Data Source: Georgia Trauma Registry Data
Data Analysis is based on the V5 csv data from the central site downloaded on 2021 Oct 1st.

Inclusion Criteria 1: Hospital Arrival **Year 2021, Apr to Jun**.
Inclusion Criteria 2: Data from both Designated and Non-designated Trauma Centers.

Data Requested:

1. Frequency of patients with an ISS >15 not cared for in level 1 or 2 trauma centers (Tables 1A - 1C, Figures 1B-1C).
2. Two major groups based on where patients came from (Table 2).
   S Group: patients directly came from 'Scene'.
   R Group: patients came from 'Referral Hospital'.
3. For patients directly came from 'Scene', **S Group**, Mean and Median Time by destination hospital level (Table 3A-3D).
   A: Time from EMS Dispatch to Scene Arrival for patients with an ISS all, ISS <=15, and ISS>15.
   B: Time from Scene Arrival to Scene Left for patients with an ISS all, ISS <=15, and ISS>15.
   C: Time from Scene Left to Hospital ED Arrival for patients with an ISS all, ISS <=15, and ISS>15.
   D: Time from EMS Dispatch to Hospital ED Arrival for patients with an ISS all, ISS <=15, and ISS>15.
4. For patients came from 'Referral Hospital', **R Group**, Mean and Median Time by destination hospital level (Table 4A-4E).
   A: Time from EMS Dispatch to Scene Arrival for patients with an ISS all, ISS <=15, and ISS>15.
   B: Time from Scene Arrival to Scene Left for patients with ISS all, an ISS <=15, and ISS>15.
   C: Time from Scene Left to Referral Hospital Arrival for patients with an ISS all, ISS <=15, and ISS>15.
   D: Time from Referral Hospital Arrival to Destination Hospital ED Arrival for patients with an ISS all, ISS <=15, and ISS>15.
   E: Time from EMS Dispatch to Destination Hospital ED Arrival for patients with an ISS all, ISS <=15, and ISS>15.

Data Reported by Danlin Luo, Trauma Epidemiologist. Contact Email: danlin.luo@dph.ga.gov
Date of Report: Nov. 8, 2021.

1. **Frequency of Patients with an ISS >15 Not Cared for in Level 1 or 2 Trauma Center**

Table 1A shows the frequency and percent of patients by the treating facility level. The level in this report is the Trauma Designated Level of Destination Hospital. The number of total cases during 2021 Apr to Jun is 10,763. Most Trauma patients (83.1%) have an ISS<=15. Patients with an ISS>15 treated by a Level 3, 4, and NA (Non-designated facility) totally account for 8.6% and are marked by yellow.

Table 1A

Frequency of Patients by Hospital Level				
Level	ISS<=15	ISS>15	Total	Percent
1	4,471	1,096	5,567	51.7
2	3,183	568	3,751	34.9
3	773	89	862	8.0
4	90	22	112	1.0
NA	425	46	471	4.4
Total	8,942	1,821	10,763	100.0
Percent	83.1	16.9	100.0	

Table 1B

Frequency of Patients with an ISS> 15 by Hospital Level		
Level	ISS>15	Percent
1	1,096	60.2
2	568	31.2
3	89	4.9
4	22	1.2
NA	46	2.5
Total	1,821	100.0

