MIDDLESEX – LONDON EMS 2015 PERFORMANCE REPORT

Middlesex – London Emergency Medical Services Authority

Tel: 519-679-5466
Fax: 519-679-9509

340 Waterloo Street
London, ON N6B 2N6

www.mlems.ca
@mlems911

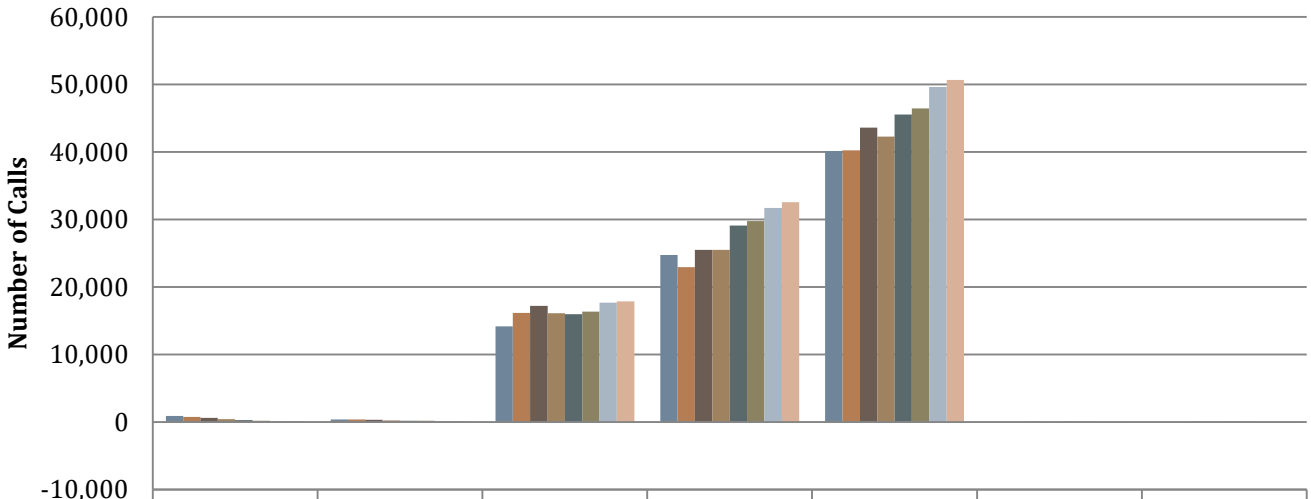
TABLE OF CONTENTS

PERFORMANCE

Number of Calls for Service Received

Traditionally, this report has shown the total number of calls including standby movements, and can vary significantly with changes to deployment policies. For example, a single deployment change reduced 2015 Priority 8 calls by over 5,000. To better reflect the number of calls with potential patient contact, beginning with this report, we report on Calls for Service as Priority 1 through 4. In 2015, the number of calls for service was **50,649** – an increase of **2.05%** over 2014 (See Figure 1), and an increase of over **26.2%** since 2008 where calls for service were at 40,132. Approximately **89.49%** of the incidents attended by Middlesex-London EMS occur within the City of London.

Figure 1



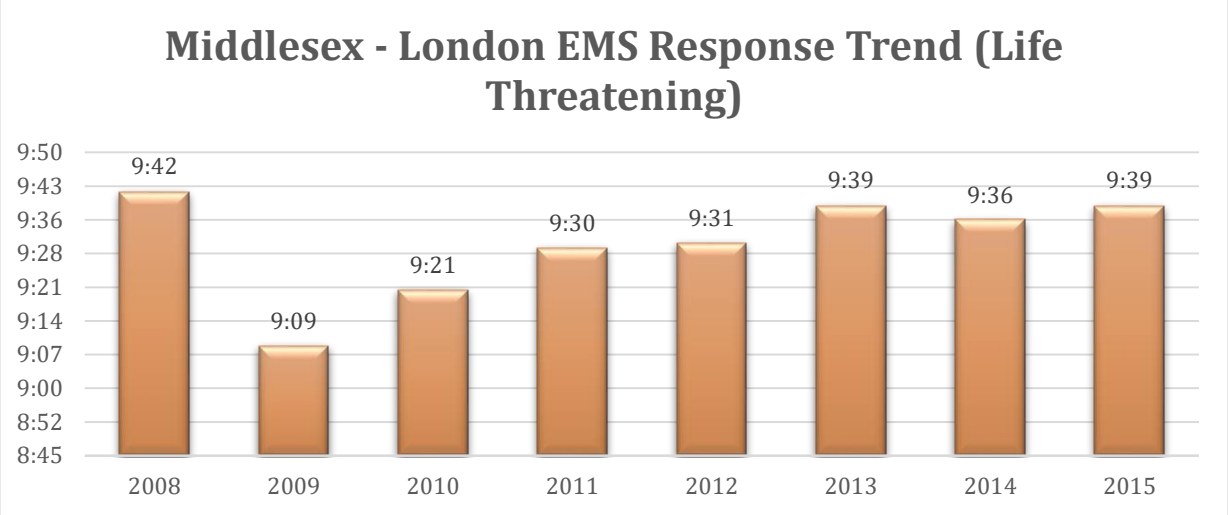
	Code 1	Code 2	Code 3	Code 4	Total Calls - Code 1-4 Only	Percent increase year by year	Total % increase since 2008
2008	887	366	14,135	24,744	40,132	0.00%	0.00%
2009	753	381	16,135	22,950	40,219	0.22%	0.22%
2010	578	305	17,211	25,489	43,583	8.36%	8.60%
2011	428	233	16,104	25,490	42,255	-3.05%	5.29%
2012	277	190	15,967	29,106	45,540	7.77%	13.48%
2013	196	158	16,330	29,741	46,425	1.94%	15.68%
2014	129	124	17,669	31,709	49,631	6.91%	23.67%
2015	137	134	17,844	32,534	50,649	2.05%	26.21%

Response Time

(Length of time for Middlesex–London EMS to arrive at an emergency scene)

Figure 2 below shows Middlesex-London EMS service-wide 90th percentile response time trend for life-threatening code “4” calls. 2015’s response time has increased slightly to 9 mins 39 secs from 2014’s time of 9 mins 36 secs. County response time decreased slightly from 14 mins 56 secs in 2014 to 14 mins 52 secs in 2015.

