 9	10 to 15	16 to 24	25 to 75	unknown/missing	Total
A	253	45	31	19	89	437
B	280	21	9	9	256	575
C	180	16	19	5	199	419
D	253	25	23	17	218	536
E	1997	247	250	98	1111	3703
F	334	63	71	18	27	513
G	1146	153	122	47	9	1477
H	119	28	30	22	95	294
I	618	81	78	34	14	825
J	303	46	49	48	330	776
K	96	17	17	4	41	175
L	364	33	19	8	48	472
M	360	13	15	12	28	428
N	333	33	33	20	3	422
O	975	95	90	38	119	1317
P	2154	242	329	77	163	2965
Q	2111	363	326	129	464	3393
R	585	68	75	40	135	903
S	266	26	47	15	28	382
T	105	17	42	12	4	180
U	500	50	52	17	10	629
V	460	49	85	35	32	661
missing/unknown	163	9	8	0	448	628
Total	13955	1740	1820	724	3871	22110

Number of Transfers by Age Categories and by Reporting Entity TSA, Texas 2013

TSA	Age Categories				
	<15	15-64	65+	UNKNOWN	Total
A	60	255	121	1	437
B	97	303	175	0	575
C	51	213	154	1	419
D	93	251	192	0	536
E	937	1700	1066	0	3703
F	98	257	155	3	513
G	254	696	527	0	1477
H	71	149	74	0	294
I	507	256	62	0	825
J	161	416	198	1	776
K	26	104	45	0	175
L	102	254	116	0	472
M	120	190	115	3	428
N	76	237	109	0	422
O	323	609	385	0	1317
P	559	1568	838	0	2965
Q	926	1788	676	3	3393
R	189	483	231	0	903
S	65	207	109	1	382
T	37	131	12	0	180
U	79	347	203	0	629
V	208	320	133	0	661
unknown/missing	132	292	180	24	628
Total	5171	11026	5876	37	22110

Transfers x 2 Per RAC

Number of Transfers 2x by Trauma Center Level and by Reporting Entity TSA, Texas 2013						
TSA	Trauma Center Level					Total
	1	2	3	4	Not Designated	
A	0	0	14	6	0	20
B	3	18	0	4	2	27
C	0	0	6	5	0	11
D	0	0	0	0	11	11
E	19	56	3	2	9	89
F	0	0	0	0	7	7
G	1	17	0	0	0	18
H	0	0	3	1	3	7
I	254	0	4	0	3	261
J	0	0	27	28	0	55
K	0	0	1	10	0	11
M	0	0	4	2	0	6
N	0	0	6	0	0	6
O	10	1	0	5	153	169
P	16	0	12	31	43	102
Q	6	0	351	45	22	424
R	0	0	12	89	1	102
S	0	0	8	4	0	12
U	0	6	0	1	0	7
V	0	0	7	3	0	10
missing/unknown	0	0	0	0	3	3
Total	309	98	458	236	257	1358

Transfer x 2 / RAC by ISS

Number of Transfers 2x by ISS Categories and by Reporting Entity TSA, Texas 2013						
TSA	ISS Categories					Total
	1 to 9	10 to 15	16 to 24	25 to 75	unknown/missing	
A	13	5	1	0	1	20
B	21	2	1	0	3	27
C	1	4	0	1	5	11
D	7	0	2	1	1	11
E	35	14	16	12	12	89
F	5	0	2	0	0	7
G	5	3	7	3	0	18
H	3	1	0	0	3	7
I	201	27	22	7	4	261
J	18	3	6	3	25	55
K	1	0	0	0	10	11
M	5	0	0	1	0	6
N	4	1	1	0	0	6
O	150	6	8	2	3	169
P	42	5	9	4	42	102
Q	286	61	49	26	2	424
R	80	11	7	4	0	102
S	9	2	1	0	0	12
U	3	2	0	2	0	7
V	5	0	4	1	0	10
missing/unknown	1	0	0	0	2	3
Total	895	147	136	67	113	1358

