



## **Administrative Report**

### **Office of the Chief, Essex-Windsor EMS**

**To:** Warden MacDonald and Members of Essex County Council

**From:** Bruce Krauter  
Chief, Essex-Windsor Emergency Medical Services

**Date:** Wednesday, August 16, 2023

**Subject:** Essex Windsor EMS Mid-year Experience 2023  
Projected

**Report #:** 2023-0816-EMS-R06-BK

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#### **Purpose**

To provide Essex County Council with background knowledge and information on the ambulance call response experience and activity across the Essex-Windsor region, utilizing historical data, up to June 30, 2023. Current pressures experienced by Essex Windsor EMS, call volume projections and future considerations will be identified.

#### **Background**

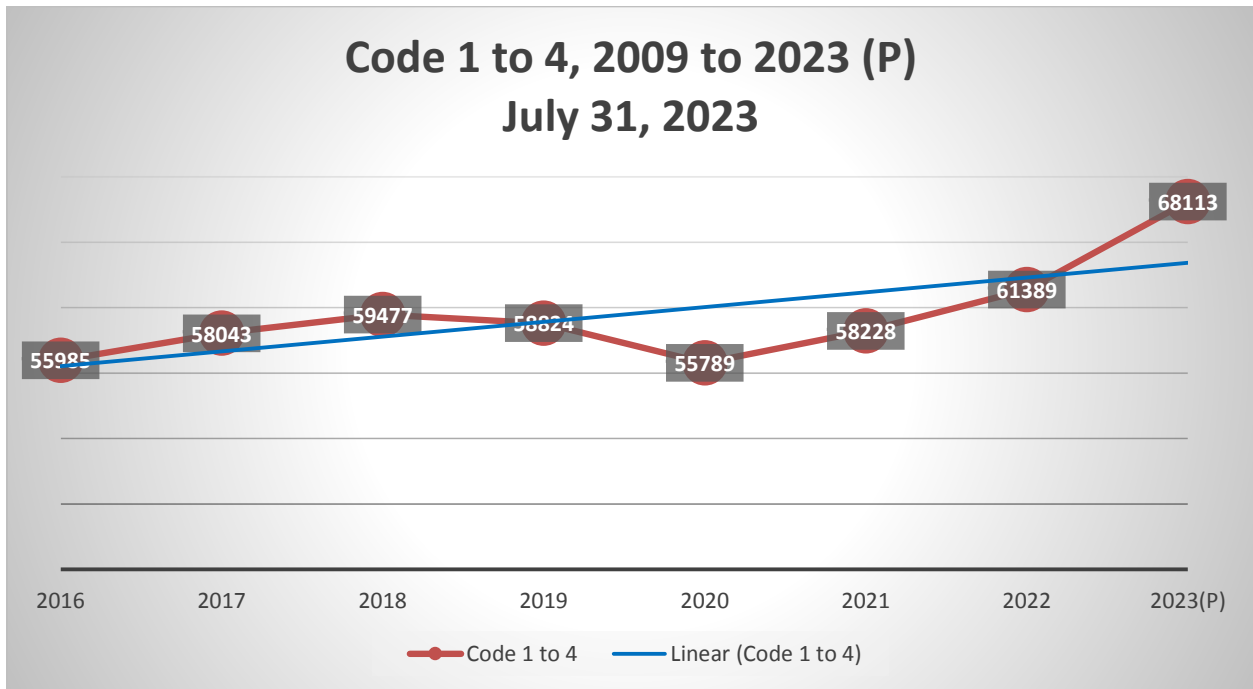
Call response data is reviewed utilizing the Interdev Technologies iMedic electronic Patient Care Record (ePCR) analytics platform and the Province of Ontario Ambulance Dispatch Records System (ADRS). The ePCR is the document that records all relevant patient care, response and transportation data for all EMS responses. By applying these tools, the operations of EWEMS are continually measured, reviewed, and adjusted to maintain the best performance possible.

In April 2019 the County of Essex completed an **Essex Windsor EMS Ten-Year Master Plan** (Appendix I) and it included recommendations for staffing enhancements, station placements, and support services enhancements. This report will refer to some aspects of the Ten-Year Master Plan that have been completed and other items for future consideration.

## Discussion

### Call Volume

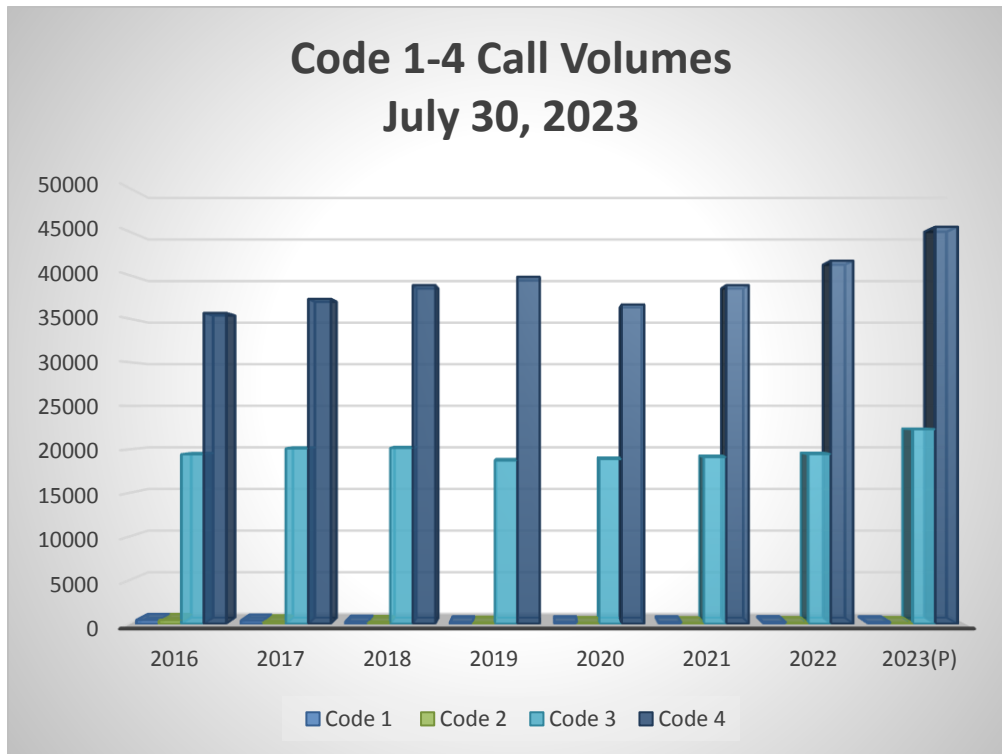
The following chart indicates the call volume trend from 2016 to 2023 (P).



