



# Region of Waterloo \* Paramedic Services **PERFORMANCE MEASUREMENT**

## Performance Measurement Report (mid-year) For the Period of January – June 2016 Produced on August 31<sup>st</sup>, 2016

As a result of work related to the Paramedic Services master plan, a number of best practice recommendations were implemented resulting in significant changes to the methodology of this report. Due to these changes, such as switching from counting distinct calls within Waterloo Region to counting vehicle responses by Paramedic Services both inside and outside of Waterloo Region, results in this report are not comparable to previously published reports and therefore trends cannot be inferred from the data. Further, throughout this report, the term vehicle response is used. A vehicle response is generated when an ambulance or emergency response unit is dispatched to a call; there can be more than one vehicle response per call (multiple ambulances/emergency response units assigned to the same call; for example multi-casualty incidents).



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## Summary

### A. Volume and Service Level Indicators

Indicator	Mid-year (2015)	Mid-year (2016)	Per cent change
Total Number of Vehicle Responses	22,472	23,855	+6.2%
Rate of vehicle responses per 1,000 population*	78.8	81.8	+3.8%
Unit Utilization	41.7%	40.5%	-3.0%

### C. Efficiency Indicators

Indicator	Mid-year (2015)	Mid-year (2016)	Per cent change
Offload Delay*	93.1 days	45.7 days	-50.9%
Code Yellow Time	15.4%	12.1%	-21.4%
Code Red Time	1.6%	0.7%	-55.2%

### B. Compliance and Quality Assurance Indicators

Indicator	Mid-year (2015)	Mid-year (2016)	Per cent change
Paramedic Services Response Time to Emergency Calls	9min 58sec	9min 43sec	-2.5%
Response Time Performance Plan Compliance Resuscitation calls (CTAS1)	71.1%	71.0%	-0.2%
Response Time Performance Plan Compliance Emergent calls (CTAS2)	76.8%	78.4%	+2.1%

### D. Service and Quality Impact Indicators

Indicator	Mid-year (2015)	Mid-year (2016)	Per cent change
Stroke Patient to Stroke Facility*	88.2%	86.2%	-2.3%
Return of Spontaneous Circulation*	13.3%	13.8%	3.4%
Heart attack (STEMI) protocol*	63.1%	74.6%	+18.3%

\*A similar indicator is captured, with some variation in measurement units, within a portion of the MBNCanada (formerly OMBI) reporting process.



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## A. Volume and Service Level Indicators

### Definition of Indicator Group

Quantity type indicators that show values related to work intake and work breakdown (how much did we do?).

### Summary of Results

For the first half of 2016, Paramedic Services responded to 20,735 calls resulting in 23,855 vehicles responses, up 6.2 per cent from the same time period in 2015, and is above the previous five year average of 4.9 per cent. Currently 47,972 vehicles responses are projected for year-end 2016. The rate of vehicle responses, 81.8 for every 1,000 people, is up 3.8 per cent from 2015, continues outpace population growth and was influenced by the aging population. Unit utilization ranged from 30.3 per cent at 2AM to 54.6 per cent at 11AM. When Unit Utilization exceeds 40 per cent it becomes difficult to ensure an ambulance will be available for the next call in a reasonable time. Monitoring unit utilization allows for proactive planning to ensure community needs are met in a reasonable time while using a sustainable level of deployed staff. Note that the effects of two additional 12-hour ambulances added in July of 2016 and a scheduling adjustment of another 12-hour ambulance in September 2016 will not be reflected until future reports.

Indicator Name	Indicator Definition	Mid-year (2015)	Mid-year (2016)	Per cent change
Number of Vehicle Responses	A measure of service demand. The total number of ambulances or emergency response units (vehicles) that responded to calls dispatched to Region of Waterloo Paramedic Services inside or outside of Waterloo Region. More than one vehicle may respond to a single call; for example, multiple casualty incidents.	22,472	23,855	+6.2%
Rate of Vehicle Responses per 1,000 population	A measure of service demand. The rate of vehicle responses per 1,000 population to calls dispatched to Region of Waterloo Paramedic Services inside or outside of Waterloo Region. More than one vehicle may respond to a single call; for example, multiple casualty incidents.	78.8	81.8	+3.8%
Unit Utilization	Unit utilization measures the per cent of time that ambulances and emergency response units are actively engaged in responding to calls (codes 1 to 4) – as opposed to being deployed waiting for calls. Monitoring resource deployment through unit utilization helps ensure sufficient staffing to meet community needs. When unit utilization exceeds 40 per cent, it becomes difficult to ensure vehicles will be available for the next call within a reasonable time.	41.7%	40.5%	-3.0%





# Region of Waterloo \* Paramedic Services

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### Number and rate of vehicle responses per 1,000 population, by dispatch priority code and year

Region of Waterloo Paramedic Services, inside and outside of Waterloo Region, January 1<sup>st</sup> to June 30<sup>th</sup>, 2011-2016

#### Number of vehicle responses

Dispatch priority code	2011	2012	2013	2014	2015	2016	2011→2016
1 – Deferrable	472	422	310	289	81	65	
2 – Scheduled	59	86	86	79	57	66	
3 – Prompt	5,523	5,913	5,520	5,398	6,586	6,294	
4 – Urgent	12,836	13,537	13,919	14,606	15,748	17,430	
<b>Rate per 1,000 (YTD)</b>	<b>69.1</b>	72.2	71.2	72.3	78.8	81.8	
Annual change (%)	4.8%	4.5%	-1.3%	1.6%	8.9%	3.8%	
<b>Total vehicle responses (YTD)</b>	<b>18,890</b>	19,958	19,835	20,372	22,472	23,855	
Annual change (%)	6.2%	5.7%	-0.6%	2.7%	10.3%	6.2%	
<b>Total vehicle responses (annual)</b>	<b>37,924</b>	40,461	40,238	42,096	45,344	47,972*	
Annual change (%)	7.0%	6.7%	-0.6%	4.6%	7.7%	5.8%	

\* Projected

Source: ADRS (August 10<sup>th</sup>, 2016)

■ Lowest value    
 ■ Middle value(s)    
 ■ Highest value



# Region of Waterloo \* Paramedic Services

## PERFORMANCE MEASUREMENT

### Rate of vehicle responses per 1,000 population, by municipality and year

Region of Waterloo Paramedic Services, inside and outside of Waterloo Region, January 1<sup>st</sup> to June 30<sup>th</sup>, 2011-2016

Rate of vehicle responses per 1,000, by year, within Waterloo Region		Year-to-date		2016
		2011 → 2016	Min. - Max.	
<b>Cities</b>	Cambridge		63.5 - 89.5	89.5
	Kitchener		74.9 - 88.8	88.8
	Waterloo		48.4 - 61.0	61.0
	<b>Cities total</b>		<b>65.1 - 81.7</b>	<b>81.7</b>
<b>Townships</b>	North Dumfries		49.7 - 86.4	86.4
	Wellesley		32.4 - 49.2	40.3
	Wilmot		51.8 - 66.6	61.5
	Woolwich		60.2 - 79.0	74.6
	<b>Townships total</b>		<b>52.3 - 69.0</b>	<b>66.5</b>
<b>Waterloo Region total</b>			<b>63.6 - 79.9</b>	<b>79.9</b>
<b>Number and proportion of total vehicle Responses outside Waterloo Region*</b>		<b>2011 → 2016</b>	<b>Min. - Max.</b>	<b>2016</b>
<b>Number of vehicle responses</b>			<b>379 - 627</b>	<b>557 calls</b>
<b>Proportion of total vehicle responses</b>			<b>1.8 - 3.5</b>	<b>2.3 per cent</b>

\*A population based rate of calls cannot be accurately calculated for calls outside of Waterloo Region because it is difficult to determine the size of the service population (denominator).