Figure 1B1

ISS > 15, Frequency by Hospital Level

Figure 1B2

ISS > 15, Percent by Hospital Level

- Level 1
- Level 2
- Level 3
- Level 4
- Level NA
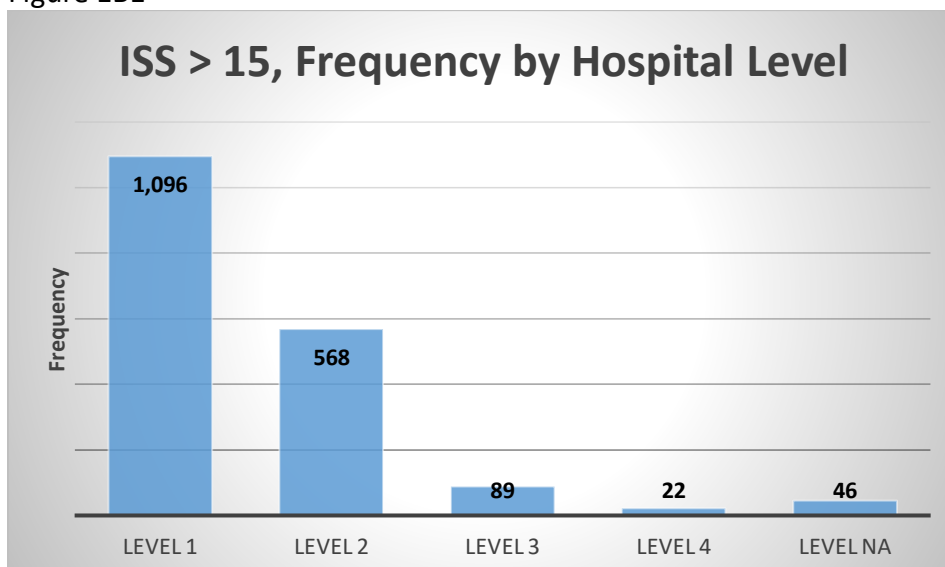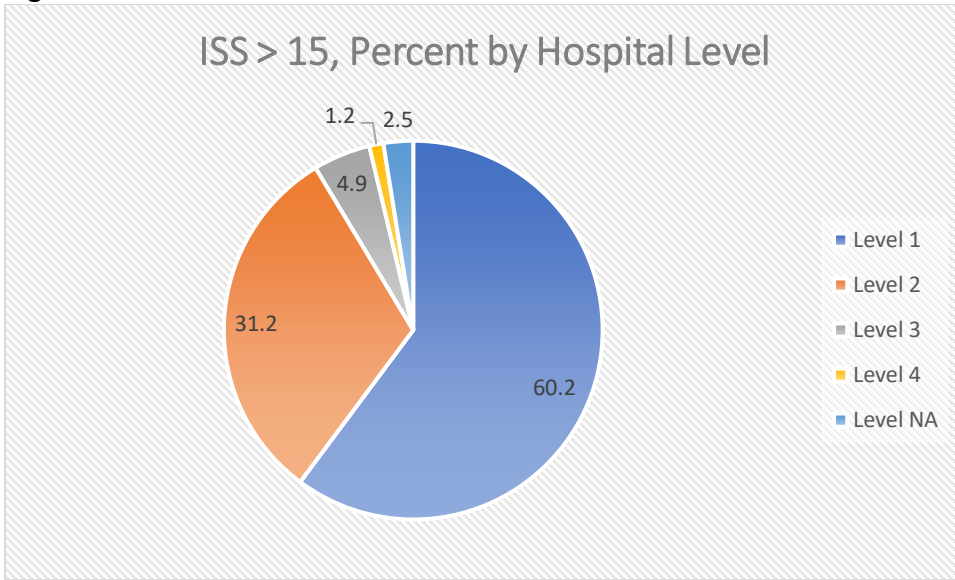
Table 1C

Frequency of Patients with an ISS> 15 by Group of Hospital Level		
Frequency	**ISS>15**	**Percent**
Level 1 & 2	1,664	91.4
Level 3 & 4	111	6.1
Level NA	46	2.5
Total	1,821	100.0

