



2018 3rd Quarter Report to the  
Lowell, Massachusetts  
Board of Health

Reporting Period: July 1 2018- Sep 30 2018

- **INTRODUCTION:**

This is the 3rd Q 2018 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

Trinity EMS, Inc

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<b>TIMES:</b>	Trinity BLS Q4 2017	Trinity ALS	LGH ALS	Trinity BLS Q1 2018	Trinity ALS	LGH ALS
Fractile %	<b>92.48%</b>			<b>91.53%</b>	<b>79.73</b>	<b>92.54</b>
Avg out of chute	28 sec	1 min 8 sec	1 min 7 sec	31 sec	1 min 4 sec	1 min 2 sec
Avg resp time	5 min 26 sec	6 min 53 sec	6 min 4 sec	5 min 3 sec	7 min 6 sec	6 min 8 sec
Avg on scene time	10 min 31 sec	8 min 45 sec	11 min 53	12 min 38 sec	15 min 18 sec	15 min 55 sec
Avg transport time	6 min 21 sec	6 min 36 sec	10 min 24 sec	10 min 57 sec	11 min 4 sec	11 min 2 sec
# of events >7:59 response time	419	35	130	476*	46	159
# of events using Non Trinity BLS	4	3 happened in a 15 minute frame. 9,10, and 11th 911 call		0	*= including calls EMD'ed via TEMS	
	Trinity BLS Q2 2018	Trinity ALS	LGH ALS	Trinity BLS Q3 2018	Trinity ALS	LGH ALS
	<b>94.04%</b>	<b>86.19%</b>	<b>94.03%</b>	<b>94.72%</b>	<b>87.23%</b>	<b>93.79%</b>
Avg out of chute	32 seconds	58 seconds	54 seconds	23 seconds	55 seconds	48 seconds
Avg resp time	4 min 50 sec	6 min 3 sec	5 min 10 sec	4 min 2 sec	5 min 43 sec	5 min
Avg on scene time	12 min 34 sec	15 min 47 sec	15 min 55 sec	12 min 27 sec	15 min 10 sec	14 min 53 sec
Avg transport time	7 min 8 sec	8 min 23 sec	12 min 30 sec	6 min 48 sec	8 min 3 sec	12 min 13 sec
# of events >7:59 response time	335*	35	108	300*	28	146
# of events using Non Trinity BLS	0			0		

	Q3 2016	Q4 2016	Q1 2017	Q3 2017	Q4 2017	Q1 2018	Q2 2018	Q3 2018
<b>TEMS BLS</b>	<b>94.66%</b>	<b>94.79%</b>	<b>95.38%</b>	<b>94.09%</b>	<b>92.48%</b>	<b>91.53%</b>	<b>94.04%</b>	<b>94.72%</b>

<b>BLS OUTLIERS:</b>	2016 Total		2017 Total		Last 4 Qs Total		Q4 2017		Q1 2018		Q2 2018		Q3 2018	
1st Emergency	204	19%	243	21%	369	24%	105	25%	113	24%	68	20%	83	28%
2nd Emergency	271	25%	210	18%	387	25%	103	25%	114	24%	91	27%	79	26%
3rd Emergency	207	19%	206	18%	282	19%	84	20%	87	18%	56	17%	55	18%
4th Emergency	167	15%	166	15%	207	14%	54	13%	72	15%	41	12%	40	13%
5th Emergency	155	14%	191	17%	141	9%	30	7%	50	11%	37	11%	24	8%
6th Plus Emergency	96	9%	124	11%	137	9%	36	9%	40	8%	42	13%	19	6%

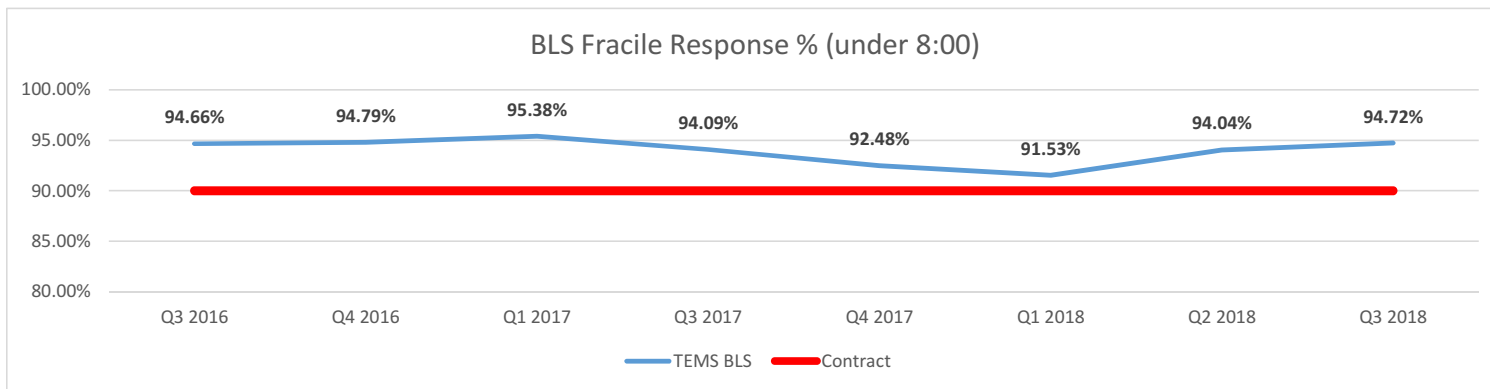
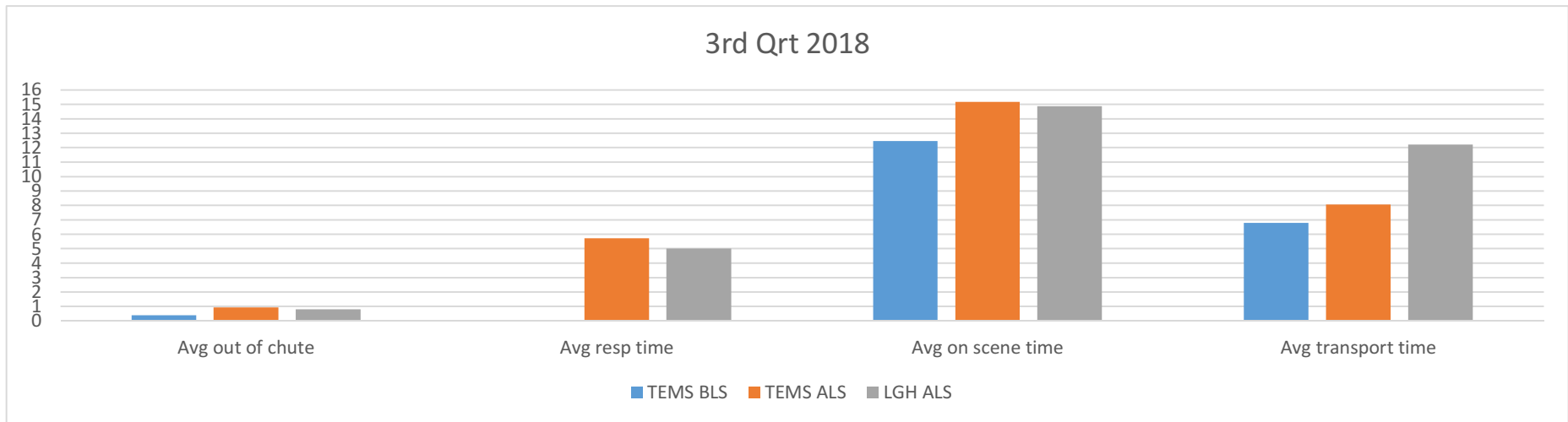
<b>BLS REASONS OVER 7:59:</b>	2016 Yearly Total		2017 Yearly Total		Last 4 Qs Total		Q4 2017		Q1 2018		Q2 2018		Q3 2018	
Total	903		1189		1529		418		476		335		300	
Couldn't locate house/lost	96	11%	22	2%	52	3%	24	6%	10	2%	8	2%	10	3%
Crew took long route	82	9%	60	5%	133	9%	38	9%	32	7%	20	6%	43	14%
Distance	194	21%	555	47%	403	26%	115	28%	121	25%	84	25%	83	28%
Dispatch delay	87	10%	56	5%	15	1%	0	0%	5	1%	10	3%	0	0%
Highway	20	2%	32	3%	11	1%	3	1%	4	1%	2	1%	2	1%
Out of chute	102	11%	188	16%	209	14%	66	16%	63	13%	44	13%	36	12%
TEMS Dispatch error	17	2%	45	4%	109	7%	16	4%	26	5%	38	11%	29	10%
Weather	84	9%	5	0%	51	3%	4	1%	41	9%	2	1%	4	1%
EMD					212	14%	43	10%	77	16%	50	15%	42	14%
911 Call volume	126	14%	115	10%	245	16%	56	13%	85	18%	63	19%	41	14%
others/blank	95	11%	111	9%	89	6%	53	13%	12	3%	14	4%	10	3%