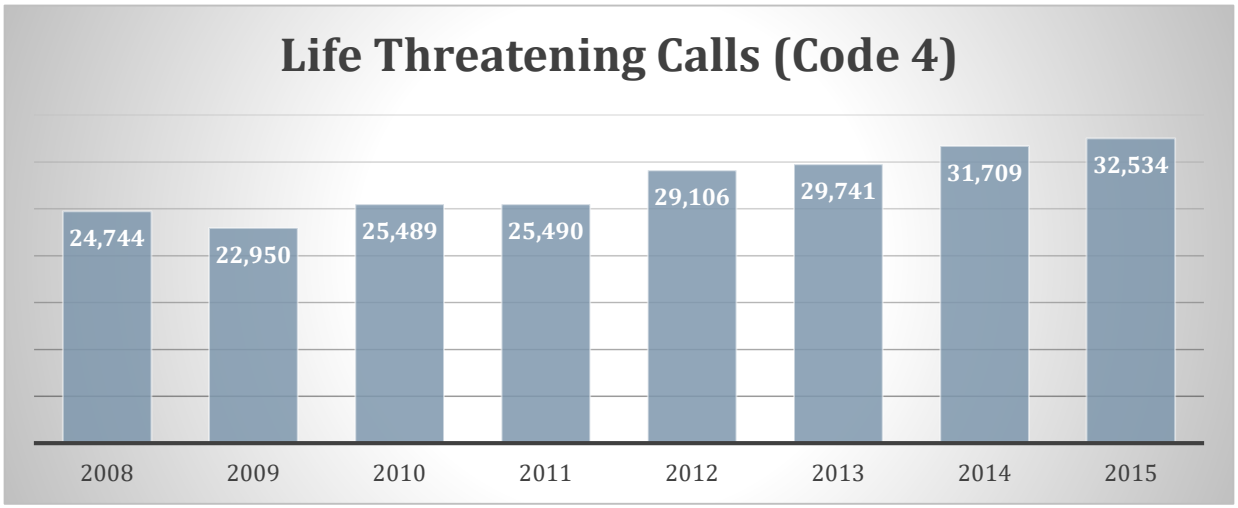
Figure 2



Number of Life Threatening Calls (Code 4)

In 2015, the number of life threatening calls dispatched was 32,534 – an increase of 2.6% over 2014 (See Figure 3)

Figure 3



Ambulance Calls per Station

Figure 4 below shows the number of ambulance calls broken down by response station.

