



Region of Waterloo * Paramedic Services
PERFORMANCE MEASUREMENT

Performance Measurement Report (Year-end)
For the Period of January – December 2017
Produced on February 12th, 2018



Region of Waterloo * Paramedic Services

PERFORMANCE MEASUREMENT

Table of Contents

Performance Measurement Report (Year-end).....	1
Summary	3
A. Volume and Service Level Indicators	4
Number and rate of vehicle responses per 1,000 population, by dispatch priority code and year	5
Rate of vehicle responses per 1,000 population, by municipality and year	6
Number and rate of vehicle responses per 1,000 population, by municipality and month	7
Number of patient transports, by return priority code	8
Various measures of service provided by Region of Waterloo Paramedic Services, by year	9
Moving 12 month average* Unit Utilization	10
B. Compliance and Quality Assurance Indicators	11
Response time to emergency calls (code 4), 80 th percentile, by month.....	12
Response time to emergency calls (code 4), 80 th percentile, by vehicle response density.....	13
Compliance to 2016 response time performance plan, by Canadian Triage Acuity Score (CTAS).....	14
C. Efficiency Indicators.....	15
12 month moving average number of ambulance days lost to offload delay, by month.....	16
Percentage of time in code yellow status, by month	17
Percentage of time in code red status, by month	18
D. Service and Quality Impact Indicators.....	19
Percentage of stroke patients transported to a stroke facility [†] , by quarter.....	20
Percentage of cardiac arrest patients with return of spontaneous circulation (ROSC), by quarter	21
Percentage of heart attack patients where care was provided in less than 90 minutes (STEMI protocol), by quarter	22
E. GLOSSARY	23
F. Contact Information.....	27



Region of Waterloo * Paramedic Services

PERFORMANCE MEASUREMENT

Summary

A. Volume and Service Level Indicators

Indicator	Year-end 2016	Year-end 2017	Per cent change
Total Number of Vehicle Responses	48,577	52,771	+8.6%
Rate of vehicle responses per 1,000 population*	83.3	89.1	+7.1%
Unit Utilization	38.8%	39.3%	1.2%

C. Efficiency Indicators

Indicator	Year-end 2016	Year-end 2017	Per cent change
Offload Delay*	91.6 days	192.5 days	+110.1%
Code Yellow Time	10.5%	9.9%	-5.6%
Code Red Time	0.6%	0.6%	0.0%

B. Compliance and Quality Assurance Indicators

Indicator	Year-end 2016	Year-end 2017	Per cent change
Paramedic Services Response Time to Emergency Calls	9min 37sec	9min 21sec	-2.8%
Response Time Performance Plan Compliance Resuscitation calls (CTAS1)	71.7%	73.8%	+2.9%
Response Time Performance Plan Compliance Emergent calls (CTAS2)	79.0%	81.6%	+3.3%

D. Service and Quality Impact Indicators

Indicator	Year-end 2016	Year-end 2017	Per cent change
Stroke Patient to Stroke Facility*	86.9%	89.7%	+3.3%
Return of Spontaneous Circulation*	13.5%	14.1%	4.7%
Heart attack (STEMI) protocol*	58.4%	64.4%	+10.2%

*A similar indicator is captured, with some variation in measurement units, within a portion of the MBN Canada (formerly 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

The 52,771 vehicle responses experienced by Paramedic Services in 2017, the most ever in a year, represent the largest year-over-year growth, both in absolute and relative terms (4,194 or 8.6 per cent additional responses), in the service's history. The rate of vehicle responses increased 7.1 per cent, and is growing faster than the rate of population growth. The number of vehicle responses provided in 2017 exceeded the Paramedic Services Master Plan projection for 2017 by 3,918 (8.0 per cent). Unit utilization averaged 39.3 per cent for the last 12 months with a range of 25.2 per cent at 5AM to 49.1 per cent at 9PM. Paramedic Services' master plan established a benchmark of target of 35 per cent; above this threshold 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. The effects of three additional 12-hour ambulances added in July 2017 were immediately evident; unit utilization improved from 41.3 per cent to 37.3 per from the first half of 2017 to the second half.

Indicator Name	Indicator Definition	Year-end 2016	Year-end 2017	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.	48,577	52,771	+8.6%
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.	83.3	89.1	+7.1%
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.	38.8%	39.3%	1.2%



Region of Waterloo * Paramedic Services

PERFORMANCE MEASUREMENT

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 1st to December 31st, 2012-2017

Number of vehicle responses

Overall priority code	2012	2013	2014	2015	2016	2017	2012→2017
1 – Deferrable	805	517	465	164	122	83	
2 – Scheduled	163	162	151	129	119	65	
3 – Prompt	11,776	11,218	11,340	13,011	13,066	13,705	
4 – Urgent	27,717	28,341	30,140	32,040	35,270	38,918	
Rate per 1,000 (YTD)	72.7	71.5	74.0	78.9	83.3	89.1	
Annual change (%)	5.7%	-1.6%	3.5%	6.6%	5.5%	7.1%	
Total vehicle responses (YTD)	40,461	40,238	42,096	45,344	48,577	52,771	
Annual change (%)	6.7%	-0.6%	4.6%	7.7%	7.1%	8.6%	
Total vehicle responses (annual)	40,461	40,238	42,096	45,344	48,577	52,771	
Annual change (%)	6.7%	-0.6%	4.6%	7.7%	7.1%	8.6%	

Source: ADRS (February 12th, 2018)

■ 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 1st to December 31st, 2012-2017

Rate of vehicle responses per 1,000, by year, within Waterloo Region		Year-to-date		2017
		2012 → 2017	Min. - Max.	
Cities	Cambridge		72.7 - 99.1	99.1
	Kitchener		79.9 - 94.2	94.2
	Waterloo		53.5 - 71.7	71.7
	Cities total		71.1 - 89.6	89.6
Townships	North Dumfries		63.1 - 81.6	79.5
	Wellesley		36.2 - 43.1	40.0
	Wilmot		58.2 - 71.9	71.9
	Woolwich		66.7 - 81.9	81.9
	Townships total		59.6 - 71.4	71.4
Waterloo Region total			69.8 - 87.5	87.5
Number and proportion of total vehicle Responses outside Waterloo Region*		2012 → 2017	Min. - Max.	2017
Number of vehicle responses			835 - 1,059	989 vehicle responses
Proportion of total vehicle responses			1.8 - 2.4	1.9 per cent

* A population based rate of vehicle responses cannot be accurately calculated for calls outside of Waterloo Region because it is not possible to determine an accurate service population (denominator).