Source: ADRS (August 10<sup>th</sup>, 2016)



# Region of Waterloo \* Paramedic Services

## PERFORMANCE MEASUREMENT

### Number and rate of vehicles responses per 1,000 population, by municipality and month

Region of Waterloo Paramedic Services, inside and outside of Waterloo Region, January 1<sup>st</sup> to June 30<sup>th</sup>, 2016

Rate of vehicle responses per 1,000, by month, within Waterloo Region		Jan → Dec	Year-to-date (YTD)	
			Rate per 1,000	Total calls
<b>Cities</b>	Cambridge		89.5	6,119
	Kitchener		88.8	10,804
	Waterloo		61.0	4,133
	<b>Cities total</b>		<b>81.7</b>	<b>21,056</b>
<b>Townships</b>	North Dumfries		86.4	430
	Wellesley		40.3	226
	Wilmot		61.5	648
	Woolwich		74.6	938
	<b>Townships total</b>		<b>66.5</b>	<b>2,242</b>
<b>Waterloo Region total</b>			<b>79.9</b>	<b>23,298</b>
<b>Outside Waterloo Region total*</b>				<b>557</b>
<b>Waterloo Region Paramedic Services total*</b>				<b>23,855</b>

\* A population based rate of calls cannot be accurately calculated for calls outside of Waterloo Region because it is difficult to determine the size of the service population (denominator).

Source: ADRS (August 10<sup>th</sup>, 2016)

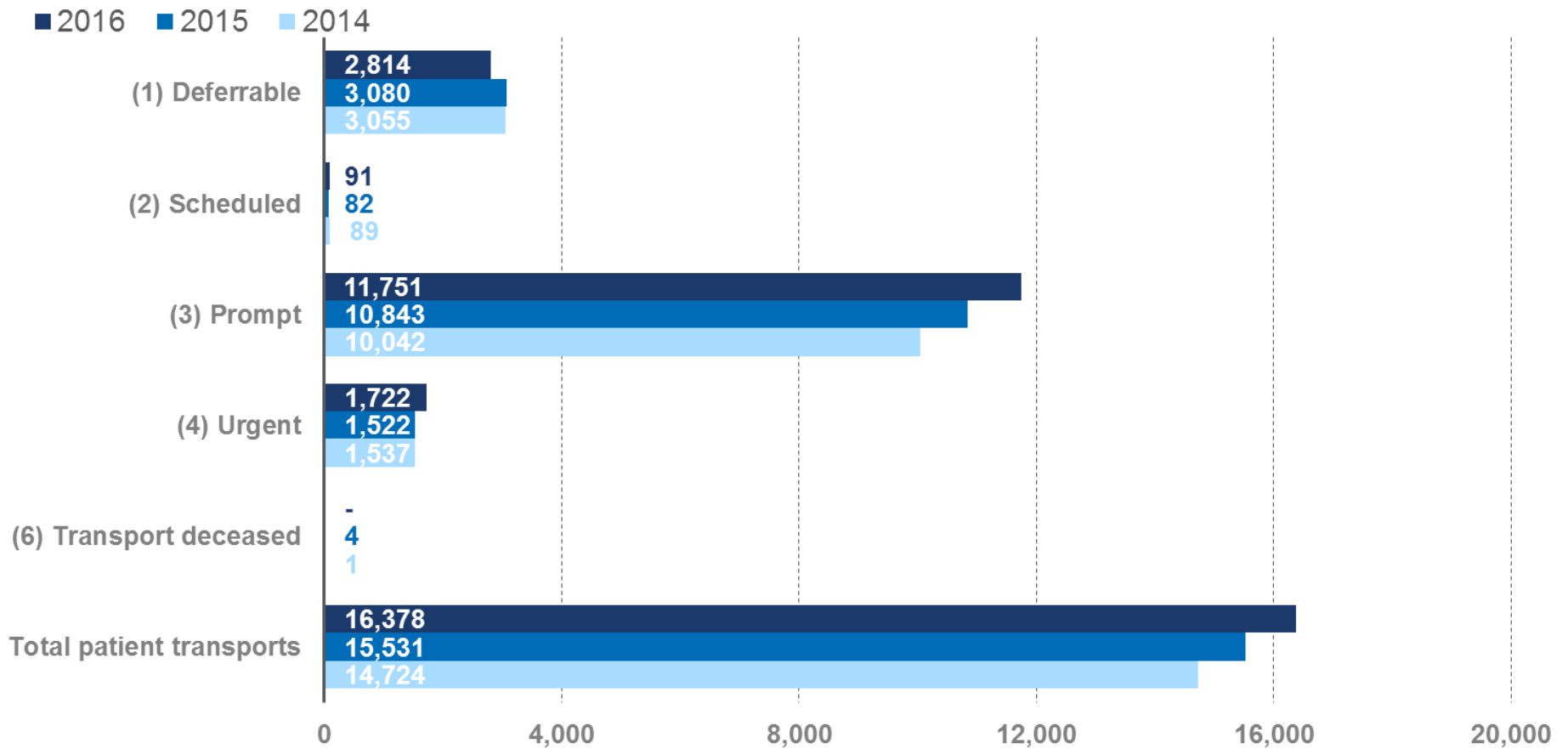
■ Lowest value    
 ■ Middle value(s)    
 ■ Highest value



# Region of Waterloo \* Paramedic Services PERFORMANCE MEASUREMENT

## Number of patient transports, by return priority code

Region of Waterloo Paramedic Services, inside and outside of Waterloo Region, January 1<sup>st</sup> to June 30<sup>th</sup>, 2014-2016



Source: TabletPCR (August 10<sup>th</sup>, 2016)





# Region of Waterloo \* Paramedic Services PERFORMANCE MEASUREMENT

## Various measures of service provided by Region of Waterloo Paramedic Services, by year

Inside and outside of Waterloo Region, January 1<sup>st</sup> to June 30<sup>th</sup>, 2011-2016

Measure	2011	2012	2013	2014	2015	2016	2011 → 2016	Per cent change (2011-2016)
Number of unique calls (T1, code 1-4)	16,906	17,739	17,524	18,252	19,580	20,735		22.6
Number of vehicles dispatched (T2, code 1-4)	18,890	19,958	19,835	20,372	22,472	23,855		26.3
Number of vehicles arriving on scene (T4, code 1-4)	17,116	17,980	17,959	18,392	19,953	21,231		24.0
Number of vehicles transporting patients (T6, code 1-4)	12,109	12,570	12,875	13,553	14,270	15,072		24.5
Number of patients transported (T6, code 1-4)	12,252	12,683	13,013	13,648	14,397	15,206		24.1
Per cent of vehicles dispatched arriving on scene	90.6	90.1	90.5	90.3	88.8	89.0		-1.8
Per cent of vehicles arriving on scene transporting patients	70.7	69.9	71.7	73.7	71.5	71.0		0.3

Note that due to differences between the ADRS and TabletPCR data sources, there may be variance between similar indicators.

Source: ADRS (August 10<sup>th</sup>, 2016)

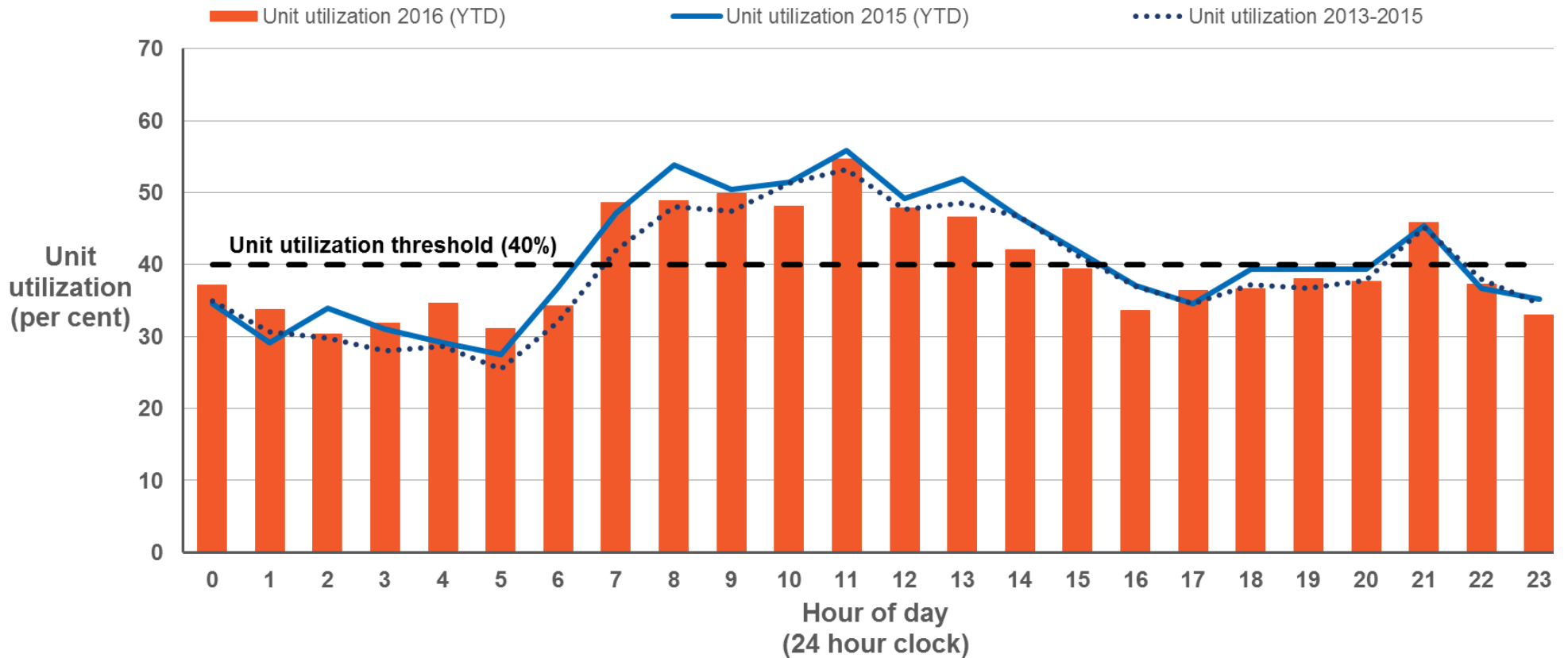
Lowest value    
  Middle value(s)    
  Highest value



