



# Updating the Deployment Review

Bruce County Paramedic Services

Council Presentation, September 5, 2024

**Comprehensive Deployment and Base Review** undertaken by ORH in **2020**; series of recommendations made for deployments **between 2019 and 2029**

BCPS have made **progress implementing recommendations**, however:

- Call growth has been higher than anticipated, particularly in Saugeen Shores
- There have been increased offload delays and other changes to hospital capabilities
- The new Port Elgin and Sauble Beach stations have opened, and there are other developments in the County that may impact station locations

Work completed to **refresh** the deployment review using latest data and assumptions, to understand if the longer-term **recommendations of the original review are still valid**

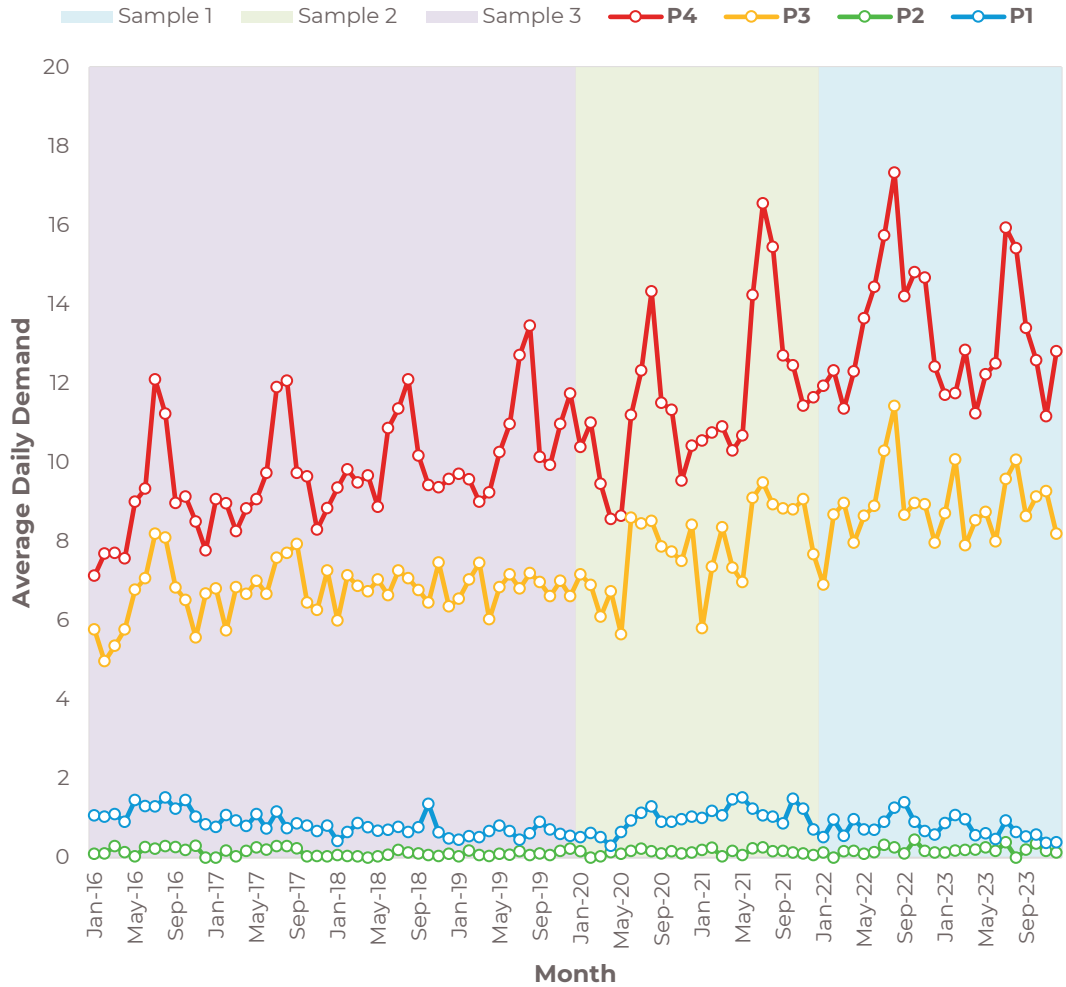


**ORH helps emergency services around the world to optimize resource use and respond in the most effective and efficient way.**