Source: ADRS (February 12th, 2018)



Region of Waterloo * Paramedic Services

PERFORMANCE MEASUREMENT

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

Region of Waterloo Paramedic Services, inside and outside of Waterloo Region, January 1st to December 31st, 2017

Rate of vehicle responses per 1,000, by month, within Waterloo Region

		Jan → Dec	Year-to-date (YTD)	
			Rate per 1,000	Total calls
Cities	Cambridge		99.1	13,467
	Kitchener		94.2	23,574
	Waterloo		71.7	9,793
	Cities total		89.6	46,834
Townships	North Dumfries		79.5	821
	Wellesley		40.0	465
	Wilmot		71.9	1,531
	Woolwich		81.9	2,131
	Townships total		71.4	4,948
Waterloo Region total			87.5	51,782
Outside Waterloo Region total*				989
Waterloo Region Paramedic Services total*				52,771

* A population based rate of vehicle responses cannot be accurately calculated for calls outside of Waterloo Region because it is not possible to determine an accurate service population (denominator).

Source: ADRS (February 12th, 2018)

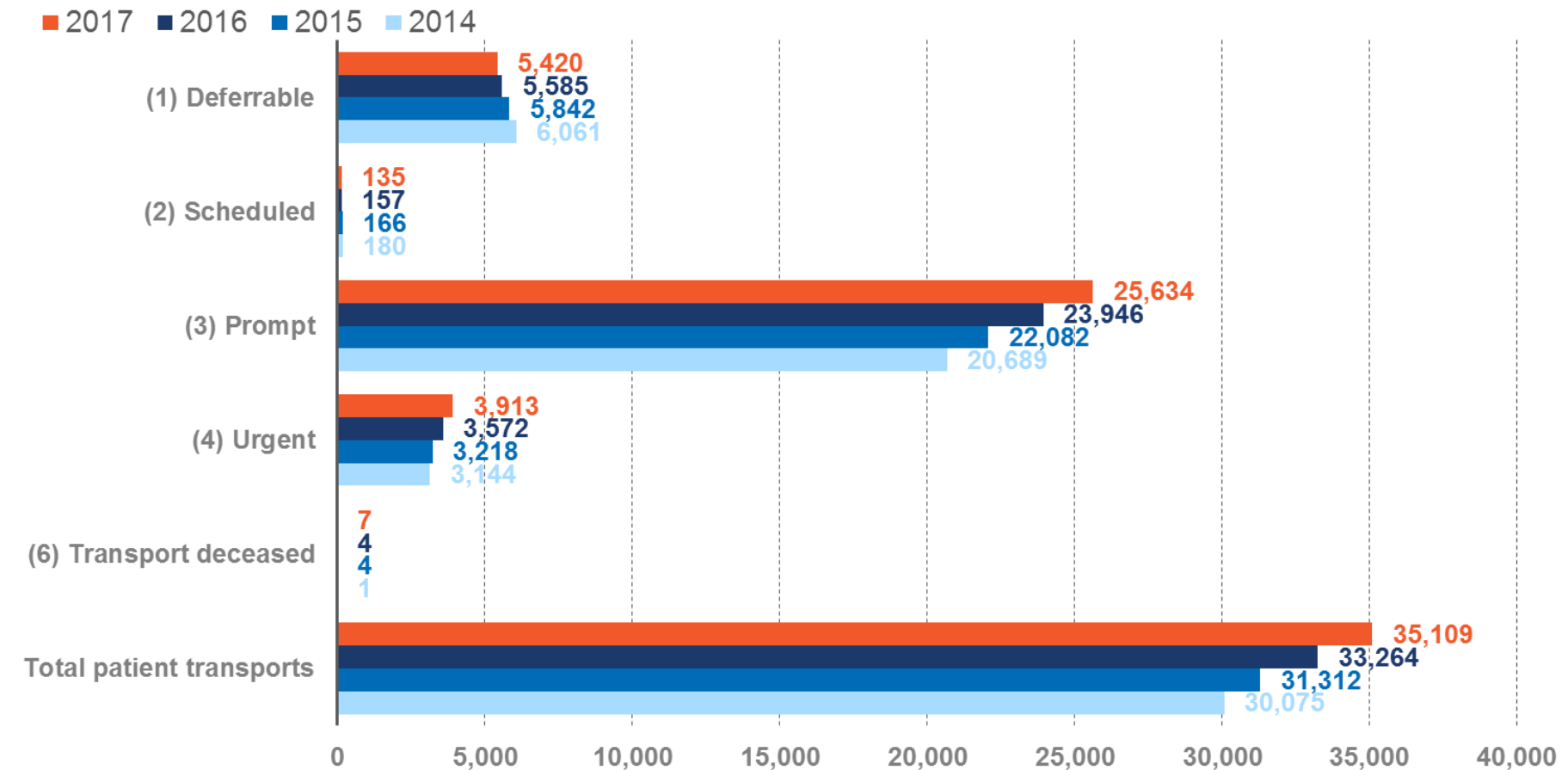
Lowest value
 Middle value(s)
 Highest value



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 1st to December 31st, 2015-2017



Source: TabletPCR (February 12th, 2018)



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 1st to December 31st, 2012-2017

Measure	2012	2013	2014	2015	2016	2017	2012 → 2017	Per cent change (2012-2017)
Number of unique calls (T1, code 1-4)	35,504	35,229	37,232	39,384	42,187	45,621		28.5
Number of vehicles dispatched (T2, code 1-4)	40,461	40,238	42,096	45,344	48,577	52,771		30.4
Number of vehicles arriving on scene (T4, code 1-4)	36,341	36,373	37,884	40,352	43,400	46,660		28.4
Number of vehicles transporting patients (T6, code 1-4)	26,648	27,408	29,143	30,645	32,720	34,486		29.4
Number of patients transported (T6, code 1-4)	26,948	28,725	29,425	30,989	33,064	34,601		28.4
Per cent of vehicles dispatched arriving on scene	89.8	90.4	90.0	89.0	89.3	88.4		-1.6
Per cent of vehicles arriving on scene transporting patients	73.3	75.4	76.9	75.9	75.4	73.9		0.8

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

Source: ADRS (February 12th, 2018)

