

8 Emergency Medical Services (EMS)



What is the Service?

Emergency Medical Services (EMS), often referred to as ambulance or paramedic services, provides emergency care to stabilize a patient's condition, initiates rapid transport to hospitals, and facilitates both emergency and non-emergency transfers between medical facilities.

Specific objectives include:

- All citizens should have equal access to ambulance services
- Ambulance services are an integrated part of the overall emergency health care system
- The closest available and appropriate ambulance responds to a patient regardless of political, administrative or other artificial boundaries
- Ambulance service operators are medically, operationally and financially accountable to provide service of the highest possible caliber
- Ambulance services must adapt to the changing health care, demographic, socio-economic and medical needs in their area

Influencing Factors:

Demographics: Age and health status of the population has an impact on the number and severity of calls. An older population can increase the demand for services, as can seasonal visitors and the inflow of workers from other communities during the day.

Dispatch: The system, processes and governance of the dispatch function effect the efficiency of the land ambulance operation.

Governance: Budgeted Resources, Local Response Times Standards and Deployment Plans are mandated by Council.

Hospital Delay: Emergency Medical Services face varying lengths of delays in the off-load of patients at local hospitals, which can impact the resources required and availability to respond to calls.

Non Residents: Visitors, workers, tourists and out of town hospital patients can increase the call volume but are not reflected in the measures (population is that of the municipality only).

Specialized Services: Tactical teams, multi-patient transport units, bike and marine teams are increasingly being provided by the larger municipalities. Also, costs can be impacted by higher wage rates of Advanced Care (ACP) vs. Primary Care (PCP) Paramedics.

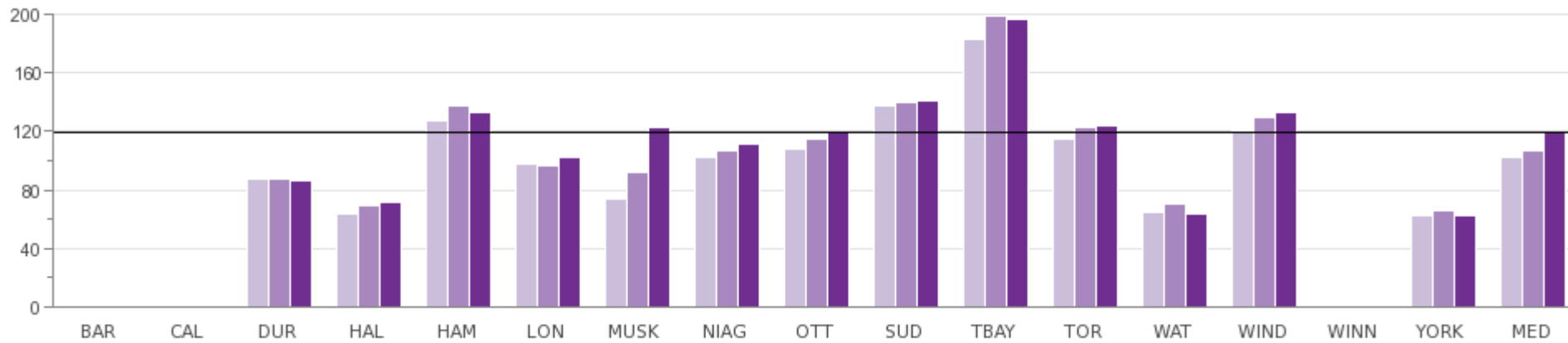
Urban vs. Rural: Mix of urban vs. rural geography can influence response time and cost factors. Congestion can make navigating roads more difficult, resulting in significant delays. Urban centres with taller buildings can impact response times, i.e. added vertical response to high level apartment/condo units. Large rural geographic areas can make it challenging to provide cost-effective, timely emergency coverage.

Vehicle Mix: Emergency Medical Services use a varying mixture of response vehicles which have differing levels of staffing.