<b>NO TRANSPORTS:</b>	2016 Total		2017 Total		Last 4 Qs Total		Q4 2017		Q1 2018		Q2 2018		Q3 2018	
Cancelled via ALS	275	4%	308	4%	452	6%	114	6%	111	7%	113	6%	114	6%
Cancelled via BLS	107	1%	114	2%	129	2%	40	2%	37	2%	26	1%	26	1%
Cancelled closer unit	111	1%	150	2%	202	3%	28	1%	52	3%	71	4%	51	3%
Cancelled by fam/staff	61	1%	56	1%	31	0%	6	0%	3	0%	21	1%	1	0%
Cancelled via Fire	700	9%	579	8%	592	8%	150	8%	128	8%	165	9%	149	8%
Cancelled via Police	1315	17%	1262	17%	1079	14%	267	14%	249	15%	232	12%	331	17%
No EMS needed	1090	14%	650	9%	1039	14%	313	16%	295	17%	185	10%	246	12%
No pt found	476	6%	482	6%	545	7%	107	6%	104	6%	185	10%	149	8%
Pt deceased on arrival	167	2%	133	2%	171	2%	49	3%	45	3%	37	2%	40	2%
Other	66	1%	146	2%	33	0%	1	0%	23	1%	6	0%	3	0%
Pt refusal	3167	42%	3607	48%	3196	43%	830	44%	642	38%	861	45%	863	44%

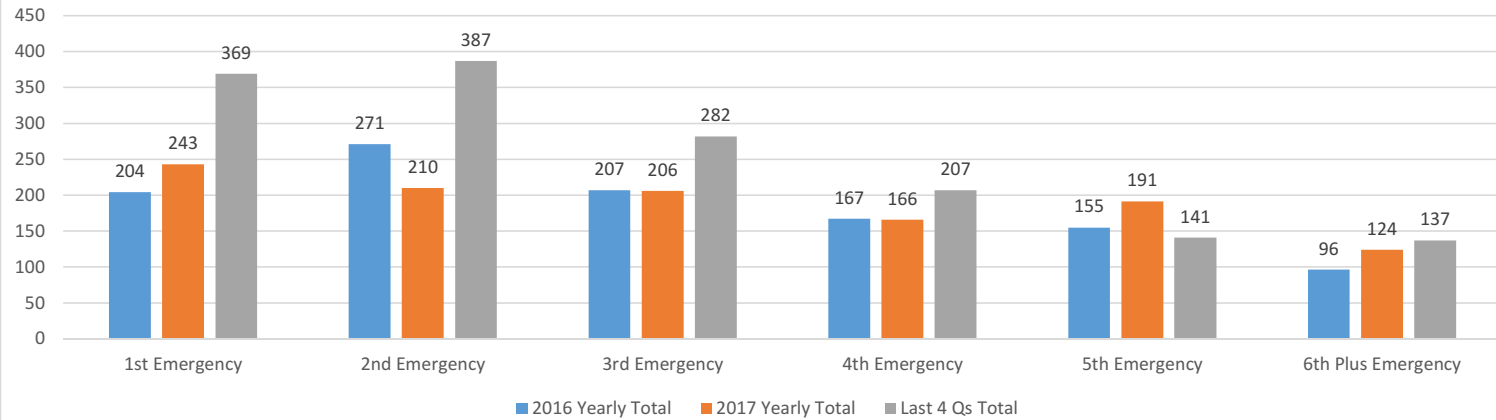
<b>VOLUME:</b>	2016		2017		Last 4 Qs		Q4 2017		Q1 2018		Q2 2018		Q3 2018	
Total responses (ALS & BLS)	27317		29696		31131		7863		7741		7728		7799	
Total ALS Responses	7417	27%	8196	28%	8312	27%	1964	25%	2121	27%	2108	27%	2119	27%
TEMS ALS Responses	846	11%	871	11%	1007	12%	242	12%	252	12%	293	14%	220	10%
LGH ALS Responses	6571	89%	7325	89%	7305	88%	1722	88%	1869	88%	1815	86%	1899	90%
<b>INCIDENTS:</b>	19900		21500		22492		5572		5620		5620		5680	
BLS Incident	12483		13304		14211		3600		3494		3556		3561	
ALS and BLS Incident	7417		8196		8281		1972		2126		2064		2119	
Needle pick ups					724		95		134		221		274	
Non Emergent Lift assists					298		45		46		101		106	
<b>TRANSPORTS:</b>	14303		14781		16126		4044		3790		4193		4099	
Total Transports (ALS & BLS)	14303		14781		16126		4044		3790		4193		4099	
Total BLS Transports	11498	80%	11735	79%	13005	81%	3288	81%	2965	78%	3324	79%	3428	84%
Total ALS Transports	2805	20%	3046	21%	3121	19%	756	19%	825	22%	869	21%	671	16%
TEMS ALS Transports	504	18%	434	14%	485	16%	117	15%	109	13%	161	19%	98	15%
LGH ALS Transports	2301	82%	2612	86%	2636	84%	639	85%	716	87%	708	81%	573	85%
<b>TRIAGE:</b>	993		1102		1044		239		260		240		305	
Total Triage	993	13%	1102	13%	1044	13%	239	12%	260	12%	240	11%	305	14%
TEMS Triage	74	9%	60	7%	79	8%	19	8%	27	11%	15	5%	18	8%
LGH ALS Triage	919	14%	1042	14%	965	13%	220	13%	233	12%	225	12%	287	15%

<b>INTUBATIONS:</b>	2016			2017			Last 4 Qs Total			Q4 2017			Q1 2018			Q2 2018			Q3 2018										
Trinity company total	56	of	68	82%	48	of	98	49%	79	of	91	87%	35	of	39	90%	19	of	25	76%	15	of	16	94%	10	of	11	91%	
Trinity Lowell only	7	of	14	50%	2	of	7	29%	12	of	16	75%	5	of	5	100%	2	of	6	33%	4	of	4	100%	1	of	1	100%	
LGH ALS Lowell only	140	of	144	97%	166	of	174	95%	160	of	167	96%	48	of	48	100%	35	of	39	90%	39	of	39	100%	38	of	41	93%	
LGH Greater Lowell region																	69	of	73	95%	73	of	74	99%	58	of	61	95%	
LGH ALS MAI* in Lowell only	44				55				45				17				14				14				16	(24 system wide)			
<b>IO SUCCESS RATE:</b>	2016			2017			Last 4 Qs Total			Q4 2017			Q1 2018			Q2 2018			Q3 2018										
Trinity company total	77	of	79	97%	65	of	69	94%	103	of	104	99%	34	of	35	97%	29	of	29	100%	27	of	27	100%	13	of	13	100%	
Trinity Lowell only	10	of	10	100%	6	of	6	100%	19	of	19	100%	4	of	4	100%	8	of	8	100%	6	of	6	100%	1	of	1	100%	
LGH ALS Lowell only	45	of	47	96%	72	of	75	96%	86	of	86	100%	28	of	28	100%	19	of	19	100%	18	of	18	100%	21	of	21	100%	
<b>Airways:</b>	2016			2017			Last 4 Qs Total			Q4 2017			Q1 2018			Q2 2018			Q3 2018										
Trinity company wide- King tube success rate-post ETT failure			###			#####			###	4	of	4	100%			100%	6	of	6	100%	1	of	1	100%	1	of	1	100%	
Trinity Lowell- King tube success rate-post ETT failure			###			#####			###	0	of	0		4	of	4	100%	n	of	n		0	of	0		n	of	n	
* 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																													

