



2022 4th Quarter Report to the Lowell, Massachusetts Board of Health

Reporting Period: October 1, 2022 – December 31, 2022

- **INTRODUCTION:**

This is the 4th Quarter Report for the Lowell Board of Health.

Any questions or concerns surrounding the contents of this report should be directed to:

Trinity EMS, Inc.

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Thank you,

Management Team

PrideStar EMS and TrinityEMS

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TIMES:	Trinity BLS Q1 2022	Trinity ALS	LGH ALS	Trinity BLS Q2 2022	Trinity ALS	LGH ALS
Fractile %	90.18%	76.43%	85.47%	90.81%	82.23%	88.88%
Avg out of chute	1 min 2 sec	1 min 12 sec	1 min 2 sec	56 sec	1 min 17 sec	1 min 16 sec
Avg resp time	5 min 49 sec	8 min 2 sec	6 min 4 sec	5 min 52 sec	7 min 10 sec	6 min 35 sec
Avg on scene time	13 min 7 sec	10 min 34 sec	15 min 3 sec	13 min 41 sec	15 min 3 sec	14 min 11 sec
Avg transport time	6 min 6 sec	6 min 55 sec	10 min 24 sec	5 min 54 sec	6 min 21 sec	9 min 41
# of events >7:59 response time	586	66	260	523	70	178
# of events using Non Trinity BLS	0			1- 8th concurrent 911 call		
	Trinity BLS Q3 2022	Trinity ALS	LGH ALS	Trinity BLS Q4 2022	Trinity ALS	LGH ALS
	89.35%	75.00%	87.00%	85.10%	71.01%	84.80%
Avg out of chute	1 min 6 sec	1 min 30 sec	1 min 14 sec	1 min 7 sec	1 min 20 seco	43 sec
Avg resp time	5 min 50 sec	7 min 51 sec	6 min 44	5 min 58 sec	5 min 57 sec	7 min 1 sec
Avg on scene time	13 min 11 sec	15 min 49 sec	13 min 56 sec	12 min 41 sec	13 min 31 sec	13 min 44 sec
Avg transport time	5 min 27	6 min 7 sec	9 min 21 se	5 min 42 sec	5 min 49 sec	6 mni 47 sec
# of events >7:59 response time	601	126	206	821	160	264
# of events using Non PEMS/BLS units	1- 7th concurrent 911 call			0		

	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022
TEMS BLS	90.03%	88.60%	90.44%	92.24%	90.18%	90.81%	89.35%	85.10%

BLS OUTLIERS:	2020		2021		Last 4 Qs Total		Q1 2022		Q2 2022		Q3 2022		Q4 2022	
1st Emergency	423	23%	390	18%	354	14%	101	17%	67	13%	89	15%	97	12%
2nd Emergency	452	25%	440	21%	492	19%	121	21%	97	19%	117	19%	157	19%
3rd Emergency	371	21%	407	19%	499	20%	94	16%	101	19%	132	22%	172	21%
4th Emergency	273	15%	342	16%	474	19%	108	18%	88	17%	108	18%	170	21%
5th Emergency	164	9%	262	12%	405	16%	95	16%	73	14%	96	16%	141	17%
6th Plus Emergency	123	7%	291	14%	307	12%	67	11%	97	19%	59	10%	84	10%
	1806		2132		2531		586		523		601		821	
BLS REASONS OVER 7:59:	2020		2021		Last 4 Qs Total		Q1 2022		Q2 2022		Q3 2022		Q4 2022	
Total	1806		2132		2531		586		523		601		821	
Couldn't locate house/lost	61	3%	38	2%	74	3%	18	3%	19	4%	19	3%	18	2%
Crew took long route	89	5%	144	7%	87	3%	22	4%	20	4%	24	4%	21	3%
Distance	421	23%	611	29%	849	34%	155	26%	165	32%	205	34%	324	39%
Dispatch delay	193	11%	222	10%	281	11%	90	15%	52	10%	52	9%	87	11%
Highway	12	1%	18	1%	18	1%	5	1%	3	1%	5	1%	5	1%
Out of chute	174	10%	249	12%	399	16%	91	16%	78	15%	100	17%	130	16%
TEMS Dispatch error	27	1%	38	2%	49	2%	11	2%	13	2%	14	2%	11	1%
Weather	13	1%	6	0%	48	2%	27	5%	5	1%	16	3%	0	0%
911 Call volume	262	15%	495	23%	671	27%	153	26%	153	29%	145	24%	220	27%
others/blank	554	31%	27	1%	55	2%	14	2%	15	3%	21	3%	5	1%