Emergency Medical Services (EMS)

How many calls were responded to by EMS providers?

Fig 8.1 Total EMS Responses per 1,000 Population



2010	N/A	N/A	87	63	127	98	74	102	108	138	183	115	65	121	N/A	62	102
2011	N/A	N/A	87	69	138	97	92	107	115	140	199	123	70	130	N/A	66	107
2012	N/A	N/A	86	71	133	102	123	111	119	141	197	124	64	133	N/A	62	119

Source: EMDS229 (Service Level)

How long does it take from the time a call is received and dispatched to EMS unit?

Fig 8.2 EMS T0-2 Code 4, 90th Percentile Response Time

Municipality	EMS T0-2, Code 4 90th Percentile Response Time (min:sec)		
	2010 (EMDS419C)	2011 (EMDS419D)	2012 (EMDS419E)
Durham	0:02:34	0:02:49	0:02:29
Halton	0:02:50	0:02:52	0:02:53
Hamilton	0:02:58	0:03:07	0:03:10
London	0:02:39	0:02:50	0:02:54
Muskoka	N/A	0:01:44	N/A
Niagara	0:01:51	0:01:51	0:01:55
Ottawa	0:02:46	0:02:41	0:02:35
Greater Sudbury	0:03:28	0:02:51	0:02:51
Thunder Bay	0:02:16	0:02:18	0:02:18
Toronto	0:03:15	0:03:05	0:02:59
Waterloo	0:02:53	0:02:52	0:03:50
Windsor	0:03:27	0:03:32	0:03:27
York	0:02:43	0:02:42	0:02:41
Median	0:02:48	0:02:50	0:02:52

Note: The Ministry of Health and Long-Term Care directly operates all land ambulance dispatch service in Province of Ontario with the exception of Toronto and Niagara.

Dispatch time is the time from a phone call being received to the EMS unit being notified.

Code 4 refers to the highest priority calls.

90th Percentile means that 90% of all calls of the service have a dispatch time within the period reflected in the graph.

Source: EMDS419C, EMDS419D, EMDS419E (Customer Service)

How long does it take from the time a call is received by EMS unit to when the unit arrives on scene?

Fig 8.3 EMS T2-4 Code 4, 90 Percentile Response Time

		EMS T2-4, Code 4 90th Percentile Response Time (min:sec)		
Municipality	1996 Standard (EMDS415A)	2010 (EMDS408A)	2011 (EMDS408B)	2012 (EMDS408C)
Durham	0:10:04	0:10:42	0:10:36	0:10:27
Halton	0:10:32	0:10:16	0:10:04	0:10:13
Hamilton	0:10:03	0:10:15	0:10:48	0:10:37
London	0:09:30	0:09:10	0:09:23	0:09:31
Muskoka	0:24:00	0:09:00	0:09:12	0:20:00
Niagara	0:10:48	0:09:45	0:09:43	0:09:53
Ottawa	0:12:33	0:10:59	0:10:41	0:10:08
Greater Sudbury	0:12:12	0:10:26	0:10:44	0:10:37
Thunder Bay	0:10:14	0:11:33	0:11:33	0:11:47
Toronto	0:09:59	0:10:38	0:10:43	0:10:34
Waterloo	0:10:30	0:12:12	0:12:17	0:11:54
Windsor	0:10:23	0:10:27	0:10:23	0:10:27
York	0:11:33	0:11:45	0:12:41	0:11:45
Median	0:10:30	0:10:27	0:10:41	0:10:34

Note: As set out by the Province, the 1996 information is considered to be the base year standard that service is expected to match.

Response time is the time from the EMS unit being notified by dispatch and the EMS unit arriving on scene.