Transfer x 2/RAC By Payer

Table of TSA by Payer and by Reporting Entity TSA, Texas 2013												
TSA	Payer											Total
	Auto Insurance	BCBS	Medicaid	Medicare	Other Government	Private Insurance	Self Pay	Workers Comp	Not Recorded	OTHER	missing/unknown	
A	3	3	0	3	1	3	5	1	0	1	0	20
B	0	1	4	9	0	4	3	1	0	4	1	27
C	0	1	0	2	0	2	0	0	0	0	6	11
D	2	1	0	4	1	0	1	2	0	0	0	11
E	0	4	10	47	2	3	7	2	0	8	6	89
F	0	2	0	3	0	0	1	0	0	1	0	7
G	4	3	0	9	1	0	0	0	0	1	0	18
H	0	0	0	6	1	0	0	0	0	0	0	7
I	5	10	158	0	17	11	29	0	1	30	0	261
J	0	6	4	24	0	0	9	8	0	4	0	55
K	0	1	0	2	1	2	0	0	0	5	0	11
M	0	1	0	1	1	0	3	0	0	0	0	6
N	0	0	1	0	0	2	1	0	0	2	0	6
O	0	11	35	34	4	23	47	3	2	3	7	169
P	8	8	12	36	2	13	14	1	2	6	0	102
Q	0	27	82	96	3	49	57	14	95	1	0	424
R	0	3	9	44	3	18	14	2	2	7	0	102
S	2	1	0	3	2	0	3	1	0	0	0	12
U	0	1	0	0	1	1	2	0	0	2	0	7
V	0	2	4	4	0	0	0	0	0	0	0	10
missing/unknown	0	0	0	0	0	0	2	0	0	0	1	3
Total	24	86	319	327	40	131	198	35	102	75	21	1358

RAC Arrived In Shock

Number Arrived with Systolic Blood Pressure ≤ 90 by Trauma Center Level and by Reporting Entity TSA, Texas 2013						
	Trauma Center Level					Total
	1	2	3	4	Not Designated	
A	0	0	72	30	2	104
B	63	42	0	16	1	122
C	0	0	16	13	0	29
D	0	0	0	22	30	52
E	471	179	54	250	253	1207
F	0	0	7	14	36	57
G	61	318	48	85	0	512
H	0	0	10	8	20	38
I	109	0	33	26	1	169
J	0	0	82	18	2	102
K	0	0	27	3	2	32
L	27	11	13	9	0	60
M	0	0	47	10	0	57
N	0	0	38	3	0	41
O	138	15	0	38	31	222
P	293	0	23	84	24	424
Q	505	0	200	70	119	894
R	35	0	50	25	10	120
S	0	0	25	15	0	40
T	0	0	22	0	0	22
U	0	42	0	17	29	88
V	0	0	140	21	10	171
missing/unknown	0	0	0	4	31	35
Total	1702	607	907	781	601	4598

Shock Transfers

Number Arrived with Systolic Blood Pressure ≤ 90 and were Transferred Out by Trauma Center Level and by Reporting Entity TSA, Texas 2013						
TSA	Hospital Designation					Total
	1	2	3	4	Not Designated	
A	0	0	12	4	2	18
B	0	0	0	6	0	6
C	0	0	0	6	0	6
D	0	0	0	10	6	16
E	3	14	21	84	125	247
F	0	0	4	8	11	23
G	4	41	20	49	0	114
H	0	0	2	5	9	16
I	25	0	3	8	0	36
J	0	0	11	10	1	22
K	0	0	4	2	1	7
L	0	0	5	7	0	12
M	0	0	10	8	0	18
N	0	0	7	1	0	8
O	2	0	0	10	3	15
P	1	0	3	35	9	48
Q	2	0	54	28	9	93
R	0	0	6	9	2	17
S	0	0	4	6	0	10
T	0	0	8	0	0	8
U	0	1	0	9	1	11
V	0	0	6	10	2	18
missing/unknown	0	0	0	3	11	14
Total	37	56	180	318	192	783

Note: Cells represent count information, not number of hospitalizations.