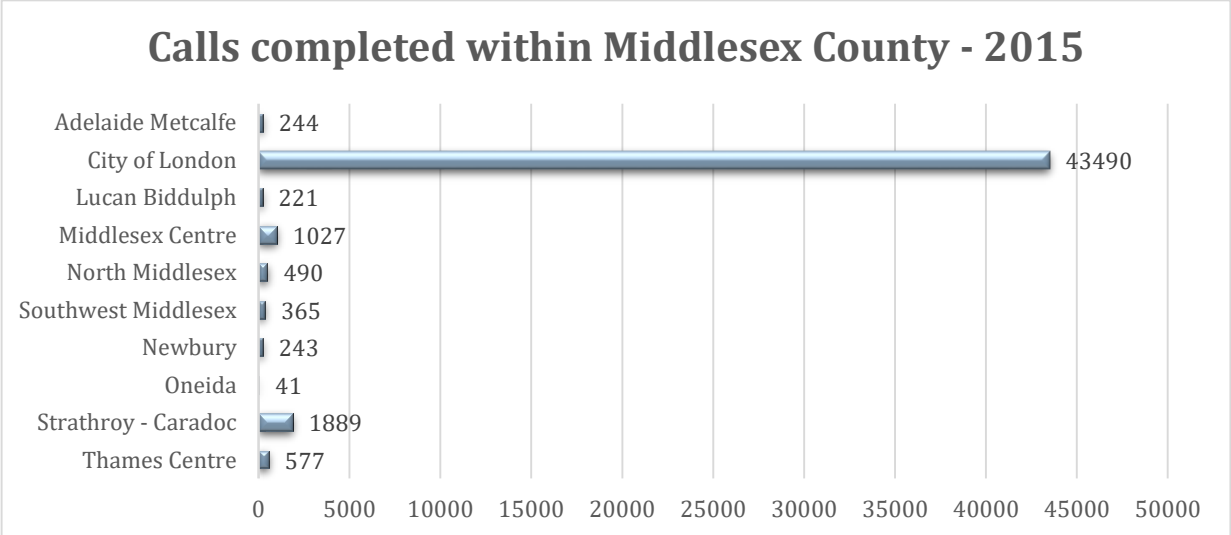
Figure 4

Station	Station Name	Priority 1	Priority 2	Priority 3	Priority 4	Priority 8	Total
1	LONDON - Waterloo St.	38	32	6,170	10,746	5,084	22,070
2	LONDON - Meg Dr.	15	10	1,531	3,059	1,527	6,142
4	LONDON - Trossack's Av.	15	24	1,724	3,137	1,858	6,758
6	GLENCOE	11	1	269	369	141	791
7	STRATHROY	13	2	730	1,368	1,170	3,283
8	PARKHILL	0	1	144	301	543	989
9	LUCAN	2	1	152	371	367	893
10	THAMES CENTRE - Nilestown	7	10	597	1,306	2,437	4,357
12	KOMOKA	2	1	380	795	1,369	2,547
13	LONDON - Colonel Talbot Rd.	0	6	1,087	1,948	2,446	5,487
14	LONDON - Hyde Park Rd.	4	3	992	1,631	3,175	5,805
15	LONDON - Trafalgar St.	20	39	1,436	2,862	1,463	5,820
16	LONDON - Horizon Dr.	10	4	2,632	4,641	2,372	9,659
MIDDLESEX-LONDON EMS - TOTAL		137	134	17,844	32,534	23,952	74,601

Calls completed within Middlesex County Boundaries

Priority 1-4 calls completed within the County of Middlesex broken down by lower-tier (See Figure 5). During 2015, Middlesex-London completed 392 requests for service in other municipalities, while other municipalities assisted within Middlesex-London 920 times.

Figure 5



Average Chute Time for Life Threatening Calls (Code 4)

The Average Elapsed Time (T2–T3) Crew Notified of Life Threatening Call to Crew Mobile on call (Reaction Time)

Middlesex-London EMS Policy for Chute Time on Code 4 Calls is 1 minute

2015 Average Code 4 Chute Time for Middlesex-London EMS: 37 seconds

Dispatch Priority and Return Priority

In Figures 6 and 7, you can see the issues with Dispatch "over triage" of calls. In 2015, Paramedics were sent out Priority 4 (Lights and Sirens) to calls 64.20% of the time, only returning Priority 4, 11.36% of the time.

Figure 6

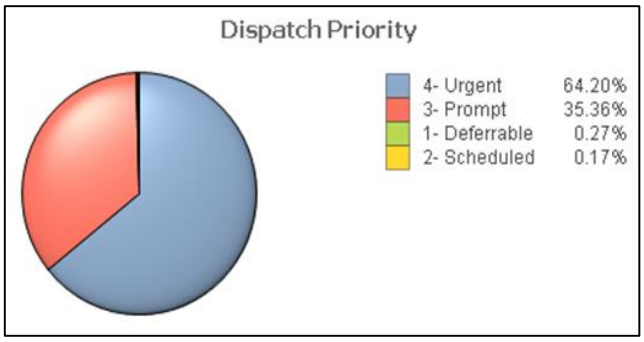
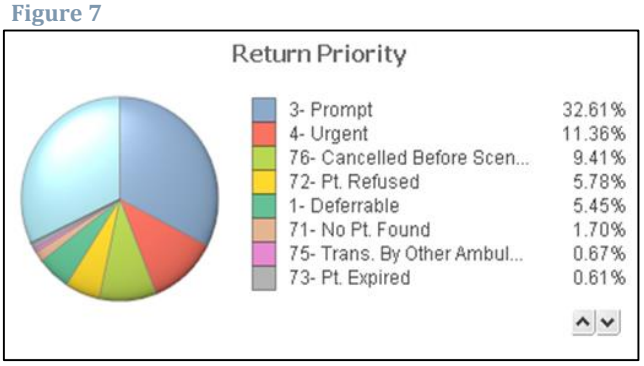


Figure 7



Top Dispatch Problems and Top Primary Problems

Figures 8 illustrates the Top Dispatch Problems (what the paramedics are told when they are assigned to the call by London CACC). Figure 9 illustrates the Top Primary Problems (what the actual problem is with the patient when the paramedics arrive on scene.) In 2015, the Top Dispatch Problems were for Respiratory Distress, General Illness/Weakness, Falls, Chest Pain, Motor Vehicle Collisions, Muscular/Skeletal Trauma and Abdominal Pain.

Figure 8

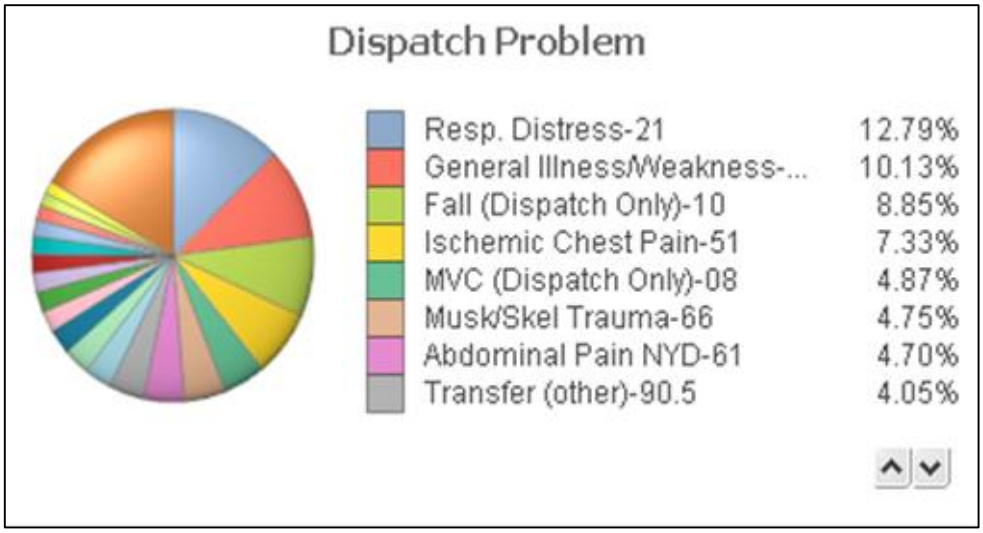
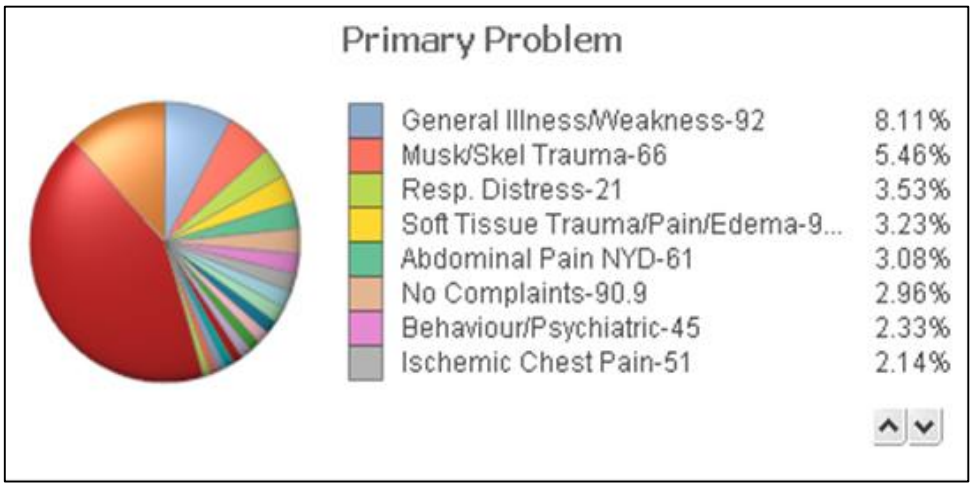


