Cleveland EMS 2021 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 2021, the target staffing for Cleveland EMS was 25 Advanced Life Support (ALS) ambulances during daytime hours and 21 at night. Due to chronic understaffing combined with Covid cases among EMS providers, during later 2021 CEMS did not always meeting staffing goals.

CEMS was assisted by the Cleveland Fire Department (CFD), which staffed 31 Basic Life Support (BLS) units and 5 ALS non-transport 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 specializedtreatment 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

Note that during some shifts in later 2021 CEMS was not able to meet the target number of units due to staffing shortages.

General Statistics:

Total Emergency calls for 2021	109,305
No onscene time	5,611
Calls with a recorded on-scene time	103,694

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 2021 statistics				TRA	18,440	18%
Calls with recorded onscene time	**103,694**			TRB	19,194	19%
Average response time	**11:55**			TRC	22,631	22%
Median response time	**9:46**			TRDM	4,611	4%
under 20 minutes	96,224	93%		NOTS1	796	0.7%
under 15 minutes	86,302	83%		NOTS2	3,180	3%
under 10 minutes	54,197	52%		NOTS3	4,230	4%
under 8 minutes	31,896	31%		TRDT/PNOTS	397	0.4%
under 6 minutes	11,278	11%		TRET	81	0.01%
				TEM/TALS	570	0.5%
				Total Transports	**74,130**	**71%**
				DOA/TREA	1,170	1%
				REFUSAL	12,202	12%
				CCFMS	212	0.2%
				GOA/UTL	3,976	4%
				Other	12,003	12%

Calls coded as ECHO				TRA	491	9%
Calls with recorded onscene time	**5,625**	5%		TRB	675	12%
Average response time	**9:33**			TRC	1,772	32%
Median response time	**8:36**			TRDM	665	12%
under 20 minutes	5,479	97%		NOTS1	4	0.1%
under 15 minutes	5,095	91%		NOTS2	14	0.2%
under 10 minutes	3,644	65%		NOTS3	15	0.2%
under 8 minutes	2,422	43%		TRDT/PNOTS	5	0.1%
under 6 minutes	947	17%		TRET	4	0.1%
				TEM/TALS	310	6%
				Total Transports	**3,955**	**70%**
				DOA/TREA	878	16%
				REFUSAL	416	7%
				GOA/UTL	40	0.7%
				Other	336	6%

Calls coded as Delta				TRA	3,636	11%
Calls with recorded onscene time	31,641	31%		TRB	4,708	15%
Average response time	**10:14**			TRC	9,156	29%
Median response time	**9:07**			TRDM	2,232	7%
under 20 minutes	30,423	96%		NOTS1	637	2%
under 15 minutes	27,864	88%		NOTS2	1,510	5%
under 10 minutes	18,719	59%		NOTS3	1,118	4%
under 8 minutes	11,713	37%		TRDT	157	0.5%
under 6 minutes	4,325	14%		TRET	73	0.2%
				TEM/TALS	209	0.7%
				Total Transports	**23,436**	**74%**
				DOA/TREA	206	0.7%
				REFUSAL	3,318	10%
				GOA/UTL	1,459	5%
				Other	3,221	10%

Delta + Echo combined				TRA	4,127	11%
Calls with recorded onscene time	37,267	36%		TRB	5,383	14%
Average response time	10:03			TRC	10,928	29%
Median response time	9:02			TRDM	2,897	8%
under 20 minutes	35,903	96%		NOTS1	641	2%
under 15 minutes	32,961	88%		NOTS2	1,524	4%
under 10 minutes	22,364	60%		NOTS3	1,133	3%
under 8 minutes	14,136	38%		TRDT	162	0.4%
under 6 minutes	5,273	14%		TRET	77	0.2%
				TEM/TALS	519	1%
				Total Transports	27,391	73%
				DOA/TREA	1,084	3%
				REFUSAL	3,734	10%
				GOA/UTL	1,499	4%
				Other	3,558	10%

Calls coded as Charlie				TRA	5,372	22%
Calls with recorded onscene time	24,481	24%		TRB	5,450	22%
Average response time	11:38			TRC	7,590	31%
Median response time	10:07			TRDM	1,198	5%
under 20 minutes	22,865	93%		NOTS1	7	0%
under 15 minutes	20,263	92%		NOTS2	110	0.4%
under 10 minutes	11,915	49%		NOTS3	102	0.4%
under 8 minutes	6,475	26%		TRDT	14	0.1%
under 6 minutes	1,951	8%		TRET	1	0%
				TEM/TALS	34	0.1%
				Total Transports	19,878	81%
				DOA/TREA	7	0%
				REFUSAL	2,085	9%
				GOA/UTL	599	2%
				Other	1,912	8%

