

# EMERGENCY MEDICAL SERVICES

## VALUE STATEMENT

*I expect if I have a medical emergency, the ambulance will arrive in a timely manner; and I will be assessed, cared for and/or delivered to an appropriate destination, promptly and safely as required.*

# EMERGENCY MEDICAL SERVICES (EMS)

## What is this Service?

Emergency Medical Services (EMS), increasingly referred to as 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.

## Objectives May include:

- All people should have equal access to ambulance services.
- Paramedic services are an integral part of the overall health care system.
- The most appropriate paramedic assigned resource will respond 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:

- **Community Services:** Community paramedicine, tactical teams, multi-patient transport units, bike and marine teams are examples of services being provided by municipalities to meet the needs of their community. System design and service delivery are impacted by the ratio of Advanced Care Paramedics vs. Primary Care Paramedics.
- **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 impact the efficiency and effectiveness of the land ambulance operation. Local control or influence of dispatch operations has a direct influence on Emergency Medical Services/Paramedic Services operations.
- **Governance:** All Emergency Medical Services/Paramedic Services operations are governed and regulated provincially pursuant to the Ambulance Act including minimum operational standards. Budgeted Resources, Local Response Times Standards and Deployment Plans are mandated by Council.
- **Hospital Delay:** Emergency Medical Services/Paramedic 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 municipality only).

- **Urban vs. Rural:** Mix of urban vs. rural geography can influence response time and cost factors. Traffic congestion can make navigating roads more difficult, resulting in longer response times. Large rural geographic areas can make it challenging to provide cost-effective, timely emergency coverage.
- **Vehicle Mix:** Emergency Medical Services/Paramedic Services use a varying mixture of response vehicles which have differing levels of staffing.

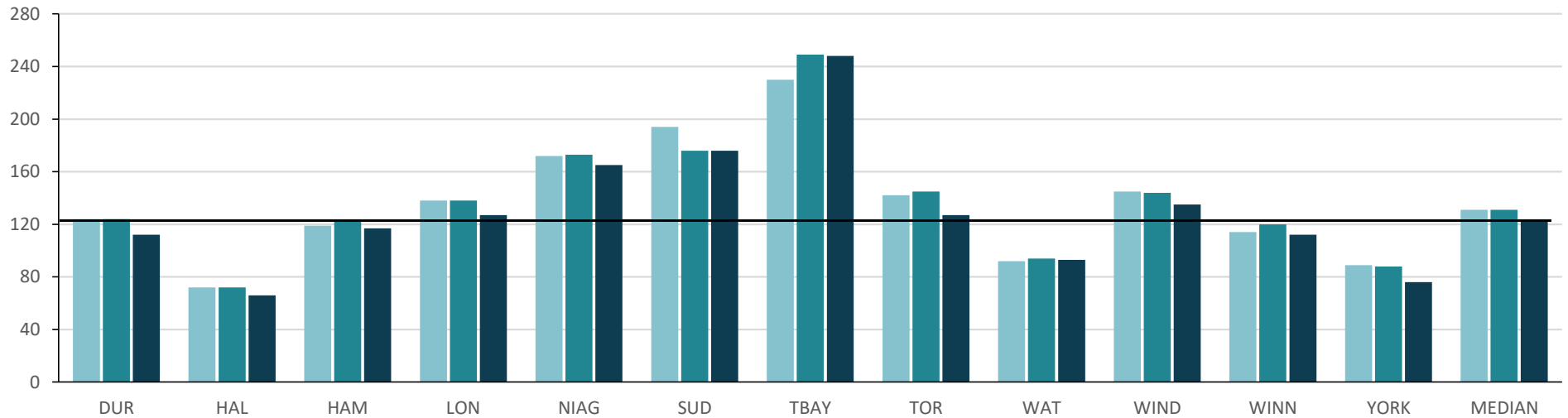
### Extenuating Circumstances:

- **COVID-19 Pandemic:** The pandemic caused impacted various aspects in the service delivery and paramedic services. While overall call volume may have decreased, service delivery costs increase substantially. In particular, equipment, PPE, medical supplies were in high demand while supply was extremely low. Both paramedic service and health system capacity increased early, identified in volumes and offloads, patient acuity varied across sectors. Caution should be taken when reviewing the data and understanding that as the system moves out of the pandemic, the rebound of volumes, patient acuity and decreased hospital capacities will impact the paramedic service delivery in a negative manner.