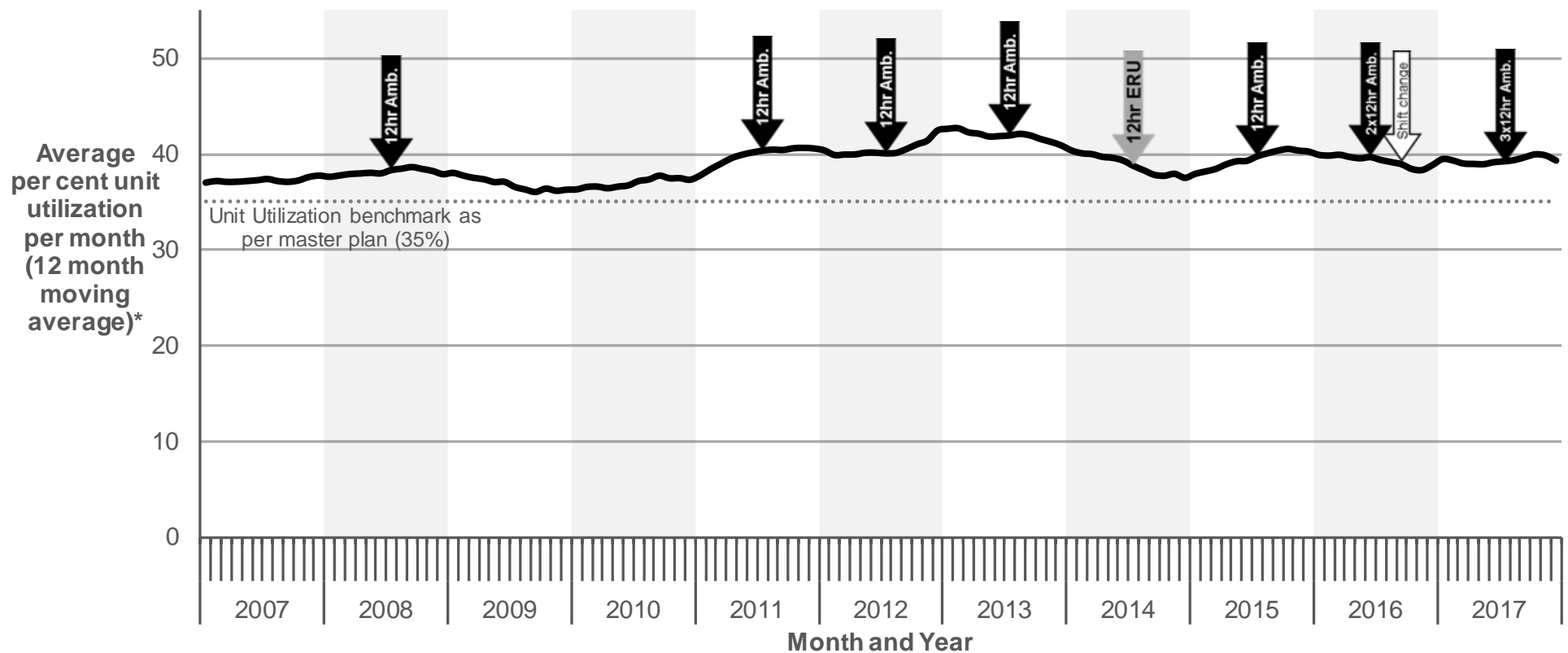
Lowest value
 Middle value(s)
 Highest value



Region of Waterloo * Paramedic Services PERFORMANCE MEASUREMENT

Moving 12 month average* Unit Utilization

Region of Waterloo Paramedic Services, January 1st, 2007 to December 31st, 2017



*On average, ambulances were in use 39.3 per cent of each month from January 2017 to December 2017 compared to 38.8 per cent from January 2016 and December 2016. **For unit utilization, a decreasing trend is considered positive, while an increasing trend is seen as a negative.**

Source: ADRS (February 12th, 2018)



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

For 2017 the 80th percentile response time to emergency calls (code 4) within Waterloo Region was 9 minutes and 21 seconds, 16 seconds (2.8 per cent) faster than in 2016. Despite growth in call response volume throughout 2017 response times improved, in part, due to three 12-hour ambulances added in July 2017. The 80th percentile response time for the second half of the year was 20 seconds faster than the first half of the year despite a greater increase in call volume in the second half of the year. Paramedic Services continues to monitor response times observed from urban, suburban, and rural perspectives, as defined by call density, against an informal benchmark. Response times vary according to population and road density. Drives times are longer in rural areas. Compliance to the 2017 response time performance plan improved for most acuity levels with some of the biggest improvements seen in the sudden cardiac arrest and resuscitation call types. 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.

Indicator Name	Indicator Definition	Year-end 2016	Year-end 2017	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 th percentile.	9min37sec	9min21sec	-2.8%
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.	71.7%	73.8%	+2.9%
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.	79.0%	81.6%	+3.3%

