

# Middlesex-London Paramedic Service

## 2017 PERFORMANCE REPORT



Middlesex-London Emergency Medical Services Authority  
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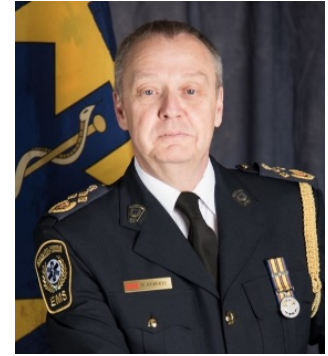


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# MESSAGE FROM THE CHIEF

As Chief, on behalf of Middlesex London Emergency Medical Services Authority, it is a privilege to present our 2017 Annual Report. It has been a busy and eventful year, as evidenced by many successes and improvements. This report provides an opportunity to highlight our achievements that are the result of the ongoing commitment, professionalism and hard work that is consistently demonstrated by our staff.



I am incredibly proud of the dedication of our staff in living out our Mission Statement of delivering efficient and high quality emergency response and care service to the population of Middlesex-London. Through innovative programs and clinical expertise, Middlesex-London Paramedic Service contributes to the overall health of our communities through direct care delivery and active collaboration with other health care, community and emergency service partners. Those we serve receive our care with appreciation. In 2017, our customer service satisfaction scores remain favourable, with 97.5% of all responses being positive.

The number of calls for service continues to rise year on year. In 2017, the number of calls for potential patient carrying service was 58,220, an increase of 8.39% over 2016, and an increase of just over 31% since 2008, when calls for service for that year were at 40,132. In 2017, approximately 89% of the incidents attended by Middlesex-London Paramedic Service occurred within the City of London. Consistent with demographic data from 2016, the majority (52%) of all the patients assessed by Middlesex-London paramedics in 2017 were older than 60 years of age.

Offload delays at Emergency Departments remain a challenge. Over the course of 2017, Ambulance Offload Delay hours fluctuated throughout the year, peaking in September. Overall, offload delays climbed by 44% in 2017 over the 2016 year. We continue to work with the hospital system in seeking solutions to mitigate the problems and impact that these delays have on our ability to provide efficient and effective paramedic services to the residents of Middlesex County and the City of London. Our participation in a pilot project to examine how to divert mental health calls away from the Emergency Department is an example of the proactive and constructive work that is taking place. I commend the professionalism of our paramedics and supervisors, who, each and every day continually look for opportunities to minimize offload delays.

The Middlesex-London Community Paramedicine program continues to provide valuable services that help patients with complex conditions to live independently with a system goal to reduce Emergency Department visits and hospital admissions. Our paramedics work collaboratively with community based agencies so that patients in need of additional care receive the support that they require.

Ongoing training and education are continuing priorities as we support our paramedics in providing safe and clinically sound interventions and care. Our education team uses a range of teaching methods to enhance learning so that our paramedics are equipped with the knowledge and skills they need. In 2017, our service became the only service in the province where paramedics are trained in the Incident Management System (IMS 100 level). Likewise, we are leaders in implementing a driving training program, Coaching the Emergency Vehicle Operator (CEVO 4), with a plan to certify all of our paramedics.

In all that we do, Middlesex-London Paramedic Service strives to provide the highest quality of care to anyone who requires our services. Our robust Quality Assurance processes are designed to gain feedback from patients, as well as from our internal and external stakeholders. The Regulatory Compliance Division uses data and investigative results to identify gaps in service and performance in order to make improvements to better serve the residents of Middlesex and London. Since May 2017, we have benefited from the addition of a Medical Director whose perspective is valuable in helping us increase positive clinical outcomes, providing advice and recommendations to minimize risk, and support strategic partnerships.

Here at Middlesex-London Paramedic Service, we remain committed to our role in focusing on community education and saving lives. During 2017, our Public Access Defibrillator program continued to expand. Generous donations provided six new Public Access Defibrillators to very appreciative sites, bringing the total number of units to 283 throughout Middlesex and London. One donation in particular was extra special, as we saw one of our first public access defibrillators save a life at a hockey arena. As a result of our efforts, 959 people participated in CPR and public access defibrillator awareness training. We certainly value the opportunity to engage with our local citizens and allied community agencies on various types of education and training programs.

It has been exciting to be part of several facility expansion projects throughout 2017. In December, Middlesex-London Paramedic Service moved into a new 46,000 square foot facility located on Adelaide Street South in London. Serving as our Headquarters, this multi-use station also houses an operational paramedic station, administration division, logistics division, professional standards, education and training. In always looking ahead, this new facility has growth opportunity built-in to the space.

I would also like to highlight other station infrastructure projects that support our paramedic crews. In 2017, paramedics began working out of our renovated station on Frances Street in Strathroy-Caradoc, and construction started for a new station located in the town of Dorchester (Thames Centre). I would like to recognize the many hours of time and effort put forth by so many staff for their contributions to the projects completed and those underway. The enthusiasm and dedication of our team is appreciated.

# MESSAGE FROM THE CHIEF

In conclusion, I sincerely acknowledge the excellence, compassion, and professionalism that our staff demonstrate in carrying out their daily work. With many successes achieved and with many projects and innovations in progress, we look to a future that continues to build on and shape efforts to improve patient outcomes and help our community.

Neal Roberts  
Chief, Middlesex-London EMS Authority





# MISSION STATEMENT

## Middlesex-London Paramedic Service 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.



Middlesex-London Paramedic Service employs a total of 310 staff including Paramedics, Supervisors (operations superintendents & deputy superintendents); Administration staff (coordinators, administrative support, logistics, training staff, and medical director); and Senior Management. Made up of full-time, part-time and contracts, Middlesex-London Paramedic Service has paramedic staff on 365 days a year. Front line paramedics are responsible for providing patient care and make up 87% of the employees of Middlesex-London Paramedic Service. (Figure 1)

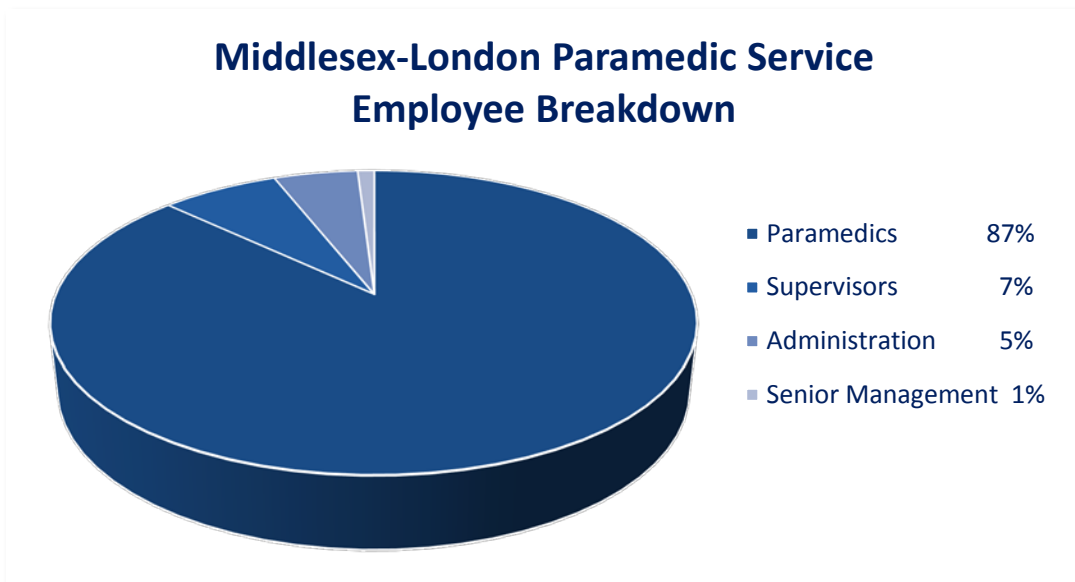
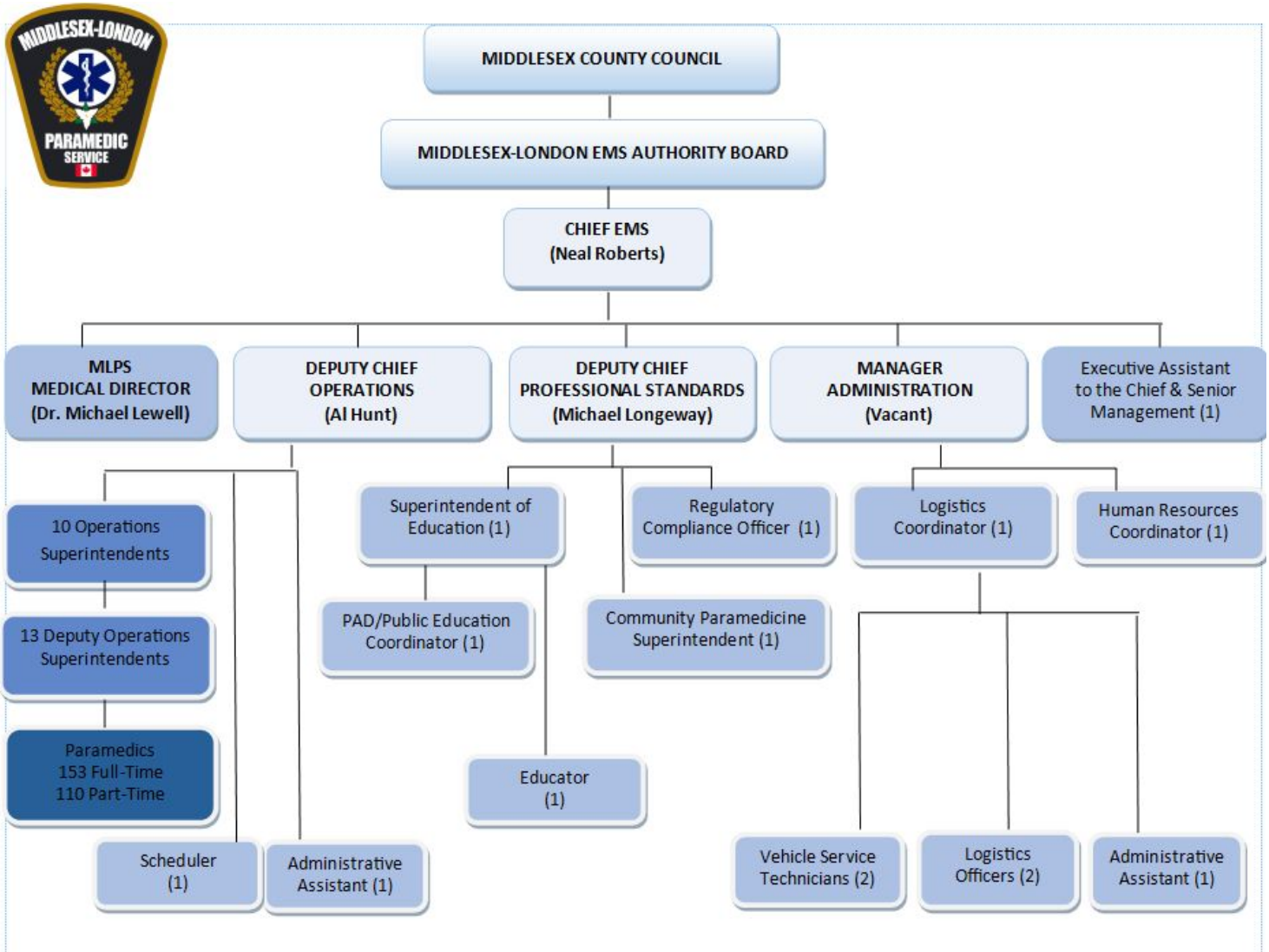


