



Administrative Report

Office of the Chief, Essex-Windsor EMS

To: Warden MacDonald and Members of Essex County Council

From: Justin Lammers
Chief, Essex-Windsor Emergency Medical Services

Date: Wednesday, March 06, 2024

Subject: Essex-Windsor EMS Operational Tempo Update

Report #: 2024-0306-EMS-R05-JL

Purpose

The purpose of this report is to provide Essex County Council with information on the current operational tempo of Essex-Windsor EMS and to highlight existing and future strategies for improvement.

Background

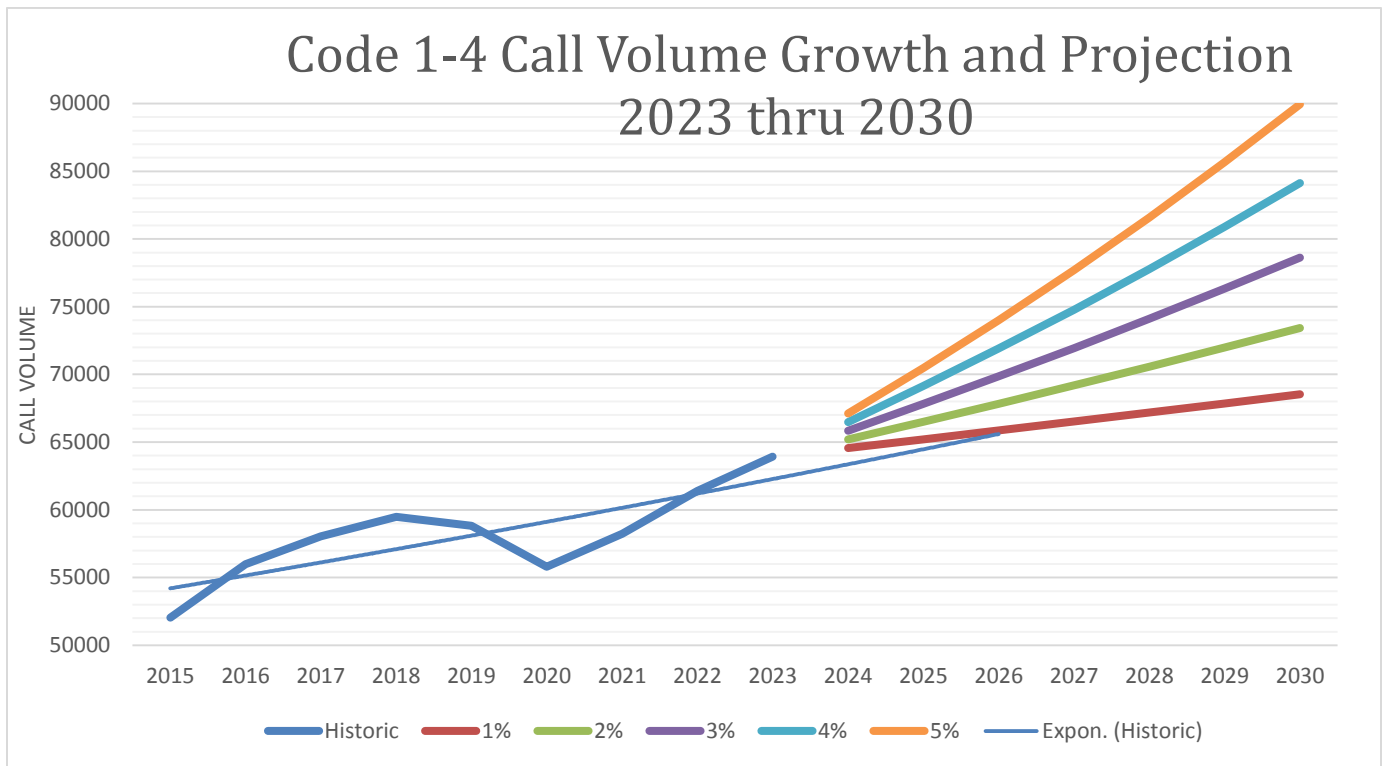
Call response data is reviewed utilizing ESO Medusa's electronic patient care records (ePCR) analytics platform and the Province of Ontario's Ambulance Dispatch Reporting System (ADRS). The ePCR is the document that records all relevant patient care, response, and transportation data for all EMS responses. By applying these tools, the operations of EWEMS are continually measured, reviewed, and adjusted to maintain the best performance possible, in the current circumstances.