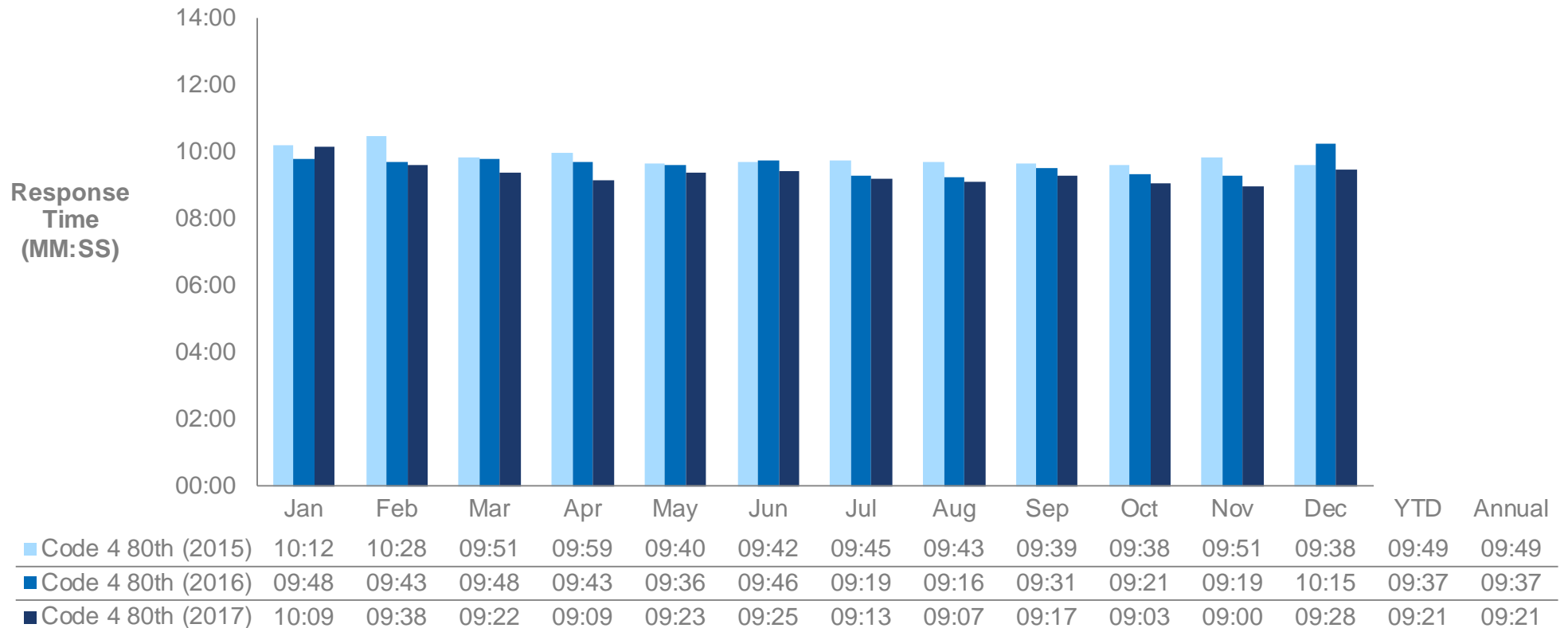


Region of Waterloo * Paramedic Services

PERFORMANCE MEASUREMENT

Response time to emergency calls (code 4), 80th percentile, by month

Any paramedic service, inside Waterloo Region, January 1st, 2015 to December 31st, 2017



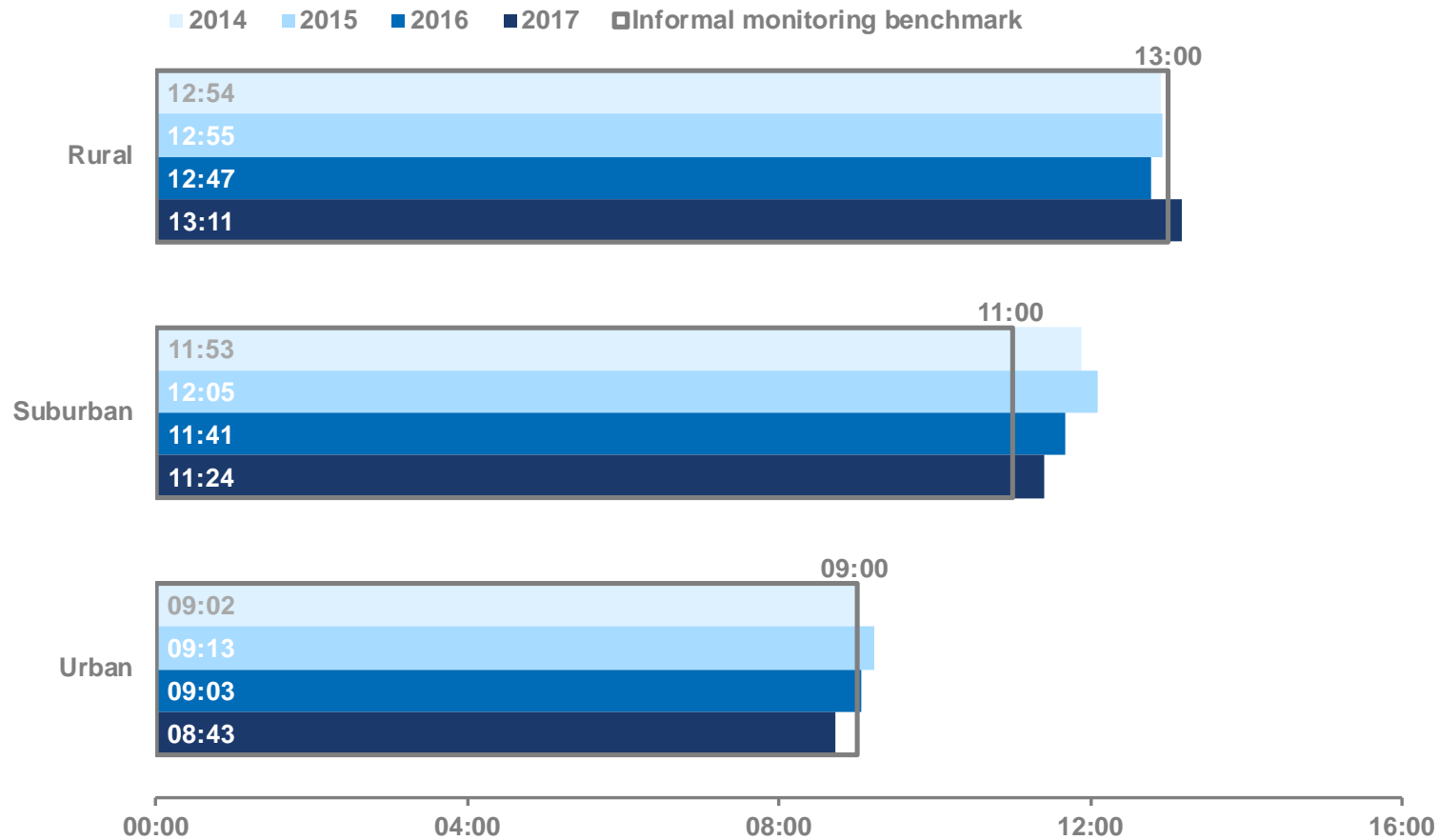
Sources: ADRS (February 12th, 2018)



Region of Waterloo * Paramedic Services PERFORMANCE MEASUREMENT

Response time to emergency calls (code 4), 80th percentile, by vehicle response density

Any paramedic service, inside Waterloo Region, January 1st, 2014 to December 31st, 2017



Source: ADRS (February 12th, 2018)



Region of Waterloo * Paramedic Services

PERFORMANCE MEASUREMENT

Compliance to 2017 response time performance plan, by Canadian Triage Acuity Score (CTAS)

Region of Waterloo Paramedic Services, inside or outside of Waterloo Region, January 1st to December 31st, 2016 and 2017

Response Time Target Paramedic Services notified (T2) to arrive scene (T4)	Approved 2017 Region of Waterloo target	2016		2017	
		Per cent compliance	Percentile time (mm:ss)	Per cent compliance	Percentile time (mm:ss)
Defibrillator response in 6 minutes or less (set by MOHLTC)	50% or better (Paramedic Services only)	39.4%	06:41	43.8%	06:25
Paramedic Services response in 8 minutes or less (set by MOHLTC)	70% or better	71.7%	07:50	73.8%	07:40
Paramedic Services response in 10 minutes or less	80% or better	79.0%	10:10	81.6%	09:45
Paramedic Services response in 11 minutes or less	80% or better	79.5%	11:06	80.8%	10:52
Paramedic Services response in 12 minutes or less	80% or better	81.1%	11:46	83.2%	11:21
Paramedic Services response in 12 minutes or less	80% or better	77.8%	12:27	80.2%	11:58