## Emergency Medical Services

**Figure 7.1 Unique Responses per 1,000 Population**

This measure refers to the number of unique events responded to by Emergency Medical Services (EMS). This does not reflect the total number of EMS vehicles responding to events.



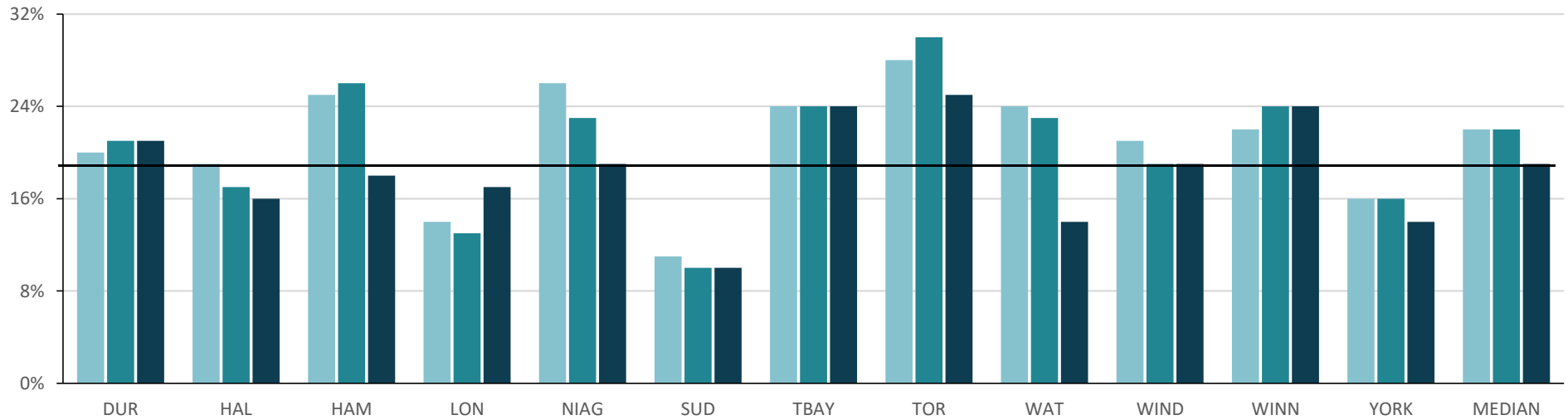
2018	124	72	119	138	172	194	230	142	92	145	114	89	131
2019	124	72	122	138	173	176	249	145	94	144	120	88	131
2020	112	66	117	127	165	176	248	127	93	135	112	76	122

Source: EMDS229 (Service Level)

## Emergency Medical Services

**Figure 7.2 Percent of Ambulance Time Lost to Hospital Turnaround**

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.



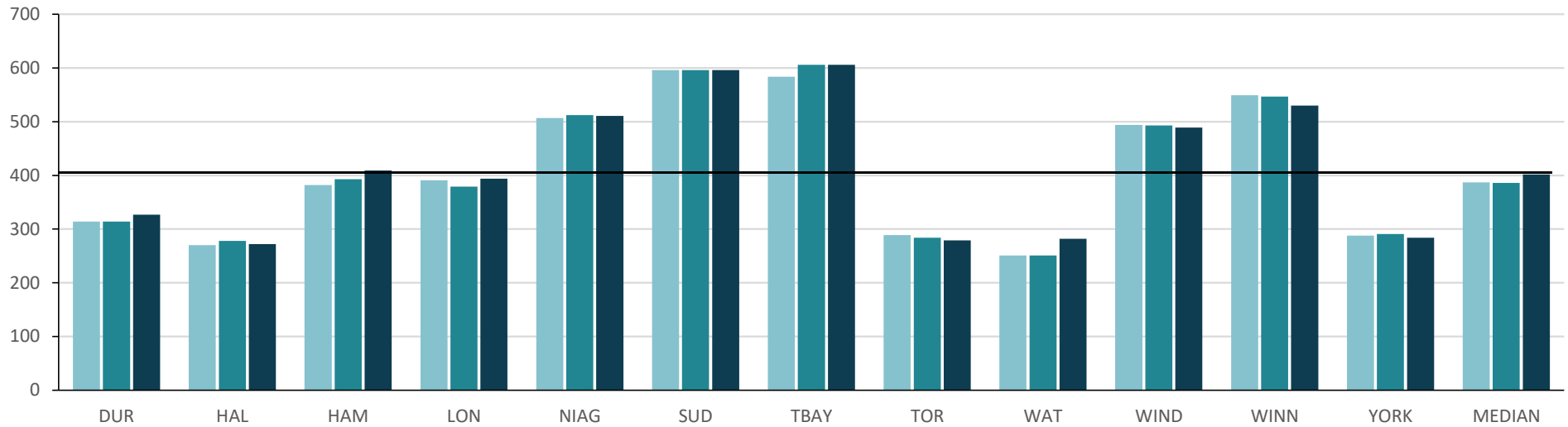
2018	20%	19%	25%	14%	26%	11%	24%	28%	24%	21%	22%	16%	22%
2019	21%	17%	26%	13%	23%	10%	24%	30%	23%	19%	24%	16%	22%
2020	21%	16%	18%	17%	19%	10%	24%	25%	14%	19%	24%	14%	19%