# Region of Waterloo \* Paramedic Services PERFORMANCE MEASUREMENT

## Unit Utilization, by hourly average (24 hour clock)

Region of Waterloo Paramedic Services, January 1<sup>st</sup>, 2013 to December 31<sup>st</sup>, 2015, January 1<sup>st</sup> to June 30<sup>th</sup>, 2015 and 2016



Source: ADRS (August 10<sup>th</sup>, 2016)



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## B. Compliance and Quality Assurance Indicators

### Definition of Indicator Group

Indicators that monitor Paramedic Services' adherence to internal process, procedure, legislated mandates etc. (how well did we do it?).

### Summary of Results

To June 2016 the 80<sup>th</sup> percentile response time to emergency calls (code 4) within Waterloo Region was 9 minutes and 43 seconds, 2.5 per cent (15 seconds) faster than 2015, and likely influenced by additional resources added mid-year 2015 taking effect and a slight easing in the rate of call growth. Using an informal benchmark Paramedic Services monitors response times observed from urban, suburban, and rural perspectives as defined by call density. Response times vary according to population and road density. Drives times are longer in rural areas. Compliance to the 2016 Response Time Performance Plan improved for the most urgent call types and worsened for the less urgent call types indicating that the most urgent calls are being given a more appropriate priority and are being attended to faster. Setting faster times for more urgent calls and progressively slower times for less urgent calls is a standard approach. Note that the effects of two additional 12-hour ambulances added in July of 2016 and a scheduling adjustment of another 12-hour ambulance in September 2016 will not be reflected until future reports.

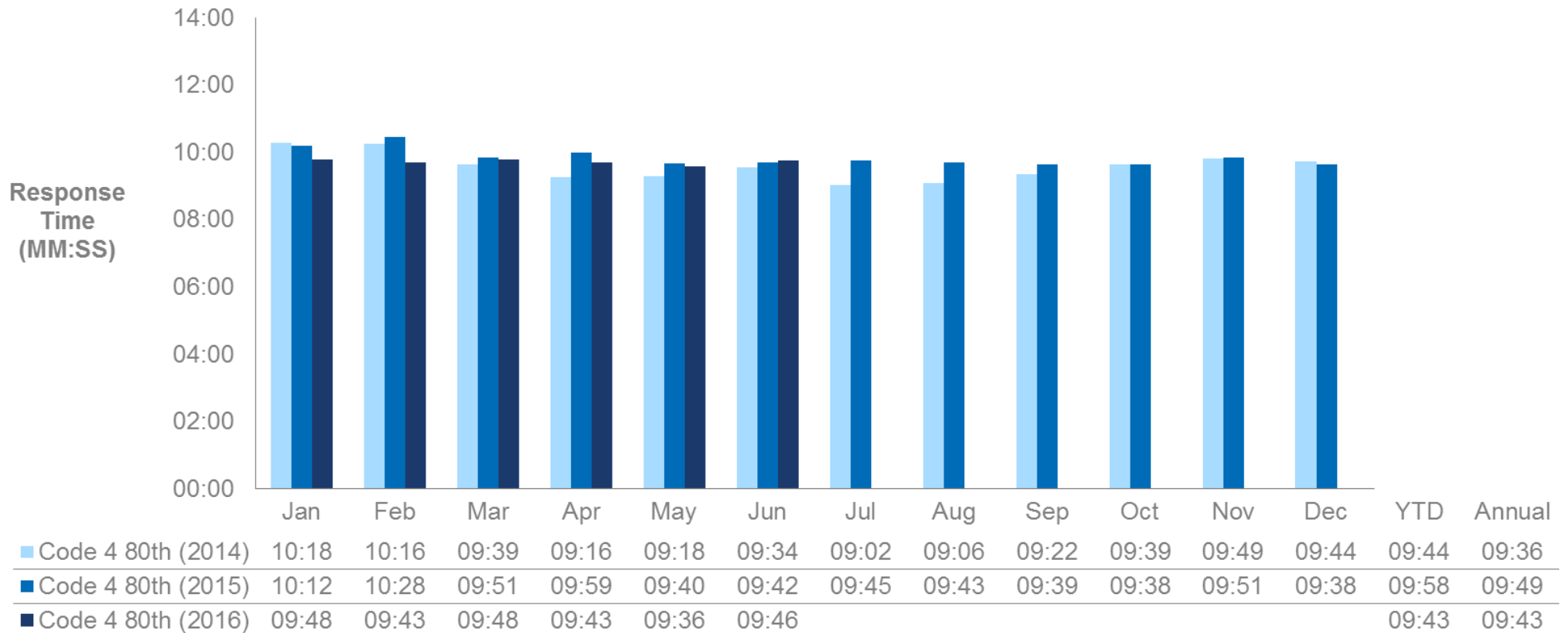
Indicator Name	Indicator Definition	Mid-year (2015)	Mid-year (2016)	Per cent change
Paramedic Services Response Time to Emergency Calls	A measurement of the Paramedic Services' ability to meet performance a summary performance indicator, response time to code 4 calls, 80 <sup>th</sup> percentile.	9min 58sec	9min 43sec	-2.5%
Response Time Performance Plan Compliance Resuscitation calls (CTAS1)	Resuscitation calls involve conditions that are, or may pose, an imminent threat to life or limb or risk of deterioration requiring immediate aggressive interventions; ideal physician assessment is immediate. The current target for resuscitation calls is a response time of 8 minutes or less 70 per cent of the time or better. A high proportion of compliance indicates that the most urgent calls are being attended to in the appropriate time frame.	71.1%	71.0%	-0.2%
Response Time Performance Plan Compliance Emergent calls (CTAS2)	Emergent calls involve conditions that potentially threaten to life, limb or function, requiring rapid medical interventions or delegated acts; ideal physician assessment is within 15 minutes. The current target for emergent calls is a response time of 10 minutes or less 80 per cent of the time or better.	76.8%	78.4%	+2.1%



# Region of Waterloo \* Paramedic Services PERFORMANCE MEASUREMENT

## Response time to emergency calls (code 4), 80<sup>th</sup> percentile, by month

Any paramedic service, inside Waterloo Region, January 1<sup>st</sup>, 2013 to December 31<sup>st</sup>, 2015, and January 1<sup>st</sup> to June 30<sup>th</sup>, 2016



Sources: ADRS (August 10<sup>th</sup>, 2016)

