



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

Performance Measurement Report (year-end)  
For the Period of January – December 2015  
Produced on January 19<sup>th</sup>, 2016



# Region of Waterloo \* Paramedic Services

# PERFORMANCE MEASUREMENT

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### SUMMARY

#### A. VOLUME AND SERVICE LEVEL INDICATORS

Indicator	Current Q4 (2015)	Previous Q4 (2014)	Year-end
Total Number of Calls	9,958	9,918	39,020
Rate of calls per 1,000 population*	68.6	69.2	67.7
Unit Utilization	39.5%	40.0%	40.8%

#### C. EFFICIENCY INDICATORS

Indicator	Current Q4 (2015)	Previous Q4 (2014)	Year-end
Offload Delay (# of days)*	26.2 days	31.8 days	150.0 days
Code Yellow Time	11.8%	12.5%	13.3%
Code Red Time	0.8%	0.9%	1.1%

#### B. COMPLIANCE AND QUALITY ASSURANCE INDICATORS

Indicator	Current Q4 (2015)	Previous Q4 (2014)	Year-end
Response Time (Code 4, 80 <sup>th</sup> percentile)*	09min 41sec	09min 44sec	09min 49sec
Paramedic Services' Warning System Use	100.0%	100.0%	100.0%
Chute Time Adherence	92.1%	92.2%	91.5%

#### D. SERVICE AND QUALITY IMPACT INDICATORS

Indicator	Current Q4 (2015)	Previous Q4 (2014)	Year-end
Stroke Patient to Stroke Facility*	89.3%	88.3%	86.9%
Return of Spontaneous Circulation*	15.5%	14.7%	13.5%
Heart attack (STEMI) protocol*	57.4%	66.7%	63.6%

### SUMMARY BY MUNICIPALITY

		Municipality						
		Cambridge	Kitchener	Waterloo	North Dumfries	Wellesley	Wilmot	Woolwich
<b>Response Times (code 4, 80<sup>th</sup> percentile)</b>	Current Q4 (2015)	09min 51sec	08min 52sec	09min 21sec	13min 47sec	18min 10sec	15min 59sec	11min 58sec
	Previous Q4 (2014)	09min 57sec	08min 57sec	09min 22sec	14min 25sec	18min 20sec	14min 24sec	13min 09sec
	Year-end	10min 01sec	09min 04sec	09min 27sec	13min 43sec	17min 48sec	16min 25sec	12min 59sec
<b>Total Call Volume</b>	Current Q4 (2015)	2,487	4,618	1,985	180	78	265	345
	Previous Q4 (2014)	2,436	4,687	1,888	161	79	270	397
	Year-end	9,904	18,416	7,257	621	319	1,037	1,466

\*Indicator is also captured in a similar fashion (with some variation in measurement units) within a portion of the OMBI reporting process.



# Region of Waterloo \* Paramedic Services

# PERFORMANCE MEASUREMENT

## 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 2015, Paramedic Services responded to 39,020 calls in Waterloo Region and has continued to increase to unprecedented levels for the third year in a row. The rate of calls per 1,000 was up 3.3 per cent from 2014, continuing to greatly outpace population growth, and was likely influenced by an aging population. For the fourth quarter of 2015, unit utilization ranged from a low of 28 per cent at 5AM, generally increased to peak at 11AM at 53 per cent, before gradually decreasing much of the rest of the day. Unit utilization was down 1.0 per cent from the same time last year (2014-Q4) and down 1.6 per cent from the previous quarter (2015-Q3). Staffing is partly based on patterns and predictions seen in unit utilization, and monitoring unit utilization allows for proactive planning to alter the deployment of staff to reach an appropriate unit unitization level. Note that a 12-hour ambulance was added in each July of 2011, 2012, 2013, and 2015, and an emergency response unit was added in 2014.

### Performance Report

Indicator Name		Indicator Definition	Rolling Quarterly Results		
			Current Q4 (2015)	Previous Q4 (2014)	Current Year-end
Number of Calls	The total number of calls responded to within Waterloo Region Year-end. This is a measure of service demand.*		9,958	9,918	39,020
Rate of calls per 1,000 population	The rate of calls per 1,000 population responded to within the Waterloo Region. This is a measure of service demand.*		68.6	69.2	67.7
Unit Utilization	Unit utilization measures the per cent of an hour that ambulances are actively engaged in responding to calls (codes 1 to 4) – as opposed to being deployed waiting for calls. It is used to monitor resource deployment, allowing for planning to ensure sufficient staff to meet community needs. Note that when unit utilization exceeds a value of 40 per cent, it becomes difficult to ensure an ambulance will be available for the next call within a reasonable time.		39.5%	40.0%	40.8%

\*Note that due to differences between the ADRS and TabletPCR data sources, there may be variances with numbers.





# Region of Waterloo \* Paramedic Services PERFORMANCE MEASUREMENT

## A measure of service demand

### Number and rate of calls per 1,000 population, Year-end, by dispatch priority code and year

Waterloo Region, January 1<sup>st</sup> to December 31<sup>st</sup>, 2010-2015<sup>†</sup>

Dispatch priority code	Number of calls						2010→2015
	2010	2011	2012	2013	2014	2015	
1 – Deferrable	707	678	646	430	401	144	
2 – Scheduled	201	200	254	176	167	171	
3 – Prompt	9,491	10,071	10,151	9,308	10,054	10,837	
4 – Urgent	20,882	22,421	24,016	24,822	26,652	27,868	
<b>Rate per 1,000 (YTD)</b>	57.5	60.5	63.1	61.8	65.6	67.7	
Annual change (%)	-0.1%	5.2%	4.2%	-2.0%	6.1%	3.3%	
<b>Total calls (YTD)</b>	31,281	33,370	35,067	34,736	37,274	39,020	
Annual change (%)	1.5%	6.7%	5.1%	-0.9%	7.3%	4.7%	
<b>Total calls (annual)</b>	<b>31,281</b>	<b>33,370</b>	<b>35,067</b>	<b>34,736</b>	<b>37,274</b>	<b>39,020</b>	
Annual change (%)	1.5%	6.7%	5.1%	-0.9%	7.3%	4.7%	

<sup>†</sup> Due to a slight change in methodology, such as including the student population in the denominator, results may differ from previous reports.

Source: ADRS (January 19<sup>th</sup>, 2015)

Lowest value    Middle value(s)    Highest value

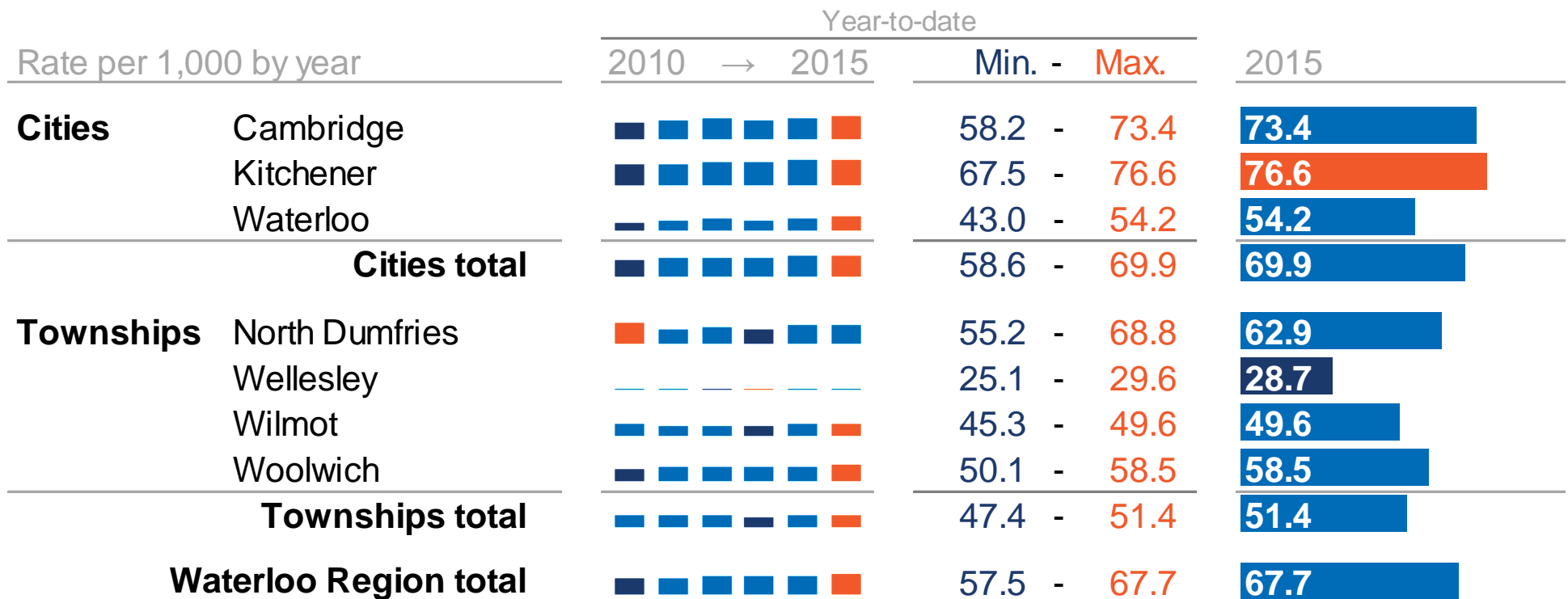


# Region of Waterloo \* Paramedic Services PERFORMANCE MEASUREMENT

## A measure of service demand

### Rate of calls per 1,000 population, Year-end, by municipality and year

Waterloo Region, January 1<sup>st</sup> to December 31<sup>st</sup>, 2010-2015<sup>†</sup>



<sup>†</sup> Due to a slight change in methodology, such as including the student population in the denominator, results may differ from previous reports.