Source: EMDS150 (Community Impact)

## Emergency Medical Services

Figure 7.3 EMS Weighted Vehicle In-Service Hours per 1,000 Population

'In-Service Hours' refers to only the hours that vehicles are available for service.



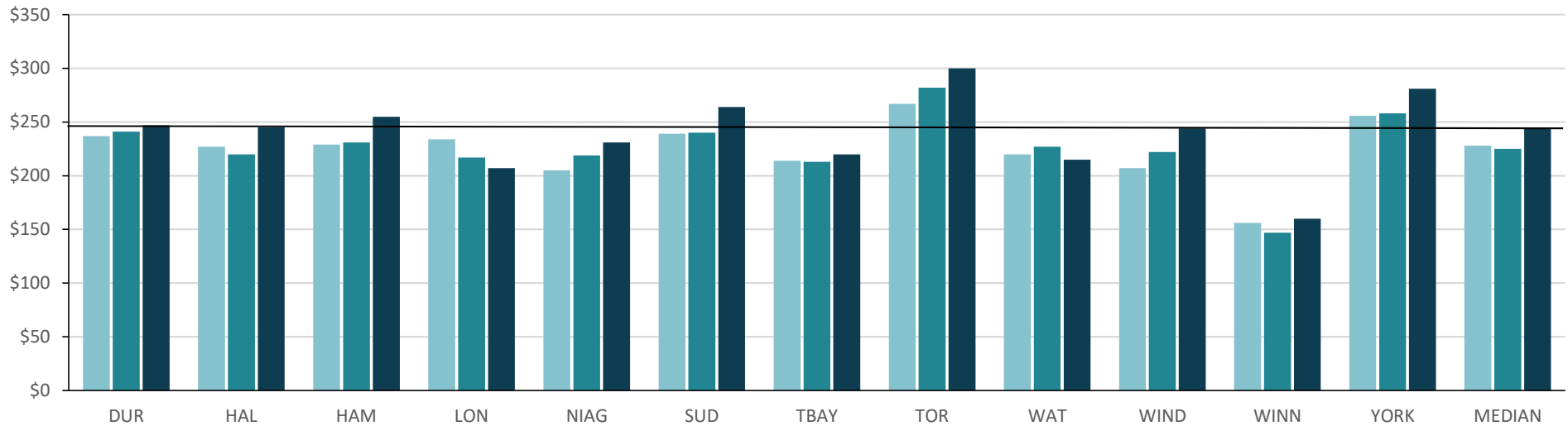
2018	314	270	382	391	507	596	584	289	251	494	549	288	387
2019	314	278	393	379	512	596	606	284	251	493	547	291	386
2020	327	272	409	394	511	596	606	279	282	489	530	284	402

Source: EMDS226 (Service Level)

## Emergency Medical Services

**Figure 7.4 EMS Total Cost per Weighted Vehicle In-Service Hour**

This measure represents total costs to provide Emergency Medical Services on an 'In Service Hour' basis. 'In Service Hour' refers to the hours that vehicles are available.



