Appendix A

Paramedic Services Performance Measurement Key Indicator Trends
Actual and forecast number of vehicle responses, by year
Region of Waterloo Paramedic Services, inside and outside of Waterloo Region, 2015 to 2026

Vehicle responses volume continues to align to the high growth scenario of the Master Plan growing 11 per cent from 2021 to 2022. Excluding 2020 and 2021, annual growth in vehicle responses is averaging 7 per cent.

Source: Ambulance Dispatch and Reporting System (ADRS) (February 2023)
Unit Utilization (ambulance use) by month
Region of Waterloo Paramedic Services, January 2015 to December 2022

Unit utilization remains above well above the recommend threshold of 35 per cent and is considered unsustainable on an ongoing-basis.

*Shift change*  
*Ambulance added*  
*Impact of fully staffed ambulances not yet realized*

**Notes:** For unit utilization, a decreasing trend is considered positive, while an increasing trend is seen as a negative. The impact of the three, twelve-hour ambulance shifts added in October 2022 have not yet been fully realized due to staff recruitment and retention issues.

**Source:** ADRS (February 2023)
Unit Utilization (ambulance use) by hour of day
Region of Waterloo Paramedic Services, 2021 and 2022

Unit utilization remains above well above the recommend threshold of 35 per cent for most hours of the day.

Note: For unit utilization, a decreasing trend is considered positive, while an increasing trend is seen as a negative.

Source: ADRS (February 2023)
80th percentile response time to emergency calls (code 4) by year
Region of Waterloo Paramedic Services, inside Waterloo Region, 2015 to 2022

Despite increased call volume and other pressures facing the service, response times remain consistent.

Sources: ADRS (February 2023)
80th percentile response time to emergency calls (code 4) by municipality and year
Region of Waterloo Paramedic Services, inside Waterloo Region, 2015 to 2022

Response times increased slightly across most municipalities, but for the most part, remain well below historical highs.

Note: Response times are not intended to be measured at the municipal level.

Sources: ADRS (February 2023)
Compliance to 2022 response time performance plan, by Canadian Triage Acuity Score (CTAS)
Region of Waterloo Paramedic Services, 2021 and 2022

Response times remain consistent across most acuity levels. Compliance results indicate that urgent calls are being given a more appropriate priority and attended to faster.

<table>
<thead>
<tr>
<th>CTAS Level</th>
<th>Performance Indicator</th>
<th>Goal Year</th>
<th>2021 Compliance</th>
<th>2022 Compliance</th>
<th>Ministry Target</th>
<th>Percentile (mm:ss)</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Sudden Cardiac Arrest</em></td>
<td>Defibrillator response in 6 minutes or less (set by Ministry of Health)</td>
<td>2021</td>
<td>✔️ 72%</td>
<td>✔️ 65%</td>
<td>✔️ 70%</td>
<td>05:54</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2022</td>
<td>✔️ 65%</td>
<td>✔️ 65%</td>
<td>✔️ 66%</td>
<td>06:00</td>
</tr>
<tr>
<td><em>CTAS 1 (resuscitation)</em></td>
<td>Paramedic Services response in 8 minutes or less (set by M of H)</td>
<td>2021</td>
<td>✔️ 79%</td>
<td>✔️ 74%</td>
<td>✔️ 70%</td>
<td>07:01</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2022</td>
<td>✔️ 74%</td>
<td>✔️ 74%</td>
<td>✔️ 70%</td>
<td>07:31</td>
</tr>
<tr>
<td><em>CTAS 2 (emergent)</em></td>
<td>Paramedic Services response in 10 minutes or less</td>
<td>2021</td>
<td>✔️ 83%</td>
<td>✔️ 81%</td>
<td>✔️ 80%</td>
<td>09:30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2022</td>
<td>✔️ 81%</td>
<td>✔️ 81%</td>
<td>✔️ 80%</td>
<td>09:51</td>
</tr>
<tr>
<td><em>CTAS 3 (urgent)</em></td>
<td>Paramedic Services response in 11 minutes or less</td>
<td>2021</td>
<td>✔️ 84%</td>
<td>✔️ 81%</td>
<td>✔️ 80%</td>
<td>10:12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2022</td>
<td>✔️ 81%</td>
<td>✔️ 81%</td>
<td>✔️ 80%</td>
<td>10:53</td>
</tr>
<tr>
<td><em>CTAS 4 (less urgent)</em></td>
<td>Paramedic Services response in 12 minutes or less</td>
<td>2021</td>
<td>✔️ 86%</td>
<td>✔️ 83%</td>
<td>✔️ 80%</td>
<td>11:20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2022</td>
<td>✔️ 83%</td>
<td>✔️ 83%</td>
<td>✔️ 80%</td>
<td>11:57</td>
</tr>
<tr>
<td><em>CTAS 5 (non-urgent)</em></td>
<td>Paramedic Services response in 12 minutes or less</td>
<td>2021</td>
<td>✔️ 84%</td>
<td>✔️ 84%</td>
<td>✔️ 80%</td>
<td>11:16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2022</td>
<td>✔️ 84%</td>
<td>✔️ 84%</td>
<td>✔️ 80%</td>
<td>12:00</td>
</tr>
</tbody>
</table>