Source: ADRS (January 19<sup>th</sup>, 2015)

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

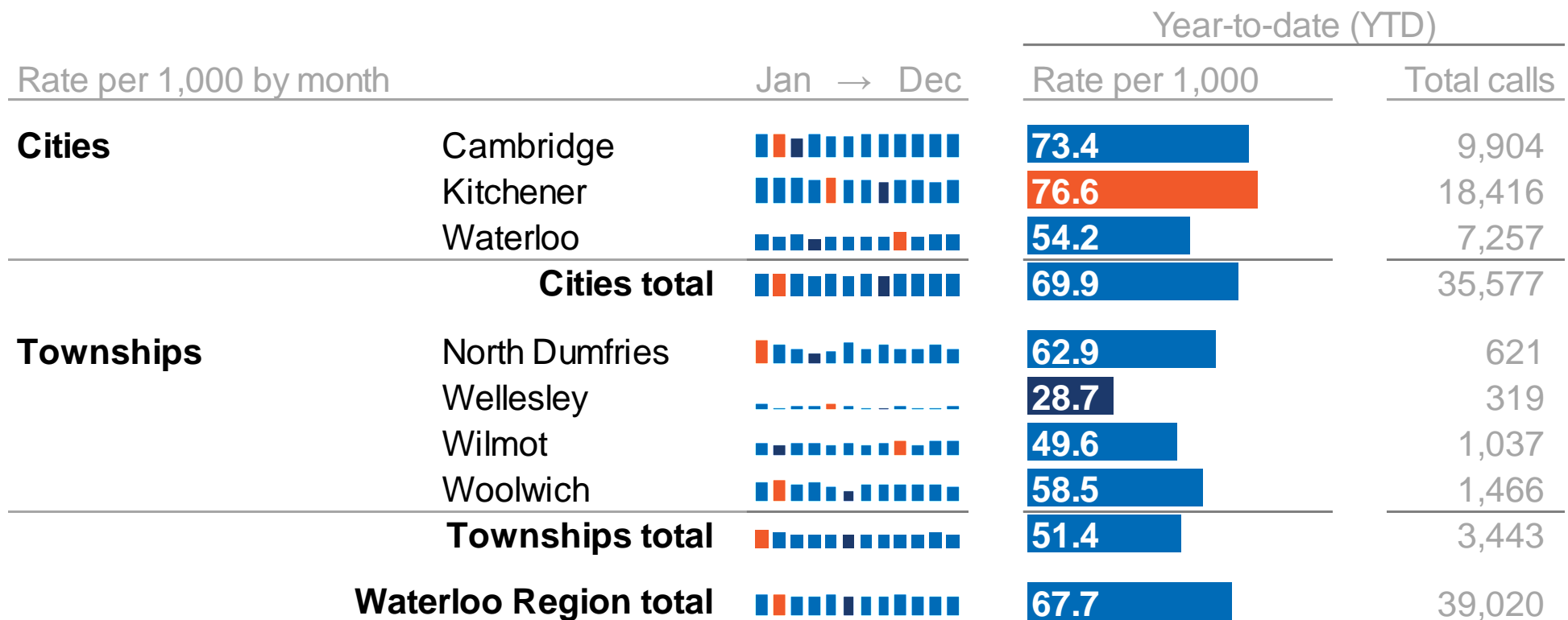


# Region of Waterloo \* Paramedic Services PERFORMANCE MEASUREMENT

## A measure of service demand

### Number and rate of calls per 1,000 population, Year-end, by municipality and month

Waterloo Region, January 1<sup>st</sup> to December 31<sup>st</sup>, 2015<sup>†</sup>



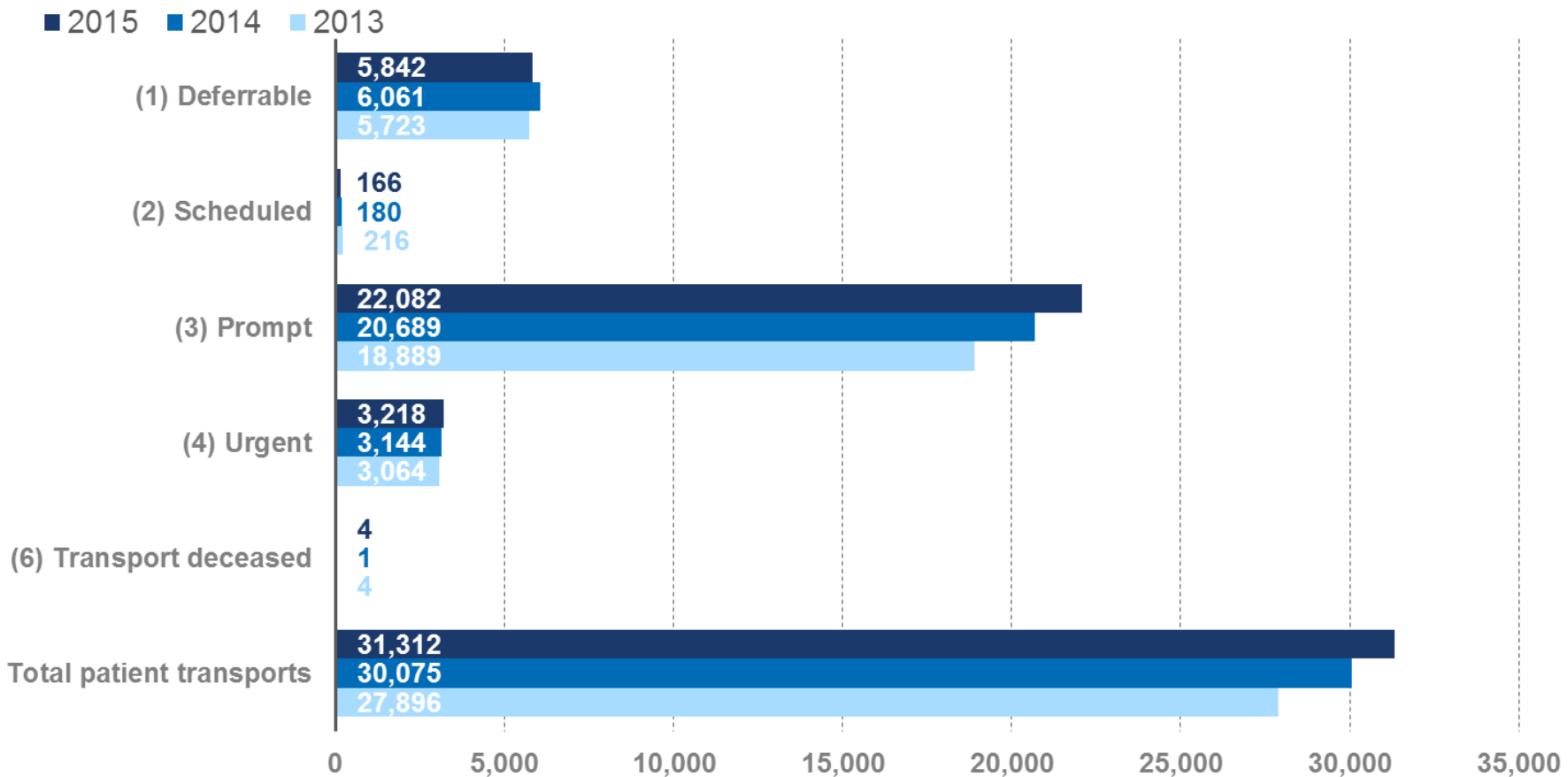
<sup>†</sup> Due to a slight change in methodology, such as including the student population in the denominator, results may differ from previous reports.

Source: ADRS (January 19<sup>th</sup>, 2015)

Lowest value   Middle value(s)   Highest value

### Number of patient transports, Year-end, by return priority code

Region of Waterloo Paramedic Services, January 1<sup>st</sup> to December 31<sup>st</sup>, 2013-2015



**Note:** Indicator is based on all calls that Region of Waterloo Paramedic Services responds to both within and outside of Waterloo Region.

**Source:** TabletPCR (January 19<sup>th</sup>, 2015)





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### All calls served by Region of Waterloo Paramedic Services, Year-end, by year

Inside and outside of Waterloo Region, January 1<sup>st</sup> to December 31<sup>st</sup>, 2010-2015

Measure	2010	2011	2012	2013	2014	2015	2010 → 2015	Per cent change (2010-2015)
Number of unique calls (T1, code 1-4)	31,883	33,902	35,725	35,421	37,426	39,611		24.2
Number of units dispatched (T2, code 1-4)	36,729	39,333	41,638	41,442	43,319	46,916		27.7
Number of units transporting patients (T6, code 1-4)	24,188	25,224	26,637	27,395	29,137	30,628		26.6
Per cent of units dispatched arriving on scene	87.8	87.6	87.2	87.8	87.4	85.9		-2.2
Per cent of units arriving on scene transporting patients	75.0	73.2	73.3	75.3	76.9	76.0		1.3

Note that due to differences between the ADRS and TabletPCR data sources, there may be variance between similar indicators. Also, data presented above represent calls dispatched to our paramedic service within or beyond Waterloo Region, while most other indicators represent calls to any paramedic service with Waterloo Region only; therefore totals will not align with previous and subsequent pages.