BLS OUTLIERS:	2020		2021		Last 4 Qs Total		Q1 2022		Q2 2022		Q3 2022		Q4 2022	
Within the standard (7:59 >)	18975	91.31%	19463	90.14%	19959	88.73%	5047	90.18%	5171	93.69%	5044	91.39%	4697	85.11%
0800-0859	859	4.13%	975	4.33%	908	4.04%	231	4.19%	228	4.13%	201	3.64%	248	4.49%
0900-0959	465	2.24%	556	2.47%	638	2.84%	155	2.81%	128	2.32%	149	2.70%	206	3.73%
1000-1059	216	1.04%	256	1.14%	417	1.85%	80	1.45%	75	1.36%	113	2.05%	149	2.70%
1100-1159	121	0.58%	146	0.65%	231	1.03%	50	0.91%	44	0.80%	50	0.91%	87	1.58%
1200 plus	145	0.70%	196	0.87%	340	1.51%	72	1.30%	48	0.87%	88	1.59%	132	2.39%
							see below		see below		see below		see below	
12 PLUS BREAKOUT	2020		2021		Last 4 Qs Total		Q1 2022		Q2 2022		Q3 2022		Q4 2022	
911 Call volume (5th +)	30	20.69%	71	36.22%	151	44.41%	40	30.30%	22	16.67%	37	28.03%	52	39.39%
Distance	6	4.14%	21	10.71%	43	12.65%	4	3.03%	1	0.76%	15	11.36%	23	17.42%
Crew got lost/couldn't find house	16	11.03%	10	5.10%	13	3.82%	2	1.52%	5	3.79%	3	2.27%	3	2.27%
Highway call	3	2.07%	10	5.10%	6	1.76%	2	1.52%	1	0.76%	2	1.52%	1	0.76%
TEMS Dispatch error/delay	17	11.72%	41	20.92%	33	9.71%	11	8.33%	11	8.33%	6	4.55%	5	3.79%
Others	48	33.10%	23	11.73%	81	23.82%	20	15.15%	8	6.06%	25	18.94%	28	21.21%
Chute													20	15.15%

