Cleveland EMS 2020 Response Statistics

Report produced by Timothy Sommerfelt for CARE 1975

All statistics derived from public records obtained by CARE 1975

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Service Overview:

Cleveland EMS (CEMS) is the primary provider of 911 medical treatment and transport for the City of Cleveland, Ohio. During 2019, Cleveland EMS staffed 25 ambulances during daytime hours and 21 at night. Occasionally, when extra personnel were available, 1-2 additional ambulances were staffed.

CEMS was assisted by the Cleveland Fire Department (CFD), which staffed 31 Basic Life Support (BLS) units and 5 ALS units. CFD units provided patient care prior to the arrival of CEMS and accompanied CEMS to the hospital if the patient was in critical condition. CEMS was also assisted by the Cleveland Clinic Foundation (CCF) Mobile Stroke Unit, which is a private ambulance designed to provide specialized treatment to stroke patients.

CEMS ALS Ambulances 2020	25 day / 21 night
CFD ALS Engine	5
CFD BLS Engine	18
CFD BLS Ladder	11
CFD BLS Rescue	2
Total CFD	36
CCF Mobile Stroke	1

General Statistics:

Total Emergency calls for 2020	104,845
No onscene time	4,880
Calls with a recorded on-scene time	99,965

Goals: Historically, Cleveland EMS attempts to meet the National Fire Protection Association (NFPA) standard 1710, which calls for a BLS resource to arrive within 6 minutes from receipt of call and an ALS resource to arrive within 10 minutes from receipt of call.

Call Prioritization: Cleveland EMS utilizes a priority dispatch system. Dispatchers assign each call a letter prefix from Alpha-Echo to grade the severity of each call.

Alpha	BLS minor injury/illness
Bravo	BLS patient cannot walk
Charlie	ALS resources needed
Delta	ALS life-threatening emergency
Echo	ALS Inadequate breathing
STBY/BOX	Assist CFD at a fire or CPD at a standoff
Other	Non-common dispatch designation

In-service Disposition: Upon completion of the call, CEMS medics assign an in-service disposition to each call. This uses the same grading scale rating calls from Alpha-Echo, but also incorporates when a patient refuses to go to the hospital and situations where the unit cannot locate a patient.

TRA	Transported Alpha- BLS minor injury/illness
TRB	Transported Bravo- BLS patient cannot walk
TRC	Transported Charlie- ALS resources needed
TRDM	Transported Delta Medical- ALS life-threatening medical
NOTS1	Transported Critical adult trauma
NOTS2	Transported Serious adult trauma
NOTS3	Transported Minor adult trauma
TRDT	Transported Pediatric trauma
TRET	Transported Traumatic Cardiac Arrest
TEM/TALS	Transported Echo Medical- Medical Cardiac Arrest
DOA/TREA	Dead On Arrival
REFUSAL	Patient refused transport
CCFMS	Patient transported by CCF mobile stroke unit
GOA/UTL	Patient is Gone on Arrival or Unable to be Located.
Other	CFD, CPD, or another agency handled.

Response Times and In-service Disposition by Dispatch Priority

Note that all response times are measured from the time the call is received until the time the EMS unit arrives at the scene. This is in accordance with national best practices, and best represents the amount of time it takes for help to arrive. In their 2020 report, Cleveland Fire only measured from the time a call was dispatched, until a unit arrived on-scene, resulting in artificially shorter response times.

Overall 2020 statistics					TRA	19,048	19%
Calls with recorded onscene time	**99,965**				TRB	19,097	19%
Average response time	**10:29**				TRC	21,005	21%
Median response time	**9:14**				TRDM	4,519	5%
under 20 minutes	96,163	96%			NOTS1	794	0.8%
under 15 minutes	88,965	89%			NOTS2	2,448	2%
under 10 minutes	58,406	58%			NOTS3	3,960	4%
under 8 minutes	34,723	35%			TRDT	165	0.2%
under 6 minutes	22,597	23%			TRET	84	0.1%
					TEM/TALS	529	0.5%
					Total Transports	**71,649**	**72%**
					DOA/TREA	1,049	1%
					REFUSAL	11,904	12%
					CCFMS	178	0.2%
					GOA/UTL	3,830	4%
					Other	11,355	11%