2018	\$237	\$227	\$229	\$234	\$205	\$239	\$214	\$267	\$220	\$207	\$156	\$256	\$228
2019	\$241	\$220	\$231	\$217	\$219	\$240	\$213	\$282	\$227	\$222	\$147	\$258	\$225
2020	\$247	\$245	\$255	\$207	\$231	\$264	\$220	\$300	\$215	\$244	\$160	\$281	\$245

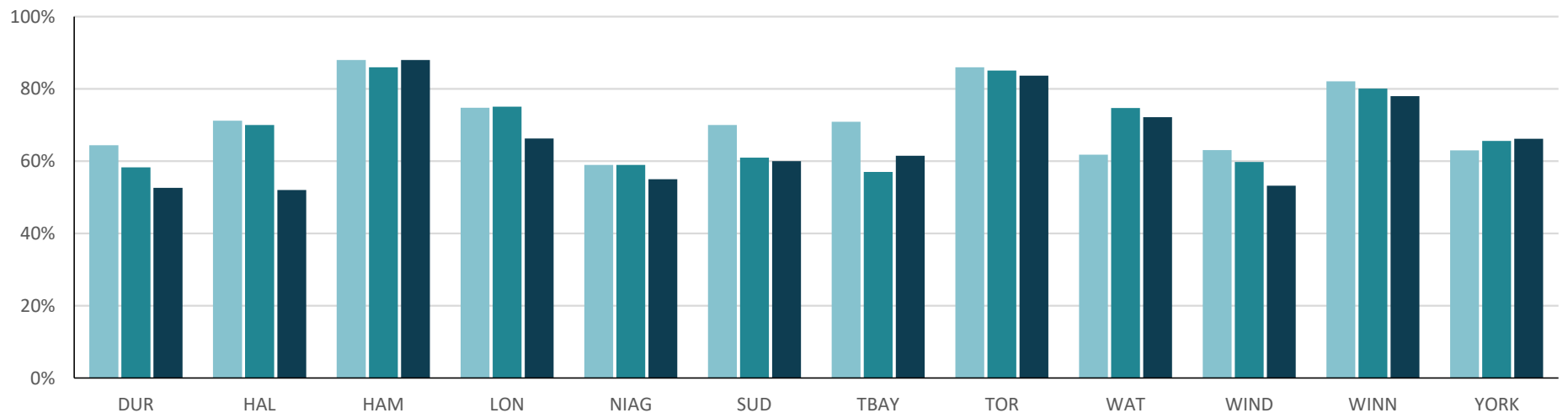
Source: EMDS306T (Efficiency)

Winnipeg: The decrease in 2019 was based on the movement of costs from Medical Services to Fire Rescue and Response.

# Emergency Medical Services

**Figure 7.5 Response Time Performance Standard - Sudden Cardiac Arrest Within 6 Minutes**

The measure reflects the actual percentage of time any person equipped with a defibrillator arrives on scene to provide defibrillation to a sudden cardiac arrest patient within six minutes of the time notice is received from dispatch. Annually, each service is able to determine and set the percentage of compliance for this measure, which is identified in the table as a target. Any person with a defibrillator stops the clock on this measure so the paramedic (service) is required to capture the time of arrival for any defibrillator by a non-paramedic party. These times are reflected as procedure code 385 with a soft time (best estimate) provided by the attending paramedic. The response time is calculated based on the crew notified (T2) time of the first vehicle being notified of the call and the arrived scene (T4) time of the first vehicle to reach the scene.



Target	60.0%	55.5%	75.0%	75.0%	55.0%	70.0%	60.0%	75.0%	50.0%	55.0%	90.0%	60.0%
2018	64.4%	71.2%	88.0%	74.8%	59.0%	70.0%	70.9%	86.0%	61.8%	63.1%	82.1%	63.0%
2019	58.3%	70.0%	86.0%	75.1%	59.0%	61.0%	57.0%	85.1%	74.7%	59.8%	80.1%	65.6%
2020	52.6%	52.0%	88.0%	66.3%	55.0%	60.0%	61.5%	83.7%	72.2%	53.2%	78.0%	66.2%