The current projections indicate that the Code 1 to 4 Response Call Volume will increase 9.87% in 2023, to 68,113. This is expected to be the highest volume in the EWEMS' history.

Code 3 and 4 Call responses are projected to increase 9.94% in 2023. The interfacility transfer load (Code 1 and 2) is decreasing, as local hospitals utilize private transfer services for the majority of low-priority transports.

The chart below reflects the increase in Code 3 and Code 4 responses and the decline in Code 1 and 2.



## Municipal Call Volume Distribution

The chart below indicates the five-year call volume experienced by municipal pick-up.

Municipality	2016	2017	2018	2019	2020	2021	2022	2023 (P)
Amherstburg	2,157	2,439	2,799	2,681	2,474	2,682	2,694	2,940
Essex	2,157	2,505	2,842	2,417	2,503	2,586	2,934	2,735
Kingsville	2,089	2,365	2,659	2,789	2,369	2,805	2,761	3,052
Lakeshore	2,588	3,097	3,762	3,389	3,007	3,112	3,333	3,259
LaSalle	2,236	2,572	2,887	2,729	2,640	2,743	2,869	2,735
Leamington	3,352	3,709	4,070	4,120	4,070	4,104	4,103	4,191
Tecumseh	3,101	3,549	3,870	3,524	3,267	3,553	3,783	3,674
Windsor	<b>32,662</b>	<b>39,430</b>	<b>44,041</b>	<b>42,260</b>	<b>39,726</b>	<b>40,643</b>	<b>40,273</b>	<b>44,844</b>
Pelee Island	76	84	96	78	34	53	70	79
Chatham-Kent	133	269	348	277	258	288	336	286
<b>Essex County</b>	<b>17,680</b>	<b>20,236</b>	<b>22,889</b>	<b>21,649</b>	<b>20,330</b>	<b>21,585</b>	<b>22,351</b>	<b>22,587</b>

In review of the chart on the previous page, the following is identified:

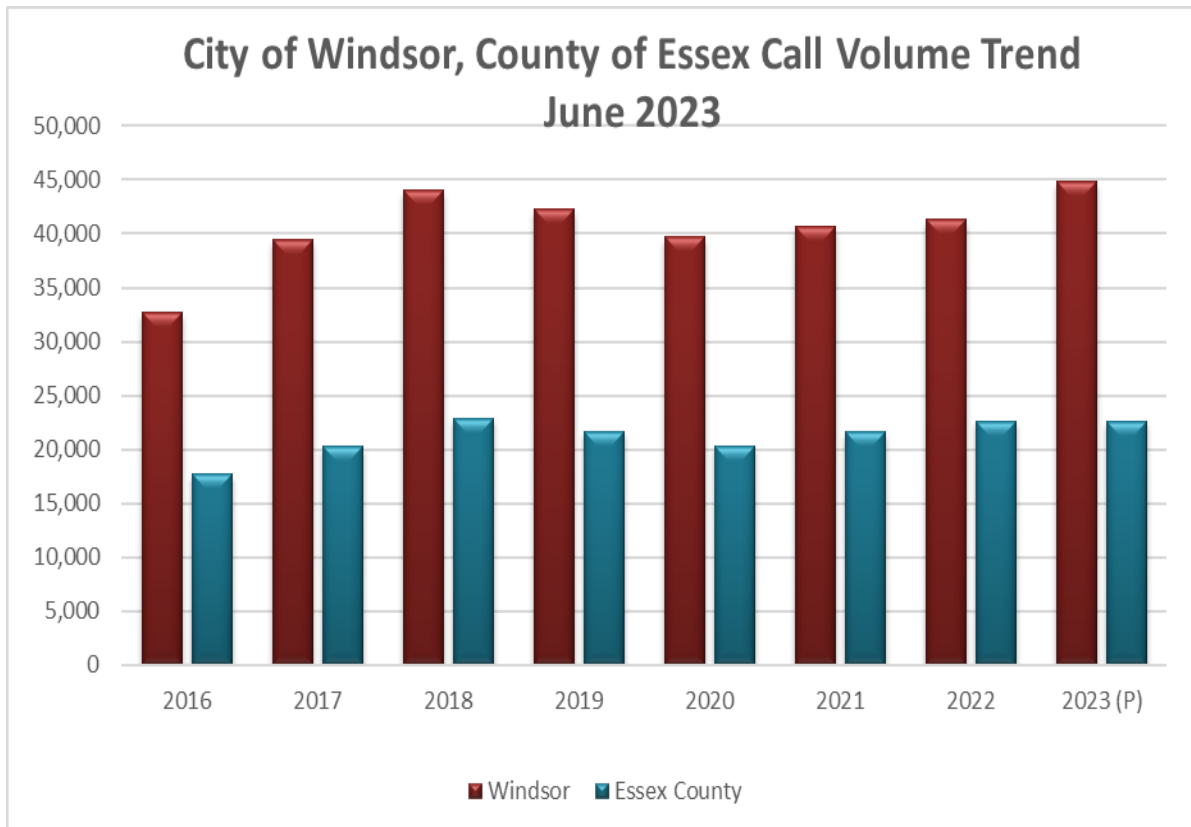
1- Municipalities with a projected increase in volume are:

- Amherstburg 8.38%
- Kingsville 9.53%
- Leamington 0.82%
- City of Windsor 7.85%
- Pelee Island 10.22%

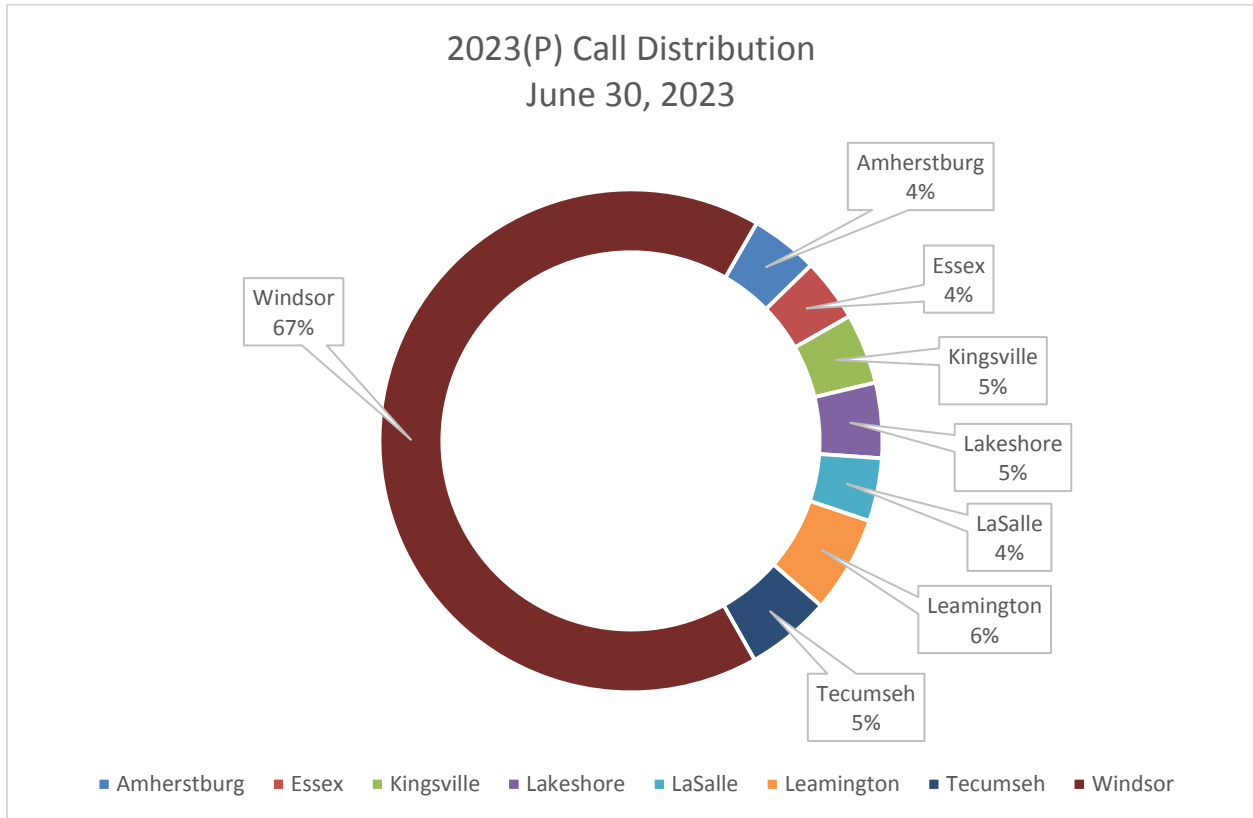
2- Municipalities with a projected decrease in volume are:

- Essex -7.26%
- Lakeshore -2.28%
- Lasalle -6.2%
- Tecumseh -4.15%
- Chatham-Kent -18.92%

The chart below indicates the call volume trend from 2016 to 2023 (P) for the City of Windsor and the County of Essex:



The chart below indicates the call share between the Municipalities for 2023(P)



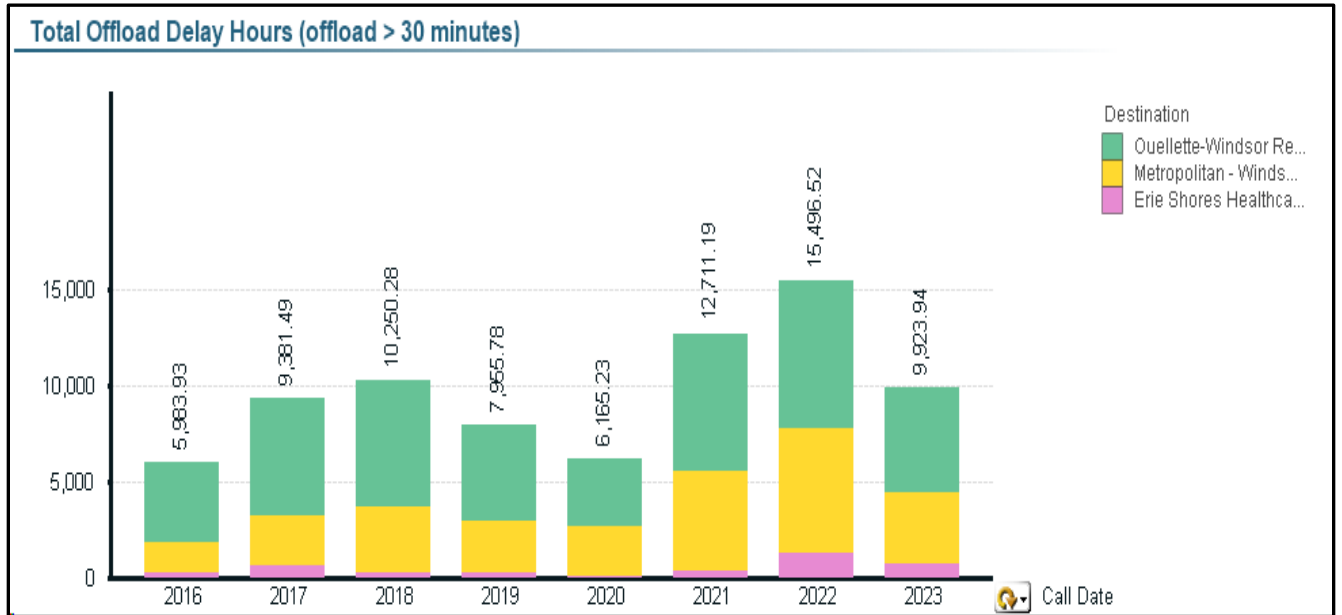
The projections indicate an increasing call volume trend through 2023. The hospital and health care system continue to be strained. The future industrial development in the region, the expected completion of the international crossing, and the ongoing residential development in local municipalities will continue to contribute to the increased volume into the future. EWEMS leadership continually refer to the 2019 Ten (10) Year Master Plan as the guiding document for planning, forecasting, and projecting.