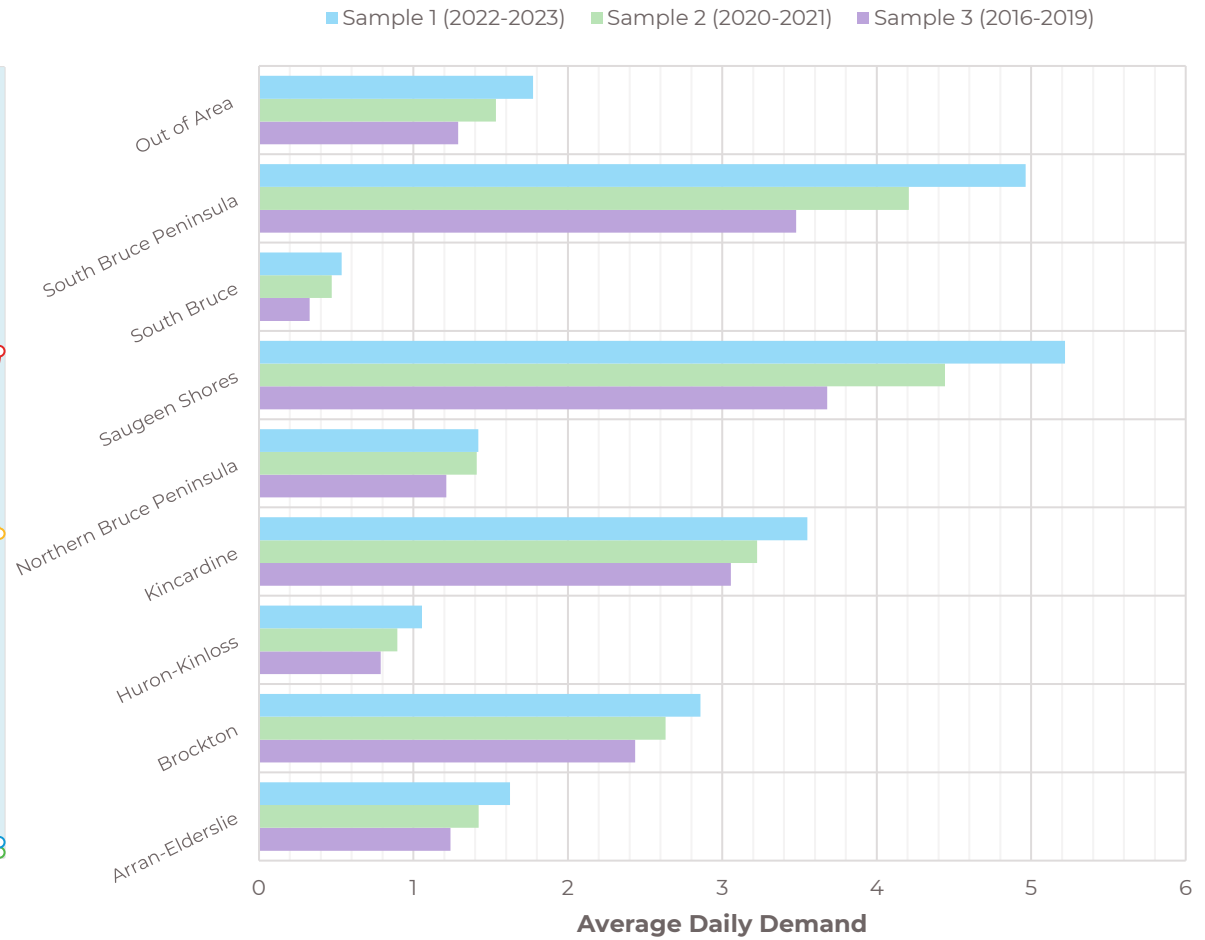


A paramedic in a dark uniform with a caduceus patch is sitting in the driver's seat of an ambulance. She is holding a mobile phone to her ear with her right hand and has her left hand on the steering wheel. The ambulance interior is visible, including the dashboard and a seat with 'EMERGENCY' written on it. The scene is overlaid with a purple tint.