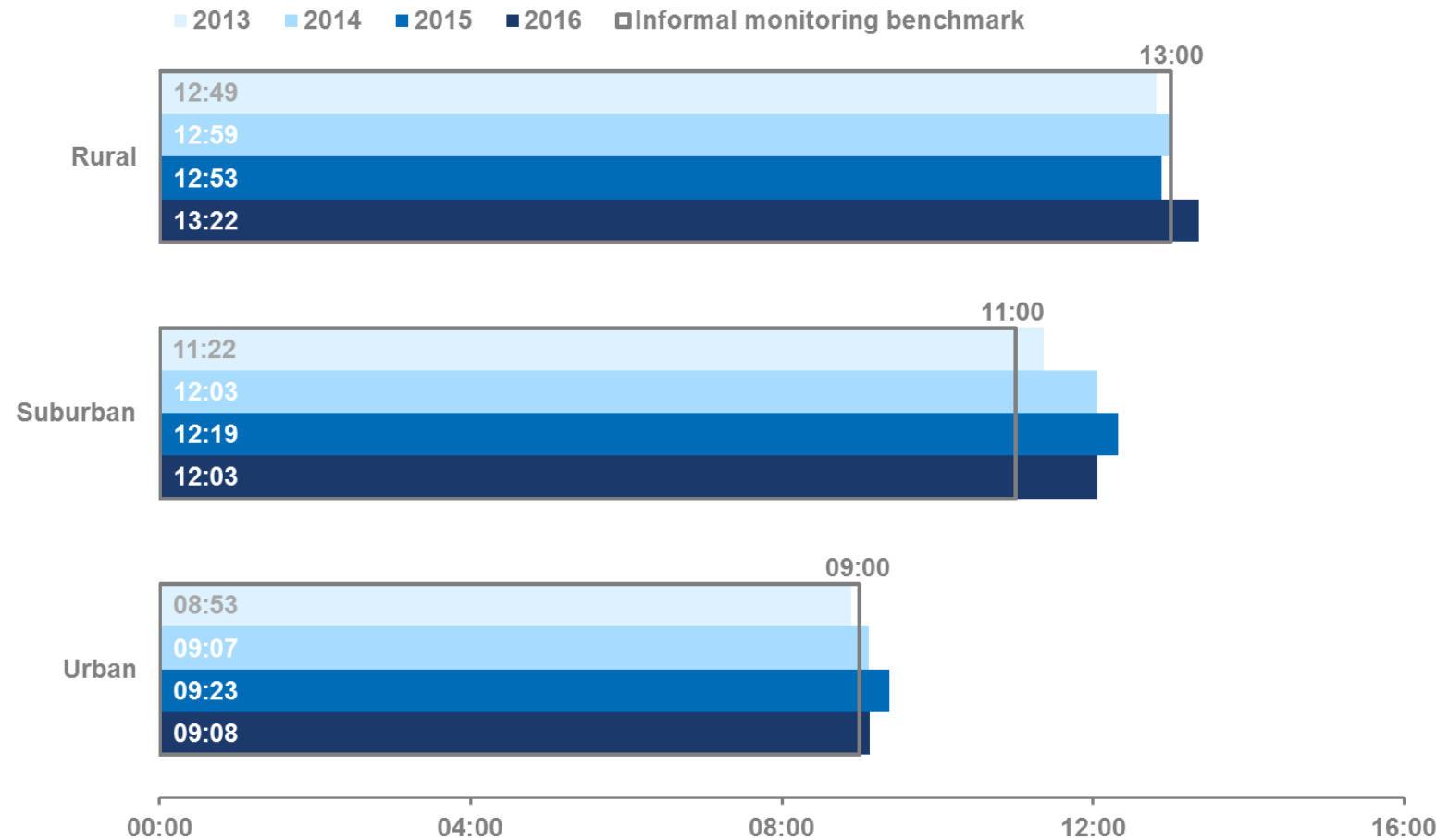




# Region of Waterloo \* Paramedic Services PERFORMANCE MEASUREMENT

## Response time to emergency calls (code 4), 80<sup>th</sup> percentile, by vehicle response density

Any paramedic service, inside Waterloo Region, January 1<sup>st</sup> to June 30<sup>th</sup>, 2013-2016



Source: ADRS (August 10<sup>th</sup>, 2016)



# Region of Waterloo \* Paramedic Services PERFORMANCE MEASUREMENT

## Compliance to 2016 response time performance plan, by Canadian Triage Acuity Score (CTAS)

Region of Waterloo Paramedic Services, inside or outside of Waterloo Region, January 1<sup>st</sup> to June 30<sup>th</sup>, 2015 and 2016

Type of call	Response Time Target Paramedic Services notified (T2) to arrive scene (T4)	Approved 2016 Region of Waterloo target	2015 (year-to-date)		2016 (year-to-date)	
			Per cent compliance	Percentile time (mm:ss)	Per cent compliance	Percentile time (mm:ss)
Sudden Cardiac Arrest	Defibrillator response in 6 minutes or less (set by MOHLTC)	50% or better (Paramedic Services only)	36%	06:59	38%	06:55
CTAS 1	Paramedic Services response in 8 minutes or less (set by MOHLTC)	70% or better	71%	07:53	71%	08:18
CTAS 2	Paramedic Services response in 10 minutes or less	80% or better	77%	10:34	78%	10:23
CTAS 3	Paramedic Services response in 11 minutes or less	80% or better	76%	11:39	79%	11:23
CTAS 4	Paramedic Services response in 12 minutes or less	80% or better	78%	12:30	81%	12:08
CTAS 5	Paramedic Services response in 12 minutes or less	80% or better	77%	12:34	76%	12:15

Source: ADRS and TabletPCR (August 10<sup>th</sup>, 2016)

### C. Efficiency Indicators

#### Definition of Indicator Group

Indicators that outline how timely Paramedic Services is being performed by staff and offered to the Region (how well did we do it?).

#### Summary of Results

For the first half of 2016, Offload Delay losses declined 50.9 per cent from the same time last year, a savings of nearly 50 ambulance days. Offload Delay is currently trending below the previous lows last observed in 2013. Paramedic Services and local hospitals continue to collaborate closely to address the issue of Offload Delay to limit the effects of Offload Delays on Paramedic Services. Collaboration on new and innovative strategies to address Offload Delay and return crews to the public for re-assignment helps to limit our Offload Delay losses. Time spent in Code Yellow and Code Red declined in the first half of 2016, 21.4 per cent and 55.2 per cent respectively from the same time last year. Code Yellow and Code Red are now trending at or slightly above the historical average. Note that the effects of two additional 12-hour ambulances added in July of 2016 and a scheduling adjustment of another 12-hour ambulance in September 2016 will not be reflected until future reports.