### **Ambulance Offload Delays & Hospital Volumes**

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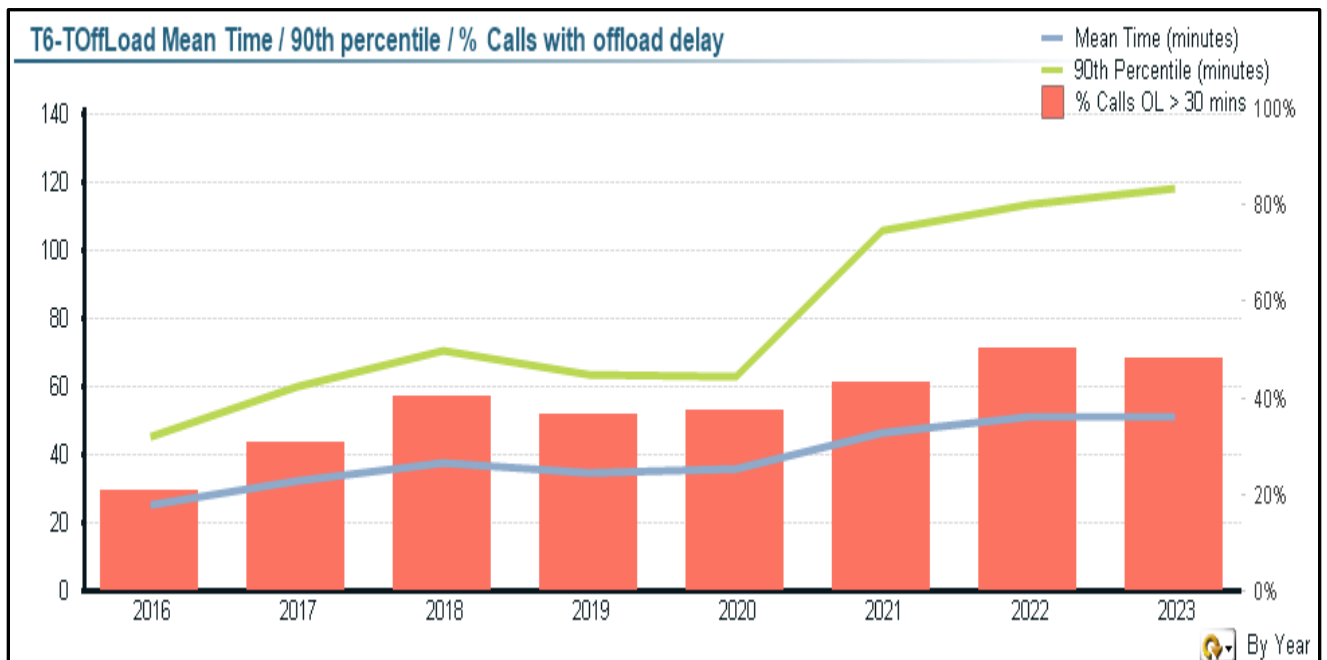
Ambulance offload delays and hospital volumes (capacity) are two factors that impact the delivery of EMS. If an ambulance cannot offload, they are unable to respond within the community.

The chart below represents the Total Offload Delay Hours by site. This reflects the times up to August 3, 2023.