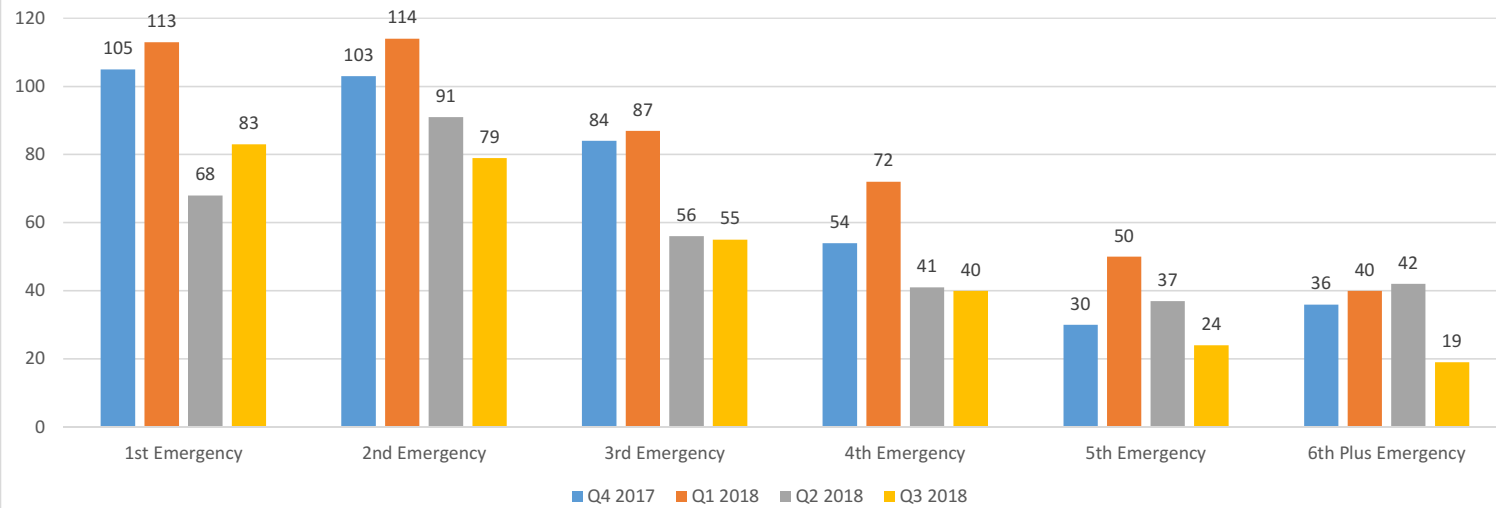




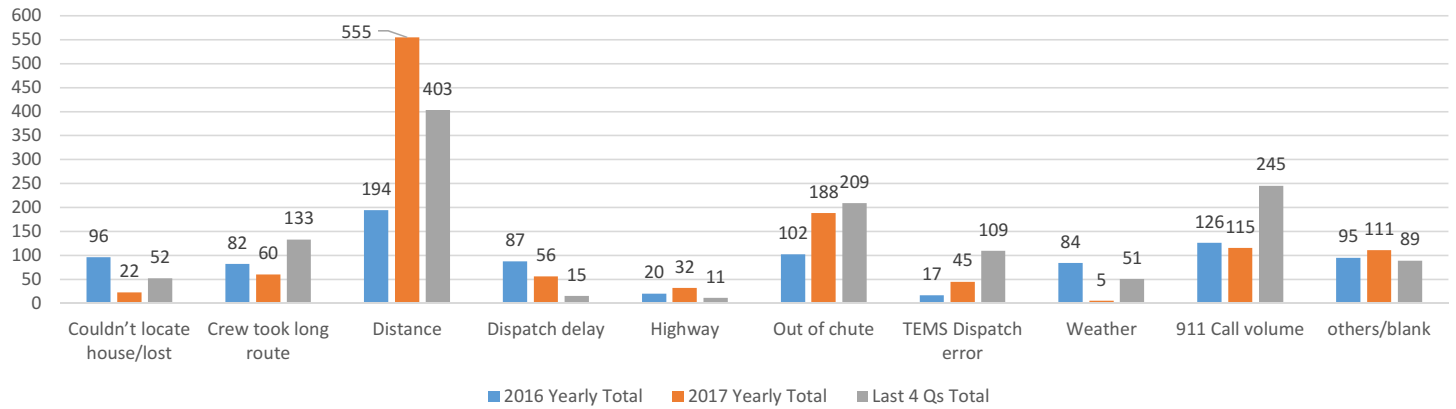
Q3 2018 BLS OUTLIERS: Yearly view



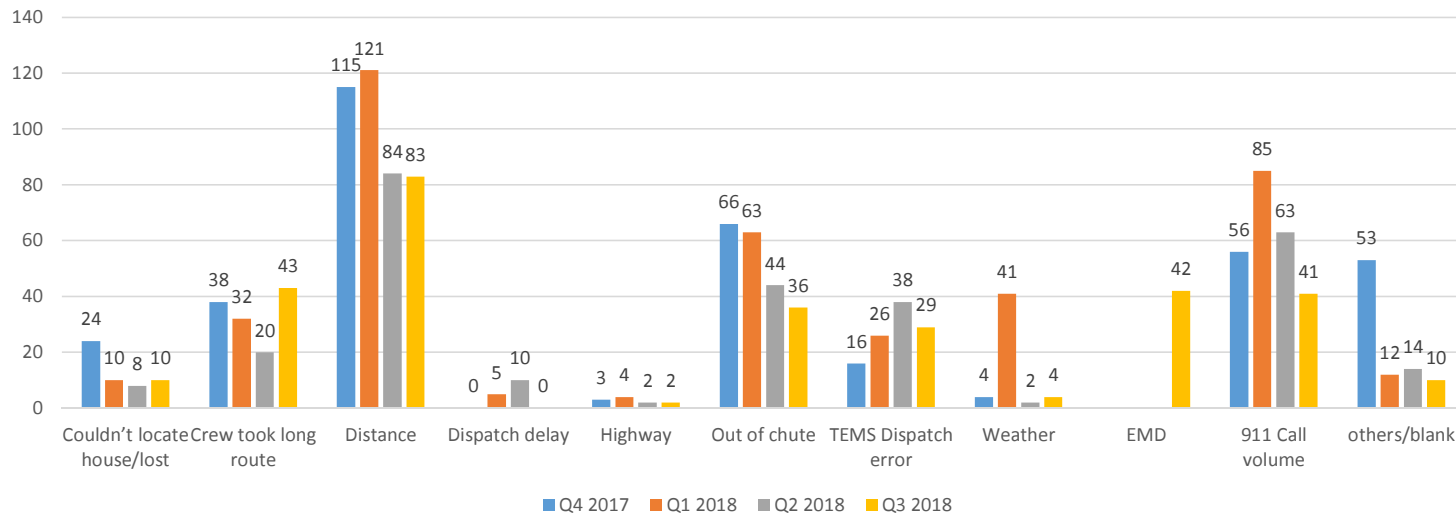
Q3 2018 BLS OUTLIERS: Qrts View

