ONLINE FIRST

DISASTER AND EMERGENCY MEDICINE JOURNAL

Reviev of complains about the late arrival of ambulances

Authors: Ramiz Yazici, Murat Genc

DOI: 10.5603/demj.101731

Article type: Research paper

Submitted: 2024-07-24

Accepted: 2024-08-07

Published online: 2024-08-12

ORIGINAL PAPER

REVIEV OF COMPLAINS ABOUT THE LATE ARRIVAL OF AMBULANCES

Ramiz Yazici[1], Murat Genç[2]

[1]Emergency Department, Kanuni Sultan Suleyman Training and Research Hospital, Istambul, Türkiye

[2]Department of Emergency, Ankara Training and Research Hospital, Ankara, Türkiye

CORRESPONDING AUTHOR:

Ramiz Yazici, Emergency Department, Kanuni Sultan Suleyman Training and Research Hospital, Istambul, Türkiye, phone: 0090 533 4214202, e-mail: dr.ramiz.yazici@gmail.com

ABSTRACT

INTRODUCTION: The arrival times of ambulances to the scene are a significant health quality indicator in terms of patient health and the public's trust in the system. In this study, it was reviewed whether complaints regarding ambulances are concentrated on certain days, hours, months, diagnoses, and triage codes. This study aims to contribute to the missing part of the literature and to improve emergency health services. Using these evaluations, pre-hospital health services can be assessed and required corrections can be implemented.

MATERIAL AND METHODS: This was a retrospective registrational study. Complaints sent to the 112 head physician offices by petitions and to SABIM (Ministry of Health Communication Centre) and CIMER (Republic of Türkiye Presidency's Communication Centre) online regarding the late arrival of ambulances in Ankara Province between 1 January 2021 and 31 December 2023 were reviewed. The data analysis was conducted using IBM SPSS 27.0 (Armonk, NY, USA: IBM Corp.).

RESULTS: The study included 161 complaints sent within three years. Of the complaints, 54.3% were made by males. The highest number of complaints was received in the summer months and the lowest number was in November. The highest number of complaints was made on Fridays. In 2022, the command reaction times were shorter than in the other years. Reaction and case arrival times in off-site cases were longer compared to those for in-site cases.

CONCLUSIONS: In this study, significant data were obtained about the active and effective use of 112 emergency ambulance services. Schedules should be drawn up taking into consid-eration the weekends and times when the number of patients is greater. Strategic arrangements

can be made to utilize resources by reviewing previous data and complaints about ambulance systems. Such evaluations can be important sources for improving emergency healthcare services. Conducting these assessments and tasks regularly will inform future improvements such as reduced case transport times, reduced command reaction times and better pre-hospital care.

KEYWORDS: ambulance service; complaint; delay; reaction time; emergency healthcare

INTRODUCTION

Pre-hospital healthcare services play a significant role in public health. Ambulances are one of the cornerstones of pre-hospital care. The 112-ambulance service used both for in-site cases and patient transfers, was created to help patients and injured individuals access healthcare services as fast as possible [1].

Complaints received for a particular service play an important role in the development of that service. an important branch of pre-hospital health services is the 112-ambulance service. 112 ambulance service is the system that the public in Turkey uses to receive health care in any emergency. It serves a large number of ambulances and stations throughout the country. When the literature is examined, the number of studies examining the complaints made to ambulance services in Turkey is limited. This study aims to contribute to this missing part of the literature and to improve emergency health services [2].

In an emergency, reaction and response times are vital. Studies have shown that these times are closely related to mortality and morbidity rates [3, 4]. Speed and efficiency in emergencies are two important factors that affect the survival of patients. Moreover, ambulances, positioned at the centre of such services, enable the fastest and most suitable intervention for individuals who are experiencing health issues such as accidents, diseases, or injuries. They play a critical part not only in the transfer of patients but also in the first response at the scene.

The arrival times of ambulances to the scene are a significant health quality indicator in terms of patient health and the public's trust in the system. Maintaining the quality of the provided healthcare services is only possible through feedback and supervision. Complaints and feedback sent by the public, who receive healthcare services in the first place, are significant resources in enhancing the overall quality of the services. In the present study, the complaints made through petitions and online feedback systems for the Ankara Provincial Ambulance services over three years were evaluated.