Source: ADRS (January 19<sup>th</sup>, 2015)

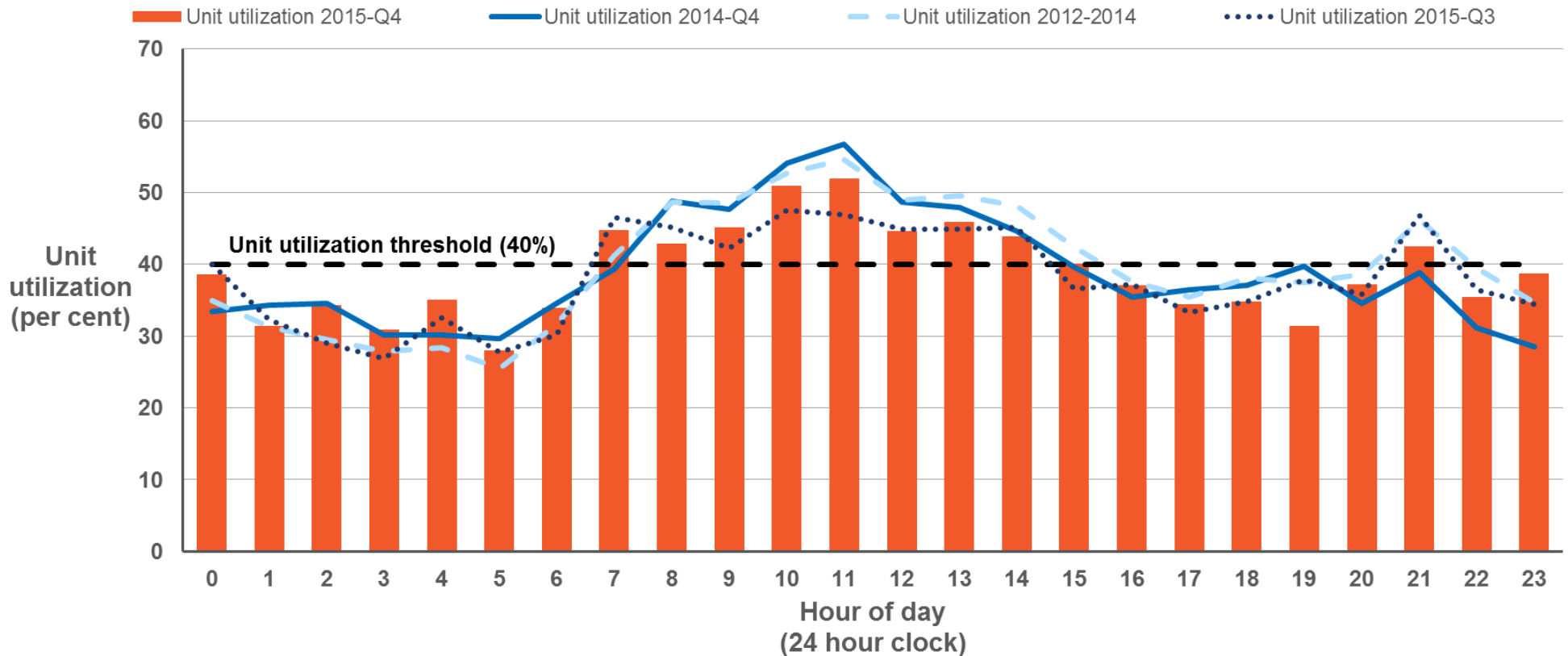
Lowest value
  Middle value(s)
  Highest value



# 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>, 2012 to December 31<sup>st</sup>, 2014, July 1<sup>st</sup> to September 30<sup>th</sup>, 2015, and October 1<sup>st</sup> to December 31<sup>st</sup>, 2014 and 2015



Source: ADRS (January 19<sup>th</sup>, 2015)



# Region of Waterloo \* Paramedic Services

## PERFORMANCE MEASUREMENT

### 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

In 2015, the 80<sup>th</sup> percentile response time to emergency calls (code 4) within Waterloo Region was 09 minutes and 49 seconds, which is 2.3 per cent (13 seconds) slower than in 2014. From the third quarter to the fourth quarter of 2015 the 80th percentile response time to emergency calls improved 0.3 per cent (2 seconds), likely influenced by additional resources taking effect, a slight easing in the growth of call volume being experienced, and unseasonably good road conditions. Paramedic Services has begun monitoring response parameters observed from urban, suburban, and rural perspectives, using an 80th percentile response time informal benchmark. Response times vary according to population and road density. Drives times are longer in rural areas. Internal reviews identified warning system use compliance of 100 per cent in the current quarter. Chute time adherence remained below the historical average for most of the year as Region of Waterloo Paramedic Services continues work to improve compliance on this metric. Note that a 12-hour ambulance was added in each July of 2011, 2012, 2013, and 2015, and an emergency response unit was added in 2014.

#### Performance Report

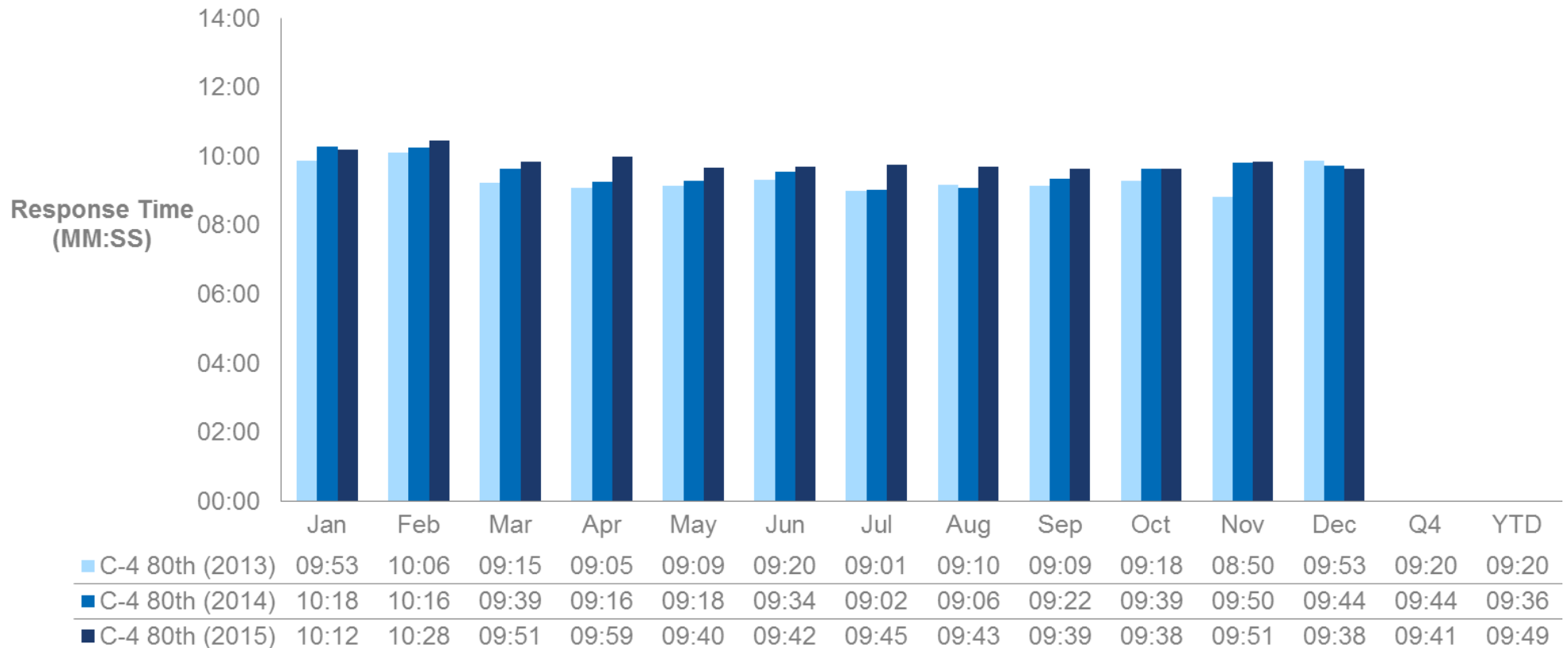
Indicator Name	Indicator Definition	Rolling Quarterly Results		
		Current Q4 (2015)	Previous Q4 (2014)	Current Year-end
Paramedic Services Response Time to Emergency Calls	A measurement of the Paramedic Services' ability to meet performance a summary performance indicator, response time to code 4 calls, 80 <sup>th</sup> percentile.	09min 41sec	09min 44sec	09min 49sec
Paramedic Services' Warning System Use	A measurement of compliance with the appropriate use of warning systems by Paramedic Services staff (based on a review of internal audits conducted on calls flagged for review during the month).	100.0%	100.0%	100.0%
Chute Time Adherence	The percentage of calls where the timeframe from crew notification to when they are enroute is within protocol (Policy #4.3) of 2 minutes.	92.1%	92.2%	91.5%