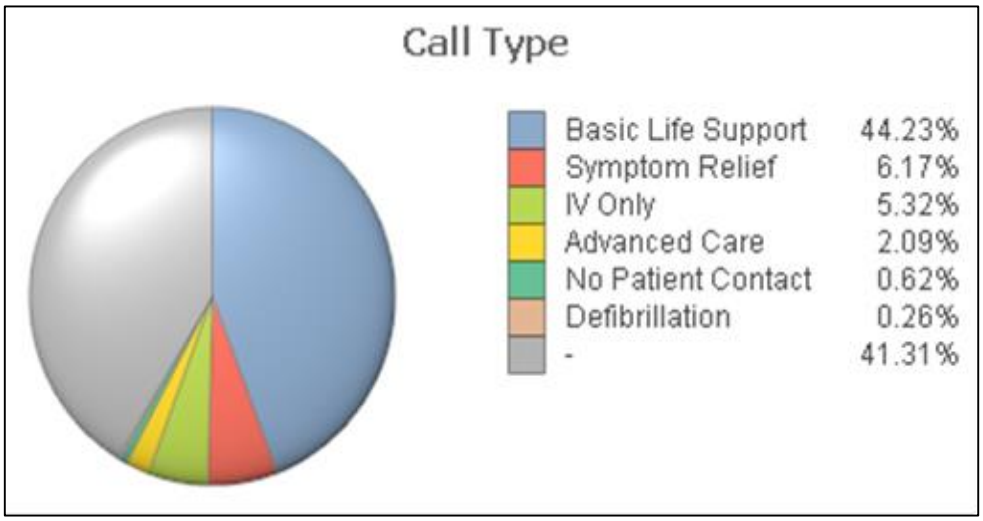
Figure 9



Call Type

Figure 10 illustrates the types of calls that the paramedics are responding to. The majority of the calls (44.23%) were considered Basic Life Support Calls. For all of the calls in 2015, 2.09% were considered Advanced Care. Where the care seems to be most effective is in the areas of Primary Care Paramedics with enhanced skills of Symptom Relief and Intravenous Therapy Certification.