MATERIAL AND METHODS

This was a retrospective registrational study. Complaints sent to the 112 head physician offices by petitions and to SABIM (Ministry of Health Communication Centre) and CIMER (Republic of Türkiye Presidency's Communication Centre) online regarding the late arrival of ambulances in Ankara Province between 1 January 2021 and 31 December 2023 were reviewed. The permission was obtained from the relevant institution for the study. Ethical approval was granted by the Scientific and Ethics Evaluation Committee for Medical Research No. 1 with TABED-1-24-284 number on 22.05.2024 at Ankara Bilkent City Hospital. The study included 161 complaints about the late arrival of ambulances on the specified dates. Due to the structure of the emergency healthcare services, patients of all ages

and groups were included in the study. Groundless complaints and those with missing research parameters were excluded from the study. The data analysis was conducted with IBM SPSS 27.0 (Armonk, NY, USA: IBM Corp.). In addition to descriptive statistical methods (frequency, percentage, mean, standard deviation, median, interquartile range), the chi-squared test was used to compare quantitative data. The fit of the data to the normal distribution was evaluated through methods such as the Kolmogorov–Smirnov test, skewness and kurtosis, and graphical methods (histogram, Q-Q plot, stem and leaf, boxplot). Mann–Whitney U and Kruskal–Wallis tests were used for the comparisons between the quantitative data groups that do not have a normal distribution. Post-hoc Bonferroni correction was used in instances where the difference was found in multiple comparisons. The statistical significance level was set at $p = 0.05$.

RESULTS

This study included a total of 161 cases in which 112 emergency ambulance services were used over three years and a complaint was filed afterwards. The mean age was 48.4 ± 21.2. Furthermore, 36.6% of the complaints (n: 59) were received in 2021, 31.7% (n: 51) in 2022, and 31.7% (n: 51) in 2023. Regarding the days of the week, the highest number of complaints was made on Fridays (n: 37). Further, 85.7% of the complaints (n: 138) were on weekdays and 14.3% (n: 23) on weekends. While 57.8% of the patients attended (n: 93) were off-site, 42.2% (n: 68) were in-site. Looking at the reasons for calls, 81.4% (n: 131) were medical and 18.6% (n: 30) were trauma-related calls. On the other hand, the cases were finalized as transfer to hospital 89.4% (n: 144), transfer rejection 7.5% (n: 12), on-site intervention 1.9% (n: 3), and 3.1% (n: 2) death when the patient was left at the scene. Considering the diagnosis codes, the highest number of calls in specific diagnoses were trauma-related (18%, n: 29) (Tab. 1).

Command, station reaction times, and scene arrival times are provided in Table 2.

In the comparisons made based on years, a significant difference ($p < 0.05$) was found between years in terms of Command Reaction Time and Arrival Time-1 values, and in two instances where differences were found, the reaction times in 2022 were shorter. No significant difference was found between years in terms of other variables ($p > 0.05$). In the comparisons made based on seasons, no significant difference was found in terms of all times ($p > 0.05$). In the comparisons made based on Weekday/Weekend, a significant difference ($p < 0.05$) was found between years in terms of Command Reaction Time and Arrival Time-1 values, and in two instances where differences were found, the reaction times on weekends were shorter. No significant difference was found in terms of other variables ($p > 0.05$). In the comparisons made based on the hour range, no significant difference ($p > 0.05$) was found in terms of hour ranges in terms of all times. In the comparisons made based on work status, a y significant difference ($p < 0.05$) was found between the work status in terms of Arrival Time-

2 values, and the time outside the working hours was shorter. No significant difference was found in terms of other variables ($p > 0.05$). In the comparisons made based on sex, no significant difference ($p > 0.05$) was found between the sexes in terms of all variables. In the comparisons made based on age groups, no significant difference ($p > 0.05$) was found between age groups in terms of all variables. In the comparisons made based on regional status, a significant difference ($p < 0.05$) was found between regional status in terms of Command Reaction Time and Arrival Time-1 and -2 values, and in three instances where differences were found, off-site times were longer. No significant difference was found in terms of other variables ($p > 0.05$). In the comparisons made based on the reason for calls, a significant difference ($p < 0.05$) was found between the reasons for calls in terms of Command and Station Reaction Times, and it was found that in reaction time trauma-related calls and in station reaction time medical calls were longer. No significant difference was found in terms of other variables ($p > 0.05$). In the comparisons made based on finalization, no significant difference ($p > 0.05$) was found between the finalization in terms of all times. In the comparisons made based on triage, no significant difference ($p > 0.05$) was found between triages in terms of all times. In the comparisons made based on the Transferred Hospital type, no significant difference ($p > 0.05$) was found between the transferred hospital types in terms of diagnoses (Tab. 3).