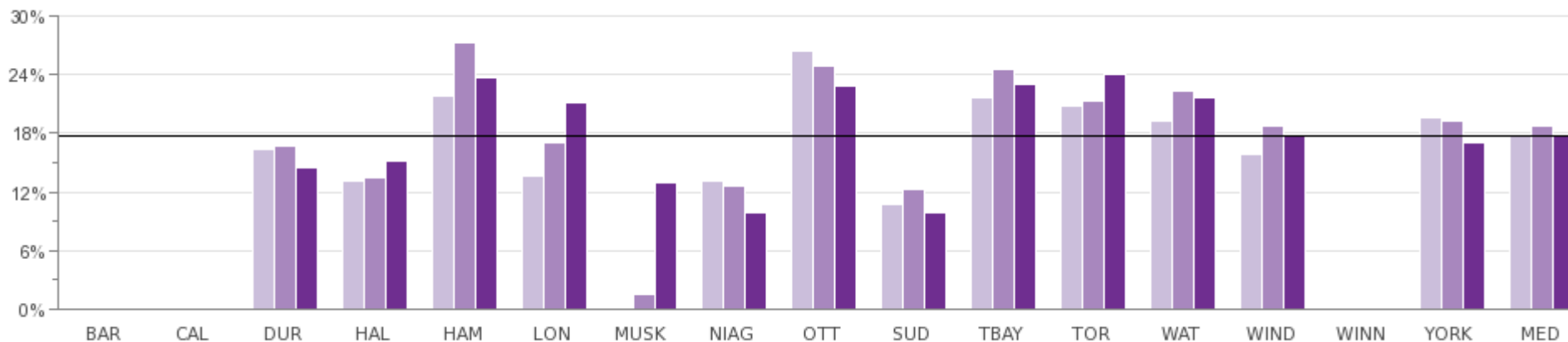
Code 4 refers to the highest priority calls.

90th Percentile means that 90% of all calls of the service have a response time within the period reflected in the graph.

Source: EMDS415A, EMDS408A, EMDS408B, EMDS408C (Customer Service)

What percent of time do ambulances spend at the hospital?

Fig 8.4 Percent of Ambulance Time Lost to Hospital Turnaround



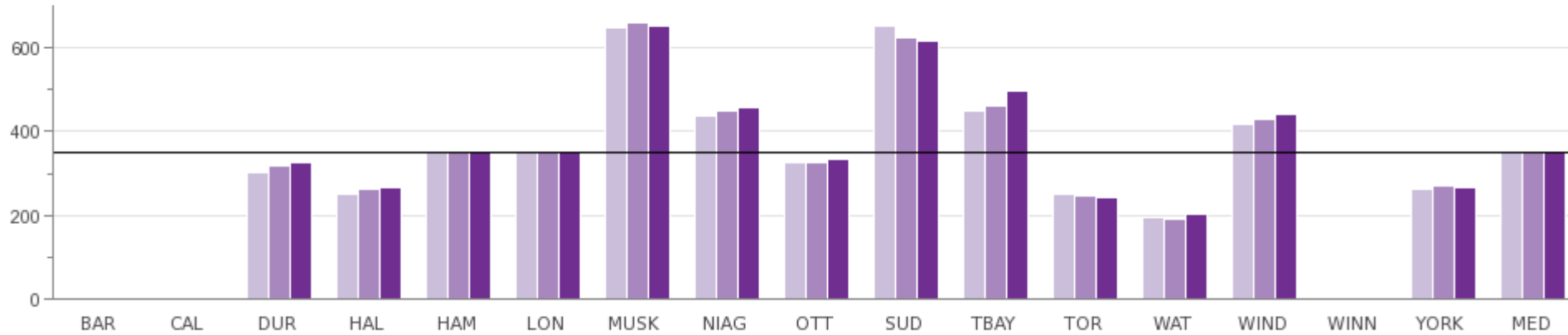
2010	N/A	N/A	16.3%	13.1%	21.8%	13.6%	N/A	13.1%	26.4%	10.8%	21.6%	20.8%	19.2%	15.8%	N/A	19.6%	17.8%
2011	N/A	N/A	16.7%	13.4%	27.3%	17.0%	1.4%	12.6%	25.0%	12.2%	24.5%	21.4%	22.3%	18.7%	N/A	19.3%	18.7%
2012	N/A	N/A	14.5%	15.2%	23.8%	21.1%	13.0%	9.9%	22.8%	9.9%	23.1%	24.1%	21.6%	17.8%	N/A	17.0%	17.8%