There were 783 hospitalizations that arrived with a Systolic Blood Pressure ≤ 90 and were Transferred Out

Shock Outcome

Number Arrived with Systolic Blood Pressure ≤ 90 by Trauma Center Level and by Outcome, Texas 2013

Hospital Designation	Hospital Disposition									Total
	Death	Home	Left AMA	Nursing	Rehab	Correctional Facility	Hospice	Transfer Out	Missing/ Unknown	
1	519	657	3	171	171	0	0	37	144	1702
2	115	264	2	43	40	0	0	56	87	607
3	273	311	4	46	58	0	0	180	35	907
4	109	131	2	43	34	0	0	318	144	781
Not Designated	91	213	0	55	30	2	1	192	17	601
Total	1107	1576	11	358	333	2	1	783	427	4598

TBI Review

Traumatic Brain Injury (TBI) Hospitalizations by Reporting Facility Trauma Designation and Outcome, Texas 2013										
Trauma Designation	Hospital Disposition									Total
	Death	Home	Left AMA	Nursing	Rehab	Correctional Facility	Hospice	Transfer Out	Missing/Unknown	
I	874	6993	116	816	960	0	0	239	281	10279
II	226	1784	17	237	259	0	0	150	146	2819
III	337	3015	64	274	387	0	2	1405	108	5592
IV	55	738	8	120	151	2	2	2050	208	3334
Non-Designated	108	2071	15	243	167	6	15	901	285	3811
Total	1600	14601	220	1690	1924	8	19	4745	1028	25835

SCI Review

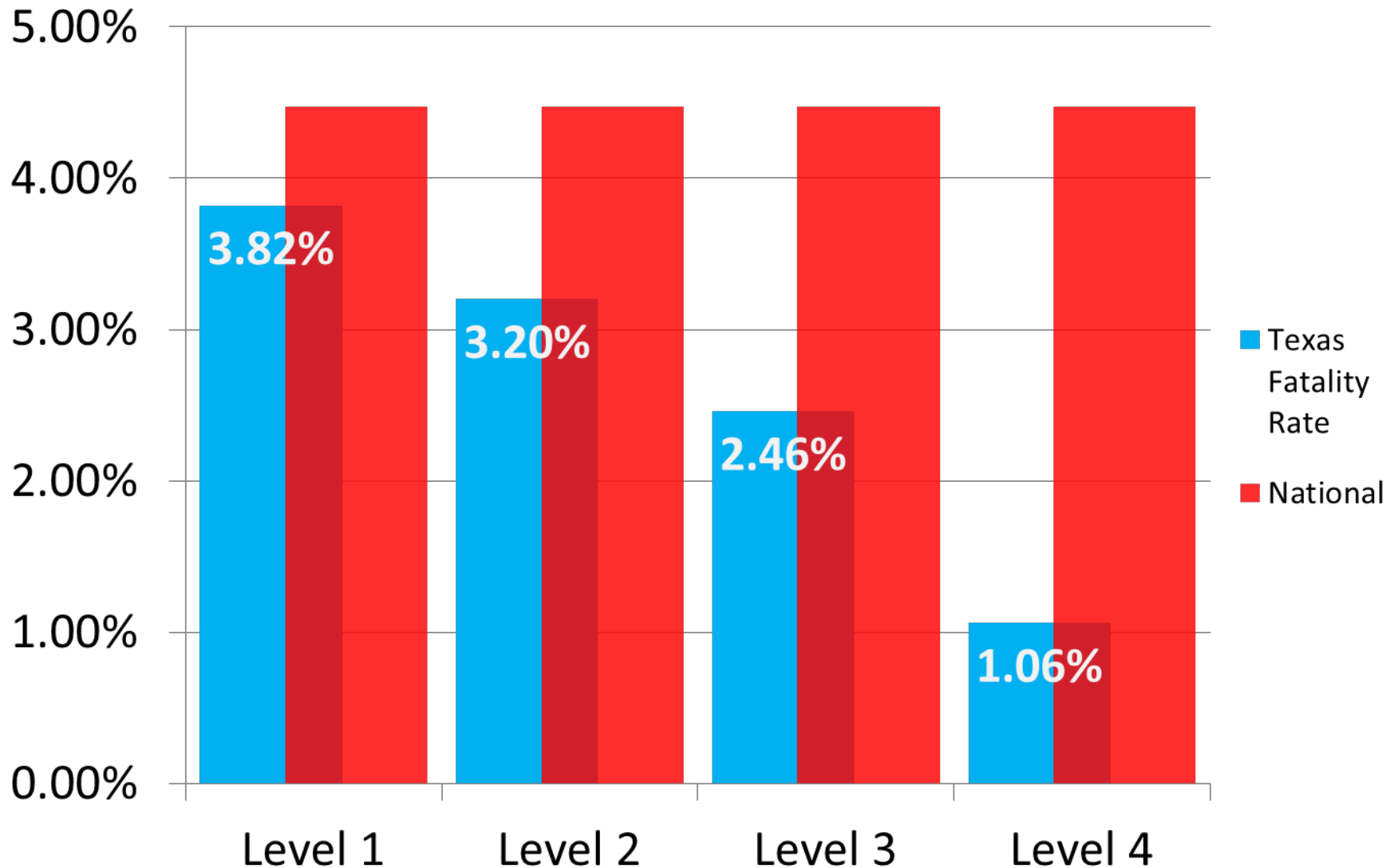
Spinal Cord Injury (SCI) Hospitalizations by Reporting Facility Trauma Designation and Outcome, Texas 2013								
Trauma Designation	Hospital Disposition							Total
	Death	Home	Left AMA	Nursing	Rehab	Transfer Out	Missing/ Unknown	
I	76	249	3	96	235	7	21	687
II	14	56	0	11	41	6	2	130
III	24	66	4	20	62	54	1	231
IV	3	9	0	5	10	69	6	102
Non-Designated	2	40	0	9	25	31	1	108
Total	119	420	7	141	373	167	31	1258