Figure 1C1

ISS > 15, Frequency by Hospital Group

Figure 1C2

ISS > 15, Frequency by Hospital Group

- Level 1 & 2
- Level 3 & 4
- Level NA

2.5
6.1
91.4
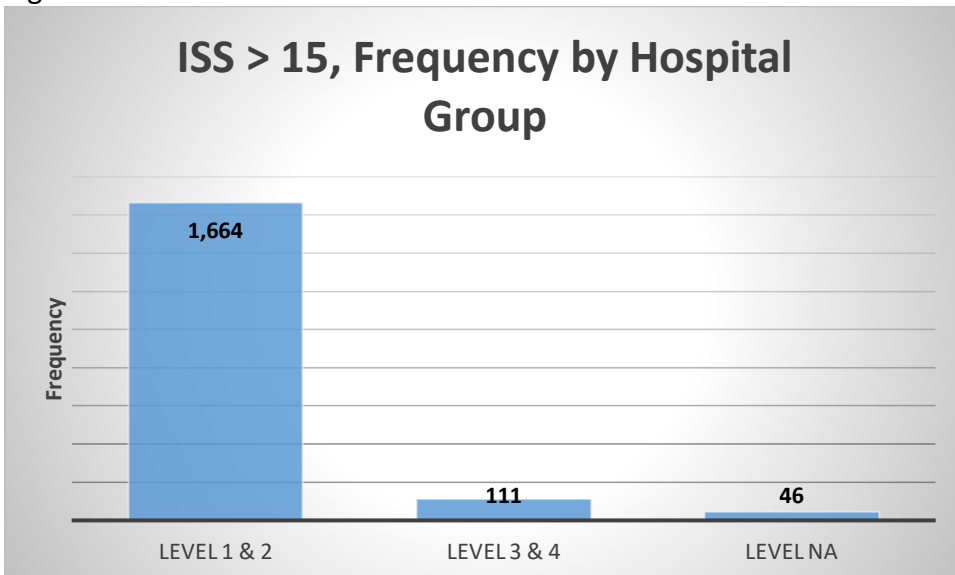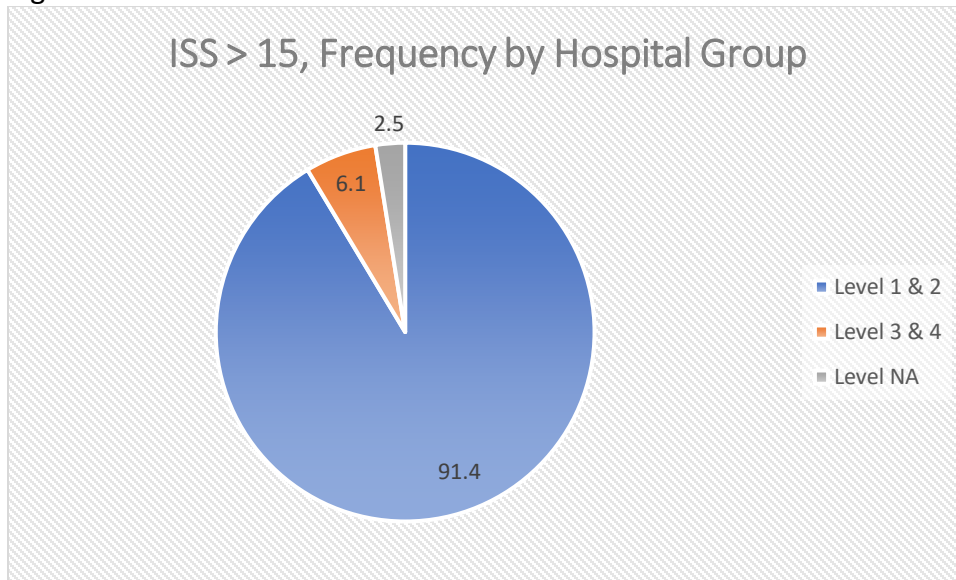
2. Where Patients Came from

Table 2

Frequency of Patients by Where Patients Came from				
Frequency	ISS<=15	ISS>15	Total	Percent
Scene	5,838	1,314	7,152	66.6
Referring Hospital	2,027	360	2,387	22.2
Home	663	62	725	6.7
Unknown	190	61	251	2.3
Other	205	20	225	2.1
Not Applicable	3	0	3	0.0
Total	8,926	1,817	10,743	100.0

Frequency missing=20.

