Emergency Service Planning

County of Dufferin

Consulting Services for the Development of a Masterplan and Service Delivery Review for Paramedic Services

Final Report

December 17, 2025
ORH/DCPS/1

ASSOCIATION OF AMBULANCE CHIEF EXECUTIVES

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Accreditations

Other than data provided by Dufferin County, this report also contains data from the following sources:

Contents

1 Introduction

Project Background

1.1 The County of Dufferin commissioned Operational Research in Health Limited (ORH) to undertake a Master Plan and Service Delivery Review for Dufferin County Paramedic Services (DCPS). The development of such a plan is complex as it embraces operational, estate and finance issues, and there will be wider issues in terms of how the service is positioned within the public sector.

1.2 ORH sub-contracted the Association of Ambulance Chief Executives (AACE) to undertake the Service Delivery Review (SDR) components. AACE is the UK's representative body for statutory ambulance services, also providing consultancy services with the aim of sharing best practice through operational development and quality improvement guidance.

1.3 The scope of the review was to identify:

- Future call volume projections
- The optimal number and location of facilities
- The vehicle requirements to meet response time standards
- Staffing and delivery model recommendations, including support staff

1.4 The review also commissioned the handover of ORH's ambulance simulation model, AmbSim, to DCPS staff.

1.5 In order to undertake this review ORH collected and analyzed detailed workload, resourcing and supporting data to assess the current service profile (see Section 2).

1.6 Demand projections were created to quantify the impact of population and demographic changes through to 2036 on paramedic service demand (see Section 3).

1.7 ORH's optimization and simulation models were set up and calibrated to create a 'Base Position' (see Section 4).

1.8 The demand projections were loaded into the simulation model to create a 'Do Nothing' scenario through to 2036 to understand the impact of demand growth (see Section 5).

1.9 Scenario modelling was undertaken to understand optimal location configurations, while also quantifying future resourcing requirements in both the historical DPCI II system and future Medical Priority Dispatch System (MPDS) (see Section 6).

1.10 The SDR comprised a document review and stakeholder interviews, with the methodology and recommendations presented in Section 7.

1.11 A trajectory was created to understand the ideal prioritization of changes over the next ten years (see Section 8).

1.12 This document is the Final Report for the review.

2 Data Analysis and Benchmarking

ORH collected detailed workload and resourcing data from June 2020 to May 2025. This was used to analyse historical trends, and the following conclusions can be drawn:

- Responded incidents attended by DCPS generally increased from 2020 onwards though volumes for 2023, 2024 and 2025 (to date) were similar at around 20 per day (see Appendix **B1a**).
- P4 response times were relatively similar at 68.2% within 8 minutes in 2025 compared to 69.9% in 2020, though there were reductions in performance in 2021 and 2022 (see Appendix **B3a**).
- The largest fluctuation in time component of a call was found in time at hospital, ranging from 32m42s in June 2020 to 43m in June 2024 (see Appendix **B4b**). Time at hospital is, however, similar in May 2025 to June 2023, with the largest variations occurring prior to this.

ORH also benchmarked DCPS analysis against that undertaken for recent reviews of similarly-sized Ontario paramedic service clients. The results of this can help identify potential efficiencies for DCPS to target over the next ten years.

The outcomes can be summarized as follows (see Figure **2-3**):

- 66.2% of DCPS demand was categorized as P4, at the lower end compared to other services but within the expected range
- DCPS mobilization times are relatively short, with some of the longer times for other services representing communication or timestamp recording issues
- Travel time to scene within the County of Dufferin is the shortest of the benchmarked areas, reflecting the location of stations within the main urban areas
- Time at scene is the fourth longest benchmarked; however, the minimum and maximum values are relatively close
- Time at hospital is the second longest benchmarked at 38m37s on average

Time at hospital was the main outlier in the benchmarking; reductions and increases to this were tested in the scenario modelling (see Section 6).

Data Collection

2.1 A sample of workload and resourcing data from June 2020 to May 2025 was collected by ORH to examine and analyze trends in demand and performance. Datasets collected include:

- Workload data (from both Ambulance Dispatch Reporting System (ADRS) and Electronic Patient Care Record (ePCR) systems)
- Resource data (planned deployments and future enhancements)
- Geographical data (station and hospital locations)
- Operational policies and procedures (deployment protocols, meal break policies)

2.2 ORH also collected incident data broken down by age, gender and LTM back to 2015, in order to inform demand projections. This was supported by the collection of Census-based historical population data and population projections.

2.3 Organizational, budgetary and strategic information documents were also collected to inform the SDR.

2.4 A summary of the data specification is provided in Appendix **A**.

Service Analysis

Demand

2.5 ORH's definition of demand is incidents with a response made by DCPS inside or outside the County, within Priorities 1 to 4.

2.6 Most of the analysis focused on the last two years of data (from June 2023 to May 2025), with some longer-term trends being analyzed over five years.

2.7 Responded incidents attended by DCPS generally increased from 2020 onwards after the start of the COVID-19 pandemic (see Appendix **B1a**). Incident volumes for 2023, 2024 and 2025 (to date) were similar at around 20 per day.

2.8 Incident demand followed a similar pattern by hour to that experienced in other EMS services, with Priority 4 (P4) demand peaking at around 10:00 and remaining high through the daytime (see Appendix **B1b**).

2.9 Demand was highest in Orangeville Lower Tier Municipality (LTM) at 10.3 incidents per day, with 61% of this being categorized as P4 incidents (see Appendix **B1c**).

2.10 P4 demand accounted for between 61% and 76% of responded demand in most LTMs. P4T (Transfer) demand only occurred within Orangeville, as this is the only LTM with a major hospital.

2.11 The volume of responses in and out of the County had not materially changed across the sample period, with DCPS being the only responder to an incident outside of the County approximately once every two days (see Appendix **B1d**). The 'out of area, other only' incidents are those not occurring within the County and responded to by non-DCPS vehicles only; these are included within the ADRS dataset as they will have been transported to hospital in the County.

2.12 Out-of-county paramedic services responded mostly into northwest Melancthon and northeast Mulmur, with some responses into Orangeville and Shelburne (see Appendix **B1e**).

2.13 ORH's analysis focuses on call priority, as this is known at the point of dispatch. It is, however, possible to analyze the relationship between priority and the Canadian Triage Acuity Scale (CTAS). P4 calls account for all CTAS 1 demand, although this category is small; P4s are mostly equivalent to CTAS 2 and 3 (see Appendix **B1f**).

2.14 The proportion of patients transported to hospital was relatively stable from the COVID-19 pandemic onwards, at around 80% for P4 and 68% for P3 (see Appendix **B2a**).

2.15 Headwaters Health Care Centre was the only hospital receiving more than one patient per day, and is the only major hospital in the County (see Appendix **B2b**).

2.16 Brampton Civic Hospital, Southlake Regional Hospital and Stevenson Memorial Hospital each received around 0.3 patients a day. However, the profile of incidents by priority differed between these hospitals, with 86% of patients transported to Brampton being P3.

Response Performance and Call Components

2.17 The proportion of P4 incidents responded to within 8 minutes was similar in 2025 to 2020, at 69.9% and 68.2% respectively; P4 performance had reduced in 2021 and 2022 (see Appendix **B3a**). The P3 90th percentile showed a steady increase from 15m18s in 2020 to 19m29s in 2025. These performance metrics were measured from the time the first vehicle was assigned to the incident.

2.18 The mean P4 response time was lowest in the two concentrated urban centres of Shelburne and Orangeville, at 5m43s and 5m54s respectively (see Appendix **B3b**). East Garafraxa, Amaranth and Mono LTMs experienced similar mean response times of just under 10 minutes.

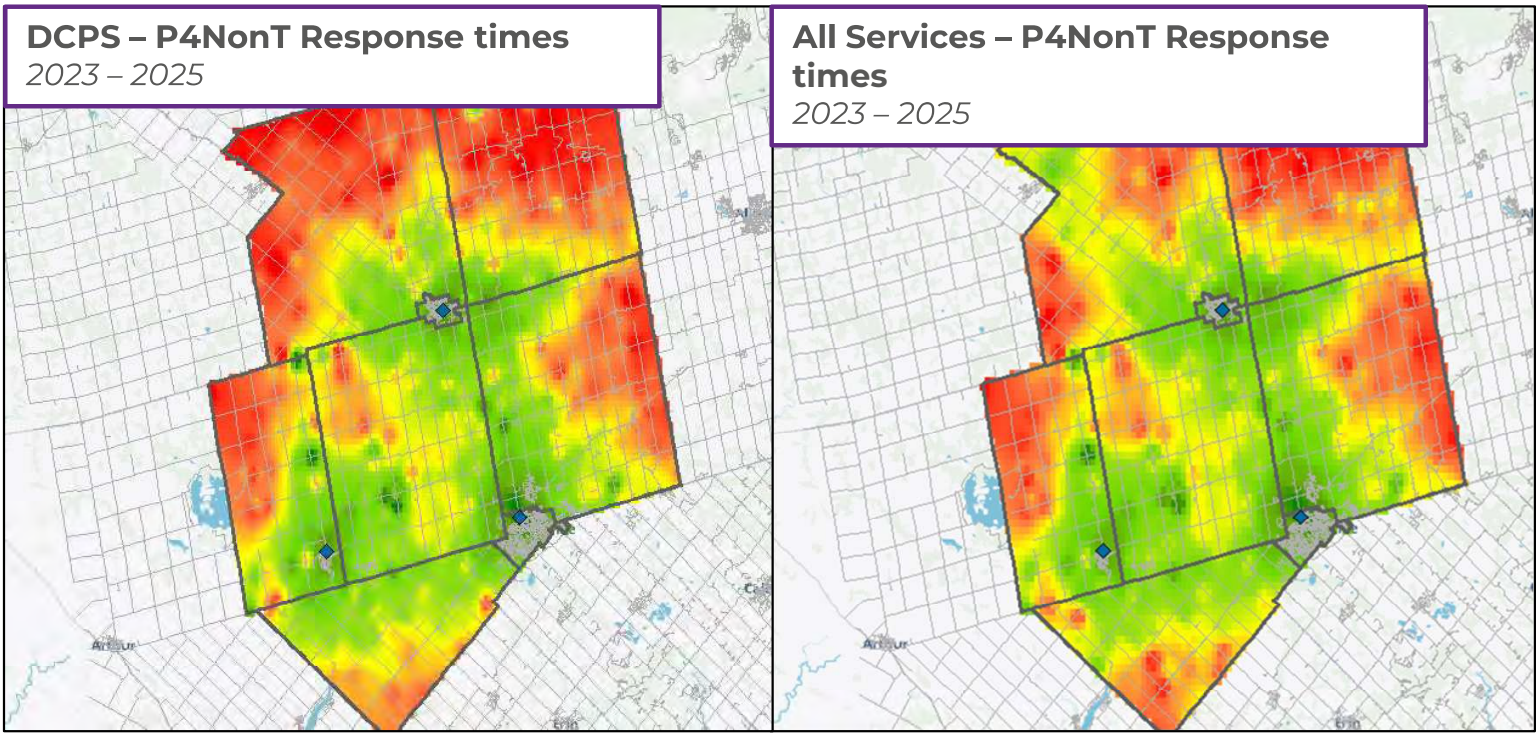
2.19 When considering only DCPS responses, northwest Melancthon and northeast Mulmur showed long response times; the northwest of Melancthon in particular improved when incorporating responses from all services (see Figure **2-1**). The volume of first responses to incidents by non-DCPS services is low, at 0.2 per day for both Melancthon and Mulmur.

2.20 P4 8-minute response performance was relatively consistent through the daytime, at between 68% and 74% from 06:00 to 23:00; performance was lowest between 01:00 and 06:00 at below 65% (see Appendix **B3c**). This, however, corresponds to the period of lowest demand.

2.21 Time at hospital was the largest component of time on task, at 38m57s on average for P4 incidents (see Appendix **B4a**). Time spent travelling to hospital was longer for P1 and P2 incidents owing to their nature as hospital transfers to out-of-county locations.

2.22 Examining the average call components by month showed that the largest fluctuation was in time at hospital, ranging from 32m42s in June 2020 to 43m in June

Figure 2-1: Mean Response Performance



First Responses by Responding Service and LTM

Responding Service	Daily First Responses by Lower Tier Municipality (2023 to 2025), All Vehicle Types							
	Amaranth	East Garafraxa	Grand Valley	Melancthon	Mono	Mulmur	Orangeville	Shelburne
DCPS	0.9	0.6	1.8	0.7	1.7	0.6	11.9	6.7
BCPS					0.0			
CSPS				0.0	0.0	0.2		0.0
GCPS	0.0		0.0	0.2	0.0	0.0		0.1
GWPS	0.0	0.1	0.0				0.0	
HEMS							0.0	
PRPS	0.0	0.0			0.1		0.1	0.0
ROWPS							0.0	
TPS							0.1	
Non-DCPS Service Total	0.0	0.1	0.0	0.2	0.1	0.2	0.2	0.1

2024 (see Appendix **B4b**). Time at hospital is, however, similar in May 2025 to June 2023, with the largest variations occurring prior to 2023. Most of the fluctuation and increase is within arrival to offload, with offload to clear reducing across the sample.

2.23 The other call components were relatively stable during the last two years, with time at scene (the second longest component) showing a slight increase over that period.

2.24 Call components differed by area, broadly in line with the relative rurality and, therefore, travel time to scene. The relative proximity of each LTM to Headwaters Health Care Centre influences the travel time to hospital and, therefore, the total occupied time in Shelburne is relatively longer than might be expected given its urbanity (see Appendix **B4c**).

Resourcing and Resource Use

2.25 Orangeville base was by far the busiest station, undertaking 17.4 responses per day on average (see Figure **2-2**). Approximately 3.3 of these were P8 standby moves, with 70% of these occurring from Orangeville to Shelburne.

2.26 Shelburne was the most common 'target' station for standby moves, with 6.2 occurrences per day where a unit was either mobilized or arrived at location (see Appendix **B5a**).

2.27 Of the assignments occurring following a standby move, between 50% and 60% were more than 30 minutes after the standby move was completed. Nineteen percent of the next assignments were to an incident (and ultimately to hospital) within 30 minutes.

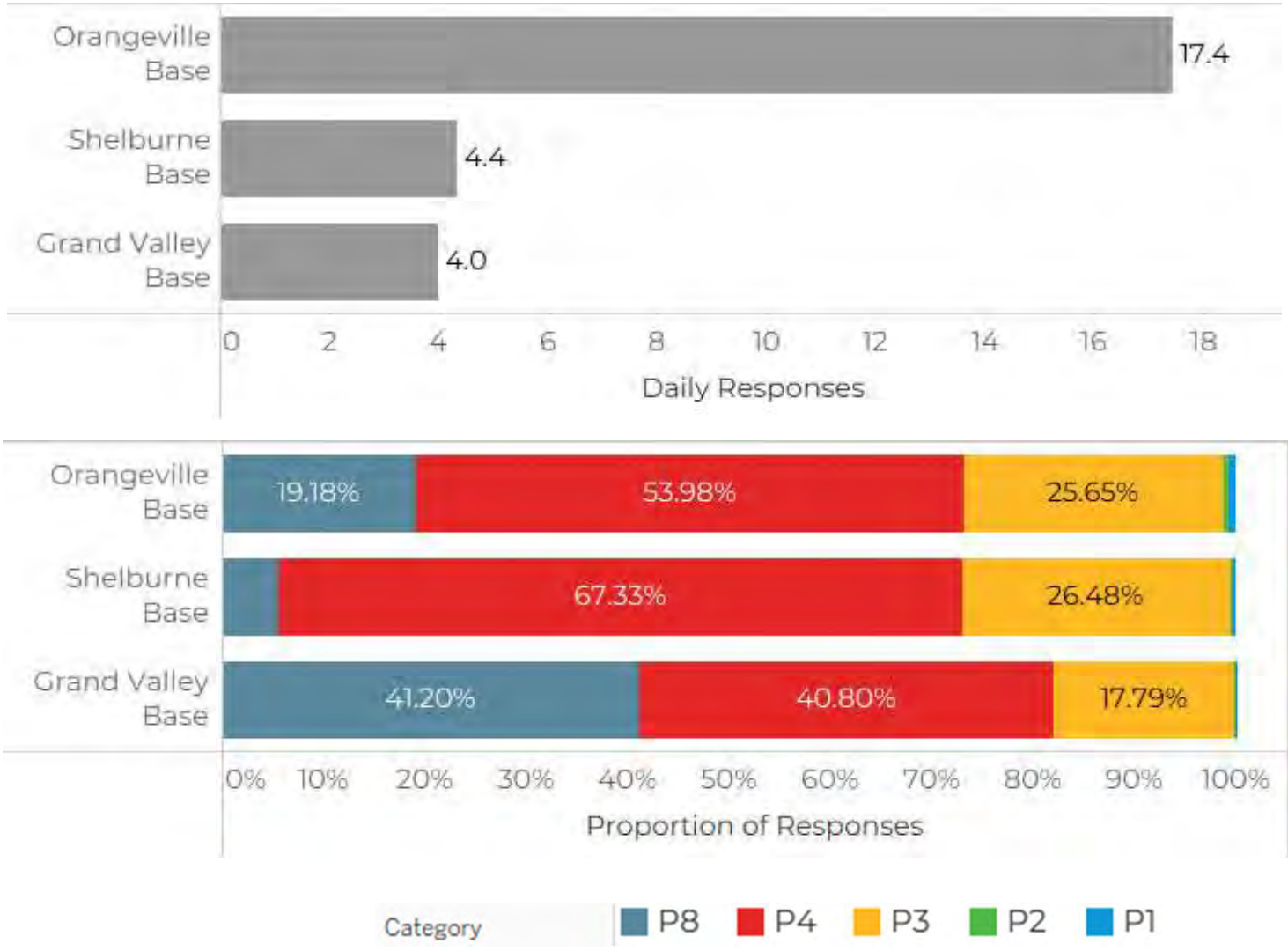
2.28 Of the post-standby move assignments to an incident, for moves to Orangeville and Shelburne the next incident was most frequently within the same LTM. However, for Grand Valley, 14% of the next assignments were to an incident in Orangeville owing to the greater demand and population in that area.

2.29 DCPS has a relatively high proportion of Advanced Care Paramedics (ACPs) and therefore ACP-led ambulances, as evidenced by the proportion of responses by lead clinician type (see Appendix **B5b**). During periods of high vacation levels, the proportion of ambulances led by Primary Care Paramedics (PCPs) increases, as part-time staff are more commonly utilized, and the proportion of PCPs within this cohort is higher.

2.30 During the sample period, DCPS deployed a peak of five ambulances, with four operating 24/7 (see Appendix **B6**). A 12-hour day shift enhancement at Shelburne is due in September 2025, and the impact of this was tested within the simulation model (see Section 6). It was not possible to collect downstaffing information; however, downstaffing has not occurred historically and the service utilizes its part-time staff pool to cover absences.

2.31 On average DCPS ambulances were 23% utilized, with this increasing to around 30% in line with demand increases during the day (see Appendix **B7**). This calculation

Figure 2-2: Responses by Station



excludes time spent on meal breaks, returning to base, and standby moves; it is, therefore, not necessarily reflective of the utilization experienced by staff.

Benchmarking

2.32 ORH has compiled an anonymized database of key operational parameters across recent similarly-sized Ontario paramedic service clients (see Figure **2-3**). The results of benchmarking can help to identify potential efficiencies for DCPS to target over the next ten years.

2.33 The outcomes of the benchmarking can be summarized as follows:

- 66.2% of DCPS demand was categorized as P4, at the lower end compared to other services but within the expected range
- DCPS mobilization times are relatively short, with some of the longer times for other services representing communication or timestamp recording issues
- Travel time to scene within the County of Dufferin is the shortest of the benchmarked areas, reflecting the location of stations within the main urban areas
- Time at scene is the fourth longest benchmarked; however, the minimum and maximum values are relatively close
- Time at hospital is the second longest benchmarked at 38m37s on average

2.34 Time at hospital was the main outlier in the benchmarking; reductions and increases to this were tested in the scenario modelling (see Section 6).

Figure 2-3: Benchmarking Results

Measure (P4)	DCPS Value	Rank Low = 1	Minimum	Maximum
Demand %	66.2%	6 of 7	57.0%	72.0%
Mobilization Time	00:50	2 of 5	00:45	01:11
Travel Time to Scene	06:27	1 of 7	06:27	10:45
Time at Scene	19:51	4 of 5	18:43	20:04
Travel Time to Hospital	14:45	3 of 5	11:01	15:49
Time at Hospital	38:37	4 of 5	18:53	49:21
Arrival to Transfer Time	25:02	4 of 5	12:00	31:56
Transfer to Clear Time	13:33	4 of 5	06:44	16:04
Conveyance Rate	81.0%	2 of 5	79.4%	86.4%

3 Demand Projections

ORH used a population-based demand projection method to quantify future call volumes (see Figure **3-1**). This method captures three factors that affect demand: changes to population size, changes to the age profile of the population and changes to the base demand rates per head of population.

No single source of data was available to provide historical and future population figures by age group, LTM and year from 2020 to 2036. Statistics Canada 2016 and 2021 Censuses, plus 2021-based Census projections, were amalgamated in order to create the data required.

Total population across Dufferin is anticipated to grow by 19.9% in total from 2025 to 2036 (see Appendix **C1**). Grand Valley has the largest proportional increase at 81.4% across this period.

ORH calculated the average demand rate per 1,000 people per day for each LTM and the County average (see Figure **3-2**). The largest increase is projected for the 75+ age group, with an anticipated 1.76 calls per 1,000 people per day (or 642 per year) in this age group in 2036.

The demand projection method produced an average annual increase of 4.0% across Dufferin from 2026 to 2036 (see Figure **3-3**). Grand Valley has the largest proportional increase at 9.9% per year, but due to the relatively low call volume (and population) in this LTM, this only equates to an additional 1.6 calls per day by 2036. The largest absolute projected increase is in Orangeville at an additional 5.6 calls per day by 2036.