# Region of Waterloo \* Paramedic Services PERFORMANCE MEASUREMENT

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

Waterloo Region, January 1<sup>st</sup>, 2013 to December 31<sup>st</sup>, 2015<sup>†</sup>



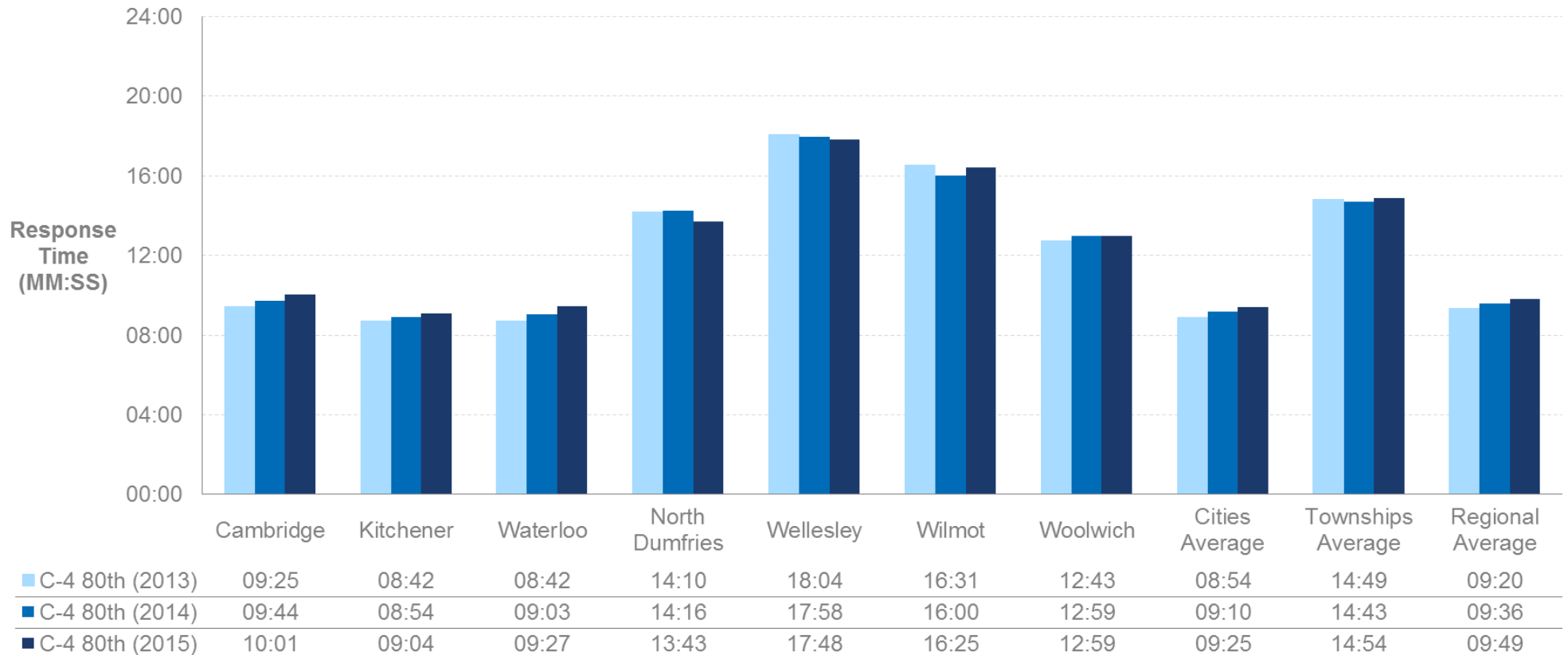
<sup>†</sup> Due to a slight change in methodology results may differ from previous reports.

Sources: ADRS (January 19<sup>th</sup>, 2015)



### Response time to emergency calls (code 4), Year-end, 80<sup>th</sup> percentile, by municipality

Waterloo Region, January 1<sup>st</sup> to December 31<sup>st</sup>, 2013-2015<sup>†</sup>



<sup>†</sup> Due to a slight change in methodology results may differ from previous reports.

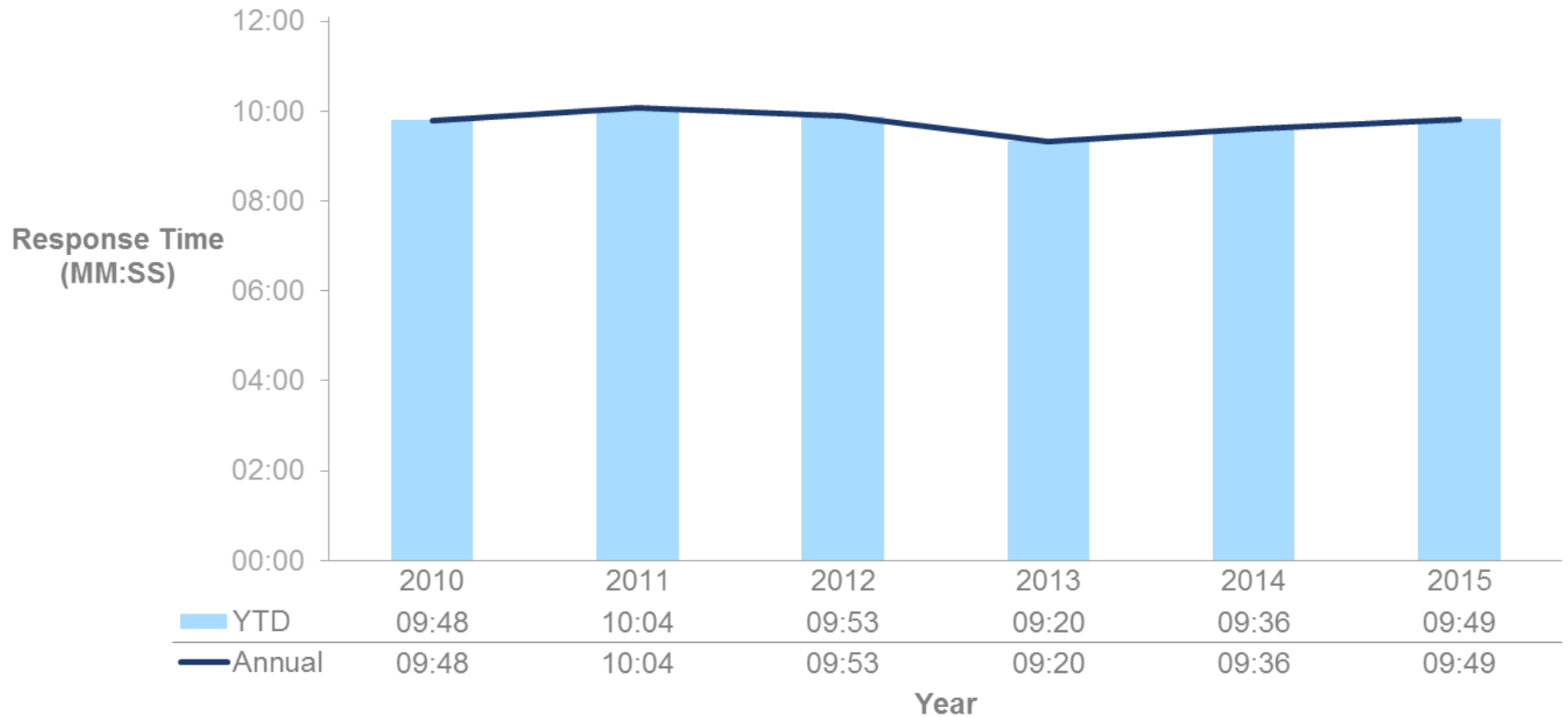
Source: ADRS (January 19<sup>th</sup>, 2015)



# Region of Waterloo \* Paramedic Services PERFORMANCE MEASUREMENT

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

Waterloo Region, January 1<sup>st</sup> to December 31<sup>st</sup>, 2010-2015<sup>†</sup>



<sup>†</sup> Due to a slight change in methodology results may differ from previous reports.