Source: ADRS and TabletPCR (February 12th, 2018)

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 2017, ambulance days lost to offload delay increased 110.1 per cent compared 2016 resulting in the loss of 101 additional ambulance days relative to 2016. Currently, the equivalent of 16.0 ambulance days per month is lost to offload delay. The large increase in offload delay observed in 2017 is attributed to increased paramedic service call volumes, and increased patient walk-in volumes at the hospitals. In addition, funding for the Dedicated Offload Nurse Program from the Ministry of Health & Long-Term Care has not kept pace with the increases in patient volumes. Paramedic Services continues to work with area Emergency Departments to minimize losses due to offload delay. Relative to 2016, there were 97 fewer code yellow events and less time spent in code yellow in 2017 while there were 17 more code red events, but a similar amount of time spent in code red in 2017. The effects of three additional 12-hour ambulances added in July 2017 were immediately evident. From the first half of the year to the second half, the number of code yellow and red events decreased 29.2 per cent, and the average duration decreased 8 minutes. Decreases in this range are typical of the improvement achieved when ambulance units are added in July.

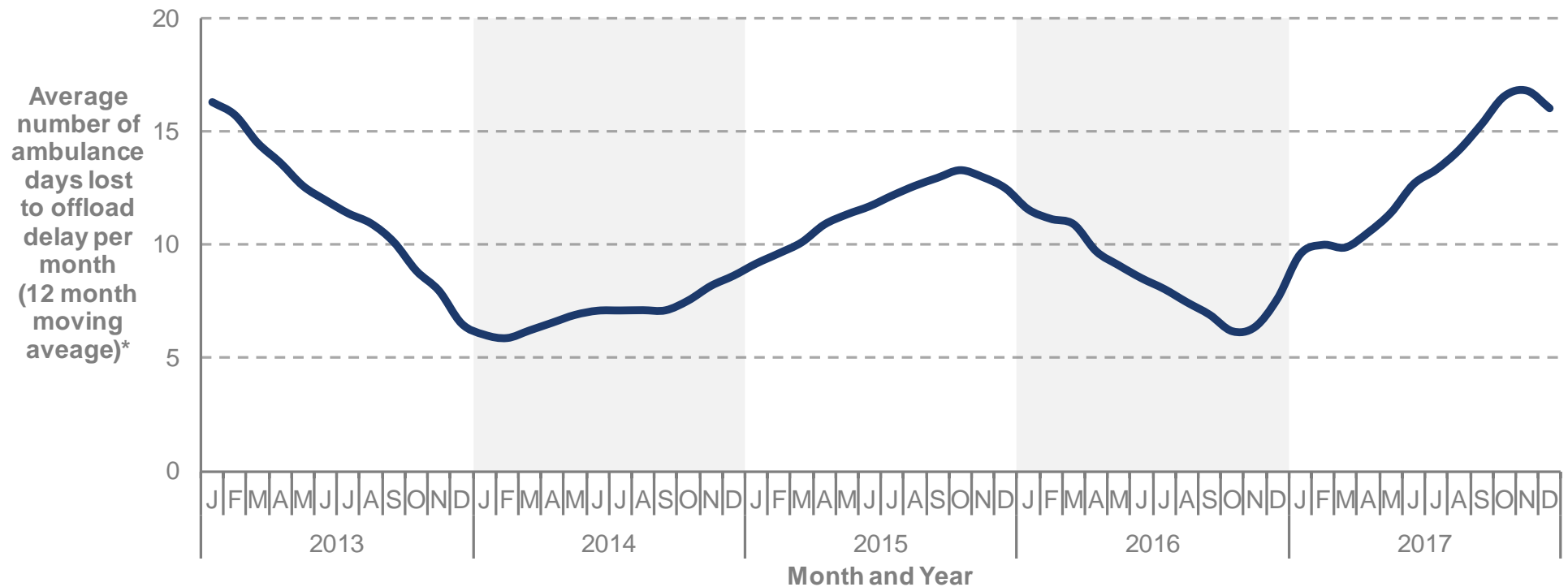
Indicator Name	Indicator Definition	Year-end 2016	Year-end 2017	Per cent change
Offload Delay Measurement	The amount of 24 hour ambulance days lost to offload delay over the course of a month.	91.6days	192.5days	+110.1%
Code Yellow Status	The percentage of time where Paramedic Services is in a Code Yellow Status for the month (\leq three vehicles available).	10.5%	9.9%	-5.6%
Code Red Status	The percentage of time where Paramedic Services is in a Code Red Status for the month (zero vehicles available).	0.6%	0.6%	0.0%



Region of Waterloo * Paramedic Services PERFORMANCE MEASUREMENT

12 month moving average number of ambulance days lost to offload delay, by month

Region of Waterloo Paramedic Services, inside and outside of Waterloo Region, January 1st, 2013 to December 31st, 2017



*On average, 16.5 days of offload delay were experienced each month from January 2017 to December 2017, a deterioration of 110.1 per cent from December of 2016. **For offload delay, a decreasing trend is considered positive, while an increasing trend is seen as negative.**