Over 12-minute response calls

1	Psy	23	Swollen lip, P3 trans	45	Psy,	67	Diff br, ALS transport	89	Psy at SNF	111	Fall, P2 trans
2	etoh	24	Sec 12, P3 trans	46	Vomiting, 81m	68	Headache	90	Check welfare, no tra	112	Synca, Pt refusal
3	etoh	25	Infection, P3 trans	47	ETOH, 47 F	69	38 F psy	91	AMS, P3 transp	113	Past assault, no tran
4	not answering, no tr	26	Fall, P2 trans	48	Gen weak,	70	Lifecall, no transp	92	Should FX, P2 tranp	114	Abd pain
5	Diab CAOx3	27	Assault, no trans	49	Leg pain	71	Anxiety	93	Preg abd pain, P2	115	56 m vomiting
6	Anxiety attack	28	Fall, P2 trans	50	Abd pain, No tranp	72	Fall, 79 F	94	M detox	116	ETOH
7	Check welfare, no tra	29	Psy, P3 transp	51	Lift assist, no transp	73	Dizzy, P2 transp	95	ETOH, no transp	117	Fall, no tranp
8	Pt wanted detox	30	Abd pain, no transp	52	com of legs w/ P3 trans	74	MVA, P2 transp	96	SI, P3 transp	118	Check welfare, no transp
9	Infection, P3 transp	31	Psy, no transp	53	ETOH, vomiting	75	Fever, 75 M	97	Vomiting, no tranp	119	Fall x12 hrs,
10	deceased, PD on si	32	Fall, P2 trans	54	ETOH	76	61 F back pain	98	Psy, P3 trans	120	40 F psy,
11	ETOH, no transport	33	Gout, P3 trans	55	Cant walk	77	OD, P2 trans BLS	99	MVA, P2 transp	121	Failure to thrive, P3 trans
12	Abd pain	34	Abd pain, P3 transp	56	kid locked in car, no tranp	78	Foot pain	100	Suicidal, P2 transp	122	Abd pain, no trans
13	Check welfare, no tra	35	Psy, P2 transp	57	Cant walk	79	Abd pain, 24 M	101	Sepsis, P2 tranp	123	88m back pain
14	Assault, no tranpor	36	MVA, P3 transp	58	Psy,	80	ETOH, no transp	102	Abd pain, P2 tranp	124	60 F abd pain
15	Assault, P3 transpor	37	Fall, no transp	59	MVA, P2 tranp	81	34 M dizzy	103	Pt in cell block w/o meds	125	Cant walk, no tranp
16	Sec 12, P3 transpor	38	ETOH	60	Hip inj, P2 transp	82	ETOH, P3 trans	104	Back pain MVA, P2	126	Flu
17	ETOH, P3 trans	39	fall 2 days ago, P3 trans	61	Abd pain	83	Psy	105	Assault P3 trans	127	Diff breathing, LFD w pt, ALS
18	Psy, P3 trans	40	Lac, P3 transp	62	Fall, P3 transp	84	Check welfare, no trans	106	Psy, no tran	128	Assault, no tranp
19	Psy, P2 trans	41	Psy, P2 transp	63	Fall P2 transp	85	15M Pys	107	Lac, no tranp	129	Lift assist, no transp
20	Back pain	42	Lift assist, No transp	64	Vomiting	86	32 M Psy	108	Fall, P2 tranp	130	Psy 40 f
21	Missing kid eval	43	Psy, P3 transp	65	Psy eval	87	23 Anxiety	109	Vomting, P3 tranp	131	? Drug use, no tranp
22	Psy pt escp from H	44	Psy, P2 transp	66	Psy eval	88	Weakness, P3 trans	110	Psy,	132	Psy at medical center

VOLUME:	2020		2021		Last 4 Qs		Q1 2022		Q2 2022		Q3 2022		Q4 2022	
Total responses (ALS & BLS)	28573		29668		31506		7968		7689		8075		7774	
Total ALS Responses	7790	27%	8076	28%	8505	27%	2059	26%	1995	26%	2195	27%	2256	29%
TEMS ALS Responses	700	9%	972	12%	1735	20%	271	13%	395	20%	552	25%	517	23%
LGH ALS Responses	7090	91%	7104	88%	6770	80%	1788	87%	1600	80%	1643	75%	1739	77%
INCIDENTS:	20783		21592		23001		5909		5694		5880		5518	
BLS Incident	13173		13658		14496		3850		3699		3685		3262	
ALS and BLS Incident	7610		7934		8505		2059		1995		2195		2256	
Needle pick ups	142		133		59		4		36		7		12	
Non Emergent Lift assists	64		93		73		11		17		14		31	
TRANSPORTS:	2020		2021		Last 4 Qs		Q1 2022		Q2 2022		Q3 2022		Q4 2022	
Total Transports (ALS & BLS)	14780		15679		16497		4034		4413		4378		3672	
Total BLS Transports	12073	82%	12931	82%	13763	83%	3402	84%	3746	85%	3727	85%	2888	79%
Total ALS Transports	2797	19%	2748	18%	2734	17%	632	16%	667	15%	651	15%	784	21%
TEMS ALS Transports	178	6%	428	16%	806	29%	124	20%	181	27%	197	30%	304	39%
LGH ALS Transports	2619	94%	2320	84%	1928	71%	508	80%	486	73%	454	70%	480	61%
TRIAGE:	2020		2021		Last 4 Qs		Q1 2022		Q2 2022		Q3 2022		Q4 2022	
Total Triage	1028	13%	850	11%	703	8%	179	9%	183	9%	113	5%	228	10%
TEMS Triage	40	6%	46	5%	-57	-3%	12	4%	10	3%	14	3%	6	1%
LGH ALS Triage	988	14%	804	11%	760	11%	167	9%	173	11%	199	12%	221	13%

