
Subject: Niagara EMS Resources Impact Update

Report to: Regional Council

Report date: Thursday, August 25, 2022

Recommendations

1. That staff **BE AUTHORIZED** to continue providing on a temporary basis two additional 24-hour ambulances and one additional 12-hour ambulance for the remainder of 2022 at an incremental cost of \$1,005,466 for the balance of 2022; and
2. That the Regional Chair **BE DIRECTED** to write to the new Minister of Health for Ontario, copying Niagara's Members of Provincial Parliament, regarding the continuing worsening state of offload delays and the need for systemic improvements.

Key Facts

- Since the implementation of additional resources in May 2022, call volumes have increased as predicted, but trending 5% higher than seasonal summer patterns. Offload delays have decreased slightly but remain substantial.
- These factors, combined with ongoing health system related pressures, are challenging EMS resources in unprecedented ways.
- Additional resources added have improved the availability of ambulances, decreasing 'status alerts' and instances of public waiting prolonged periods for ambulance response.
- Additional resources have only slightly improved or prevented worsening of some front line staff operational stressors as offload delay worsening has overwhelmed most of the positive effect of the additional resources.
- Significant health care pressures currently being experienced are not likely to improve in the short term, and may worsen.

Financial Considerations

Offload Delay Pressures

In 2021, the highest year to date for offload delays, offload resulted in a total of 21,420 hours of lost productivity at a cost of \$2.4 million. In the first six months of 2022, the

system has already lost over 19,500 hours (\$2.1 million) to offload delay; this has abated very little, and at current rates is projected to double by years' end.

Offload delays and call volume increases, workload issues, and the evolving nature of paramedic working conditions (such as increased use of PPE and greater rates of abuse and assault) contribute to human resource challenges and operational costs. This is exacerbated by missed meal breaks and involuntary end-of-shift overtime. As these factors impact staff resiliency, they may contribute to increased sick time, increased risk of injury, and changes in staff morale.

Temporary Resourcing

The addition of two 24-hour ambulances and one 12-hour ambulance for May 19 to December 2022 is anticipated to cost approximately \$1,729,402. These costs will need to be offset with the taxpayer relief reserve at year-end. The reserve fund policy (Report CSD 48-2014 Reserve and Reserve Fund Policy) recommends that reserves identified as "Corporate Stabilization", which includes the taxpayer relief reserve, be used to stabilize levy requirements due to unanticipated changes in operational requirements, such as emergency-related purchases. Use of the reserve requires approval by Council. Required use of this reserve will be communicated to Council as part of the annual year-end transfer report.

Staff are currently working on their 2023 budget under the strategy presented to Council in July 2022, which proposed no funds for new permanent investments. This business case is proposed in the 2023 budget, staff will submit a 2022 budget amendment for Council to approve in order to attract 50% provincial subsidy in 2023.

Capital Impact

The additional deployments are also placing additional strain on the current EMS fleet of ambulances. EMS does operate with a small number of spare ambulances in order to cover additional shifts, and also to be able to rotate vehicles through maintenance and necessary repairs. The addition of ambulance hours in service by these temporary measures has reduced the number of spares available, however the situation has been manageable and is expected to continue to be manageable to the end of 2022. The increased offloads also place additional wear and tear on ambulances and age them prematurely since ambulances are required to idle when waiting at hospitals. As colder weather approaches, it is expected to become more of a concern as the frequency of repairs and maintenance becomes higher, and the impact of engine idling will be even

greater. A capital business case has been included in the 2023 Capital Budget that will request two new ambulances that would only be acquired should Council approve any operating ask to move forward with increased paramedic staffing in 2023.

Analysis

Report [PHD 05-2022 Niagara EMS – System Pressure Update 2](https://pub-niagararegion.escribemeetings.com/filestream.ashx?DocumentId=22561) (https://pub-niagararegion.escribemeetings.com/filestream.ashx?DocumentId=22561) outlined the significant challenges being placed on Niagara’s EMS system as a result of increasing call volumes, offload delays, and health care system pressures. As a result of that report, 2.5 ambulances were added for a period of ninety days. Staff were directed to provide an update prior to the end of the ninety-day period.

