

Memoranda
Lawrence-Douglas County
Fire Medical Department

TO: David Corliss, City Manager
 Craig Weinaug, County Administrator

FROM: Mark Bradford, Fire Chief

CC: Diane Stoddard, Asst. City Manager
 Cynthia Wagner, Asst. City Manager
 Sara Plinsky, Asst. County Administrator

DATE: February 19, 2014

SUBJECT: 2013 Response Summary

Reviews of 2013 Fire and EMS responses reveal a continuation of the increase in services provided. Fire calls increased 1% and EMS calls increased 10% from 2012 total calls for service.

Fire calls in 2013 totaled 1,979 with the largest increase in calls due to fire alarms/detectors, overheated motors, and aircraft standby. The most service calls are for fire alarms, and this number increases around 10% each year. In 2013, there was a significant decline in calls for brush/grass fires, cooking fires and trash/dumpster fires. 2013 was the first year that we saw a reduction in structure fires in the last 6 years.

Below is a 4-Year summary of fire calls with the most prevalent 2013 call types.

Description	2010	2011	2012	2013	% Increase From 2012
FIRE CALLS - Most Prevalent					
Building fire	55	70	90	82	-9%
Cooking fire	28	52	37	25	-32%
Passenger vehicle fire	30	55	30	34	13%
Brush/Grass fire	25	52	60	40	-33%
Trash/dumpster fire	54	43	70	42	-40%
Gas Leak (natural gas or LPG)	64	73	95	111	17%
Overheated motor	20	13	9	16	78%
Unauthorized burning	14	18	30	24	-20%
Authorized controlled burning	21	44	32	35	9%
No fire found on arrival	67	75	78	92	18%
Downed power line/arcng	112	84	135	143	6%
Aircraft standby	4	9	12	16	33%
Hazardous Materials w/no HazMat	26	17	18	22	22%
Smoke scare, odor of smoke	34	46	54	42	-22%
Detector malfunction/unintentional	887	837	846	933	10%
Total All Fire Call Types	1982	1958	1968	1979	1%

The demand for medical services has increased 10% in both 2012 and 2013. There was a 3% increase in the demand for basic life support and advanced life support (BLS/ALS)

care in 2013, and these calls represent 54% of the total EMS calls for the year. Calls resulting in no treatment increased 25% and facility transfers increased 15%. The number of EMS calls cancelled/no incident found declined 8%.

Below is the 4-year summary of EMS calls with the most prevalent 2013 call types.

Description	2010	2011	2012	2013	% Increase From 2012
EMS CALLS - Most Prevalent					
BLS/ALS Care	4161	4426	4577	4693	3%
EMS Call - No treatment	687	670	867	1084	25%
EMS Facility Transfers	1157	1005	993	1139	15%
EMS Call - Cancelled or No Incident	705	669	684	632	-8%
Total ALL Ems Call Types	7763	7743	8213	8734	6%
EMS Patient Care Reports	6371	6404	6366	7018	10%

Total Response Time Performance

Total response time starts when the emergency communications center receives a 911 call and ends when the first appropriate fire or medical unit arrives on scene. Within our agency accreditation Standard of Cover, we have an established benchmark performance level for priority emergency medical incidents and structure fires. For these incidents we are trying to achieve the benchmark performance time at a 90 percent or 9 out of 10 times compliance level. It is important to note that as an accredited department we strive to be better than the commonly used "average" used by many departments. Our actual total response time is our baseline performance and is reviewed monthly and annually. As our call load continues to increase, we evaluate our baseline performance times to better analyze and plan for immediate or future operational needs. All citizens desire the same level of service and in order to work towards this goal we analyze trends in baseline performance. Analyzing trends allow us to understand our changing community and adjust current response efforts and plan for the future.