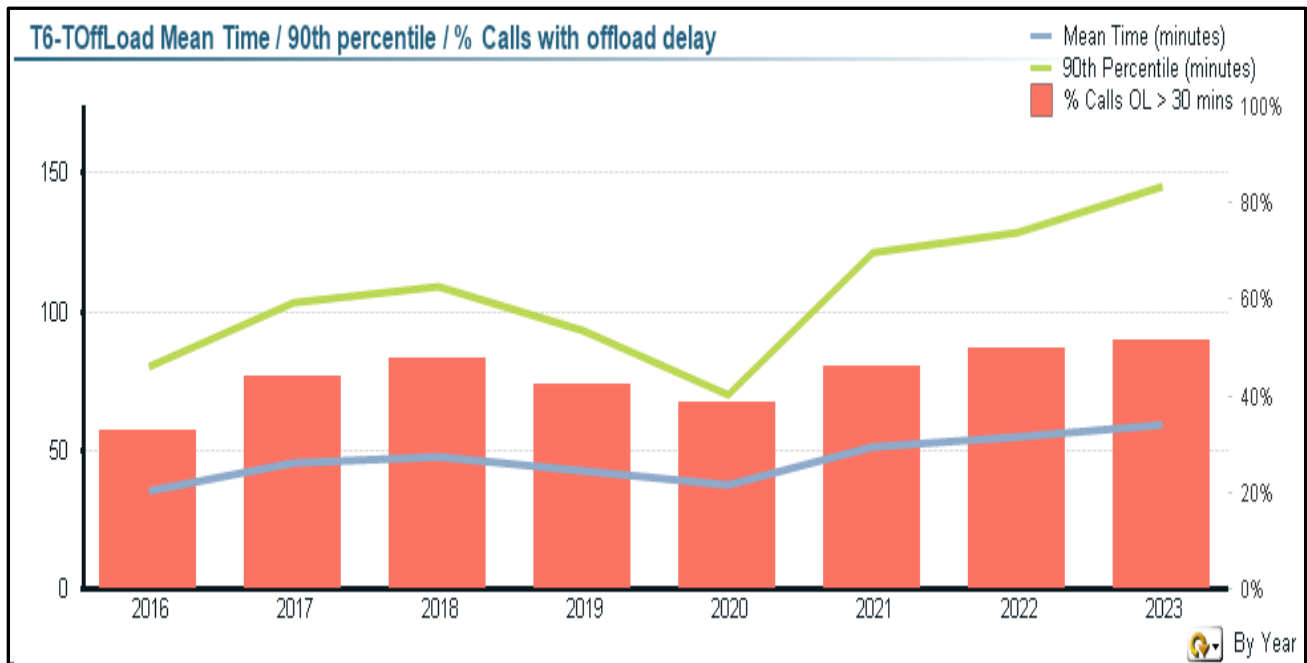


The charts below indicate the historical and actual 90<sup>th</sup> Percentile and volume of the three regional hospital sites: Windsor Regional Met Campus, Ouellette Campus, and Erie Shores Health Care.

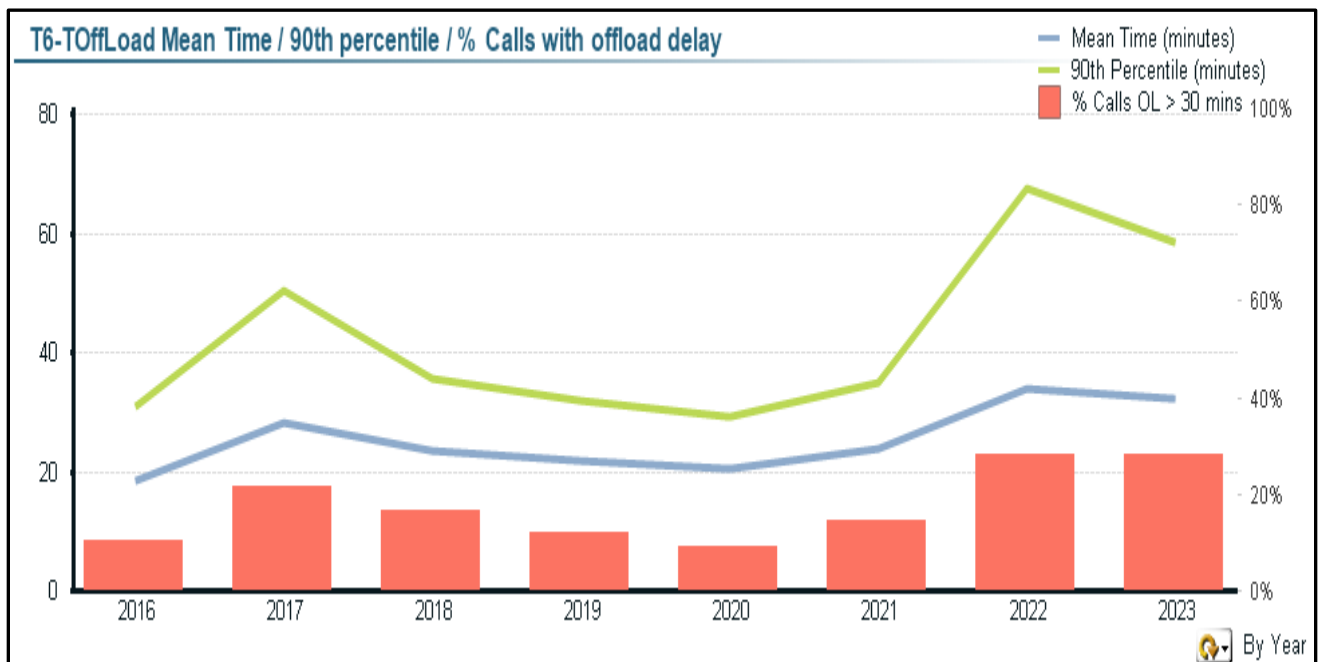
### WRH Met Campus



### WRH Ouellette Campus



### Erie Shores Health Care



EWEMS and the hospitals continue to implement strategies to assist in offload mitigation. These strategies include, but are not limited to:

- Continued diversion strategies for low-acuity patient cohorts

- Daily meetings between EWEMS and hospital leaders to understand daily experiences and expected pressures
- Increased real-time communication pathways between all organizations to develop action plans as soon as possible
- Dedicated Offload Nurse funding
- Offload to waiting room procedures (Fit to Sit)
- Paramedic Offload Program at all three sites

EWEMS has also implemented a number of additional strategies to mitigate pressures. These strategies include, but are not limited to:

- New Models of Care approved by the Ministry of Health, operational on August 1, 2023;
- Utilization of MIH-CP in Emergency Department (ED) diversion strategies;
- Collaborating with hospitals when organizing interfacility transfers to out-of-region destinations;
- Encouraging the use of alternate transportation models for transfers, such as private transport, or ORNGE; and
- Paramedic Patient Navigator in the communications centre.

It must be understood that the current issues with offload delays and hospital capacities are not isolated to the Windsor-Essex region. Across the Province and Canada, the health care system experiences similar pressures. There are multiple contributing factors that impact EWEMS and create offload delays such as decreased primary care access, the deferral of medical procedures, human resource fatigue and market capacity limitations in the healthcare sector.