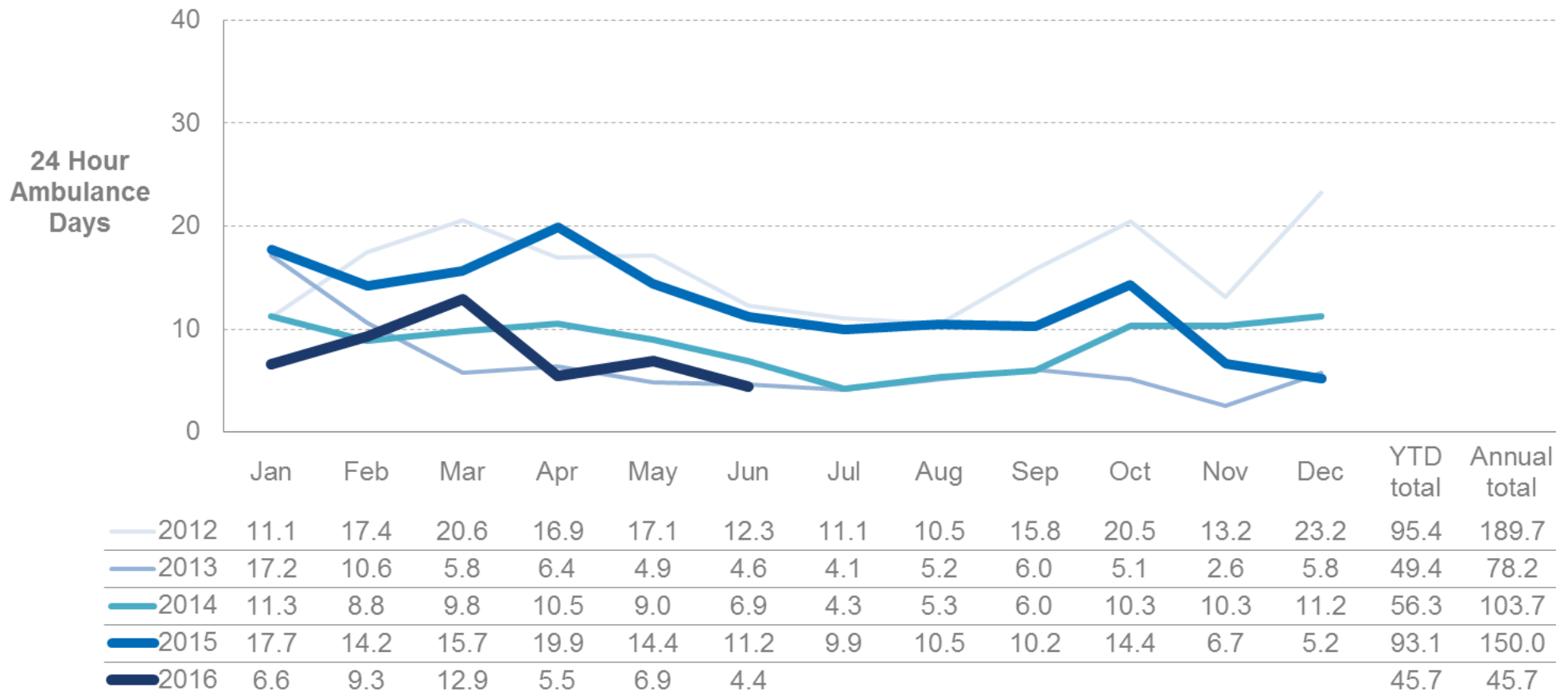
Indicator Name	Indicator Definition	Mid-year (2015)	Mid-year (2016)	Per cent change
Offload Delay Measurement	The amount of 24 hour ambulance days lost to offload delay over the course of a month.	93.1 days	45.7 days	-50.9%
Code Yellow Status	The percentage of time where Paramedic Services is in a Code Yellow Status for the month ( $\leq$ three vehicles available).	15.4%	12.1%	-21.4%
Code Red Status	The percentage of time where Paramedic Services is in a Code Red Status for the month (zero vehicles available).	1.6%	0.7%	-55.2%



# Region of Waterloo \* Paramedic Services PERFORMANCE MEASUREMENT

## Number of ambulance days lost to offload delay, by month

Region of Waterloo Paramedic Services, inside and outside of Waterloo Region, January 1<sup>st</sup> to December 31<sup>st</sup> 2012-2015 and January 1<sup>st</sup> to June 30<sup>th</sup>, 2016



Source: TabletPCR (August 10<sup>th</sup>, 2016)

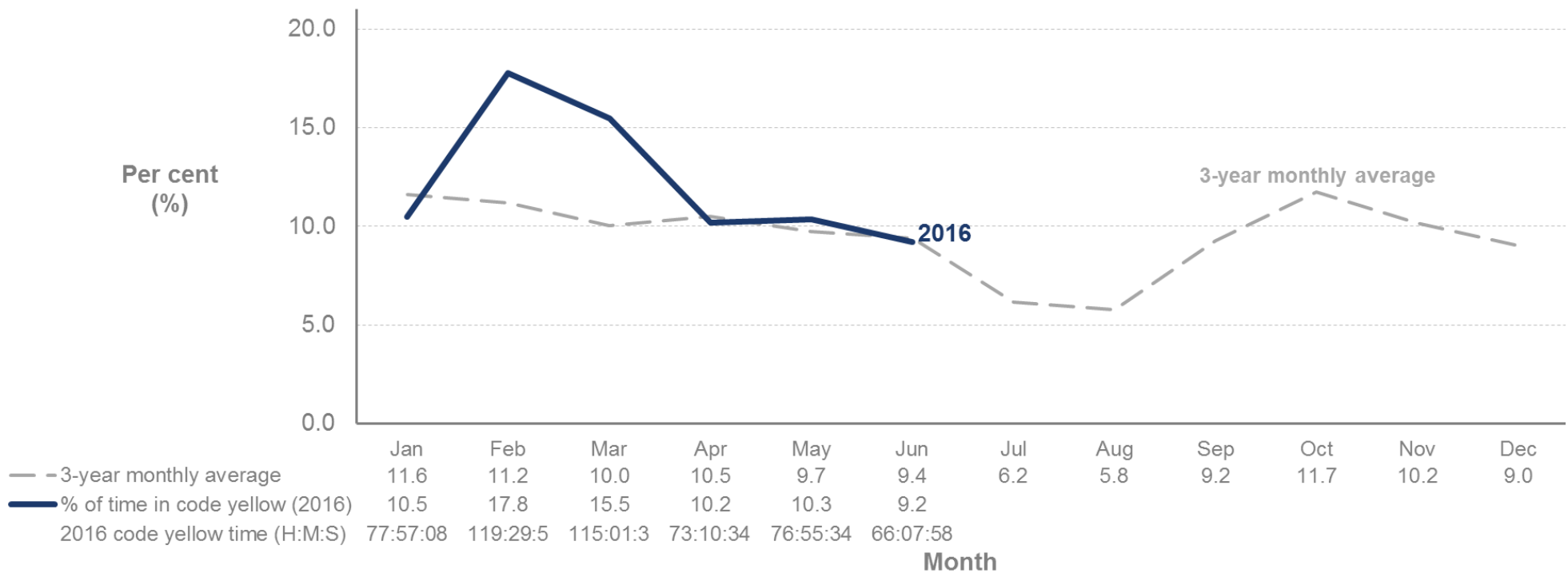




# Region of Waterloo \* Paramedic Services PERFORMANCE MEASUREMENT

## Percentage of time in code yellow status, by month

Region of Waterloo Paramedic Services, inside and outside of Waterloo Region, January 1<sup>st</sup> to December 31<sup>st</sup> 2012-2015 and January 1<sup>st</sup> to 30<sup>th</sup>, 2016



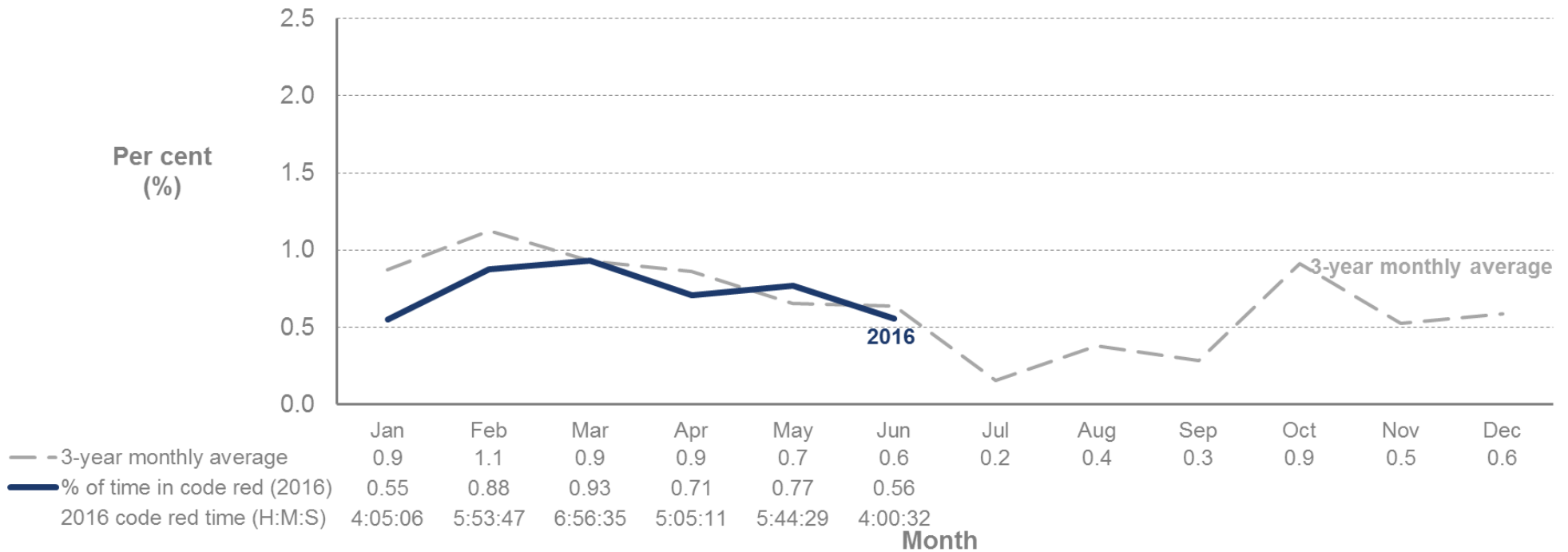
Source: CACC (August 15<sup>th</sup>, 2016)