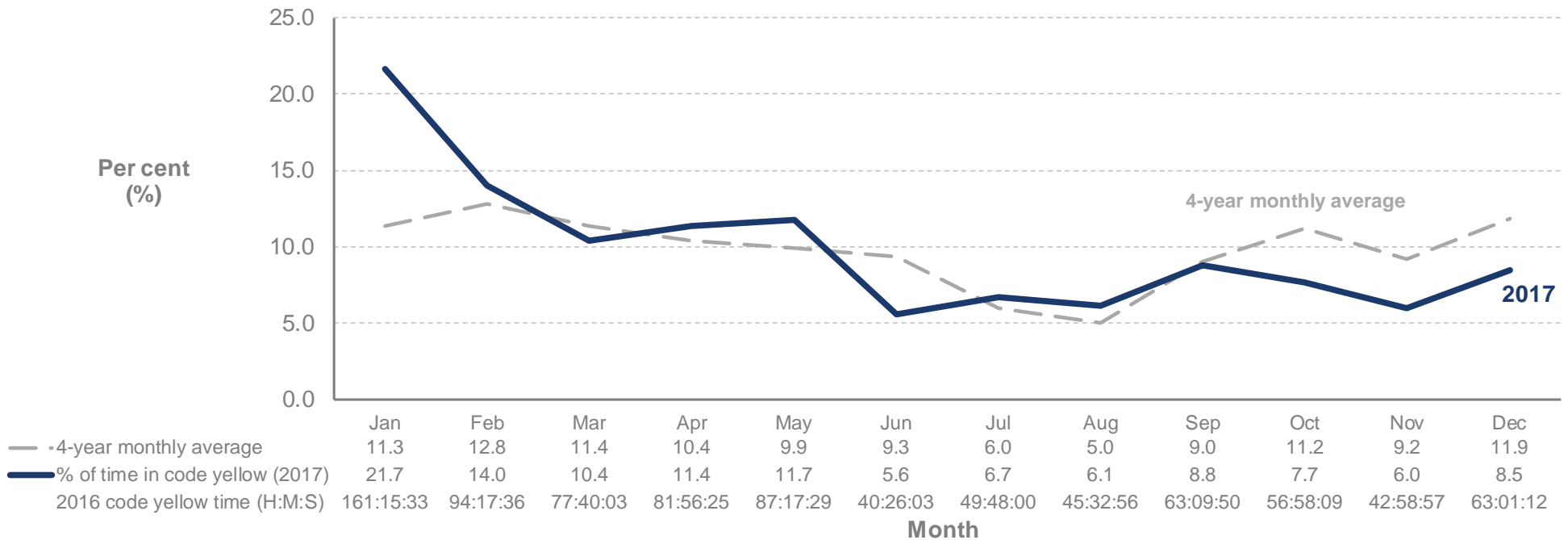
Source: TabletPCR (February 12th, 2018)



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 1st to December 31st 2013-2017



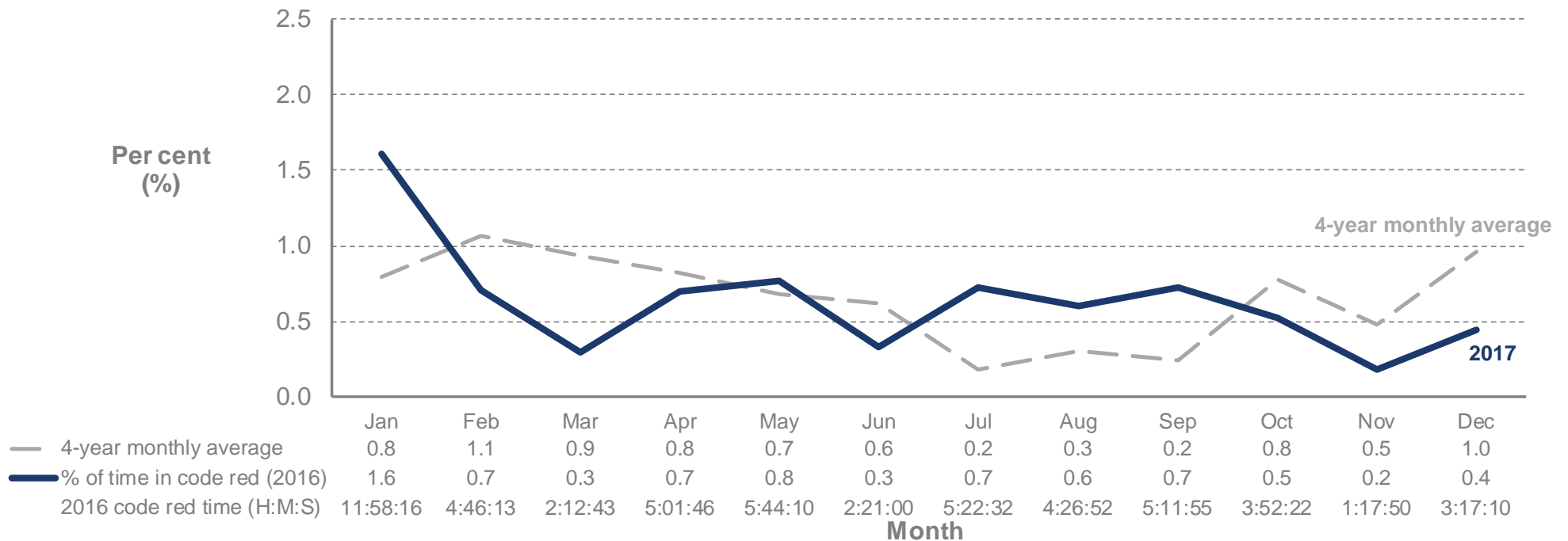
Source: CACC (February 12th, 2018)



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 1st to December 31st 2013-2017



Source: CACC (February 12th, 2018)



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

The percentage of stroke patients taken to stroke facilities improved 3.3 per cent from 2016. The percentage of cardiac arrest patients with the return of pulse also improved between 2016 to 2017, up 4.7 per cent. As any return of spontaneous circulation is deemed to be positive, results are in an acceptable range. Heart attack STEMI (ST-segment elevation myocardial infarction) protocol compliance (providing care in less than 90 minutes) improved 10.2 per cent from the previous year, but was below the above the historical average. Note that service type indicators tend to fluctuate around the average over time, due to the small number of cases and the large number of complex variables involved in these cases.