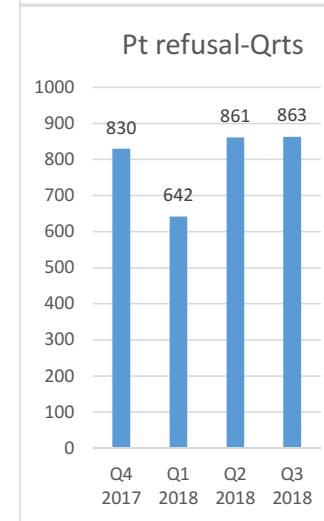
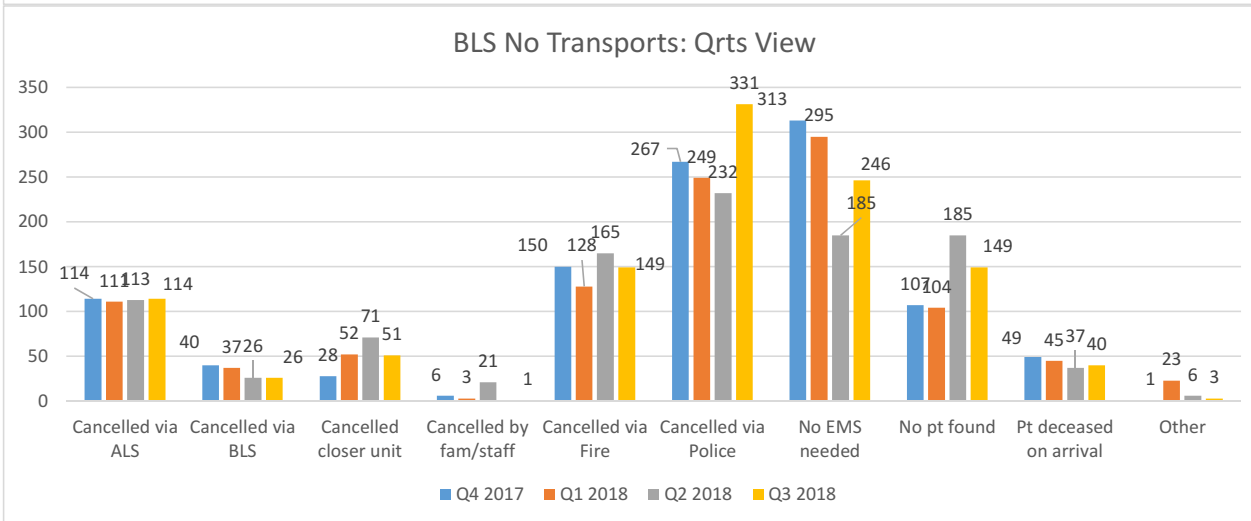
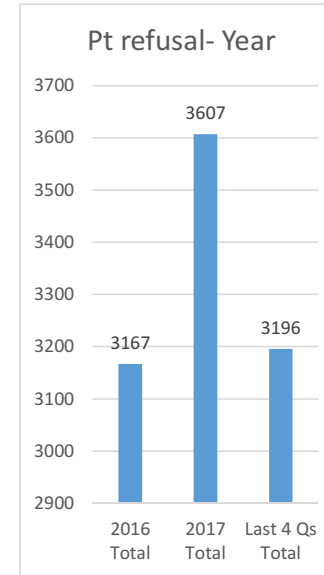
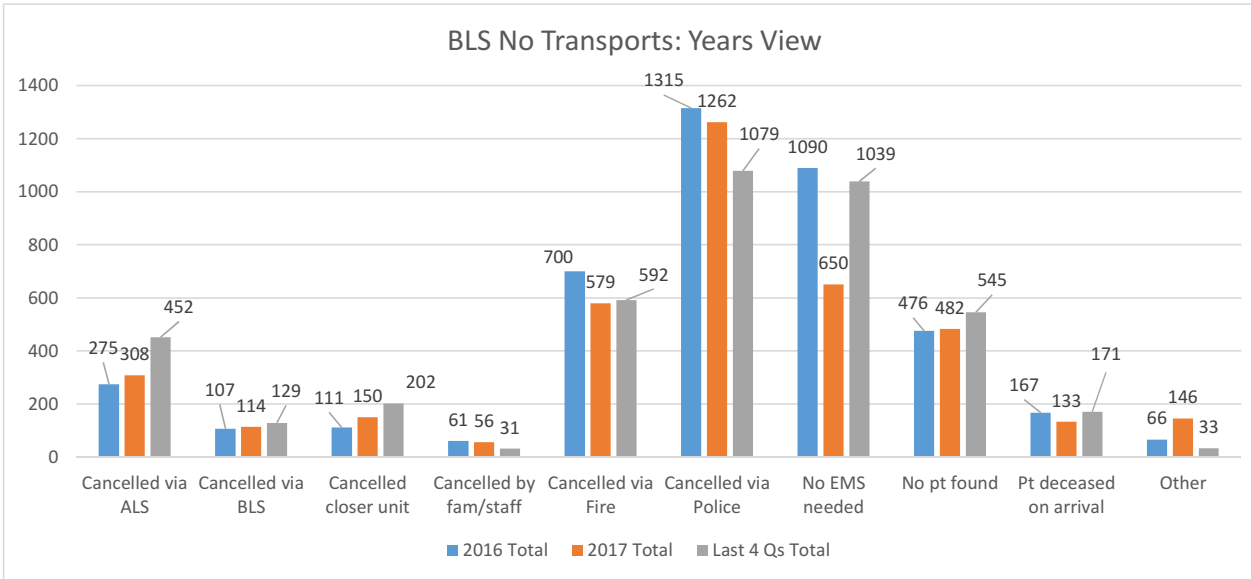