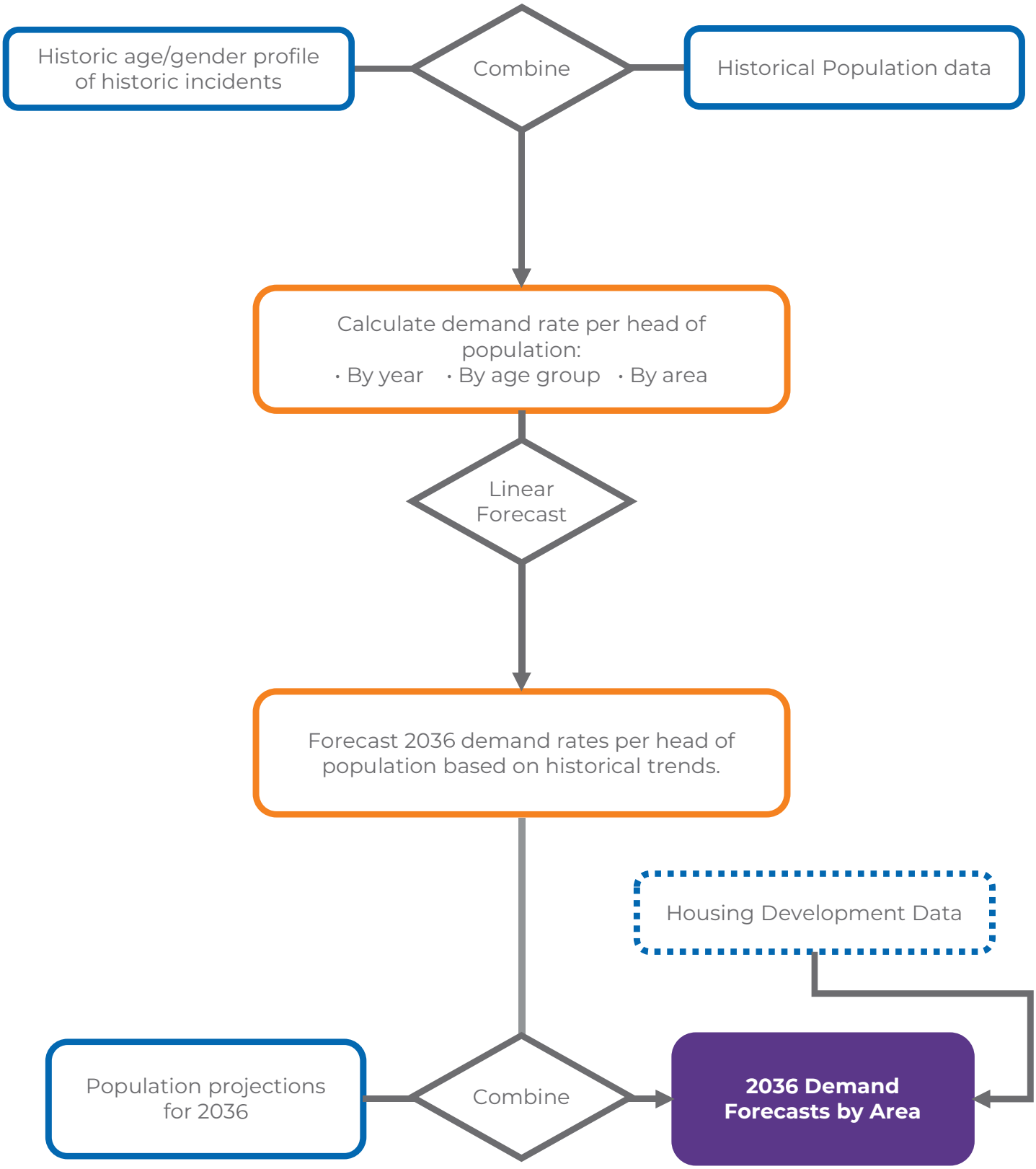
3.1 Demand projections for DCPS were required to identify the facility and resource requirements over the next ten years.

3.2 Demand projections were created using a population-based projection method (see Figure **3-1**). This method is based on the hypothesis that demand is strongly related to the population age profile, and that there is an underlying trend for increased demand in all age groups due to unquantifiable factors such as the overall level of health provision and public expectation, which, it is assumed, will continue into the foreseeable future.

3.3 Historical population was compared with historical demand to calculate demand rates per head of population for different age and area combinations. These were then investigated to understand how they have changed over time, and combined with future population projections to calculate expected future demand levels. This method captures three factors that impact demand:

- Changes to the population size

Figure 3-1 – Demand Projection Methodology



- Changes to the age profile of the population
- Changes to the base demand rates per head of population

Population

3.4 This projection method requires historical and future population figures by age group, LTM and year from 2020 to 2036. No single data source can provide this level of detail, so multiple data sources were combined to fulfil the requirement. (ORH has taken a similar approach in reviews for other ambulance services in Ontario.)

3.5 Statistics Canada 2016 and 2021 Censuses, plus 2021-based Census projections, were used for the Dufferin totals for future population. The difference between 2016 and 2021 by LTM was utilized to create future population totals by LTM through to 2036.

3.6 The difference between LTM age group breakdowns in the 2021 Census compared to the County total was used to create future age group breakdowns. For example, if an LTM has a generally older population than the County average, this was assumed to continue through to 2036, while still 'shifting' in the same manner as the County ageing profile.

3.7 Total population across Dufferin is anticipated to grow by 19.9% in total from 2025 to 2036 (see Appendix **C1**). This rate of growth varies by LTM, with the largest proportional increase being in Grand Valley at 81.4%, and the smallest in Mulmur at 4.8%. Grand Valley has the largest expected absolute increase in population of 4,090. Despite a relatively low proportional increase in Orangeville LTM, due to its largest existing population size this area has the second largest absolute increase.

Demand Rate Trends

3.8 ORH calculated the average demand rate per 1,000 people per day for each LTM and the County average (see Figure **3-2**). Most of the age groups experienced increases in demand rates in the 2021 to 2025 sample, leading to projected increases in future. The largest increase is in the 75+ age group, with an anticipated 1.76 calls per 1,000 people per day (or 642 per year) in this age group in 2036.

3.9 Some of the age groups showed decreases in the demand rate, and these have been capped at 2024 levels.

Demand Projection Results

3.10 An average annual increase of 4.0% is projected across Dufferin from 2026 to 2036 (see Figure **3-3**). This varies from 2.6% in Amaranth to 9.9% in Grand Valley. Although Grand Valley has the largest proportional increase, due to the relatively low call volume (and population) in this LTM, this only equates to an additional 1.6 calls per day by 2036. The largest absolute projected increase is in Orangeville, at an additional 5.6 calls per day by 2036.

Figure 3-2: Demand Rate Trends

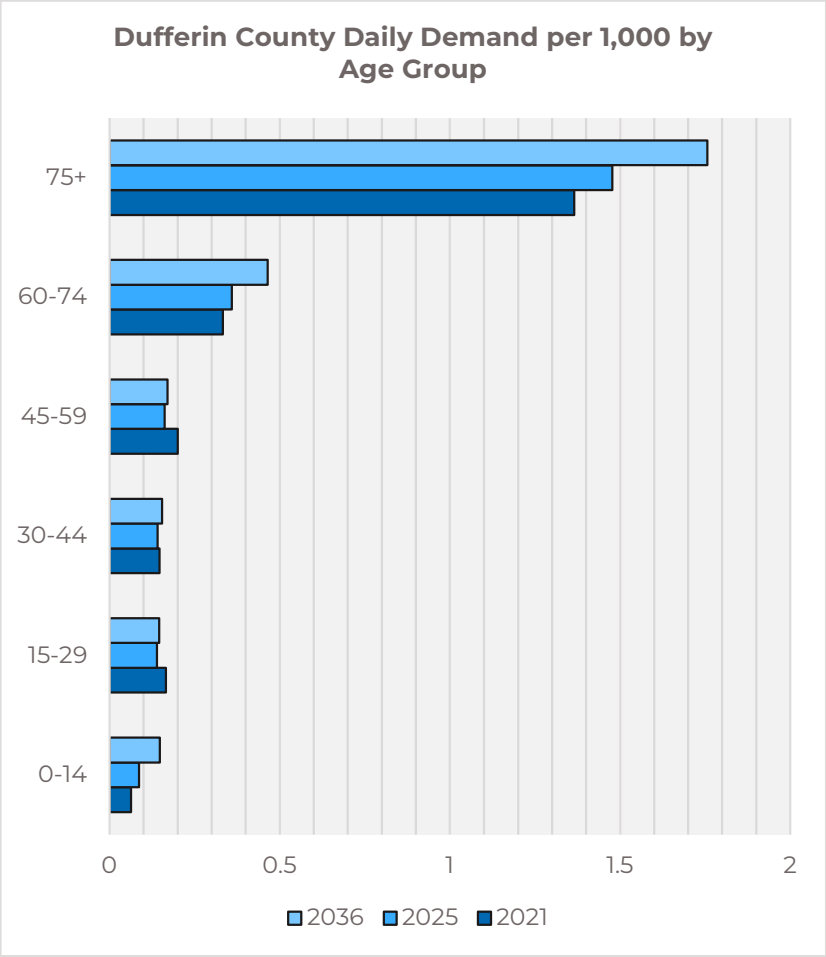


Figure 3-3: Demand Projection Results

Using data from 2021 onwards

% Due to Factor

% Change	2020-24	2026-36	Daily Incidents		Pop Growth	Ageing	Demand Rate Change
			2025	2036			
Amaranth	5.6%	2.6%	0.8	1.4	61.8%	22.5%	15.8%
East Garafraxa	5.4%	6.8%	0.7	1.6	36.2%	15.7%	48.1%
Grand Valley	5.0%	9.9%	0.9	2.5	59.5%	4.3%	36.2%
Melancthon	4.7%	3.5%	0.7	1.1	34.7%	10.7%	54.6%
Mono	3.9%	3.1%	1.5	2.7	70.7%	24.1%	5.2%
Mulmur	0.8%	5.3%	0.8	1.3	23.2%	15.9%	61.0%
Orangeville	3.5%	3.7%	10.8	16.4	40.6%	18.9%	40.6%
Shelburne	5.1%	4.7%	3.2	5.8	56.2%	19.3%	24.5%
Dufferin County	**4.2%**	**4.0%**	**19.3**	**30.8**	**52.6%**	**19.8%**	**27.5%**

3.11 It was possible to undertake demand projections without individual factors (population growth, population ageing and demand rate changes) to understand which factors drive demand increases in different areas.

3.12 Within the County as a whole population growth is the main driver, accounting for 52.6% of the demand increase. In Orangeville, the demand rate change drives a similar rate of demand growth as the total population change. In East Garafraxa, Melancthon and Mulmur, the largest driver is the demand rate change.

3.13 It is difficult to definitively forecast demand, and therefore lower and higher demand rates were tested to quantify the potential impact on resourcing requirements (see Section 6).

4 Model Setup and Base Position

ORH uses its bespoke ambulance simulation model, AmbSim (see Appendix **D1**), for modelling the operations of ambulance services. This model replicates the key characteristics of an emergency ambulance service.

The model was set up and calibrated to match real-life response performance and utilization metrics as closely as possible (see Figure **4-1**). Once this was undertaken, the model could then be used with confidence to model different 'what if' scenarios.

A 2026 Base Position was subsequently created by uplifting demand and incorporating the planned shift enhancement at Shelburne station. This enhancement alone improved P4 8-minute response performance from 69.7% to 73.0% (see Figure **4-2**).

Model Setup

AmbSim

4.1 ORH has developed a sophisticated simulation model, AmbSim (see Appendix **D1**), for modelling the operations of ambulance services. AmbSim is a discrete event simulation model that replicates the key characteristics of an emergency ambulance service and can be used to predict future behaviour under a variety of different scenarios.

4.2 AmbSim takes account of the actual geographical and temporal distributions of demand and resources and incorporates travel times between locations. It reports operational performance in terms of response times, vehicle workload and utilization, and patient flows.

4.3 A virtual replica of DCPS operations was created within AmbSim. Once validated, and thereby shown to accurately replicate DCPS operations, a Base Position was created.

Model Validation

4.4 ORH's simulation model was populated using parameters derived from analysis of the last two years of provided workload data (June 2023 to May 2025). Analysis of DCPS activity data provided information on demand, call locations, job cycle times and hospital transports. Service data was also used to provide ambulance numbers and deployed hours, deployment locations and dispatch times, for inputting to the model.

4.5 In addition to this data, ORH developed a detailed travel time model of the DCPS area using commercially available data calibrated against information on journey times from activity data. To achieve this, the area was 'noded' with key points in relation to the road network and incident distribution (including some locations outside the County). Stations and hospitals were also included as noded points.

4.6 Travel times between nodes are a key model input and were assigned initially based on road classifications that differentiate achievable speeds in 'average' traffic conditions. Using CAD workload data, the speeds were calibrated to match actual DCPS travel times under lights and sirens as closely as possible.

4.7 The model was then validated by comparing a range of outputs from the model, such as response performance, vehicle workload (utilization) and hospital workload, to the corresponding analyzed figures for these factors based on actual data.

4.8 The modelled P4 and P3 response time distributions, measured from the time of vehicle assign, showed a close match to actual analyzed values (see Figure **4-1**). The profile of transports by destination hospital also showed a close match to the analysis results.

4.9 Overall, the model replicated historical operations accurately and therefore could be used with confidence to model different 'what if' modelling scenarios.

Base Position

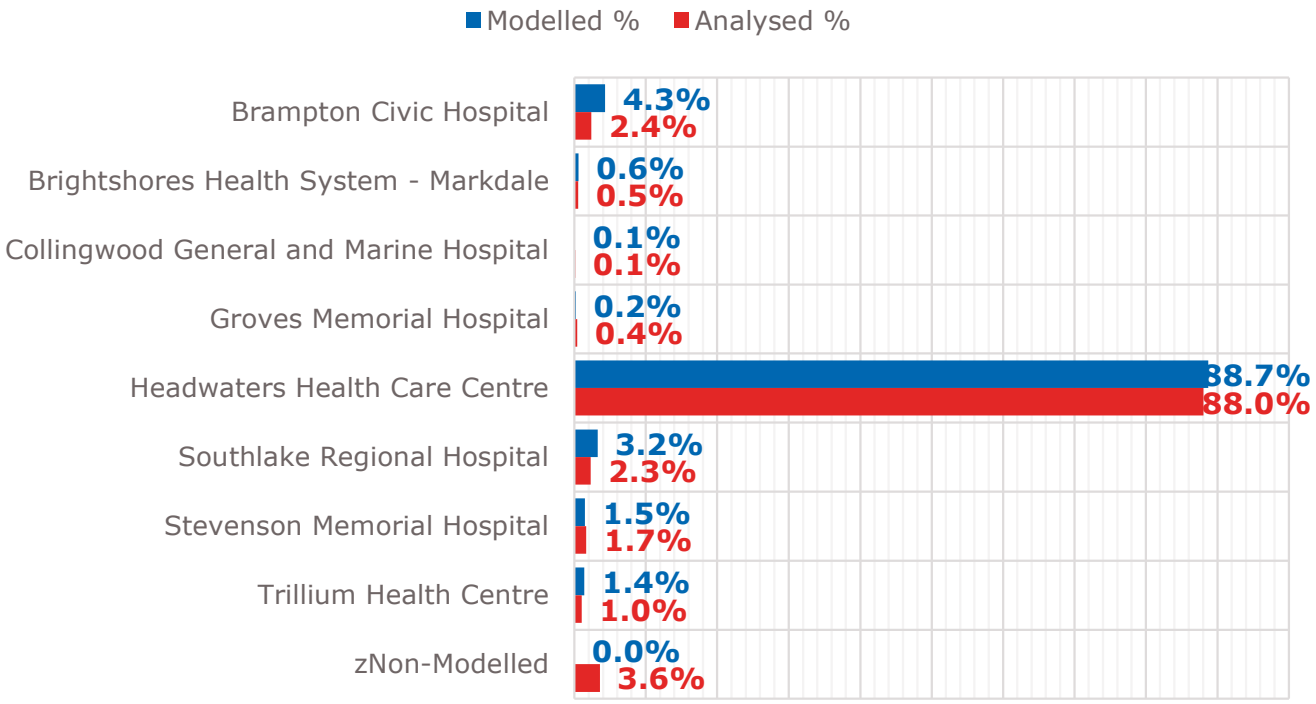
4.10 An enhancement was planned in September 2025, after the sample period (a 12-hour shift from 09:00 to 21:00 at Shelburne station).

4.11 This shift was incorporated into the model, along with a demand increase to 2026 projected levels. This was equivalent to 22.4 daily incidents, an increase of 2.1 from the analyzed 2023 to 2025 position.

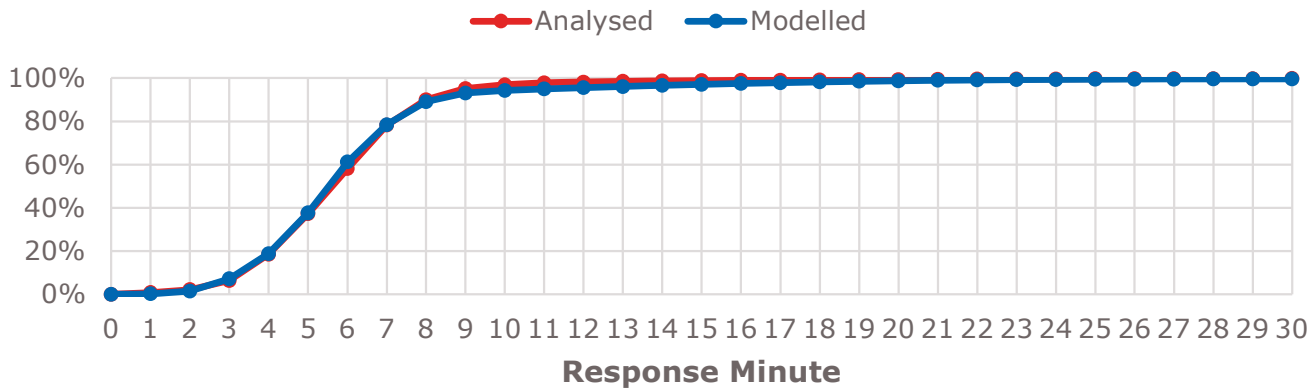
4.12 From the 2026 position with only existing shifts, adding the enhancement produced an improvement in P4 8-minute response performance, from 69.7% to 73.0% (see Figure **4-2**).

Figure 4-1: Model Validation Examples

Proportion of Hospital Journeys



P4 Response Time Distribution



P3 Response Time Distribution

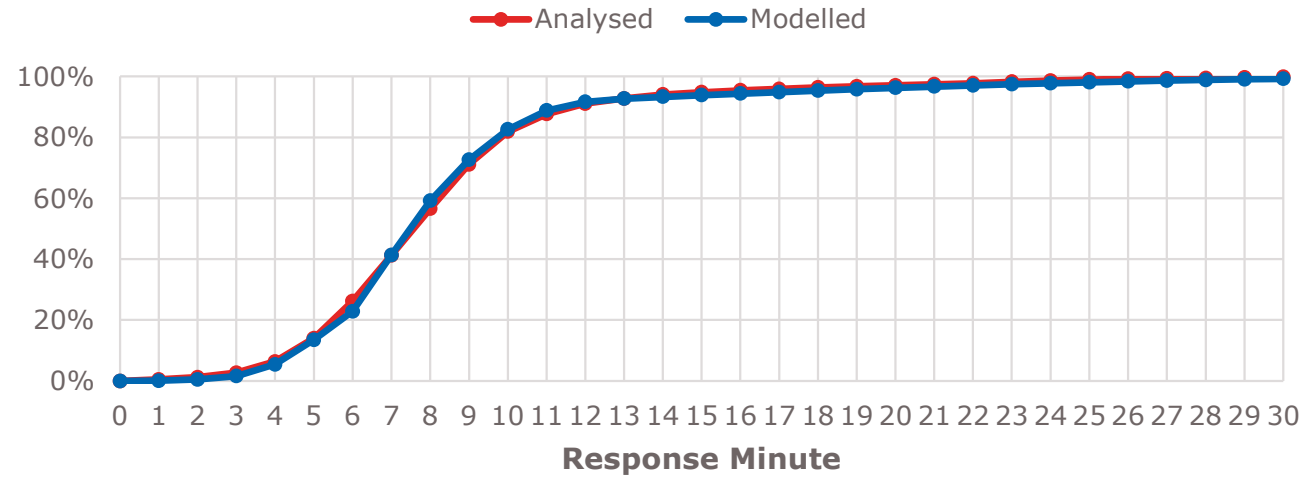


Figure 4-2: Base Position

The Base Position – 2026 – Incl. Shelburne Enhancement

LTM	P4 (From time Notified)				
	8 Mins	10 Mins	12 Mins	Average RT (mm:ss)	90th %ile (mm:ss)
Amaranth	36.7%	60.8%	78.9%	09:22	13:48
East Garafraxa	28.8%	59.8%	80.5%	09:44	13:44
Grand Valley	68.8%	73.9%	77.7%	07:23	16:16
Melancthon	15.3%	37.3%	61.8%	11:53	17:50
Mono	42.7%	61.1%	75.2%	09:25	15:13
Mulmur	16.7%	21.8%	32.9%	14:14	20:59
Orangeville	90.4%	97.2%	98.3%	05:46	07:58
Shelburne	92.3%	94.6%	95.3%	05:09	07:23
Overall	**73.0%**	**82.3%**	**87.8%**	**07:08**	**13:01**

The Base Position – 2026 – Excl. Shelburne Enhancement

LTM	P4 (From Time Notified)				
	8 Mins	10 Mins	12 Mins	Average RT (mm:ss)	90th %ile (mm:ss)
Amaranth	35.2%	57.8%	74.8%	09:52	14:48
East Garafraxa	28.0%	58.0%	76.9%	10:08	14:39
Grand Valley	61.1%	66.2%	70.3%	08:49	18:29
Melancthon	14.1%	34.4%	57.4%	12:40	19:50
Mono	41.8%	59.7%	73.7%	09:41	15:38
Mulmur	15.5%	20.2%	30.8%	14:41	21:31
Orangeville	88.2%	95.5%	97.0%	06:02	08:19
Shelburne	85.8%	89.0%	90.3%	06:13	11:32
Overall	**69.7%**	**79.1%**	**84.8%**	**07:42**	**14:28**

5 Do Nothing Scenario

The first modelling scenario devised was a 'do nothing' scenario, in which demand is uplifted through to 2036 with no other operational changes. This is not a recommendation but instead it provides a useful baseline and quantifies the impact of rising demand.

P4 8-minute response performance fell in all LTMs, varying from -0.7% in Mono to -15.4% in Grand Valley (see Figure **5-1**). DCPS-wide P4 8-minute response performance falls to 65.2% in 2036, from 73.0% in the 2026 Base Position

5.1 To provide meaningful context for future resource recommendations, it was important to create a Do Nothing position through to 2036. This involved using the core demand projection of 4.0% average growth per year, or 59.5% from 2025 to 2036, with no other operational changes being made to the Base Position.

5.2 The aim of this scenario is not to recommend no changes to DCPS operations over the next ten years. It quantifies the impact of rising demand on the service and provides a baseline position against which options for responding to the increased demand can be tested.

5.3 P4 8-minute response performance fell in all LTMs, varying from -0.7% in Mono to -15.4% in Grand Valley (see Figure **5-1**). DCPS-wide P4 8-minute response performance falls to 65.2% in 2036, from 73.0% in the 2026 Base Position.

5.4 The mean average increases by 1m31s, with patients now receiving a response in 8m39s on average.

5.5 This Do Nothing position demonstrates the influence of greater demand on the system, with a relatively large fall in performance in just five years should no additional resourcing be introduced. This is despite improvements in performance projected for 2026 owing to the Shelburne enhancement.

Figure 5-1: Do Nothing (2036)

The 'Do Nothing' Scenario – 2036

LTM	P4 (From Time Notified)				
	8 Mins	10 Mins	12 Mins	Average RT (mm:ss)	90th %ile (mm:ss)
Amaranth	34.7%	55.9%	71.5%	10:28	16:07
East Garafraxa	27.1%	55.3%	72.2%	10:53	16:25
Grand Valley	53.4%	58.2%	62.5%	10:46	21:50
Melancthon	13.8%	33.1%	54.4%	13:27	22:11
Mono	42.0%	58.7%	72.5%	09:57	16:18
Mulmur	15.4%	20.1%	30.2%	15:10	22:19
Orangeville	83.9%	91.4%	93.5%	06:34	09:20
Shelburne	79.6%	82.8%	84.2%	07:41	18:12
Overall	**65.2%**	**74.2%**	**79.9%**	**08:39**	**17:19**

Difference to the Base Position – 2026 – Incl. Shelburne Enhancement

LTM	P4				
	8 Mins	10 Mins	12 Mins	Average RT (mm:ss)	90th %ile (mm:ss)
Amaranth	-2.0%	-4.9%	-7.4%	01:05	02:19
East Garafraxa	-1.7%	-4.5%	-8.3%	01:09	02:41
Grand Valley	-15.4%	-15.7%	-15.2%	03:23	05:33
Melancthon	-1.4%	-4.2%	-7.4%	01:34	04:22
Mono	-0.7%	-2.3%	-2.7%	00:32	01:05
Mulmur	-1.3%	-1.6%	-2.7%	00:56	01:20
Orangeville	-6.6%	-5.8%	-4.8%	00:48	01:22
Shelburne	-12.7%	-11.8%	-11.1%	02:32	10:49
Overall	**-7.8%**	**-8.2%**	**-8.0%**	**01:31**	**04:19**

6 Scenario Modelling

Optimization Modelling

ORH used its in-house optimization tool (DCM; see Appendix **E1**) to identify optimal locations across the County of Dufferin. This was initially undertaken assuming no stations exist (a 'blank canvas' scenario). The results showed that existing bases are located in close proximity to optimal sites using two different optimization criteria (see Figure **6-1**).