DISCUSSION

An important part of the pre-hospital healthcare services is the 112 ambulance service. Reaching patients and reaction times are closely related to the mortality and morbidity of patients [3]. Studies have shown a correlation between the time patients spend in an ambulance and their mortality rates [4]. Therefore, it is essential that previous cases are evaluated while arranging ambulance services and plans are made in accordance with these evaluations so that resources are utilized effectively.

Alarilla et al. [5], in 2022, stated that people in England are waiting for an ambulance longer than ever, and revealed the target response time for the most critical calls was 7 min, the patients waited an average of 8.5 minutes in 2021/22, and this number was almost one fifth longer than they would have waited in 2018/19 . Moreover, the waiting period for less urgent cases where ambulance response is required increased more than double, reaching an average of 3 h. The present study, however, showed that, unlike the literature, command reaction times in 2022 were shorter than those in 2021 and 2023 ($p < 0.03$). The reason behind this could be increasing ambulance and call centre services. However, due to increased demand, the waiting duration for ambulances is increasing both in Türkiye and in the rest of the world.

Cantwell et al. [6], who discussed the time distribution of emergency calls, found the command reaction times to be longer on weekends compared to on weekdays. They stated that emergency calls displayed a bimodal distribution with the highest numbers of calls at 10:00 a.m. and 07:00 p.m. in the daytime. They revealed that the highest number of cases was on Fridays and the lowest on Tuesdays and Wednesdays. The distribution on Fridays, Saturdays, and Sundays was significantly different from that on the rest of the days ($p < 0.001$). They found that the trauma cases were highest on Friday and Saturday at midnight [6]. Al-Thani et al. [7], on the other hand, showed similar results to the present study, namely a shorter reaction time of call command reaction on weekends. Most of the cases occurred on weekdays. The present study showed that the call durations were significantly shorter on weekends than on weekdays. These differences might have occurred due to accessible and increased emergency healthcare services on weekends in Türkiye. In addition, the traffic density on weekends in cities was less dense compared to that on weekdays, which might have caused a shorter patient arrival time. Zang et al. [8] also found less traffic density on weekends than on weekdays. This study also supports the authors' opinion on the matter. The authors think that planning the emergency call services by reviewing these demands and distributions can help improve durations.

Al-Thani et al. [7], in their study in which they reviewed emergency calls, found that the time spent at the scene and the total pre-hospital time were especially higher in rural areas. They only studied patients with trauma-related calls and found that the mean response time, the time spent at the scene, and the total pre-hospital time were 6, 21, and 72 min, respectively. Similarly, the present study found the in-site command reaction time and arrival time to be significantly low.

Ibsen et al. [9], who studied the reasons for 112 calls, found that the most frequent five reasons for calls were chest pain, unknown issues, accidents, possible stroke, and shortness of breath. Lo et al. [10], who reviewed classified (valid) ambulance calls, stated that traumatic injuries and general medical issues made up a large portion of the calls. Traffic accident-related trauma is the primary reason for ambulance service calls. The second and third reasons are injury or bleeding and syncope with loss of consciousness, respectively [10]. Similar results to the literature were found as well. Although the number of medical calls was high, the command reaction time and arrival time in trauma-related calls were significantly shorter than in medical calls. Stojek et al. [11], who discussed trauma triage in the pre-hospital process, stated that, based on the severity of the injury, triage can be challenging in the pre-hospital care for patients who have been seriously injured. Poorly defined triage algorithms can lead to the trauma team intervening unnecessarily (over-triage), causing ineffective consumption of financial and human resources. A pre-hospital triage algorithm must be able to reliably iden-

tify patients who have experienced bleeding or severe brain injuries. Trauma is still one of the most frequent reasons for mortality across the world. Pre-hospital bleeding control and early intervention are crucial parts of providing care [11].

Considering the triage codes of the collected complaints, the highest number of red codes was observed in trauma patients. Additionally, the highest number of complaints about late arrival of the ambulance was once again seen in patients diagnosed with trauma. The authors think that such results were obtained because trauma cases are unexpected, can affect all age groups, and have a possible poor outcome. Mohta et al. [12] stated in their research that in order to finalize the treatment process positively, it is necessary to provide psychological care in addition to physical treatment for patients who are treated in hospitals due to trauma.