Mortality By RAC

Number of Deaths by Trauma Center Level and by Reporting Entity TSA, Texas 2013						
	Trauma Center Level					Total
	1	2	3	4	Not Designated	
A	0	0	47	16	0	63
B	83	33	0	5	5	126
C	0	0	10	10	0	20
D	0	0	0	11	40	51
E	505	259	47	40	41	892
F	0	0	3	6	26	35
G	379	83	50	66	0	578
H	0	0	16	3	10	29
I	78	0	37	26	3	144
J	0	0	71	10	0	81
K	0	0	29	3	1	33
L	0	0	7	4	0	11
M	0	0	47	6	0	53
N	0	0	43	5	0	48
O	114	17	0	35	43	209
P	322	0	15	68	28	433
Q	443	0	143	15	62	663
R	22	0	70	11	9	112
S	0	0	21	9	0	30
T	0	0	6	0	0	6
U	0	53	0	10	10	73
V	0	0	104	13	5	122
missing/unknown	0	0	0	0	14	14
Total	1946	445	766	372	297	3826

Texas Trauma Centers Case Fatality Rate 2013 Admissions vs. National Trauma Data Bank 2013 Admission Case Fatality Rate

*NTDB Annual Report 2014 ©American College of Surgeons



Liaison Updates

- Committee Member Stakeholder Reports
 - GETAC Council
 - Region VI American College of Surgeons/Committee on Trauma (ACS/COT) (Eastridge)
 - Texas Trauma Coordinator's Forum (Courtney Edwards)
 - Level IV Trauma Centers (Jorie Klein)
 - Level III Trauma Centers (Kathy Rodgers; Lisa Price)
 - Level II Trauma Centers (Lori Boyett)
 - Level I Trauma Centers (Eastridge, Gandhi, Winchell)
 - Pediatric Trauma Centers (Lori Vinson)
 - Texas EMS/Trauma Foundation (TETAF) Trauma Division (Lisa Price)
 - Emergency Medical Services (EMS) (Alex Ramos)
 - Trauma Center Administrators (Jorie Klein)
 - Texas Hospital Association (Jorie Klein)
 - Emergency Nurses Association (Sally Snow)

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Public Comment

- Open Discussion
- Announcements
- Items To Move Forward To GETAC Council
- Next Meeting Priorities / Agenda Items