Call volumes were reported throughout 2023 including at the 2024 County of Essex budget deliberations, with a clear increasing trend. The focus of this report will be on the frequency of code red and black, and offload delays.

Discussion

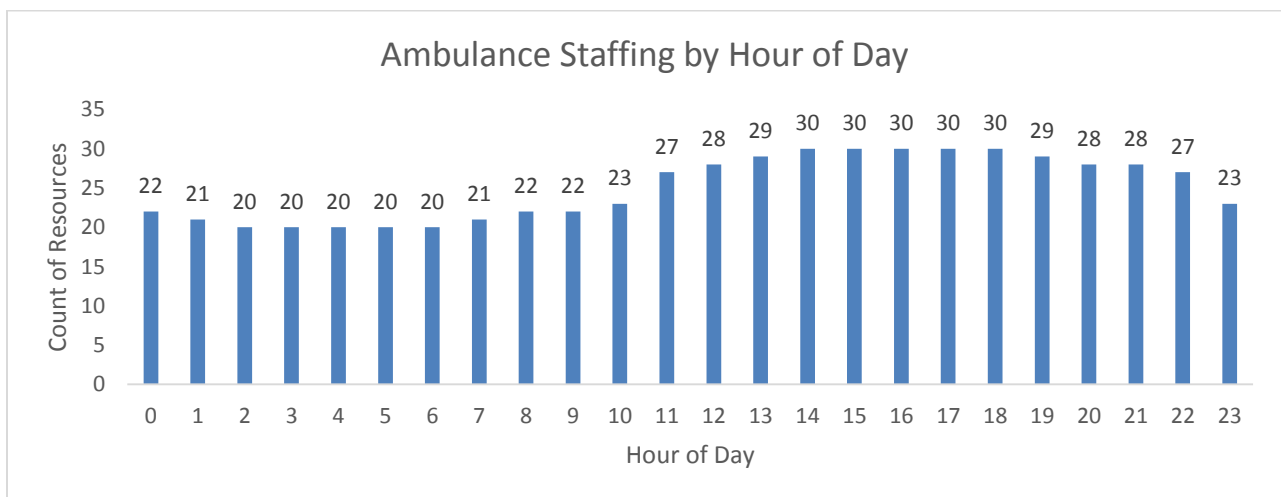
The following chart shows historical and projected call volume growth from 2015 to 2030:

Figure 1



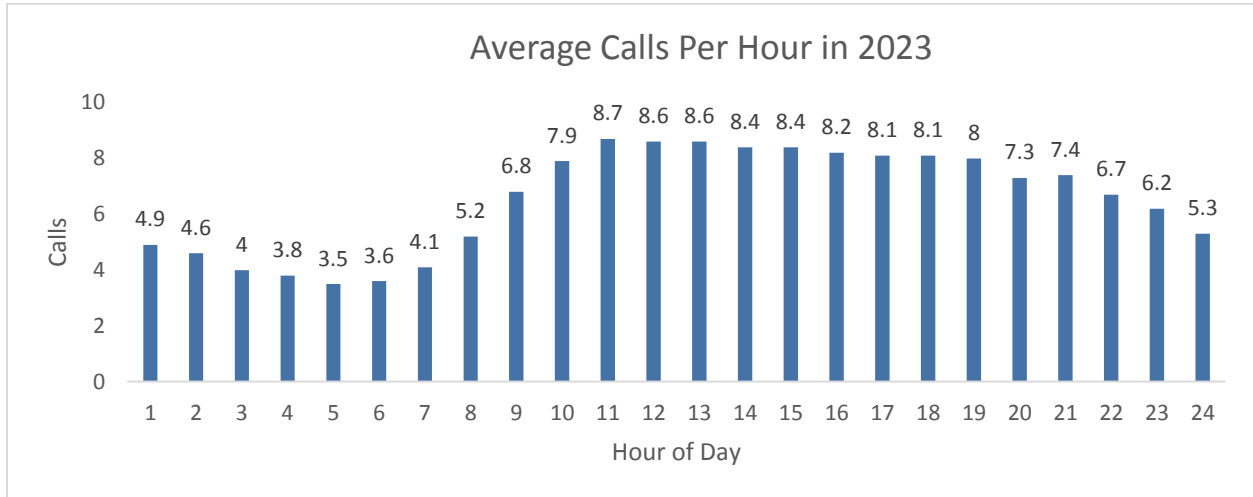
The following chart shows the current count of staffed EMS resources by hour of day:

Figure 2



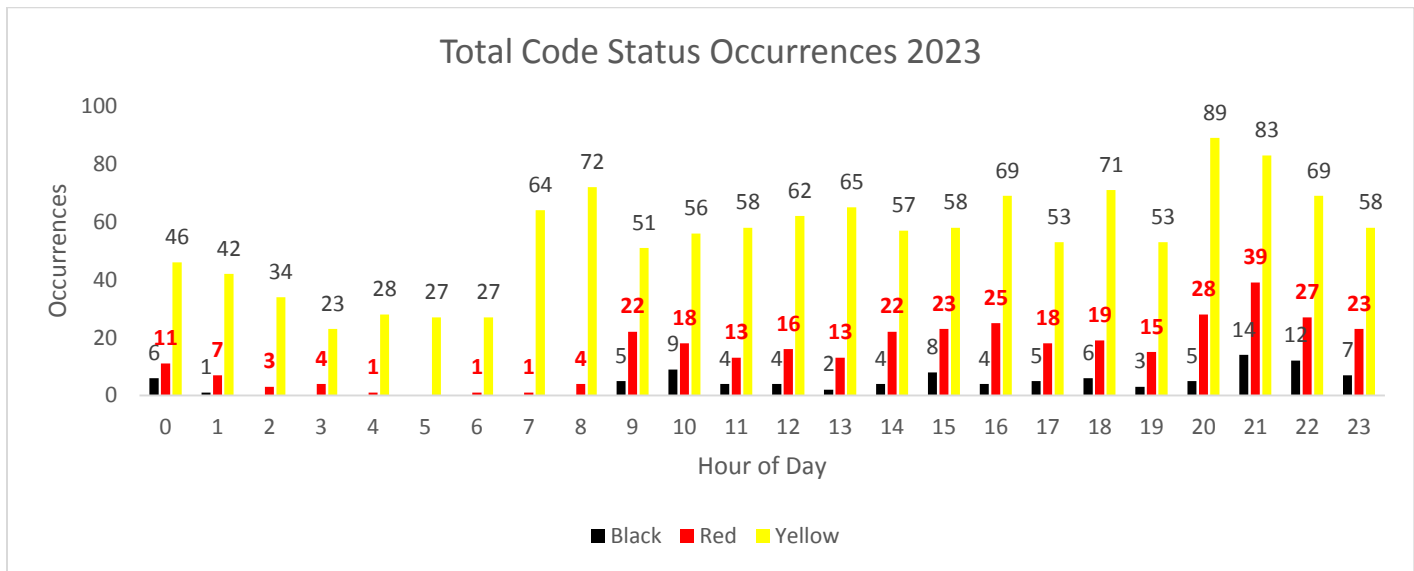
The following chart shows the average count of 911 responses by hour of day, for 2023:

Figure 3



The following chart indicates the sum of occurrences for codes yellow, red, and black by hour of day for 2023:

Figure 4



For clarity, the following defines code yellow, red and black:

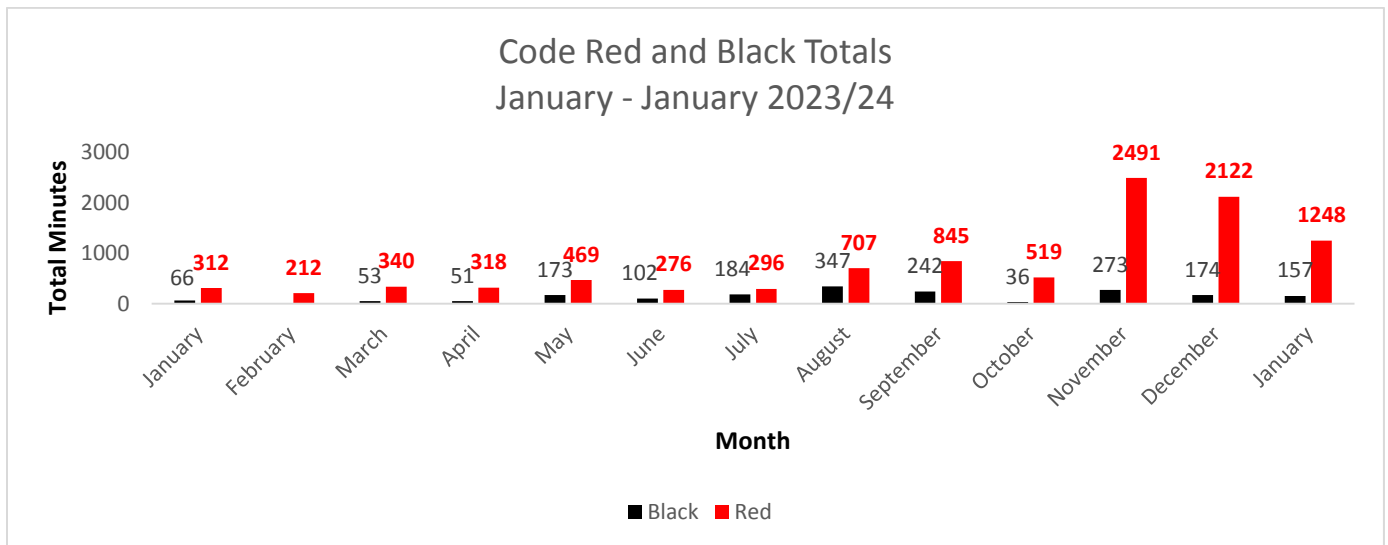
Code Status Yellow occurs when the number of available ambulances is greater than or equal to four (4) and up to or equal to ten (10) throughout the mainland service area.

Code Status Red occurs when the number of available ambulances is greater than zero (0) but less than or equal to three (3) throughout the mainland service area.

Code Status Black occurs when the number of available ambulances is zero (0) or less throughout the mainland service area. "Or less" indicates that emergency (life or limb) responses are being delayed greater than 15 minutes.