CONCLUSIONS

In the present study, important data were obtained about the active and effective use of 112 ambulance services. Schedules should be drawn up taking into consideration the weekends and times when the number of patients is higher. Strategic arrangements can be made to utilize resources by reviewing previous data and complaints about ambulance systems. Such evaluations can be important sources for improving emergency healthcare services. Conducting these evaluations and tasks regularly will shed light on future developments.

Article information and declarations

Data availability statement

Data regarding our study can be accessed from Ankara Provincial Health Directorate, Emergency Health Services, Türkiye.

Ethics statement

Ethical approval was granted by the Scientific and Ethics Evaluation Committee for Medical Research No. 1 with TABED-1-24-284 number on 22.05.2024 at Ankara Bilkent City Hospital.

Author contributions

Study conception and design: Ramiz Yazıcı; data collection: Ramiz Yazıcı, Murat Genç; analysis and interpretation of results: Ramiz Yazıcı, Murat Genç; draft manuscript preparation: Murat Genç. All authors reviewed the results and approved the final version of the manuscript.

Funding

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Acknowledgements

Not applicable.

Conflict of interest

No conflict of interest to declare.

Supplementary material

None.

REFERENCES

1. Yilmaz, A. İ. (2014). 112 Acil Sağlık hizmetleri sunumunu etkileyen faktörler (Konya örneği) (Master's thesis, Sosyal Bilimler Enstitüsü). 2014.
2. ASLAN Ş. TÜRKİYEDEKİ HASTANE ÖNCESİ ACİL SAĞLIK HİZMETLERİ. International Journal of Social Humanities Sciences Research (JSHSR). 2018; 5(31): 4995–5002, doi: 10.26450/jshsr.856.
3. Byrne JP, Mann NC, Dai M, et al. Association Between Emergency Medical Service Response Time and Motor Vehicle Crash Mortality in the United States. JAMA Surg. 2019; 154(4): 286–293, doi: 10.1001/jamasurg.2018.5097, indexed in Pubmed: 30725080.
4. Nicholl J, West J, Goodacre S, et al. The relationship between distance to hospital and patient mortality in emergencies: an observational study. Emerg Med J. 2007; 24(9): 665–668, doi: 10.1136/emj.2007.047654, indexed in Pubmed: 17711952.
5. Alarilla, A., Stafford, M., Coughlan, E., Keith, J., & Tallack, C. Why have ambulance waiting times been getting worse. 2022: Health.
6. Cantwell K, Morgans A, Smith K, et al. Time of Day and Day of Week Trends in EMS Demand. Prehosp Emerg Care. 2015; 19(3): 425–431, doi: 10.3109/10903127.2014.995843, indexed in Pubmed: 25664379.
7. Al-Thani H, Mekkodathil A, Hertelendy AJ, et al. Emergency Medical Services (EMS) Transportation of Trauma Patients by Geographic Locations and In-Hospital Outcomes: Experience from Qatar. Int J Environ Res Public Health. 2021; 18(8), doi: 10.3390/ijerph18084016, indexed in Pubmed: 33921199.
8. Zang J, Jiao P, Liu S, et al. Identifying Traffic Congestion Patterns of Urban Road Network Based on Traffic Performance Index. Sustainability. 2023; 15(2): 948, doi: 10.3390/su15020948.
9. Ibsen S, Lindskou TA, Nickel CH, et al. Which symptoms pose the highest risk in patients calling for an ambulance? A population-based cohort study from Denmark. Scand J Trauma Resusc Emerg Med. 2021; 29(1): 59, doi: 10.1186/s13049-021-00874-6, indexed in Pubmed: 33879211.

10. Man Lo S, Min Yu Yi, Larry Lee LY, et al. Overview of the shenzhen emergency medical service call pattern. World J Emerg Med. 2012; 3(4): 251–256, doi: 10.5847/wjem.j.issn.1920-8642.2012.04.002, indexed in Pubmed: 25215072.

11. Stojek L, Bieler D, Neubert A, et al. The potential of point-of-care diagnostics to optimise prehospital trauma triage: a systematic review of literature. Eur J Trauma Emerg Surg. 2023; 49(4): 1727–1739, doi: 10.1007/s00068-023-02226-8, indexed in Pubmed: 36703080.

12. Jiang T, Webster JL, Robinson A, et al. Emotional responses to unintentional and intentional traumatic injuries among urban black men: A qualitative study. Injury. 2018; 49(5): 983–989, doi: 10.1016/j.injury.2017.12.002, indexed in Pubmed: 29248186.