The pressures outlined in PHD 05-2022 have changed very little. Offload delays have decreased slightly, but are still well above pre-2022 record levels. Call volume is in a seasonal high, as anticipated, but is at least 5% above previous seasonal highs.

As seen in Figure 1, the combined effect of offload delays and call volume are trending towards record levels for 2022, with a projected 19.6% increase over 2021, the previous record year. The middle (blue) line shows all recorded EMS incidents over time. The lower (green) line shows the number of patients transported to hospital, which has remained very stable despite increases in call volumes, as a result of EMS efforts. The top (red) line shows the combined effect of incidents and hours lost to offload delay. This is a better demonstration of the true system impact of offload delay.

Niagara EMS was recently the recipient of two international awards for system design, reflecting its commitment to innovative and efficient use of resources. Despite these efforts, health care system stressors that are impacting not only Niagara but are being seen provincially and nationally are rapidly impacting paramedic services. In particular, stressors on the hospitals that prevent them from being able to admit more patients, play out as a “downloading” of patient care to EMS who must care for patients for lengthy periods in hospital hallways during offload delay. As Figure 1 shows, while the number of patients being transported to the hospital is effectively unchanged (green line) over the last several years, the time spent attending to each patient transported is rapidly increasing (red line) due to longer and longer offload delays when the hospital cannot assume care for the patients.

Figure 1: Incidents and Transports per Year 2012-2022 (projected).

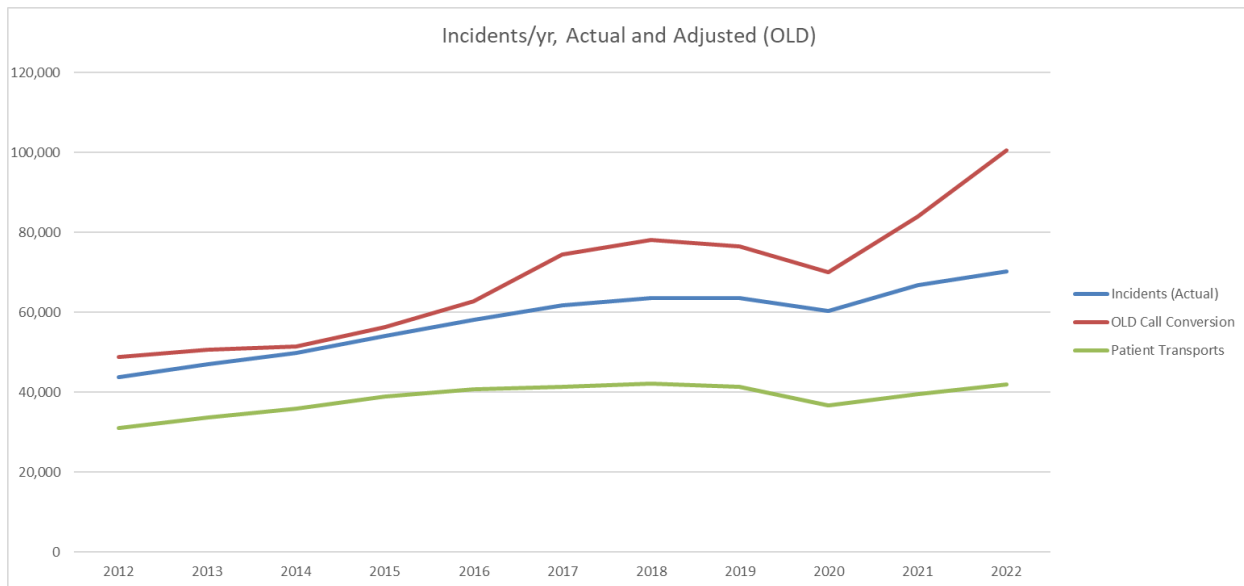


Figure 1: Incidents show actual versus adjusted to include offload delay resource demand impacts.