# Current Service Profile

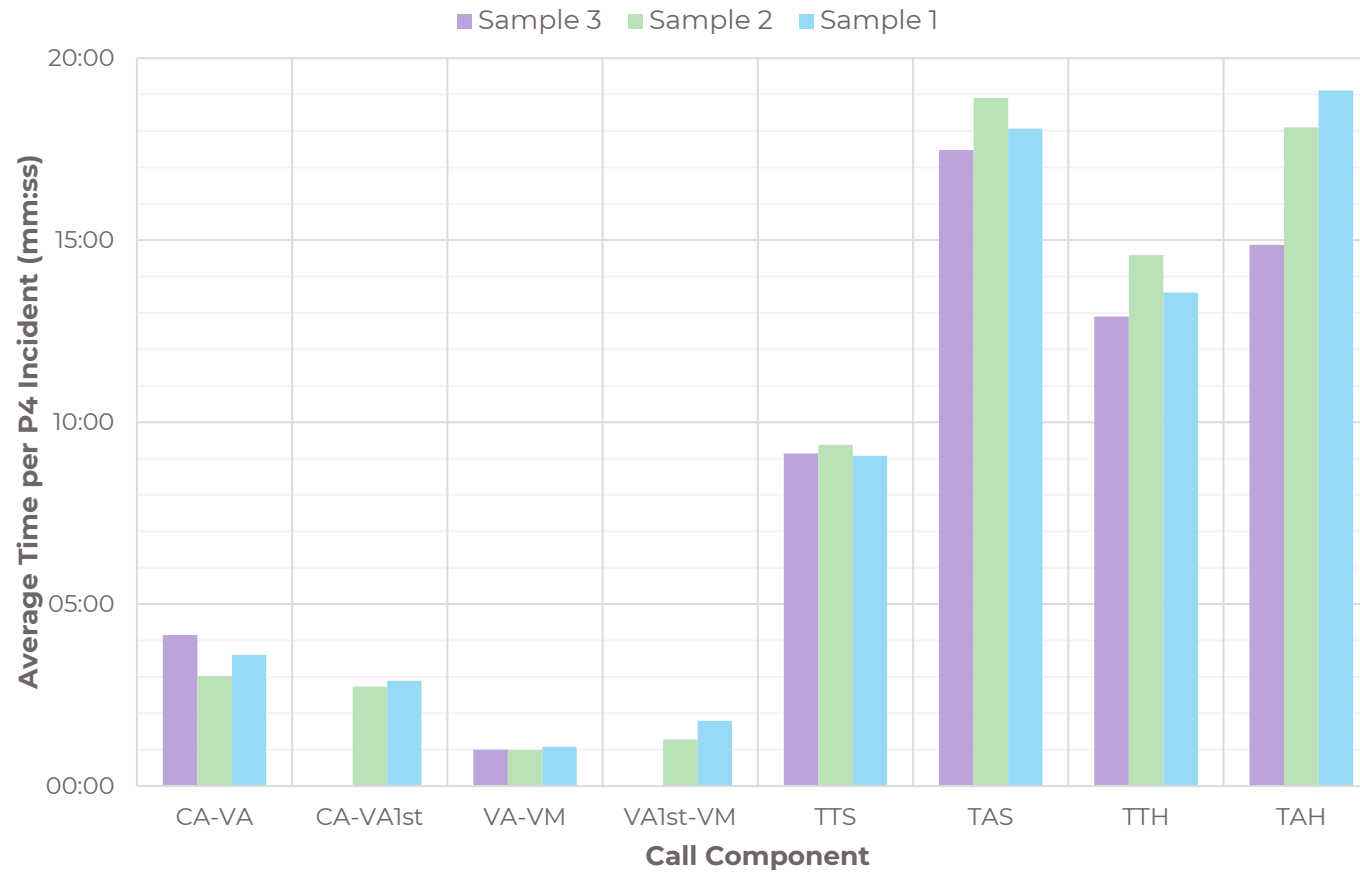


ORH Final Report, Appendix A1a



ORH Final Report, Figure 2-2

# Call Components



Time stamps used are for first BCPS vehicle on scene, except where first assigned vehicle is also considered.

CA-VA: Call Answer to Vehicle Assigned

CA-VA1st: Call Answer to First Vehicle Assigned

VA-VM: Vehicle Assigned to Vehicle Mobile

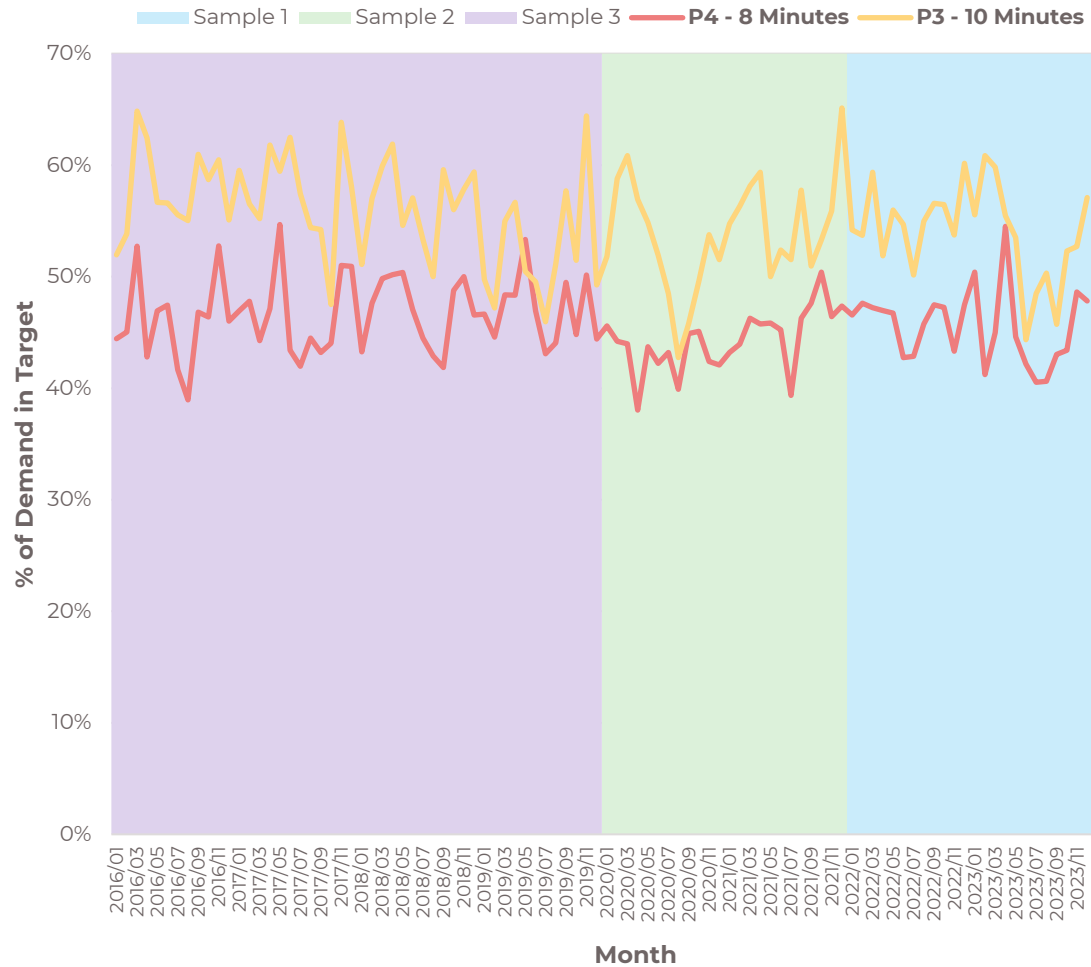
VA1st-VM: First Vehicle Assigned to Vehicle Mobile