## **Code Red and Code Black Status**

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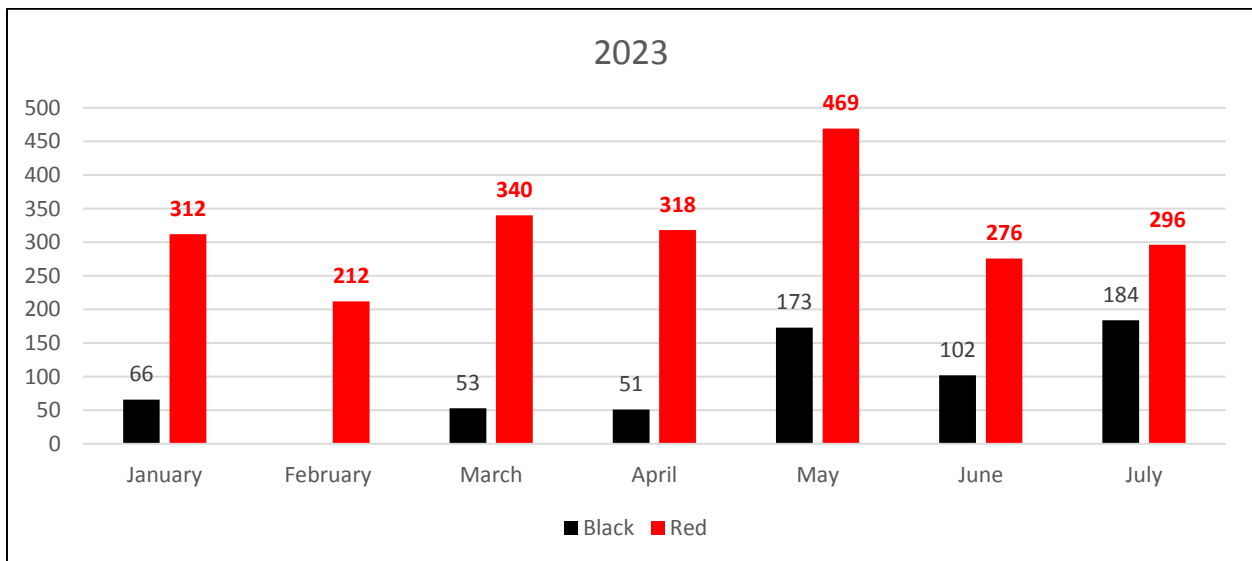
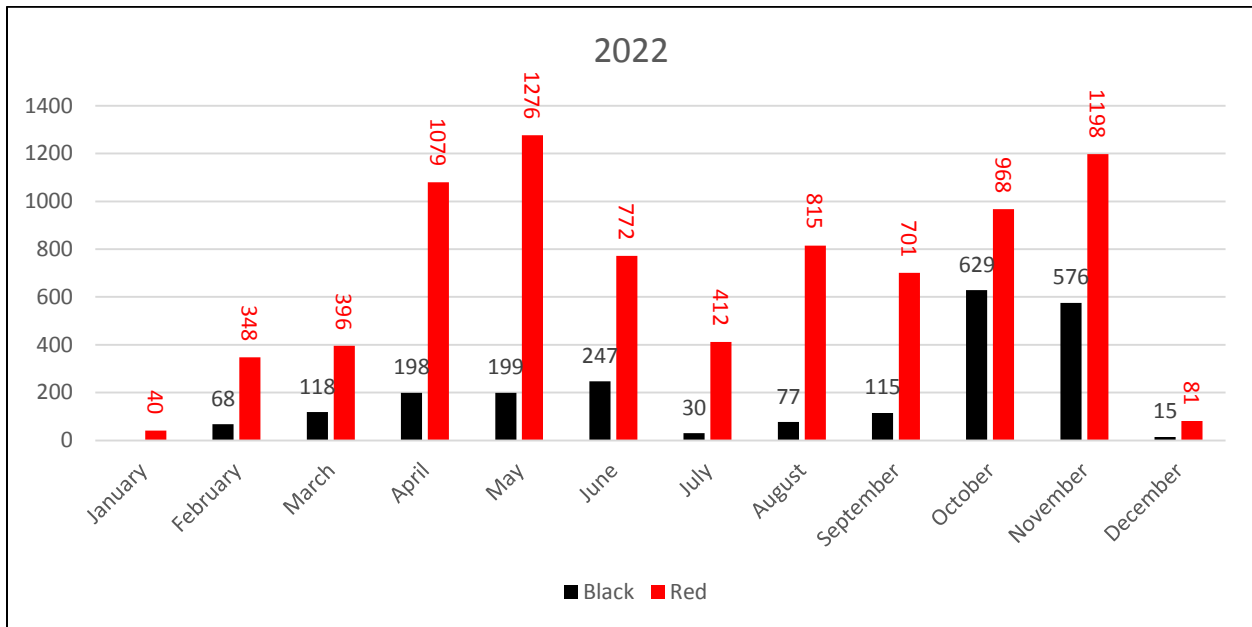
Code Red status is defined as a period of time, measured in minutes where there are only two or fewer ambulances available to respond to a request for service. Code Black status is defined as a period of time, measured in minutes, where there are no ambulances available to respond to a request for service.

During these periods of time, resource utilization is prioritized and only the most life-threatening requests are responded to. In addition, EWEMS relies on our neighbours to assist in a mutual aid capacity and our partner responders, Police and Fire assist in a medical assist capacity.

The data is collected by CACC, and forwarded to EWEMS for its use.