There are 7,152 cases (66.6%) arrived from 'Scene', which is the original data source for **S Group**.
There are 2,387 cases (22.2%) arrived from 'Referring Hospital', which is the original data source for **R Group**.

3. For Patients Came from 'Scene': S Group

There are 7,152 cases arrived from '**Scene**'.
Among these 7,152 cases, 6,318 cases were linked with a Prehospital Provider data.
Among these 6,318 cases, **5,887** cases have EMS provider's role as '**Transport from Scene to Facility**'.
These 5,887 cases are the data source of **S Group**.

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3A. Time from EMS Dispatch to Scene Arrival

Among these 5,887 cases, 5,446 cases (92.5%) have valid values in the four fields: Dispatch Date, Dispatch Time, Scene Arrival Date, and Scene Arrival Time.
Among these 5,887 cases, **7.5% of the cases have missing data in at least one of the four fields.**
The data with these **5,446** cases is used to calculate the mean and median time from EMS Dispatch to Scene Arrival.

Table 3A1

S Group, ISS All, Mean and Median Time from EMS Dispatch to Scene Arrival			
Hospital Level	**Frequency**	**Mean Total Time**	**Median Total Time**
1	2,800	0:12:53	0:10:00
2	1,907	0:09:34	0:09:00
3	461	0:10:00	0:09:00
4	33	0:10:53	0:11:00
NA	245	0:10:00	0:09:00
Total	5,446	0:11:20	0:09:00

Note: Time Format: HH:MM:SS (all the following tables have the same Time Format).

Table 3A2

S Group, ISS <= 15, Mean and Median Time from EMS Dispatch to Scene Arrival			
Hospital Level	**Frequency**	**Mean Total Time**	**Median Total Time**
1	2,183	0:13:05	0:10:00
2	1,572	0:09:39	0:09:00
3	405	0:10:02	0:09:00
4	25	0:11:10	0:11:00
NA	212	0:10:19	0:09:00
Total	4,397	0:11:26	0:09:00

Table 3A3

S Group, ISS > 15, Mean and Median Time from EMS Dispatch to Scene Arrival			
Hospital Level	**Frequency**	**Mean Total Time**	**Median Total Time**
1	617	0:12:12	0:10:00
2	335	0:09:08	0:09:00
3	56	0:09:50	0:08:00
4	8	0:10:00	0:09:00
NA	33	0:08:04	0:06:00
Total	1,049	0:10:57	0:09:00

3B. Time from Scene Arrival to Scene Left

Among these 5,887 cases, 5,414 cases (92.0%) have valid values in the four fields: Scene Arrival Date, Scene Arrival Time, Scene Left Date, and Scene Left Time.
Among these 5,887 cases, **8.0% of the cases have missing data in at least one of the four fields.**
The data with these **5,414** cases is used to calculate the mean and median time from Scene Arrival to Scene Left.

Table 3B1

S Group, ISS All, Mean and Median Time from Scene Arrival to Scene Left			
Hospital Level	**Frequency**	**Mean Total Time**	**Median Total Time**
1	2,772	0:20:14	0:19:00
2	1,904	0:17:56	0:16:00
3	459	0:19:48	0:19:00
4	33	0:22:36	0:19:00
NA	246	0:20:30	0:19:00
Total	5,414	0:19:25	0:18:00

Table 3B2

S Group, ISS <= 15, Mean and Median Time from Scene Arrival to Scene Left			
Hospital Level	**Frequency**	**Mean Total Time**	**Median Total Time**
1	2,161	0:20:47	0:19:00
2	1,569	0:18:12	0:16:00
3	404	0:19:59	0:19:00
4	25	0:20:29	0:19:00
NA	213	0:20:25	0:19:00
Total	4,372	0:19:46	0:18:00