Standard of Cover Benchmarks - Total Response Time	Min: Sec
EMS Priority One First Arriving 90 % of Time - City	6:30
EMS Priority One First Arriving 90 % of Time - Rural	12:30
EMS Priority One First Arriving 90 % of Time - Countywide	9:30
Structure Fires First Arriving 90 % of Time - Lawrence	6:30

	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	YTD
EMS: City	7:05	6:27	5:59	6:42	6:35	6:25	6:59	6:26	6:36	6:28	7:07	6:36	6:40
EMS: Rural	9:44	14:17	12:20	13:45	16:01	15:33	11:38	15:51	14:10	15:13	13:18	13:36	14:28
EMS: Countywide	9:57	10:02	9:10	7:02	10:14	8:46	8:06	9:48	9:52	10:35	9:48	10:02	9:48
Structure Fires	8:37	6:05	6:19	5:53	5:50	6:58	5:51	5:54	7:19	7:21	6:16	5:15	6:58

In 2013 structure fire baseline performance was steady but continued to slightly exceed our benchmark goals. This past year we did not see any significant trends that impacted our baseline performance. As our call volumes continue to increase and the city develops farther away from current fire stations, the potential to see rising response time trends is expected.

Emergency medical call baseline performance is based on the time a trained EMS first responder arrives on the scene. EMS first responders can stabilize a patient until the arrival of an ALS transport medic unit. Because of lower call volumes, a few medical incidents in rural areas of the county where EMS first responders may not be available at all times, can quickly degrade our rural performance, as well as the overall countywide performance. Ideally, all citizens would receive the same level of medical service wherever they live but population densities and available resources dictate otherwise. Approximately 84 percent of our medical responses this past year occurred in the City of Lawrence.

Our medical benchmark performance standards are analyzed by two specific areas and one overall county performance standard. The specific standards are for the "City" which is comprised of the city of Lawrence. The "Rural" standard applies to all areas outside the City of Lawrence. By analyzing these areas separately and then combined we are able to look at response trends more specifically.

In 2013, based on analysis of our past performance, a trend that was identified was long dispatch alarm handling times related to emergency medical priority dispatching. As a result of this analysis, the department worked with Douglas County Emergency Communications (DCECC) to change the way medical emergencies were initially dispatched. This change along with a new staffing model, in DCECC, saw immediate positive results in dispatching medical units on priority calls which reduces the overall total response time. We saw an immediate reduction of dispatcher call processing time of 90 seconds.

In 2013, our overall medical baseline performance countywide is somewhat higher than our benchmark and in reviewing trends over the last six months, may continue to grow. Performance inside the City of Lawrence remains steady and has times over the last year matched the benchmark targets. Rural performance continues to exceed the benchmark goals by approximately two minutes. The location of a call and the time of day are two of the most important factors in analyzing rural response trends. Calls in the most remote areas during the day when first responder availability is the lowest is the most obvious trend we are continuing to monitor.

Attachments

Annual Comparison 2010 - 2013

"What we have today is to be ready for an uncertain tomorrow"

Mission: Committed to Saving and Protecting Lives and Property

Values: Compassion and Respect, Community Oriented, Diverse, Professionalism, Teamwork and Leadership.