Source: ADRS (January 19<sup>th</sup>, 2015)



# Region of Waterloo \* Paramedic Services

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### Compliance to 2015 response time performance plan, by Canadian Triage Acuity Score (CTAS)

Waterloo Region, October 1<sup>st</sup> to December 31<sup>st</sup>, 2015 and January 1<sup>st</sup> to December 31<sup>st</sup>, 2015

Type of call	Response Time Target Paramedic Services notified (T2) to arrive scene (T4)	Approved 2015 Region of Waterloo target	2015 (Q4) Per cent compliance	2015 (year-to-date) Per cent compliance
Sudden Cardiac Arrest	Defibrillator response in 6 minutes or less (set by MOHLTC)	50% or better (Paramedic Services only)	49%	38%
CTAS 1	Paramedic Services response in 8 minutes or less (set by MOHLTC)	70% or better	65%	68%
CTAS 2	Paramedic Services response in 10 minutes or less	80% or better	78%	78%
CTAS 3	Paramedic Services response in 11 minutes or less	80% or better	80%	78%
CTAS 4	Paramedic Services response in 12 minutes or less	80% or better	80%	80%
CTAS 5	Paramedic Services response in 12 minutes or less	80% or better	79%	79%

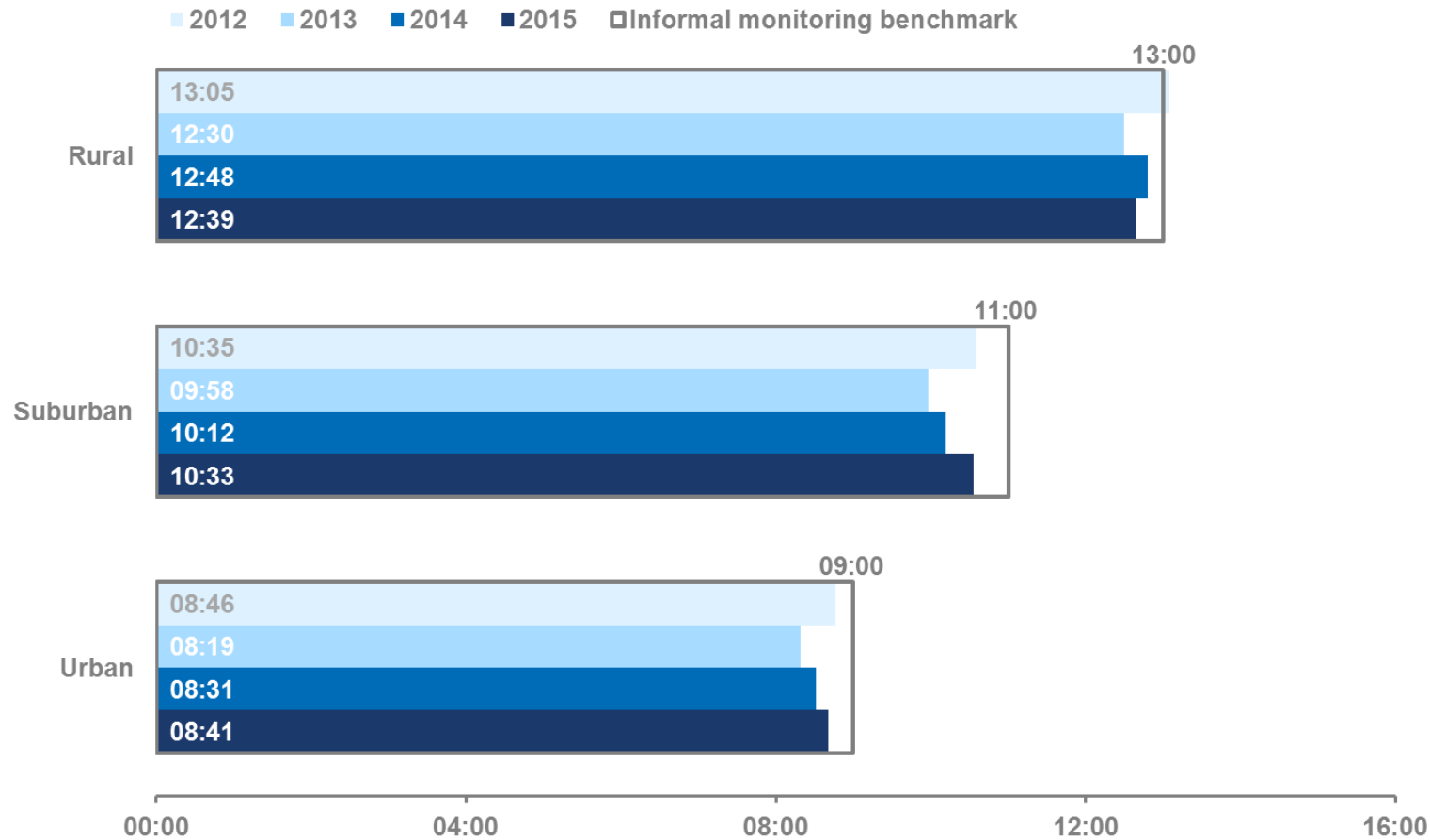
Source: ADRS and TabletPCR (January 19<sup>th</sup>, 2015)



# Region of Waterloo \* Paramedic Services PERFORMANCE MEASUREMENT

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

Waterloo Region, January 1<sup>st</sup> to December 31<sup>st</sup>, 2012-2015



Source: ADRS (January 19<sup>th</sup>, 2015)





# Region of Waterloo \* Paramedic Services

## PERFORMANCE MEASUREMENT

### Paramedic Services' warning system use of audited calls, by month

Waterloo Region, January 1<sup>st</sup>, 2013 to December 31<sup>st</sup>, 2015

Percentage of internally reviewed EMS calls where the use of warning systems was in compliance

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2015	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
2014	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
2013	100.0%	100.0%	99.6%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Notes:** Results presented are a representative sample of calls audited, not a review of all calls.

Months with less than 100% compliance are **highlighted orange**.

**Source:** TabletPCR (January 19<sup>th</sup>, 2015)

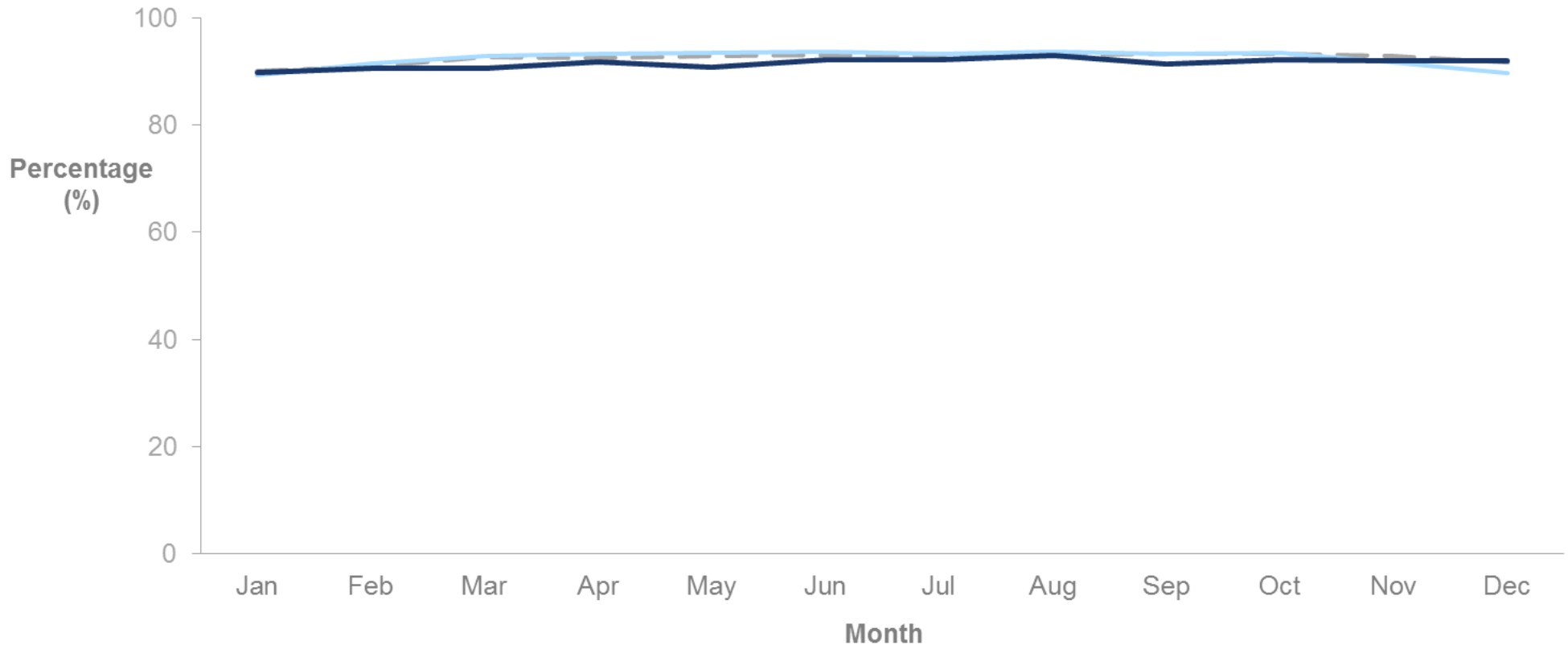


# Region of Waterloo \* Paramedic Services PERFORMANCE MEASUREMENT

## Percentage of calls with crew chute adherence (meets two minute policy), by month

Region of Waterloo Paramedic Services, January 1<sup>st</sup> to December 31<sup>st</sup>, 2012-2014 and January 1<sup>st</sup> to December 31<sup>st</sup>, 2015

— -3-year monthly average    — 2014    — 2015



Source: TabletPCR (January 19th, 2015)



# Region of Waterloo \* Paramedic Services PERFORMANCE MEASUREMENT

## 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

Across the fourth quarter, Offload Delay losses declined 14.4 per cent from the third quarter and were down 44.9 per cent from the first quarter of 2015. Despite the large improvements seen in the latter half of 2015 annual Offload Delay remains 91.7 per cent above the previous lows last observed in 2013, but are now trending in a more sustainable direction demonstrated a decreasing trend from Q1 to Q4. 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 again this quarter, this time 9.0 per cent and 99.0 per cent respectively from the third quarter, perhaps reflecting the influence of additional resources taking effect. By year-end Code Yellow and Code Red remained slightly above the historical average.