# Region of Waterloo \* Paramedic Services PERFORMANCE MEASUREMENT

## Percentage of time in code red status, by month

Region of Waterloo Paramedic Services, inside and outside of Waterloo Region, January 1<sup>st</sup> to December 31<sup>st</sup> 2012-2015 and January 1<sup>st</sup> to 30<sup>th</sup>, 2016



Source: CACC (August 15<sup>th</sup>, 2016)



# Region of Waterloo \* Paramedic Services

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## D. Service and Quality Impact Indicators

### Definition of Indicator Group

Indicators that measure not only the timely provision of service, but how well that service is being provided by Paramedic Services' staff (How well is the service being performed?).

### Summary of Results

Note that service type indicators tend to fluctuate around the average over time, particularly when a small number of cases are involved. The percentage of stroke patients taken to stroke facilities was down 2.3 per cent from the same time last year. Results for the Return of Spontaneous Circulation (ROSC) indicator continued to trend down compared to the historical average. As any Return of Spontaneous Circulation is deemed to be positive, results are in an acceptable range (variation is normal due to the small number of cases). Heart attack STEMI (ST-Segment Elevation Myocardial Infarction) Protocol compliance (providing care in less than 90 minutes) also fluctuated around the historical at 74.6 per cent for the year-to-date (variation is expected for heart attack STEMI due to the numerous variables involved).

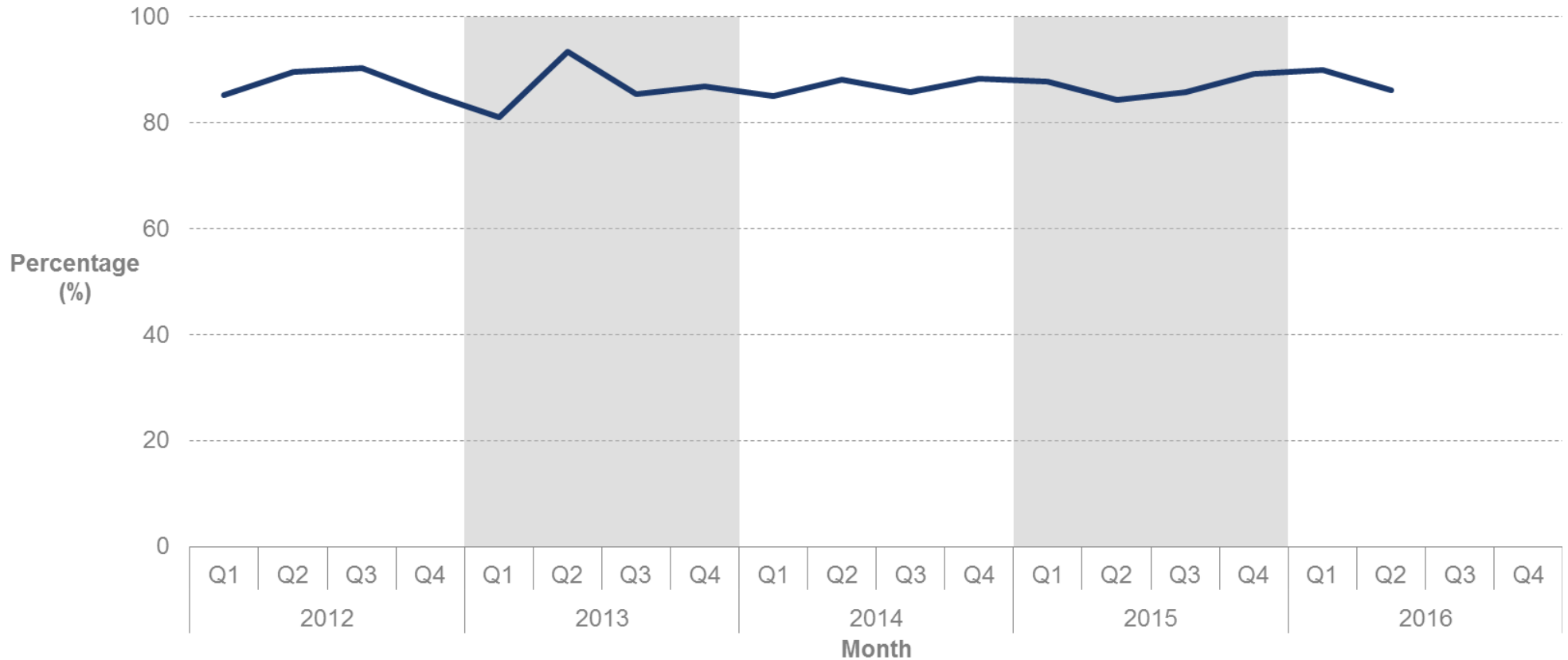
Indicator Name	Indicator Definition	Mid-year (2015)	Mid-year (2016)	Per cent change
Stroke Patient to Stroke Facilities	The percentage of stroke patients taken to Provincial Stroke Facilities. *Note that 'stroke protocol' outlines that only patients with certain symptoms and within certain timelines are transported to a stroke facility. Due to this, a variance under 100% may not necessarily represent a missed target.	88.2%	86.2%	-2.3%
Return of Spontaneous Circulation (ROSC)	The percentage of cardiac arrest patients with the return of pulse.	13.3%	13.8%	+3.4%
Heart attack (STEMI) Protocol ST-Segment Elevation Myocardial Infarction	The percentage of STEMI patients where care was provided in less than 90 minutes ('STEMI' represents a type of heart attack). *Note that indicator results are shared among Paramedic Services and St. Mary's Hospital. Paramedic Services can only control time from patient contact to arrival at St. Mary's Hospital; the remaining time to the 90 minute target is Hospital dependent.	63.1%	74.6%	+18.3%



# Region of Waterloo \* Paramedic Services PERFORMANCE MEASUREMENT

## Percentage of stroke patients transported to a stroke facility<sup>†</sup>, by quarter

Region of Waterloo Paramedic Services, inside and outside of Waterloo Region, January 1<sup>st</sup> to December 31<sup>st</sup>, 2012-2015 and January 1<sup>st</sup>, 2016 to June 30<sup>th</sup>, 2016



<sup>†</sup>Stroke facilities include: Grand River, Brantford General, Hamilton General, Stratford General, and Guelph General.

Source: TabletPCR (August 10<sup>th</sup>, 2016)