As seen in Figure 2 below, since PHD 05-2022, offload hours at Niagara hospitals soared, reaching new peaks in May. This improved slightly through June, but has not reached sustainable levels; ambulance resource losses continue to track at unprecedented levels. Pressures on hospitals across the province are severe with several other areas in Ontario having experienced recent short-term emergency department closures recently. Staff have been assured that no such action is imminent in Niagara. However, intermittent hospital system challenges such as departmental COVID-19 outbreaks, influx of COVID-19 patients due to the current seventh wave of the pandemic, and staff shortages are ongoing, and have immediate impacts on EMS resource availability.

The additional resources that commenced in May 2022 upon Council's earlier approval contributed to small improvements in staff being able to take their meal break during a 12 hour shift (from 90% in May to 96% in June and 94% in July). Despite call volume increases, forced end of shift overtime stayed the same and did not increase, which may be attributed to the extra resources allowing the increased call volumes to be managed. However, that also meant that the additional resources could not relieve demands on overtime and other staff pressures. Weekly occurrences of staff illness and WSIB (Workplace Safety and Insurance Board) improved slightly, but overall length of absences remains high, with WSIB lost time increasing. Front line staff feedback indicates that the extra resources are helpful, but do not wholly mitigate current pressures.

System Impact

Niagara EMS uses an Alert Status monitoring system for real time situational awareness of system capacity. Status levels indicate availability of 35% of EMS resources (level 2), 20% of EMS resources (level 1), or more calls being held than ambulances available (level 0).

As of mid July, all previous yearly counts of status levels 0-2 had been surpassed. However, since the additional resources were added, alert status instances have decreased 42%, with only two occurrences of alert level 0, (and no occurrences where there were no ambulances at all available). This has had a small positive impact on low acuity 911 responses delayed due to low car count; in the first four weeks after the temporary resources were added, thirty-three patients waited longer than two hours for an EMS response. This is an improvement over the preceding four weeks (124), but still significantly higher than same period last year (13). The resources have therefore helped with patient service, but have not eliminated pressures with offload delays continuing to worsen.