Table 3B3

S Group, ISS > 15, Mean and Median Time from Scene Arrival to Scene Left			
Hospital Level	**Frequency**	**Mean Total Time**	**Median Total Time**
1	611	0:18:19	0:16:00
2	335	0:16:40	0:15:00
3	55	0:18:35	0:17:00
4	8	0:29:15	0:23:30
NA	33	0:21:02	0:18:00
Total	1,042	0:17:58	0:16:00

3C. Time from Scene Left to Hospital ED Arrival

Among these 5,887 cases, 5,414 cases (92.0%) have valid values in the four fields: Scene Left Date, Scene Left Time, ED Arrival Date, and ED Arrival Time.
Among these 5,887 cases, **8.0% of the cases have missing data in at least one of the four fields.**
The data with these **5,414** cases is used to calculate the mean and median time from Scene Left to Hospital ED Arrival.

Table 3C1

S Group, ISS All, Mean and Median Time from Scene Left to Hospital ED Arrival			
Hospital Level	**Frequency**	**Mean Total Time**	**Median Total Time**
1	2,772	0:50:02	0:25:00
2	1,904	0:49:23	0:25:00
3	459	1:06:31	0:24:00
4	33	0:17:05	0:17:00
NA	246	2:08:16	0:20:00
Total	5,414	0:54:33	0:24:00

Table 3C2

S Group, ISS <= 15, Mean and Median Time from Scene Left to Hospital ED Arrival			
Hospital Level	**Frequency**	**Mean Total Time**	**Median Total Time**
1	2,161	0:54:36	0:25:00
2	1,569	0:52:44	0:25:00
3	404	1:11:47	0:25:00
4	25	0:18:14	0:18:00
NA	213	2:25:28	0:21:00
Total	4,372	0:59:44	0:25:00

Table 3C3

S Group, ISS > 15, Mean and Median Time from Scene Left to Hospital ED Arrival			
Hospital Level	**Frequency**	**Mean Total Time**	**Median Total Time**
1	611	0:33:51	0:22:00
2	335	0:33:39	0:22:00
3	55	0:27:51	0:20:00
4	8	0:13:30	0:10:00
NA	33	0:17:15	0:13:00
Total	1,042	0:32:48	0:22:00

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3D. Time from EMS Dispatch to Hospital ED Arrival

Among these 5,887 cases, 5,451 cases (92.6%) have valid values in the four fields: EMS Dispatch Date, EMS Dispatch Time, ED Arrival Date, and ED Arrival Time.
Among these 5,887 cases, **7.4% of the cases have missing data in at least one of the four fields.**
The data with these **5,451** cases is used to calculate the mean and median time from EMS Dispatch to Hospital ED Arrival.

Table 3D1

S Group, ISS All, Mean and Median Time from EMS Dispatch to Hospital ED Arrival			
Hospital Level	Frequency	Mean Total Time	Median Total Time
1	2,803	1:22:40	0:57:00
2	1,908	1:16:47	0:52:00
3	461	1:36:11	0:55:00
4	33	0:50:35	0:53:00
NA	246	2:38:26	0:51:00
Total	5,451	1:24:59	0:55:00

Table 3D2

S Group, ISS <= 15, Mean and Median Time from EMS Dispatch to Hospital ED Arrival			
Hospital Level	Frequency	Mean Total Time	Median Total Time
1	2,186	1:27:54	0:58:00
2	1,573	1:20:29	0:53:00
3	405	1:41:42	0:55:00
4	25	0:49:53	0:52:00
NA	213	2:55:48	0:51:00
Total	4,402	1:30:33	0:56:00

Table 3D3

S Group, ISS > 15, Mean and Median Time from EMS Dispatch to Hospital ED Arrival			
Hospital Level	Frequency	Mean Total Time	Median Total Time
1	617	1:04:09	0:53:00
2	335	0:59:27	0:48:00
3	56	0:56:18	0:51:00
4	8	0:52:45	0:59:30
NA	33	0:46:20	0:44:00
Total	1,049	1:01:35	0:50:00

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4. For Patients Came from Referral Hospital: R Group

There are 2,387 cases arrived from 'Referring Hospital'.
Among these 2,387 cases, 2,381 cases were linked with a Referral data
Among these 2,381 cases, 1,253 cases were linked with a Prehospital Provider data.
Among these 1,253 cases, 899 cases have EMS provider's role as 'Transport from Scene to Facility'.
These **899** cases are used for analysis for R Group times.