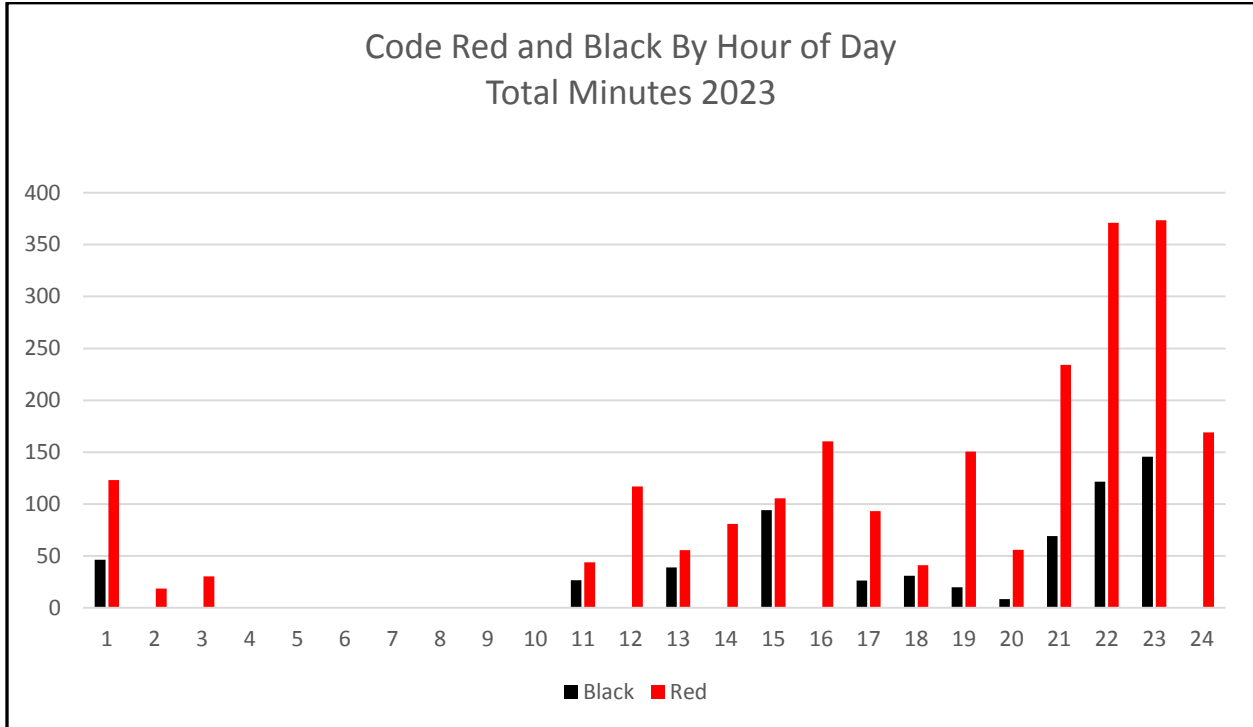


The graphs below indicate the number of minutes EWEMS is in Red or Black status in each month for the years 2021, 2022 and up to July 31, 2023.

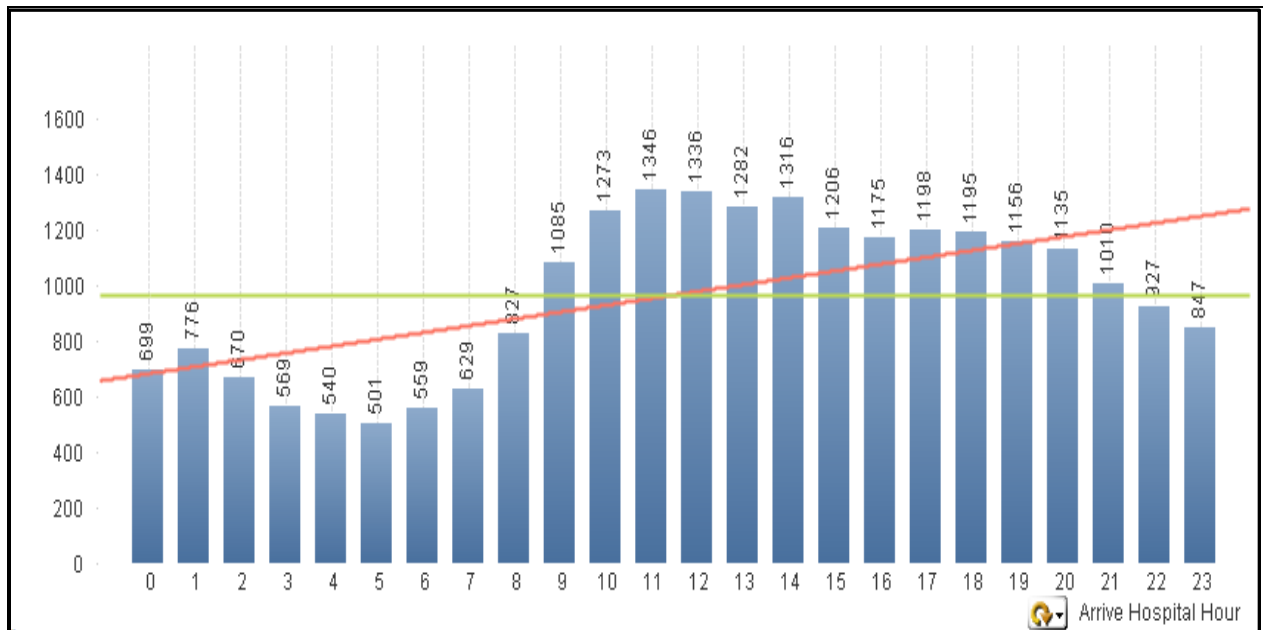


There are notable "Milestones" in regard to the evolutions of Code Red and Code Black status across the region. In October 2022 Warden Gary McNamara Declared an Emergency in regards to the ongoing and continued Code Blacks and Reds across Windsor and Essex County. Health care partners gathered and specific attention was given to the ongoing crisis. As a result, there was a reduction in the number of minutes in Red and Black status. But this reduction was not long-lasting.