Figure 1



# ORGANIZATIONAL CHART







## SCOPE OF PRACTICE

### What is a Paramedic?

Paramedics are graduates of a Community College full-time program dedicated to the Paramedic Profession. Upon graduation from a Paramedic Program, the paramedic student must complete the Ontario Ministry of Health and Long-Term Care provincial certification. This certification, known as the Advanced Emergency Medical Care Assistant (A-EMCA) exam, must be successfully completed to practice as a Primary Care Paramedic in Ontario. In addition, a paramedic must be authorized by a medical director of a Regional Base Hospital (RBH) to perform controlled medical acts. In Middlesex- London, all paramedics are certified under the South West Ontario Regional Base Hospital Program by Dr. Matt Davis.

### PRIMARY CARE PARAMEDIC (PCP)



2 year community college program

THE PCP Functions to provide:

- patient assessment
- cardiopulmonary resuscitation (CPR)
- patient immobilization
- basic trauma life support
- oxygen therapy via various methods
- blood glucose testing
- trauma care, including basic wound care

The PCP skill set and medications include:

- manual defibrillation
- medication administration including Epinephrine, Glucagon, Dextrose, Oral Glucose, Acetylsalicylic Acid (asa), Nitroglycerin Spray, Salbutamol (Ventolin), Dimenhydrinate (Gravol), Diphenhydramine (Benadryl), Naloxone, Ibuprofen, Acetaminophen, Ketorolac
- 12-lead ecg interpretation
- pulse oxymetry monitoring
- ETCO2 monitoring
- continuous positive airway pressure therapy
- supraglottic airway insertion (king lt)
- medical/traumatic termination of resuscitation

### ADVANCED CARE PARAMEDIC (ACP)



3 year community college program

In addition to the PCP Skill Set, ACPs are qualified to perform and/or use:

- advanced airway management equipment
- orotracheal intubation equipment
- laryngoscopy and removal of foreign body obstruction using Magill forceps
- intravenous therapy
- needle thoracostomy
- intraosseous , external jugular IV starts and central venous access device
- synchronized cardioversion and external transcutaneous cardiac pacing
- treatment of cardiac emergencies according to the Heart & Stroke Foundation Advanced Cardiac Life Support (ACLS) guidelines
- administration of the following emergency medications:
  - Adenosine, Amiodarone, Atropine, Calcium gluconate, Dopamine, Epinephrine, Lidocaine, Lidocaine Spray, Midazolam, Morphine, Sodium Bicarbonate, and Xylometazoline Spray.

## 2017 Operating Costs

Middlesex-London Paramedic Service responded to over 230 calls per day in 2017 resulting in an 8.39% increase in service demand over 2016. The increase in demand for paramedic services caused financial pressures on numerous operating lines. With more than 84,000 ambulances responding to calls over the year, the gross average cost per response was \$384.91. Approximately 82% of all operating costs are directly attributed to employee salaries, wages, and benefits. (Figure 2)

The majority of Middlesex-London Paramedic Service operating costs are fixed and based on emergency response capacity. The marginal operating costs are primarily vehicle operations, supplies, and equipment. For 2017, the marginal operating costs comprised 7% of the total operational expenditures.

In 2017, Middlesex-London Paramedic Service operating fleet consisted of 48 service vehicles, including ambulances, supervisor vehicles, support units, and command vehicles. Operational and support vehicles traveled over 1.4 million kilometers in 2017. The average cost per kilometer for these vehicles, including fuel, maintenance, repairs, and insurance costs was \$.89 per kilometer. Middlesex-London Paramedic Service has worked to minimize fleet costs through maintaining a comprehensive preventive maintenance program, partnering with the City of London in a corporate fuel purchasing agreement, and providing enhanced driver training to all paramedic staff.

### Middlesex-London Paramedic Service Operating Costs

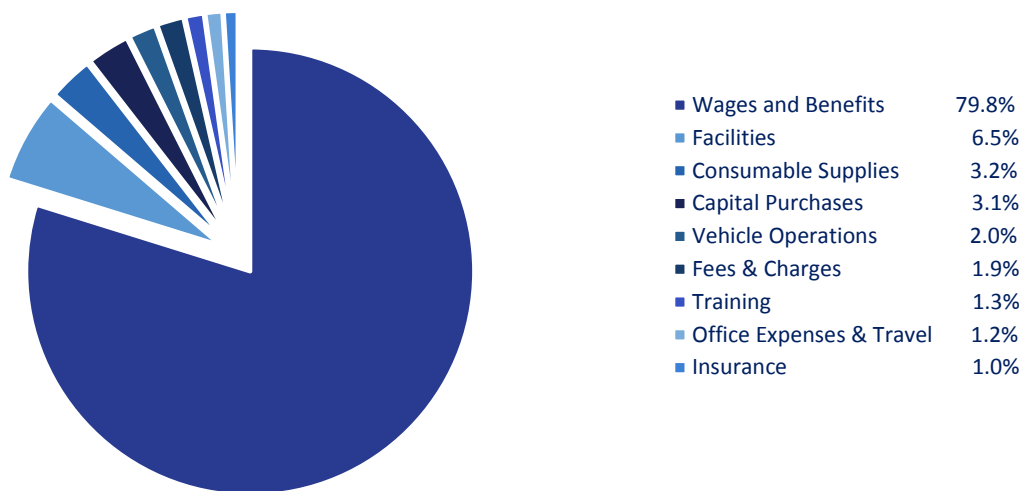


Figure 2

## Number of Calls for Service Received

In 2017, the number of calls for potential patient carrying service was 58,220 – an increase of 8.39% over 2016, and an increase of approximately 31% since 2008 when calls for service were at 40,132. (Figure 3)

## Ambulance Calls per Station (including Emergency Coverage)

Station Name	Code 1	Code 2	Code 3	Code 4	Code 8	Total
Adelaide Street (opened Nov 21 2017)	-	-	178	385	198	<b>761</b>
Byron	4	3	1,516	2,985	3,597	<b>8,105</b>
Glencoe	3	1	292	469	298	<b>1,063</b>
Horizon	16	4	3,326	6,169	2,665	<b>12,180</b>
Hyde Park	3	1	1,096	1,883	2,948	<b>5,931</b>
Komoka	4	-	521	995	1,499	<b>3,019</b>
Lucan	-	-	277	528	1,196	<b>2,001</b>
Meg Drive (closed Nov 21 2017)	5	5	1,568	3,193	1,675	<b>6,446</b>
Nilestown	5	12	840	1,792	2,860	<b>5,509</b>
Parkhill	-	-	187	404	1,418	<b>2,009</b>
Strathroy	8	-	763	1,494	1,297	<b>3,562</b>
Trafalgar	15	16	1,453	3,381	1,320	<b>6,185</b>
Trossacks	9	12	1,787	3,512	2,044	<b>7,364</b>
Waterloo	16	3	5,449	11,632	3,210	<b>20,310</b>
<b>TOTAL</b>	<b>88</b>	<b>57</b>	<b>19,253</b>	<b>38,822</b>	<b>26,225</b>	<b>84,445</b>

Figure 3



## Life Threatening Calls (Code 4)

In 2017, the number of life threatening calls (Code 4) dispatched was 38,822 – an increase of 9.9% over 2016. (Figure 4)

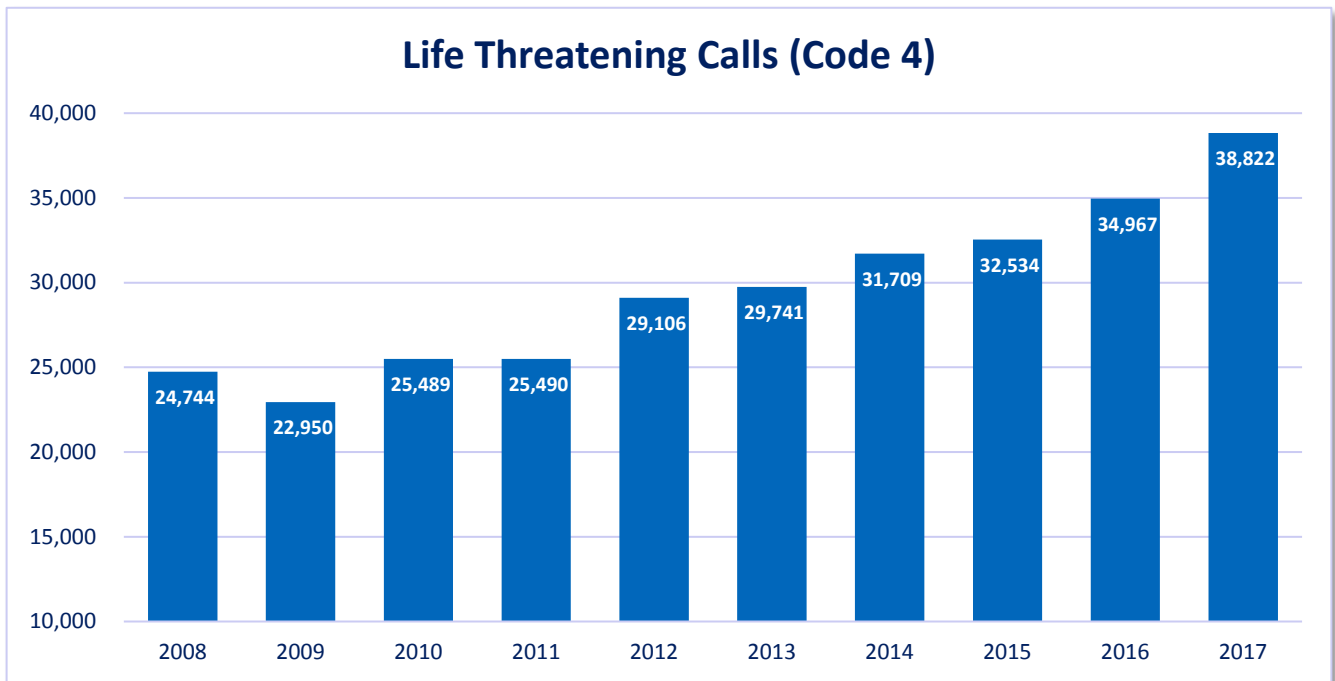


Figure 4





## Response Time

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

Middlesex-London Paramedic Service service-wide 90th percentile response time trend for life-threatening “Code 4” calls saw an increase in 2017. As a result of significant call volume growth and ongoing offload delay pressures, 2017’s response time increased to 9 mins 59 secs from 2016’s time of 9 mins 57 secs (not statistically significant). (Figure 5)

Less affected by these pressures, County response time continued to decrease, moving from 14 mins 35 secs in 2016 to 13 minutes 48 seconds in 2017.