Calls coded as ECHO				TRA	342	7%
Calls with recorded onscene time	4,572			TRB	452	10%
Average response time	8:48			TRC	1,362	30%
Median response time	8:13			TRDM	542	12%
under 20 minutes	4,541	99%		NOTS1	9	0.2%
under 15 minutes	4,362	95%		NOTS2	14	0.3%
under 10 minutes	3,197	70%		NOTS3	9	0.2%
under 8 minutes	2,142	47%		TRDT	4	0%
under 6 minutes	857	19%		TRET	4	0%
				TEM/TALS	315	7%
				Total Transports	**3,053**	**67%**
				DOA/TREA	833	18%
				REFUSAL	359	8%
				GOA/UTL	78	2%
				Other	249	5%

Calls coded as Delta				TRA	3,529	11%
Calls with recorded onscene time	30,689			TRB	4,820	16%
Average response time	9:21			TRC	8,572	28%
Median response time	08:38			TRDM	2,381	8%
under 20 minutes	30,200	98%		NOTS1	658	2%
under 15 minutes	28,533	93%		NOTS2	1,208	4%
under 10 minutes	20,175	66%		NOTS3	1,097	4%
under 8 minutes	12,632	41%		TRDT	105	0.3%
under 6 minutes	4,633	15%		TRET	76	0.2%
				TEM/TALS	192	0.6%
				Total Transports	**22,638**	**74%**
				DOA/TREA	164	0.5%
				REFUSAL	3,341	11%
				GOA/UTL	1,433	5%
				Other	3,113	10%

Delta + Echo combined				TRA	3,871	11%
Calls with recorded onscene time	**35,260**			TRB	5,272	15%
Average response time	**9:17**			TRC	9,934	28%
Median response time	**8:35**			TRDM	2,923	8%
under 20 minutes	34,740	99%		NOTS1	667	2%
under 15 minutes	32,894	93%		NOTS2	1,222	3%
under 10 minutes	23,371	66%		NOTS3	1,106	3%
under 8 minutes	14,773	42%		TRDT	109	0.3%
under 6 minutes	5,489	16%		TRET	80	0.2%
				TEM/TALS	506	1%
				Total Transports		
				DOA/TREA	998	3%
				REFUSAL	3,700	10%
				GOA/UTL	1,511	4%
				Other	3,361	10%

Calls coded as Charlie				TRA	5,143	22%
Calls with recorded onscene time	**22,861**			TRB	5,239	23%
Average response time	**10:33**			TRC	7,115	31%
Median response time	**9:42**			TRDM	1,073	5%
under 20 minutes	22,169	97%		NOTS1	9	0%
under 15 minutes	20,265	89%		NOTS2	69	0.3%
under 10 minutes	12,292	54%		NOTS3	68	0.3%
under 8 minutes	6,584	28%		TRDT	10	0%
under 6 minutes	1,926	8%		TRET	0	0%
				TEM/TALS	17	0%
				Total Transports	**18,743**	**82%**
				DOA/TREA	1	0%
				REFUSAL	1,953	9%
				GOA/UTL	564	2%
				Other	1,600	7%

Calls coded as Bravo				TRA	3,182	16%
Calls with recorded onscene time	**19,534**			TRB	2,957	15%
Average response time	**10:37**			TRC	1,132	6%
Median response time	**9:32**			TRDM	205	1%
under 20 minutes	18,738	96%		NOTS1	89	0.5%
under 15 minutes	17,101	88%		NOTS2	882	5%
under 10 minutes	10,772	55%		NOTS3	2,058	11%
under 8 minutes	6,136	31%		TRDT	30	0.2%
under 6 minutes	2,107	11%		TRET	0	0%
				TEM/TALS	2	0%
				Total Transports	**10,537**	**54%**
				DOA/TREA	43	0.2%
				REFUSAL	3,725	19%
				GOA/UTL	1,392	7%
				Other	3,837	20%

Calls coded as Alpha				TRA	6,724	34%
Calls with recorded onscene time	**19,992**			TRB	5,533	28%
Average response time	**12:53**			TRC	2,726	14%
Median response time	**10:11**			TRDM	305	2%
under 20 minutes	18,139	91%		NOTS1	19	0%
under 15 minutes	16,305	82%		NOTS2	239	1%
under 10 minutes	9,622	48%		NOTS3	666	3%
under 8 minutes	5,066	25%		TRDT	15	0%
under 6 minutes	1,445	7%		TRET	0	0%
				TEM/TALS	4	0%
				Total Transports	**16,231**	**81%**
				DOA/TREA	1	0%
				REFUSAL	2,339	12%
				GOA/UTL	336	2%
				Other	1,085	5%