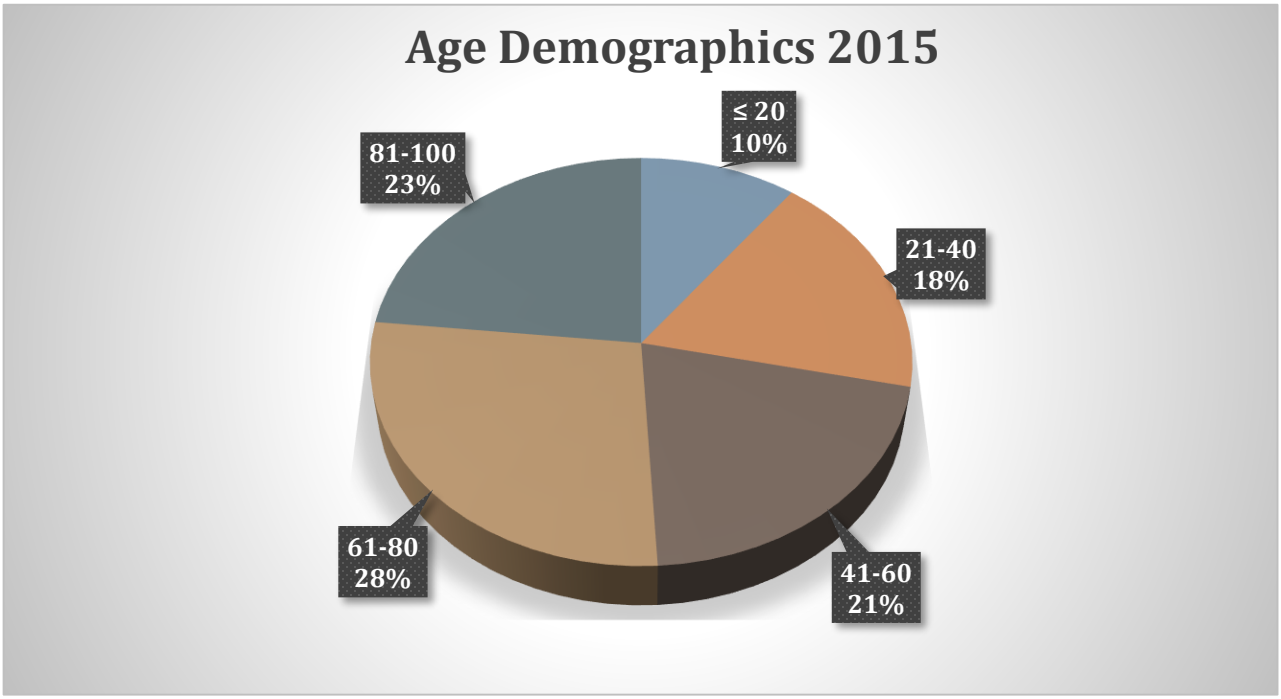
Figure 10



Age Demographics

In 2014, of all the patients assessed by Middlesex-London EMS Paramedics, the majority of the patients (51%) are older than 60 years of age. Middlesex-London EMS is experiencing increasing EMS demand from an aging population. (Figure 11).

Figure 11



COMPLIANCE AND QUALITY ASSURANCE

Land Ambulance Response Time Standard

Ontario Regulation 368/10 as consolidated into O. Reg 257/00 requires ambulance service delivery agents to adopt municipally-developed response time plans for cardiac arrest patients and CTAS (Canadian Triage Acuity Scale) 1, 2, 3, 4 and 5 patients receiving emergency responses. As the designated delivery agent for ambulance service for Middlesex County and the City of London, the Council for Middlesex County adopted the performance plan respecting response times for 2015.

Middlesex-London EMS continues to monitor and exceed all targeted response time standards. (Figure 12) (Data Source: iMedic Analytics)

Figure 12

JANUARY 1, 2015- DECEMBER 31, 2015	Target Response Time	% Achieved Target	Number of Calls that met response time	% Achieved
SUDDEN CARDIAC ARREST (defibrillator on scene)	6 minutes	50%	227/283	78.82%
CTAS Level				
1	8 minutes	50%	992/1184	83.78%
2	8 minutes	50%	6582/8684	75.79%
3	8 minutes	50%	14580/22401	65.09%
4	12 minutes	50%	5431/6259	86.77%
5	12 minutes	50%	1744/2050	85.07%

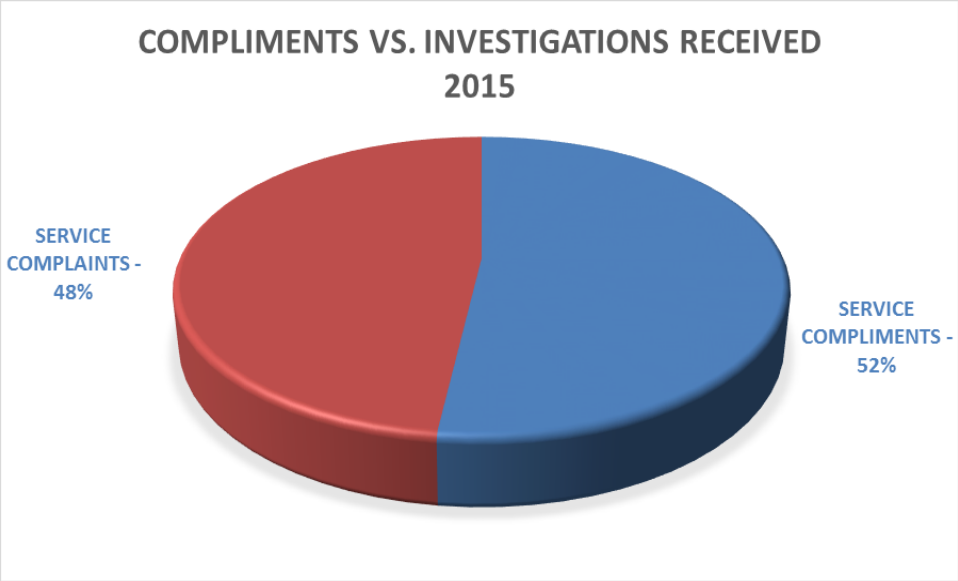
Regulatory Compliance Division

The Regulatory Compliance Division is responsible for auditing and maintaining policies and procedures for the operation of Middlesex-London EMS and its related activities to prevent illegal, unethical, or improper conduct. This division manages and conducts all workplace investigations of complex and unique scale and works closely with the Ministry of Health and Long-Term Care, specifically the Investigations, Certification and Regulatory Compliance Group (ICRCG), Provincial Coroner's Office, local and municipal Police Services, Special Investigations Unit (SIU) and any other external investigative body.

In 2015, Middlesex-London EMS received 62 complaints regarding service. Of the 62 incidents, 95% have been investigated and a conclusion has been reached and closed. 5% of the complaints have been investigated and found to be a non-issue due to a lack of definitive information.