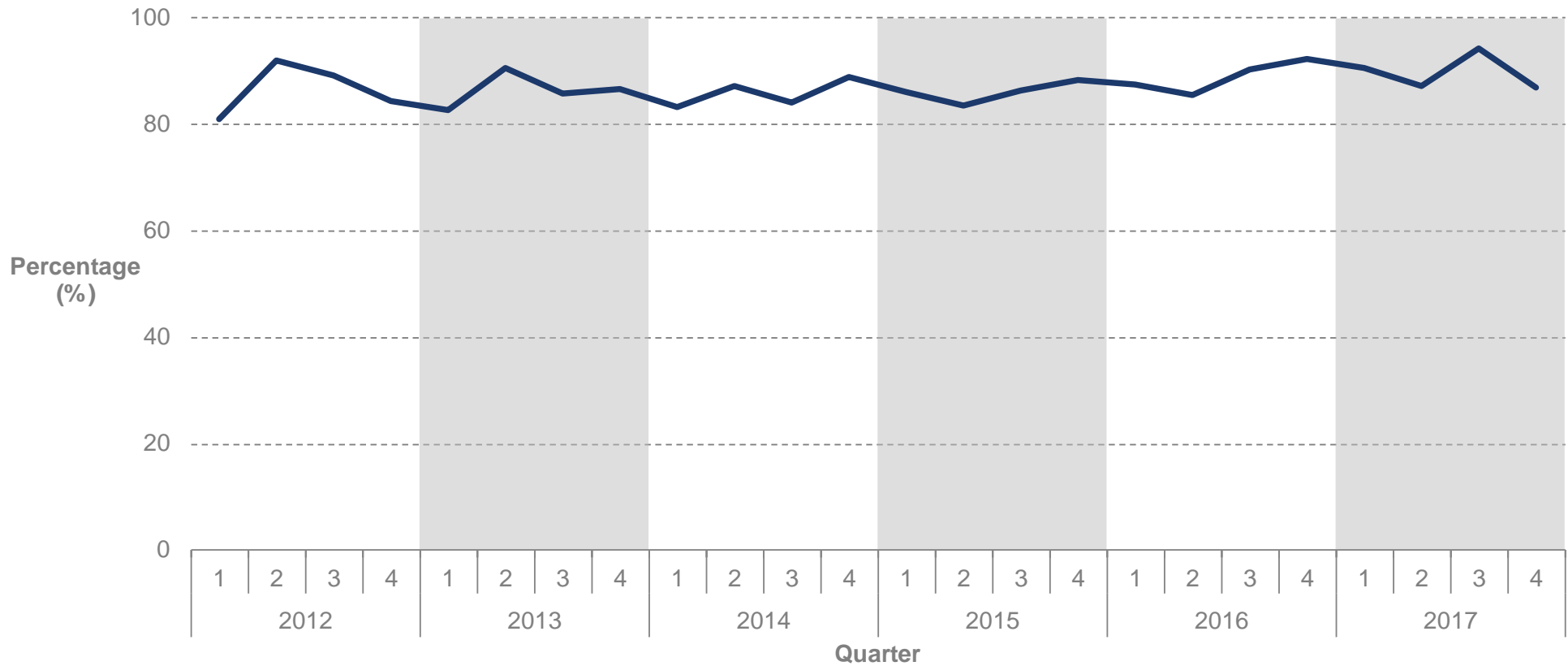
Indicator Name	Indicator Definition	Year-end 2016	Year-end 2017	Per cent change
Stroke Patient to Stroke Facilities	The percentage of stroke patients taken to Provincial Stroke Facilities. *Note that 'stroke protocol' outlines that only patients with certain symptoms and within certain timelines are transported to a stroke facility. Due to this, a variance under 100% may not necessarily represent a missed target.	86.9%	89.7%	+3.3%
Return of Spontaneous Circulation (ROSC)	The percentage of cardiac arrest patients with the return of pulse.	13.5%	14.1%	4.7%
Heart attack (STEMI) Protocol ST-Segment Elevation Myocardial Infarction	Percentage of STEMI patients where care was provided in less than 90 minutes ('STEMI' represents a type of heart attack). *Note: 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.	58.4%	64.4%	+10.2%



Region of Waterloo * Paramedic Services PERFORMANCE MEASUREMENT

Percentage of stroke patients transported to a stroke facility[†], by quarter

Region of Waterloo Paramedic Services, inside and outside of Waterloo Region, January 1st, 2012 to December 31st, 2017



[†]Stroke facilities include: Grand River, Brantford General, Hamilton General, Stratford General, and as of December 2013, Guelph General.

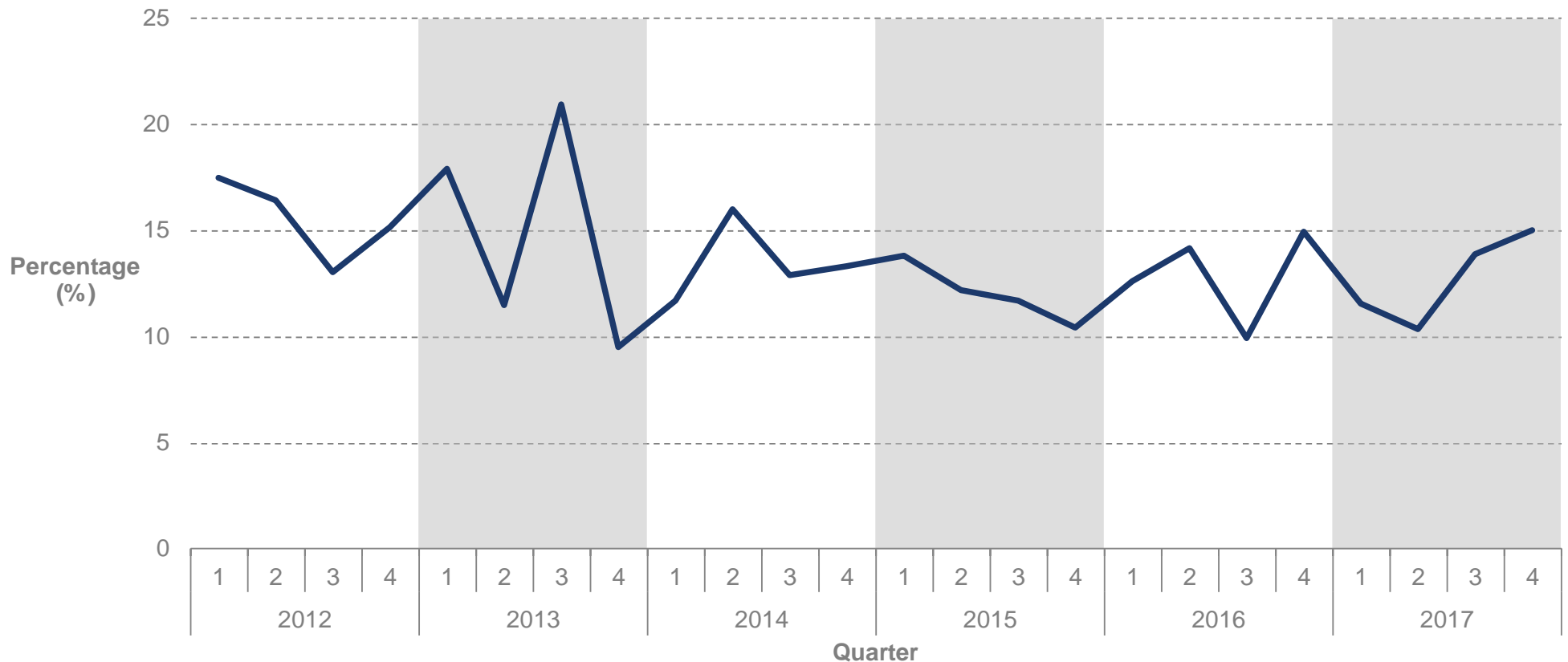
Source: TabletPCR (February 12th, 2018)



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 1st, 2012 to December 31st, 2017