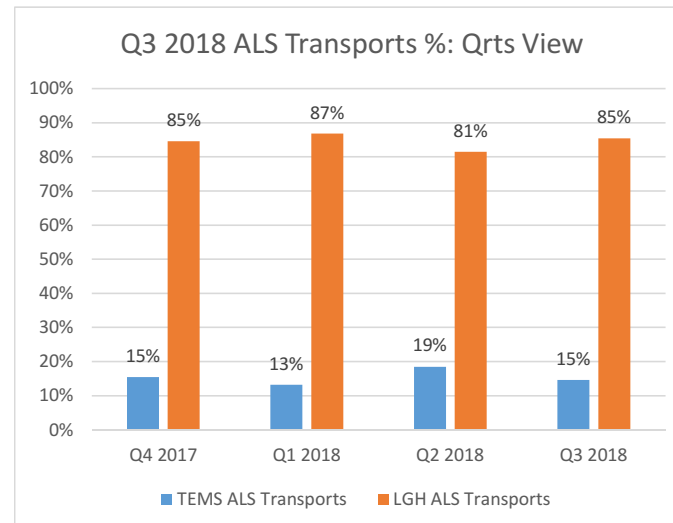
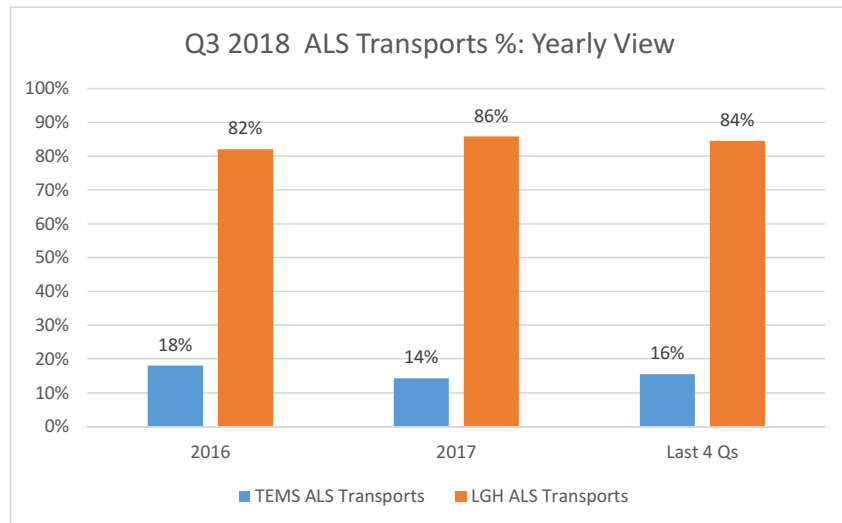
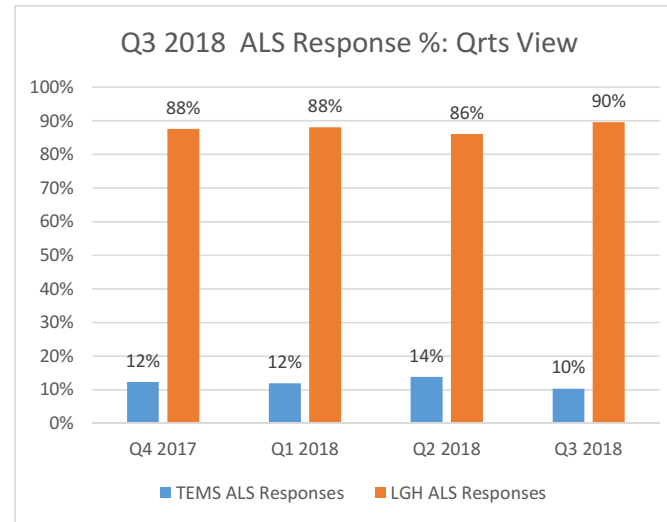
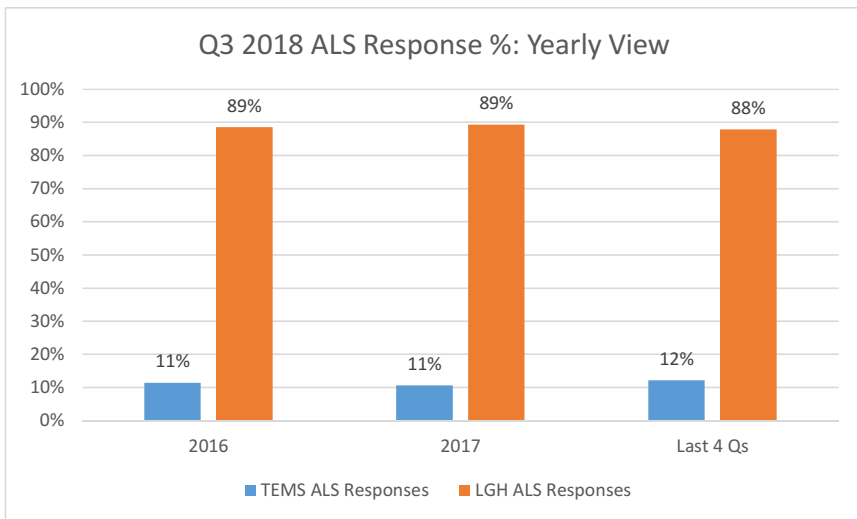
Q3 2018 BLS REASONS OVER 7:59: Yearly view

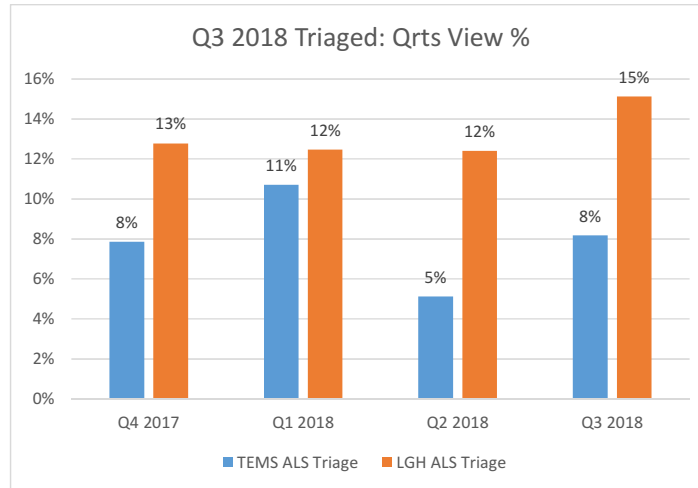
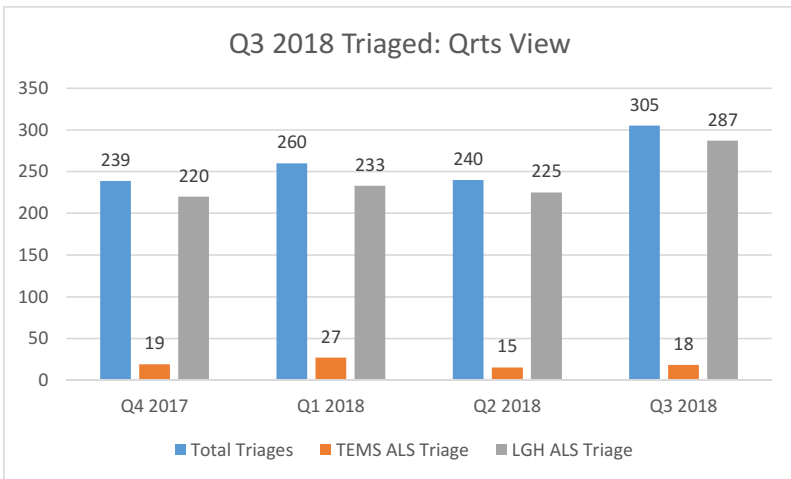
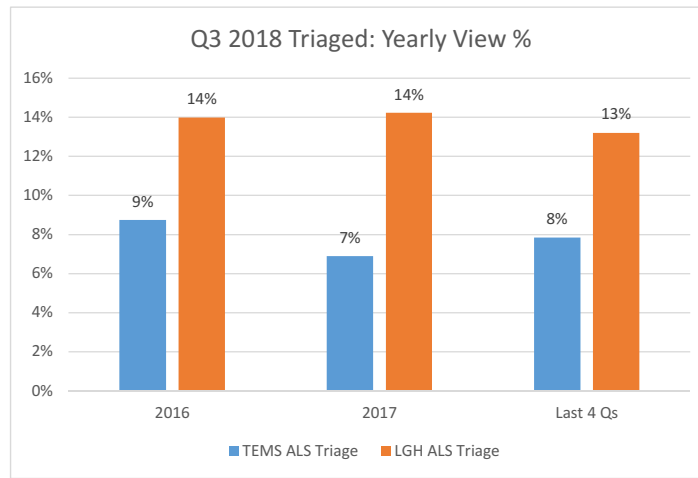
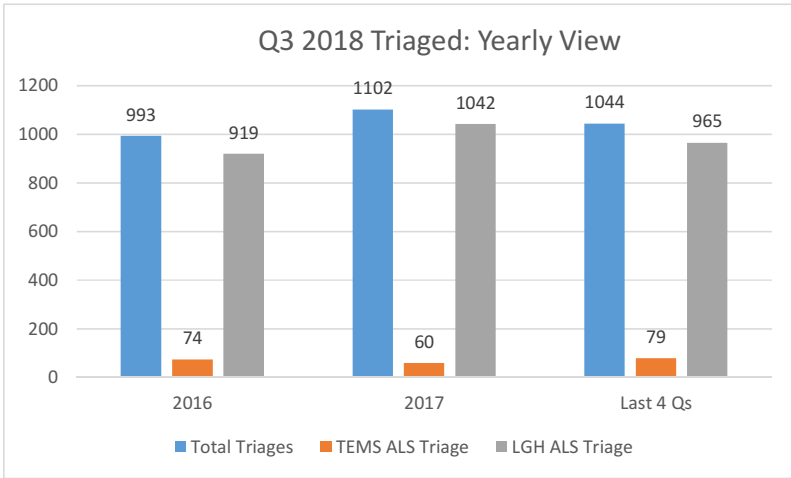