Source: EMDS150 (Community Impact)

Comment: Time spent in hospital includes the time it takes to transfer a patient, delays in transfer care due to lack of hospital resources (off-load delay), paperwork and other activities. The more time paramedics spend in the hospital process equates to less time they are available to respond to calls.

How many hours of ambulance service are provided in the community for every 1,000 people?

Fig 8.5 EMS Actual Weighted Vehicle In-Service Hours per 1,000 Population

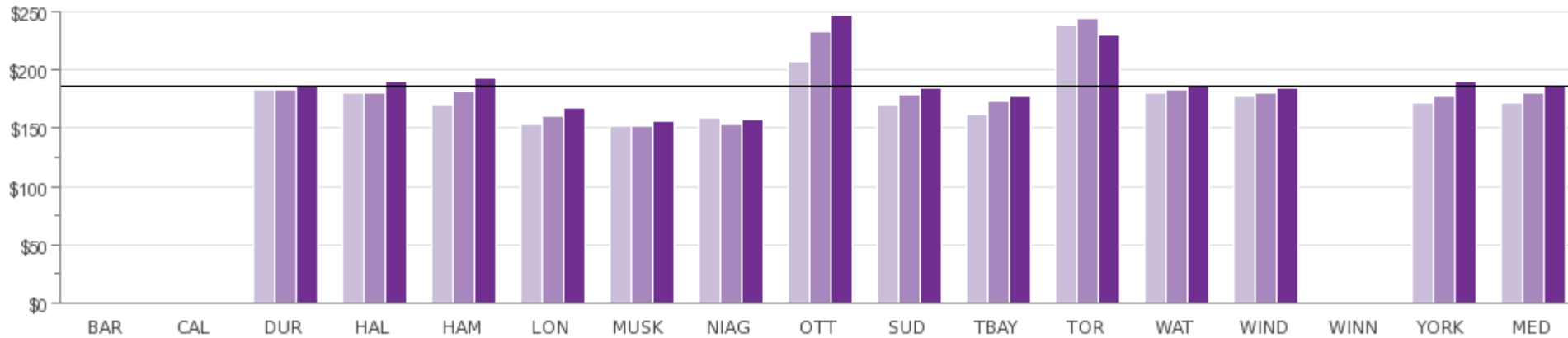


2010	N/A	N/A	303	249	354	349	651	438	326	652	450	249	193	417	N/A	263	349
2011	N/A	N/A	316	264	350	354	660	450	325	627	461	246	192	428	N/A	269	350
2012	N/A	N/A	324	267	349	349	654	458	334	618	499	241	201	441	N/A	266	349

Source: EMDS225A (Service Level)

What is the total cost to provide one hour of ambulance service?

Fig 8.6 OMBI EMS Total Cost per Actual Weighted Vehicle In-Service Hour



2010	N/A	N/A	\$183	\$180	\$170	\$153	\$152	\$159	\$208	\$171	\$162	\$239	\$181	\$178	N/A	\$172	\$172
2011	N/A	N/A	\$183	\$181	\$182	\$161	\$152	\$153	\$234	\$179	\$174	\$245	\$183	\$181	N/A	\$177	\$181
2012	N/A	N/A	\$186	\$190	\$194	\$168	\$156	\$158	\$247	\$185	\$177	\$231	\$187	\$185	N/A	\$190	\$186

Source: EMDS305T (Efficiency)

Note: Hours refers to only the hours that vehicles are available for service. Costs include paramedic, administrative, medical supply, building, operating, supervision and overhead.