Calls coded as Bravo				TRA	3,012	15%
Calls with recorded onscene time	**20,526**	20%		TRB	2,908	14%
Average response time	**11:50**			TRC	1,223	6%
Median response time	**10:03**			TRDM	213	1%
under 20 minutes	19,001	93%		NOTS1	102	0.5%
under 15 minutes	16,829	82%		NOTS2	1,181	6%
under 10 minutes	10,155	49%		NOTS3	2,181	11%
under 8 minutes	5,729	28%		TRDT	168	0.8%
under 6 minutes	2,035	10%		TRET	1	0%
				TEM/TALS	12	0.1%
				Total Transports	**11,001**	**54%**
				DOA/TREA	68	0.3%
				REFUSAL	3,925	19%
				GOA/UTL	1,426	7%
				Other	4,106	20%

Calls coded as Alpha				TRA	5,828	30%
Calls with recorded onscene time	**19,318**	19%		TRB	5,370	28%
Average response time	**16:19**			TRC	2,806	15%
Median response time	**10:50**			TRDM	288	1%
under 20 minutes	16,390	85%		NOTS1	22	0.1%
under 15 minutes	14,263	74%		NOTS2	318	2%
under 10 minutes	8,165	42%		NOTS3	741	4%
under 8 minutes	4,343	22%		TRDT	47	0.2%
under 6 minutes	1,278	7%		TRET	1	0%
				TEM/TALS	4	0%
				Total Transports	**15,425**	**80%**
				DOA/TREA	5	0%
				REFUSAL	2,280	12%
				GOA/UTL	429	2%
				Other	1,179	6%

Coded as StandbyF, Box, or Still				TRA	22	1%
Calls with recorded onscene time	**1,567**	2%		TRB	24	1%
Average response time	**09:03**			TRC	27	1%
Median response time	**08:10**			TRDM	2	0.1%
under 20 minutes	1,538	98%		NOTS1	12	0.8%
under 15 minutes	1,493	95%		NOTS2	17	1%
under 10 minutes	1,106	71%		NOTS3	20	1%
under 8 minutes	747	48%		TRDT	3	0.1%
under 6 minutes	307	20%		TRET	1	0.1%
				TEM/TALS	0	0
				Total Transports	**128**	**8%**
				DOA/TREA	2	0.1%
				REFUSAL	44	3%
				GOA/UTL	2	0.1%
				Other	1,391	89%

Other/non-common dispatch prefix				TRA	79	15%
Calls with recorded onscene time	**535**	0.5%		TRB	59	11%
Average response time	**2:46**			TRC	57	11%
Median response time	**0:22**			TRDM	13	2%
under 20 minutes	527	99%		NOTS1	12	2%
under 15 minutes	522	98%		NOTS2	30	6%
under 10 minutes	492	92%		NOTS3	53	10%
under 8 minutes	466	87%		TRDT	3	0.6%
under 6 minutes	434	81%		TRET	1	0.2%
				TEM/TALS	1	0.2%
				Total Transports	**308**	**58%**
				DOA/TREA	4	0.7%
				REFUSAL	134	25%
				GOA/UTL	21	4%
				Other	69	13%

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

Calls received 07:00-18:59	**58,749**	**57%**	**Calls received 19:00-06:59**	**44,946**	**43%**
Average response time	**12:23**			**11:18**	
Median response time	**9:58**			**9:32**	
under 20 minutes	53,862	92%		42,363	94%
under 15 minutes	47,683	81%		38,620	86%
under 10 minutes	29,487	50%		24,711	55%
under 8 minutes	17,473	30%		14,424	32%
under 6 minutes	6,217	11%		5,062	11%