Table 1. Characteristics of participants

		n	%
Year	2021	59	36.6
	2022	51	31.7
	2023	51	31.7
Seasons	Spring	38	23.6
	Summer	53	32.9
	Fall	39	24.2
	Winter	31	19.3
Months	January	10	6.2
	February	11	6.8
	March	12	7.5
	April	9	5.6
	May	17	10.6
	June	14	8.7
	July	14	8.7
	August	25	15.5
	September	20	12.4
	October	11	6.8
	November	8	5
	December	10	6.2
Day of the week	Monday	26	16.1
	Tuesday	19	11.8
	Wednesday	28	17.4
	Thursday	28	17.4
	Friday	37	23
	Saturday	14	8.7
	Sunday	9	5.6
Weekday/Weekend	Weekdays	138	85.7
	Weekends	23	14.3
Hour range	12 a.m.–07:59 a.m.	31	19.3
	08:00 a.m.– 03:59 p.m.	58	36
	04:00 p.m.– 11:59 p.m.	72	44.7
Work	Working Hours	70	43.5
	Outside working hours	91	56.5

Sex	Female	75	46.6
	Male	86	53.4
Age (year) [Median (IQR)]			52.0 (30.0 – 65.0)
	< 18 Age	13	8.1
	≥ 18 Age	148	91.9

IQR — interquartile range

Table 1. Characteristics of participants (continued)

Region	Off-site	93	57.8
	In-site	68	42.2
Reason for Call	Medical	131	81.4
	Trauma	30	18.6
Finalization	Transfer — to hospital	144	89.4
	Training and Research Hospitals	*79*	*54.9*
	Public Hospitals	*29*	*20.1*
	Universities	*21*	*14.6*
	Private Institutions	*15*	*10.4*
	Transfer — rejection	12	7.5
	On-site intervention	3	1.9
	Death — left at the site	2	1.2
Triage	Green code	51	31.7
	Yellow code	68	42.2
	Red code	37	23
	Black code	5	3.1
Diagnosis	Trauma	29	18
	Neurological complaints	25	15.5
	Psychiatric complaints	19	11.8
	Arrest	17	10.6
	Infectious diseases	14	8.7
	Cardiac complaints	13	8.1
	Gastrointestinal system	12	7.5
	Other system complaints	32	19.9

Table 2. Command, station reaction and scene arrival times	
	Median (IQR)
Command reaction time (s)	246.0 (149.0–440.0)
Station reaction time (s)	42.0 (22.5–57.0)
Arrival Time – 1 (s) (Scene Arrival —Call)	675.0 (495.5–1.018.0)
Arrival Time – 2 (s) (Scene Arrival —Case)	363.0 (276.5–560.0)

Table 3. Comparison of Reaction and Arrival Times					
		Command Reaction Time (s)	**Station Reaction Time (s)**	**Arrival Time-1 (s) (Scene Arrival — Call)**	**Arrival Time-2 (s) (Scene Arrival — Case)**
Year	2021 (n = 59)	314 (173.0–623.0)	41 (21.0–56.0)	726 (526.0–1.381.0)	420 (314.0–586.0)
	2022 (n = 51)	175 (118.0–332.0)	34 (20.0–56.0)	550 (446.0–751.0)	331 (290.0–543.0)
	2023 (n = 51)	255 (177.0–533.0)	45 (27.0–58.0)	700 (527.0–941.0)	379 (242.0–565.0)
	p*	**0.003**	0.378	**0.012**	0.348
	Difference	2 and 1–3	–	2 and 1–3	–
Seasons	Spring (n = 38)	269 (174.5–536.0)	35.5 (25.8–57.0)	811 (544.3–1.180.3)	375 (260.8–598.8)
	Summer (n = 53)	228 (127.0–385.0)	42 (24.0–59.0)	589 (441.5–972.0)	356 (266.0–542.5)
	Fall (n = 39)	293 (148.0–516.0)	45 (21.0–55.0)	695 (502.0–1.368.0)	420 (290.0–610.0)
	Winter (n =	222	45	638	350