TTS: Time to Scene

TAS: Time at Scene

TTH: Time to Hospital

TAH: Time at Hospital



ORH Final Report, Appendix A2a

### BCPS Reported % Calls in Target

CTAS and Target Time	Current Target %	2020	2021	2022	2023
CTAS1 in 8 mins	45%	42.3%	50.0%	50.0%	49.0%
CTAS2 in 10 mins	50%	49.2%	56.0%	53.0%	53.0%
CTAS3 in 15 mins	70%	69.6%	70.0%	70.0%	71.0%
CTAS4 in 20 mins	85%	82.1%	83.0%	85.0%	86.0%
CTAS5 in 25 mins	90%	91.1%	91.0%	90.0%	90.5%

ORH Final Report, Figure 2-4

# Ambulance Deployment Summary

## Weekly Ambulance Hours

Station	Scenario			2024 Recommended (from Original Review)
	2020 Base (from Original Review)	2022 Deployment Plan	2024 Deployment Plan	
Chesley	168	168	168	168
Kincardine	168	168	168	252
Port Elgin	168	168	252	168
Tobermory	168	168	168	168
Walkerton	210	252	252	168
Wiarion	210	168	168	168
Sauble Beach	0	84	84	84
Holyrood	0	0	0	84
Overall	1,092	1,176	1,260	1,260

**Notes:**

84 weekly hours = 12/7 vehicle

Sauble Beach utilized as post in 2022 Deployment Plan, but as full station in 2024 Deployment Plan and 2024 Recommended

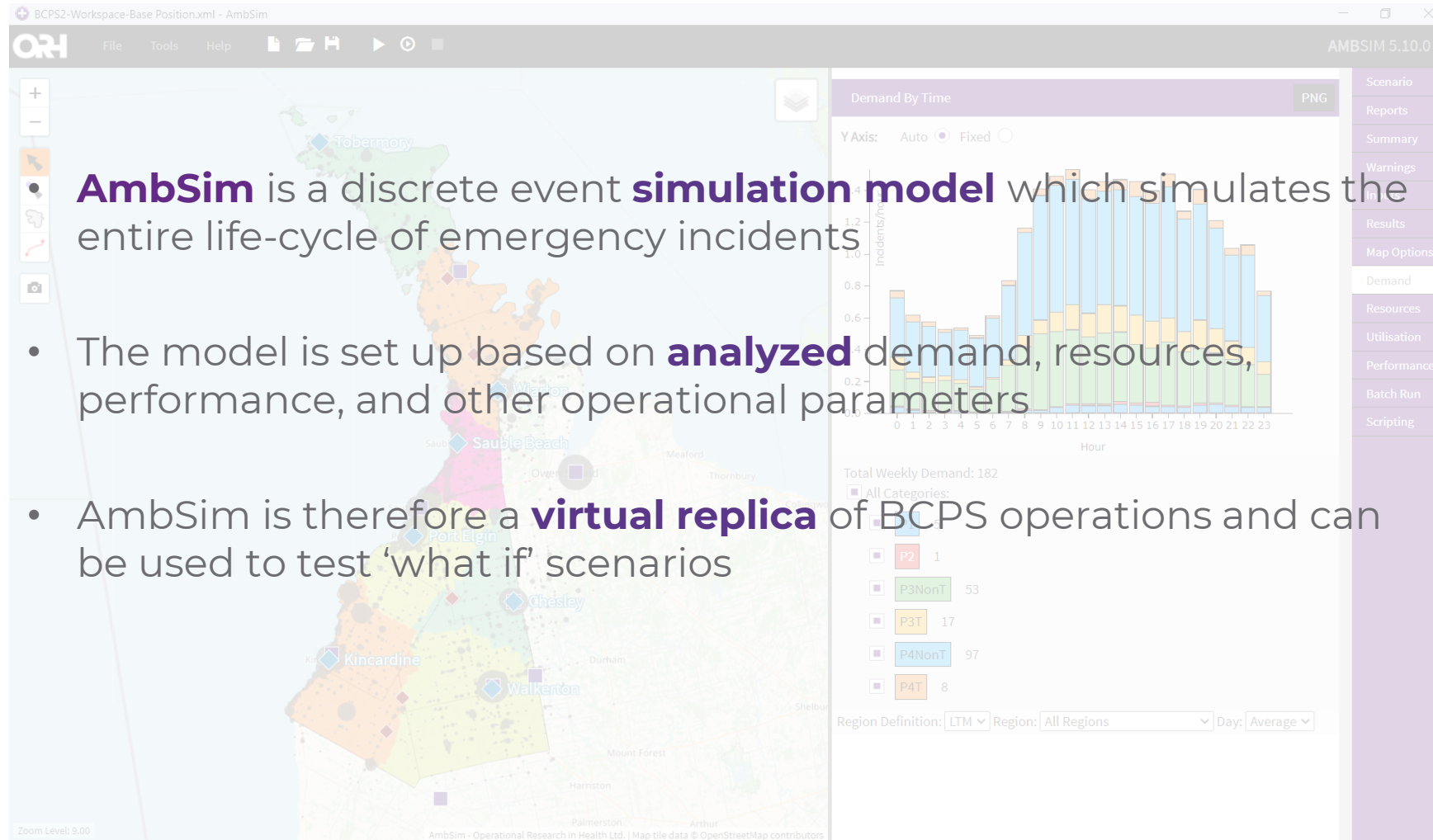
Second Walkerton day shift in 2022/2024 Deployment Plan intended to roam to Holyrood whenever possible