Specific questions were also raised regarding a potential additional site in Mulmur or Melancthon LTMs (see Appendix **E3a**); the best option was the optimal site identified on County Road 17, however no option improved DCPS-wide performance (see Appendix **E3b**). This site would provide a net improvement County-wide if operating using an additional shift.

The inclusion of a standby point would also require construction and would have a knock-on impact of creating more standby moves. The core modelling therefore assumed stations remain at their current locations, though potential relocations closer to optimal sites should be considered in future should opportunities arise.

Maintaining Performance in 2036

ORH tested additional shift options within AmbSim, with the aim of maintaining response performance in 2036. Three additional 12-hour shifts were required to maintain performance in this year, with improvements in most LTMs and negligible degradations in Shelburne and Melancthon (see Figure **6-2**).

This scenario is logistically possible to deliver, however Community Paramedicine vehicles are currently parked outside at Orangeville and the additional ambulance required will mean that Orangeville supervisor vehicles will also now have to be parked outside.

MPDS Modelling

The Ministry of Health is rolling out the MPDS dispatch system across CACCs in Ontario with Cambridge CACC expected to go-live late in 2025.

ORH used data and knowledge gleaned from other MPDS ambulance and paramedic services to inform assumptions for the model created for DCPS. It should be noted that MPDS alone does not fundamentally change the response-and-transport system Ontario EMS providers operate within, however it can improve the possibility of identifying patients for whom transport to hospital may not be the most clinically appropriate outcome. This was explored in the 'Sensitivity Modelling' sub-section.

The main MPDS scenario involved testing the 'Maintaining Performance in 2036' requirement to ensure this still maintained performance with the change of dispatch system. The results showed that performance could be maintained with the same three additional shifts, and for high acuity categories performance improved by 0.5 percentage points (see Figure **6-4**). Low acuity calls would be held longer than in 2026 in order to prioritize higher acuity; however, the 90th percentiles were still well within the maximum hold times.

Sensitivity Modelling

ORH modelled two scenarios involving changes to 'Hear and Treat' and 'See and Treat'; whilst these are not currently deliverable given the framework and legislation that Ontario paramedic services operate in, they help demonstrate the impact of reducing unnecessary ambulance responses and transports.

Modelling a 7% Hear and Treat scenario would mean one fewer 12-hour ambulance shift would be required by 2036 in order to maintain performance, while modelling a 15% Hear and Treat rate showed that potentially the three additional ambulance shifts could be replaced by a single 24/7 Emergency Response Vehicle (ERV) operating with one staff member.

There would be a requirement for clinicians in the control room to deliver these levels of Hear and Treat; however, this would be lower than the frontline staff saving and would not incur vehicle costs. This could also potentially be a shared resource between services operated by the Cambridge CACC.

Alternative demand projections were also tested, to quantify the change in the resourcing required to maintain performance if demand grows at a different rate. The impacts were as follows (see Figure **6-5**):

- Low demand projection (3.0% per year, 29.0 incidents per day in 2036): two 12-hour ambulance shifts required to maintain performance
- Core demand projection (4.0% per year, 33.3 incidents per day in 2036): three 12-hour ambulance shifts required to maintain performance
- High demand projection (5.0% per year, 35.8 incidents per day in 2036): four 12-hour ambulance shifts required to maintain performance

As time at hospital had been variable within the sample period, ORH tested the impact of changing this:

- Time at hospital reduced by 10 minutes: two 12-hour ambulance shifts required to maintain performance
- Core time at hospital: three 12-hour ambulance shifts required to maintain performance

Time at hospital increased by 10 minutes: four 12-hour ambulance shifts required to maintain performance

Location Optimization

Background

6.1 ORH used its bespoke in-house optimization tool, the Demand Coverage Model (DCM), to assess geographical coverage and optimal locations (see Appendix **E1**).

6.2 The DCM was populated with DCPS data, and initially used to identify the optimal locations to respond to demand in the County assuming no stations exist (a 'blank canvas' scenario). This was undertaken using two different criteria: maximizing drive time coverage in 10 minutes, and minimizing the average response time.

Results

6.3 The optimization results show that existing bases are located in close proximity to optimal sites using either optimization criteria (see Figure **6-1**). Notable changes are as follows:

- Grand Valley base is close to the optimal site using 'minimize average' criteria, but would move further southeast when using 'maximize in 10 minutes'
- Both options show the Orangeville base moving closer to Headwaters Health Care Centre, though this is only a straight-line distance of approximately 2.5km
- Modelling an additional site (using the 'minimize average' criteria) identified a location in Mulmur LTM near to the border with Melancthon

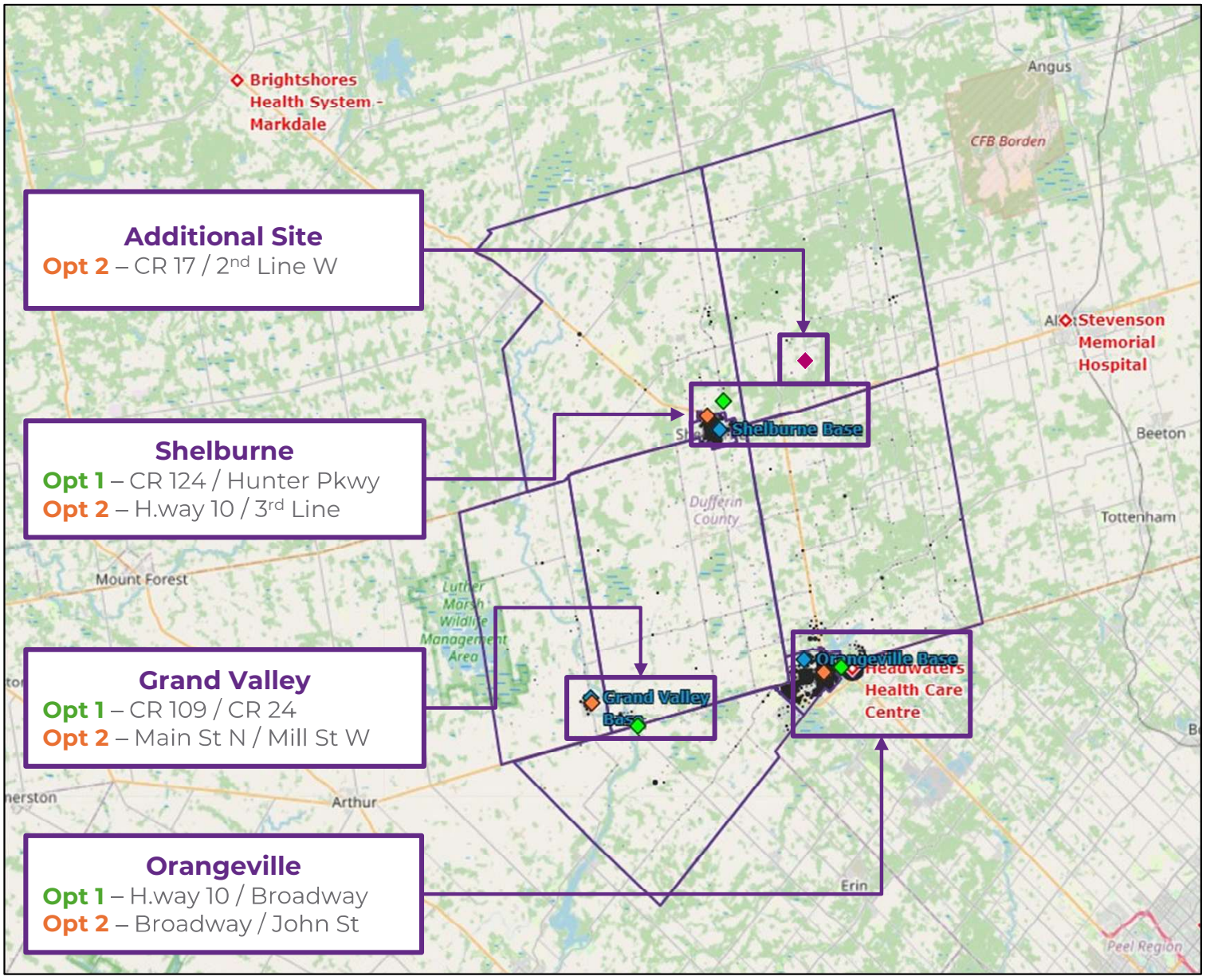
6.4 Each of the optimal sites (using the 'minimize average' criteria) was tested within AmbSim. The largest performance improvement was observed when relocating Orangeville to the optimal site, producing a 46-second improvement in the average response time DCPS-wide (see Appendix **E2**).

6.5 Given the capital investment required in relocating a station, it is not recommended solely for response performance reasons given the relatively small improvement. A relocation should only be considered should station condition or capacity also dictate that the station is no longer fit-for-purpose in future.

6.6 Four options for the additional site in Mulmur or Melancthon were tested, as response posts utilizing existing shifts operating from Shelburne station (see Appendix **E3a**). Three of the four options improved performance within both Mulmur and Melancthon, with 157101 Hwy 10 only improving Melancthon (see Appendix **E3b**). The best option was the optimal site on County Road 17; however, no option improved DCPS-wide performance.

6.7 These four options were also tested with an additional shift, posted to the standby post from Shelburne (see Appendix **E3c**). Performance improved for each potential option; however, only the optimal site at County Road 17 shows a net improvement

Figure 6-1: Location Optimization



Key

Option 1: maximizing drive time coverage in 10 minutes

Option 2: minimizing average drive time

County-wide compared to the Base Position. Each of these options would require investment in location, and an additional shift.

6.8 These options included additional demand responded to within Mulmur and Melancthon municipalities that would now potentially be closest to the new posts.

6.9 The inclusion of a standby point would also require construction (either with new facilities, or expansion of the Fire Hall), and would have a knock-on impact of creating more standby moves to Shelburne from other locations.

6.10 The core modelling therefore includes stations at their current locations, although potential relocations closer to optimal sites should be considered in future should opportunities arise.

Maintaining Performance in 2036

6.11 Utilizing the Do Nothing scenario for 2036, ORH tested additional shift options within AmbSim, with the aim of maintaining response performance in 2036.

6.12 The proposed enhancements were:

- Two additional 12-hour shifts at Orangeville (day and night)
- One additional 12-hour shift at Shelburne (night, creating a 24-hour pattern with the 2025 enhancement)

6.13 P4 8-minute response performance is maintained, with improvements in most LTMs and negligible degradations in Shelburne and Melancthon (see Figure **6-2**).

6.14 Response performance could be improved further if an additional day shift at Shelburne was modelled instead of the night shift. This would, however, require an additional vehicle, and the station is at capacity as of the 2025 enhancement.

6.15 Even though this scenario is logistically possible to deliver, Community Paramedicine vehicles are currently parked outside at Orangeville, and the additional ambulance vehicle required will mean that Orangeville supervisor vehicles will now also have to be parked outside.

6.16 Alternative options, including the use of the standby points identified in the location optimization modelling, were also tested in the future model; however, these did not provide benefits given the infrastructure investment required.

MPDS Modelling

Background

6.17 The Ministry of Health is undertaking a rollout of the MPDS dispatch system across Central Ambulance Communication Centres (CACCs) in Ontario, with the Cambridge CACC expected to go-live with MPDS later in 2025.

Figure 6-2: Maintaining Response Performance in 2036

Maintain Performance – 2036

LTM	P4 (From Time Notified)				
	8 Mins	10 Mins	12 Mins	Average RT (mm:ss)	90th %ile (mm:ss)
Amaranth	37.8%	61.9%	79.8%	09:15	13:42
East Garafraxa	30.2%	61.3%	81.7%	09:35	13:23
Grand Valley	69.3%	74.5%	78.4%	07:17	16:04
Melancthon	15.3%	37.2%	61.5%	11:53	17:49
Mono	44.8%	62.6%	76.6%	09:11	14:56
Mulmur	17.2%	22.5%	33.6%	14:06	20:57
Orangeville	91.1%	97.5%	98.6%	05:38	07:54
Shelburne	91.5%	94.0%	94.9%	05:14	07:37
Overall	**73.0%**	**82.1%**	**87.6%**	**07:05**	**13:08**

Difference to the Base Position – 2026 – Incl. Shelburne Enhancement

LTM	P4				
	8 Mins	10 Mins	12 Mins	Average RT (mm:ss)	90th %ile (mm:ss)
Amaranth	1.1%	1.1%	1.0%	-00:07	-00:06
East Garafraxa	1.4%	1.5%	1.2%	-00:09	-00:21
Grand Valley	0.5%	0.6%	0.7%	-00:06	-00:13
Melancthon	0.1%	-0.1%	-0.3%	00:00	-00:01
Mono	2.1%	1.6%	1.4%	-00:14	-00:16
Mulmur	0.5%	0.7%	0.7%	-00:07	-00:03
Orangeville	0.7%	0.3%	0.2%	-00:08	-00:04
Shelburne	-0.8%	-0.6%	-0.4%	00:05	00:14
Overall	**0.0%**	**-0.2%**	**-0.2%**	**-00:03**	**00:08**

6.18 ORH has worked with a multitude of ambulance and paramedic services across the world that operate with MPDS, including three services in Ontario. DCPS wished to understand the potential categorization and performance outcomes on MPDS go-live.

6.19 This process involved utilizing data from other MPDS ambulance and paramedic services to inform assumptions for the model, and also comparing these services when operating under the DPCI II system to the analysis of MPDS.

6.20 It should be noted that MPDS alone does not fundamentally change the response-and-transport system Ontario EMS providers operate within. MPDS itself provides a greater stratification of demand compared to DPCI II, which in turn allows services and dispatch centres to hold lower acuity calls in order to prioritize higher acuity patients.

6.21 MPDS does also then improve the possibility of identifying patients for whom transport to hospital (particularly the ED) may not be the most clinically appropriate outcome. Further changes to the Ontario Ambulance Act and operating environment, including secondary triage in the dispatch centre and greater scope of 'Treat and Release' and 'Treat and Refer', are required to fundamentally change this response-and-transport model. These are explored in the 'Sensitivity Modelling' sub-section.

Model Setup

6.22 Utilizing information from Ontario paramedic services operating in an MPDS CACC environment, ORH made assumptions to reflect the categorization and system changes within the model (see Figure **6-3**). This involved analyzing the difference between pre- and post-MPDS go-live for the Ontario services, and comparing these values to DCPS in order to convert to an MPDS model.

6.23 The largest change in switching to MPDS is the change in categorization system. In the DPCI II system, approximately 66% of responded demand is categorized as P4, and it is predominantly a two-category system. This means that it is difficult to prioritize patients at the point of dispatch, as P4 patients all receive an emergency lights-and-sirens response even though two patients within the P4 category may have very different clinical requirements.

6.24 Converting the 2026 Base Position with the Shelburne enhancement to MPDS showed slightly improved Purple and Red 8-minute response performance compared to the P4 8-minute metric (see Appendix **E4**).

6.25 Orange, Yellow and Green performance was measured from the time the call was answered, given the ability of the CACC to 'hold' low acuity calls in favour of prioritizing the response to high acuity calls. 'Maximum hold' thresholds are set in order to create a relative priority of calls. The 90th percentile response times can be summarized as follows:

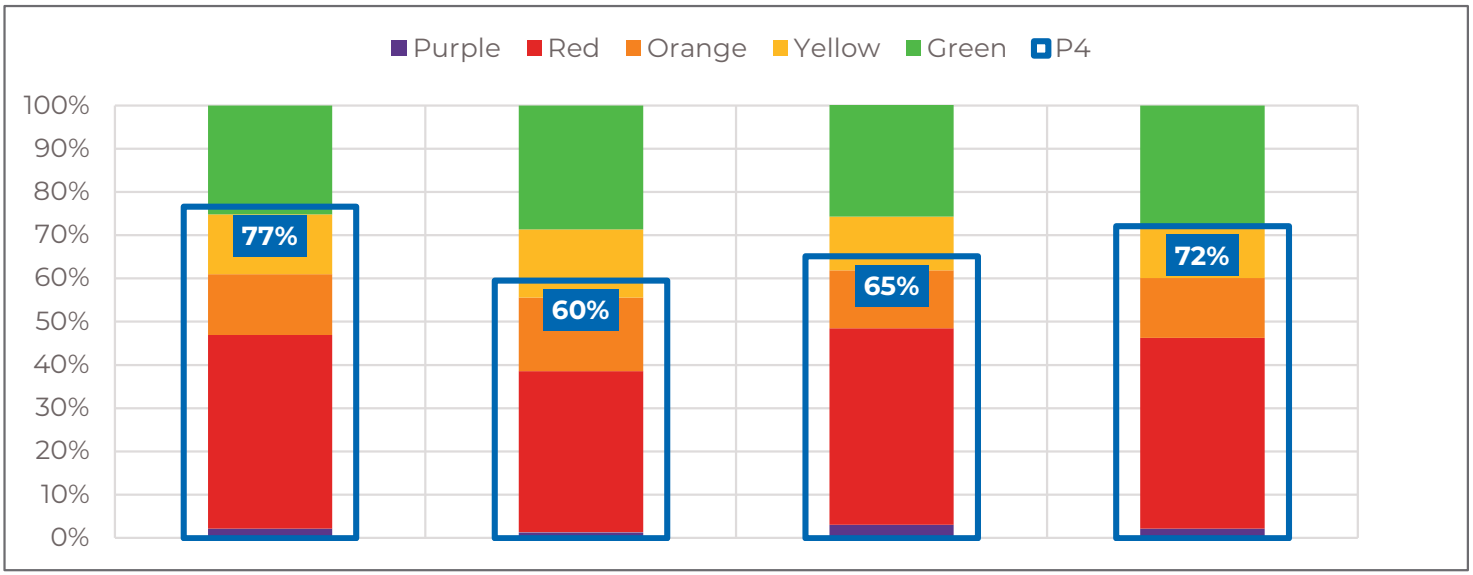
- Orange: 23m54s, against a maximum hold of one hour
- Yellow: 42m17s, against a maximum hold of two hours

Figure 6-3: MPDS Demand Examples

Proportion of Demand within Category

Pre-MPDS Category	Service 1	Service 2	Service 3	Service 4
P4	77%	60%	65%	72%
P3	23%	38%	34%	27%

Post-MPDS Category	Service 1	Service 2	Service 3	Service 4
Purple	2%	1%	3%	2%
Red	45%	37%	45%	44%
Orange	14%	17%	13%	14%
Yellow	14%	16%	12%	12%
Green	25%	29%	26%	27%



- Green: 72m33s, against a maximum hold of four hours

6.26 These 90th percentile response times are well within the maximum hold threshold, however, this is still a shift from the predominantly two-category system. There will be education required both in the CACC to ensure that calls are held appropriately to maximize high acuity performance, but also among the public to re-frame the expectation of response for lower acuity calls.

Maintaining Performance in 2036

6.27 The 'Maintaining Performance in 2036' position was replicated using the MPDS model. The same three additional shifts (two at Orangeville and one at Shelburne) would continue to maintain 2026 performance in 2036 under MPDS; high acuity performance improved by 0.5 percentage points (see Figure **6-4**). Low acuity calls would be held longer than in 2026 in order to prioritize this improvement in higher acuity; however, the 90th percentiles were still well within the maximum hold times.

Sensitivity Modelling

Hear and Treat, See and Treat

6.28 While it brings system benefits, MPDS alone does not fundamentally change the response-and-transport model operated across Ontario; simply moving to this system does not change the resourcing requirement to maintain performance.

6.29 If clinical programs such as 'See and Treat', 'See and Refer' and 'Hear and Treat' could be further developed, this would potentially reduce future frontline resource requirements. To deliver this in Ontario would require fundamental changes to the Ambulance Act; however, such systems operate in the UK and other jurisdictions, meaning it is possible to model the impact.

6.30 Benchmarking of English ambulance services showed that Hear and Treat rates (calls dealt with via telephone advice) averaged 7% in 2019, increasing to 15% in 2024 (see Appendix **E5**). See and Treats (calls completed on scene with no transport to hospital) have remained at around 30%. Overall, the proportion of calls resulting in a transport to ED has fallen from 64% to 55%, compared to the 76% observed in DCPS.

6.31 There are many potential ways to deliver these two scenarios depending on clinician deployment in the control room, scope of practice of frontline paramedics, and software utilized. For the purposes of this review, the following assumptions were made:

- 7% Hear and Treat: triage 25% of Orange calls and 50% of both Yellow and Green calls with 33% success rates (success meaning the call is resolved without dispatch a response to scene)
- 15% Hear and Treat: triage 50% of Orange calls, 66% of Yellow calls and 75% of Green calls with 50% success rates

Figure 6-4: MPDS Maintaining Performance in 2036

Maintain Performance under MPDS (2036)

Lower Tier Municipality	Purple (From Time Assigned)			Red (From Time Assigned)			Orange	Yellow	Green
	8 Mins	Average (mm:ss)	90th %ile (mm:ss)	8 Mins	Average (mm:ss)	90th %ile (mm:ss)	90th %ile (From Call Answer)		
Amaranth	37.6%	09:09	13:35	38.6%	09:04	13:26	23:01	69:45	96:10
E. Garafraxa	30.4%	09:21	12:54	30.9%	09:23	12:57	27:41	73:18	100:57
Grand Valley	71.3%	06:41	15:08	71.6%	06:38	15:06	28:57	69:45	97:50
Melancthon	16.4%	11:38	17:15	16.0%	11:36	16:59	30:48	77:55	104:16
Mono	45.4%	09:04	14:43	45.6%	09:03	14:44	26:38	70:10	95:41
Mulmur	18.2%	13:49	20:44	17.5%	13:54	20:47	34:17	80:49	107:16
Orangeville	92.7%	05:28	07:45	92.3%	05:29	07:48	19:54	67:14	92:01
Shelburne	94.8%	04:32	06:58	95.1%	04:33	06:54	18:14	68:33	97:25
Overall	**74.0%**	**06:51**	**12:40**	**74.2%**	**06:49**	**12:33**	**27:11**	**69:21**	**96:28**

Note: this modelling assumes 1x 12-hour night shift at Shelburne, and 2x 12-hour shifts at Orangeville

6.32 The current, 7% Hear and Treat and 15% Hear and Treat scenarios can be summarized as follows:

Scenario	Daily Hear and Treats	Daily See and Treats	Daily See and Transports
Current	0.0	8.3	26.0
7% Hear and Treat	2.4	10.3	21.7
15% Hear and Treat	5.1	10.3	18.9

6.33 These positions were created within AmbSim, assuming time at scene for non-transported incidents was 50% higher than for transported incidents (in line with UK ambulance benchmarking).

6.34 Response performance could be maintained in 2036 with fewer frontline resources than required in the main scenario due to the efficiencies delivered through Hear and Treat and See and Treat. The frontline resource savings were:

- 7% Hear and Treat: one fewer 12-hour ambulance shift required (84 hours per week, 4 full-time staff), reducing from three additional to two additional shifts
- 15% Hear and Treat: the three additional 12-hour ambulance shifts could be replaced by a 24/7 Emergency Response Vehicle (ERV), meaning that 6 fewer full-time staff are required

6.35 There would be a requirement for clinicians in the control room to deliver the Hear and Treat rates required; however, this would be lower than the frontline staff saving and would not incur vehicle costs. Given the relatively low call volume in the County of Dufferin, it is also likely that these clinicians could undertake Hear and Treat for all services operated via the Cambridge CACC, meaning that costs could be shared.