INTUBATIONS:	2020			2021			Last 4 Qs Total			Q1 2022			Q2 2022			Q3 2022			Q4 2022									
Trinity company total	58	of	66	88%	43	of	46	93%	62	of	66	94%	16	of	18	89%	20	of	20	100%	16	of	17	94%	10	of	11	91%
Trinity Lowell only	6	of	8	75%	7	of	8	88%	3	of	3	100%	1	of	1	100%	0	of	0	###	2	of	2	100%	0	of	0	###
LGH ALS Lowell only	170	of	171	99%	202	of	203	100%	169	of	173	98%	42	of	43	98%	47	of	48	98%	45	of	45	100%	35	of	37	95%
LGH Greater Lowell region													69	of	70	99%	72	of	73	99%	74	of	75	99%	64	of	66	97%
LGH ALS MAI* in Lowell only									Last 4 Qs Total			17 of 17 in Lowell			19 of 19 in Lowell			17 of 17 in Lowell										
IO SUCCESS RATE:	2020			2021			Last 4 Qs Total			Q1 2022			Q2 2022			Q3 2022			Q4 2022									
Trinity company total	84	of	85	99%	66	of	66	100%	81	of	81	100%	20	of	20	100%	23	of	23	100%	22	of	22	100%	16	of	16	100%
Trinity Lowell only	12	of	12	100%	12	of	12	100%	4	of	4	100%	1	of	1	100%	0	of	0	###	2	of	2	100%	1	of	1	100%
LGH ALS Lowell only	120	of	120	100%	96	of	96	100%	109	of	109	100%	33	of	33	100%	35	of	35	100%	21	of	21	100%	20	of	20	100%
Airways:	Last 4 Qs Total			Last 4 Qs Total			Last 4 Qs Total			Q1 2022			Q2 2022			Q3 2022			Q4 2022									
Trinity company wide- King tube success rate-post ETT failure													2	of	2	100%	0	of	0	!	1	of	1	100%		of		!
Trinity Lowell- King tube success rate-post ETT failure													0	of	0	na	0	of	0	na	0	of	0	na		of		na
* Intubation total- Total patients intubated/ Total Patients intubated attempted.																												
** Medication Assisted Intubation, in MA, this requires the use of a Paralytic which is controlled & monitored by a special project																												

Employee ID	Employee Name		Hire Date
2163	Farias, Paul	BLS	12/12/2022
2150	Beaulieu, Robert (NH)	BLS	11/14/2022
2154	Estrada, Halvert	BLS	11/14/2022
2159	Smith, Abigail (NH)	BLS	11/14/2022
2155	White, Jonathan (NH)	BLS	11/14/2022
2156	Lutton, James	BLS	11/13/2022
2146	Pellegrino, Samantha	BLS	10/10/2022
2145	Williams, Ashleigh	BLS	10/10/2022

EMD- Direct to Trinity

	2020	2021	Last 4 Qs Total	Q1 2022	Q2 2022	Q3 2022	Q4 2022
Alpha (BLS-P3)	1271	1224	1210	331	321	280	278
Bravo (BLS-P2)	340	366	414	118	108	90	98
Charlie (ALS-P1)	647	773	489	127	124	125	113
Delta (ALS-P1)	664	714	535	144	142	109	140
Echo (ALS-P1)	8	9	9	1	3	1	4
Total EMD by Trinity in Lowell	2930	3086	2657	721	698	605	633

The above data are direct calls to Trinity for patients in Lowell.

Alpha- results in BLS going no lights or sirens to the patient

Bravo- results in BLS going lights and sirens to the patient

Charlie, Delta, Echo- results in ALS and BLS going lights and sirens to the patient

As part of Trinity EMS's EMD accreditation a portion of the above calls are randomly selected for quality assurance review. TEMS reviews 25 EMD'ed calls per week. These 25 calls could come from any city or state. Potentially none or all 25 calls could be for patients in Lowell.