Coded as StandbyF, Box, or Still				TRA	18	1%
Calls with recorded onscene time	**1,709**			TRB	23	1%
Average response time	**07:31**			TRC	27	2%
Median response time	**06:59**			TRDM	4	0.2%
under 20 minutes	1,698	99%		NOTS1	2	0.1%
under 15 minutes	1,654	97%		NOTS2	14	0.8%
under 10 minutes	1,403	82%		NOTS3	14	0.8%
under 8 minutes	1,104	65%		TRDT	1	0%
under 6 minutes	593	35%		TRET	3	0.2%
				TEM/TALS	0	0%
				Total Transports	**106**	**6%**
				DOA/TREA	3	0.2%
				REFUSAL	47	3%
				GOA/UTL	8	0.05%
				Other	1,545	90%

Other/non-common dispatch prefix				TRA	110	18%
Calls with recorded onscene time	**608**			TRB	73	12%
Average response time	**03:08**			TRC	71	12%
Median response time	**00:42**			TRDM	9	1%
under 20 minutes	607	99%		NOTS1	8	1%
under 15 minutes	599	99%		NOTS2	22	4%
under 10 minutes	550	90%		NOTS3	48	8%
under 8 minutes	522	86%		TRDT	0	0%
under 6 minutes	466	77%		TRET	0	0%
				TEM/TALS	0	0%
				Total Transports	**341**	**56%**
				DOA/TREA	3	0.5%
				REFUSAL	140	23%
				GOA/UTL	19	3%
				Other	105	17%

Day Shift (25 ambulances) **vs Night Shift** (21 ambulances)

Calls received 07:00-18:59	**55,828**	**56%**	**Calls received 19:00-06:59**	**44,137**	**44%**
Average response time	**10:28**			**10:31**	
Median response time	**9:15**			**9:18**	
under 20 minutes	53,703	96%		42,389	96%
under 15 minutes	49,661	89%		39,158	89%
under 10 minutes	32,559	58%		25,452	58%
under 8 minutes	19,154	34%		15,032	34%
under 6 minutes	6,715	12%		5,312	12%

Year-to-Year Comparison

Note that 2016 is not listed. In 2016 Cleveland hosted the Republican National Convention, the CAVS championship parade and the World Series. These events necessitated several weeks of atypical EMS responses that made for unreliable statistics.