6.36 To deliver Hear and Treat, and further increase the scope of models of care enabling See and Treat, would require legislative change for paramedic services across Ontario. This modelling should be treated as an indication of the potential efficiency rather than an exact scenario, as the final deliverable option will depend on exactly how changes are enacted.

Alternative Demand Projections

6.37 The core demand projection was for a 4.0% average annual increase in call volume from 2026 to 2036. Alternative demand increases of 3.0% and 5.0% per year were applied in the MPDS model in order to understand the potential resourcing requirement impacts when maintaining performance in 2036.

6.38 The impacts were as follows (see Figure **6-5**):

- Low demand projection (3.0% per year, 29.0 incidents per day in 2036): two 12-hour ambulance shifts required to maintain performance

Figure 6-5: Sensitivity Modelling Summary

Demand Sensitivities

Demand Projection	Purple			Red		
	8 Mins	Average	90th %ile	8 Mins	Average	90th %ile
Low (3.0% per year)	75.2%	06:44	12:14	75.2%	06:43	12:08
Base (4.0% per year)	74.0%	06:51	12:40	74.2%	06:49	12:33
High (5.0% per year)	73.4%	06:55	12:53	73.3%	06:54	12:52

Demand Projection	To Maintain Performance in 2036
Low (3.0% per year)	2x 12-hour shifts
Base (4.0% per year)	3x 12-hour shifts
High (5.0% per year)	4x 12-hour shifts

Time at Hospital Sensitivities

Time at Hospital Sensitivities	Purple			Red		
	8 Mins	Average	90th %ile	8 Mins	Average	90th %ile
Reduced by 10 minutes	74.9%	06:45	12:20	75.0%	06:44	12:15
Base	74.0%	06:51	12:40	74.2%	06:49	12:33
Increased by 10 minutes	73.0%	06:58	13:04	73.2%	06:57	12:58

Time at Hospital Sensitivities	To Maintain Performance in 2036
Reduced by 10 minutes	2x 12-hour shifts
Base	3x 12-hour shifts
Increased by 10 minutes	4x 12-hour shifts

- Core demand projection (4.0% per year, 33.3 incidents per day in 2036): three 12-hour ambulance shifts required to maintain performance
- High demand projection (5.0% per year, 35.8 incidents per day in 2036): four 12-hour ambulance shifts required to maintain performance

6.39 Modelling the resourcing requirement changes was limited to adding or removing whole shifts; in reality there may be slight over- or under-performance depending on the exact change in demand growth. These changes are potentially most useful when considering the trajectory of phasing, as based on the number of incidents per day they provide an estimate of when an additional shift may be required.

Alternative Time at Hospital

6.40 The 2023 to 2025 analysis showed an average time at hospital of 38m57s. AmbSim applies 'vehicle thresholds' which are calculated using the time at hospital experienced based on the number of patients or vehicles currently at hospital. As the volume of demand increases, the average time at hospital increases; by 2036 this is assumed to be 44m34s.

6.41 ORH tested the impact of increasing the average time at hospital by 10 minutes, and reducing it by 10 minutes. The levels of resourcing in the model were then altered to maintain response performance in 2036, with the changes as follows:

- Time at hospital reduced by 10 minutes: two 12-hour ambulance shifts required to maintain performance
- Core time at hospital: three 12-hour ambulance shifts required to maintain performance
- Time at hospital increased by 10 minutes: four 12-hour ambulance shifts required to maintain performance

6.42 Similarly to the modelling with alternative demand projections, this was limited to adding whole shifts and as such there may be slight over- or under-performance. It should be treated as a guide as to the impact of increasing time at hospital in future.

7 Service Delivery Review

A Service Delivery Review (SDR) was also undertaken to understand the structure of the organization and how it should be configured particularly given the master plan findings of expected call volume growth and a need for additional frontline paramedics.

The key findings of the SDR are set out in Figure **7-1** and explored in further detail below.

Background

7.1 AACE, the UK representative body for public sector ambulance services, was asked to undertake a Service Delivery Review (SDR) for DCPS. The scope of the review included the current contractual mechanism in place for the delivery of paramedic services, the organizational leadership structures and the support services arrangements in place for the organization.

7.2 This service delivery review was a time-limited piece of work and has necessarily taken a high-level view of the points included in the scope of the review. This was based on a comprehensive documentary review of all the pertinent information that was made available, and a comprehensive stakeholder engagement exercise. The engagement involved a significant number of interviews conducted remotely with key internal and external stakeholders. It is important to note that it was not possible to secure interviews with two proposed stakeholders as we were unable to identify suitable arrangements within the timeframe to facilitate these.

7.3 The considerations and conclusions reached by AACE therefore focus on the existing contractual arrangements, the current organizational structure and its suitability, as well as the effectiveness of the current support functions that sit alongside it.

7.4 This report outlines the key conclusions and provides a set of recommendations that will ensure that the organizational structure and the functions within it continue to provide the foundations required to continue to support DCPS in achieving their organizational and County strategic objectives over the next ten years.

Key Findings

7.5 The key findings of the SDR are set out in Figure **7-1** and explored in further detail below.

Contractual Provision of Paramedic Services

7.6 The County of Dufferin sits on the fringe of the Greater Toronto Area, about 100 kilometres (62 miles) northwest of Toronto. Dufferin covers an area of approximately 1,500 square kilometres, and its population was circa 70,000 at the last Census in 2021.

Figure 7-1: Service Delivery Review Key Findings

#	Key Finding
1	Current service delivery mechanism through HHCC is deemed to be positive and delivers high quality clinical care and value for money for the County .
2	There is a robust clinical governance framework in place at HHCC which includes DCPS.
3	Some concerns were identified with the existing contract including a lack of agreed KPIs, lack of formal contract management and insufficient shared risk .
4	The operational management structure is still adapting to their new requirements of team supervision and additional management portfolios. Working full rotating shifts affects the consistent delivery of some of these portfolios.
5	The staff to Operational Platoon Supervisor ratio should not exceed 20:1 with any future resource growth.
6	There is too much reliance on the single Deputy Chief to fulfil all of the responsibilities and statutory / regulatory requirements of the day to day running of the organization.
7	There is insufficient capacity with appropriate skills to ensure the effective management of the organizational requirements for Fleet & Logistics.
8	There remains a range of development requirements across the operational management team to ensure they can successfully deliver all elements of their individual roles.
9	There is a positive relationship with the Cambridge CACC, however some operational challenges were raised with being the smallest of the three Paramedic Services providers whose dispatch and oversight are undertaken by them.
10	The right clinically appropriate skill mix balance between ACP and PCP should be considered in future given recruitment challenges.
11	The Community Paramedicine Program is fully integrated within the wider health system and is positively looking to expand the range of services it provides or supports to safely keep more clinically appropriate patients out of hospital. The supervisory leadership role of this function should be fully aligned with the rest of operations.
12	Trade Union and Management relationship overall is positive within DCPS – some concerns were raised about HHCC paramedics and their membership of SEIU which is a different union body to other Paramedic Services across the province.
13	An improvement in I.T / Digital systems and processes is required along with additional management development in I.T skills.

It is largely a rural county, with three urban settlement areas: Grand Valley, Orangeville and Shelburne.

7.7 The Town of Orangeville is the County seat. It is situated on the southern border of the County and is the largest urban centre, with just over half of the total the population of the County. Although Orangeville dominates in terms of population, in area it is very small and geographically compact. The current Chief Administrative Officer (CAO) for the county is Sonya Pritchard, and the current Warden is Janet Horner.

7.8 DCPS is a relatively small service provider, with circa 70 staff and managers/supervisors employed who are currently based within three locations across the operational geography. The service currently responds to an average of 20 incidents per day.

7.9 DCPS accounts for approximately 10% of the total annual budget for the County of Dufferin. It was observed that expenditure for paramedic services is consistently growing, indicating an increase in the financial allocation required to deliver services.

7.10 More general financial concerns were raised through stakeholder feedback regarding the provincial funding model for paramedic services. Currently this is based on the prior-year budget, and not the actual costs at year-end.

7.11 For each budgeting year the province funds **up to** 50% for services. This amount is based on 50% of the budget in the previous year, and therefore does not take into consideration inflation or service enhancements. The rest of the budget is achieved through municipality taxation.

7.12 Feedback received indicated that there can be a significant gap between these two financial positions. This differential needs to be filled by the County of Dufferin, and is usually unbudgeted and may have to come from County financial reserves.

7.13 The County of Dufferin has the ownership and management of all DCPS estate facilities, fleet and equipment. However, the provision of land ambulance services is contracted out to Headwaters Health Care Centre (HHCC), who also manage the main hospital in the County based in Orangeville.

7.14 The provision of land ambulance services within the County of Dufferin is managed through a formalized agreement between the Corporation of the County of Dufferin ('the County') and HHCC ('the Operator').

7.15 This is not routinely the way that the provision of land ambulance services is commissioned, although DCPS is one of four services across Ontario where this is the case. It is more routine to see paramedic service providers directly funded and delivered by the County or Region they serve.

7.16 The historic provision of land ambulance services in various different guises within the County of Dufferin has been delivered through the main hospital provider and is a legacy arrangement that has been in place for over 20 years.

7.17 The current agreement was agreed in 2018, but services under this agreement did not commence until 1 January 2019. The terms of the agreement were for a period of five

years. The agreement was also subject to a mutually agreed two-year extension, which was implemented. A further six-month contract extension was also agreed to enable this review to take place.

7.18 Under the terms of this agreement, the County is responsible for the provision of all estate facilities (buildings) and their maintenance. The current location of buildings are in Orangeville, Shelburne and Grand Valley. The County is also responsible for the provision and maintenance of vehicles and physical equipment, including the replacement of these assets as necessary.

7.19 The Operator is responsible for properly caring for and operating ambulances, vehicles and equipment in accordance with the Ambulance Act. The Operator is also responsible for providing all materials and consumable supplies required for the provision of land ambulance services.

7.20 Each party in the agreement acknowledges that ownership and maintenance responsibilities, with respect to radio and other communications equipment, rest with the Ministry of Health.

7.21 Under the existing terms of the agreement, the Operator shall be responsible for providing the following aspects of Land Ambulance Services: all labour and associated personnel costs, all medical supplies and consumables, general supplies related to the operation, professional liability and medical malpractice insurance, and any other related direct costs that may be determined from time to time by both parties.

7.22 The Operator shall also be deemed to be the employer of the employees necessary to provide the delivery of Land Ambulance Services. The Chief of DCPS is also directly employed by the Operator and is charged with managing the provision of services to the County.

7.23 The commercial arrangements of this agreement deem that services provided through the agreement are on a cost recovery basis.

7.24 The Operator is eligible to charge a management fee over and above the direct cost of providing Land Ambulance Services to the County. This fee is currently circa $60,000 per annum.

7.25 Some of the key advantages of the existing mechanism for delivery of services that were expressed were that paramedics are employed by the main hospital in the County. It was stated that this had a positive effect in the synergy of clinical services being delivered to patients.

7.26 There are strong connections between clinical staff at HHCC and DCPS paramedics. This enables wider integration of staff across the health landscape within the County; the Community Paramedicine (CP) program is an example of this collaborative approach. There are also very robust clinical governance systems and processes in place.

7.27 It was also observed that there is an overarching consensus that the current contractual arrangements provide value for money for the County, particularly in

relation to the competitive pricing in the procurement of medications and consumables which is done at a larger scale through HHCC.

7.28 Despite the seemingly overwhelming support for the current delivery mechanism for the provision of Land Ambulance Services, there were a number of stakeholder concerns raised specifically about certain elements of the current contractual arrangement.

7.29 The current contract contains terms and conditions that would be fully expected within such a commercial agreement. However, it was noted that there is a lack of suitably agreed specific Key Performance Indicators (KPIs). There would also appear to be a lack of a formalized contract management framework contained within the schedule of the agreement.

7.30 There were also concerns raised about the controls and approvals process for financial spend not being sufficiently robust. At present the Council feel that they do not have a sufficient say on some of the financial expenditure decisions that are made within the current arrangements. Some further feedback received also suggested that there was insufficient risk sharing between the parties with the current arrangements.

7.31 Finally, representations were made about whether the County was paying its fair share of administrative costs associated with Workplace Safety Insurance Board (WSIB) claims, given the higher level of claims. These costs are not explicitly mentioned in the contract, and so this has not been clearly confirmed.

7.32 Despite these concerns, they were felt by all to be resolvable by a comprehensive redrafting of any future agreement. In summary, there was overarching support from all stakeholders for this contractual mechanism remaining in place as the preferred option to deliver paramedic services for the County of Dufferin.

7.33 The review concludes that the current contractual arrangements for delivering Land Ambulance Services within the County of Dufferin are well established and have effectively delivered the service over a significant period of time with good levels of operational performance.

7.34 The positive relationships between hospital and paramedic staff and a robust clinical governance framework will be even more important in the future as DCPS continues to develop and transform more clinically effective and efficient models of care for patients.

Management Structure

7.35 DCPS is led by a Paramedic Chief who is employed directly by HHCC. He has been in post since 2024 following the retirement of the long-standing previous incumbent. The Chief is a very experienced paramedic who has worked in several services in Ontario, including Toronto. He has been with DCPS for a considerable period, and in 2017 was promoted to the role of Deputy Chief. In this role he had primary responsibility for quality, education and the CP program.

7.36 The Chief has overall accountability for the organization, reporting to the Vice President of Patient Experience, Health Integration and CNE at HHCC. He is a senior leader within HHCC, and sits on several senior internal management groups as part of his role.

7.37 Additionally, the Chief has an implicit secondary line of accountability through to the CAO of the County of Dufferin, which involves considerable engagement and participation in meetings with other stakeholders from within the County and Council.

7.38 The secondary line accountability inevitably creates additional workload with the Chief; for example, attending multiple sets of meetings, some of which will involve duplication of effort which is potentially inefficient.

7.39 Consideration should be given as to whether the current reporting arrangements could be more streamlined in the future, with a more comprehensive and exacting commercial contract in place that includes suitable KPIs and reporting that reflect the needs of both parties.

7.40 Nevertheless, the Chief fully accepts the current reporting arrangements and works significantly long hours to ensure that all stakeholder needs are met.

7.41 He is an enthusiastic and passionate leader who is committed to high-quality care for the patient, and this is recognized throughout his leadership team. DCPS aligns itself to HHCC corporate values and behaviours that have been developed and embedded throughout the organization. This is an essential factor in how the organization is led and how effectively services are delivered.

7.42 When the Chief was appointed to the role in 2024, discussions were held with appropriate stakeholders around the existing organizational structure. As a result, an alternative management structure was developed and implemented shortly after his appointment.

7.43 Essentially the changes involved removing one Deputy Chief post from the structure and investing to create four non-unionized Platoon Supervisor positions to support the remaining Deputy Chief position. This is a leadership model that has some similarities to other paramedic services in the province.

7.44 Within this new structure the Chief has three direct line management reports for Paramedic Services and one for HHCC. The Senior Administrative Assistant (Office Coordinator) role has only recently been recruited and is responsible for office management, communication and coordination, strategic support, and problem solving for DCPS. They are also required to schedule staff in accordance with a collective bargaining agreement and complete all necessary time and attendance payroll activities.

7.45 The second role to report directly into the Chief is the Deputy Chief role who is responsible for a significant range of clinical and non-clinical functions. The current holder has only been in post for about twelve months, but has considerable clinical experience and has worked in two other paramedic service organizations prior to

joining DCPS. They also have experience in IT, project management and system implementation.

7.46 The final internal direct line report to the Chief is the current unionized Superintendent for Community Paramedicine.

7.47 The Deputy Chief is supported by four Platoon Supervisors, who in turn lead four teams of operational staff. In addition to working a full frontline operational schedule in a solo response vehicle, each of the Platoon Supervisors has an additional organizational portfolio to manage. These include Quality, Fleet and Logistics, Operations, and Education and Training.

7.48 There can be advantages in being a relatively small organization with a lean management structure where, inevitably, leadership roles can involve 'wearing more than one hat', but this can also pose challenges in terms of having robust assurance and governance arrangements in place. It can also create issues around resilience.

7.49 Having appropriate governance structures, relevant competencies and capacity in place within operations and support functions is intrinsically linked to the delivery of safe, effective clinical care for patients.

7.50 The leadership roles within the leadership structure are predominantly filled by uniformed staff with a clinical background (paramedic). It is acknowledged that some of these staff have different additional skills, management qualifications and experience that they apply to their existing roles within the organization.

7.51 It should be noted at this point that the CP program is currently led by an interim unionized Platoon Superintendent. This is at odds with the rest of operations, but is a result in part of the original uncertainty around provincial funding for the Long-Term Care (LTC) element of the CP program.

7.52 Since the introduction of this new structure, the province has committed to permanent funding for LTC provision, and DCPS should seek to bring the CP program supervisory arrangements back in line with the rest of frontline operations.

7.53 The new structure has only been in place for just over twelve months, and recruitment has only recently been completed for all roles within the structure. It is concluded that DCPS is still trying to adapt to both the model and the delivery of its individual responsibilities within it.

7.54 Despite the implementation of this new structure and the fact that it is still embedding itself within the organization, some concerns about the structure were raised through feedback as part of the review process.

7.55 Views were expressed that having to work a full rotational schedule as a Platoon Supervisor, along with the management of multiple portfolios across a range of service lines, was placing some members of the team under real pressure.

7.56 Some expressed a view that they were unable to effectively deliver their roles due to capacity constraints. It was felt that efforts to make up for the lack of capacity,

including working additional hours, were adversely affecting their own work-life balance.

7.57 It is acknowledged that Platoon Supervisors working full rotational schedules will have periods within their schedule where they will not be in work at all for up to a week at a time.

7.58 This may impact on the consistent delivery of some reporting requirements within some of the management portfolios that are delegated to this group of leaders. Weekly tasks are however within each of the portfolios of work are completed by both the Chief and the Deputy Chief.

7.59 Due to the remote nature of the review, there was no opportunity to physically observe people discharging their duties and see first-hand the potential impacts of the capacity constraints that were being received through stakeholder feedback.

7.60 This review has also considered the overall levels of utilization for frontline resources, and the current size of the operational teams for each of the Platoon Supervisors, that are within the parameters of current best practice.

7.61 Considering both these factors, it is difficult to reconcile why there would be such a significant challenge with capacity constraints for some Platoon Supervisors. The current ratio of frontline staff to Platoon Supervisors is circa 12:1 in the daytime. It is important to note that the staff to Platoon Supervisor ratio should not exceed 20:1 as frontline resources grow through the duration of the Master Plan.

7.62 This could potentially in part be due to an individual's ability to manage their time and work priorities more effectively. Despite some of the challenges that have been represented in stakeholder feedback within the area of IT and the perceived over-reliance on manual workflows, there is a real differential in the IT literacy of some members of the leadership team.

7.63 Increasing the competence and confidence in the use of existing electronic systems and software applications would certainly support some members of the team to create additional capacity to manage their range of responsibilities more efficiently and effectively.

7.64 The development and delivery of a digital training program to improve core IT competencies, including the suite of Office software applications, would be beneficial. However, the content of any training program should be associated with the outcome of a training needs analysis.

7.65 It should be noted that there is additional suitably trained Platoon Supervisor capacity in the existing frontline workforce that could be deployed to temporarily backfill for episodes of vacation or sickness.

7.66 It is assumed that this same additional capacity could be used to support substantive Platoon Supervisors at times where additional capacity was required to assist with delivery of their management portfolios.

7.67 Despite being empowered to make decisions, it was communicated that some members of the team were struggling with making decisions independently and often sought more senior approval for actions.

7.68 In addition, it was identified that some members of the leadership team did not feel sufficiently equipped to manage the challenges that exist within an ever more complex operating environment, and a workforce with increasingly high levels of expectation and more complex demands to be managed.

7.69 It is essential that DCPS develops and nurtures an environment where staff and supervisors feel engaged, capable and confident in undertaking their clinical and supervisory responsibilities in providing care to patients.

7.70 While work is underway through the Deputy Chief to build confidence and decision making skills, DCPS needs to develop a consistent set of Continual Professional Development (CPD) mandatory requirements for Platoon Supervisors using existing development programs and the annual CPD financial investment funds that are available to them.

7.71 This development will increase their overall competence, leadership confidence within their teams, and the improved management of their portfolios. Completion of CPD should be a mandatory part of their annual objectives and managed through a formalized annual appraisal process.

7.72 The review concludes that the current leadership structure within DCPS requires additional resource at a point when funding to expand the team can be agreed. This additional resource will provide the additional capacity to enable the leadership team to fulfil all the responsibilities and statutory/regulatory requirements for the day-to-day running of operations. Currently the capacity of the Deputy Chief dedicates significant discretionary effort through working sometimes excessive hours to manage all their responsibilities.

7.73 This additional capacity will also provide some much-needed time for the existing Deputy Chief to support the Chief in translating the strategic objectives into operational deliverables. This is imperative to meet the increasing organizational requirements to deliver operating efficiencies and quality improvements in patient care across the life cycle of the Master Plan.

7.74 The current position is unsustainable and will deteriorate further due to future increases in resource levels and the increasing number of regulatory requirements that will need managing. There is also the additional impact of the development and delivery of enhanced clinical practice for PCPs that needs considering.

7.75 The funded establishment and recruitment of one additional Full-Time Equivalent (FTE) Deputy Chief in 2028 is recommended as a result of this review. This new post will alleviate the continuing pressures that the existing Deputy Chief is trying to absorb currently. This can be achieved by enabling a more equitable distribution of responsibilities to create capacity to manage the effective delivery of day-to-day operations, and providing sufficient capacity to deliver a broad transformation agenda to include increased productivity and efficiency gains across the organization.

Support Services Functions

7.76 The DCPS organizational structure does not, except for the Fleet and Logistics portfolio managed by a Platoon Supervisor, have any dedicated leadership positions for business support functions.

7.77 Support services such as HR are delivered through HHCC under a business partnering arrangement. Similarly, there are dedicated points of contact within HHCC to support DCPS senior leadership manage medication orders and other pharmacy-related requirements. There is also a designated contact to support the procurement and supply of medical consumables and any other operational purchasing needs.

7.78 The County owns the vehicles and equipment, but the Deputy Chief manages the serviceability and maintenance of these assets as part of the contractual arrangements for the delivery of paramedic services. Minor repairs to vehicles and equipment are handled in-house by the Platoon Supervisors where possible, and this is further supported by contracts with third party vendors.

7.79 It is also questioned whether the Platoon Supervisor who has responsibility for this portfolio is suitably mechanically skilled, trained and equipped to be undertaking this type of role. Training exists in these areas, but potentially needs to increase. Further to this, there may not be suitable liability protection for the Platoon Supervisor if there were to be an adverse safety incident in relation to the maintenance or serviceability of a fleet resource or item of equipment.

7.80 These issues lead to the conclusion that there are potential levels of unmitigated risk in this particular area. The establishment of a funded Fleet and Logistic Technician post, with appropriate knowledge and skills, is required as soon as is practicable.

7.81 The establishment of such a role would provide additional specialist capacity to support the Deputy Chief in managing all elements of this portfolio more consistently and effectively, and mitigate any risks.

7.82 IT infrastructure and the complexities of IT support are also challenges within DCPS, due to the fact that ownership and support for certain systems sit between a number of different organizations.