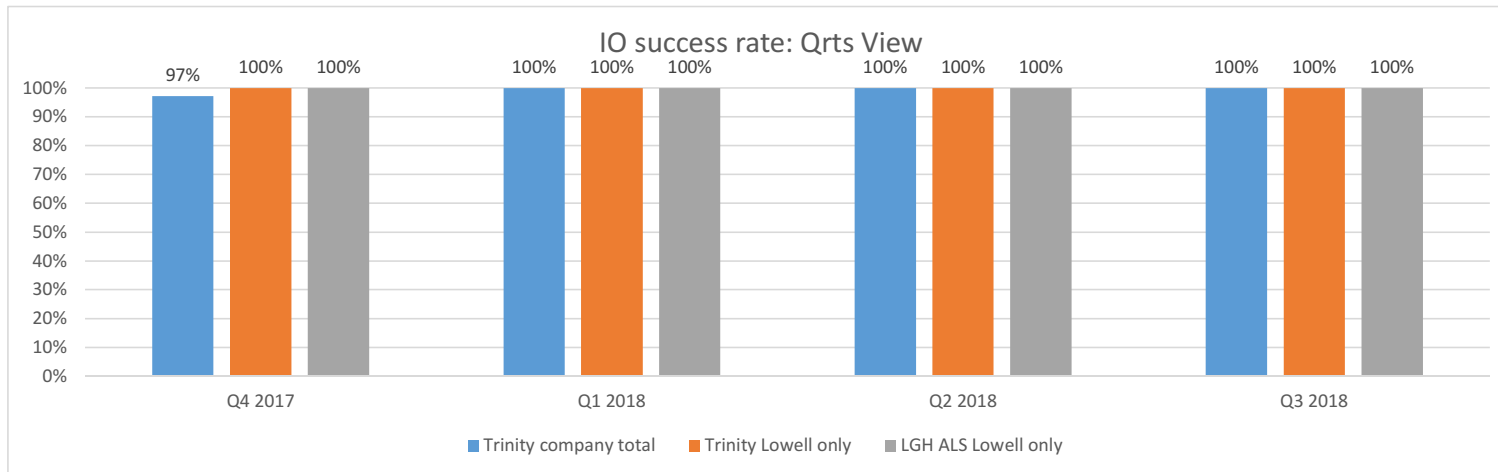
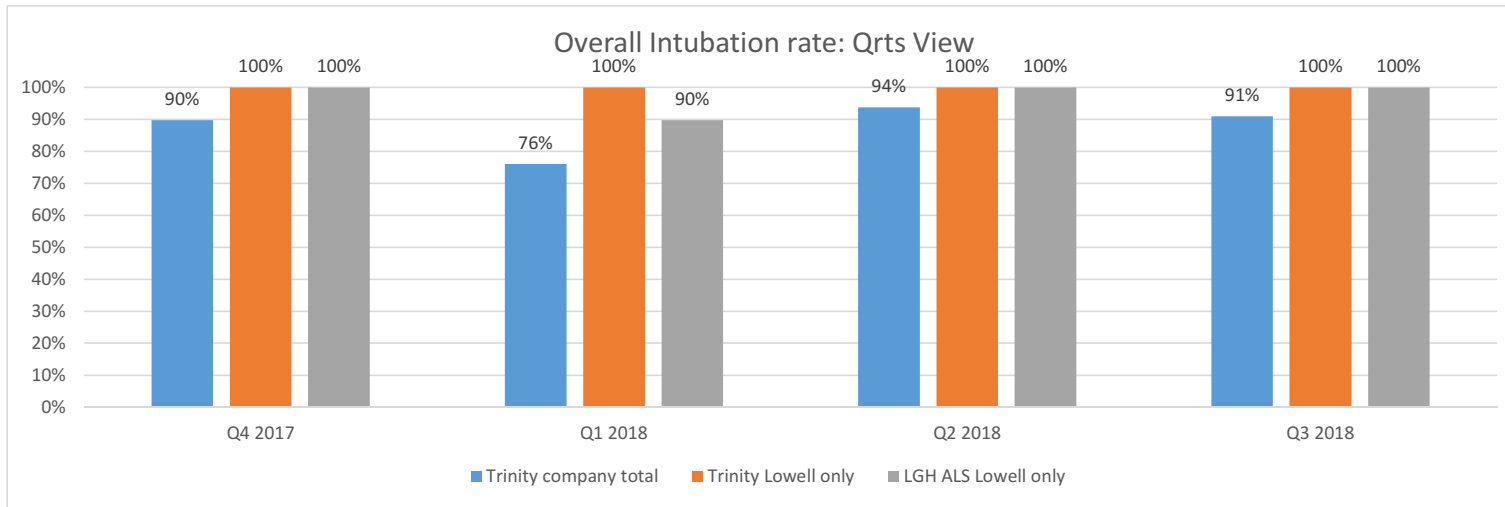
Q3 2018 BLS REASONS OVER 7:59: Qrts View











Last Name	First Name	Title	Hire Date	Position	MA Certi	MA Certific	CPR Exp	National Re	National Registry Exp.
Gonzalez	Jeanmerli	(PT) EMT-B	2018-09-17	EMT-B	E0913718	2021-04-01	2020-02-2	E3398810	2020-03-31
Kiernan	Michael	(PT) EMT-B	2018-09-17	EMT-B	E0912829	2020-04-01	2020-02-2	E3394948	2020-03-31
Kreamer	Mark	(PT) EMT-B	2018-09-17	EMT-B	E900872	2020-04-01	2019-08-3	E3013665	2020-03-31
Moura	Steven	(FT) EMT-B	2018-09-17	EMT-B	E0903595	2020-04-01	2020-03-3	E3104990	2020-03-31
Chorlian	Alexandra	(PT) EMT-B	2018-08-20	EMT-B	E0912844	2020-04-01	2018-11-3	E3391676	2020-03-31
LaFlamme	Erik	(FT) EMT-B	2018-08-20	EMT-B	E0913000	2021-04-01	2019-05-3	E3397675	2020-03-31
Martel	Grace	(PT) EMT-B	2018-08-20	EMT-B	E0910271	2019-04-01	2019-07-3	E3264667	2019-03-31
Mayer	Katherine	(PT) EMT-B	2018-08-20	EMT-B	E0911766	2020-04-01	2019-09-3	E3365276	2020-03-31
Mumper	William	(FT) EMT-B	2018-08-20	EMT-B	E0913230	2021-04-01	2020-06-3	E3405421	2021-03-31
Regan	Jordan	(PT) EMT-B	2018-08-20	EMT-B	E0911551	2020-04-01	2020-07-3	E3342686	2020-03-31
Schafer	Louise	(FT) EMT-B	2018-08-20	EMT-B	E0907699	2020-04-01	2020-07-1	E3262403	2020-03-31
Shiba	Steven	(PT) EMT-B	2018-08-20	EMT-B	E0912559	2020-04-01	2020-03-3	E314461	2019-03-31
DiGenova	Meagan	(FT) EMT-B	2018-07-16	EMT-B	E0912968	2020-04-01	2020-02-2	E3394950	2020-03-31
Frias	Gabriel	(FT) EMT-P	2018-07-16	EMT-P	P0902954	2020-04-01	2019-07-3	M5059039	2020-03-31
Glabicky	John	(PT) EMT-P	2018-07-16	EMT-P	P875387	2019-04-01	2019-10-31		
Libby	Kaitlyn	(PT) EMT-B	2018-07-16	EMT-B	E0912719	2020-04-01	2020-02-2	E3390128	2020-03-31
Lora	Michael	(PT) EMT-B	2018-07-16	EMT-B	E0907835	2019-04-01	2020-04-3	E3251060	2020-03-31
McHugh	Alec	(FT) EMT-B	2018-07-16	EMT-B	E0912961	2020-04-01	2020-02-2	E3398386	2020-03-31
O'Connor	Colette	(FT) EMT-B	2018-07-16	EMT-B	E0912895	2020-04-01	2020-04-3	E3387206	2020-03-31
Reilly	Bryan	(FT) EMT-B	2018-07-16	EMT-B	E0912725	2020-04-01	2020-02-2	E3391677	2020-03-31