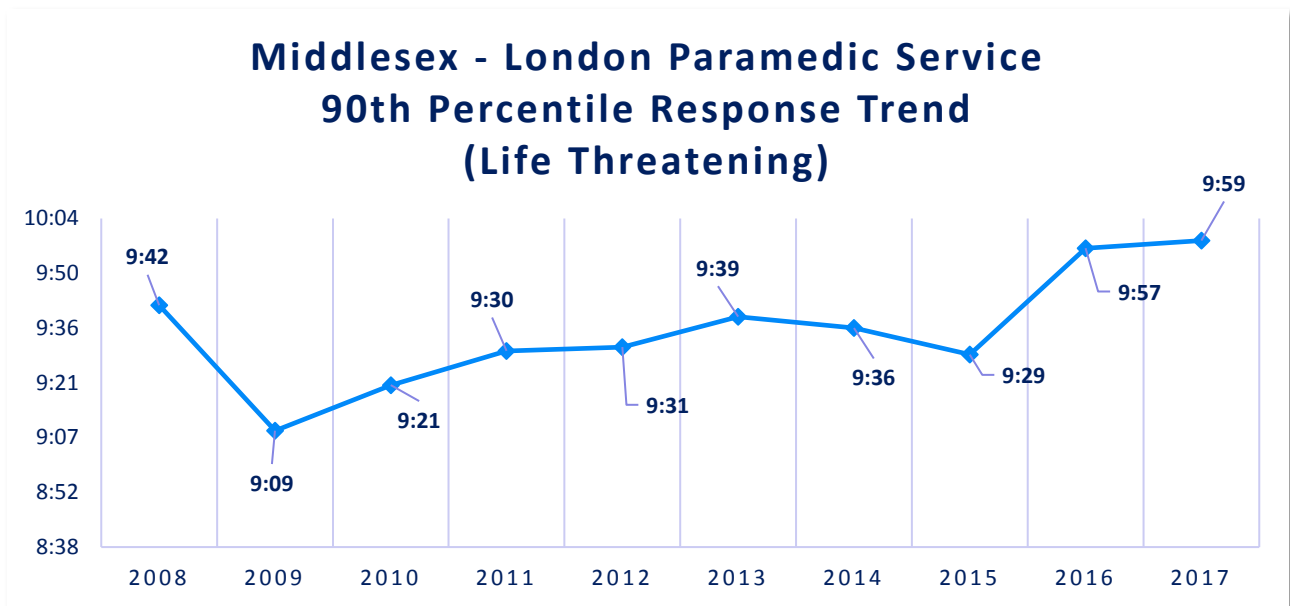


Figure 5

## Calls completed within Middlesex County Boundaries

Approximately 89% of the Priority 1-4 calls attended by Middlesex-London Paramedic Service occur within the City of London. (Figures 6 & 7). During 2017, other municipalities assisted within Middlesex-London 1,301 times. Conversely, Middlesex-London Paramedic Service assisted neighbouring municipalities 471 times.

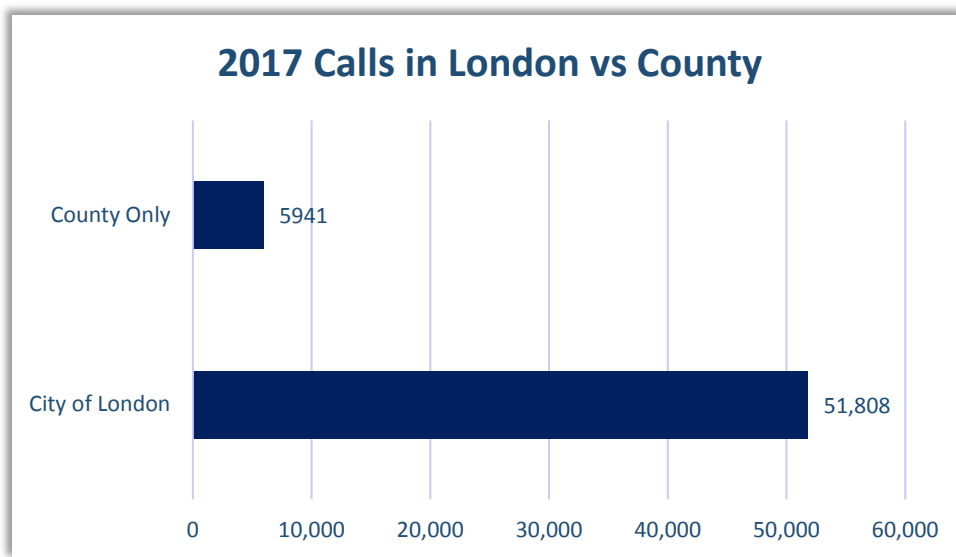


Figure 6

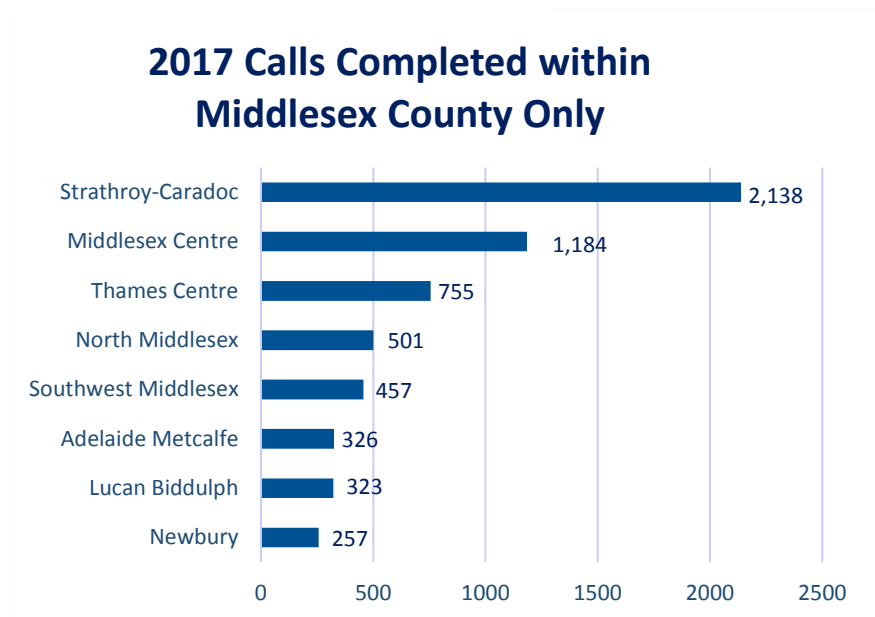


Figure 7

## Average Chute Time for Life Threatening Calls (Code 4)

The Average Elapsed Time from the time the crew is notified of life threatening calls to the crew being mobile on the call is called the Chute Time.

In 2017, the Average Code 4 Chute Time for Middlesex-London Paramedic Service was 1 minute and 18 seconds. (Figure 8). This time can vary as the Paramedics could be at a station, in a hospital (further away from their vehicle) or already in the vehicle.

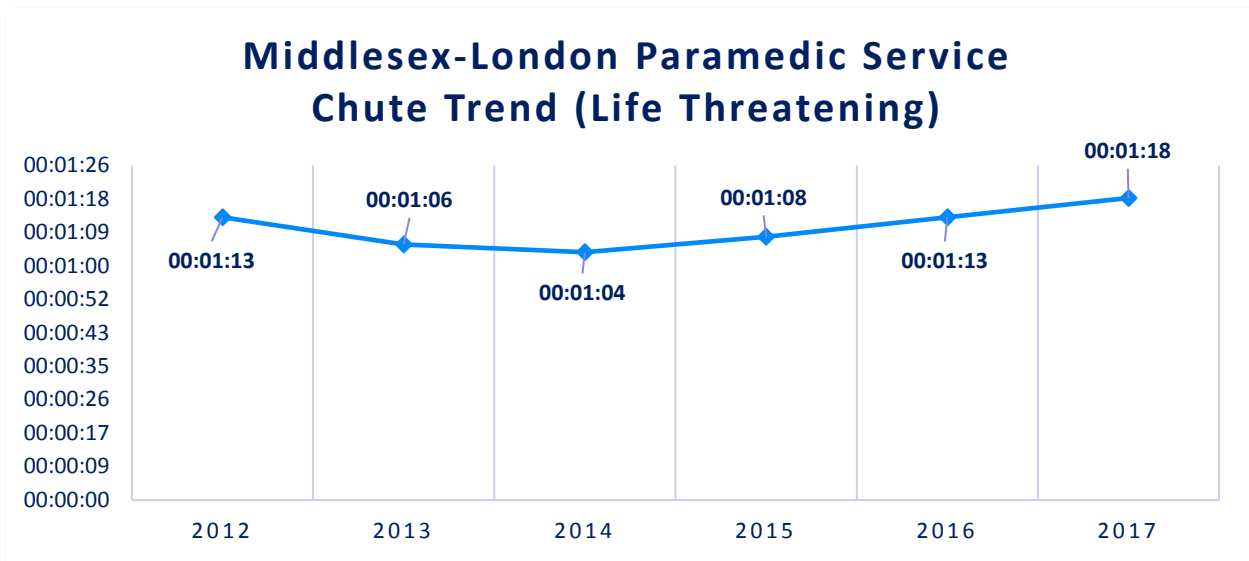
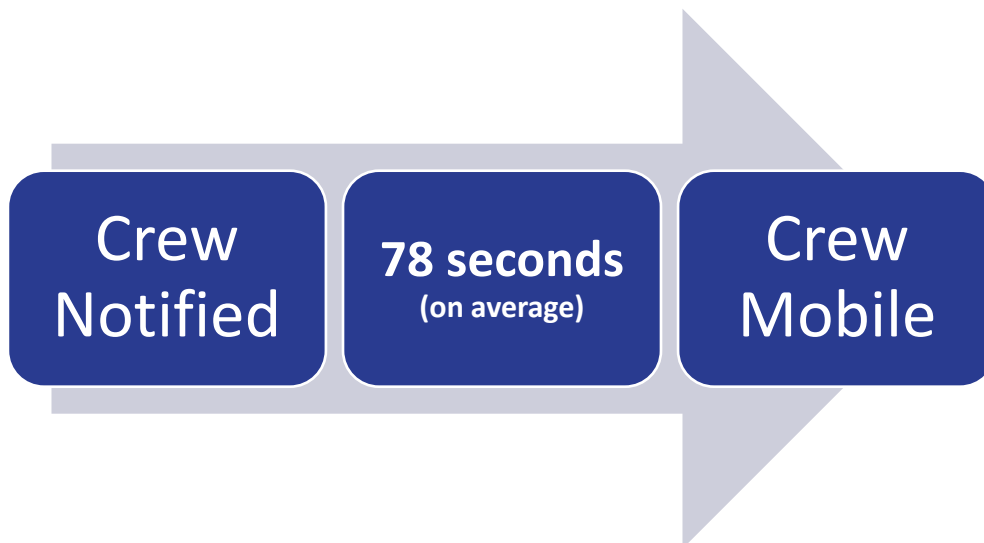