Port Elgin moved to new location in 2024



A photograph of a paramedic sitting in the driver's seat of an ambulance. The paramedic is wearing a dark uniform with a patch on the shoulder that says "AMBULANCE". She is holding a radio to her mouth and appears to be in the middle of a conversation. The interior of the ambulance is visible, including the dashboard and a seat with "EMERGENCY" written on it. The image has a purple color overlay.

# The Model Base Position



**AmbSim** is a discrete event **simulation model** which simulates the entire life-cycle of emergency incidents

- The model is set up based on **analyzed** demand, resources, performance, and other operational parameters
- AmbSim is therefore a **virtual replica** of BCPS operations and can be used to test 'what if' scenarios

Ready

# 2024 Base Position

2024 Base Position created to provide a **basis for comparison** with future scenarios:

- The vehicle shift pattern was updated to reflect planned 2024 deployments
- The Port Elgin station was moved to the new headquarters site at MacKenzie Rd
- Sauble Beach was assumed to operate 10:00 to 22:00 all year round (instead of 12:00 to 00:00 peak and 10:00 to 22:00 off-peak)

**Base Position with 2024 Deployment Plan**

LTM	P4 Performance				
	8-minute	10-minute	15-minute	Average (mm:ss)	90th %ile (mm:ss)
Arran-Elderslie	48.8%	53.3%	75.2%	10:07	18:31
Brockton	80.3%	87.2%	96.8%	05:45	11:10
Huron-Kinloss	12.1%	26.6%	56.1%	14:27	21:20
Kincardine	59.1%	65.3%	82.8%	09:10	17:49
Northern Bruce Peninsula	25.0%	29.0%	34.5%	17:41	27:27
Saugeen Shores	59.7%	79.3%	95.2%	07:27	11:53
South Bruce	10.3%	39.3%	85.8%	10:49	16:00
South Bruce Peninsula	41.1%	49.7%	71.8%	10:49	20:42
<b>Bruce County</b>	<b>48.4%</b>	<b>59.6%</b>	<b>78.6%</b>	<b>10:01</b>	<b>19:48</b>