### Performance Report

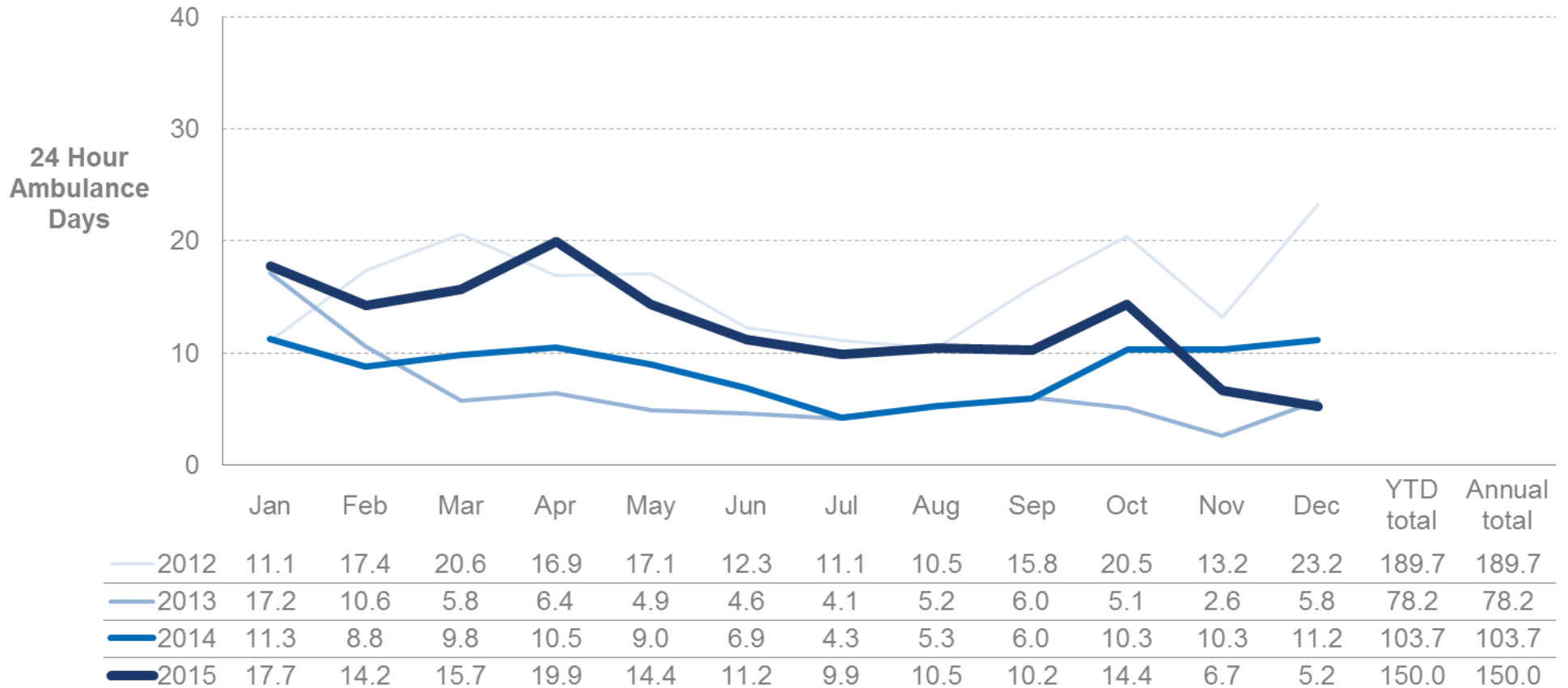
Performance Report		Rolling Quarterly Results		
		Current Q4 (2015)	Previous Q4 (2014)	Current Year-end
Indicator Name	Indicator Definition			
Offload Delay Measurement	The amount of 24 hour ambulance days lost to offload delay over the course of a month.	26.2 days	31.8 days	150.0 days
Code Yellow Status	The percentage of time where Paramedic Services is in a Code Yellow Status for the month (≤ three vehicles available).	11.8%	12.5%	13.3%
Code Red Status	The percentage of time where Paramedic Services is in a Code Red Status for the month (zero vehicles available).	0.8%	0.9%	1.1%



# Region of Waterloo \* Paramedic Services PERFORMANCE MEASUREMENT

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

Region of Waterloo Paramedic Services, January 1<sup>st</sup>, 2012 to December 31<sup>st</sup>, 2015<sup>†</sup>



<sup>†</sup> Currently **offload delay time** is reported, which is defined as the time beyond 30 minutes that a crew waits at the hospital, as a maximum 30 minute wait time per call is deemed to be acceptable. Previously, the total amount of **offload time of calls experiencing offload delay** (greater than 30 minutes) was reported, these are not the same indicator. As a result, trends remain identical to previous reports, but the totals are lower.

Source: TabletPCR (January 19<sup>th</sup>, 2015)

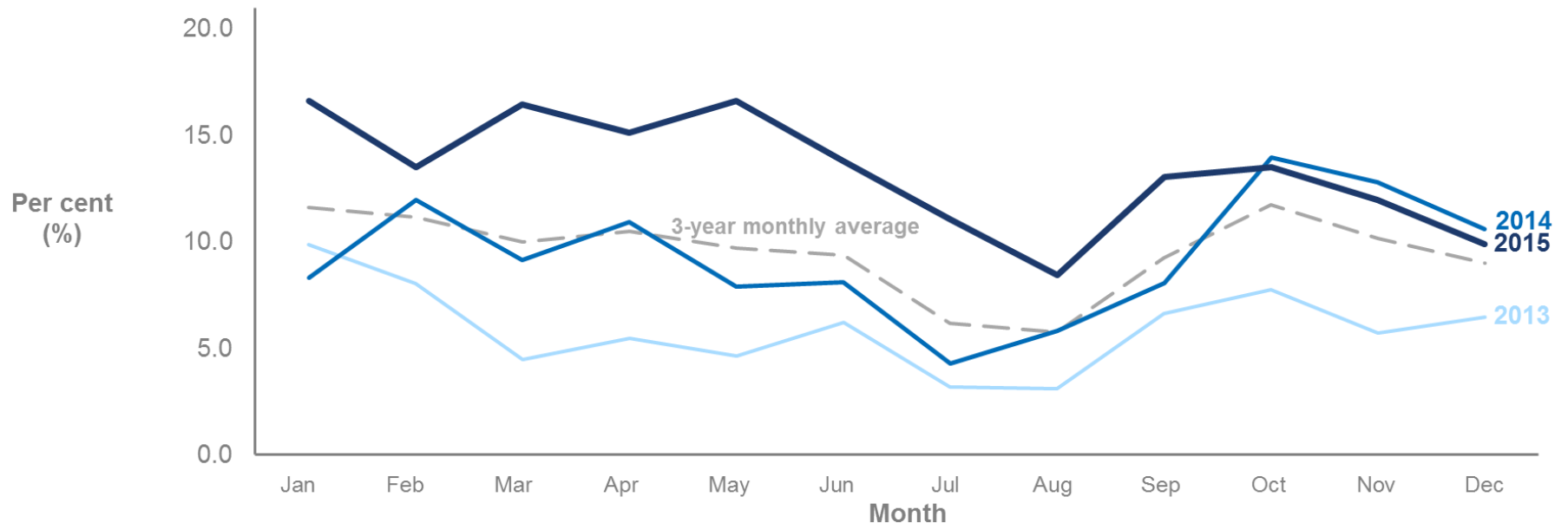




# Region of Waterloo \* Paramedic Services PERFORMANCE MEASUREMENT

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

Waterloo Region, January 1<sup>st</sup>, 2013 to December 31<sup>st</sup>, 2015



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
% of time in code yellow (2013)	9.9	8.0	4.5	5.5	4.6	6.2	3.2	3.1	6.6	7.8	5.7	6.5
% of time in code yellow (2014)	8.3	12.0	9.2	10.9	7.9	8.1	4.3	5.8	8.1	14.0	12.8	10.6
% of time in code yellow (2015)	16.6	13.5	16.4	15.1	16.6	13.8	11.0	8.4	13.0	13.5	12.0	9.9
2015 code yellow time (H:M:S)	123:47:02	90:52:37	122:19:32	108:51:29	123:43:10	99:24:21	82:09:41	62:44:34	93:53:51	100:26:15	86:10:44	73:41:01