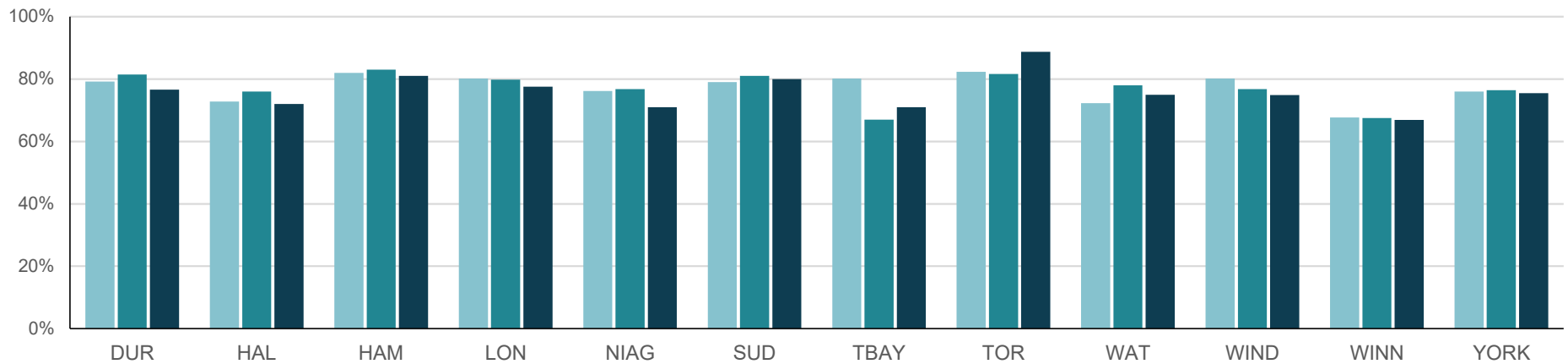
Source: EMDS430 (Customer Service)



## Emergency Medical Services

**Figure 7.6 Response Time Performance Standard - Canadian Triage & Acuity Scale 1**

This measure reflects the actual percentage of time an ambulance crew has arrived on scene to provide ambulance services to sudden cardiac arrest patients or other patients categorized as CTAS 1, within eight minutes of the time notice is received respecting such services. The Canadian Triage & Acuity Scale is a standardized tool that enables emergency departments and Paramedic services to prioritize care requirements according to the type and severity of the presenting signs and symptoms. Patients are assigned a CTAS level between 1 – more severe, life threatening; and 5 – least severe. Annually, each service may determine and set the percentage of compliance for this measure, which is identified in the table as a target. The response time is calculated based on the crew notified (T2) time of the first vehicle being notified of the call and the arrived scene (T4) time of the first vehicle to reach the scene.



Target	75.0%	75.0%	75.0%	75.0%	80.0%	80.0%	70.0%	75.0%	70.0%	75.0%	90.0%	75.0%
2018	79.2%	72.8%	82.0%	80.2%	76.2%	79.0%	80.2%	82.3%	72.3%	80.2%	67.7%	76.0%
2019	81.5%	76.0%	83.0%	79.8%	76.8%	81.0%	67.0%	81.6%	78.0%	76.8%	67.5%	76.4%
2020	76.6%	72.0%	81.0%	77.6%	71.0%	80.0%	71.0%	88.7%	75.0%	74.9%	66.9%	75.5%

Source: EMDS431 (Customer Service)

## Emergency Medical Services (EMS)

Figure 7.7 90<sup>th</sup> Percentile Call Processing Time (Dispatch) – EMS TO-2 Code 4 (AMPDS 1 and 2/DE, optional in C)

MUNICIPALITY	Actual 90th Percentile Call Processing Time (Dispatch) EMS TO-2, Code (AMPDS 1 and 2/DE, optional in C) (min:sec)		
	2018	2019	2020
DUR	3:39	3:54	4:03
HAL	3:27	3:18	4:15
HAM	3:17	3:15	3:14
LON	3:23	3:31	3:34
NIAG	2:19	2:25	2:39
SUD	2:42	2:38	2:46
TBAY	3:13	3:13	3:13
TOR	2:46	2:46	2:53
WAT	3:00	3:18	3:20
WIND	3:10	3:05	3:08
WINN	2:58	3:10	3:18
YORK	3:53	3:22	3:15
MEDIAN	3:12	3:14	3:15

Source: EMDS480 (Customer Service)

The Ministry of Health directly operates all land ambulance dispatch service in Ontario with the exception of Niagara and Toronto.

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.

90<sup>th</sup> percentile means that 90% of all calls of the service have a dispatch time within the period reflected in the table.