**Base Position including Port Elgin (New) and Sauble Beach 10-22 Year Round**

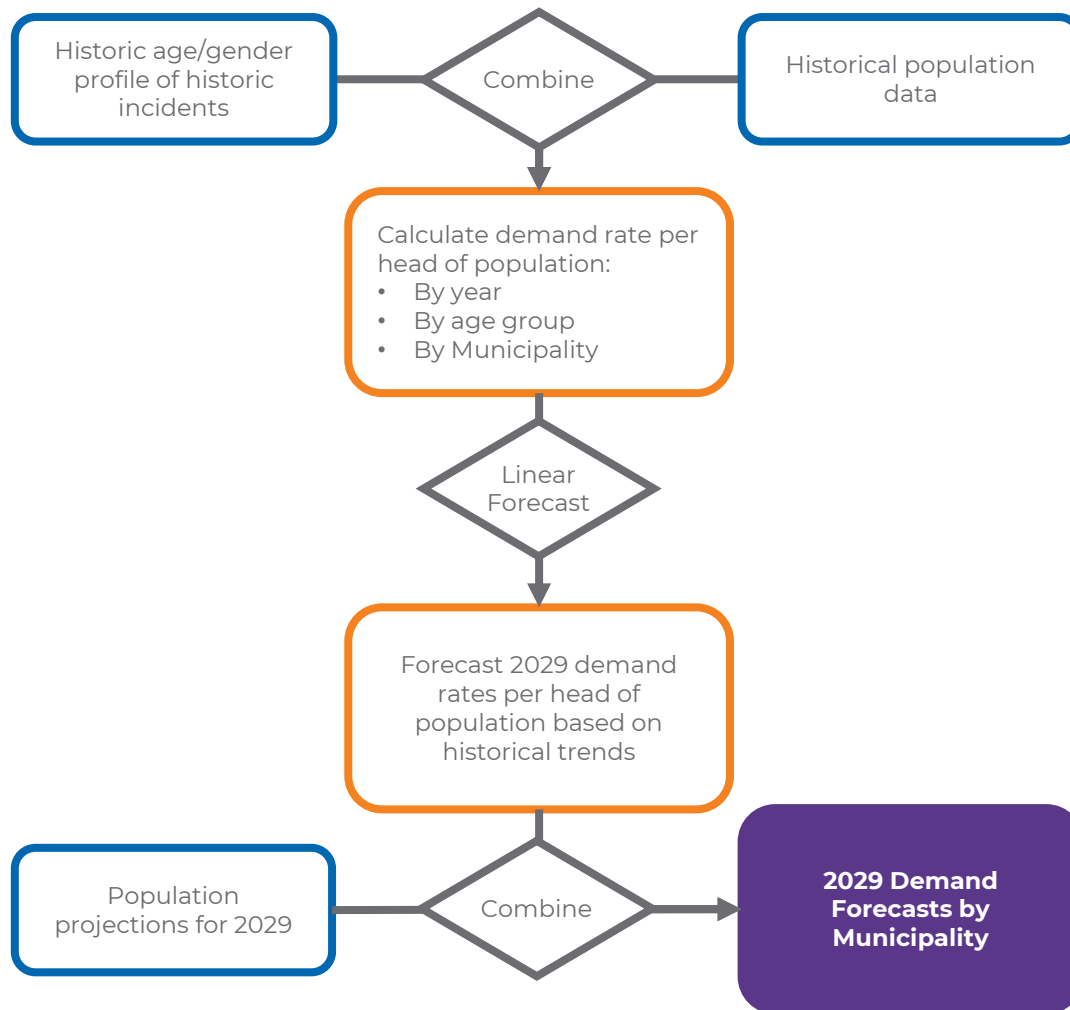
LTM	P4 Performance				
	8-minute	10-minute	15-minute	Average (mm:ss)	90th %ile (mm:ss)
Arran-Elderslie	49.2%	53.7%	75.4%	10:03	18:32
Brockton	80.1%	87.0%	96.7%	05:47	11:13
Huron-Kinloss	11.9%	26.2%	56.1%	14:32	21:26
Kincardine	58.8%	64.8%	81.7%	09:20	18:15
Northern Bruce Peninsula	25.5%	29.3%	34.5%	17:28	27:08
Saugeen Shores	75.5%	86.4%	95.0%	07:37	11:30
South Bruce	10.4%	39.0%	85.4%	10:53	16:05
South Bruce Peninsula	42.4%	56.3%	73.6%	10:24	20:24
<b>Bruce County</b>	<b>52.6%</b>	<b>62.5%</b>	<b>78.6%</b>	<b>09:59</b>	<b>19:48</b>