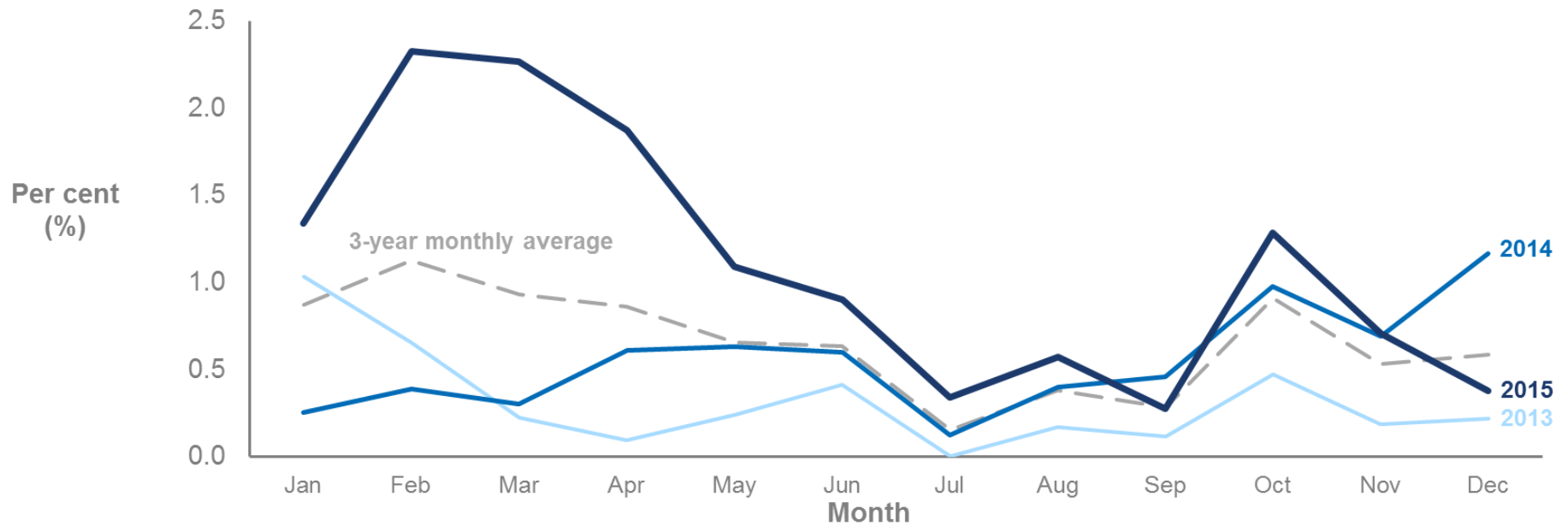
Source: CACC (January 19<sup>th</sup>, 2015)



# Region of Waterloo \* Paramedic Services PERFORMANCE MEASUREMENT

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

Waterloo Region, January 1<sup>st</sup>, 2013 to December 31<sup>st</sup>, 2015



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
% of time in code red (2013)	1.03	0.65	0.22	0.09	0.24	0.41	0.00	0.17	0.12	0.47	0.19	0.22
% of time in code red (2014)	0.25	0.39	0.30	0.61	0.63	0.60	0.12	0.40	0.46	0.97	0.69	1.16
% of time in code red (2015)	1.34	2.33	2.27	1.87	1.09	0.90	0.34	0.57	0.27	1.29	0.71	0.37
2015 code red time (H:M:S)	9:56:23	15:38:2	16:52:1	13:29:1	8:06:47	6:28:21	2:32:24	4:15:16	1:58:19	9:34:14	5:05:19	2:47:13

Source: CACC (January 19th, 2015)



# Region of Waterloo \* Paramedic Services

# PERFORMANCE MEASUREMENT

## 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

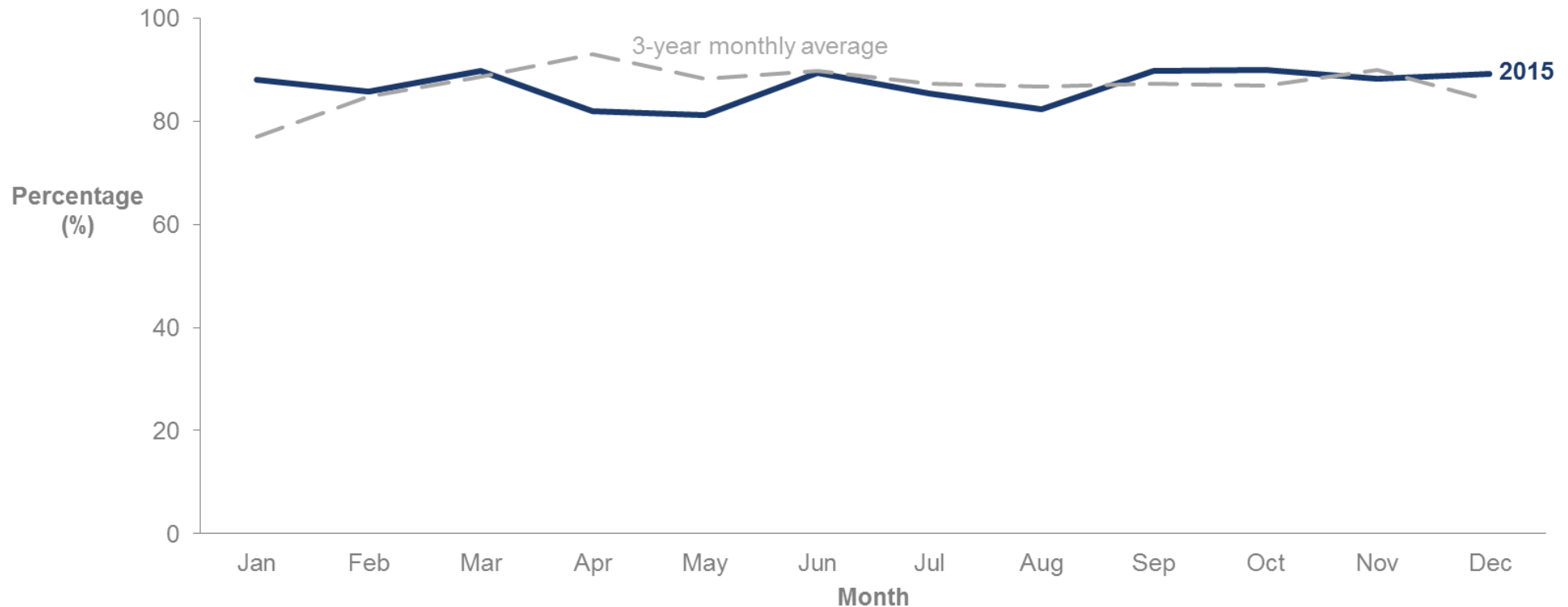
Note that service type indicators tend to fluctuate around the average over time, particularly when a small number of cases are involved. The percentage of stroke patients taken to stroke facilities was slightly at or above the monthly average throughout the quarter. Results for the Return of Spontaneous Circulation (ROSC) indicator continued to track with the monthly 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 monthly average and averaged 57.4 per cent for the quarter (variation is expected for heart attack STEMI due to the numerous variables involved).

### Performance Report

		Rolling Quarterly Results		
Indicator Name	Indicator Definition	Current Q4 (2015)	Previous Q4 (2014)	Current Year-end
Stroke Patient to Stroke Facilities	The percentage of stroke patients taken to Provincial Stroke Facilities. <i>*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.</i>	89.3%	88.3%	86.9%
Return of Spontaneous Circulation (ROSC)	The percentage of cardiac arrest patients with the return of pulse.	15.5%	14.7%	13.5%
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). <i>*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.</i>	57.4%	66.7%	63.6%

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

Region of Waterloo Paramedic Services, January 1<sup>st</sup> to December 31<sup>st</sup>, 2012-2014 and January 1<sup>st</sup>, 2015 to December 31<sup>st</sup>, 2015



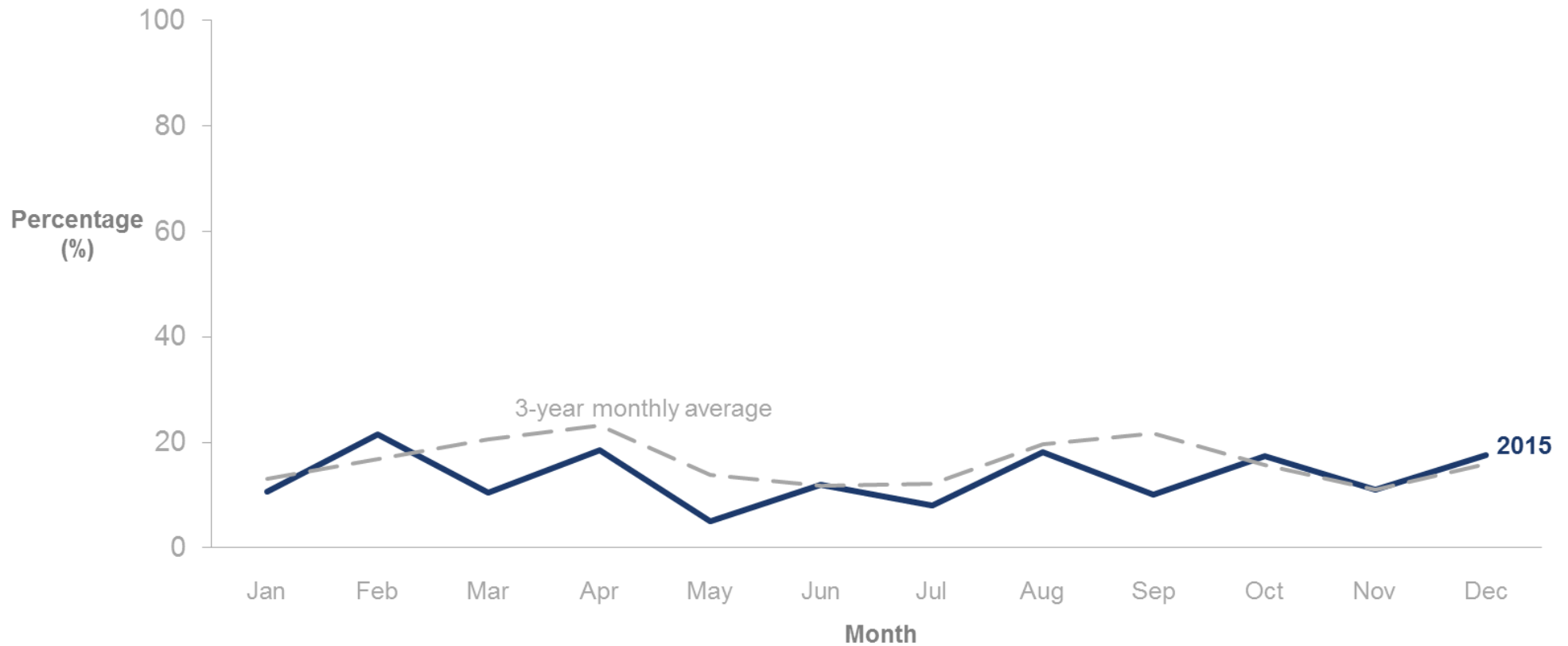
<sup>†</sup>Stroke facilities include: Grand River, Brantford General, Hamilton General, Stratford General, and Guelph General.