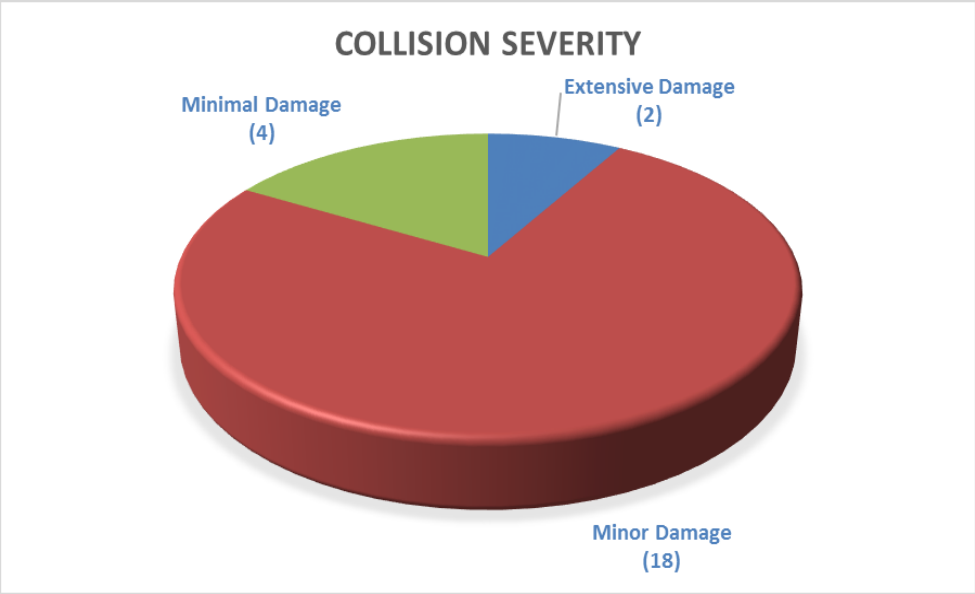
The Regulatory Compliance Division also handles and processes all compliments that are received from the public or allied agencies. In 2015, MLEMS received 77 compliments for paramedic actions. (See Figure 13).

Figure 13



Another aspect of investigations is Ambulance Collisions. In 2015, there were 24 reportable incidents involving Middlesex-London EMS vehicles. Of the 24 incidents, 11 occurred while responding to the scene of a call and 2 occurred while returning to a hospital with a patient on board. See Figure 14 for a breakdown of collision severity.

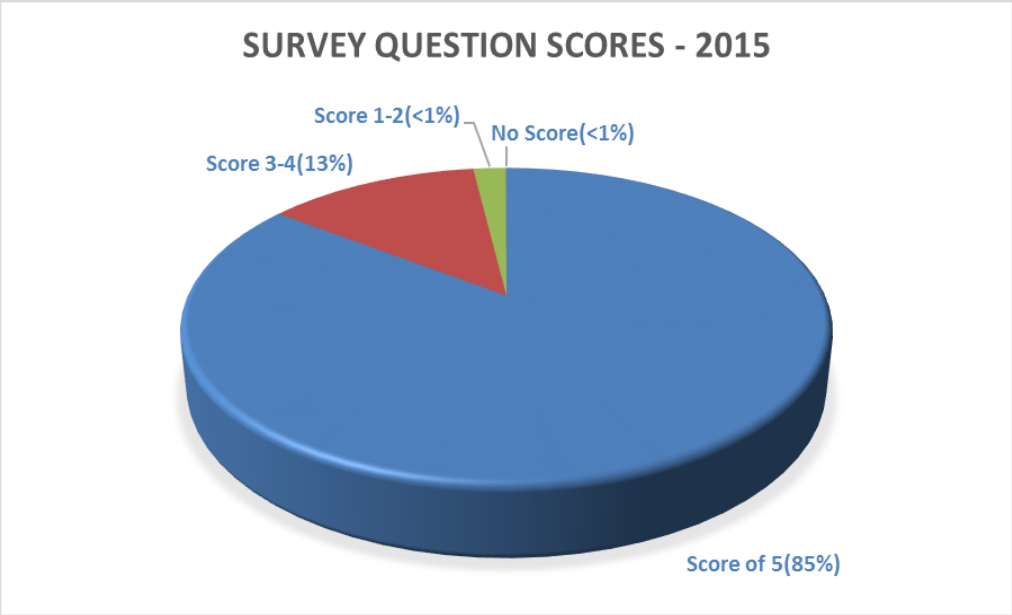
Figure 14



Customer Survey

Middlesex-London EMS relies on valuable feedback from the community that we serve. Randomized customer surveys are sent out to clients who have utilized the EMS Service. In 2015, 455 surveys were sent out with 281 surveys being returned completed (61.76% return rate). Each survey has 10 questions, and they are scored on a scale of 1 – 5 with a score of 5 being excellent and a score of 1 being unacceptable. 98% of the surveys came back with positive feedback (> 3 out of 5). See Figure 15. In December, the survey format changed to a fuller patient experience survey, prompting the client to choose words to describe eight different stages of the experience, from placing the 9-1-1 call through transfer of care to hospital staff. More comprehensive results will be available in 2016, but the initial 65 surveys sent out in December revealed only a few negative comments related to offload delays in hospital.