Figure 8



## Offload Delay

The definition of offload delay is the amount of time spent in the Emergency Department transferring care to the hospital. It is calculated as the difference in time from when the ambulance arrives at the Emergency Department until Transfer of Care is documented and acknowledged on the Ambulance Call Report – less the standard thirty (30) minutes which is normal for ambulance turnaround. Any time greater than thirty minutes is considered offload delay.

Over the course of 2017, Ambulance Offload Delay hours fluctuated throughout the year peaking in September. Overall, offload delays climbed by 44% in 2017 over 2016. (Figure 9)

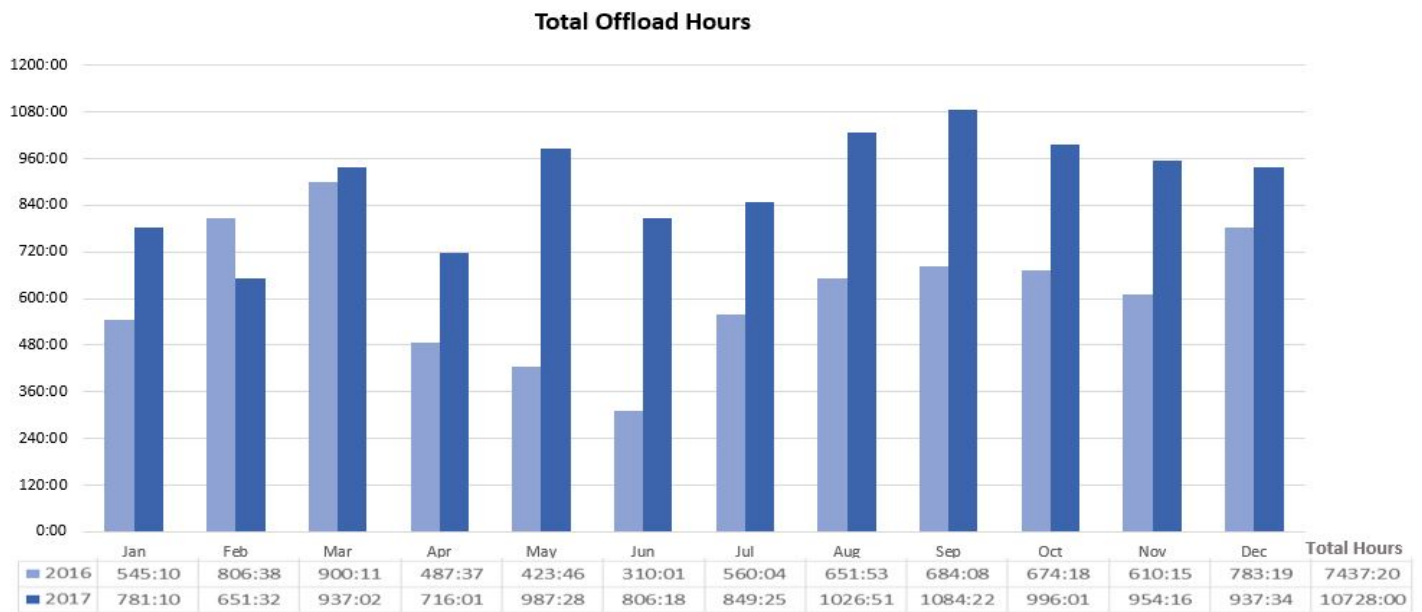


Figure 9

In 2017, a total of 444.8 24-hour ambulance days were lost to offload delays. (Figure 10)

	Rolling Monthly Results -2017												2017 TOTAL
	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	32.5	27.1	39.0	29.8	41.1	33.6	35.3	42.8	45.2	39.6	39.8	39.1	444.8

Figure 10



## 2017 Middlesex-London Paramedic Service Response Time Plan

Ontario Regulation 368/10 as consolidated into Ontario Regulation 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, Middlesex County Council adopted a new performance plan respecting response times for 2017. (Figure 11)

Middlesex-London Paramedic Service continues to monitor the targeted response time standards, working towards bringing all categories into compliance with the new standards.

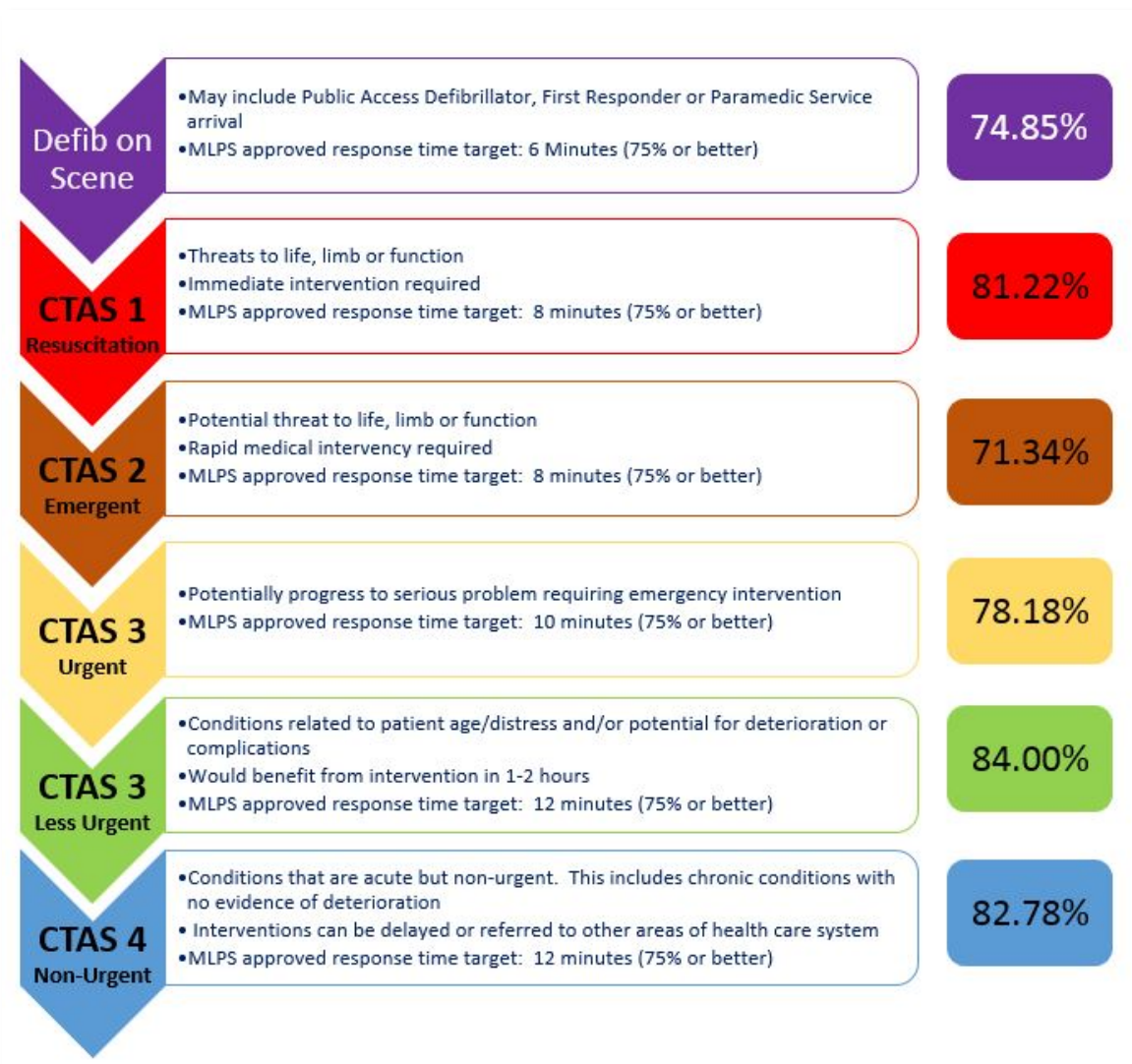


Figure 11

## Dispatch Priority and Return Priority

In 2017, Paramedics were sent out Code 4 (Lights and Sirens) to calls 66.15% of the time, only returning Code 4, 13.67% of the time. (Figures 12 & 13)