7.83 IT support structures are divided between the County (hardware, network and helpdesk) and HHCC for some electronic systems in place. This is compounded by challenges arising from a past ransomware attack that led to the separation of systems and now creates some confusion over who is responsible for what.

7.84 An example of this is that scheduling is managed through a hospital system that is accessed via County-owned computers. Radios are owned by the Ministry of Health and other devices (Toughbooks, iPads and iPhones) managed by the County or third-party vendors.

7.85 There is still over-reliance on software applications such as Excel and administratively burdensome manual workflows, which significantly impede the ability for DCPS to become more productive and efficient.

7.86 Stakeholders reported that, while there is a vision for progressive digitization, progress is limited by resource constraints and, in particular, the need for more capacity to focus on strategic IT projects.

7.87 DCPS, and the nature of the services it provides, do have some unique and custom IT requirements compared with other departments within the County. However, presently the County does not develop custom solutions for individual departments.

7.88 The Deputy Chief attempts to mitigate this by trying to build in-house solutions when time permits, and is reliant on Microsoft Power platform tools to do so.

7.89 It is concluded that there would be real benefits in the senior leadership of DCPS establishing a digital task and finish group with key IT stakeholders from the different organizations on whom they are reliant for support.

7.90 The key objectives of the group would be to undertake a comprehensive review of existing IT and software applications, as well as a forensic IT needs analysis, for the organization over the next ten years.

7.91 This should help reduce duplication in the use of multiple systems and would enable DCPS to achieve increases in productivity, despite the increases in activity and the expanding number of services they will be required to deliver over the next ten years.

Community Paramedicine Program

7.92 The CP program is a non-emergency, community-based service with a focus on long-term care, health promotion, system navigation and injury prevention. The staffing numbers assigned to the CP program are one ACP supervisor who is unionized, one FTE PCP Monday to Friday 8-hour (PCP), and two FTE PCPs on a rotating schedule. There are an additional four PCPs who are trained in CP but mainly work on 911 ambulances.

7.93 Among paramedic services and EMS providers, the County of Dufferin is seen as one of the services at the forefront of CP, having a number of innovative community programs.

7.94 Strong partnerships exist between the CP program and local family physicians, with a physician lead involved to support care coordination and keep more patients in the community and out of the acute hospital setting.

7.95 Some of the core services the CP program delivers as part of its person-centred care are as follows:

- Scheduled wellness checks
- Safe home assessments
- Remote telehealth monitoring
- Ability to refer to community partners
- In-home blood work

- System navigation
- In consultation with PCPs, administration of medications for various conditions

7.96 While this CP provision will go some way to alleviating current and future demand on 911, there are further opportunities to develop community paramedicine models of care; for example, frail elderly fallers.

7.97 There are also further opportunities with these types of initiatives, as part of a wider health strategy, to develop attractive career pathways for paramedics. These pathways could allow paramedics to develop their clinical skillset to better support urgent and primary care needs of patients, enhance clinical decision making, and improve clinical outcomes.

7.98 This would also potentially support better recruitment and retention of the workforce. It is acknowledged that achieving this would require legislative changes but, given the overall challenges the health and social care system will face over the next ten years, it warrants careful consideration.

Clinical Response Model

7.99 DCPS currently operates a predominantly traditionally based pre-hospital response-and-transport clinical response model.

7.100 The 911 call answering and DCPS resources dispatch functions are under the ownership and management oversight of the Ministry of Health CACC located in Cambridge.

7.101 DCPS currently maintains a positive working relationship with the CACC and the lines of communication between the two management teams appear to be positive.

7.102 This facility also manages these functions for the Region of Waterloo Paramedic Services (RoWPS) and Guelph Wellington Paramedic Services (GWPS). DCPS is the smallest provider of the three services, and feedback received as part of this review process highlighted that this creates some operational challenges.

7.103 The Cambridge CACC, with support from these three paramedic services providers, aims to transition over to MPDS as their primary call triage platform by December 2025.

7.104 This transition is expected to improve triaging accuracy and priority categorization for DCPS, based on evidence from other paramedic services in Ontario who have already adopted this triage system.

7.105 If DCPS and neighbouring services will need to manage a sustained increase in activity through the life cycle of the Master Plan, then there are operational constraints with paramedic service providers not having collaborative ownership of the CACC. It is important to recognize strategically that paramedic service providers not having overall oversight and management of the 911 call flow from the point of access in the CACC through to call conclusion is a sub-optimal position.

7.106 This will inhibit the ability of DCPS to collaboratively develop and provide more clinically appropriate alternative responses for patients. This will inevitably result in the continuation of inappropriate ambulance dispatch to patients who could potentially be managed differently and more clinically appropriately.

7.107 This current model of dispatch and response undoubtedly provides clinical benefits and a positive experience to some groups of patients, but this will not be the case for all patients that have traditionally received an ambulance response. Neither does it always create the system operating efficiencies seen in high performance pre-hospital care systems elsewhere in the world.

7.108 It is therefore recommended that the Chief of DCPS works strategically with his counterparts in RoWPS and GWPS to ensure that the full range of benefits relating to the implementation of the MPDS triage platform in the Cambridge CACC are realised.

7.109 Discussions between the three paramedic services should also explore other innovative ways to develop and support new clinical models of care in the future.

7.110 Any proposal to achieve this objective could also rapidly solve some of the long-standing issues within the CACC operating environment, such as:

- Enabling a unified system (paramedics and communications officers operating in unison)
- Implementation and oversight of long overdue technology, such as leveraging Artificial Intelligence for predictive modelling and re-engineered systems and processes to increase system efficiencies and reduce costs
- More effective management of calls entering the CACC by acting more like a 'system navigator', ensuring that the right resource is provided to the right patient at the right time
- Stabilizing and improving staff recruitment and retention within the CACC environment

Clinical Skill Mix

7.111 The frontline workforce at the time of this review consisted of 33 full-time staff and 24 part-time staff. The skill mix of the frontline workforce comprises 20 ACPs and 37 PCPs. These frontline staff are distributed across three operational stations: Orangeville, Shelburne and Grand Valley.

7.112 There are ongoing discussions between the DCPS senior leadership team and the HHCC senior clinical leadership regarding an appropriately balanced mix of PCPs and ACPs in frontline response teams. This is to ensure that advanced clinical skills are available when needed without the requirement for all staff to be advanced care trained.

7.113 DCPS historically would try to ensure that each ambulance was staffed by one ACP and one PCP, to provide the most clinically effective response to all patients. This is no longer possible due to the shortfall in employed ACPs.

7.114 Following further enquiries, it would appear that this was predominantly due to limitations in the availability of ACPs that could be recruited directly into the service. This is a common challenge within other services that ORH has reviewed in Ontario.

7.115 In addition, individuals would appear to be more reluctant to pursue continuing professional development, including the advancement from PCP to ACP.

7.116 The limited number of ACPs available, the current recruitment constraints of qualified ACPs directly into the service, and the lack of staff actively seeking to advance from PCP to ACP, all create some real challenges for DCPS. The proposed enhancements to clinical practice for PCPs may partially mitigate some of these challenges, but will not remove the risks entirely.

7.117 DCPS needs to consider how best to optimize the use of ACPs in their operational response model. This is more relevant with the forthcoming introduction of the MPDS triage platform into the Cambridge CACC in December 2025. This triage system will far more accurately identify those patients in life-threatening conditions.

7.118 While the current clinical response model deployed by DCPS does not include dedicated solo response vehicles within the core resourcing plan, outside of the Platoon Supervisors, this resource type could potentially be considered in targeted areas as alternative clinical response models are considered and developed.

Clinical Supervision and Governance

7.119 Clinical governance is one of the golden threads that should run seamlessly throughout an organization. DCPS' internal clinical governance processes feed into a wider HHCC clinical governance framework (see Figure **7-2**).

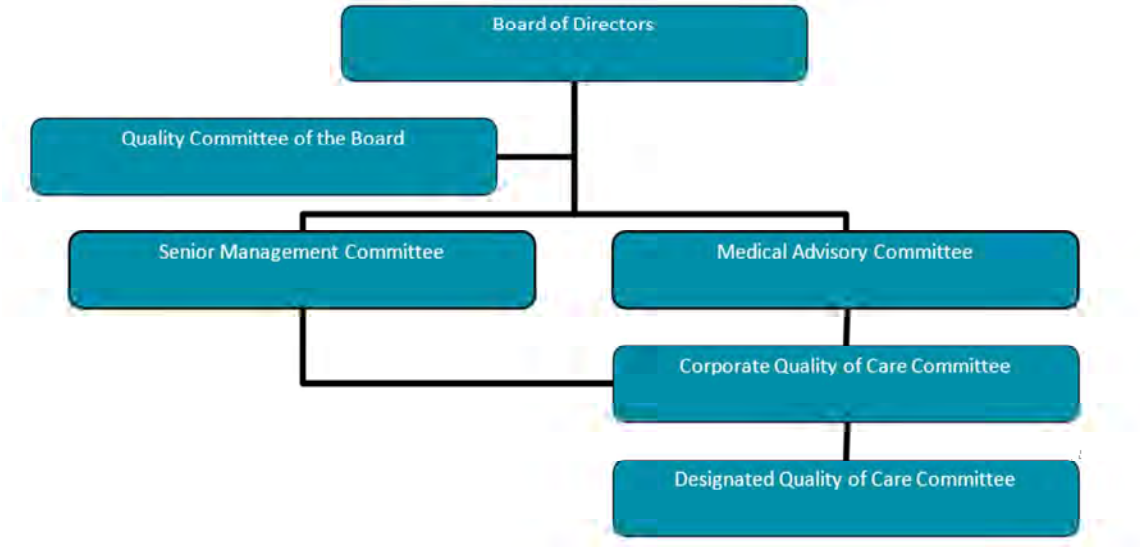


*Figure **7-2**: HHCC Clinical Governance Framework*

7.120 The review heard of many examples of good clinical governance within DCPS, however, as the organization grows and becomes busier there is the potential for internal clinical governance systems and processes to weaken.

7.121 DCPS should take the earliest practicable opportunity to comprehensively stress-test its internal clinical governance systems and processes. This will provide assurance that the service remains fit-for-purpose currently, and identify whether it will be sustainable in the future as new clinical models of care and supporting structures develop to achieve future strategic ambitions.

Clinical Education and Training

7.122 Frontline clinical staff need to be effectively and appropriately educated, trained, equipped, and clinically supported to deliver their roles.

7.123 Clinical Education and Training (CET) within DCPS is overseen and delivered by the Platoon Supervisor who has this portfolio within the current operational structure.

7.124 Although patient care standards for both PCP and ACP are provided by the province, and group directives are authorized by the Base Hospital, there is a large education and training agenda to be developed and delivered throughout DCPS.

7.125 Given that the CET portfolio has an extensive remit, there would appear to be limited resilience as the overseeing Platoon Supervisor could be absent for any period of time due to sickness or leave.

7.126 This would seem to be one area where additional support from within the existing team will potentially be required to maintain effective delivery of the future requirements of the function as the organization grows.

Trade Union and Employee Relations

7.127 It has been identified through this review that the relationship between the trade unions and management is both positive and productive. There was a willingness to be open and transparent when discussing issues, as well understanding the need to work jointly to find solutions. It was reported that there were few occasions where escalation beyond the DCPS senior leadership team was required to resolve workplace issues.

7.128 However, there were some more general concerns raised through feedback regarding paramedics who are employed directly by HHCC being affiliated to the Service Employees International Union (SEIU). This is a different trade union body for paramedics when compared to other paramedic service providers across the province. The concerns raised were that they thought the SEIU was a broad-based trade union that did not appropriately represent the paramedic profession. It should be noted that other allied health professionals within HHCC are also members of the SEIU.

8 Recommendations and Trajectory

Recommendations

8.1 The combined recommendations for the Master Plan and Service Delivery Review are as follows:

(a) Employ 12 additional full-time staff (plus part-time for backfill) plus one additional vehicle by 2036 to maintain response performance.

(b) Continue to advocate for changes to the Ontario paramedic system to 'unlock' the use of MPDS in delivering Hear and Treat and See and Treat initiatives where clinically suitable.

(c) Monitor call volumes and offload delays, adjusting the resourcing and investment required in line with the sensitivity modelling.

(d) Review and re-draft a more robust commercial contractual agreement between the County of Dufferin and Headwaters Health Care Centre for Paramedic Service Delivery.

(e) Create formalized contract management arrangements, including the use of pre-agreed penalties for poor performance against Key Performance Indicators.

(f) Identify whether there is an opportunity to reduce the inefficiencies that currently exist with dual reporting of DCPS Chief to both Headwaters Health Care Centre and Council.

(g) Work strategically with Region of Waterloo and Guelph-Wellington Paramedic Services to ensure the full range of benefits that MPDS can bring to the CACC are realized, including new models of care.

(h) Convert the existing unionized Community Paramedicine supervisor role into a non-unionized management role.

(i) Establish a 0.75 Whole Time Equivalent (WTE) Fleet and Logistics Technician post from Q2 2026, increasing hours up to 1 WTE in Q1 2031.

(j) Establish a second 1 WTE Deputy Chief role in Q1 2028 to assume management of day-to-day operations, releasing capacity for the existing Deputy Chief to manage the increasing workload in regulatory requirements and enhancing clinical practice for PCPs.

(k) Develop a digital training program to optimize system and software use.

(l) Work with Headwaters Health Care Centre and the County to develop a digital roadmap to reduce burdensome manual administrative tasks.

(m) Develop a consistent set of Continuing Professional Development requirements for Platoon Supervisors to complete through existing development programs.

Trajectory Modelling

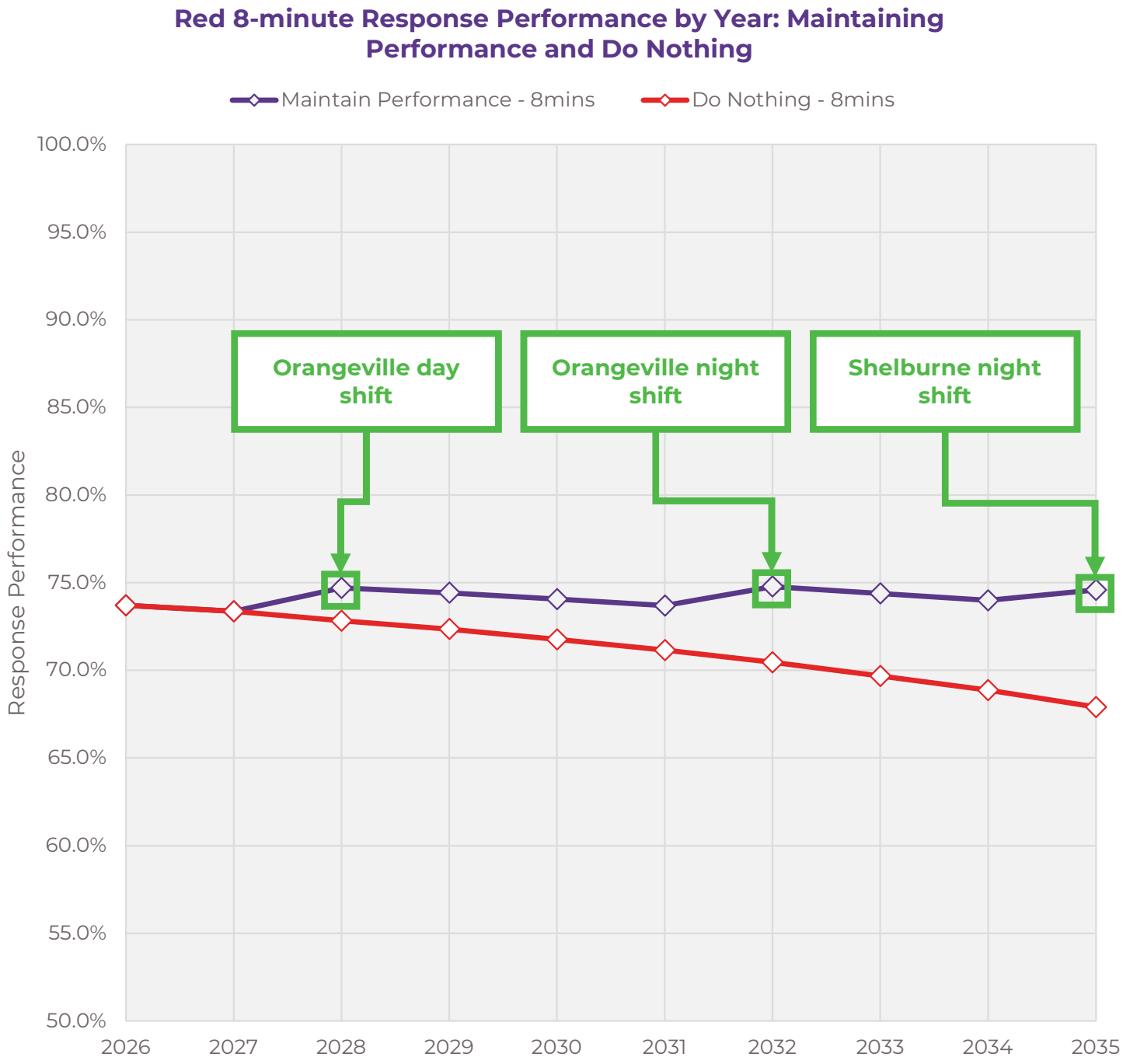
8.2 An additional Do Nothing scenario was run with the MPDS categorization system to quantify the impact should no further investment in resources take place through to 2036 (see Figure **8-1**).

8.3 The three additional shifts required were introduced with the aim of maintaining performance as much as possible, while also phasing in the additional investment. The three shifts were added as follows:

- 2028: Orangeville day shift
- 2032: Orangeville night shift
- 2035: Shelburne night shift

8.4 While this maintains response performance to 2036, all stations would be at capacity, with Emergency Response Vehicle and Community Paramedicine vehicles having to be parked outside. Station expansion or relocation options would therefore need to be considered by this point.

Figure 8-1: Trajectory Modelling



Appendices

Dufferin County

Consulting Services for the Development of a Masterplan and Service Delivery Review for Paramedic Services

Final Report

December 17, 2025
DCPS/1

PLAN. PREPARE. PERFORM.

A Data Specification

DCPS1 - ORH Data Specification

Sample Period:01/06/2020 - 01/06/2025

For initial validation, provide a sample set including one month's workload data, monthly demand and performance reports, and actual deployments.

Where and How to Send the Data

Data should be uploaded to the ORH website.

Please contact ORH for account creation and login details.

A. Workload Data

Sample Period:01/06/2020 - 01/06/2025

Item	Requirement	Priority	Description	Prefered Data Format
A1	A Service-wide CAD-generated database. Please see full field list attached	**Essential**	Capturing all calls through the control centre, and the details of the response provided, including calls that did not result in a vehicle assignment or vehicle arriving on scene.	Tab-delimited

B. Historical Data

Sample Period:01/06/2020 - 01/06/2025

Item	Requirement	Priority	Description	Prefered Data Format
B1	Monthly Demand & Performance Reports	**Essential**	Monthly reports on call demand, responded demand (by call category), and performance against mobilisation, response, and transport targets are required for the same Workload Data sample period. Provide the field names and calculation logic for demand and performance.	Tab-delimited CSV Excel
B2a	Historical Demand Data by Age and Gender	**Essential**	Counts by age, gender, year, and lower tier for the past 10 years	Tab-delimited CSV Excel
B2b	Historical Demand Data	**Essential**	Counts of calls/incidents by category, month, and lower tier for the past 10 years. Note: This is required if B2a is not available	Tab-delimited CSV Excel

C. Resource Data

Sample Period:01/06/2020 - 01/06/2025

Item	Requirement	Priority	Description	Prefered Data Format
C1	Planned Vehicle Shifts	**Essential**	Planned rosters and shifts by vehicle type and station during the sample period.	Tab-delimited CSV Excel
C2	Actual Vehicle Shifts	**Essential**	Actual deployment data, with station, vehicle type, and shift details for the sample period.	Tab-delimited CSV Excel
C3	Vehicle Downtime/Out of Service	**Essential**	Log of vehicle downtime, including start/end times, downtime reasons, and callsign.	n/a
C4	Vehicle Numbers	**Nice to have**	List of operational vehicles including callsign/unit ID, vehicle type, make, model, and home station	n/a
C5	Station Capacities	**Nice to have**	Vehicle capacity per station, including bays for each vehicle type.	n/a
C6	Vehicle Types	**Desired**	List of vehicle types with descriptions, skill levels, transport capabilities, base stations, and response type. These are needed for each UnitId / Vehicle Id	n/a

D. Geographical Data

Sample Period:01/06/2020 - 01/06/2025

Item	Requirement	Priority	Description	Prefered Data Format
D1	Location Data	**Essential**	List of ambulance stations, dispatch points, receiving hospitals, and relevant sites with coordinates.	MapInfo TAB files ESRI shapefiles
D2	Area Boundaries	**Essential**	A map, or shapefiles, showing boundary definitions of lower tiers against which performance targets are measured or any other relevant areas	MapInfo TAB files ESRI shapefiles

E. Hospital Data

Sample Period:01/06/2020 - 01/06/2025

Item	Requirement	Priority	Description	Prefered Data Format
E1	Hospital Details	**Essential**	List of main receiving hospitals, specialties, opening hours, and hospital codes.	n/a
E2	Hospital Destination Policies	**Essential**	Details of any bypass protocols in place for certain specialities of patients (for example, Stoke, STEMI, Trauma)	n/a
E3	Hospital Relief Policy	**Desired**	Protocols for relieving crews waiting with patients prior to handover.	n/a

F. Planning Data

Item	Requirement	Priority	Description	Prefered Data Format
F1	Population Data	**Essential**	Historical and future population estimates by age, gender, and area (for example, lower tier municipality) for the past and next 10 years.	n/a
F2	Future Housing and Road Network Developments	**Desired**	Provide details on planned housing projects, including the expected year, location, number of units, persons per unit, and shapefiles (if available). Additionally, include information on any upcoming major road network developments	n/a
F3	Future Operational Changes	**Essential**	Details of planned changes to resource deployment, estates (e.g., closures, relocations, new stations), operational policies, hospital reconfigurations and any major changes to road network during the project timeframe	n/a

G. Additional Operational Info Sample Period:01/06/2020 - 01/06/2025

Item	Requirement	Priority	Description	Prefered Data Format
G1	Staffing Data - Funded Levels	**Essential**	Funded staff levels by skill level	n/a
G2	Staffing Data - Actual Levels	**Essential**	Actual staff levels by skill level	n/a
G3	Staffing Data - Abstractions	**Desired**	Abstractions level due to leave, training, etc.	n/a
G4	Staffing Data- Working Arrangements	**Essential**	Information from the Collective Agreement on working arrangements, for example working hours and agreed shift lengths.	n/a
G5	Meal Break Policy	**Essential**	Information on meal breaks, frequency, length, and conditions for interruptions.	n/a
G6	Meal Break Compliance	**Essential**	Data on meal break compliance	n/a
G7	Resource Deployment Model	**Essential**	Dispatch protocols for vehicle allocation, response times, and prioritisation.	n/a
G8	End-of-Shift Procedures	**Essential**	Information regarding any restrictions on resource responses to certain categories of call when they are near the end of their shift	n/a
G9	Standby Policy	**Essential**	A list of standby points including information on how they are used, for example, which vehicles or stations typically utilise the standby point, hours	n/a
G10	Organizational Structure	**Essential**	Breakdown of the service organizational structure	n/a
G11	Operational Changes	**Desired**	Document any resource deployment, station location, or policy changes during the sample period.	n/a

B Service Analysis

B1 Demand

- B1a Average Daily Demand by Date
- B1b Demand by Hour
- B1c Demand by Area
- B1d In-County and Out-of-County Responses
- B1e In-County Responses by Other Services
- B1f Responded Demand CTAS vs Priority Code