Fire Incidents - 4 Year Period Comparisons

Incident Type	01/01/2013 to 12/31/2013	01/01/2012 to 12/31/2012	01/01/2011 to 12/31/2011	01/01/2010 to 12/31/2010
100 Fire, Other	0	0	1	6
111 Building fire	82	90	70	55
112 Fires in structure other than in a building	4	4	7	4
113 Cooking fire, confined to container	25	37	52	28
114 Chimney or flue fire, confined to chimney or flue	4	1	6	6
115 Incinerator overload or malfunction, fire confined	0	0	0	1
116 Fuel burner/boiler malfunction, fire confined	0	1	1	2
117 Commercial Compactor fire, confined to rubbish	0	0	1	1
118 Trash or rubbish fire, contained	1	4	4	7
121 Fire in mobile home used as fixed residence	0	1	2	1
122 Fire in motor home, camper, recreational vehicle	0	0	0	1
130 Mobile property (vehicle) fire, Other	4	2	1	1
131 Passenger vehicle fire	34	30	55	30
132 Road freight or transport vehicle fire	1	1	2	6
137 Camper or recreational vehicle (RV) fire	3	1	0	0
138 Off-road vehicle or heavy equipment fire	2	1	1	0
140 Natural vegetation fire, Other	3	13	11	5
141 Forest, woods or wildland fire	2	7	2	0
142 Brush or brush-and-grass mixture fire	23	27	22	19
143 Grass fire	17	43	30	6
150 Outside rubbish fire, Other	1	6	3	8
151 Outside rubbish, trash or waste fire	14	24	12	13
152 Garbage dump or sanitary landfill fire	0	0	0	1
153 Construction or demolition landfill fire	1	1	1	0
154 Dumpster or other outside trash receptacle fire	28	46	31	41
155 Outside stationary compactor/compacted trash fire	1	1	1	3
160 Special outside fire, Other	8	8	3	6
161 Outside storage fire	1	3	0	1
162 Outside equipment fire	4	3	1	4
170 Cultivated vegetation, crop fire, Other	1	0	2	0
171 Cultivated grain or crop fire	0	0	1	1
173 Cultivated trees or nursery stock fire	0	0	0	1
200 Overpressure rupture, explosion, overheat other	0	0	0	5
210 Overpressure rupture from steam, Other	0	0	1	0
211 Overpressure rupture of steam pipe or pipeline	0	0	0	2
221 Overpressure rupture of air or gas pipe/pipeline	1	2	0	0
231 Chemical reaction rupture of process vessel	0	0	1	1
240 Explosion (no fire), Other	1	1	0	0
241 Munitions or bomb explosion (no fire)	0	0	1	0
243 Fireworks explosion (no fire)	1	1	0	1
251 Excessive heat, scorch burns with no ignition	12	5	18	9
320 Emergency medical service, other	0	5	0	0
321 EMS call, excluding vehicle accident with injury	1	0	0	0
341 Search for person on land	0	0	1	0
342 Search for person in water	0	0	1	1

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Fire Incidents - 4 Year Period Comparisons

Incident Type	01/01/2013 to 12/31/2013	01/01/2012 to 12/31/2012	01/01/2011 to 12/31/2011	01/01/2010 to 12/31/2010
350 Extrication, rescue, Other	0	1	3	1
351 Extrication of victim(s) from building/structure	1	2	1	1
353 Removal of victim(s) from stalled elevator	20	11	22	15
354 Trench/below-grade rescue	0	0	0	1
355 Confined space rescue	0	0	0	2
356 High-angle rescue	0	1	0	0
357 Extrication of victim(s) from machinery	0	0	1	1
360 Water & ice-related rescue, other	0	0	1	3
3611 Rescue person in water near shore Pond/Lake/River	1	0	2	1
3612 Rescue person in swimming pool	0	2	0	0
363 Swift water rescue	0	0	1	0
400 Hazardous condition, Other	1	0	0	6
410 Combustible/flammable gas/liquid condition, other	4	3	3	4
411 Gasoline or other flammable liquid spill	28	28	33	26
412 Gas leak (natural gas or LPG)	111	95	73	64
413 Oil or other combustible liquid spill	7	5	5	5
420 Toxic condition, Other	3	0	2	0
421 Chemical hazard (no spill or leak)	5	4	5	3
422 Chemical spill or leak	6	4	7	11
424 Carbon monoxide incident	22	32	32	41
430 Radioactive condition, Other	0	0	1	0
440 Electrical wiring/equipment problem, Other	8	11	16	14
441 Heat from short circuit (wiring), defective/worn	2	5	8	8
442 Overheated motor	16	9	13	20
443 Breakdown of light ballast	3	4	3	2
444 Power line down	53	39	64	47
445 Arcing, shorted electrical equipment	59	45	71	90
451 Biological hazard, confirmed or suspected	1	1	0	0
460 Accident, potential accident, Other	1	1	0	0
461 Building or structure weakened or collapsed	0	0	1	0
462 Aircraft standby	16	12	9	4
463 Vehicle accident, general cleanup	1	1	2	1
471 Explosive, bomb removal (for bomb scare, use 721)	1	2	1	0
480 Attempted burning, illegal action, Other	0	1	0	0
500 Service Call, other	0	7	0	6
510 Person in distress, Other	0	2	1	0
511 Lock-out	0	0	1	0
512 Ring or jewelry removal	1	0	0	0
520 Water problem, Other	3	1	2	4
521 Water evacuation	0	0	0	2
522 Water or steam leak	5	3	2	12
531 Smoke or odor removal	38	39	42	35
540 Animal problem, Other	0	0	1	0
542 Animal rescue	0	0	2	0
550 Public service assistance, Other	2	0	0	0