### Dispatch Priority

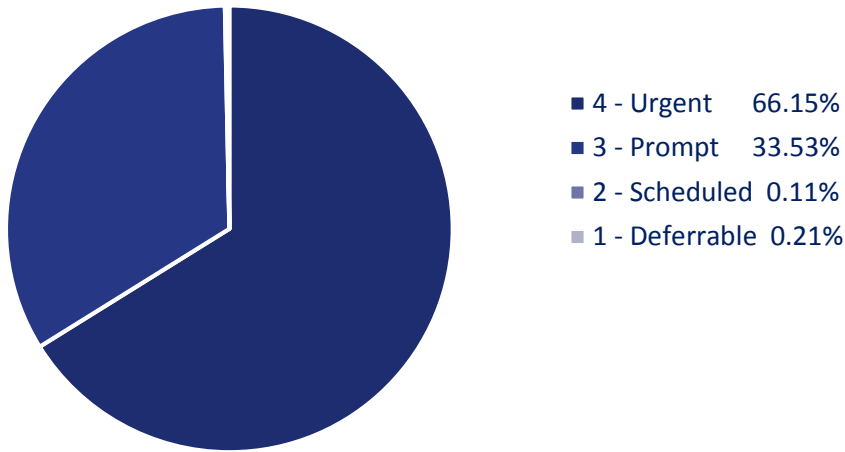


Figure 12

### Return Priority

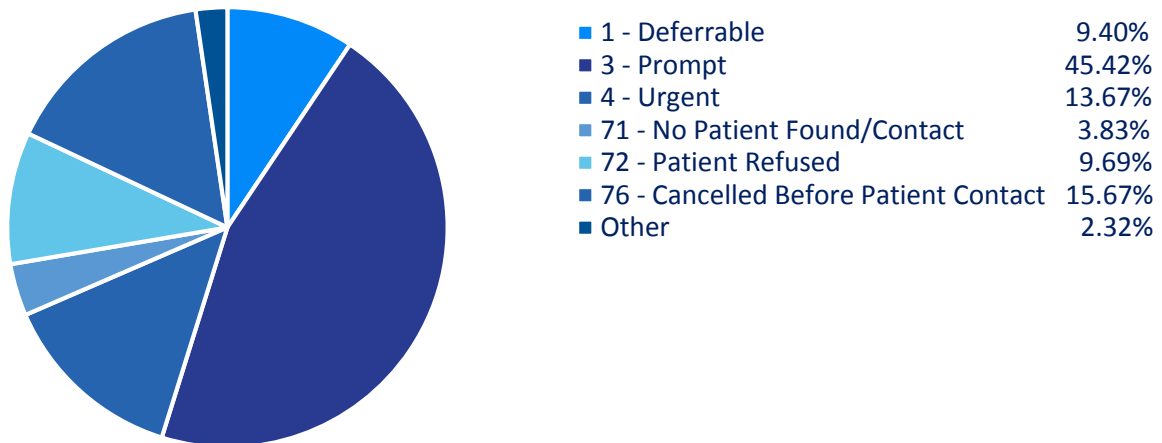


Figure 13

## Top Dispatch Problems and Top Primary Problems

In 2017, the Top Dispatch Problems (what the paramedics are told when they are assigned to the call by London ACC) were for Respiratory Distress (short of breath), General Illness/Weakness, Falls, Chest Pain, Abdominal Pain, Motor Vehicle Collisions, and Psychiatric. (Figure 14)

The Top Primary Problems (what the actual problem is with the patient when the paramedics arrive on scene) included General Illness/Weakness, Musculoskeletal Trauma, Abdominal Pain and Respiratory Distress (short of breath). (Figure 15)

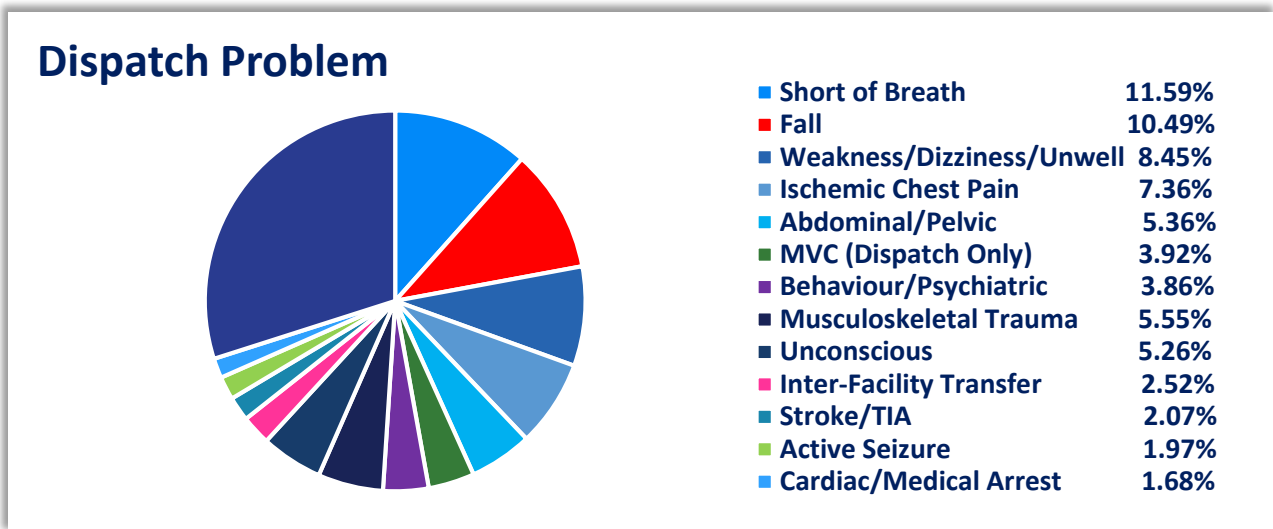


Figure 14

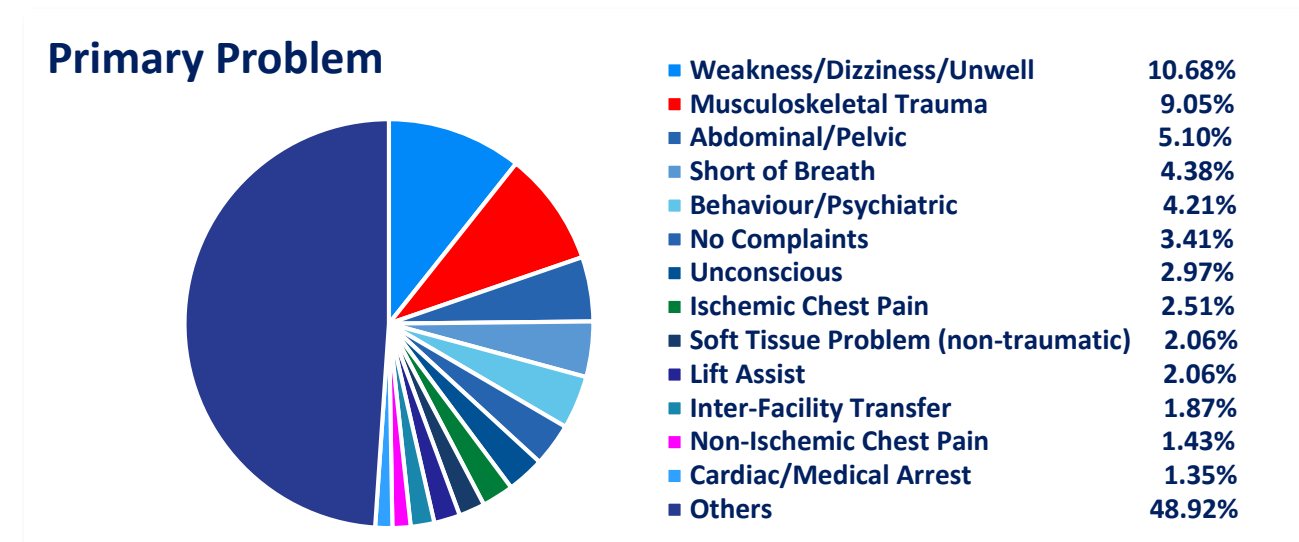


Figure 15

## Call Type

In 2017, the majority of the calls that the Middlesex-London Paramedic Service responded to were considered Basic Life Support Calls (62.17%). Of all of the calls in 2017, 19.41% were considered the most critical Advanced Care. Primary Care Paramedics with enhanced skills of Symptom Relief and Intravenous Therapy Certification are able to provide the majority of care needed. (Figure 16)

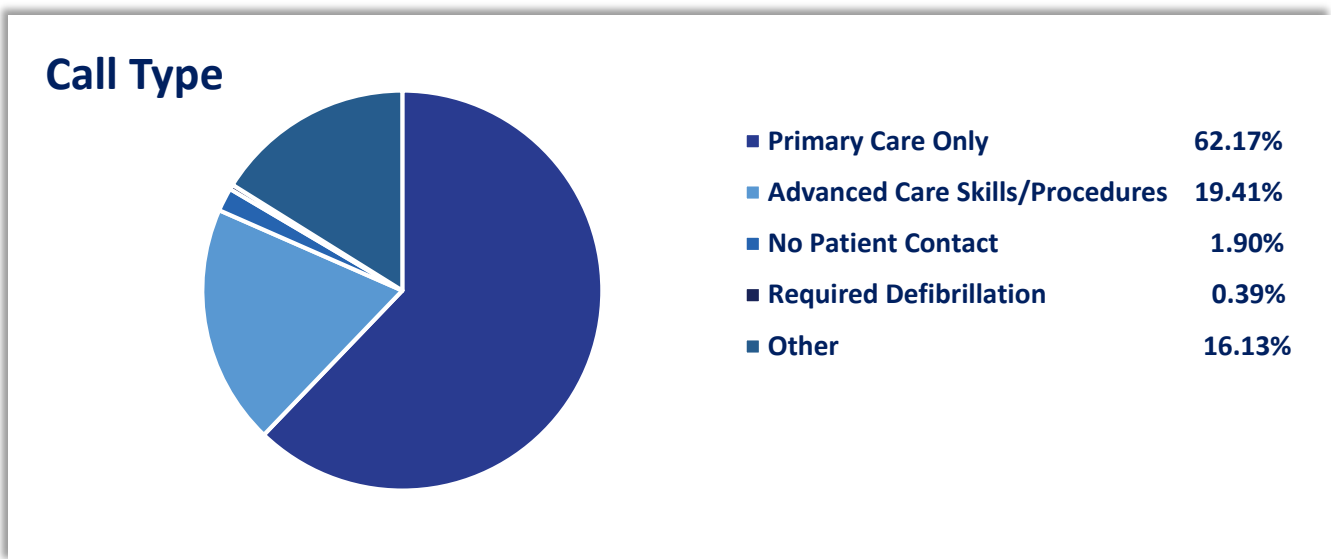


Figure 16

## Age Demographics (2017)

Of all the patient contact calls in 2017, 52% of the patients were over 61 years of age. (Figure 17)