		2020		2021		Last 4 Qrts		Q1 2022		Q2 2022		Q3 2022		Q4 2022	
Total ORI in Lowell		489		525		555		122		139		167		127	
Priority 1 ORI in Lowell		274		347		346		77		72		112		85	
Trinity wide ORI		801		906		799		187		191		235		186	
Trinity wide Priority 1		482		566		516		122		105		163		126	
ORI in Lowell by setting:															
Inside Private home		176	36%	180	34%	188	34%	48	39%	39	28%	59	35%	42	33%
Public location inside		29	6%	58	11%	48	9%	10	8%	14	10%	13	8%	11	9%
Public location outside		273	56%	274	52%	296	53%	58	48%	74	53%	92	55%	72	57%
Other		11	2%	13	2%	23	4%	6	5%	12	9%	3	2%	2	2%
Gender:															
Female		127	19%	98	19%	128	23%	24	20%	34	25%	35	21%	35	28%
Male		362	81%	427	81%	426	77%	98	80%	104	75%	132	79%	92	72%
Females U20		0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Female 20-29		34	12%	12	12%	24	19%	4	17%	6	18%	7	20%	7	20%
Female 30-39		52	34%	33	34%	53	41%	10	42%	11	32%	18	51%	14	40%
Female 40 - 49		23	18%	17	18%	27	21%	7	29%	9	26%	4	11%	7	20%
Female 50- +		18	36%	35	36%	24	19%	3	13%	8	24%	6	17%	7	20%
Male U20		2	0%	2	0%	1	0%	0	0%	1	0%	0	1%	0	0%
Male 20-29		61	16%	67	16%	58	14%	15	14%	13	15%	17	13%	13	13%
Male 30- 39		135	34%	145	34%	141	33%	41	33%	34	42%	40	33%	26	30%
Male 40 - +		66	22%	94	22%	101	24%	23	24%	22	23%	37	21%	19	28%
Male 50 - +		98	28%	119	28%	125	29%	19	29%	34	19%	38	33%	34	29%

	2020		2021		Last 4 Qs Total		Q1 2022		Q2 2022		Q3 2022		Q4 2022		
Acre	62	13%	70	13%	81	15%	27	22%	19	14%	21	13%	14	11%	
Back Central	115	23%	123	23%	97	17%	17	14%	29	21%	37	22%	14	11%	
Belvidere	16	4%	23	4%	16	3%	3	2%	2	1%	5	3%	6	5%	
Centralville	44	9%	45	9%	45	8%	16	13%	11	8%	7	4%	11	9%	
Downtown	125	28%	148	28%	183	33%	34	28%	43	31%	58	35%	48	38%	
Highlands	26	3%	16	3%	22	4%	2	2%	9	6%	6	4%	5	4%	
Lower Belvidere	8	1%	6	1%	14	3%	2	2%	5	4%	1	1%	6	5%	
Lower Highlands	49	7%	35	7%	47	8%	8	7%	11	8%	17	10%	11	9%	
Pawtucketville	17	6%	34	6%	25	5%	8	7%	5	4%	8	5%	4	3%	
Sacred Heart	20	4%	21	4%	25	5%	5	4%	5	4%	7	4%	8	6%	
South Lowell	7	1%	4	1%	0	0%	0	0%	0	0%	0	0%	0	0%	
Home towns of patients:															
Lowell	311	65%	343	65%	346	62%	64	52%	85	61%	112	67%	85	67%	
Dracut	14	5%	25	5%	9	2%	2	2%	2	1%	2	1%	3	2%	
Billerica	19	2%	8	2%	14	3%	5	4%	5	4%	2	1%	2	2%	
Chelmsford	11	1%	3	1%	8	1%	0	0%	1	1%	3	2%	4	3%	
Tewksbury	17	15%	20	15%	4	1%	2	2%	1	1%	0	0%	1	1%	
Other/unknow	117	13%	68	13%	174	31%	49	40%	45	32%	48	29%	32	25%	

ALS: Life Support- may refer to vehicles staffed with a least one paramedic or refer to a paramedic level of patient care. Trinity Emergency ALS vehicles are staffed with two paramedics.

A Response: Is defined as dispatching or sending an ambulance to a request for service. In this report , a response is further sorted to include only emergency responses. These numbers do not include routine transfers such as dialysis patients or radiation treatment patients.

A Transport: Is defined as taking a patient in an ambulance to a destination.