# EMD- Direct to Trinity

	2016 Total	2017 Total	Last 4 Qs Total	Q4 2017	Q1 2018	Q2 2018	Q3 2018
Alpha (BLS-P3)	1285	1405	1473	358	393	370	352
Bravo (BLS-P2)	385	410	459	112	132	121	94
Charlie (ALS-P1)	660	679	703	156	199	186	162
Delta (ALS-P1)	522	645	647	160	184	146	157
Echo (ALS-P1)	2	2	2	0	1	1	0
Total EMD by Trinity	2854	3141	3284	786	909	824	765

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

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

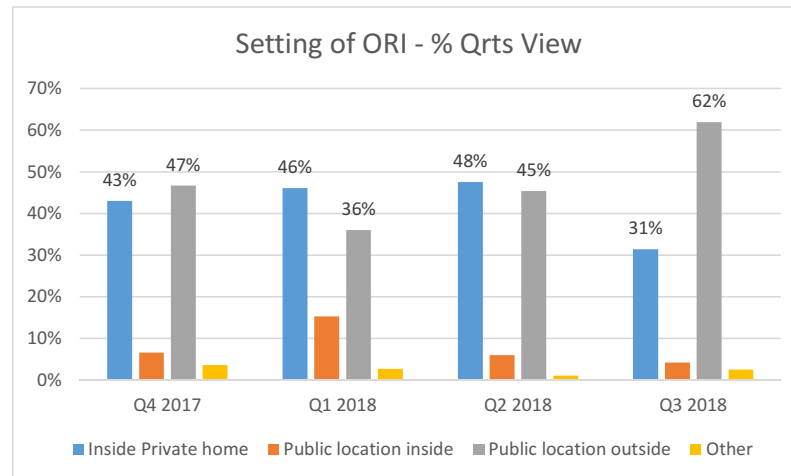
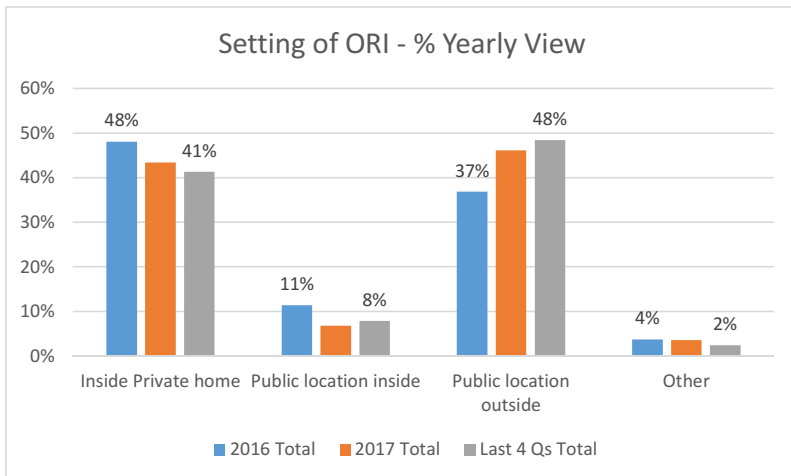
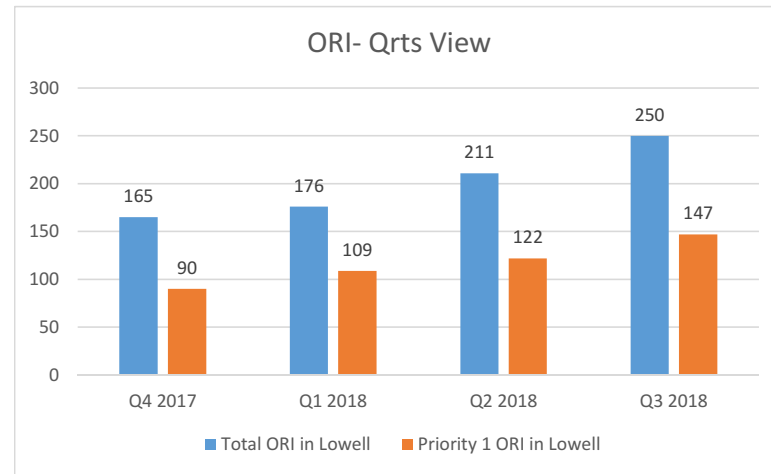
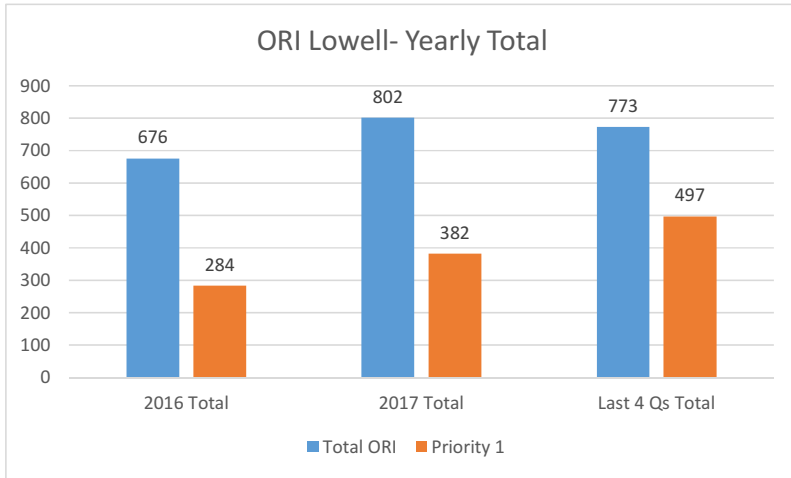
Bravo- results in BLS going lights and sirens to the patient