Figure 15

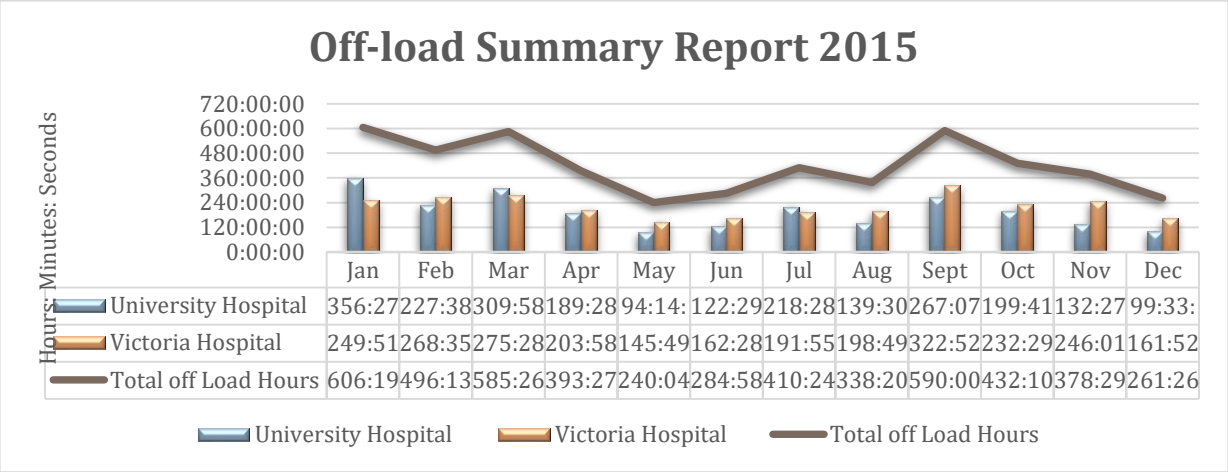


EFFICIENCY AND COST INDICATORS

Offload Delay

Over the course of 2015, Ambulance Offload Delay hours fluctuated throughout the year with peaks in March and September, and a very significant drop over the summer months. (Figure 16)

Figure 16



Ambulance Offload delay means all minutes >30 minutes in the Offload phase of patient transfer. Calculation = Time Arrive Hospital to Offload Time less 30 minutes.

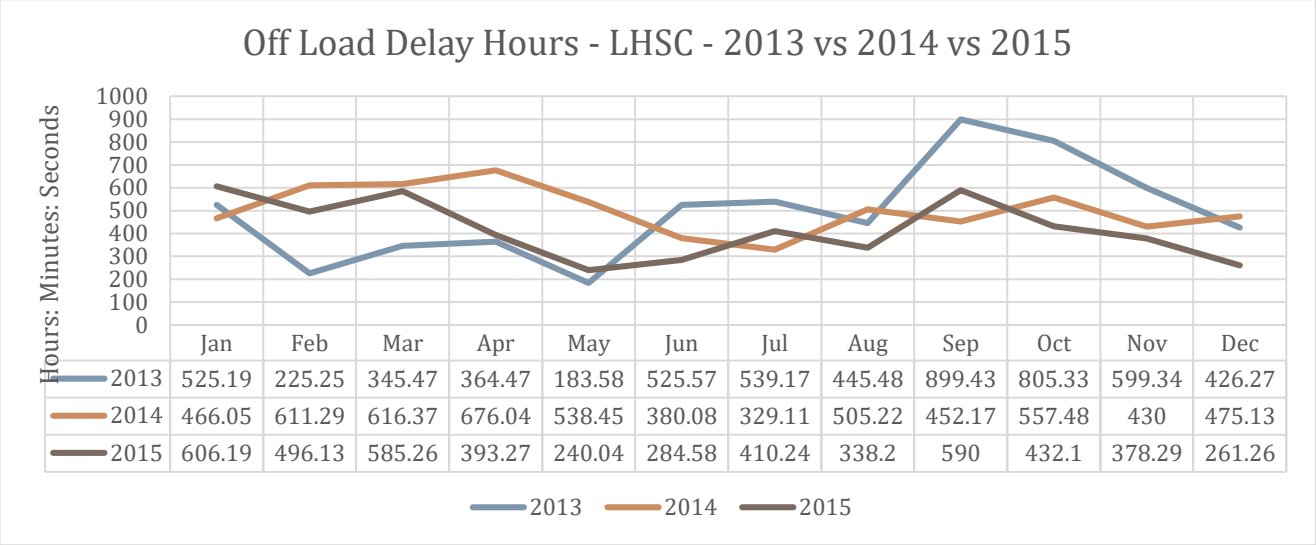
Figure 17 indicates the number of equivalent 24 hour ambulance days which were lost to offload delays over the course of each month in 2015.

Figure 17

	Rolling Monthly Results -2015											
Indicator Definition	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
The number of 24 hour ambulance days lost to offload delays over the course of a month	25.3	20.7	24.4	16.4	10	11.9	17.1	14.1	24.6	18	15.8	10.9

Figure 18 shows that year over year, Offload Delay is continuing as a significant operational concern. (Data Source: iMedic ePCR)

Figure 18



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2013	525.19	225.25	345.47	364.47	183.58	525.57	539.17	445.48	899.43	805.33	599.34	426.27
2014	466.05	611.29	616.37	676.04	538.45	380.08	329.11	505.22	452.17	557.48	430	475.13
2015	606.19	496.13	585.26	393.27	240.04	284.58	410.24	338.2	590	432.1	378.29	261.26

COMMUNITY INVOLVEMENT & PUBLIC ACCESS DEFIBRILLATOR PROGRAM

In 2015, the Middlesex-London EMS Public Access Defibrillator program continued to save lives by promoting public CPR/AED awareness through community training sessions. 13 new Automatic External Defibrillators were placed throughout London and Middlesex and over 180 people participated in CPR/AED awareness training. As a Canadian Red Cross training partner, 232 people were certified in 19 Standard First Aid and CPR courses.

County Council CPR Training

We also began work developing an AED registry to map out all of our AEDs in the City. Using Pulse Point and London Central Ambulance Communications Centre, we have initiated a registry that allows dispatchers to tell 911 callers where the closest AED is located, and provide instruction over the phone on how to use it, while waiting for Paramedics. The Pulse Point App is available for smart phone users to download and view a map of where AEDs are located in the community.

"Smart" AED Cabinet

Our latest initiative is a pilot program utilizing "Smart" AED cabinets that display a short CPR/AED training video for passersby.