BLS: Basic Life Support- may refer to a vehicle staffed with two emergency medical technicians (EMT) or an EMT level of patient care. Trinity BLS ambulances are staffed with two EMT's

EMD: Emergency Medical Dispatch- a nationally recognized system whereby dispatchers are trained and follow a specific protocol to ascertain the nature of illness/injury and provide patient care instructions to the caller until the First Responders or ambulance arrives.

Intubation Attempt: Is defined as insertion of the laryngoscope blade into the oral cavity for the purpose of inserting an endotracheal tube.

MAI: Medication Assisted Intubation is generally regarded as facilitating an intubation with the use of sedatives. In Massachusetts how ever, this term includes the use of Paralytics. The Massachusetts MAI program is not part of the standard scope of practice for Paramedics. It is controlled through the Department of Public Health's Office of Emergency Medical Services Medical Services Committee.

On scene time: The amount of time that has elapsed from the moment the ambulance is on scene to the moment the ambulance begins transport or is released back into service

Out of chute time: The amount of time that elapses from the moment when the ambulance is dispatched to the moment the ambulance begins moving towards the call.

On time performance score: Is the percentage of calls that meet or exceed the response time criteria.

Request for service: When a dispatcher receives request for an ambulance usually via telephone or radio

Response time: The amount of time that has elapsed from the moment the call is completely entered into the dispatch system to the moment the ambulance arrives on scene.

RSI: Rapid Sequence Intubation is the facilitation of intubation using both sedatives and paralytics

Service Zone Plan: M.G.L. Part 1 Title XVI Chpt. 11C Section 1 defines as "a geographic area defined by and comprised of one or more local jurisdictions, in which a local jurisdiction may select and the department shall designate an EMS first response service and an ambulance service to provide EMD first response and primary ambulance response to the public within the defined area, pursuant to section 10." Massachusetts Regulations 105 CMR 170.249.

Transport time: The amount of time that has elapsed from the moment the ambulances leaves the scene with a patient to the moment the ambulance arrives at the receiving facility

Triage down: When a paramedic units arrives at the patients side and based on the patient condition determines that the patient may be treated and transported at the BS level. Note- There is no protocol for this practice, however, OEMS does address it though an administrative advisory: A/R5=620.

- The following document is a detailed outline of the reporting process used by Trinity EMS.
- **Responding lights and sirens**
 - From Lowell 911
 - All calls require a lights and sirens response regardless of the patients condition except
 - Needle pick ups
 - Pt carry down/up without a medical issue
 - Unless requested to response without lights and sirens by the 911 center.
 - Direct to Trinity calls that Trinity EMD's
 - Bravo, Charlie, Delta, and Echo go with lights and sirens
 - Alpha or Omega level calls go without lights and sirens
 - Direct to Trinity that Trinity doesn't EMD
 - Response lights and sirens for any patients. Unless the calling agency EMD'ed the call to a non-urgent level.
 - This set of calls would include call from UMASS PD, or other ambulance services.
- Incident
 - A request for or by someone within the city limits of Lowell that requires an EMS response.
 - Each request is counted as 1 incident
 - A patient that gets a BLS unit for back pain is counted as 1 incident
 - A 10 car MVC with 20 patients requiring 6 BLS, 2 ALS, and 2 helicopters is counted as 1 incident
- Responses
 - Counts the number of occurrences when EMS vehicles response lights and sirens to a call.
 - An ALS and BLS unit response to a patient with chest pain, that counts as 2 responses. (2 vehicles put their lights on)
- Times:
 - All below are from incidents
 - BLS
 - Priority 1, 2 and 3 incident responses
 - Includes 911 and calls direct to Trinity
 - Any call directly to Trinity from another call center that would require an emergent response
 - (IE- Umass Lowell calls Trinity for a chest pain)
 - Any Charlie, Delta, Echo response called and EMD'ed by Trinity
 - Includes call when ALS and BLS responded as well as call when just BLS responded.
 - **Q# year# Performance score**
 - Is the created by
- Dividing the number of incidents BLS units responded to.