Overall Response Times

Average Response Times by Dispatch Code
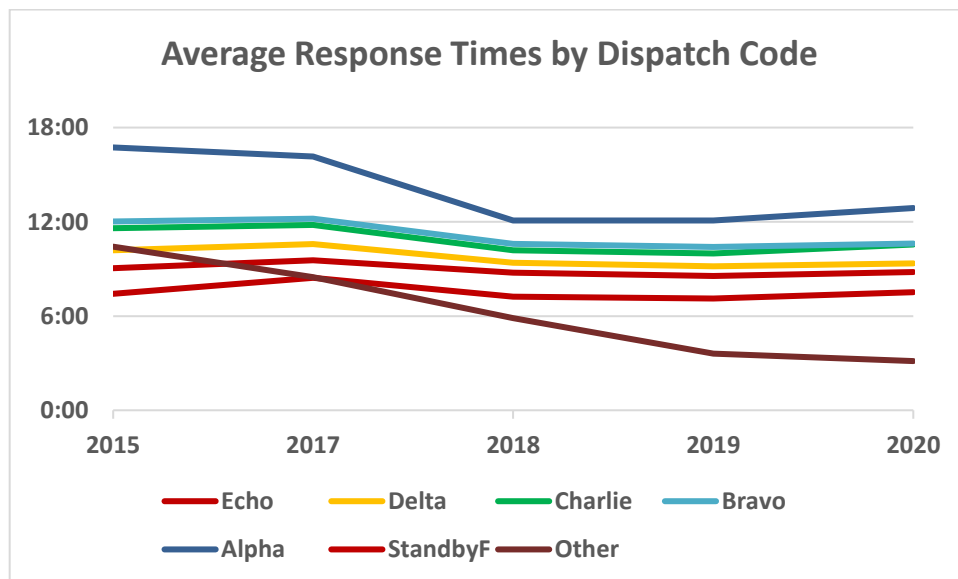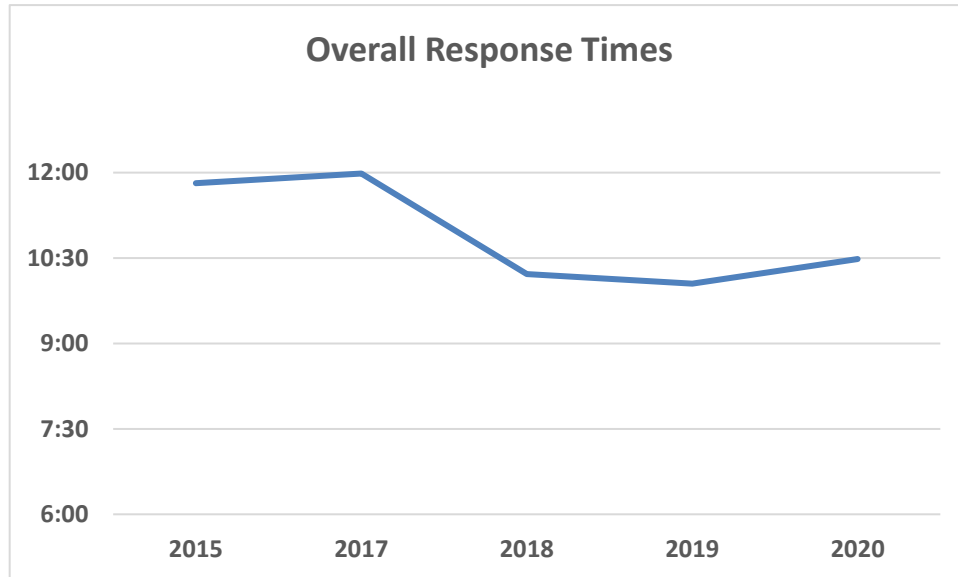
Average Response Times

	Overall	Echo	Delta	Charlie	Bravo	Alpha	StandbyF	Other
2015	11:49	9:03	10:11	11:36	12:01	16:44	7:25	10:25
2017	11:59	9:33	10:35	11:48	12:12	16:10	8:26	8:28
2018	10:13	8:46	9:24	10:11	10:36	12:05	7:14	5:52
2019	10:03	8:33	9:10	9:59	10:24	12:05	7:07	3:37
2020	10:29	8:48	09:21	10:33	10:37	12:53	7:31	3:08

Unit by Unit Comparison

Unit	2020 calls	average response time
M1	5,346	9:40
M2**	38	12:28
M3**	2	n/a
M4	5,120	9:58
M6	3,617	10:48
M7	5,584	9:55
M10	5,163	11:11
M11	4,334	11:20
M13*	2,174	10:40
M17	4,267	10:44
M20	4,233	10:13
M21*	2,074	9:44
M22	4,921	10:15
M23	4,565	10:19
M24	3,896	11:16
M26	4,710	11:08
M28*	1,730	10:54
M30	5,025	9:56
M31	3,965	10:53
M33	4,394	9:53
M36	4,902	10:23
M38*	1,712	11:19
M39	3,181	10:13
M40	3,635	11:24
M41	5,235	10:24
M42	3,398	10:42
M43	2,741	9:48
ALS/MOB units**	2	n/a

*Daytime only Unit **Units were not staffed for the entire year.

Methods and Limitations:

These statistics were compiled from a public records request filed by CARE 1975 for the actual call times for every single EMS run for the calendar year 2019 A Microsoft Excel spreadsheet was created, and the data was reviewed to remove events without a documented onscene time and calls that duplicated the same information. This is probably the reason that the run totals in this paper are different than those released in the City of Cleveland budget books and on the Cleveland EMS Twitter feed. Lastly, it appears that through a computer glitch when multiple ambulances respond to the same scene, as in the case of a traffic accident with multiple patients, only the response time of the first-arriving ambulance is recorded. As multi-unit calls represent a small amount of CEMS responses, however, this is unlikely to alter trends.