Source: TabletPCR (January 19<sup>th</sup>, 2015)



# Region of Waterloo \* Paramedic Services PERFORMANCE MEASUREMENT

## Percentage of cardiac arrest patients with return of spontaneous circulation (ROSC), by month Region of Waterloo Paramedic Services, January 1<sup>st</sup> to December 31<sup>st</sup>, 2012-2014 and January 1<sup>st</sup>, 2015 to December 31<sup>st</sup>, 2015



Source: TabletPCR (January 19<sup>th</sup>, 2015)

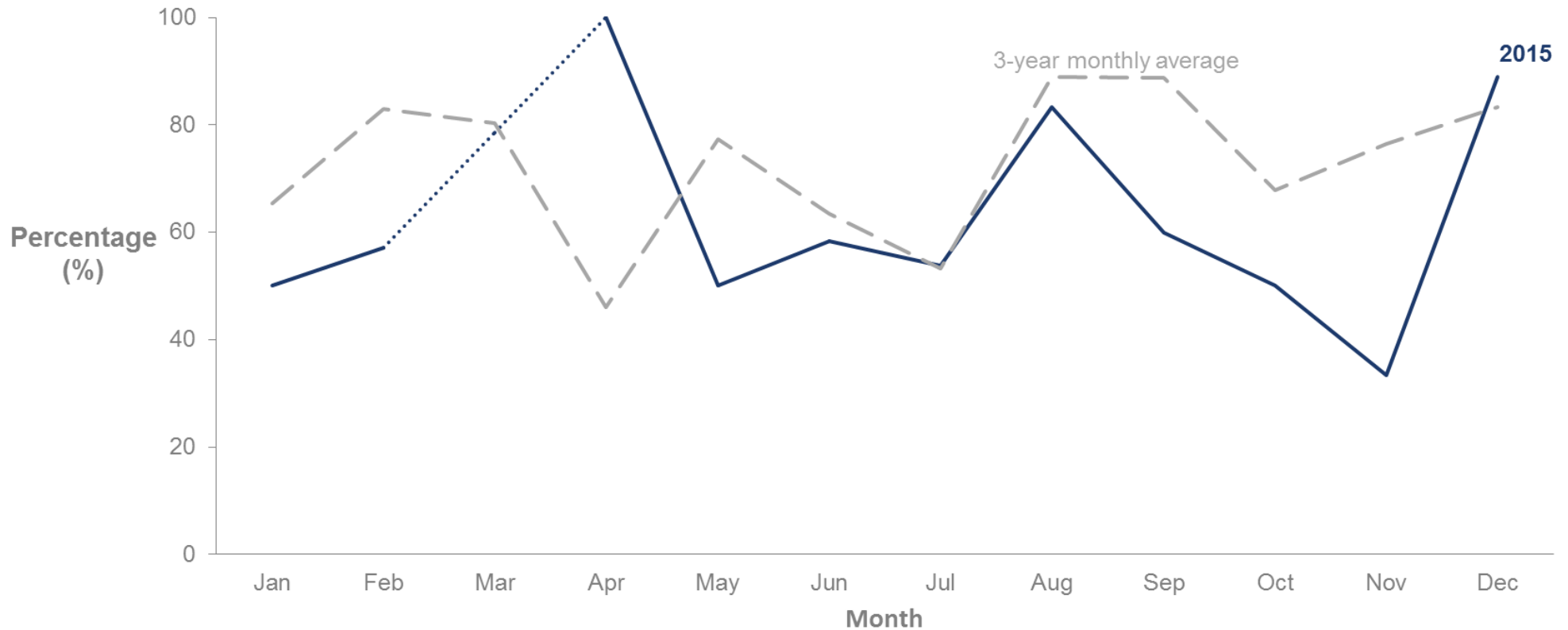




# Region of Waterloo \* Paramedic Services PERFORMANCE MEASUREMENT

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

Waterloo Region, January 1<sup>st</sup> to December 31<sup>st</sup>, 2012-2014 and January 1<sup>st</sup> to December 31<sup>st</sup>, 2015



\*\*Note that in March 2015, there were 0 STEMI cases recorded. The dotted line does not represent an adherence percentage for the month.

Source: St. Mary's Hospital (January 19<sup>th</sup>, 2015)

## E. GLOSSARY

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**ADRS:** Ambulance Dispatch Reporting System

**CACC:** Central Ambulance Communications Centre

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

**Chute Time:** The time it takes an ambulance to depart once notified of a call (Outlined in Paramedic Services Policy #4.3).<sup>ii</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>iii</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>iv</sup>

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

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

**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>ix</sup>

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



# Region of Waterloo \* Paramedic Services

## PERFORMANCE MEASUREMENT

**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>xii</sup>

**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>xiii</sup>

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

**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>xvi</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>xvii</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>xviii</sup>

**Rolling Quarterly Results:** Reviewing the previous three months data as a snapshot of the indicator’s performance over a period of time.

**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>xix</sup>

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



# Region of Waterloo \* Paramedic Services

## PERFORMANCE MEASUREMENT

**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>xxi</sup>

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

**Unit Hour Utilization:** Percentage of staffed vehicles utilized during any given hour of the day.<sup>xxii</sup> Note that when UHU 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.

**Warning System(s):** Depending on the priority of the call, Warning Systems represent emergency lights and/or sirens that may be activated.





# 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> 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.
- <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> Government of Ontario, Ministry of Health and Long-Term Care, Ambulance Call Report Completion Manual (Ontario: Government of Ontario, 2003) 9.
- <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> 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>ix</sup> Government of Ontario, Ministry of Health and Long-Term Care, Ambulance Call Report Completion Manual (Ontario: Government of Ontario, 2003) 17.
- <sup>x</sup> “Defibrillator”. *Merriam-Webster*. Merriam Webster, Incorporated, 2013. Web. 13 August 2013.
- <sup>xi</sup> Government of Ontario, Ministry of Health and Long-Term Care, Ambulance Call Report Completion Manual (Ontario: Government of Ontario, 2003) 9.

- <sup>xii</sup> “Definition of indicator in English”. *Oxford Dictionaries*. Oxford University Press, 2013. Web. 14 August 2013.
- <sup>xiii</sup> “What is Service?”. *OMBI Ontario Municipal CAO’s Benchmarking Initiative*. Ontario Municipal CAO’s Benchmarking Initiative, 2012. Web. 13 August 2013.
- <sup>xiv</sup> Government of Ontario, Ministry of Health and Long-Term Care, Ambulance Call Report Completion Manual (Ontario: Government of Ontario, 2003) 11.
- <sup>xv</sup> Schacter, Mark. Kronick, Murray. “Results-Based Management 101”. *Performance and Planning Exchange*. Performance and Planning Exchange, 2010-2011. Web. 14 August 2013.
- <sup>xvi</sup> “Ambulance Act”. *ServiceOntario e-Laws*. Government of Ontario, 2013. Web. 14 August 2013.
- <sup>xvii</sup> “Cardiac Arrest and Cardiopulmonary Resuscitation Outcome Reports”. *American Heart Association*. American Heart Association, Inc., 2013. Web. 13 August 2013.
- <sup>xviii</sup> Government of Ontario, Ministry of Health and Long-Term Care, Ambulance Call Report Completion Manual (Ontario: Government of Ontario, 2003) 10.
- <sup>xix</sup> “Cardiac Care STEMI Program Frequently Asked Questions”. *Toronto EMS News & Video*. Toronto Emergency Medical Services, 1998-2013. Web. 13 August 2013.
- <sup>xx</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>xxi</sup> “The Ontario Stroke System (OSS)”. *Ontario Stroke Network Advancing the Ontario Stroke System*. Ontario Stroke Network, 2010. Web. 13 August 2013.
- <sup>xxii</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.