B2 Transports to Hospital

- B2a Transport Rate by Month
- B2b Average Daily Patient Transports by Hospital

B3 Response Performance

- B3a Response Performance by Year
- B3b Response Performance by Area
- B3c Response Performance within 8 minutes by Hour of Day

B4 Call Components

- B4a Average Call Components by Category
- B4b Average Time at Hospital by Month
- B4c Average Call Components by Area

B5 Vehicle Workload

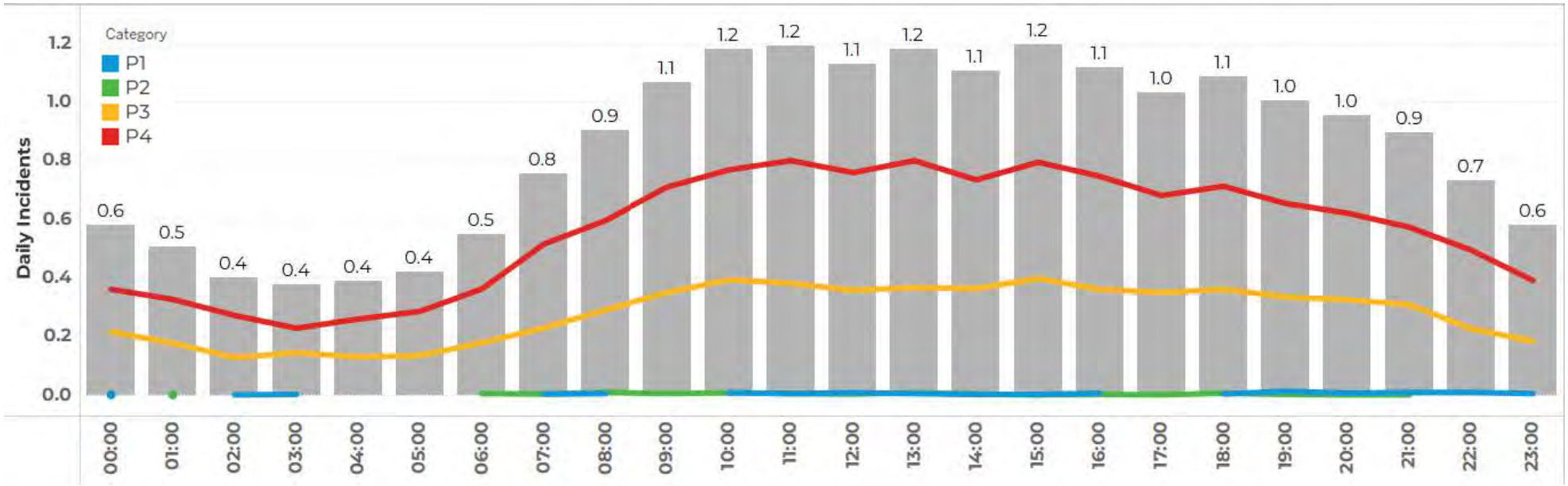
- B5a Standby Moves by Target Location
- B5b Incidents by Vehicle Type

B6 Resource/Demand Matching

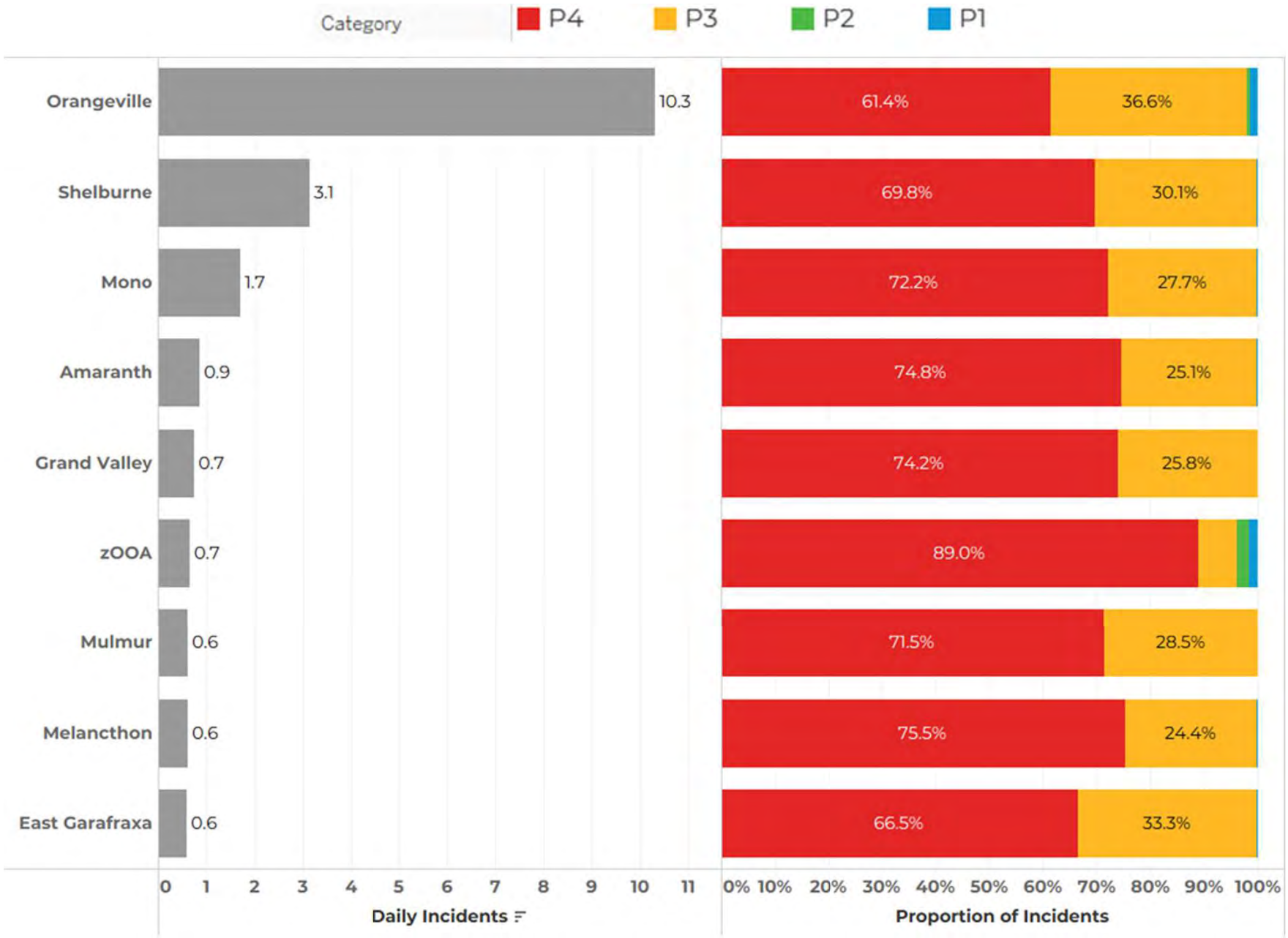
B7 Ambulance Utilization

Average Daily Demand

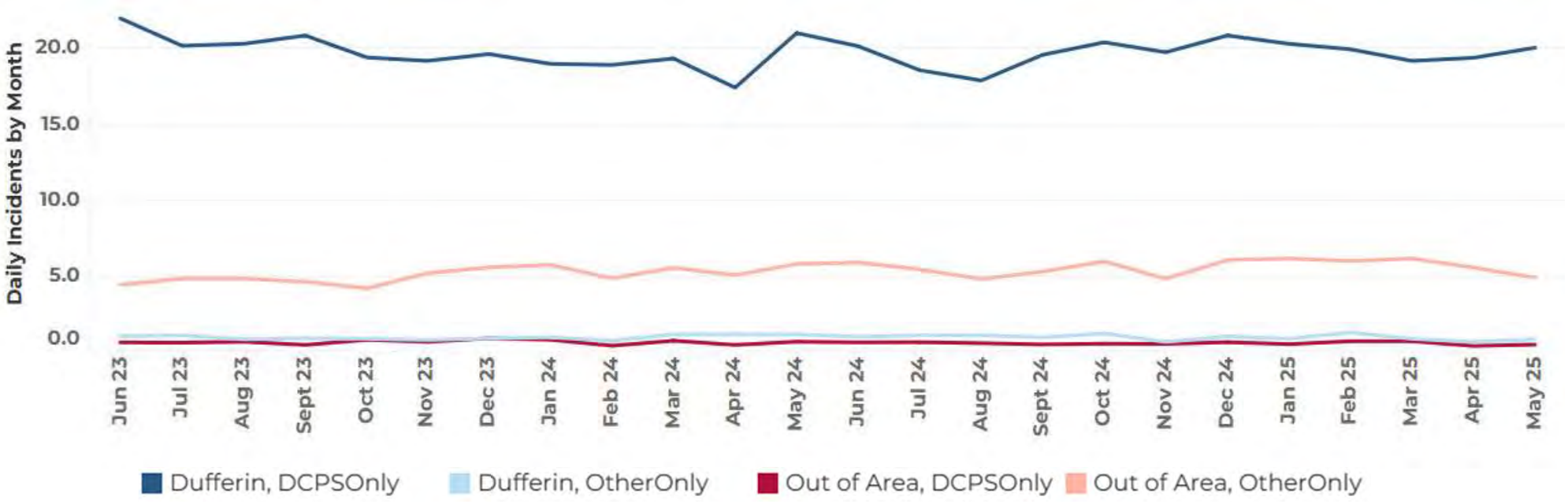
Demand by Hour (from Time Notified)



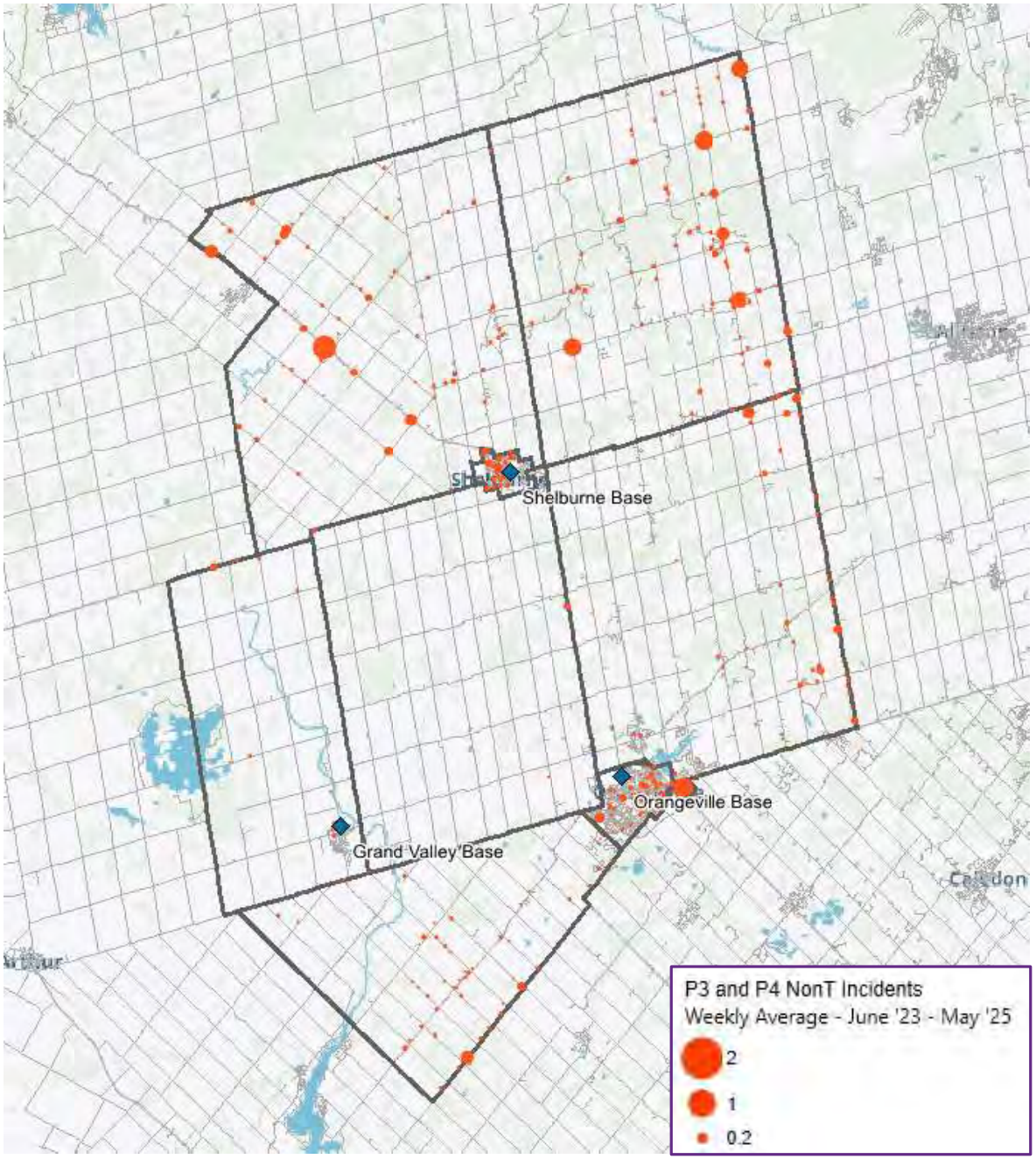
Demand by Area



In-County and Out-of-County Responses



In-County Responses by Other Services

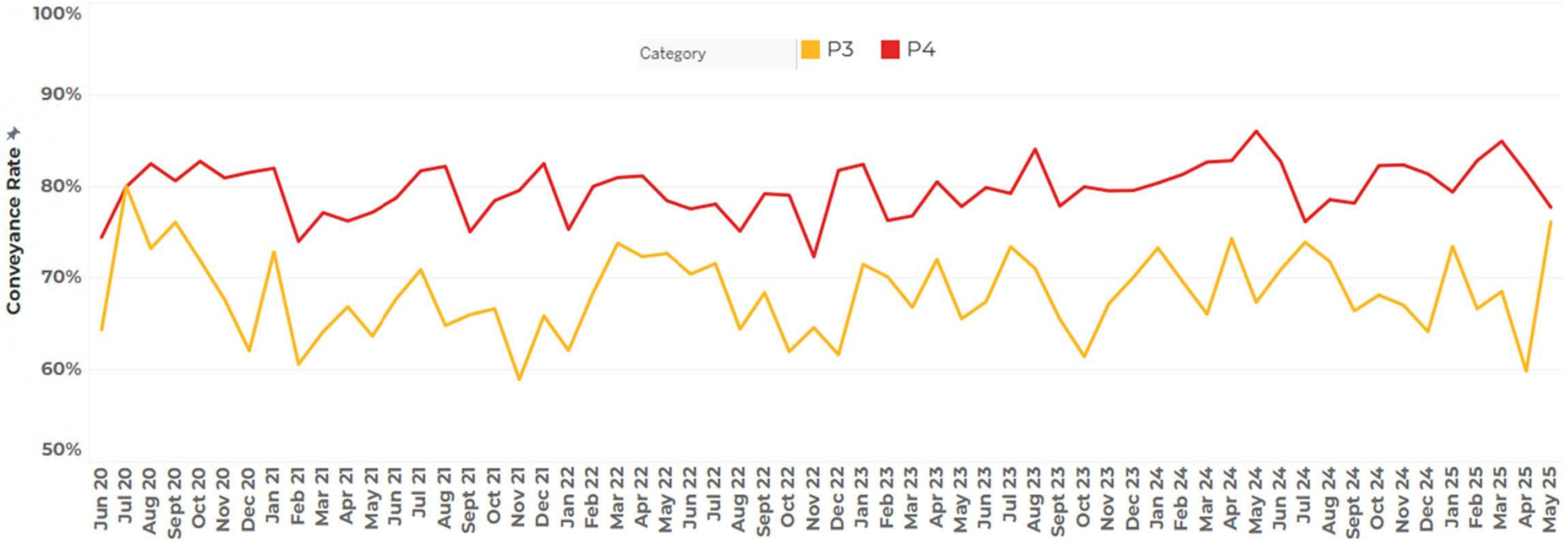


Responded Demand CTAS vs Priority Code

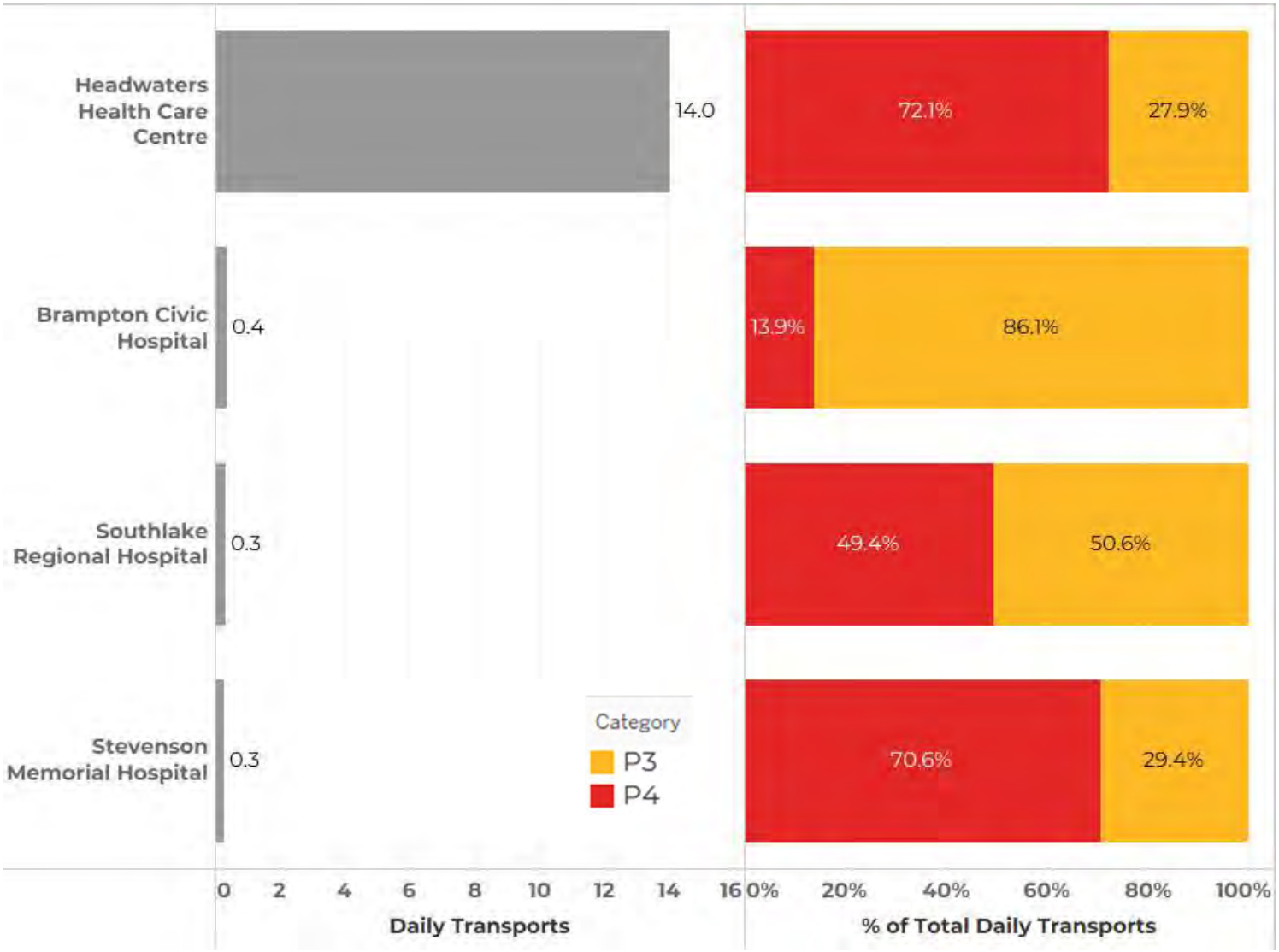
Average Daily Demand Matrix		CTAS - PT1							
		1	2	3	4	5	TR	Unknown	Total
Priority Code	P1	0.0	0.0	0.0	0.0	0.0		0.1	**0.1**
	P2		0.0	0.0	0.0	0.0		0.0	**0.1**
	P3T	0.0	0.1	0.4	0.0	0.0		0.3	**0.8**
	P3NonT	0.0	0.6	2.9	1.2	0.7		0.5	**5.9**
	P4T	0.0	0.1	0.0				0.1	**0.3**
	P4NonT	0.3	4.3	5.7	1.2	0.4		1.3	**13.2**
	Total	**0.3**	**5.2**	**9.0**	**2.4**	**1.1**		**2.3**	**20.3**

Key
P = Priority/Code
NonT = non-inter-hospital transfer
T = inter-hospital transfer