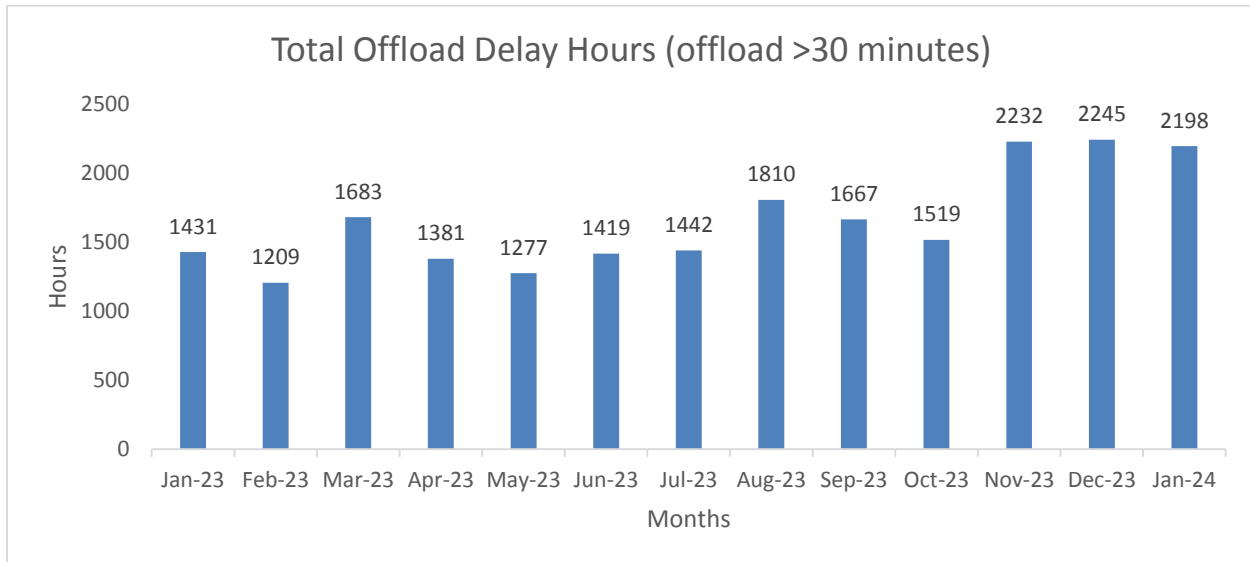
The following chart indicates the sum of code red and black from January 2023 to the end of January 2024, by month:

Figure 5



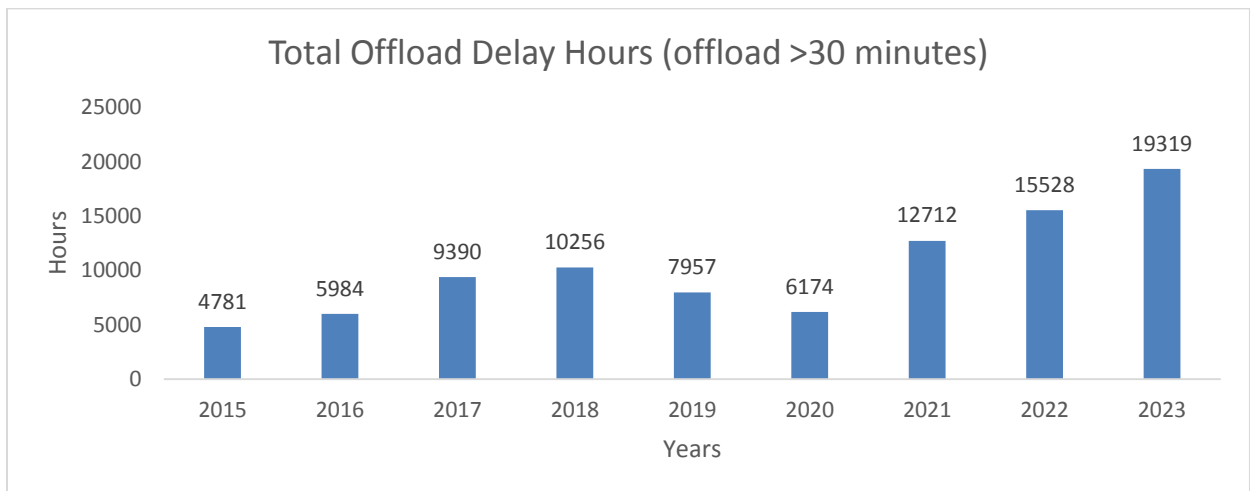
The following chart shows the sum of all offload delays from January 2023, to February 12, 2024, monthly, for all three (3) hospitals:

Figure 6



The following chart shows the trend of offload delays in our region from 2015 to 2023:

Figure 7



On September 25, 2023, Essex Windsor EMS re-rostered all start times to align with periods of high volume and increased frequencies of code red and black. In an attempt to reduce the amount of code red and black occurring in the late afternoon to early evening, resources were moved from the morning to cover this period. As a result, incidents of code red and black in the afternoon and early evening were reduced, but incidents of code red and occasionally code black were occurring in the early morning, signaling the

need for more resources in the morning hours. For clarity, the amount of code red and black in the afternoon before the re-rostering far outweighed the amount of code red and black that is now occurring in the morning.