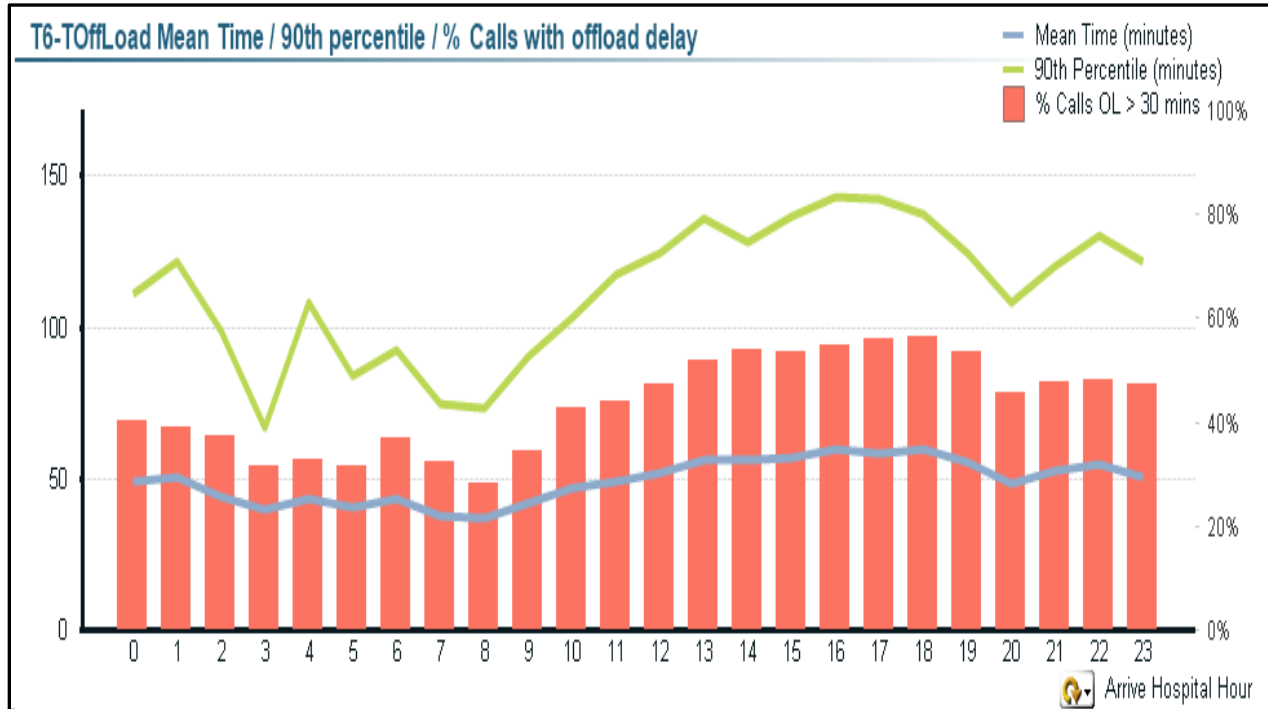
The chart below indicates the Code Red and Black occurrences by hour of day, from January 1 to June 30, 2023. The chart reflects the increase in Code Red and Blacks between the hours of 11 am to 1 am.



This activity also correlates to the experience of call volume by hour of day for the similar time period, as reflected in the chart below;



Ambulance offload delays also have a direct correlation to Code Red and Black occurrences, as indicated in the chart below and the 90<sup>th</sup> Percentile;



EWEMS and hospital partners began to implement a variety of initiatives to combat Code Red and Black status. Each initiative continues today, with the support of ongoing funding from the Province.

These initiatives are:

- **Paramedic Offload Program:** This is when one ambulance crew has the ability to monitor up to four patients waiting for bed assignment in the ED. This is occurring at all three sites. It should be noted that Windsor Regional Hospital is piloting an in-house offload program similar in design and impact.
- **Offload to Waiting Room (Fit to Sit):** This is a process where low-acuity patients are offloaded to the waiting room for assessment and triage. This frees up ambulance stretchers sooner.
- **Low Acuity Transport Diversion (to another hospital ED):** This is a process in which a low acuity patient will be transported to an ED that has capacity to offload quicker than those that are at capacity and placing an ambulance into offload status.

- Paramedic Patient Navigator in CACC: EWEMS has piloted placing a management staff into dispatch to navigate resources and facilities in order to deploy ambulances sooner. This system-wide approach is realizing great results as it allows decisions to be made efficiently and in less time.
- Supporting applications for increased and extended Primary and Urgent care hours of operation across the region.

The above initiatives have numerous goals, most notably:

- Ensure patients receive the right care, at the right time, and at the right place;
- Reduce the non-emergent use of ambulance transports;
- Reduce or eliminate ambulance offload delays; and
- Increase the availability of ambulances, thereby decreasing Code Red and Code Black status.

There is not one solution to mitigating Code Red and Code Black status, but a multifaceted approach to a systemic issue. Similarly, not one entity or organization can solve Code Red and Code Black status. Meaningful improvement requires collaboration and cooperation from all agencies within the healthcare system.

## **Ten-Year Master Plan**

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The County of Essex has primarily followed the guidance of the Ten-Year Master Plan. The following have been completed or near completion:

- New Kingsville Station in 2023;
- Re-roster schedule to match call volume in 2021;
- 12 full-time paramedics in 2022; and
- Increase to Community Paramedic (VPN) with staff and Captain in 2021.

The 2023 Budget provides capital funding for the procurement of land for a future ambulance station in the Town of LaSalle.

The Master Plan recommends an enhancement of paramedic staff in 2024 and again in 2026 and an increase to support services, such as fleet, logistics, and scheduling. As the service expands, support services should expand as well.

## Considerations

As we approach the compiling of the 2024 Budget, EWEMS must consider all aspects that place pressure on the service and ensure the service continues to meet or exceed those pressures to provide the best care possible.

In the upcoming budget development, consideration should be given to an increase in paramedic resources, support services, and a refresh of the Ten-Year Master Plan. These considerations will prepare EWEMS and the County of Essex for the current, expected and anticipated pressures that paramedic delivery will face.

## Financial Implications

There are no financial implications within the report.

## Consultations

Essex Windsor EMS Senior Leadership

## Recommendation

That Essex County Council receive report number 2023-0816-EMS-R005-BK for information.

## Approvals

Respectfully Submitted,

*Bruce Krauter*

Bruce Krauter, Chief, Essex-Windsor Emergency Medical Services

Concurred With,

*Sandra Zwiers*

Sandra Zwiers, MAcc, CPA, CA, Chief Administrative Officer and Director, Financial Services/Treasurer

Appendix Number	Title
I	Essex Windsor EMS Ten Year Master Plan