Transport rate by Month



Average Daily Patient Transports by Hospital



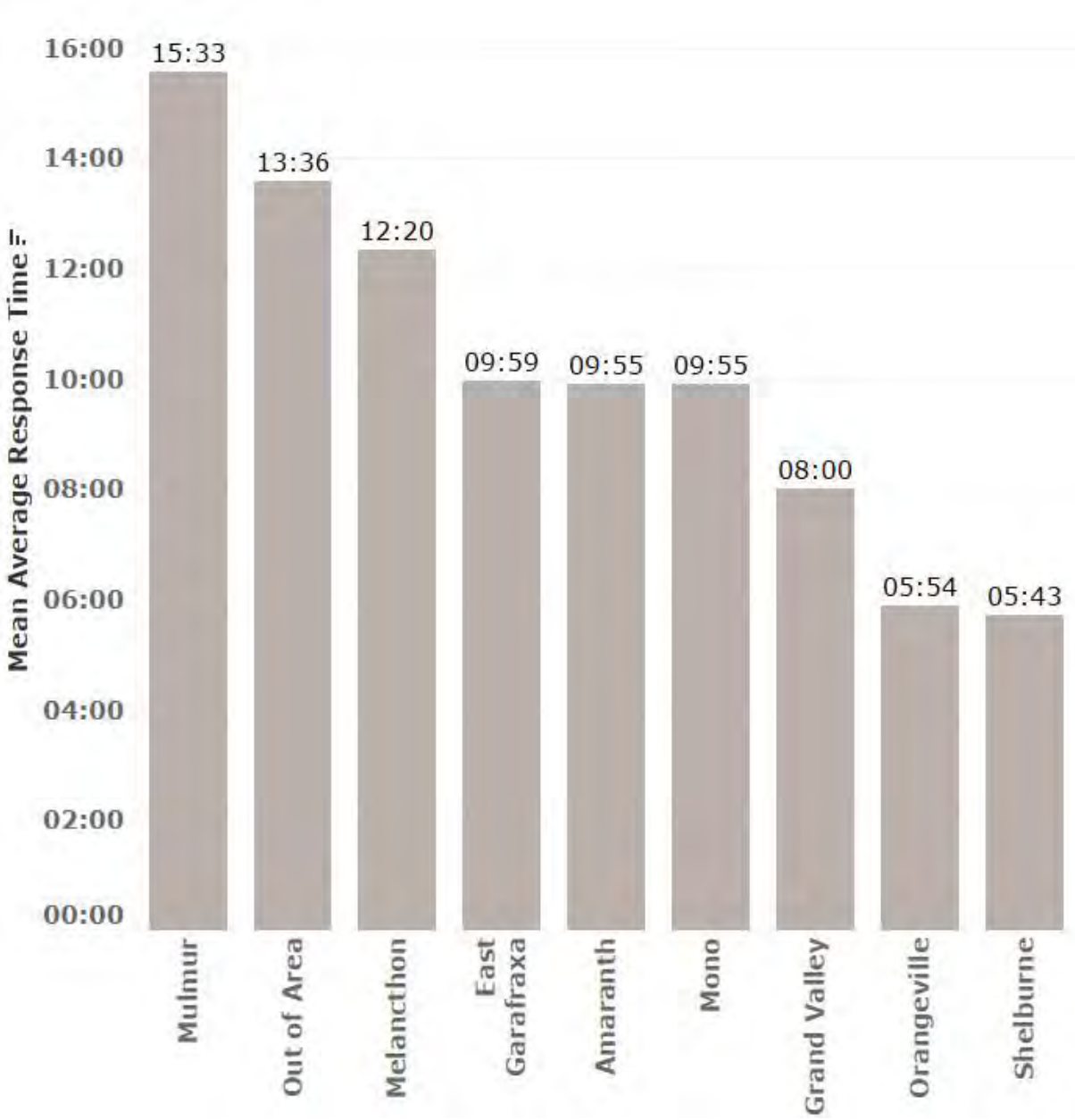
Response Performance by Year

Measured from time notified

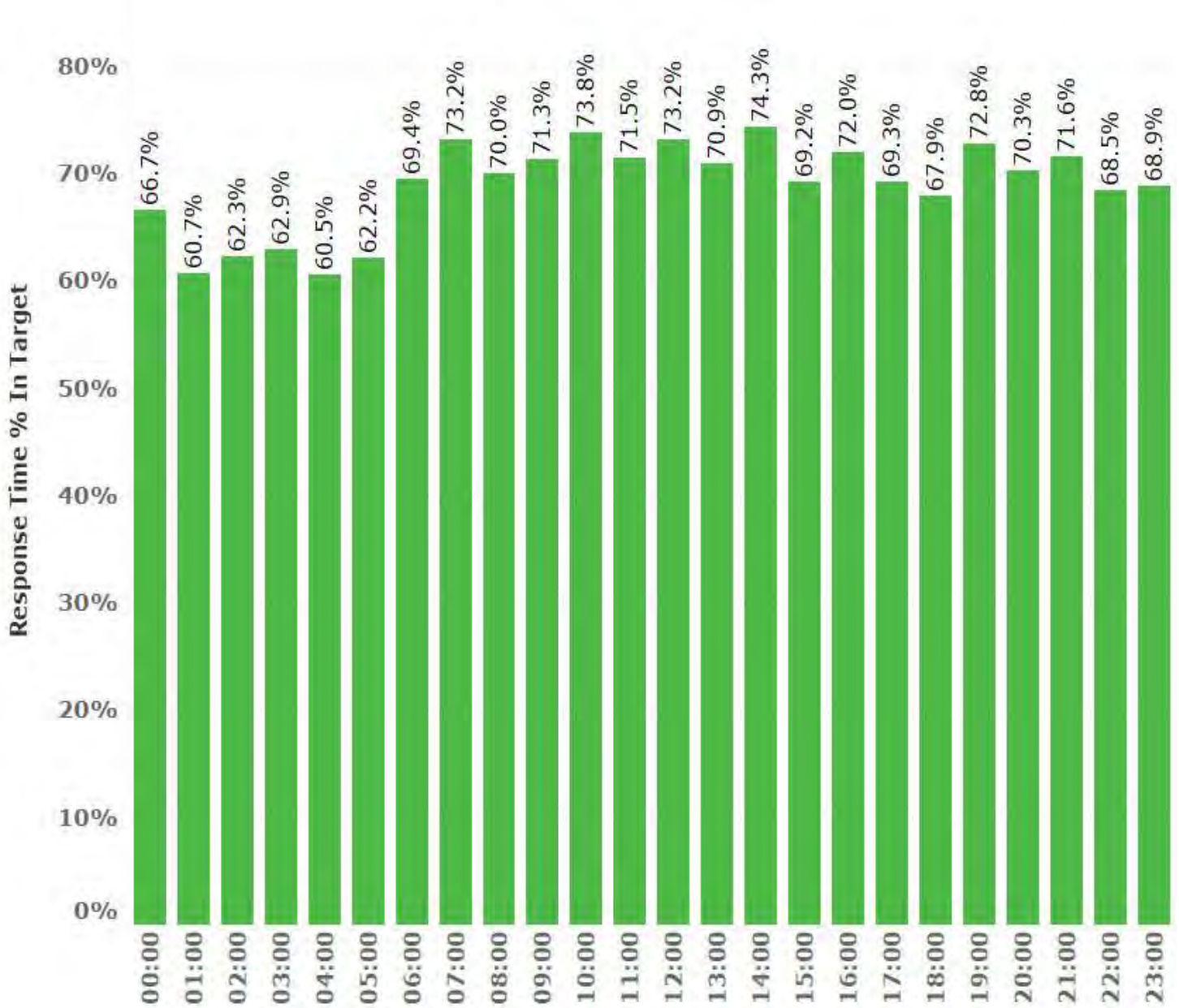
P4 Incident Response Performance				
Year	**% in 8**	**% in 10**	**% in 12**	**90th %ile**
2020	68.2%	80.1%	85.1%	13:47
2021	66.4%	78.7%	84.9%	14:15
2022	64.6%	75.8%	82.3%	15:08
2023	69.2%	78.9%	83.9%	14:10
2024	69.8%	80.0%	86.2%	13:23
2025	69.9%	80.2%	85.7%	13:34
Overall	67.8%	78.7%	84.5%	14:05

P3 Incident Response Performance				
Year	**% in 8**	**% in 10**	**% in 12**	**90th %ile**
2020	46.0%	67.7%	79.5%	15:18
2021	45.2%	65.5%	76.2%	16:24
2022	43.9%	62.9%	74.7%	17:14
2023	45.6%	63.9%	75.9%	17:13
2024	45.0%	63.6%	74.6%	18:01
2025	40.0%	59.5%	71.1%	19:29
Overall	44.6%	63.9%	75.4%	17:19

Response Performance by Area



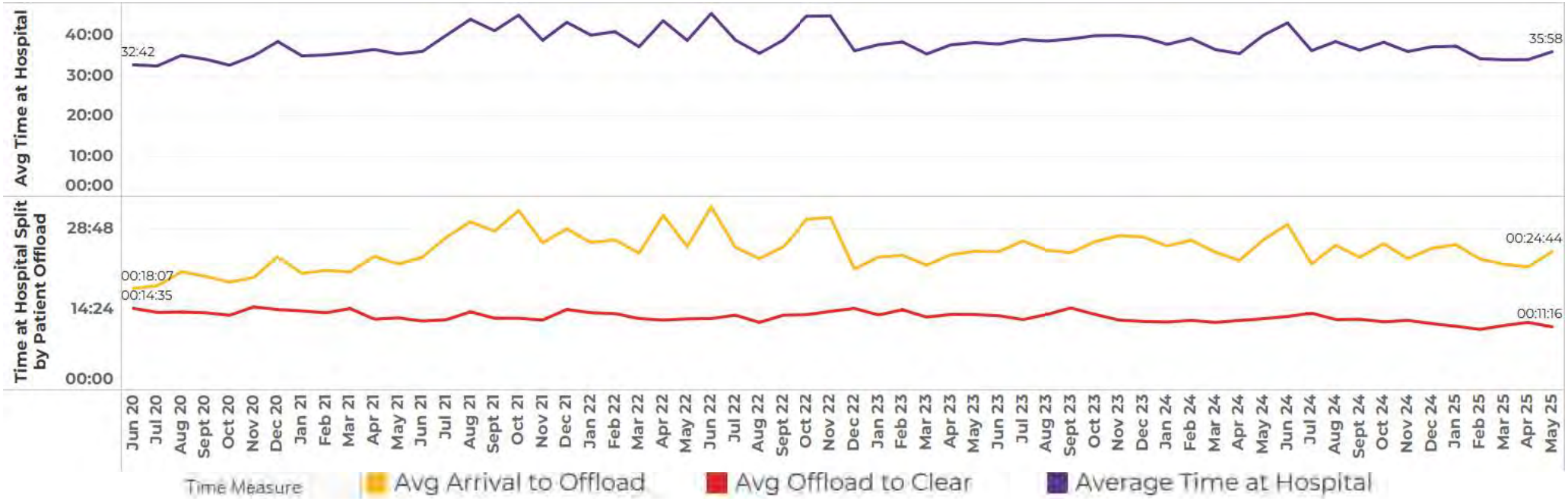
Response Performance within 8 minutes by Hour of Day



Average Call Components by Category

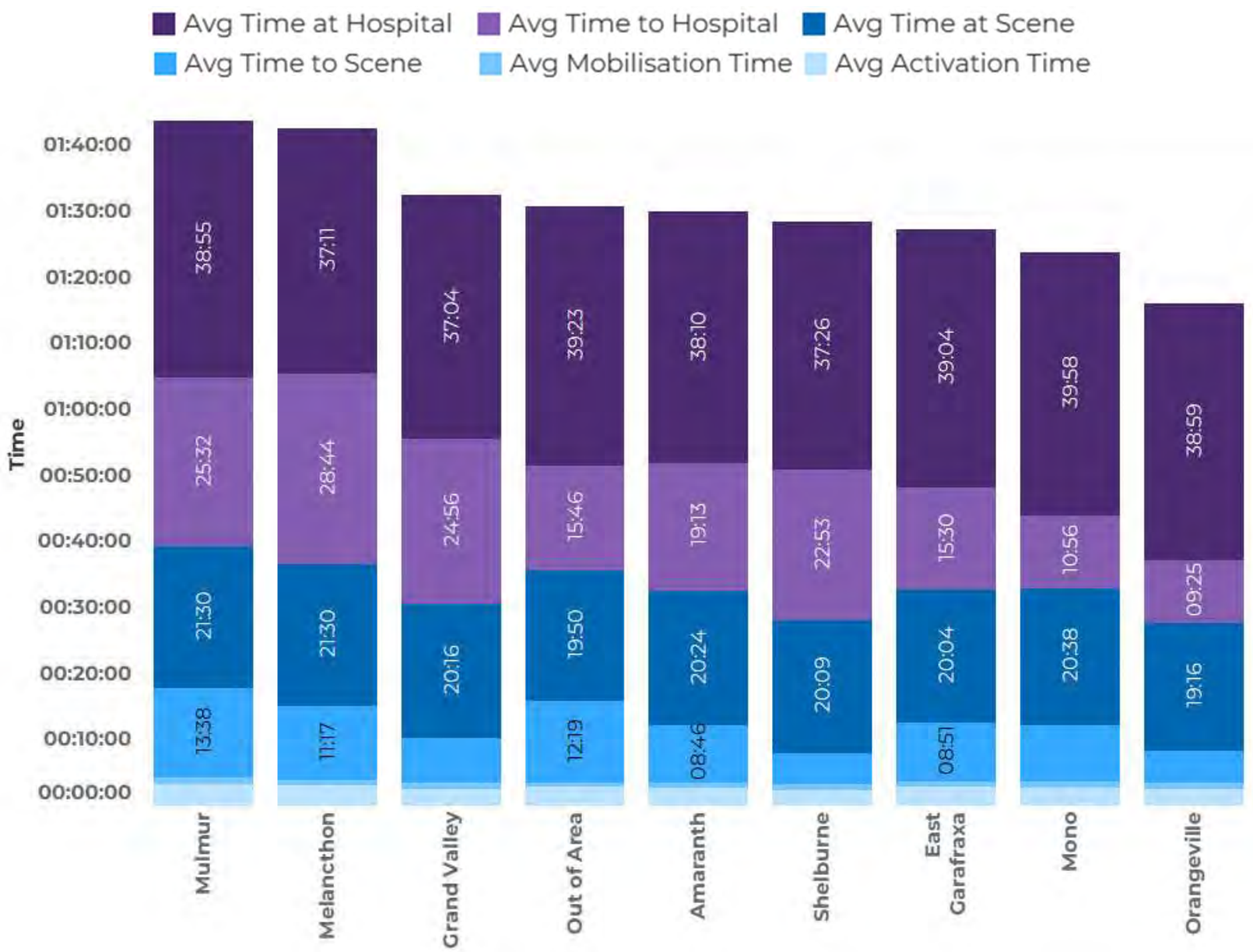
	Avg Activation Time	Avg Mobilisation Time	Avg Time to Scene	Avg Time at Scene	Avg Time to Hospital	Avg Time at Hospital	Avg Arrival to Handover	Avg Handover to Clear	Avg Occupied Time
P1	01:37:40	00:01:23	00:10:15	00:17:23	00:28:10	00:23:41	00:17:12	00:06:28	01:15:27
P2	02:46:39	00:01:23	00:08:33	00:19:31	00:48:41	00:35:50	00:22:59	00:13:07	01:43:04
P3	00:05:20	00:00:58	00:08:34	00:20:32	00:21:06	00:38:40	00:25:06	00:13:33	01:11:58
P4	00:02:27	00:00:53	00:06:41	00:19:51	00:14:43	00:38:57	00:24:53	00:14:00	01:09:08

Average Time at Hospital by Month



Note: during the period between offload and clear, an ambulance is not necessarily unavailable.

Average Call Components by Area



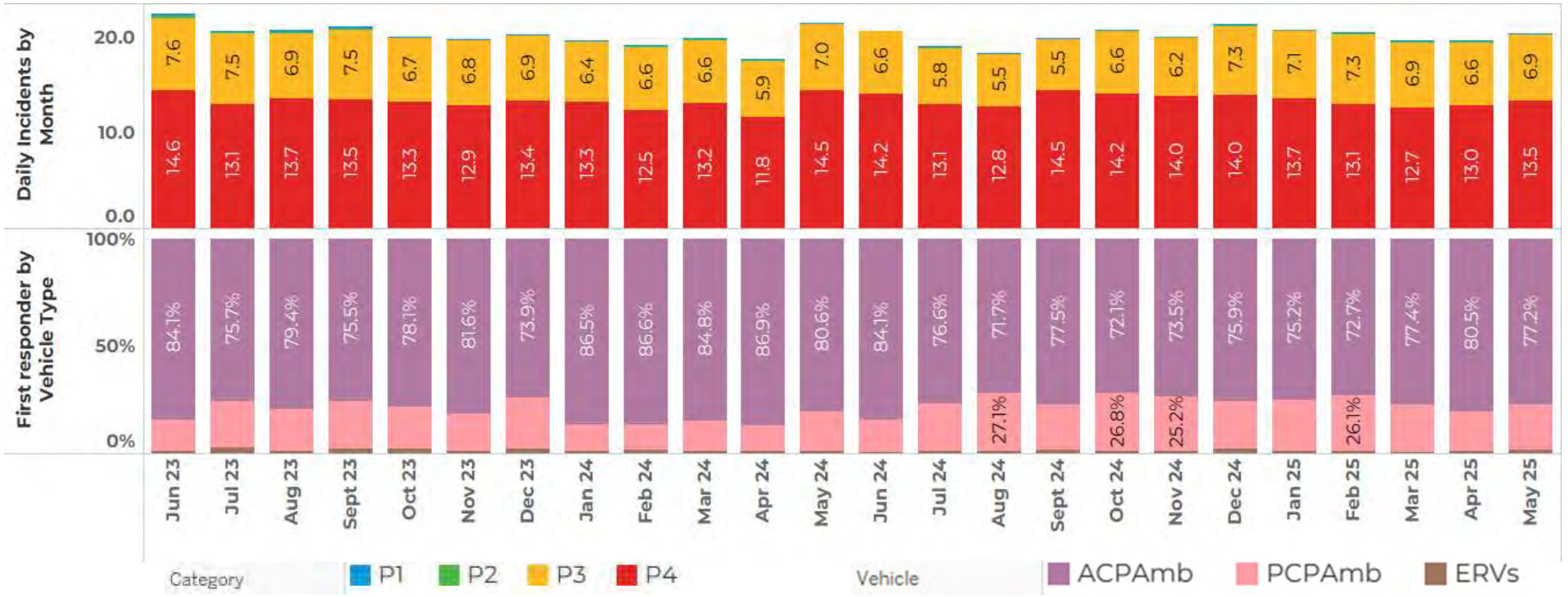
Standby Moves by Target Location

Standby Target Location	Standby Move Outcome			% Undertaken by Base		
	Notified	Mobilized	Completed	Orangeville Base	Shelburne Base	Grand Valley Base
Station: Orangeville	0.1	1.7	0.9	8%	10%	82%
Station: Shelburne	0.3	3.0	3.2	67%	3%	30%
Station: Grand Valley	0.1	0.6	0.9	91%	4%	5%
Other	0.0	0.1	0.1	48%	25%	27%
Overall	**0.5**	**5.4**	**5.2**	**57%**	**5%**	**40%**

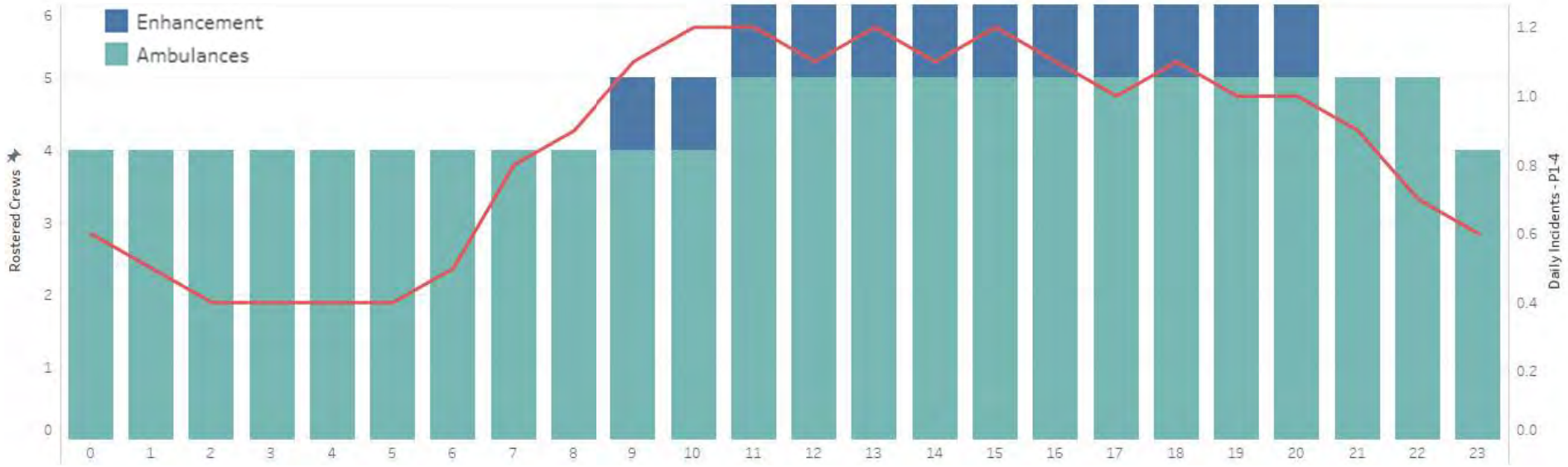
Standby Target Location	Standby Move Outcome			% by Next Assignment Outcome							
	Notified	Mobilized	Completed	Assigned > 30 Mins After	Standby: Notified	Standby: Mobilized	Standby: Responded	Incident: Notified	Incident: Mobilized	Incident: Responded	Incident: Transported
Station: Orangeville	0.1	1.7	0.9	51%	0.3%	11%	6%	0.4%	4%	7%	20%
Station: Shelburne	0.3	3.0	3.2	58%	0.2%	7%	7%	0.4%	4%	6%	19%
Station: Grand Valley	0.1	0.6	0.9	60%	0.3%	6%	9%	1%	3%	5%	16%
Other	0.0	0.1	0.1	57%	0.0%	11%	9%	1%	1%	5%	16%
Overall	**0.5**	**5.4**	**5.2**	**56%**	**0%**	**8%**	**7%**	**0%**	**3%**	**6%**	**19%**

Standby Target Location	Standby Move Outcome			% by Next Incident Municipality (Assuming within 30 Mins)								
	Notified	Mobilized	Completed	Amaranth	East Garafraxa	Grand Valley	Melancthon	Mono	Mulmur	Orangeville	Shelburne	Out of Area
Station: Orangeville	0.1	1.7	0.9	2%	1%	2%	0%	3%	0%	18%	2%	1%
Station: Shelburne	0.3	3.0	3.2	2%	0%	1%	2%	3%	2%	8%	10%	1%
Station: Grand Valley	0.1	0.6	0.9	2%	2%	3%	0%	1%	0%	14%	0%	1%
Other	0.0	0.1	0.1	1%	0%	1%	2%	4%	1%	10%	3%	1%
Overall	**0.5**	**5.4**	**5.2**	2%	1%	2%	2%	3%	1%	11%	6%	1%

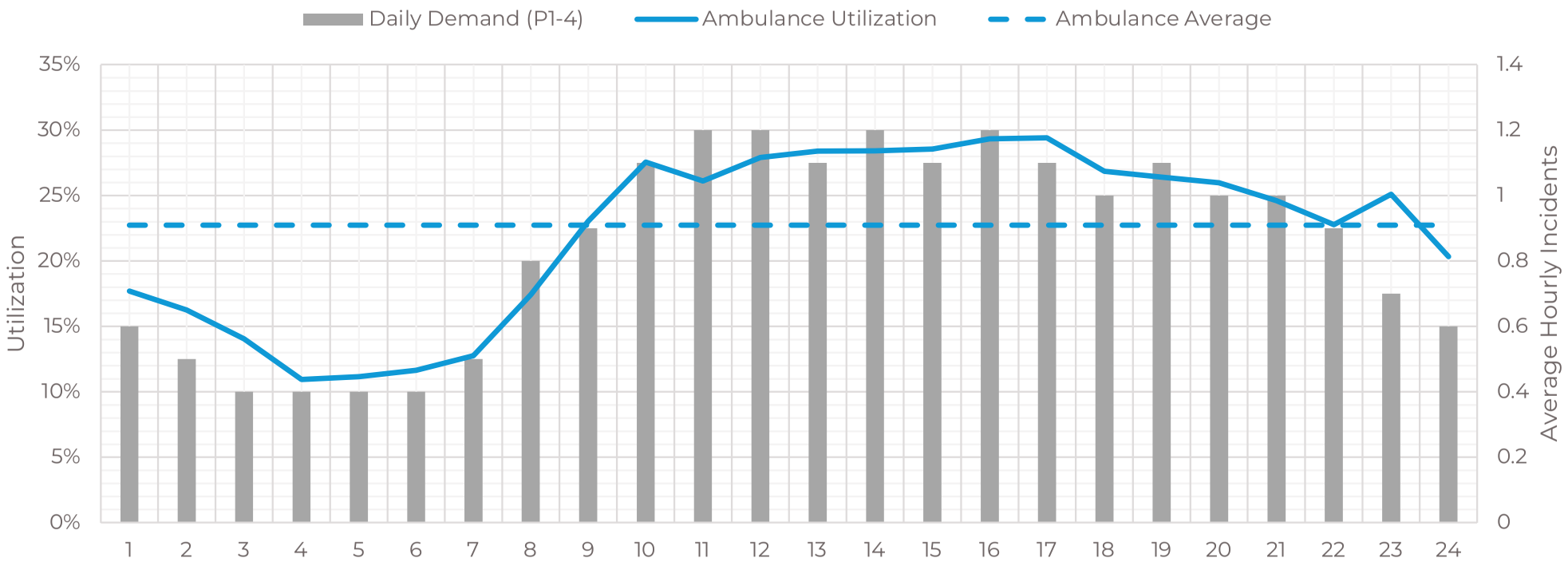
Incidents by Vehicle Type



Resource / Demand Matching



Ambulance Utilization



C Demand Projections

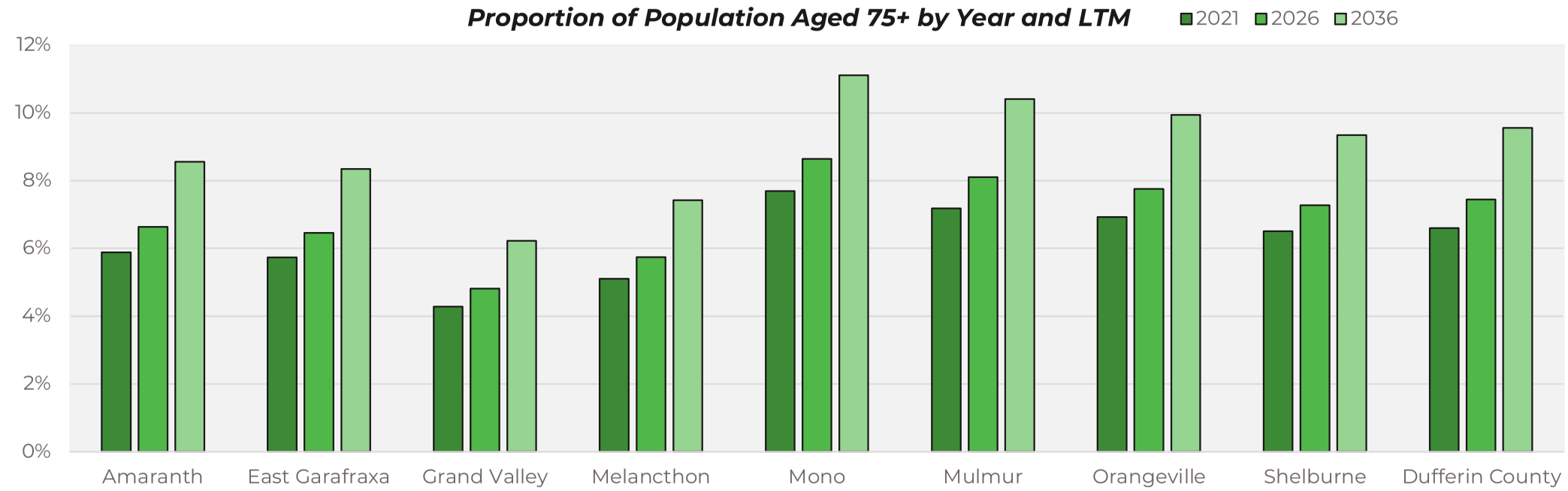
C1 Projected Population Statistics

Projected Population Statistics

Population Change

LTM	2025 Population	2036 Population	% Change
Amaranth	4,801	5,539	15.4%
East Garafraxa	3,134	3,758	19.9%
Grand Valley	5,027	9,116	81.4%
Melancthon	3,417	3,773	10.4%
Mono	10,686	13,146	23.0%
Mulmur	3,797	3,980	4.8%
Orangeville	32,915	36,459	10.8%
Shelburne	10,290	13,015	26.5%
Dufferin County	74,069	88,787	19.9%