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Incident Type	01/01/2013 to 12/31/2013	01/01/2012 to 12/31/2012	01/01/2011 to 12/31/2011	01/01/2010 to 12/31/2010
551 Assist police or other governmental agency	15	28	22	22
553 Public service	13	7	0	1
555 Defective elevator, no occupants	1	1	2	0
561 Unauthorized burning	24	30	18	14
571 Cover assignment, standby, moveup	1	1	0	0
600 Good intent call, Other	2	26	2	30
6113 Fire Call - Cancelled by another Agency	29	27	18	28
6115 Fire Call - Cancelled by Alarm Company	6	7	2	8
6117 Fire Call - Cancelled by Caller	5	7	6	9
621 Wrong location	1	1	0	1
6221 No Fire Incident found on arrival at location	92	78	75	67
631 Authorized controlled burning	35	32	44	21
632 Prescribed fire	3	4	0	6
641 Vicinity alarm (incident in other location)	0	1	0	1
650 Steam, Other gas mistaken for smoke, Other	3	0	5	4
651 Smoke scare, odor of smoke	42	54	46	34
652 Steam, vapor, fog or dust thought to be smoke	18	10	27	15
653 Smoke from barbecue, tar kettle	3	4	7	3
671 HazMat release investigation w/no HazMat	22	18	17	26
6711 Anthrax Scare no biohazard present	1	1	0	0
700 False alarm or false call, Other	1	10	0	34
710 Malicious, mischievous false call, Other	7	7	6	13
711 Municipal alarm system, malicious false alarm	0	2	4	6
712 Direct tie to FD, malicious false alarm	0	4	0	7
713 Telephone, malicious false alarm	2	2	0	0
714 Central station, malicious false alarm	8	4	7	9
715 Local alarm system, malicious false alarm	4	3	8	3
721 Bomb scare - no bomb	0	2	1	1
730 System malfunction, Other	17	7	13	20
731 Sprinkler activation due to malfunction	7	7	2	14
732 Extinguishing system activation due to malfunction	0	3	1	3
733 Smoke detector activation due to malfunction	118	102	95	148
734 Heat detector activation due to malfunction	3	4	5	11
735 Alarm system sounded due to malfunction	107	103	98	131
7351 Medical Panic Alarm sounded due to malfunction	12	8	9	6
736 CO detector activation due to malfunction	24	17	17	11
740 Unintentional transmission of alarm, Other	11	17	11	21
741 Sprinkler activation, no fire - unintentional	10	16	18	16
742 Extinguishing system activation	2	0	5	0
743 Smoke detector activation, no fire - unintentional	262	260	248	210
744 Detector activation, no fire - unintentional	99	85	98	81
745 Alarm system activation, no fire - unintentional	247	201	202	202
746 Carbon monoxide detector activation, no CO	14	16	15	13
813 Wind storm, tornado/hurricane assessment	0	0	4	0
814 Lightning strike (no fire)	2	1	1	7

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Fire Incidents - 4 Year Period Comparisons

Incident Type	01/01/2013	01/01/2012	01/01/2011	01/01/2010
	to 12/31/2013	to 12/31/2012	to 12/31/2011	to 12/31/2010
815 Severe weather or natural disaster standby	0	0	1	0
900 Special type of incident, Other	0	1	0	6
9005 Overcrowding or Locked/Blocked Exit	0	2	3	6
9006 Grilling on Deck	6	3	7	2
911 Citizen complaint	1	4	11	4
Totals	1979	1968	1958	1982

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EMS Incidents - 4 Year Period Comparisons