	31)	(150.0–384.0)	(17.0–56.0)	(456.0–917.0)	(285.0–495.0)
	p*	0.434	0.869	0.198	0.552
Week-day /Week-end	Weekdays (n = 138)	264 (155.3–516.3)	41 (21.8–56.3)	695 (508.0–1.080.0)	379.5 (291.5–567.5)
	Weekends (n = 23)	192 (110.0–281.0)	50 (33.0–58.0)	543 (437.0–720.0)	350 (225.0–394.0)
	p**	**0.048**	0.202	**0.019**	0.107
Hour Range	12:00 a.m.–07:59 a.m. (n = 31)	242 (156.0–369.0)	42 (17.0–56.0)	599 (491.0–901.0)	351 (229.0–572.0)
	08:00 a.m.–03:59 p.m. (n = 58)	278 (174.5–542.5)	36 (25.3–58.0)	745 (530.8–1.202.5)	454.5 (298.3–658.8)
	04:00 p.m.–11:59 p.m. (n = 72)	218 (124.5–500.8)	45.5 (22.5–56.8)	623.5 (458.0–1.032.0)	355 (273.8–489.0)
	p*	0.39	0.84	0.086	0.084
Work	Working Hours (n = 70)	256.5 (165.8–515.3)	40.5 (21.8–58.5)	705 (499.8–1.095.5)	422 (299.8–601.0)
	Outside Work Hours (n = 91)	242 (139.0–419.0)	43 (24.0–56.0)	638 (491.0–1.003.0)	349 (250.0–496.0)
	p**	0.656	0.814	0.248	**0.027**
*Kruskal–Wallis Test [Median (IQR)] **Mann–Whitney U Test [Median (IQR)]					

Table 3. Comparison of reaction and arrival times (Continued)						
Sex	Female (n = 75)		259 (156.0–517.0)	42 (24.0–57.0)	710 (501.0–1.169.0)	385 (271.0–576.0)
	Male (n = 86)		237.5 (145.3–404.0)	41 (21.8–56.3)	636.5 (492.5–932.0)	360 (279.3–546.0)
		p**	0.463	0.988	0.212	0.36
Age Group	< 18 Age (n = 13)		160 (105.5–524.0)	46 (28.5–57.5)	654 (440.0–968.5)	362 (291.5–706.5)
	≥ 18 Age (n = 148)		256 (153.8–433.3)	41 (22.0–56.8)	678.5 (501.3–1.037.0)	364 (270.3–553.0)
		p**	0.263	0.479	0.495	0.763
Region	Off-site (n = 93)		279 (175.5–549.0)	41 (24.0–58.0)	742 (544.0–1.194.5)	420 (305.5–613.0)
	In-site (n = 68)		221.5 (122.5–386.3)	42 (18.0–55.8)	560.5 (428.3–796.8)	322 (235.3–432.0)
		p**	**0.046**	0.462	**0.001**	**0.001**
Reason for Call	Medical (n = 131)		234 (140.0–404.0)	45 (26.0–58.0)	654 (491.0–1.003.0)	363 (285.0–542.0)
	Trauma (n = 30)		376.5 (175.8–827.8)	27.5 (17.0–47.3)	732.5 (524.3–1.427.3)	364.5 (205.0–584.5)
		p**	**0.036**	**0.014**	0.165	0.965

Finaliza-tion	Transfer — to hospital (n = 144)	244 (148.5–515.8)	41 (22.0–57.0)	694 (491.5–1.066.3)	368 (270.3–575.0)
	Transfer — Rejection (n = 12)	283 (175.8–397.5)	47.5 (24.3–54.3)	622 (470.5–679.8)	333 (248.8–365.0)
	On-site Intervention (n = 3)	143 (108.0–0.0)	60 (32.0–0.0)	638 (588.0–0.0)	480 (452.0–0.0)
	Death — Left at the site (n = 2)	260.5 (228.0–0.0)	30.5 (1.0–0.0)	651 (589.0–0.0)	390.5 (361.0–0.0)
	p*	0.655	0.568	0.628	0.393
Triage	Green Code (n = 51)	227 (143.0–455.0)	42 (25.0–57.0)	609 (464.0–1.107.0)	350 (261.0–495.0)
	Yellow Code (n = 68)	237 (150.8–516.8)	42 (24.8–56.0)	688 (494.3–1.037.0)	387.5 (286.3–541.5)
	Red Code (n = 37)	266 (120.0–402.5)	33 (14.0–57.0)	695 (479.0–926.0)	362 (261.5–604.0)
	Black Code (n = 5)	293 (253.5–461.0)	60 (17.5–77.5)	941 (651.0–1.239.5)	572 (390.5–823.5)
	p*	0.795	0.567	0.63	0.256

*Kruskal–Wallis Test [Median (IQR)] ** Mann–Whitney U Test [Median (IQR)]