Proportion of Population Aged 75+ by Year and LTM

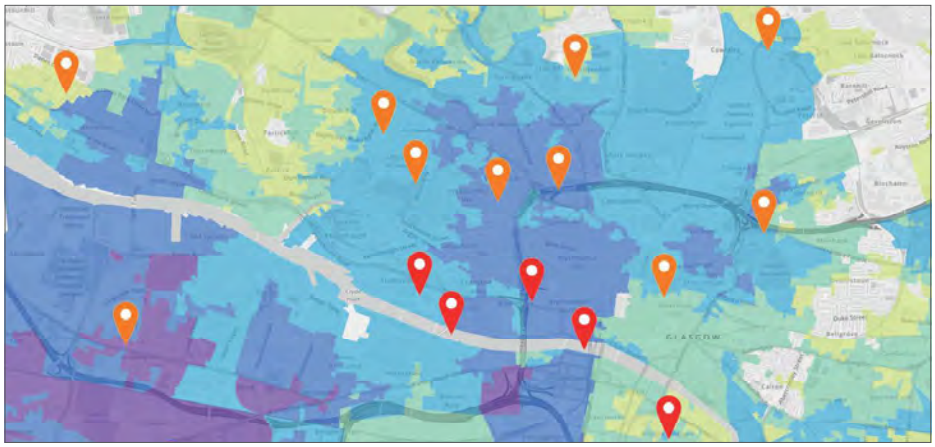


D AmbSim

D1 AmbSim Flyer

AmbSim

ORH Ambulance Simulation Model



KEY BENEFITS

- Quickly identifies the impact of future changes on response performance and utilization
- Quantifies seasonal vehicle and staffing requirements to meet national standards in future scenarios
- Examines impacts of changes in individual or multiple interrelated operational factors

Simulating potential changes and understanding their impacts

KEY FACTS

- Used in numerous studies worldwide
- Built on historical analysis
- Validated against known operations
- Risk-free environment for testing
- Evidence base for change

ABOUT AMBSIM

AmbSim is a simulation model that replicates the key characteristics of an ambulance service to predict future behaviour and performance under a variety of different scenarios. AmbSim is used by ORH consultants for ambulance service reviews, and in-house by services worldwide.

AMBSIM'S APPROACH

Demand is generated in AmbSim in accordance with historical data. Vehicles within the model respond to this demand according to their proximity and the desired dispatch protocols; dispatch rules can be based on any combination of categorization systems, resource types and staff skills.

ORH analyzes Automatic Vehicle Location data to understand variation in road speeds by time, location, road classification and vehicle type. These are fed into the model to ensure that travel times accurately replicate reality.

Resources within AmbSim can reflect both actual and planned rosters. This allows the user to identify required changes in resource levels/balance in specific detail.

Time components of the job cycle are based on historical analysis and differ by location, day, hour, category, and vehicle type. Along with demand and resourcing, the user can vary these parameters to assess different scenarios.

APPLICATION

AmbSim can be used to devise optimal operational models and resourcing by location, time, vehicle type and staff skill. Different demand levels and combinations of operational parameters can be incorporated to provide an evidence base for informed decision making. Inputs and parameters are flexible and can be updated to reflect changes that are within the control of the service and those that are external, such as hospital configuration.

E Scenario Modelling

E1 Optimization Approach

E2 Optimal Site Response Performance

E3 Northern Municipality Location Options

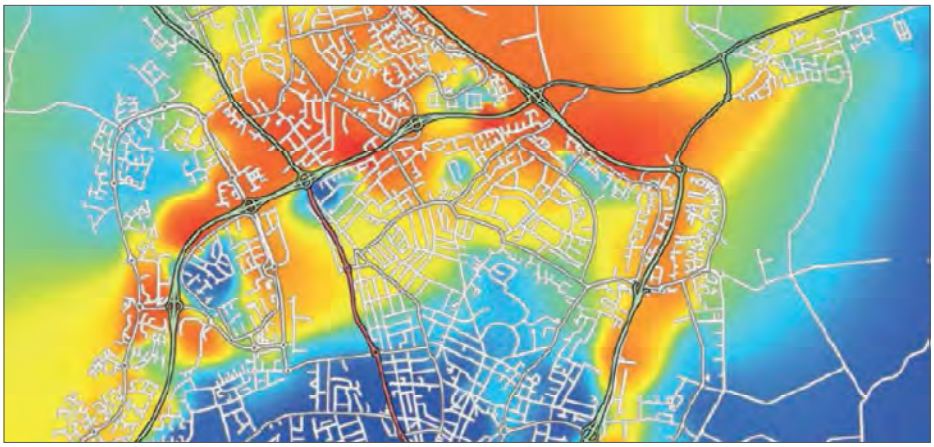
- E3a Map of Potential Locations
- E3b Response Performance with Existing Resourcing
- E3c Response Performance with Additional Resourcing

E4 2026 MPDS Base Position

E5 English Ambulance Service Benchmarking

Optimization

ORH Approach



KEY BENEFITS

- Proven approach successfully applied for hundreds of emergency services
- Identify optimal sites for stations and standby points
- Highlight the best locations within a local area
- Take account of specific targets, objectives or operational constraints
- Practical support for implementation

Optimizing response locations for emergency services

THE CHALLENGE

Identifying and evaluating optimal locations for stations and resources is a highly complex procedure. For an example scenario where an emergency service wants to place 20 resources across 15 stations, there are over 1.4 billion potential combinations to consider. If the service is not restricted to existing locations, the numbers become astronomical. Some of the questions that emergency services need to answer include:

- Where is the optimal site to relocate an old station, merge existing stations or build an additional station?
- How many locations are required to meet response standards?
- Where should stations be located to meet future demand?
- What is the optimal balance between stations and standby points?

> ***ORH determined optimum locations for new and existing fire stations using accurate modelling tools, and helped us to identify the most efficient use of our resources.***
>
> Assistant Chief Officer,
> UK Fire & Rescue Service

ORH'S APPROACH

ORH's unique and powerful program, DCM, optimizes the locations of sites, quickly determining which options best achieve the objectives. In order to do this it uses a substitution algorithm to assess configurations.

ORH designed DCM to answer a range of optimization questions, taking account of issues that are specific to each emergency service. The bespoke optimization process addresses the following:

- **Response standards:** minimize average response times or maximize the number of incidents within specific timeframes?
- **Risk factors:** assess coverage to incident locations or apply a risk-based approach that can include multiple factors?
- **Resources:** the types of vehicle that contribute to coverage, and whether multiple responders are required?
- **Restrictions:** are there any fixed current locations, and can new sites be located anywhere within the area?

To deliver solutions, ORH's experienced consultants work closely with clients to specify their requirements, understand the constraints and iteratively develop outcomes. Using simulation modelling, we fully test all potential options to quantify the impacts on response times and vehicle workload.

The outcomes from the process include:

- Service-wide maps to identify optimal sites and compare to current response locations.
- Detailed impacts on response performance and vehicle workload.
- Site-search maps that highlight the best options for potential sites within the local area.

Optimal Site Response Performance

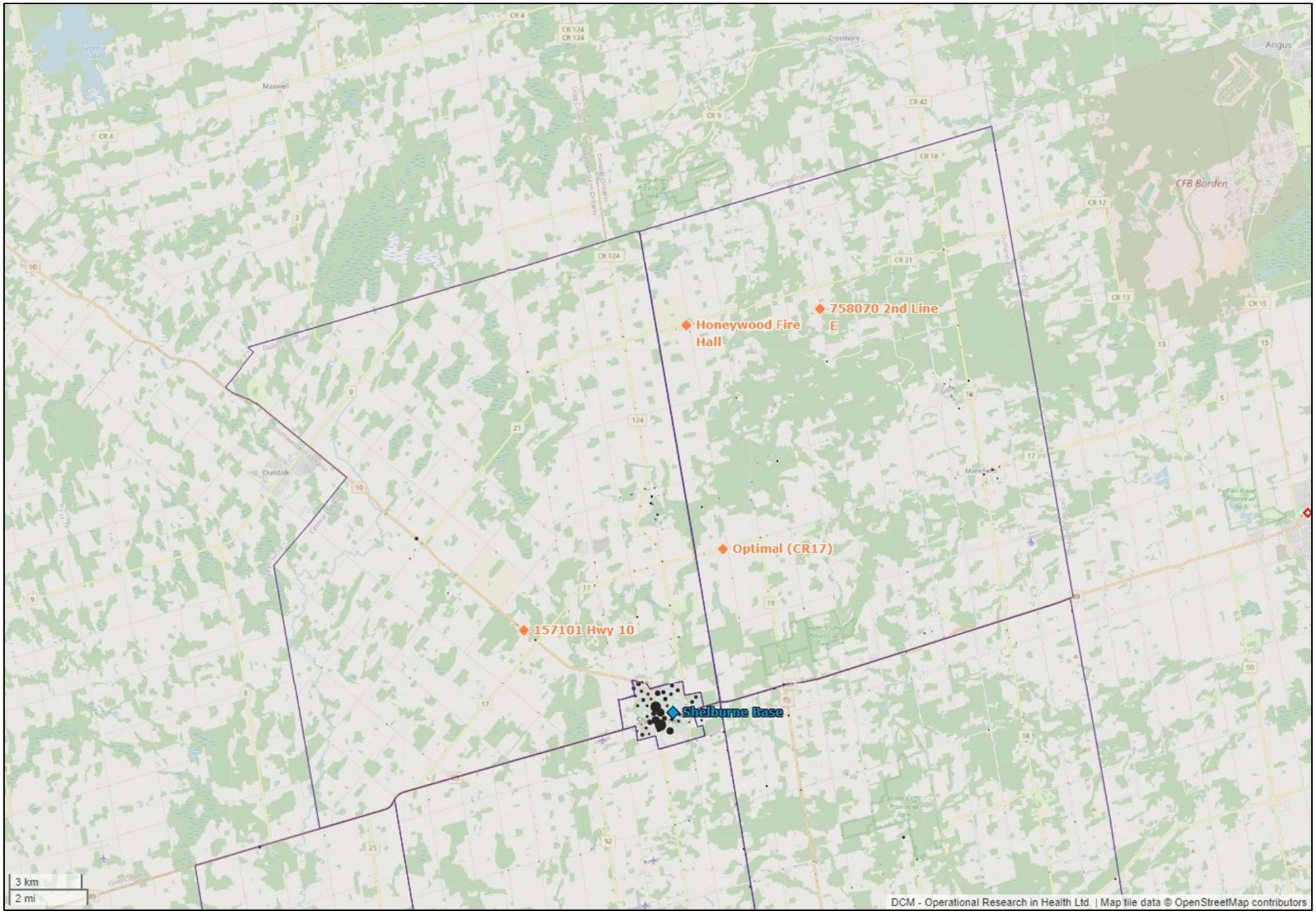
Response Performance

Scenario	P4 (From Time Notified)				
	8 Mins	10 Mins	12 Mins	Average RT (mm:ss)	90th %ile (mm:ss)
2026 Base Position	73.0%	82.3%	87.8%	07:08	13:01
Optimal Grand Valley	73.0%	82.4%	87.9%	07:08	13:01
Optimal Orangeville	76.0%	83.3%	88.3%	06:22	12:49
Optimal Shelburne	74.1%	83.9%	89.1%	07:00	12:26

Impacts from Base

Optimal Grand Valley	0.0%	0.1%	0.0%	-00:00	-00:00
Optimal Orangeville	3.0%	1.0%	0.5%	-00:46	-00:12
Optimal Shelburne	1.1%	1.5%	1.3%	-00:08	-00:35

Northern Municipality Location Options



Response Performance: Alternative Locations

Base Resourcing

Additional Sites with Existing Resourcing

Option	8-minute P4 Performance			Average RT (mm:ss)		
	Melancthon	Mulmur	Overall	Melancthon	Mulmur	Overall
2026 Base Position	15.3%	16.7%	73.0%	11:53	14:14	07:08
Optimal (CR17)	35.4%	26.9%	71.0%	10:27	11:41	07:15
Honeywood Fire Hall	27.5%	26.8%	69.2%	10:48	11:53	07:28
758070 2nd Line E	17.1%	36.6%	69.0%	11:47	10:56	07:30
157101 Hwy 10	41.1%	13.3%	70.4%	09:43	14:20	07:21

Impact from Base Position

Option	8-minute P4 Performance			Average RT (mm:ss)		
	Melancthon	Mulmur	Overall	Melancthon	Mulmur	Overall
Optimal (CR17)	20.1%	10.2%	-2.0%	-01:26	-02:33	00:07
Honeywood Fire Hall	12.3%	10.1%	-3.8%	-01:05	-02:21	00:20
758070 2nd Line E	1.8%	19.9%	-4.0%	-00:06	-03:18	00:22
157101 Hwy 10	25.9%	-3.4%	-2.6%	-02:10	00:07	00:12

Note: in each option, a 12-hour day shift from the existing deployment is posted to the location from Shelburne

Response Performance: Alternative Locations

Additional Resourcing

Additional Sites with Additional 12-hour Shift

Option	8-minute P4 Performance			Average RT (mm:ss)		
	Melancthon	Mulmur	Overall	Melancthon	Mulmur	Overall
2026 Base Position	15.3%	16.7%	73.0%	11:53	14:14	07:08
Optimal (CR17)	40.5%	30.4%	73.2%	09:45	10:47	07:00
Honeywood Fire Hall	29.9%	29.6%	71.8%	10:19	11:09	07:09
758070 2nd Line E	17.2%	41.6%	71.6%	11:28	10:00	07:11
157101 Hwy 10	47.8%	13.9%	72.7%	08:52	13:58	07:05

Impact from Base Position

Option	8-minute P4 Performance			Average RT (mm:ss)		
	Melancthon	Mulmur	Overall	Melancthon	Mulmur	Overall
Optimal (CR17)	25.3%	13.7%	0.2%	-02:08	-03:27	-00:09
Honeywood Fire Hall	14.6%	12.9%	-1.2%	-01:34	-03:05	00:01
758070 2nd Line E	1.9%	24.9%	-1.4%	-00:25	-04:14	00:03
157101 Hwy 10	32.6%	-2.8%	-0.3%	-03:01	-00:15	-00:03

Note: in each option, an additional 12-hour day shift is posted to the location from Shelburne

2026 MPDS Base Position

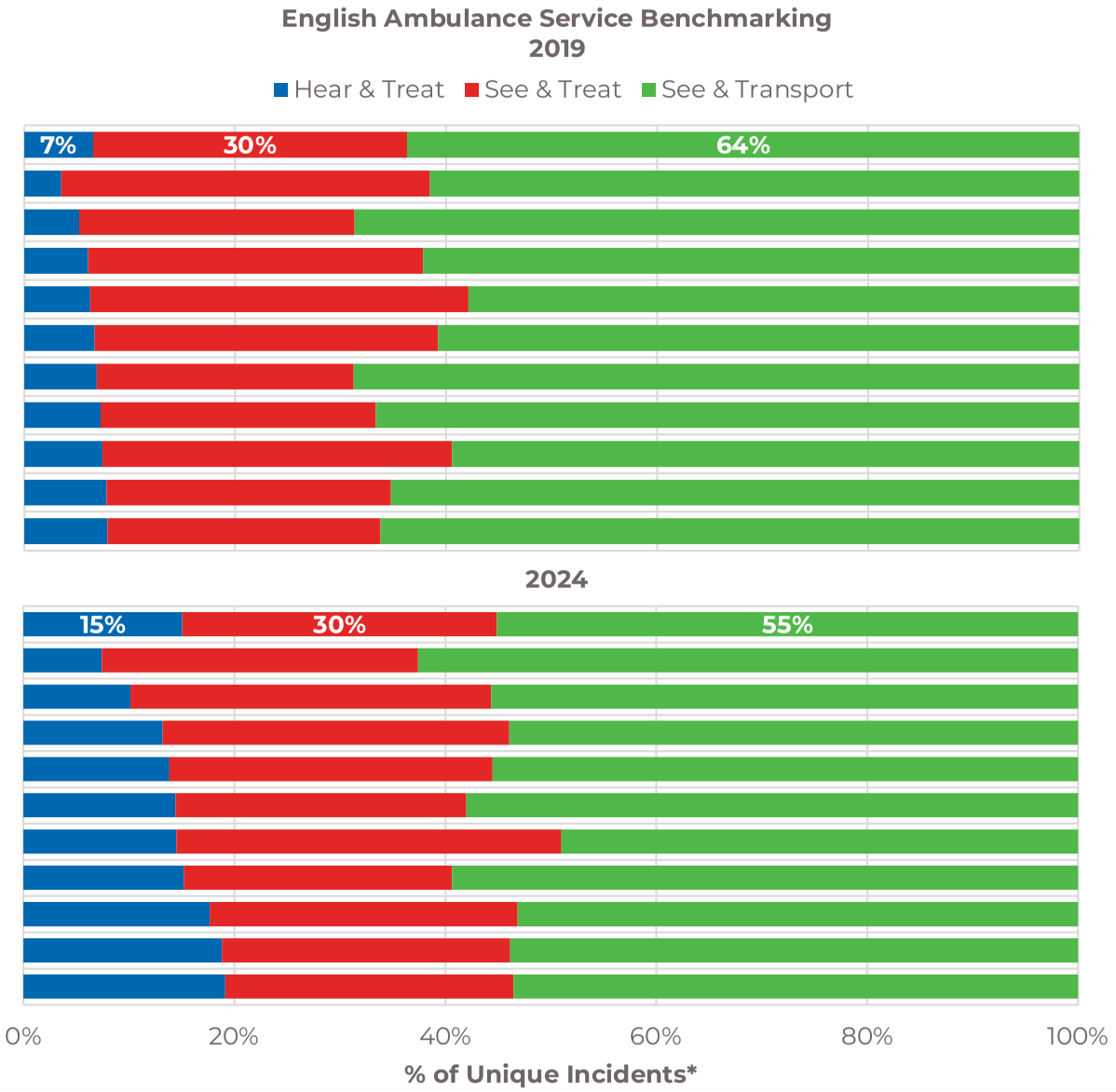
High Acuity

LTM	Purple (From Time Assigned)				Red (From Time Assigned)			
	8 Mins	10 Mins	Average RT (mm:ss)	90th %ile (mm:ss)	8 Mins	10 Mins	Average RT (mm:ss)	90th %ile (mm:ss)
Amaranth	36.2%	61.2%	09:14	13:33	37.2%	61.5%	09:12	13:39
East Garafraxa	28.1%	61.2%	09:32	13:18	28.8%	60.4%	09:34	13:23
Grand Valley	69.4%	74.8%	06:58	15:36	69.8%	75.2%	06:49	15:27
Melancthon	16.1%	38.3%	11:40	17:33	15.8%	38.3%	11:40	17:16
Mono	43.3%	61.5%	09:18	15:02	43.3%	61.6%	09:17	14:58
Mulmur	17.1%	21.8%	14:07	20:55	16.9%	22.2%	14:02	20:50
Orangeville	91.6%	98.2%	05:37	07:52	91.2%	98.1%	05:37	07:54
Shelburne	95.2%	98.0%	04:27	06:54	95.4%	97.8%	04:29	06:51
Overall	**73.5%**	**82.9%**	**06:57**	**12:43**	**73.7%**	**83.2%**	**06:55**	**12:35**

Low Acuity

LTM	From Call Answer								
	Orange			Yellow			Green		
	30 Mins	Average RT (mm:ss)	90th %ile (mm:ss)	30 Mins	Average RT (mm:ss)	90th %ile (mm:ss)	30 Mins	Average RT (mm:ss)	90th %ile (mm:ss)
Amaranth	95.7%	15:01	20:46	85.7%	22:38	40:56	77.7%	28:46	71:16
East Garafraxa	93.2%	16:48	24:22	82.9%	25:49	46:43	74.6%	32:17	77:17
Grand Valley	92.2%	13:05	28:15	83.2%	22:11	45:04	76.2%	28:55	78:07
Melancthon	91.8%	19:06	29:13	74.6%	27:39	42:10	66.6%	34:16	79:30
Mono	94.8%	15:53	24:55	81.1%	24:02	45:42	73.0%	30:32	73:57
Mulmur	86.7%	22:37	31:50	66.0%	32:00	52:51	58.1%	39:20	84:26
Orangeville	95.0%	11:48	15:57	85.8%	19:37	39:53	76.4%	26:10	69:50
Shelburne	94.1%	10:01	12:20	84.3%	18:53	40:26	77.3%	25:34	75:12
Overall	**93.9%**	**13:16**	**23:54**	**83.8%**	**21:09**	**42:17**	**75.5%**	**27:41**	**72:33**

English Ambulance Service Benchmarking



*** Incidents** are calls that receive a face-to-face response from the ambulance service at the scene of the incident and calls that are successfully resolved with telephone advice with any appropriate action agreed with the patient. If there have been multiple calls about a single incident, only one incident is counted. Excludes duplicate, hoax, test, cancelled/abandoned by caller, information, etc type calls

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