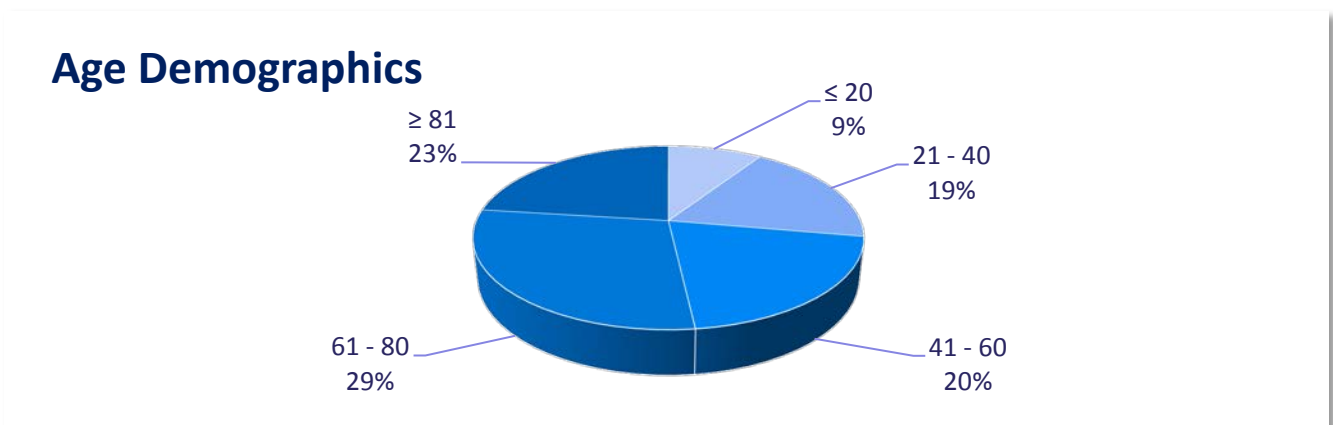


Figure 17



## Regulatory Compliance Office

The Regulatory Compliance office is responsible for auditing and maintaining policies and procedures for the operation of Middlesex-London Paramedic Service and its related activities. This office 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 bodies.

Middlesex-London Paramedic Service strives to provide the highest quality of care to anyone who requires our services. Our quality assurance process involves a review of all feedback from patients, external and internal agencies. In 2017, Middlesex-London Paramedic Service Regulatory Compliance responded to 139 inquiries from internal and/or external stakeholders of which 51 were positive feedback or compliments. (Figure 18)

The remaining inquiries required further investigation to determine if service or behavioral improvements can be made to better serve the residents of Middlesex and London.

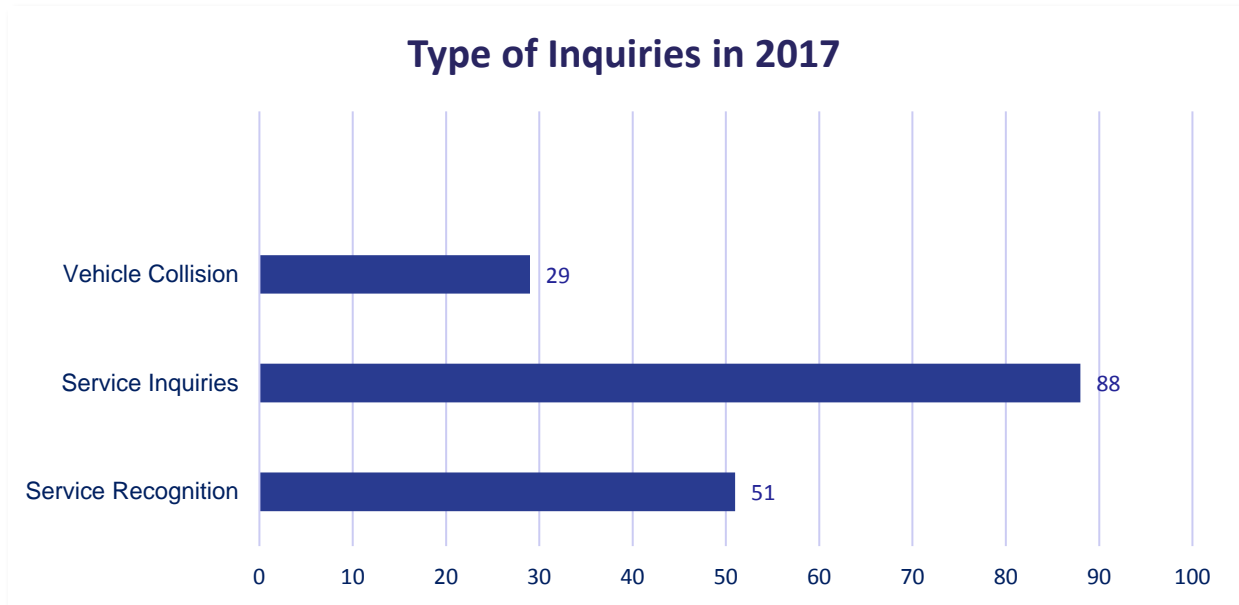


Figure 18

## Customer Survey

The Professional Standards Department sends out customer satisfaction surveys each month to clients who have used the services of Middlesex-London Paramedic Service. Each month 65 surveys are sent out – 5 picked at random from the 13 stations of Middlesex-London Paramedic Service. In 2017, clients were given an option to use online submissions or mail in results.

In 2017, **104** surveys were returned. The survey format prompts the client to choose words to describe 8 different stages of their emergency experience, from the moment the 911 call is placed to the point at which the Paramedics transfer care over to the staff at the hospital. The words indicate either a positive experience or a negative experience and the client is encouraged to add comments.

### Survey Questions

- I felt \_\_\_\_\_ in regard to the 911 call experience?
- I felt \_\_\_\_\_ with the paramedic's treatment at the scene?
- I felt \_\_\_\_\_ during the transport to the hospital?
- I felt \_\_\_\_\_ waiting at the hospital with the paramedics before being transferred to the hospital staff?
- I felt \_\_\_\_\_ about the crew's introduction & approach?
- I felt \_\_\_\_\_ in regard to the way the crew communicated with me?
- I felt \_\_\_\_\_ about the crew's listening skills with me and others at scene?
- I felt \_\_\_\_\_ in regard to the overall treatment the crew provided?

Each survey has 8 questions for 8 possible responses, either a positive response or a negative response. Of the 104 surveys, we received 832 responses. Only 21 responses were a negative response, which amounted to 97.5 % of all responses being positive.



The Logistics Department is responsible for a wide variety of services that supports Middlesex-London Paramedic Service. In 2017, Logistics staff processed 1,716 helpdesk requests for service. (Figure 19).

## Request for Service

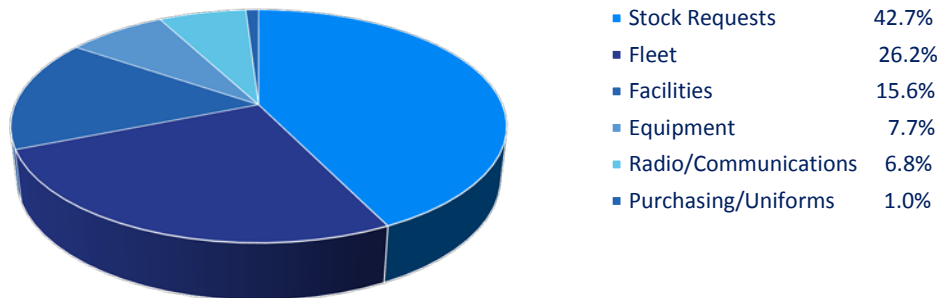


Figure 19

## Fleet Services

In 2017, Middlesex-London Paramedic Service operating fleet consisted of 48 vehicles. (Figure 20)

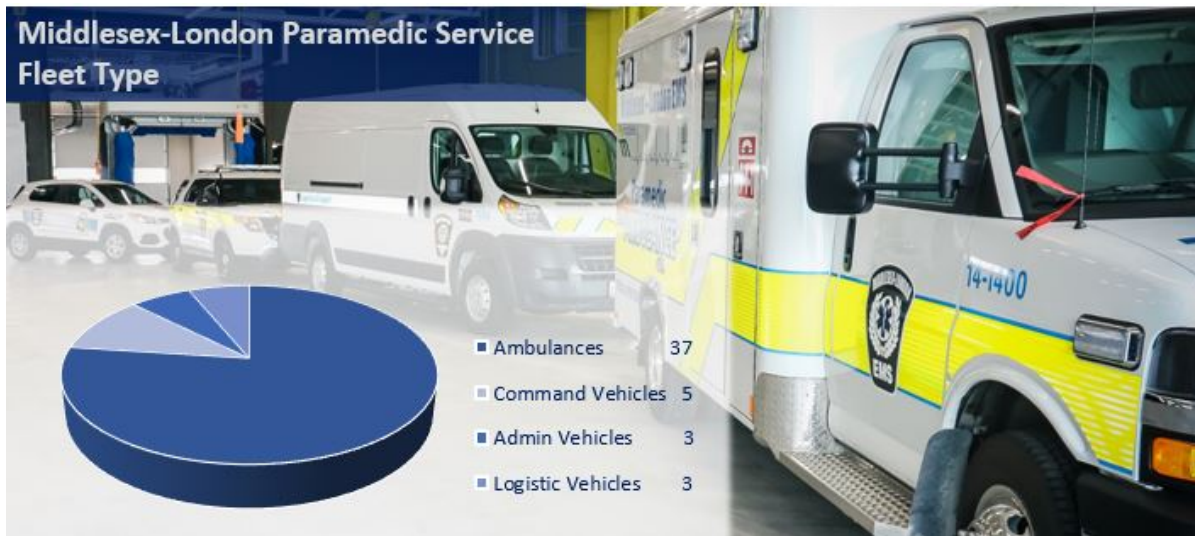


Figure 20

Logistics is responsible for coordinating the maintenance of vehicles through external vendors and commissioning new emergency vehicles for service as well as decommissioning retired vehicles.

## Ambulance Collisions

Over the course of 2017, service vehicles drove a total of 1,486,720 kilometers and there were 29 reportable incidents involving Middlesex-London Paramedic Service vehicles.

Of the 29 incidents in 2017, 5 occurred while returning to a hospital with a patient on board.

Collisions are categorized as Extensive Damage, Minor Damage and Minimal Damage (Figure 21). Minor damage includes punctured tires, dented roofs, damage to apartment canopy overhangs, etc., while minimal damage includes broken side mirrors, small surface dents, scratches, etc.