ORH Final Report, Figure 3-1

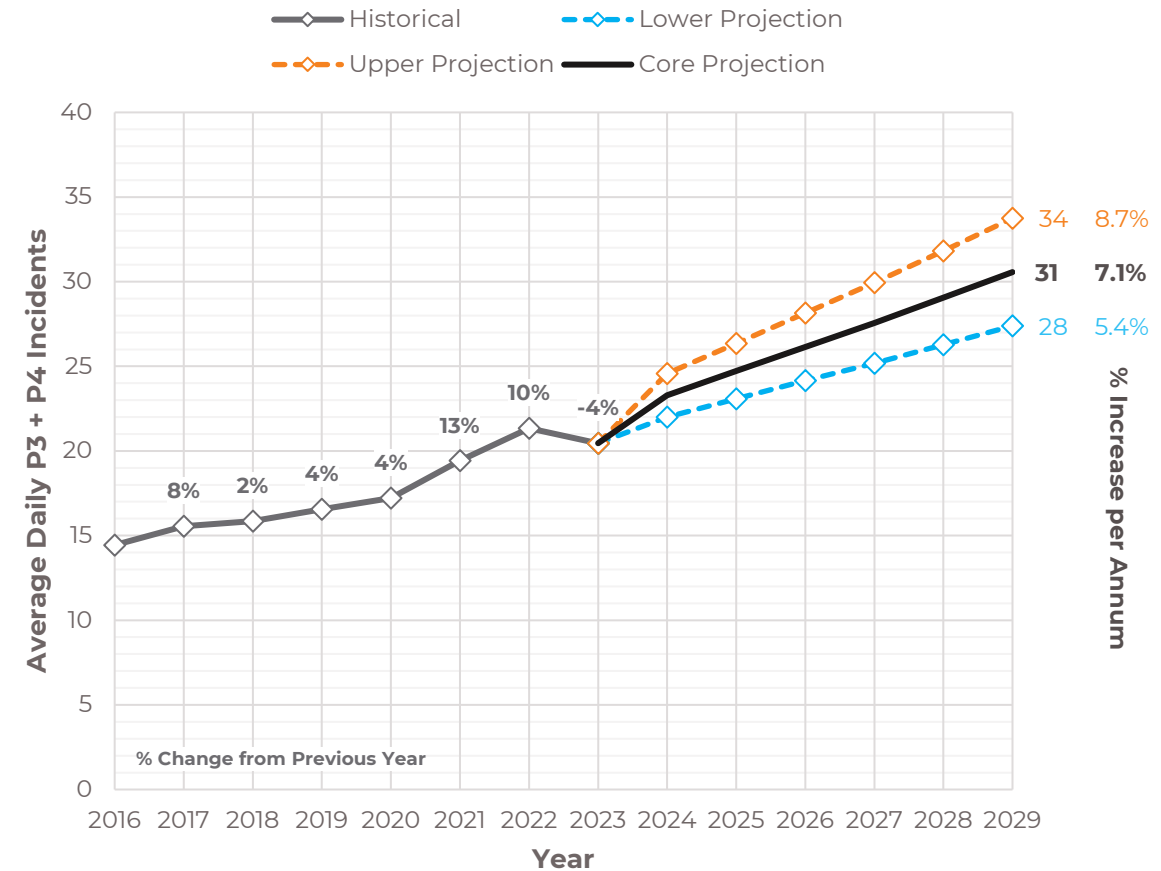


The Do Nothing Scenario

# Demand Projections

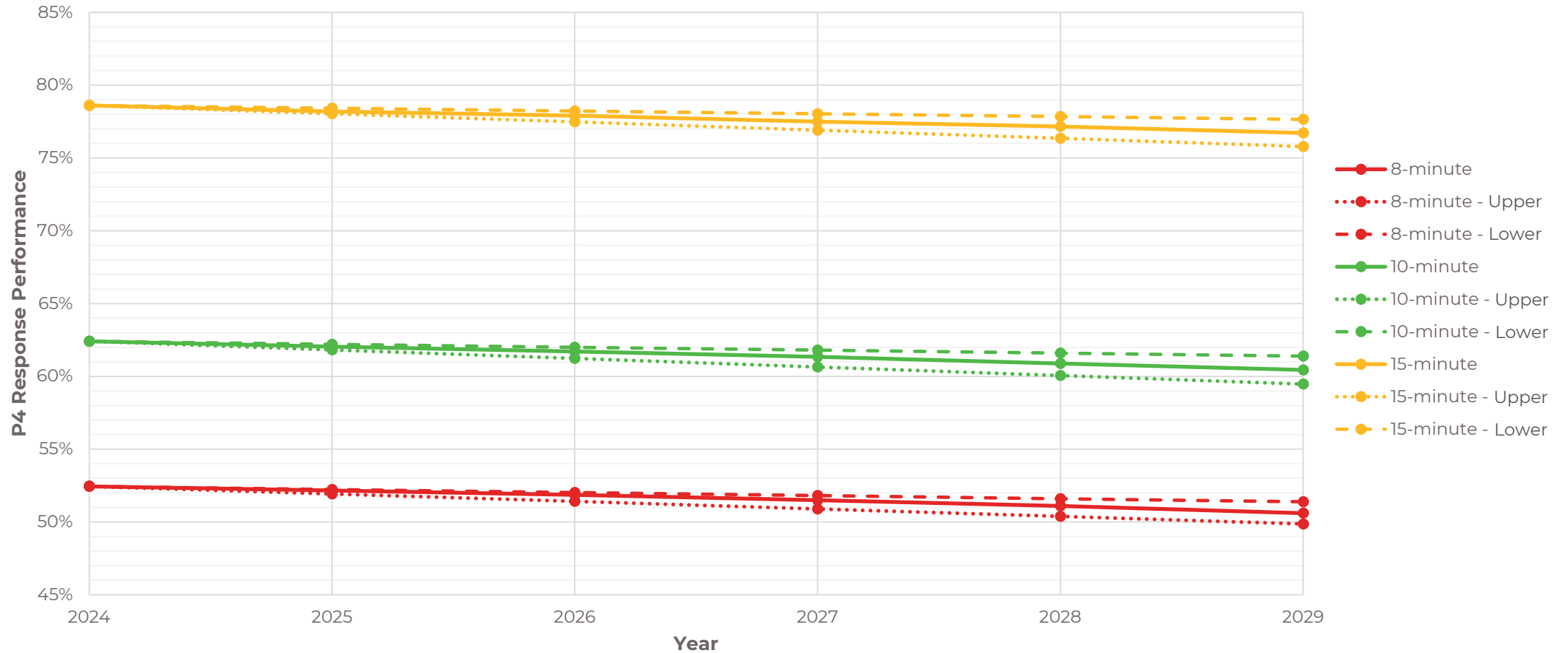


ORH Final Report, Appendix B1



ORH Final Report, Figure 4-3

# Do Nothing Performance Results



ORH Final Report, Figure 4-4

A photograph of a paramedic sitting in the driver's seat of an ambulance. The paramedic is wearing a dark uniform with a patch on the shoulder that says "AMBULANCE". She is holding a radio to her mouth and appears to be in the middle of a conversation. The interior of the ambulance is visible, including the dashboard and a seat with "EMERGENCY" written on it. The entire image has a purple color overlay.