4A. Time from EMS Dispatch to Scene Arrival

Among these 899 cases, 371 cases (41.3%) have valid values in the four fields: Dispatch Date, Dispatch Time, Scene Arrival Date, and Scene Arrival Time.
Among these 899 cases, **58.7% of the cases have missing data in at least one of the four fields.**
The data with these **371** cases is used to calculate the mean and median time from EMS Dispatch to Scene Arrival.

Table 4A1

R Group, ISS All, Mean and Median Time from EMS Dispatch to Scene Arrival.			
Hospital Level	**Frequency**	**Mean Total Time**	**Median Total Time**
1	288	0:10:44	0:09:00
2	82	0:10:10	0:09:30
3	1	0:18:00	0:18:00
Total	371	0:10:37	0:09:00

Table 4A2

R Group, ISS <= 15, Mean and Median Time from EMS Dispatch to Scene Arrival			
Hospital Level	**Frequency**	**Mean Total Time**	**Median Total Time**
1	223	0:10:35	0:09:00
2	59	0:09:03	0:09:00
3	1	0:18:00	0:18:00
Total	283	0:10:17	0:09:00

Table 4A3

R Group, ISS > 15, Mean and Median Time from EMS Dispatch to Scene Arrival			
Hospital Level	**Frequency**	**Mean Total Time**	**Median Total Time**
1	65	0:11:15	0:09:00
2	23	0:13:00	0:13:00
Total	88	0:11:42	0:10:00

4B. Time from Scene Arrival to Scene Left

Among these 899 cases, 363 cases (40.4%) have valid values in the four fields: Scene Arrival Date, Scene Arrival Time, Scene Left Date, and Scene Left Time.
Among these 899 cases, **59.6% of the cases have missing data in at least one of the four fields.**
The data with these **363** cases is used to calculate the mean and median time from Scene Arrival to Scene Left.

Table 4B1

R Group, ISS All, Mean and Median Time from Scene Arrival to Scene Left			
Hospital Level	**Frequency**	**Mean Total Time**	**Median Total Time**
1	284	0:19:08	0:17:00
2	78	0:19:20	0:18:00
3	1	0:02:00	0:02:00
Total	363	0:19:08	0:17:00

Table 4B2

R Group, ISS <= 15, Mean and Median Time from Scene Arrival to Scene Left			
Hospital Level	**Frequency**	**Mean Total Time**	**Median Total Time**
1	221	0:19:27	0:18:00
2	56	0:19:12	0:16:30
3	1	0:02:00	0:02:00
Total	278	0:19:20	0:18:00

Table 4B3

R Group, ISS > 15, Mean and Median Time from Scene Arrival to Scene Left			
Hospital Level	**Frequency**	**Mean Total Time**	**Median Total Time**
1	63	0:18:04	0:16:00
2	22	0:19:41	0:18:00
Total	85	0:18:29	0:17:00

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4C. Time from Scene Left to Referral Hospital Arrival

Among these 899 cases, 319 cases (35.5%) have valid values in the four fields: Scene Left Date, and Scene Left Time, Referral Hospital Arrival Date, and Referral Hospital Arrival Time.
Among these 899 cases, **64.5% of the cases have missing data in at least one of the four fields.**
The data with these **319** cases is used to calculate the mean and median time from Scene Left to Referral Hospital Arrival.