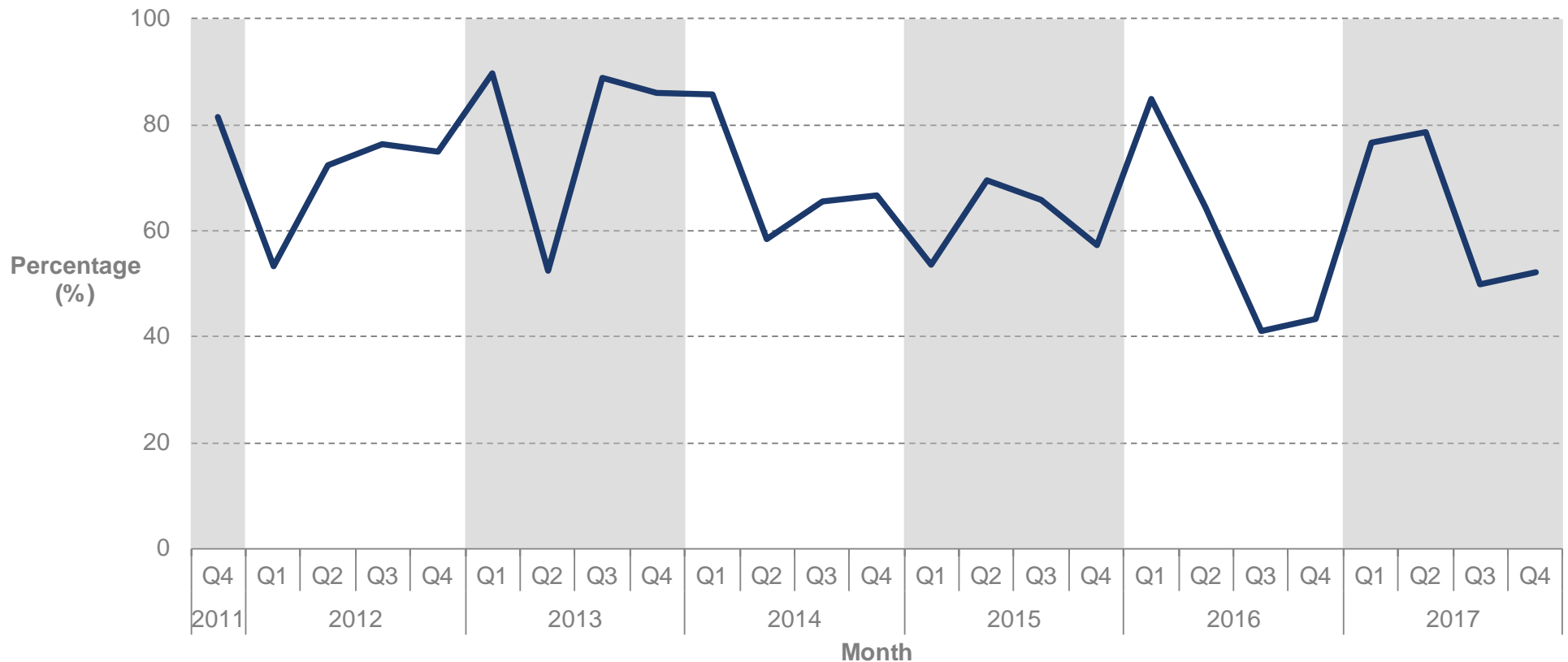
Source: TabletPCR (February 12th, 2018)



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, September 1st, 2011 to December 31st, 2017



Source: St. Mary's Hospital (February 12th, 2018)

E. GLOSSARY

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.ⁱ

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

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).ⁱⁱⁱ

Code 3 (Prompt): A call that should be performed without delay (e.g. serious injury or illness).^{iv}

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).^v

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.^{vi}

Code Yellow: When the Region of Waterloo Paramedic Services is at minimum coverage of three vehicles or less.^{vii}



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.^{viii}

Defibrillator: An electronic device that applies an electric shock to restore the rhythm of a fibrillating heart.^{ix}

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).^x

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.^{xi}

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.^{xii}

Patient Transport(s): The total number of patients carried in the ambulance during a given call.^{xiii}

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.^{xiv}

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.^{xv}



Region of Waterloo * Paramedic Services

PERFORMANCE MEASUREMENT

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.^{xvi}

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).^{xvii}

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.^{xviii}

STEMI Facilities: A hospital that houses onsite Percutaneous Coronary Intervention (PCI) facilities with an experienced interventional team.^{xix}

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.^{xx}

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.^{xxi} 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 1st) to the end of the reporting period. The Year-end report's end date is December 31st, and the year-end report's end date is December 31st.



Region of Waterloo * Paramedic Services

PERFORMANCE MEASUREMENT

F. Contact Information

Region of Waterloo Public Health and Emergency Services

Paramedic Services

120 Maple Grove Road

Cambridge, Ontario N3H 4R6

Tel: 519-650-8295

Fax: 519-650-3855

Stephen VanValkenburg, Director/Chief, Paramedic Services

svanvalkenburg@regionofwaterloo.ca

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.



Region of Waterloo * Paramedic Services

PERFORMANCE MEASUREMENT

Notes

-
- ⁱ “Definition of cardiac arrest in English”. *Oxford Dictionaries*. Oxford University Press, 2013. Web. 13 August 2013.
- ⁱⁱ Government of Ontario, Ministry of Health and Long-Term Care, Ambulance Call Report Completion Manual (Ontario: Government of Ontario, 2003) 9.
- ⁱⁱⁱ Government of Ontario, Ministry of Health and Long-Term Care, Ambulance Call Report Completion Manual (Ontario: Government of Ontario, 2003) 9.
- ^{iv} Government of Ontario, Ministry of Health and Long-Term Care, Ambulance Call Report Completion Manual (Ontario: Government of Ontario, 2003) 9.
- ^v Government of Ontario, Ministry of Health and Long-Term Care, Ambulance Call Report Completion Manual (Ontario: Government of Ontario, 2003) 9.
- ^{vi} 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.
- ^{vii} 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.
- ^{viii} Government of Ontario, Ministry of Health and Long-Term Care, Ambulance Call Report Completion Manual (Ontario: Government of Ontario, 2003) 17.
- ^{ix} “Defibrillator”. *Merriam-Webster*. Merriam Webster, Incorporated, 2013. Web. 13 August 2013.
- ^x Government of Ontario, Ministry of Health and Long-Term Care, Ambulance Call Report Completion Manual (Ontario: Government of Ontario, 2003) 9.
- ^{xi} “Definition of indicator in English”. *Oxford Dictionaries*. Oxford University Press, 2013. Web. 14 August 2013.

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