Additionally, on September 25, 2023, Essex Windsor EMS adjusted the code status thresholds for code yellow to between four (4) and ten (10) available units, and red to between one (1) and three (3) available units. The rationale for this change was to provide more time between code red and black, as previously, code red was two (2) remaining units. Code yellow was raised to ten (10) as "balanced coverage" includes one (1) ambulance in every station, that being eleven (11) on the mainland. Eleven (11) or more available ambulance resources constitute code green.

In addition to the adjustment of what constitutes a code red, the local hospitals were involved in a cyber-attack in late October 2023, that forced hospital processes to revert from electronic charting to paper, for the remainder of 2023 and into the beginning of 2024. While we typically anticipate increased EMS volumes and higher hospital occupancy rates during the respiratory season, the cyber-attack significantly affected the speed at which ambulances could turn around at hospitals. In conjunction with rising call volumes, this increased the counts of offload delays and subsequent periods of decreased available ambulances for the region, as shown in Figure 5.

On November 1, 2023, Essex Windsor EMS received pre-budget approval to increase ambulance resources by four (4) paramedics, which would allow for the additional staffing of one (1) twelve (12) hour ambulance on days. This enhancement was implemented on November 23, 2023.

Through provincial working groups and the collaboration of local hospitals, areas of opportunity within the hospital system for mitigating offload delays were investigated in January 2024, and work is underway to replicate those successes from other regions, where possible. Essex Windsor EMS continues to work closely with hospital partners on mitigating offload delays and is in constant communication with the leadership team.

In addition to the above, here are some of the ongoing and upcoming initiatives and processes to help improve ambulance availability within the region:

- Designated Offload Nurse Program
 - The 2024/25 proposal includes doubling the amount of offload Nurses for each site
- EMS Supervisor in the communications center to assist with the flow of patients across the region, in collaboration with the ambulance communication center and hospital leadership

- Daily huddles (0930 and 1500) with hospital leadership to discuss current operational demands and strategies to maintain or improve flow within the hospitals
- Sharing of EMS operational dashboard with hospital leadership for situational awareness
- 24/7 notifications to all parties on EMS code status changes
- Revising the current framework for offloading patients from the ambulance to the waiting room (Fit to Sit)
- Revising the current escalation pathway for lengthy offload delays
- Paramedic Offload Program (ultimate goal is for periods of crisis only)
- Alternate models of care to safely reduce transporting patients to the emergency departments
- Upstaffing ambulances in periods of high volume
- Mobilizing Community Paramedic resources to the front line in periods of code red and black
- Active part-time Paramedic recruitment
- Additional 16 full-time Paramedics approved within the 2024 EMS budget
 - Currently working with union executives to strategize where and when new resources will be deployed
- Preparing for Paramedic Aide recruitment to support readying ambulances at hospitals for quicker turnaround after transfer of care occurs
- Preparing for the refresh of the EMS Master Plan
- Investigating the benefits of assuming control of Ambulance Communications locally

Essex Windsor EMS is committed to continue working collaboratively with all stakeholders to investigate and operationalize opportunities within the healthcare system that will help to improve ambulance availability within the region.

Financial Implications

There are no financial implications within the report.

Consultations

Ryan Lemay, Deputy Chief of Operations

Danielle Dunlop, Manager of Administration

Sandra Zwiers, Chief Administrative Officer

Recommendation

That Essex County Council receive report number 2024-0306-EMS-R05-JL for information purposes.

Approvals

Respectfully Submitted,

Justin Lammers

Justin Lammers, Chief, Essex-Windsor Emergency Medical Services

Concurred With,

Sandra Zwiers

Sandra Zwiers, MAcc, CPA, CA, Chief Administrative Officer

Appendix	Title
N/A	N/A