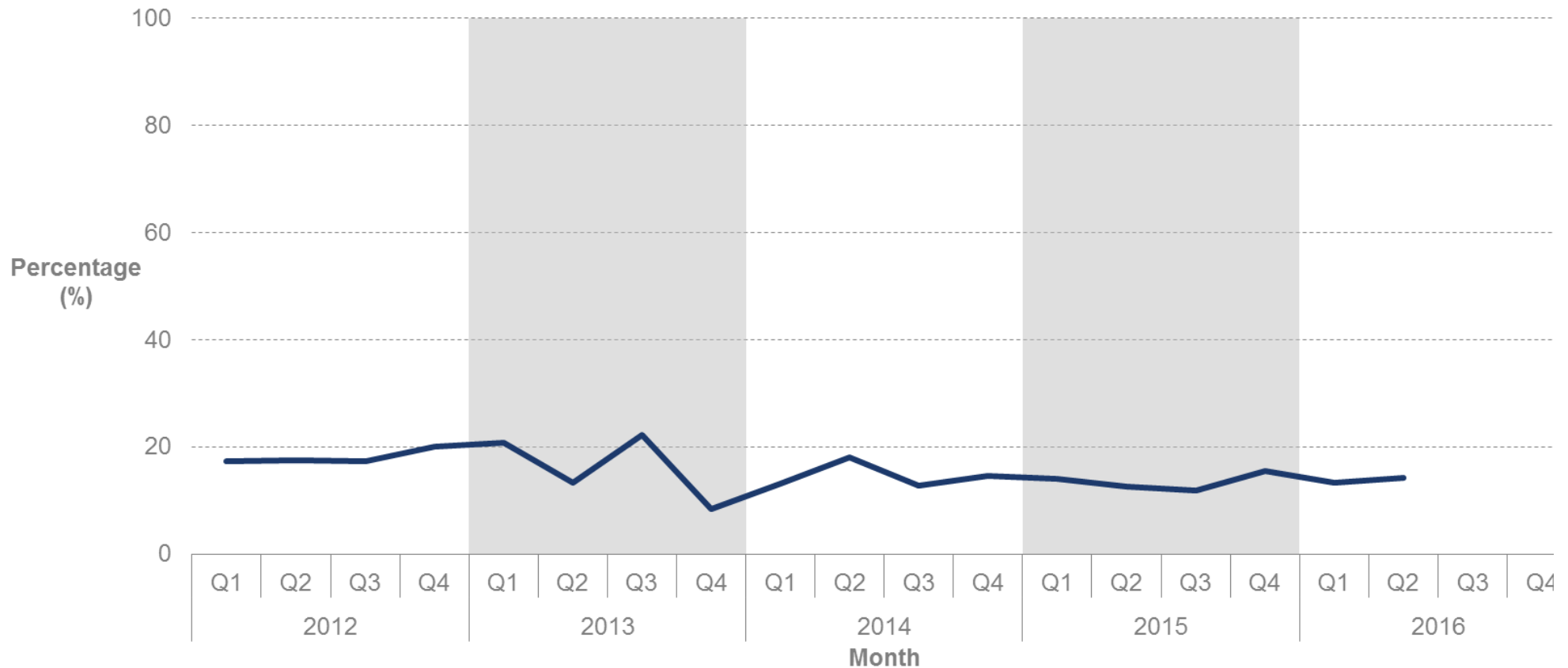




# Region of Waterloo \* Paramedic Services PERFORMANCE MEASUREMENT

## Percentage of cardiac arrest patients with return of spontaneous circulation (ROSC), by quarter

Region of Waterloo Paramedic Services, inside and outside of Waterloo Region, January 1<sup>st</sup> to December 31<sup>st</sup>, 2012-2015 and January 1<sup>st</sup>, 2015 to June 30<sup>th</sup>, 2016



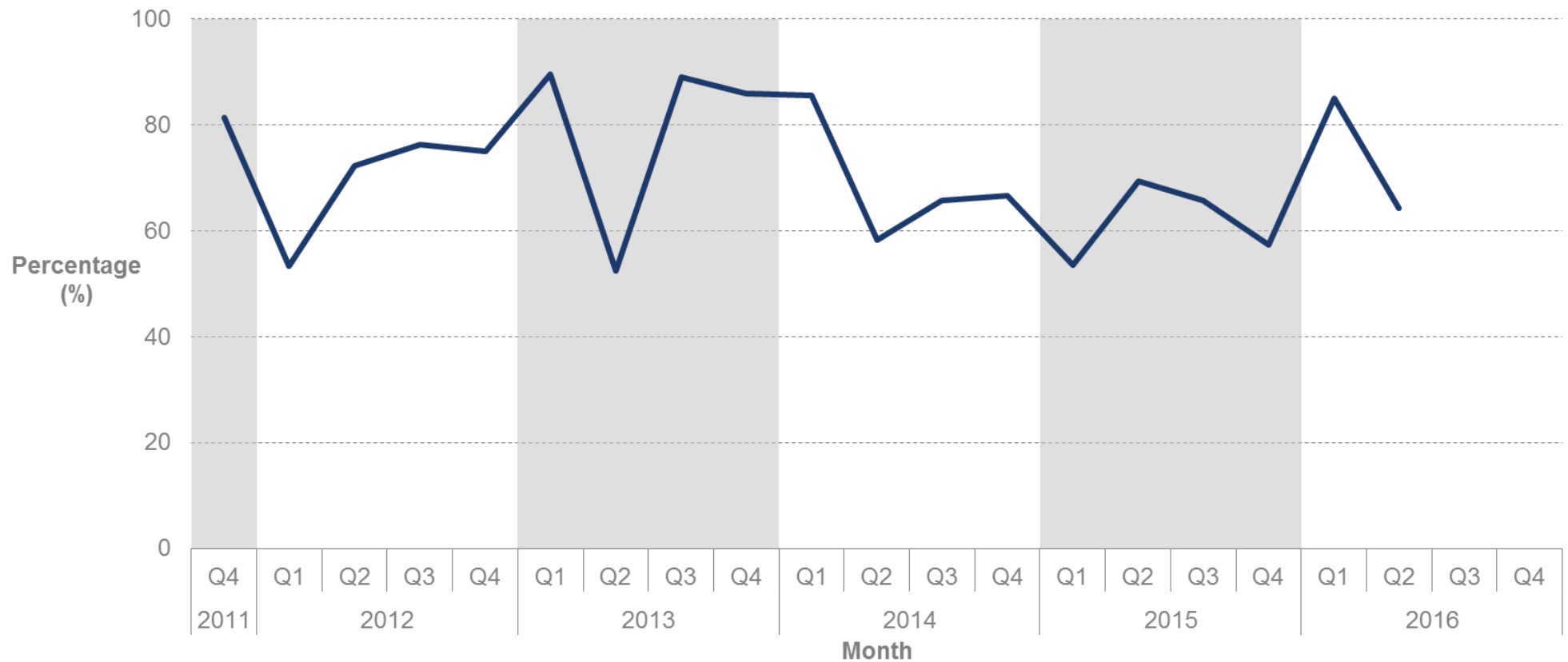
Source: TabletPCR (August 10<sup>th</sup>, 2016)



# Region of Waterloo \* Paramedic Services PERFORMANCE MEASUREMENT

## Percentage of heart attack patients where care was provided in less than 90 minutes (STEMI protocol), by quarter

Region of Waterloo Paramedic Services, inside and outside of Waterloo Region, January 1<sup>st</sup> to December 31<sup>st</sup>, 2012-2015 and January 1<sup>st</sup> to June 30<sup>th</sup>, 2016



Source: St. Mary's Hospital (August 31<sup>st</sup> 2016)

## E. GLOSSARY

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**ADRS:** Ambulance Dispatch Reporting System

**CACC:** Central Ambulance Communications Centre

**Call density:** A 1km x 1km grid was overlaid across Waterloo Region so each call could be assigned a grid square based on its location. The total number of calls and an average per month calculated for each grid square. Grid squares were then assigned one of three classes:

Urban - A grid square was classed as urban if there were more than two calls per month per square kilometer and at least half of its neighbouring grid squares were of the same density or higher.

Suburban - A grid square was classed as suburban if there were less than or equal to two calls and more than 0.5 calls per month per square kilometer and at least half of its neighbouring grid squares were of the same density or higher.

Rural - A grid square was classed as suburban if there were less than or equal to 0.5 calls and more than 0.08 calls per month per square kilometer and at least half of its neighbouring grid squares were of the same density or higher.