* A dashed reference line indicates a Ministry mandated target. Paramedic Services chosen targets are indicated with solid reference lines. Compliance values should exceed the target while response time percentiles should be lower than the target. To be more reflective of the SCA indicator definition of any defibrillator arriving on scene, the SCA indicator includes fire department data.

**Source:** ADRS and TabletPCR (February 2023); Cambridge and Kitchener Fire Departments Waterloo Fire Rescue (March 2023)

4304703
Monthly total and 12-month moving average of ambulance days lost to offload delay, by month
Region of Waterloo Paramedic Services at local hospitals, January 2015 to December 2022

For 2022 Paramedic Services lost an average of 50 days per month to offload delay or the equivalent of removing three, 12 hour shifts from the schedule every day.

Source: TabletPCR (February 2023)
Summary statistics for code yellow and code red status events
Region of Waterloo Paramedic Services, 2021 and 2022

Code yellow and red events were both much more common and much longer in duration in 2022 than in 2021.

<table>
<thead>
<tr>
<th></th>
<th>Code Yellow</th>
<th>Code Red</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Count</strong></td>
<td>2021</td>
<td>2022</td>
</tr>
<tr>
<td></td>
<td>710</td>
<td>1,158</td>
</tr>
<tr>
<td><strong>Duration (hours)</strong></td>
<td>2021</td>
<td>2022</td>
</tr>
<tr>
<td></td>
<td>367.1 hrs</td>
<td>898.0 hrs</td>
</tr>
<tr>
<td><strong>Per cent of time</strong></td>
<td>2021</td>
<td>2022</td>
</tr>
<tr>
<td></td>
<td>4.2%</td>
<td>10.3%</td>
</tr>
<tr>
<td><strong>Median Duration (mm:ss)</strong></td>
<td>2021</td>
<td>2022</td>
</tr>
<tr>
<td></td>
<td>20min 46sec</td>
<td>25min 47sec</td>
</tr>
<tr>
<td><strong>Maximum Duration (hr:mm:ss)</strong></td>
<td>2021</td>
<td>2022</td>
</tr>
<tr>
<td></td>
<td>4hr 55min 35sec</td>
<td>12hr 55min 27sec</td>
</tr>
<tr>
<td></td>
<td>12hr 55min 27sec</td>
<td>1hr 00min 56sec</td>
</tr>
</tbody>
</table>

Source: CACC (February 2023)
Glossary

ADRS: Ambulance Dispatch Reporting System

CACC: Central Ambulance Communication Centre

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 patients ‘life or limb’ may be at risk (e.g. Vital Signs Absent patient or unconscious head injury).

Code Red: When the Region of Waterloo Paramedic Services is at a level where no ambulances are available to respond to the next emergency call and no out of town services are immediately available to assist.

Code Yellow: When the Region of Waterloo Paramedic Services is at minimum coverage of three vehicles or less.

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).

Emergency Calls: Based on dispatch priority only. Emergency calls are categorized as Code 4 (Urgent).

Offload Delay: Offload delay measures the offload of patients at local hospitals, which can impact the resources required and availability to respond to calls.
Response Time: Response time means the time measured from the time a 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).

T1: The time point when a call is entered in to the queue at the Central Ambulance Communications Centre and is available for dispatch.

T2: The time point when ambulance/response unit is notified by the Central Ambulance Communications Centre of a call.

T4: The time point when an ambulance/response unit arrives at the dispatched call’s location/scene. This is not the time point when a paramedic is at the patient’s side.

T6: The time point when an ambulance arrives at its destination (e.g. hospital).

TabletPCR: An internal tool used to track information and data relevant to calls and patient care reporting.

Unit Utilization: Percentage of staffed vehicles utilized during any unit of time. Note that when UU exceeds a value of 40 per cent, it becomes difficult to ensure an ambulance will be available for the next call in a reasonable time.

Vehicle response: A vehicle response is generated when an ambulance or emergency response unit is dispatched to a call; there can be more than one vehicle response per call (multiple ambulances/emergency response units assigned to the same call; for example, multi-casualty incidents).
Contact Information

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