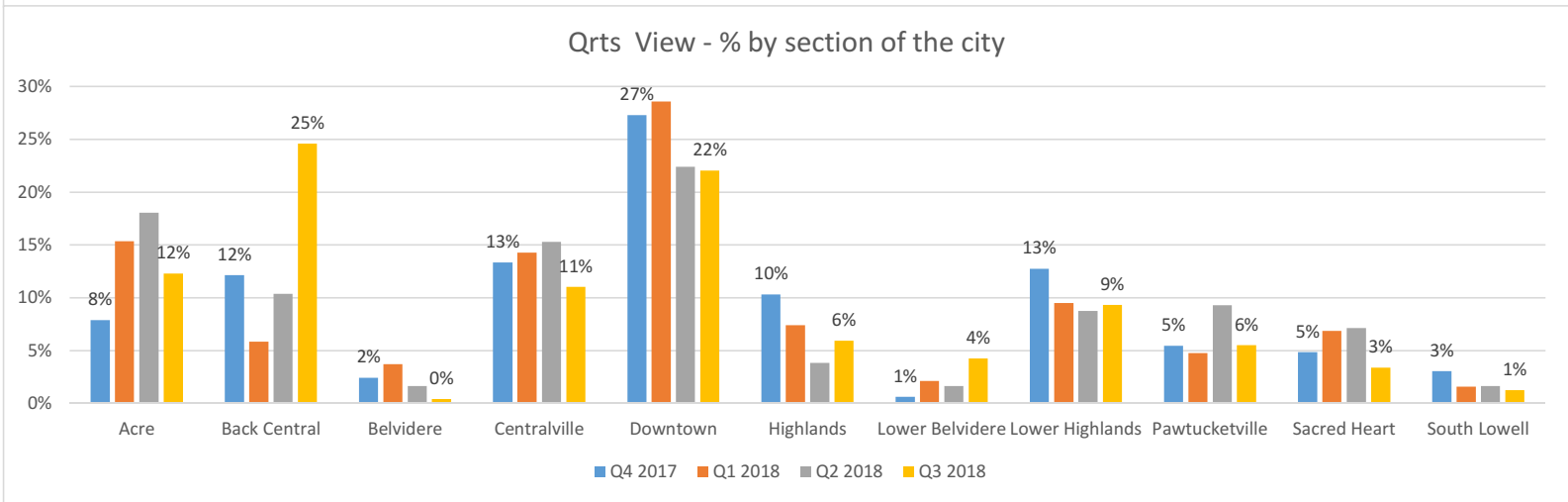
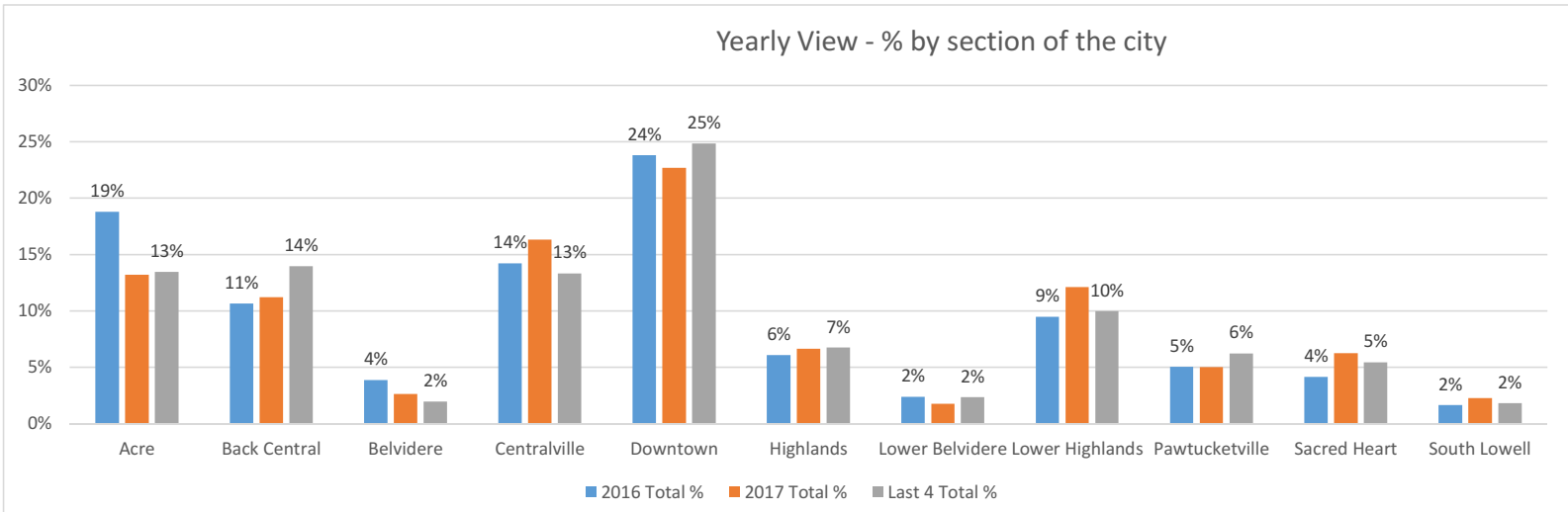
Charlie, Delta, Echo- results in ALS and BLS going lights and sirens to the patient

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.

	2016 Total	2017 Total	Last 4 Qs Total	Q4 2017	Q1 2018	Q2 2018	Q3 2018							
Total ORI in Lowell	676	802	773	165	189	183	236							
Priority 1 ORI in Lowell	371	468	420	90	109	102	119							
Trinity wide ORI	1111	1255	1163	261	296	286	320							
Trinity wide Priority 1	674	752	664	148	169	172	175							
<b>ORI in Lowell by setting:</b>														
Inside Private home	325	48%	348	43%	319	41%	71	43%	87	46%	87	48%	74	31%
Public location inside	77	11%	55	7%	61	8%	11	7%	29	15%	11	6%	10	4%
Public location outside	249	37%	370	46%	374	48%	77	47%	68	36%	83	45%	146	62%
Other	25	4%	29	4%	19	2%	6	4%	5	3%	2	1%	6	3%
<b>Gender:</b>														
Female	193	29%	234	30%	211	27%	48	29%	45	24%	51	28%	67	28%
Male	483	71%	558	70%	562	73%	117	71%	144	76%	132	72%	169	72%
Females U20	3	2%	6	3%	1	0%	0	0%	1	2%	0	0%	0	0%
Female 20-29	55	28%	70	30%	75	36%	12	25%	19	42%	21	41%	23	34%
Female 30-39	66	34%	101	43%	82	39%	25	52%	16	36%	17	33%	24	36%
Female 40 - 49	48	25%	37	16%	34	16%	10	21%	6	13%	7	14%	11	16%
Female 50- +	21	11%	20	9%	19	9%	1	2%	3	7%	6	12%	9	13%
Male U20	5	1%	2	0%	1	0%	0	0%	0	0%	0	0%	1	0%
Male 20-29	120	25%	163	29%	184	33%	42	33%	44	36%	44	31%	54	33%
Male 30- 39	151	31%	194	35%	168	30%	39	30%	46	33%	40	32%	43	30%
Male 40 - +	112	23%	115	21%	122	22%	27	22%	24	23%	33	17%	38	25%
Male 50 - +	95	20%	84	15%	87	15%	9	15%	30	8%	15	21%	33	11%

	Acre	127	19%	106	13%	104	13%	13	8%	29	15%	33	18%	29	12%
	Back Central	72	11%	90	11%	108	14%	20	12%	11	6%	19	10%	58	25%
	Belvidere	26	4%	21	3%	15	2%	4	2%	7	4%	3	2%	1	0%
	Centralville	96	14%	131	16%	103	13%	22	13%	27	14%	28	15%	26	11%
	Downtown	161	24%	182	23%	192	25%	45	27%	54	29%	41	22%	52	22%
	Highlands	41	6%	53	7%	52	7%	17	10%	14	7%	7	4%	14	6%
	Lower Belvidere	16	2%	14	2%	18	2%	1	1%	4	2%	3	2%	10	4%
	Lower Highlands	64	9%	97	12%	77	10%	21	13%	18	10%	16	9%	22	9%
	Pawtucketville	34	5%	40	5%	48	6%	9	5%	9	5%	17	9%	13	6%
	Sacred Heart	28	4%	50	6%	42	5%	8	5%	13	7%	13	7%	8	3%
	South Lowell	11	2%	18	2%	14	2%	5	3%	3	2%	3	2%	3	1%
<b>Home towns of patients:</b>															
	Lowell	361	62%	450	66%	471	61%	93	56%	123	65%	120	66%	135	57%
	Dracut	29	5%	22	3%	28	4%	7	4%	5	3%	6	3%	10	4%
	Billerica	26	4%	16	2%	20	3%	4	2%	4	2%	4	2%	8	3%
	Chelmsford	14	2%	20	3%	17	2%	1	1%	4	2%	3	2%	9	4%
	Tewksbury	11	2%	14	2%	16	2%	3	2%	5	3%	2	1%	6	3%
	Other/unknow	138	24%	165	24%	221	29%	57	35%	48	25%	48	26%	68	29%





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, and 2 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. 2<sup>nd</sup> 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 4<sup>th</sup>
    - 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 4<sup>th</sup> emergency in Lowell at this time