**Cardiac Arrest:** A sudden, sometimes temporary, cessation of the heart's functioning.<sup>i</sup>

**Code 1 (Deferrable):** A routine call that may be delayed without detriment to the patient (e.g. a non-scheduled transfer; a minor injury).<sup>ii</sup>

**Code 2 (Scheduled):** A call which must be done at a specific time, for example because of special treatment or diagnostic facility requirement (e.g. inter-hospital transfers or a scheduled meet with an air ambulance).<sup>iii</sup>

**Code 3 (Prompt):** A call that should be performed without delay (e.g. serious injury or illness).<sup>iv</sup>

**Code 4 (Urgent):** A call that must be performed immediately where the patients 'life or limb' may be at risk (e.g. Vital Signs Absent patient or unconscious head injury).<sup>v</sup>

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

**Code Yellow:** When the Region of Waterloo Paramedic Services is at minimum coverage of three vehicles or less.<sup>vii</sup>



# Region of Waterloo \* Paramedic Services

## PERFORMANCE MEASUREMENT

**CTAS Level:** The ‘Canadian Triage & Acuity Scale’ is used to assign a level of acuity to a patient. Acuity refers to the gravity of the situation – the potential for death and/or irreversible illness. CTAS is a tool that more accurately defines the patient’s need for care. Assignment of the CTAS level is to be based upon not only the presenting complaint identified on the initial assessment made by the paramedic, but also on their examination findings, and response to treatment.<sup>viii</sup>

**Defibrillator:** An electronic device that applies an electric shock to restore the rhythm of a fibrillating heart.<sup>ix</sup>

**Dispatch Priority Code:** The priority code number that is assigned to the call by the dispatcher. It identifies the priority under which the ambulance responds to the call location (e.g. an urgent response would be entered as Code 4).<sup>x</sup>

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

**Indicator:** A defined part of a program/team/system that is deemed important to measure and provide “specific information on the state or condition of”, as it contributes to the efficient and effective achievement of an outcome.<sup>xi</sup>

**MBNCanada:** Municipal Benchmarking Network Canada, formerly the Ontario Municipal Benchmarking Initiative (OMBI), is a partnership between Canadian municipalities for the purpose of fostering and supporting a culture of service excellence through the identification, creation, and collection of consistent and comparable performance data, and the sharing of operational best practices and collaboration on creative solutions to improve performance.

**Offload Delay:** Offload delay measures the offload of patients at local hospitals, which can impact the resources required and availability to respond to calls.<sup>xii</sup>

**Patient Transport(s):** The total number of patients carried in the ambulance during a given call.<sup>xiii</sup>

**Performance Measurement:** A method to monitor, observe and describe program implementation. It portrays information to tell that outputs are being delivered as planned, and gives an idea of whether outcomes are occurring. It provides information to be used for evaluation.<sup>xiv</sup>

**Response:** See vehicle response.

**Response Time:** Response time means the time measured from the time a notice is received to the earlier of either the arrival on-scene of a person equipped to provide any type of defibrillation to sudden cardiac arrest patients or the arrival on-scene of the ambulance crew.<sup>xv</sup>



**Return of Spontaneous Circulation:** Signs of the return of spontaneous circulation (ROSC) include breathing (more than an occasional gasp), coughing, or movement. For healthcare personnel, signs of ROSC also may include evidence of a palpable pulse or a measurable blood pressure.<sup>xvi</sup>

**Return Priority Code:** The priority code number that is assigned to the call by the ambulance crew. It identifies the priority under which the patient is transported (e.g. a prompt return to a medical facility would be entered as a Code 3).<sup>xvii</sup>

**STEMI:** A STEMI (ST-Segment Elevation Myocardial Infarction) is a specific type of myocardial infarction (MI), or in other words a type of heart attack, which demonstrates characteristic ECG (electrocardiogram; a tool to measure electrical activity of the heart) changes including marked elevation in the ST-segment in the cardiac cycle.<sup>xviii</sup>

**STEMI Facilities:** A hospital that houses onsite Percutaneous Coronary Intervention (PCI) facilities with an experienced interventional team.<sup>xix</sup>

**Stroke Facilities:** Stroke facilities are based on a collaborative model of 11 regional stroke networks. Each regional network is comprised of a Regional Stroke Centre (RSC), District Stroke Centres (DSCs) and community hospitals. The regional stroke networks are collaborative partnerships of care providers that span the care continuum from prevention to community re-engagement. The goal is to coordinate equitable access and improve outcomes for stroke survivors.<sup>xx</sup>

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

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

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

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

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

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



# Region of Waterloo \* Paramedic Services

## PERFORMANCE MEASUREMENT

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

**YTD:** Year-to-date refers to the period extending from the beginning of the current reporting year (January 1<sup>st</sup>) to the end of the reporting period. For the mid-year report's end date is June 30<sup>th</sup>, and the year-end report's end date is December 31<sup>st</sup>.



# Region of Waterloo \* Paramedic Services

## PERFORMANCE MEASUREMENT

### F. Contact Information

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Accessible formats of this document are available upon request. Please call the Coordinator, Health Communications at 519-575-4400 ext. 2244, (TTY 519-575-4608) to request an accessible format.

## Notes

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- <sup>i</sup> “Definition of cardiac arrest in English”. *Oxford Dictionaries*. Oxford University Press, 2013. Web. 13 August 2013.
- <sup>ii</sup> Government of Ontario, Ministry of Health and Long-Term Care, Ambulance Call Report Completion Manual (Ontario: Government of Ontario, 2003) 9.
- <sup>iii</sup> Government of Ontario, Ministry of Health and Long-Term Care, Ambulance Call Report Completion Manual (Ontario: Government of Ontario, 2003) 9.
- <sup>iv</sup> Government of Ontario, Ministry of Health and Long-Term Care, Ambulance Call Report Completion Manual (Ontario: Government of Ontario, 2003) 9.
- <sup>v</sup> Government of Ontario, Ministry of Health and Long-Term Care, Ambulance Call Report Completion Manual (Ontario: Government of Ontario, 2003) 9.
- <sup>vi</sup> Region of Waterloo. Public Health. Emergency Medical Services. 2011 EMS System Performance. Report PH-12-017. File Code P 05-80. Waterloo: Region of Waterloo, May 8, 2010. Web. 14 August 2013.
- <sup>vii</sup> Region of Waterloo. Public Health. Emergency Medical Services. 2011 EMS System Performance. Report PH-12-017. File Code P 05-80. Waterloo: Region of Waterloo, May 8, 2010. Web. 14 August 2013.
- <sup>viii</sup> Government of Ontario, Ministry of Health and Long-Term Care, Ambulance Call Report Completion Manual (Ontario: Government of Ontario, 2003) 17.
- <sup>ix</sup> “Defibrillator”. *Merriam-Webster*. Merriam Webster, Incorporated, 2013. Web. 13 August 2013.
- <sup>x</sup> Government of Ontario, Ministry of Health and Long-Term Care, Ambulance Call Report Completion Manual (Ontario: Government of Ontario, 2003) 9.
- <sup>xi</sup> “Definition of indicator in English”. *Oxford Dictionaries*. Oxford University Press, 2013. Web. 14 August 2013.



- <sup>xii</sup> “What is Service?”. *OMBI Ontario Municipal CAO’s Benchmarking Initiative*. Ontario Municipal CAO’s Benchmarking Initiative, 2012. Web. 13 August 2013.
- <sup>xiii</sup> Government of Ontario, Ministry of Health and Long-Term Care, Ambulance Call Report Completion Manual (Ontario: Government of Ontario, 2003) 11.
- <sup>xiv</sup> Schacter, Mark. Kronick, Murray. “Results-Based Management 101”. *Performance and Planning Exchange*. Performance and Planning Exchange, 2010-2011. Web. 14 August 2013.
- <sup>xv</sup> “Ambulance Act”. *ServiceOntario e-Laws*. Government of Ontario, 2013. Web. 14 August 2013.
- <sup>xvi</sup> “Cardiac Arrest and Cardiopulmonary Resuscitation Outcome Reports”. *American Heart Association*. American Heart Association, Inc., 2013. Web. 13 August 2013.
- <sup>xvii</sup> Government of Ontario, Ministry of Health and Long-Term Care, Ambulance Call Report Completion Manual (Ontario: Government of Ontario, 2003) 10.
- <sup>xviii</sup> “Cardiac Care STEMI Program Frequently Asked Questions”. *Toronto EMS News & Video*. Toronto Emergency Medical Services, 1998-2013. Web. 13 August 2013.
- <sup>xix</sup> “CCN Documents Optimizing Access to Primary PCI for ST Elevation Myocardial Infarction”. *Cardiac Care Network*. Cardiac Care Network of Ontario, 2013. Web. 14 August 2013.
- <sup>xx</sup> “The Ontario Stroke System (OSS)”. *Ontario Stroke Network Advancing the Ontario Stroke System*. Ontario Stroke Network, 2010. Web. 13 August 2013.
- <sup>xxi</sup> Region of Waterloo. Public Health. Emergency Medical Services. Emergency Medical Services (EMS) Master Plan. Report PH-07-061. File Code P 05-01. Waterloo: Region of Waterloo, December 4, 2007. Web. 14 August 2013.