Olympic Gold Medalist Scott Moir helped promote our community AED program at his fundraising golf tournament held in August.

We take pride in the community events that we are involved with. All collaborative work goes hand in hand with allied community partners to focus on community awareness through proactive goals and initiatives. Our list of contributions include:

- Race Against Drugs
- Breakfast Club of Canada
- Habitat for Humanity
- IMPACT (Impaired Minds Produce Actions Causing Trauma)
- Ronald McDonald House
- Children's Safety Village
- Helmets on Kids
- Senior Falls Prevention
- London-Middlesex Road Safety Committee

Scott Moir

Along with the Boys and Girls Club of London, we hosted a junior Amazing Race, in which our main station was a "pit stop" to learn and perform CPR.

McHappy Day

Pride Parade 2015

We hosted our first ever Paramedic Training Camp which ran for one week, and was aimed at high school students who were interested in the field of paramedicine. During this time, they were fully certified in First Aid and CPR, and had tours of both hospitals, ORNGE, and other various sites. They had a lot of hands on practice with various skills and basic procedures. We received a lot of positive feedback, and we will continue to run this program in the future.

Junior Amazing Race

Helmets on Kids

CARDIAC ARREST SURVIVAL

Post – Cardiac Arrest Survival

Each year, Middlesex-London EMS holds its Annual Cardiac Arrest Survival Day. This event is held each year to celebrate survivors of out-of-hospital Cardiac Arrest and to recognize the first responders who played a role in saving them. This event also give first responders an opportunity to meet the people they cared for and see how they've gotten on with their lives.

In 2015, Middlesex-London EMS Paramedics successfully resuscitated 36 patients, who were able to be discharged from hospital after their cardiac event. On the Annual Survivor Day, Middlesex-London EMS was pleased to have 18 of these patients come to the Event.

TRAINING DIVISION

New Employees

In 2015, we hired 29 paramedics in 3 separate hirings: in the spring, we hired 17 part-time paramedics, while in October, we hired 4 full-time advanced care paramedics, and in December 8 additional part-time paramedics were hired.

Each paramedic has a minimum of two years post-secondary education in a Paramedic Program at a Community College. Orientation training with the new hires typically last 3-4 weeks. During their orientation, they were given a tour and learned about our allied partners who they will collaborate with on a daily basis. This included ORNGE air ambulance, London airport, University Hospital ER, Central Ambulance Communications Center, LHSC Obstetrical unit, Victoria Hospital ER, University Hospital cardiac catheterization lab, and our MLEMS stations.

In November and December, we began our training program for the implementation of our new stretchers. All staff had both in-class and hands-on practice with the new equipment.

Stretcher Training

In the spring, we had 2 teams compete in the National Paramedic Competition in Durham Region. Our Advanced Care Paramedic team placed 4th, and our Primary Care Paramedic Team placed 9th. It was a great experience for all involved.

A retired ambulance was retained and converted into a Mobile Paramedic Training Unit. This will be used for continuing paramedic education, simulation practice, testing, along with community events

During 2015, MacMaster Chevrolet in London donated a car for our Public Access Defibrillation program, to assist in AED placement, and community events. We are very thankful for their continued support of our program.

MISSION STATEMENT

Middlesex-London EMS Mission Statement

To deliver an efficient and high quality emergency response and care service to the population of Middlesex – London, with required provincial targets and standards as a minimum service level, and to contribute to the health of the community through active collaboration with other health care, community and emergency services partners.

GLOSSARY

ADRS: Ambulance Dispatch Reporting System

AED: Automatic External Defibrillator – An electronic device that applies an electric shock to restore the rhythm of a fibrillating heart.

CACC: Central Ambulance Communications Centre

Chute Time: The time it takes an ambulance to depart once notified of a call.

Code 1 (Deferrable): A routine call that may be delayed without detriment to the patient (e.g. a non-scheduled transferred; a minor injury).

Code 2 (Scheduled): A call which must be done at a specific time, for example because of special treatment or diagnostic facility requirement (e.g. inter-hospital transfers or a scheduled meet with an air ambulance).

Code 3 (Prompt): A call that should be performed without delay (e.g. serious injury or illness).

Code 4 (Urgent): A call that must be performed immediately where the patient's 'life or limb' may be at risk (e.g. Vital Signs Absent patient or unconscious head injury).

CTAS Level: The 'Canadian Triage & Acuity Scale' is used to assign a level of acuity to a patient. Acuity refers to the gravity of the situation – the potential for death and/or irreversible illness. CTAS is a tool that more accurately defines the patient's need for care. Assignment of the CTAS level is to be based upon not only the presenting complaint identified on the initial assessment made by the paramedic, but also on their examination findings, and response to treatment.

Dispatch Priority Code: The priority code number that is assigned to the call by the dispatcher. It identifies the priority under which the ambulance responds to the call location (e.g. an urgent response would be entered as Code 4).

Dispatch Problem: The problem given to the crew by the Ambulance Dispatcher indicating the nature of the problem of the call they are responding to.

iMedic ePCR: The electronic documentation software used to chart the Ambulance Call Report.

Offload Delay: Offload delay measures the offload of patients at local hospitals, which can impact the resources required and availability to respond to calls.

Primary Problem: The primary complaint of the patient upon assessment by the paramedic crew.

Response Time: Response time means the time measured from the time of notice is received to the earlier of either the arrival on-scene of a person equipped to provide any type of defibrillation to sudden cardiac arrest patients or the arrival on-scene of the ambulance crew.

Return Priority Code: The priority code number that is assigned to the call by the ambulance crew. It identifies the priority under which the patient is transported (e.g. a prompt return to a medical facility would be entered as a Code 3).