# Recommended Trajectory

## Core scenarios investigated in AmbSim:

What deployment to be **prioritized next in 2026**

Result: more beneficial to initially add night shift at Sauble Beach than day shift to Kincardine

Impact of **Chippewas of Nawash Unceded First Nations (Nawash FN)** ambulance deployments

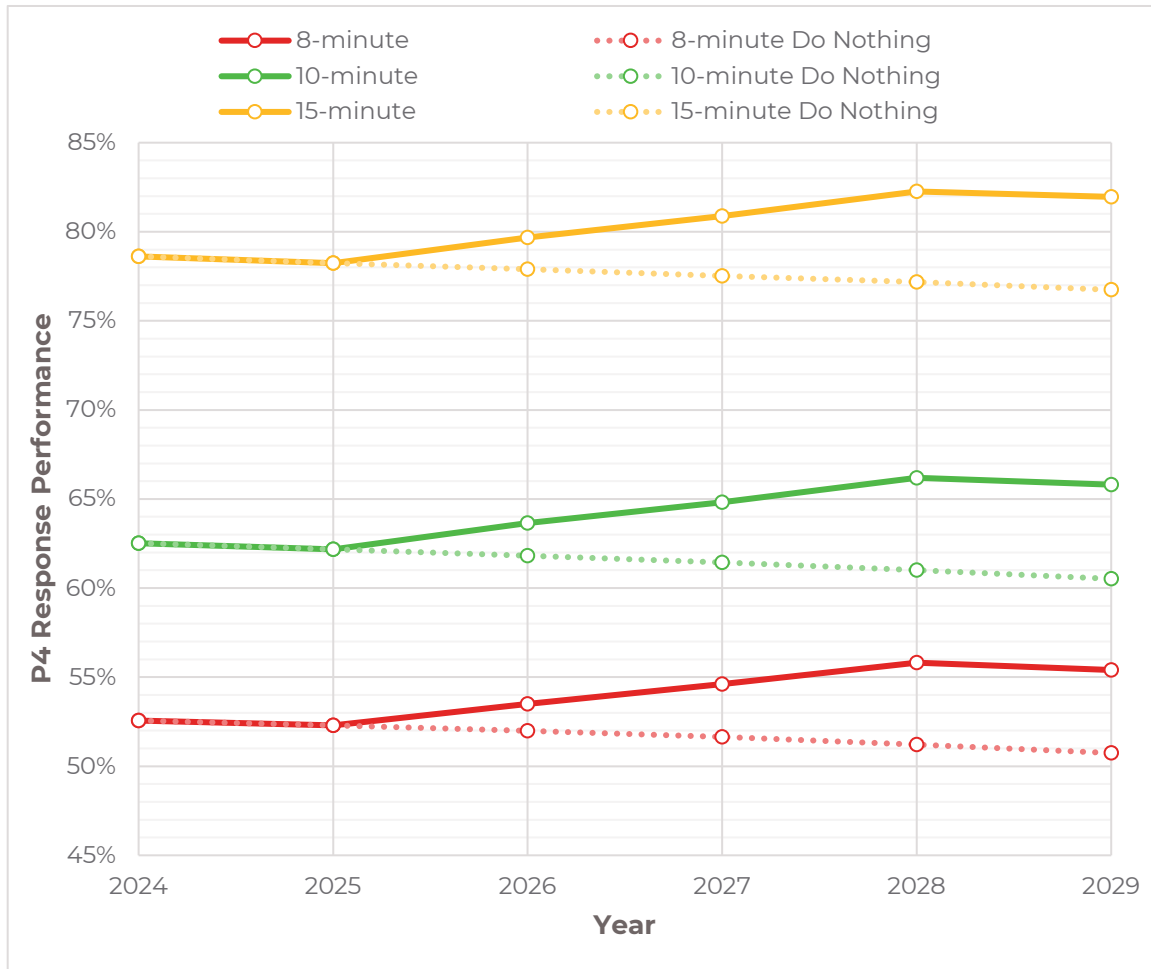
Result: even if this vehicle only responds to calls in its respective area, significant improvements expected for South Bruce Peninsula



# Recommendations

- 2024:** New Port Elgin station & Sauble Beach 10-22 year-round
- 2025:** *No change*
- 2026:** **Sauble Beach increased to 24/7 coverage**
- 2027:** Assumed Nawash FN (24/7) deployed
- 2028:** **Additional Port Elgin night shift**
- 2029:** *No change*

# Recommended Trajectory Performance Results



ORH Final Report, Figure I / 6-1

## 2029 P4 Average Response Time (mm:ss)

LTM	Recommended Trajectory	Difference from Base Position*
Arran-Elderslie	09:35	-00:27
Brockton	05:50	00:03
Huron-Kinloss	14:45	00:13
Kincardine	09:24	00:04
Northern Bruce Peninsula	17:13	-00:15
Saugeen Shores	07:20	-00:16
South Bruce	10:59	00:06
South Bruce Peninsula	08:02	-02:22
<b>Bruce County</b>	09:23	-00:36

\*including Port Elgin (New) and Sauble Beach 10-22 Year Round

South Bruce Peninsula	09:23	-01:01
<b>Bruce County</b>	<b>09:39</b>	-00:20

If FN vehicle not deployed

ORH Final Report, Appendix D2 & D3

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