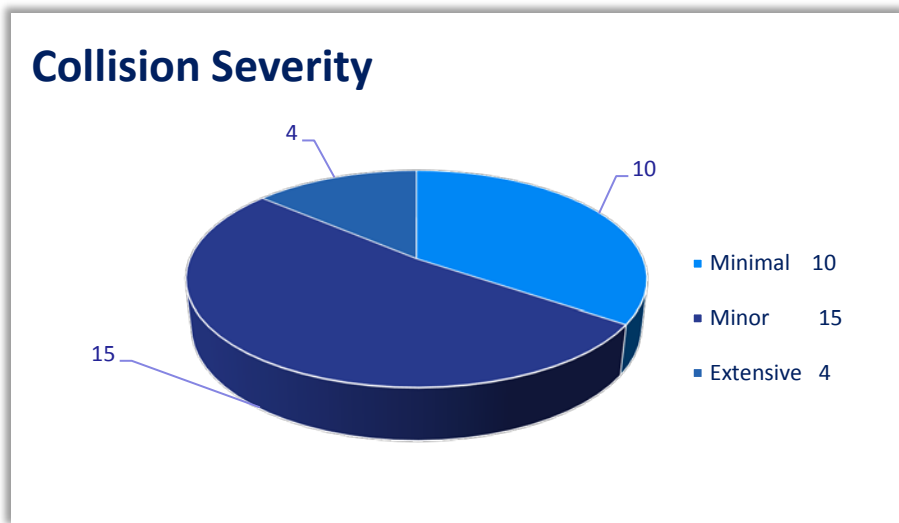


Figure 21

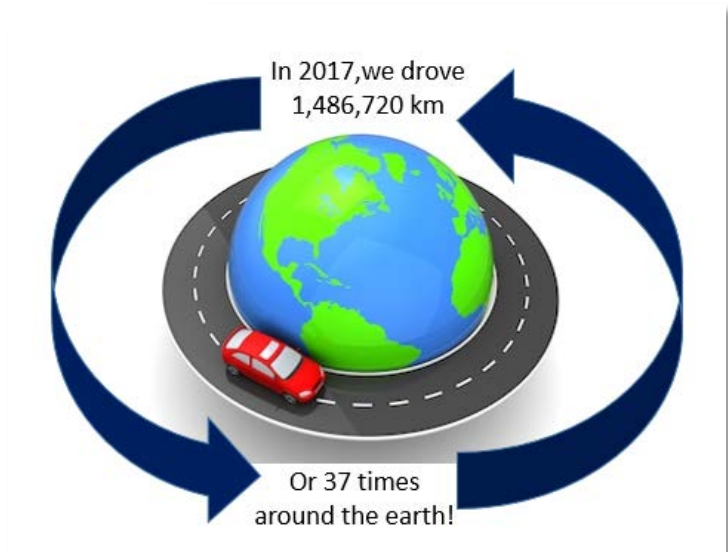


Figure 22



## Vehicle Service Technicians

Vehicle Service Technicians (VST's) prepare vehicles sixteen hours per day including washing, restocking vehicles and response bags, checking equipment and vehicle deep cleans.

- Vehicle preparedness = 240 vehicles/month (average)
- Deep Cleans = 37 vehicles/month (average)

## Supply Chain Management:

- Purchasing of supplies and services including RFP and RFI's
- Warehousing / Distributing of supplies
- Liaising with external suppliers for fuel and linen supplies
- Asset management
- General facility maintenance

## Equipment:

- Coordinating maintenance of equipment through external vendors
- Equipment testing

## Project Management:

- New station construction
- Campaigns that require launching new products and equipment



## Facilities

In late 2017, Middlesex-London Paramedic Service moved into a new 46,000 square foot facility constructed to post-disaster standards. Our new Headquarters houses a paramedic station operating 24 hours per day, seven days a week. The facility also accommodates our Administration, Training, Logistics and Operational staff. This new facility has future growth opportunity built-in to the space.



Paramedic staff began operating out of 351 Frances Street in Strathroy-Caradoc in July 2017. Middlesex-London Paramedic Service renovated 9,300 square feet creating our new Strathroy station. The station has added garage space for future growth.

Middlesex-London Paramedic Service held a ground-breaking ceremony for the new Dorchester station located in the town of Dorchester (Thames Centre). The ceremony was held in the fall of 2017 and construction started in December.



Community Paramedicine is a program that has Middlesex-London paramedics providing services that help patients with complex health conditions to live independently in their own homes, while helping to reduce unnecessary emergency department visits and hospital admissions. The Community Paramedicine program strives to promote a seamless link to appropriate health care services to ensure patients receive the right care, at the right time, in the right place.



In 2014, the ministry's involvement in funding and selecting community paramedicine projects reflected the early status of the program in Ontario with the objective of testing different models. Through that investment, the ministry learned that community paramedicine can have a role to play in Ontario, and that the success of each community paramedicine program is tied to local needs, services and partnerships.

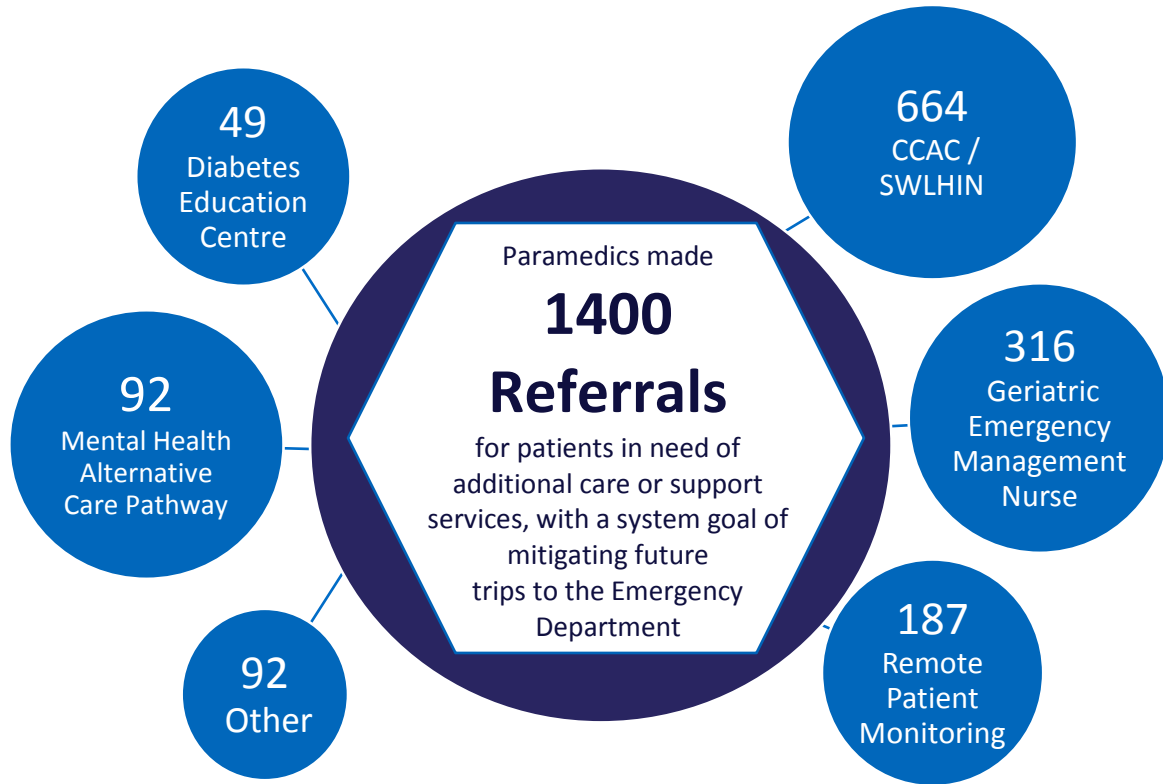
In 2016, a new health system context was established for Local Health Integration Networks (LHINs) to play an increased role in assessing and addressing health care delivery and outcomes. This uniquely positioned the LHINs to make decisions about the role and use of community paramedicine. As a result, responsibility for decisions about community paramedicine programs was transitioned to the LHINs during the year of 2017.

To support this transition and ongoing program delivery, the ministry provided the LHINs with base funding intended to support community paramedicine initiatives going forward. However, with the LHINs having minimal involvement with the community paramedicine projects, each program was evaluated within the first six months. Subject to this review, program changes have been implemented to better align with each respected LHINs vision for community paramedicine based on program capacity.



One service currently provided through the Community Paramedicine program is Paramedic Referral. This program provides frontline paramedics the tools to proactively identify and electronically refer patients in need of additional community support services. Given the positioning of paramedics directly into patients homes during crisis situations, paramedic services has the unique vantage point to be able to identify and refer these vulnerable patients to appropriate resources: nowhere else is this perspective duplicated with other provider agencies.





### Paramedic Referral to Home and Community Care

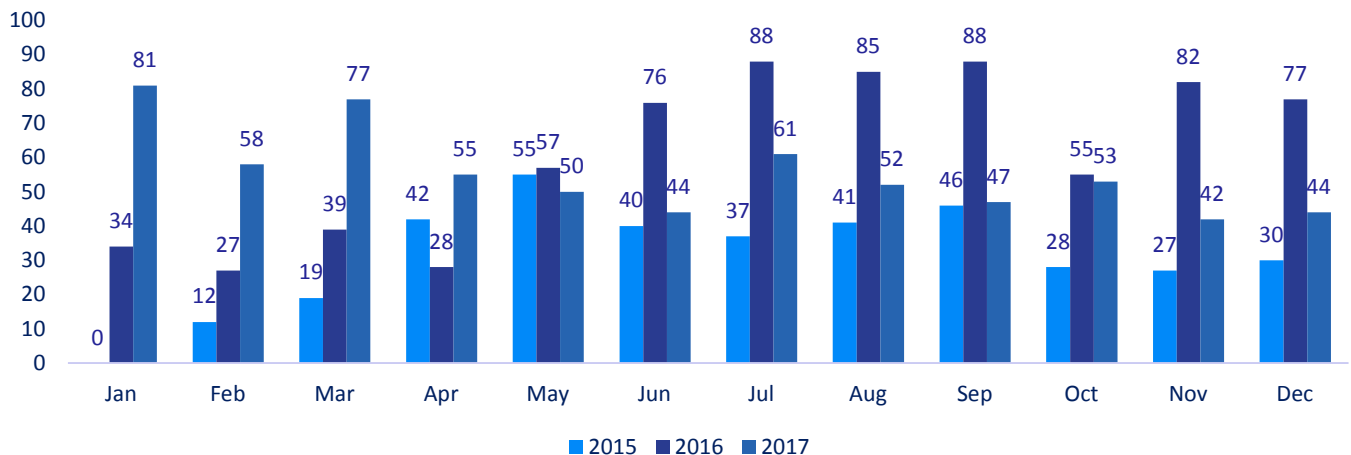


Figure 23

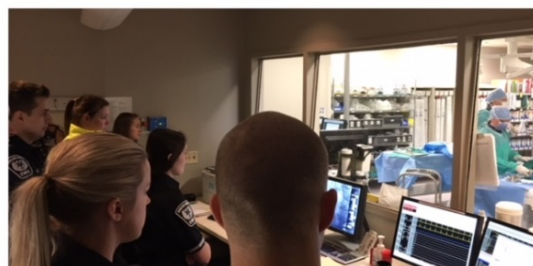
# STAFF EDUCATION AND TRAINING

## New Employees

In 2017, Middlesex-London Paramedic Service hired 7 part time paramedics. Each paramedic has a minimum of two years post-secondary education in a Paramedic Program at a Community College. The new paramedics completed an orientation program within our service.