Figure 2: Response Times by Priority plus Offload Delay

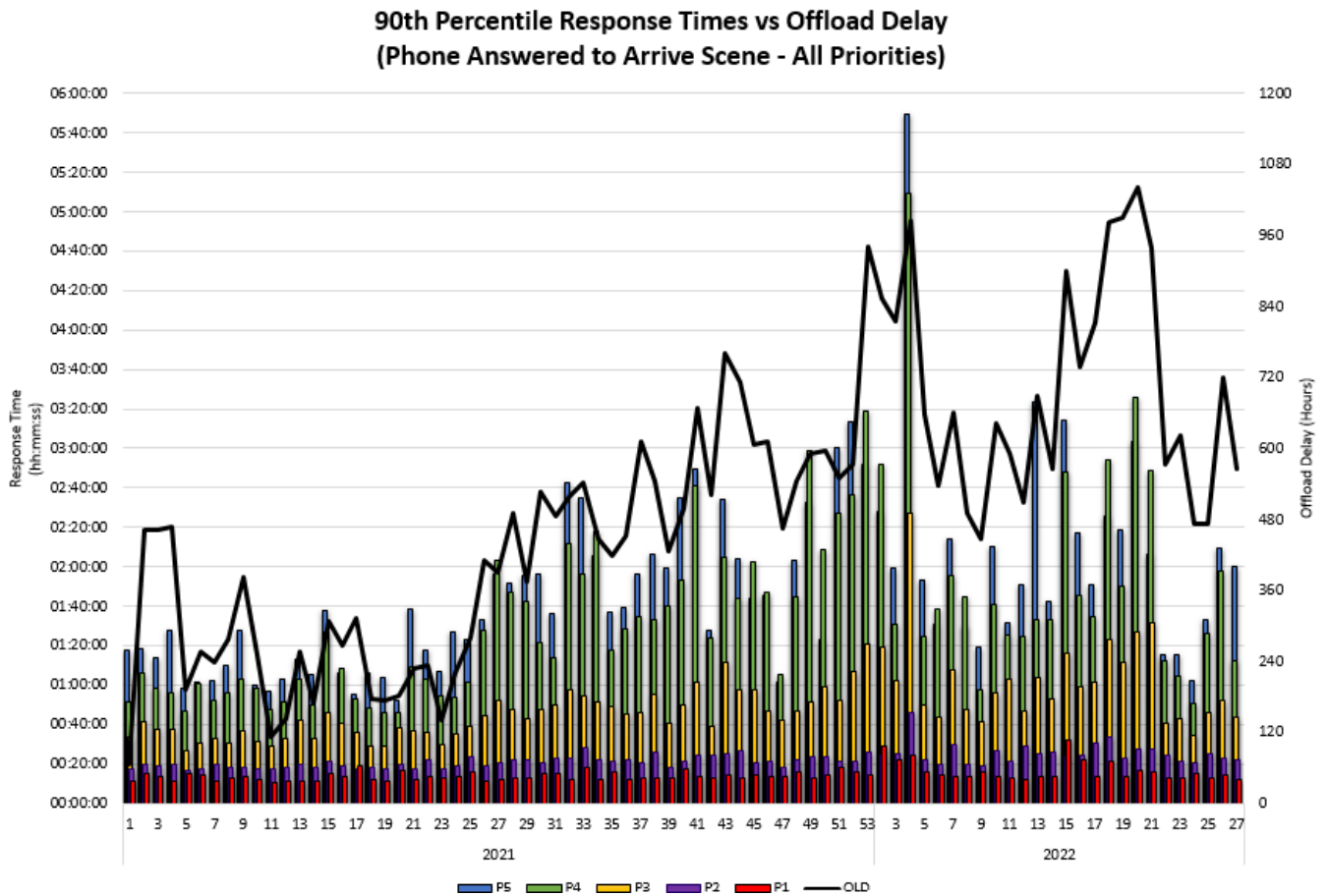


Figure 2: Response times by priority plus offload delay (line), Jan 2021-YTD 2022; response times to priority 3, 4 and 5 are particularly sensitive to offload levels, as system attempts to protect response times to priority 1 and 2 calls.

Alternatives Reviewed

Recent events including the ongoing pandemic place significant pressures on health care resources and staffing locally, provincially, and nationally. These pressures have compounded pre-existing health system challenges, and will take considerable time to address. There are, therefore, three alternatives to the recommendation;

1. Discontinuing the additional resources: This comes with increased risk for EMS ability to service patients, and the risk of exponentially greater impacts on EMS personnel.

2. Local attempts to recover ambulance resources: Efforts specifically related to offload delays have had only minimal impact on EMS resources, as the source of offload delays is systemic and extends well beyond the reach of EMS staff. Significant effort has been invested in trying to recover ambulance resources through local measures. These efforts are continuing, but alone are insufficient to address the current situation.
3. Advocating for system change: Ongoing efforts to address offload delays are occurring not only locally, but with the assistance of provincial and national EMS leadership bodies. Municipal efforts, both directly and through bodies such as Association of Municipalities of Ontario (AMO), are ongoing. In the meantime, EMS assumes all of the patient risk while awaiting broader systemic resolutions to current pressures. These efforts should continue, however more immediate measures are needed.

Relationship to Council Strategic Priorities

The issue of offload delays is directly related to the council priority of Healthy and Vibrant Community. Maintaining emergency coverage of ambulances in Niagara communities leads to protecting the health of residents and visitors. Engaging in alternate service delivery models that best meet the health and social needs of people calling 911 also reduce emergency department overcrowding and otherwise avoidable transports to hospital by ambulance.

Other Pertinent Reports

- PHD 05-2022 Niagara EMS – System Pressures Update 2
- PHD 11-2021 Niagara EMS – System Pressures Update
- CWCD 2021-182 Niagara EMS – Offload Delays Update
- PHD 14-2017 Niagara EMS Hospital Offload Status Report

Prepared by:

Rick Ferron
Chief (Acting), Niagara Emergency
Medical Services & Director (Acting),
Emergency Services
Public Health & Emergency Services

Recommended by:

M. Mustafa Hirji, MD, MPH, FRCPC
Medical Officer of Health &
Commissioner (Acting)
Public Health & Emergency Services

Submitted by:

Ron Tripp, P.Eng.

Chief Administrative Officer

This report was prepared in consultation with Melanie Steele, Associate Director, Reporting & Analysis and Michael Leckey, Program Financial Specialist.