- Into the number of those calls that shows a response time over 08:00 or greater
 - Calls excluded
 - Delta level calls EMD'ed by Trinity that had a total response time of greater than 07:59
- **Avg out of chute**
 - Time from Trinity designated and selected ambulance was assigned call to selected crew to the time selected vehicles starts movement towards this call
 - Excluded-
 - Any time showing more than 10 minutes is excluded as likely time stamp missing
- **Avg response time**
 - From Call saved by Trinity dispatch to time ambulance arrived at geocoded location of the call.
 - Within Trinity CAD- The call saved time is called "call taken". This time is created after Trinity dispatch get an address, apartment, complaint, and any other info 911 passed along.
 - Excluded-
 - Charlie, delta, Echo, and Omega calls direct and EMD'ed by Trinity that result in a response time over 07:59
 - Any time showing more than 20 minutes is excluded as likely time stamp missing
- **Avg on scene time**
 - Includes only calls included above
 - Time from crew arrival on site to time vehicle:
 - Clears
 - Occupies to the hospital
 - Excluded
 - Any time showing more than 30 minutes is excluded as likely time stamp missing
- **Avg transport time**
 - Includes only calls included above
 - Time from crew: Clears or arrives to the hospital
 - Excluded
 - Any time showing more than 20 minutes is excluded as likely time stamp missing
- **# of events >7:59 or greater**
 - Includes any call that includes calls included from reasons earlier in the section
 - That's response time is greater than 07:59
 - Excluded
 - Any call where the unit is canceled prior to arrival
- Called that were EMD'ed by Trinity

- No other calls are excluded- weather, 911 call volume as examples are outliers counted and categories in the “BLS reasons over 07:59”
 - **# of events using Non Trinity BLS units**
 - Requests for ambulances to Trinity that Trinity was not able to send a BLS unit on within the State mandated 5 minute dispatch time for
 - Any 911 priority 1 or 2 call
 - Any call directly to Trinity from another call center that would require an emergent response
 - (IE- UMass Lowell calls Trinity for a chest pain)
 - Any Charlie, Delta, Echo response called and EMD’ed by Trinity
 - ALS
 - The only difference from the BLS is the ALS times start at dispatch, and not call created
- **BLS Outliers:**
 - For any BLS response over 07:59
 - Trinity will make note and report in this section the number of concurrent emergencies in Lowell at the time this call is created.
 - Includes 911 calls and calls direct to Trinity
 - Non-emergency and call in other cities will not be counted
- **BLS Reasons over 07:59**
 - For any BLS response over 07:59
 - Trinity will conduct a route cause analyses as to the reason for the response time
 - Trinity will take note and report in this section. These reasons will be grouping into 1 of the following
 - Couldn’t location house/lost
 - Crew passes the geo-coded location for the address more than once without getting on arrival
 - Crew took long route
 - Crew did not take the fastest route from their dispatch location to the pickup location
 - Distance
 - Usually this is used when a
 - Dispatcher gives the call out within 60 seconds
 - The crew is enroute within 120 seconds
 - Posting is happening
 - The ambulance crew went the most direct route
 - Circumstances include
 - If there is a second call in a sector of the city before reposting. 2nd call in downtown, this ambulance to the second call has two reports a much greater distance to the patient.

- Also the extra time could be traffic, school buses, and people not willing to move. I I
 - Gets used if none of the others fit.
 - ALSO
 - If the address is far away from one of the top 4 posting locations
 - Posting location 1 is Chelmsford and Westford
 - Posting location 2 is Bridge & W 6th
 - Posting location 3 is Callery Park
 - Posting location 4 is Mammoth and 4th
 - Far away is not defined in miles. More looking at the map and lacking a different issue this is selected.
 - Dispatch chute
 - A Trinity EMS dispatch took more than 59 seconds from call saved to dispatch. This could be due to error or workload
 - Highway
 - The location of the call is a highway. Accessing highway locations usually takes extra time do to divided 1 way road
 - Out of Chute
 - The Trinity EMS crew took at least 120 seconds to get from a dispatched stage to the ambulance physically moving towards the call
 - GPS fail
 - If our ambulance tracking program is not running we cannot prove a response time or a root cause.
 - TEMS Dispatch error
 - An example of this is TEMS dispatcher entering the wrong house or address.
 - Weather
 - Did weather impact posting or travel time. Usually snow/ extreme cold or heat
 - 911 Call volume
 - Was this call more than the 4th emergency in Lowell at this time