Table 4C1

R Group, ISS All, Mean and Median Time from Scene Left to Referral Hospital Arrival			
Hospital Level	Frequency	Mean Total Time	Median Total Time
1	265	0:27:16	0:17:00
2	53	0:36:23	0:21:00
3	1	0:20:00	0:20:00
Total	319	0:28:45	0:17:00

Table 4C2

R Group, ISS <= 15, Mean and Median Time from Scene Left to Referral Hospital Arrival			
Hospital Level	Frequency	Mean Total Time	Median Total Time
1	212	0:28:39	0:17:00
2	37	0:41:23	0:21:00
3	1	0:20:00	0:20:00
Total	250	0:30:30	0:18:00

Table 4C3

R Group, ISS > 15, Mean and Median Time from Scene Left to Referral Hospital Arrival			
Hospital Level	Frequency	Mean Total Time	Median Total Time
1	53	0:21:44	0:13:00
2	16	0:24:49	0:22:00
Total	69	0:22:27	0:17:00

4D. Time from Referral Hospital Arrival to Destination Hospital ED Arrival

Among these 899 cases, 679 cases (75.5%) have valid values in the four fields: Referral Hospital Arrival Date, Referral Hospital Arrival Time, Destination Hospital ED arrival Date, and Destination Hospital ED arrival Time.

Among these 899 cases, **24.5% of the cases have missing data in at least one of the four fields.**

The data with these **679** cases is used to calculate the mean and median time from Referral Hospital Arrival to Destination Hospital ED Arrival.

Table 4D1

R Group, ISS All, Mean and Median Time from Referral Hospital Arrival to Destination Hospital ED Arrival			
Hospital Level	**Frequency**	**Mean Total Time**	**Median Total Time**
1	537	6:06:52	5:02:00
2	140	6:26:22	5:11:30
3	2	5:36:00	5:36:00
Total	679	6:10:48	5:03:00

Table 4D2

R Group, ISS <= 15, Mean and Median Time from Referral Hospital Arrival to Destination Hospital ED Arrival			
Hospital Level	**Frequency**	**Mean Total Time**	**Median Total Time**
1	420	6:30:15	5:12:30
2	111	7:05:30	5:28:00
3	2	5:36:00	5:36:00
Total	533	6:37:24	5:15:00

Table 4D3

R Group, ISS > 15, Mean and Median Time from Referral Hospital Arrival to Destination Hospital ED Arrival			
Hospital Level	**Frequency**	**Mean Total Time**	**Median Total Time**
1	117	4:42:54	4:12:00
2	29	3:56:35	4:24:00
Total	146	4:33:42	4:13:00

4E. Time from EMS Dispatch to Destination Hospital ED Arrival

Among these 899 cases, 374 cases (41.6%) have valid values in the four fields: EMS Dispatch Date, EMS Dispatch Time, Destination Hospital ED arrival Date, and Destination Hospital ED arrival Time. Among these 899 cases, **58.4% of the cases have missing data in at least one of the four fields.** The data with these **374** cases is used to calculate the mean and median time from EMS Dispatch to Destination Hospital ED Arrival.

Table 4E1

R Group, ISS All, Mean and Median Time from EMS Dispatch to Destination Hospital ED Arrival			
Hospital Level	Frequency	Mean Total Time	Median Total Time
1	291	6:45:30	5:56:00
2	82	7:04:01	5:28:00
3	1	5:40:00	5:40:00
Total	374	6:49:23	5:51:00

Table 4E2

R Group, ISS <= 15, Mean and Median Time from EMS Dispatch to Destination Hospital ED Arrival			
Hospital Level	Frequency	Mean Total Time	Median Total Time
1	226	6:50:32	6:15:00
2	59	8:07:12	5:52:00
3	1	5:40:00	5:40:00
Total	286	7:06:06	6:14:00

Table 4E3

R Group, ISS > 15, Mean and Median Time from EMS Dispatch to Destination Hospital ED Arrival			
Hospital Level	Frequency	Mean Total Time	Median Total Time
1	65	6:28:02	5:24:00
2	23	4:21:57	4:56:00
Total	88	5:55:05	5:09:00

**********************************End**********************************

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