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.
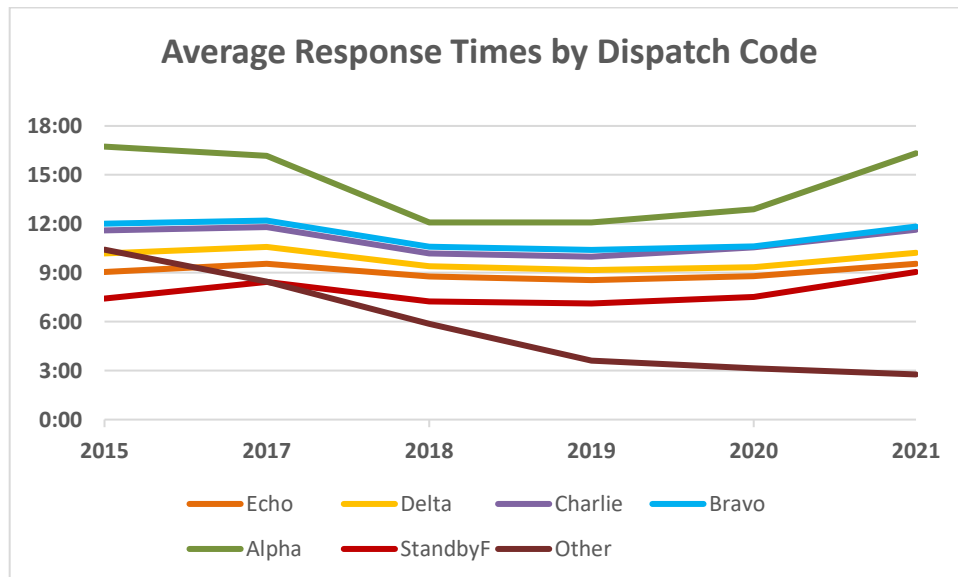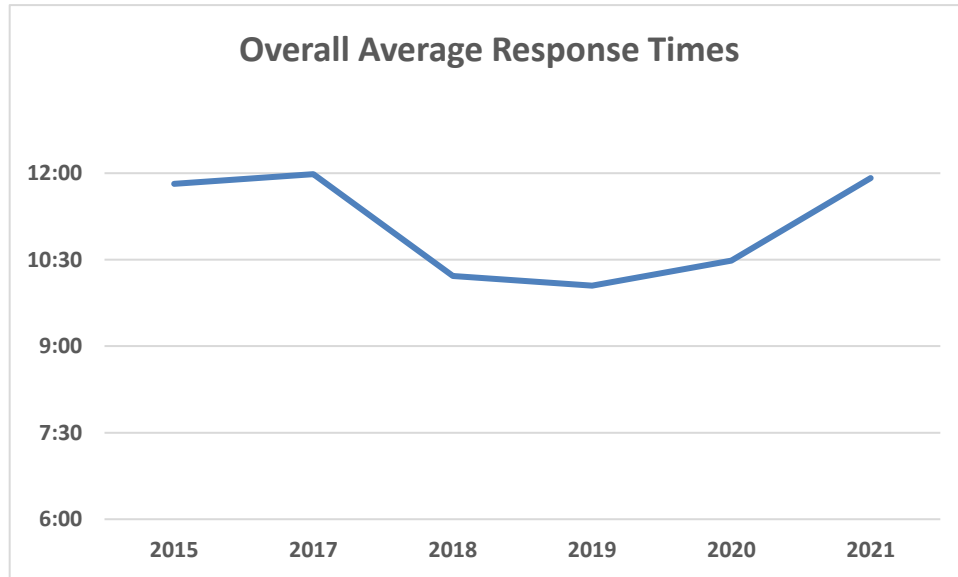
Average Response Times

	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	9:21	10:33	10:37	12:53	7:31	3:08
2021	11:55	9:33	10:14	11:38	11:50	16:19	9:03	2:46

Unit by Unit Comparison

Unit	2021 calls	average response time
Medic 1	5,486	11:48
Medic 2**	17	8:50
Medic 4	5,811	11:25
Medic 6	4,189	12:43
Medic 7	5,434	11:17
Medic 10	5,266	12:39
Medic 11	4,840	13:05
Medic 13*	1,584	13:21
Medic 17	4,237	11:35
Medic 20	4,624	12:14
Medic 21*	2,069	11:36
Medic 22	4,672	11:12
Medic 23	5,037	11:20
Medic 24	4,343	12:34
Medic 26	3,884	11:57
Medic 28*	1,612	12:43
Medic 30	4,850	11:35
Medic 31	4,125	12:30
Medic 33	4,280	11:13
Medic 36	4,910	11:59
Medic 38*	1,488	11:51
Medic 39	3,680	11:34
Medic 40	4,417	12:17
Medic 41	5,510	11:53
Medic 42	3,860	11:35
Medic 43	3,450	11:20
Mob units**	18	07:03

*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 2021 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. Lastly, it appearsthat 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.