Orientation lasts approximately 4 weeks and includes tours of University Hospital Cardiac Catheterization Lab and the Emergency Department. Tours were also done at Victoria Hospital in the Obstetrical unit, as well as the Pediatric transport team, and the Emergency Department

The group also traveled to our dispatch centre, the airport, Ornge helicopter and some of our stations. It also includes a lot of hands on learning, such as learning to use our power stretchers, equipment, and our vehicles.



## Continuous Training

In 2017, Middlesex-London Paramedic Service became one of the only services in Ontario to have their medics trained to the Incident Management System 100 (IMS 100) level. The IMS 100 is an internationally recognized program which standardizes the approach to multi-casualty situations. It allows our service to work more closely and in unison with our other emergency service partners.



# STAFF EDUCATION AND TRAINING

Also in 2017, Middlesex-London Paramedic Service began a driver training program. Over the next few years we will be certifying all our Paramedics in the Coaching the Emergency Vehicle Operation 4 program. (CEVO4). This is the only certification program to drive an ambulance and we are one of the only services to provide this to our staff.



Annual fall training focused around the new Basic Life Support changes set out by the Ministry of Health. Paramedics completed hands-on skills training, and group work practice before the December 11th implementation date. The new standards includes Spinal Motion Restriction, Oxygen administration and some new equipment. The last update to the BLS standards was in 2007. All paramedics are now performing the new standards with ease.

Middlesex-London Paramedic Service took part in a city-wide emergency exercise. This year's scenario simulated a tornado which hit a senior's centre, as well as a track and field meet behind the Parkwood hospital ponds area. This event allowed paramedics to practice our multi-casualty management, both on scene, and in the emergency operations center in Byron. Both hospitals took part in this event as well. We transported roughly 40 patients to Victoria hospital, and triaged over 90 patients at the Parkwood ponds site. It was an excellent test of our system, and many lessons were learned from this event.



In 2017, a team from Middlesex-London Paramedic Service competed in a Virtual Response Multi Casualty Incident Competition. The event tested teams in their responses to multi-casualty incident events and scenarios, all in the virtual reality world. Along with a team, Middlesex-London Paramedic Service had two judges at the event.



Middlesex-London Paramedic Service's cardiac arrest program continues to improve, and in 2017, a record setting 45 patients survived their cardiac arrest. Training continues to improve the standard of care, and to keep increasing survival numbers. Middlesex-London Paramedic Service is one of a few services who participate in the CanROC (Canadian Resuscitation Outcomes Consortium) which completes significant research into Cardiac Arrest and Trauma cases.

## Post-Cardiac Arrest Survival

Each year, Middlesex-London Paramedic Service holds its Annual Cardiac Arrest Survivors' Day. This event is held during Paramedic Services Week 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 gives first responders an opportunity to see the positive results of their hard work and reunite with the people they saved.



In 2017, Middlesex-London Paramedic Service successfully resuscitated 45 patients who were able to be discharged from the hospital after their cardiac arrest. On the Annual Survivors Day, Middlesex-London Paramedic Service were pleased to have 17 of these patients attend the event.



## Exemplary Service Bars

In November 2017, Paramedics Dale Blanchard and Lee Waterman were recipients of the First Bars for the Governor General Emergency Medical Service Exemplary Service Medal. Created in 1994, these awards recognize individual paramedics whom, in providing pre-hospital emergency medical services to the public, have performed their duties in an exemplary manner, characterized by good conduct, industry and efficiency. The bars were presented by the Lieutenant Governor of Ontario, the Honourable Elizabeth Dowdeswell, on behalf of the Right Honourable David Johnston, Governor General of Canada.



## Public Access Defibrillator Program CPR/AED & Standard First Aid Training

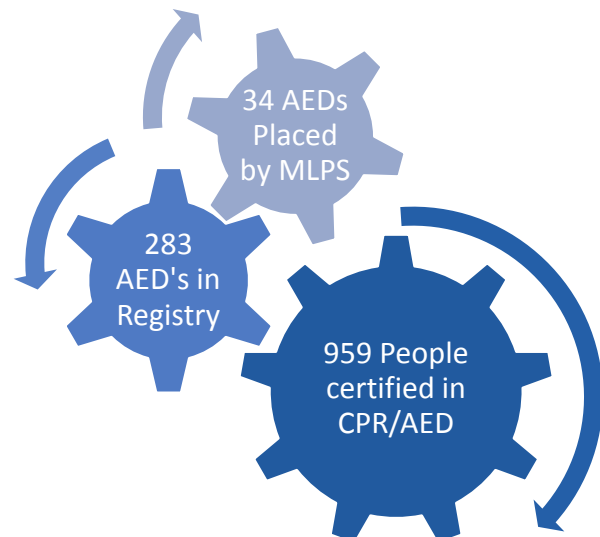
During 2017, the Middlesex-London Paramedic Service Public Access Defibrillator program focused on community CPR/ AED awareness and preparedness. Offering certification training and public awareness programs, 959 people were trained in CPR/AED and Standard First Aid certification through the Canadian Red Cross.

2017 focused on improving first response with allied community partners with CPR/AED refresher sessions.

The 9-1-1 AED registry continued to grow throughout the year, adding crowd sourced public access defibrillators, and by placing

machines throughout Middlesex County and the City of London. There are currently 283 units registered. Machine usage increased in 2017, with 16 AED's used, delivering a total of 12 shocks.

Middlesex-London Paramedic Service had the pleasure of assisting community groups achieve the overall goal of making our local schools heart safe. Generous donations provided 6 new Automated External Defibrillators to very appreciative sites. One donation in particular was extra special, as we saw one of our first public access defibrillator's save a life at a hockey arena.





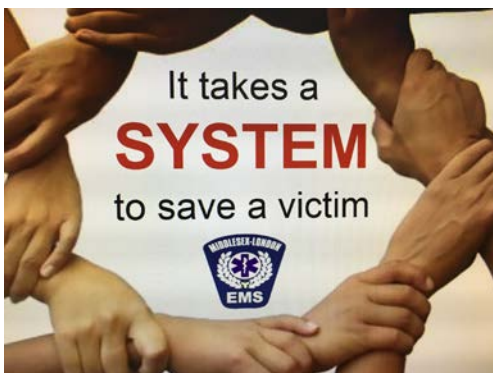
## Community Engagement

Every year Middlesex-London Paramedic Service values the opportunity to work together with allied community agencies, as a collaborative, focusing on various topics with a variety of community groups. In 2017, we continued our work with the following groups:

- Southwestern Ontario Children’s Safety Village
- Race Against Drugs
- Helmets on Kids
- Falls Prevention Strategies
- London Middlesex Road Safety Committee
- Ronald McDonald House SWO
- Tim Horton’s Camp Day
- McHappy Day
- IMPACT (Impaired Minds Produce Actions Causing Trauma)
- Farm Safety



We also had the opportunity to recognize citizens for their efforts in providing pre-emergency response care.



## Paramedic Training Camp

Middlesex-London Paramedic Service's Paramedic Training camp continues to be a highlight of the year. In August of 2017, another eager group of eleven (11) high school aged students who showed interest in the paramedic field participated in the training camp. The week was packed with activities focusing on various aspects of the paramedic profession.





## Social Media

The use of social media platforms proved to be essential with community engagement initiatives. With the use of Twitter alone, Middlesex-London Paramedic Service saw a total of 1,106,400 impressions in 2017 with an average of 3050/day. (An impression is the number of times users saw a tweet on twitter). This information allowed us to focus on key messaging for our public relations throughout the year.







**ML Paramedic Service** @MLPS911 · 7 Aug 2017

Please let our Emergency crews do their job safely. #everyonegoeshome  
@OneFourSeven @lpsmediaoffice @CityofLdnOnt @CTVLondon @LHSCCanada



41 42



**ML Paramedic Service** @MLPS911 · 29 Dec 2017

We want you to help you make the best choice for timely and effective care.  
@LHSCCanada

When to Use Urgent Care or Emergency Room	
<b>Urgent Care</b> <ul style="list-style-type: none"><li>Allergies</li><li>Colds/flu/fever</li><li>Ear pain/infection</li><li>Insect bites</li><li>Minor asthma</li><li>Minor cuts/burns</li><li>Rashes</li><li>Sprains/strains/simple fractures</li><li>Sore throat/cough</li><li>Urinary tract infections</li></ul>	<b>Emergency Room</b> <ul style="list-style-type: none"><li>Chest pain/discomfort</li><li>High fever</li><li>Shock</li><li>Severe burns/cuts</li><li>Severe headaches</li><li>Severe trauma/injuries</li><li>Shortness of breath/difficulty breathing</li><li>Sudden paralysis/slurred speech</li><li>Unconsciousness</li><li>Uncontrollable bleeding</li><li>Visible fractures</li></ul>

36 38

**ACC:** Ambulance Communications Centre

**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.

**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 transfer; 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).

**Code 8:** This is a call for emergency coverage. This occurs when an ambulance is required to reposition to maintain response times and coverage of the region in the event that the next 911 call occurs within that area.

**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.

**IMS:** Incident Management System is a consistent and systematic way for multiple agencies to coordinate and respond to public emergencies and disasters.

**LHIN:** Local Health Integration Networks are the health authorities responsible for regional administration of public healthcare services in the Province of Ontario, Canada.

**Offload Delay:** Offload delay is the amount of time spent in the Emergency Department transferring care to the hospital. It is calculated as the difference in time from when the ambulance arrives at the Emergency Department until Transfer of Care is documented – less the standard thirty (30) minutes which is normal for ambulance turnaround. Any time greater than thirty minutes is considered offload delay.

**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).