Incident Type	01/01/2013	01/01/2012	01/01/2011	01/01/2010
	to 12/31/2013	to 12/31/2012	to 12/31/2011	to 12/31/2010
300 Rescue, EMS incident, other	0	0	0	4
311 Medical assist, assist EMS crew	0	10	0	0
3211 EMS call BLS care only all patients	482	926	1028	890
3212 EMS call ALS care on one or more patients	4211	3651	3398	3271
3214 EMS call all patients no treatment	1084	867	670	687
3215 Medical Transfer - Non Emergency	865	754	736	867
3216 Medical Transfer - Emergency	274	239	269	290
3221 Motor vehicle accident with injuries	193	197	171	229
3222 Motor vehicle accident - injuries/extrication	24	35	27	22
3231 Motor vehicle versus pedestrian/bicycle accident	47	34	30	35
3241 Motor Vehicle Accident - No obvious Injuries/asses	132	119	73	109
3242 Motor Vehicle Accident - Pateint Refusal	82	80	76	102
352 Extrication of victim(s) from vehicle	0	4	0	0
3811 Medical Standby - For Law Enforcement	30	29	30	28
3812 Medical Standby - County Structure Fire	28	42	22	29
3814 Medical Standby - KU Event	79	81	68	62
3815 Medical Standby - Non KU Event	58	40	49	46
3819 Medical Standby - Not Otherwise Classified	1	1	0	0
5541 Assist person no obvious injury or assessment	470	398	399	356
6114 EMS Call - Cancelled by another Agency	224	250	197	230
6116 EMS Call - Cancelled by Alarm Company	13	5	7	9
6118 EMS Call - Cancelled by Caller	100	46	44	42
6222 No EMS Incident found on arrival at location	295	383	421	424
661 EMS call, party transported by non-fire agency	13	8	14	18
7451 Medical Panic Alarm - Unintentional	29	14	14	13
Totals	8734	8213	7743	7763

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CSI Incidents - 4 Year Period Comparisons

Incident Type	01/01/2013 to 12/31/2013	01/01/2012 to 12/31/2012	01/01/2011 to 12/31/2011	01/01/2010 to 12/31/2010
9001 Coroner Scene Investigation	131	112	108	93
9002 Coroner Scene Investigation - No Medic Response	38	55	57	65
Totals	169	167	165	158

2013 Call Volume and Total Response Time Monthly Report

Lawrence-Douglas County Fire Medical

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	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	YTD	Percent
EMS Incidents Lawrence	608	545	561	594	637	624	535	631	696	699	619	616	7,365	84.3
EMS Incidents Eudora	37	30	39	35	39	40	36	32	35	28	31	42	424	4.9
EMS Incidents Baldwin	28	24	27	30	26	24	34	28	34	40	31	34	360	4.1
EMS Incidents County	42	51	47	46	50	48	53	47	48	44	49	60	585	6.7
EMS Incidents Total	715	650	674	705	752	736	658	738	813	811	730	752	8,734	
Fire Incidents Total	145	144	136	162	163	129	155	156	203	197	194	195	1,979	
Coroner Incidents Total	30	11	14	12	19	13	12	11	7	15	10	15	169	
Total Incidents	890	805	824	879	934	878	825	905	1023	1023	934	962	10,882	

	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	YTD
EMS: City	7:05	6:27	5:59	6:42	6:35	6:25	6:59	6:26	6:36	6:28	7:07	6:36	6:40
EMS: Rural	9:44	14:17	12:20	13:45	16:01	15:33	11:38	15:51	14:10	15:13	13:18	13:36	14:28
EMS: Countywide	9:57	10:02	9:10	7:02	10:14	8:46	8:06	9:48	9:52	10:35	9:48	10:02	9:48
Structure Fires	8:37	6:05	6:19	5:53	5:50	6:58	5:51	5:54	7:19	7:21	6:16	5:15	6:58

Standard of Cover Benchmarks - Total Response Time	Min:Sec
EMS Priority One First Arriving 90 % of Time - City	06:30
EMS Priority One First Arriving 90 % of Time - Rural	12:30
EMS Priority One First Arriving 90 % of Time - Countywide	09:30
Structure Fires First Arriving 90 % of Time - Lawrence	06:30