



Staff Report

Peterborough Regional Liaison Committee

To: Chair and Members of Committee
From: Randy Mellow, Chief of Paramedics
Date: February 11, 2021

Subject: PAR 2021 001 Paramedic Service Operational Key Performance Indicators

Recommendation: Receive the report for information only.

Overview

The purpose of this report is to provide an overview of a suite of operational key performance indicators (O-KPIs) to be collected by Peterborough County/City Paramedics (PCCP) for the purpose of performance reporting to Peterborough Regional Liaison Committee.

Background

The number one priority of Peterborough County/City Paramedic Service (PCCP) is to provide the best possible prehospital clinical care to the residents and visitors of Peterborough County and City and to do so in the most effective and efficient method possible. In order to achieve this, PCCP administration performs annual analysis of paramedic service call volumes, response times and patient outcomes (where possible). The demonstrated result of this analysis is evidenced by the services ability to meet and exceed response time targets while facing disproportionately higher call volume increases and with rates of service expansion and operating costs which fall below the regional average.

While PCCP remains committed to continual response time and deployment analysis and reporting, the department has now broadened the scope of its performance measurement by introducing an expanded suite of operational key performance indicators (O-KPI) that look well beyond traditional (and legislated) response time performance. The intent of O-KPIs is to provide the City, County and public a detailed view of the paramedic service operational efficiency and to provide benchmarking that will form the basis of ongoing evaluation and performance strategy.

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Analysis

As presented to Peterborough Regional Liaison Committee in 2018, the service has established a suite of Operational Key Performance Indicators, which built upon those created by Paramedic Chiefs of Canada.

For summary purposes. This report includes a broad sampling of O-KPI's for the paramedic service. For a full analysis, the 2020 O-KPI's Summary sheet is included as Appendix 1 of this report.

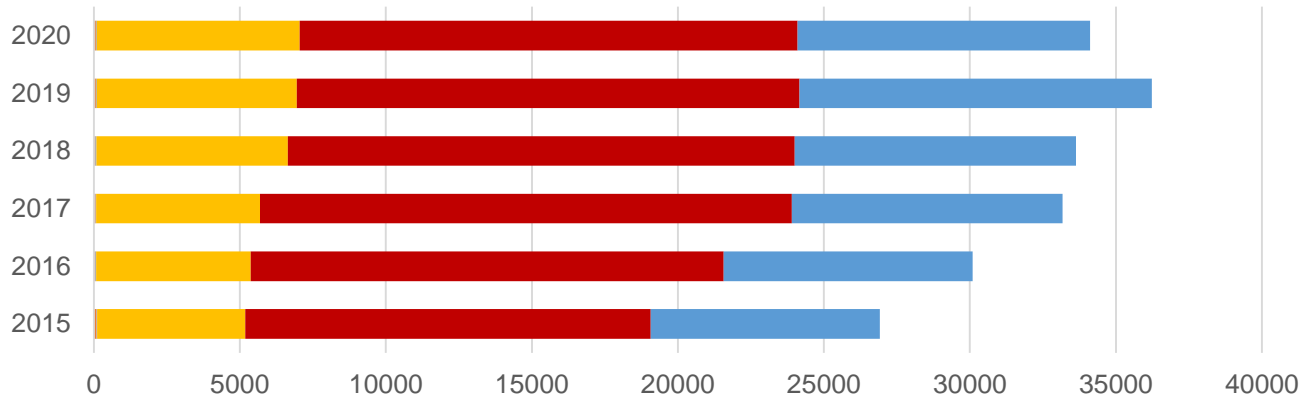
Call Volume – Vehicle Movement

Traditionally Call Volume statistics have included all vehicle assignments in response to calls for Paramedic Service within Peterborough City & County. This statistic can be somewhat misleading when evaluating service demand and often more than one vehicle may be assigned to a response. Case in point, PCCP utilized a Paramedic Response Unit (PRU) in 2017/18 which was often assigned along with an ambulance. When the PRU program ended in 2018, there was a resultant decrease in vehicle assignments giving an appearance of decreasing demand for service. In order to more accurately demonstrate demand trends, this report provides call volume trend in both vehicle assignment and individual requests for service (patients).

In 2020, the number of Emergency/Urgent (Code 4 – Urgent/life threatening) calls dispatched was 17,048 – a decrease of 0.98% over 2019 and Prompt (Code 3 – Prompt/Serious) calls was 6,955, an increase of 1.5%. **There was an overall decrease of 5.86%** for all responses including incident standby calls (Code 8). The average year over year increase for the reporting period below is 7.6% (Figure 1)

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Summary of All Responses



	2015	2016	2017	2018	2019	2020
1-Deferrable	87	51	54	47	71	68
2-Scheduled	25	26	22	41	25	29
3-Prompt	5073	5292	5616	6553	6850	6955
4-Urgent	13888	16205	18210	17357	17216	17048
8-Standy-by	7841	8516	9269	9632	12074	10012

Totals	26,914	21,575	33,171	23,998	36,236	34,112
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Figure 1

Patient Call Volume

An analysis of individual patient call volume is represented in Figure 2, which provides a more meaningful representation of actual demand for service. While deployment strategies over the past have reduced vehicle movement associated with service demand, the actual volume of patient responses continued to increase at an accelerating rate (7.62% increase in 2018). This trend turned in 2019 with the overall increase patient volume levelling somewhat at 2.81% and **decrease 2020 of -0.24%**. Similar reductions have been experienced throughout Ontario's Paramedic Services as well as many Hospital Emergency Departments. It has been theorized that fear of viral transmission may have affected the threshold for seeking medical attention.

The recently released PCCP "Is Your Urgency and Emergency" program and resources may also have assisted individuals to successfully seek safe and appropriate resources.

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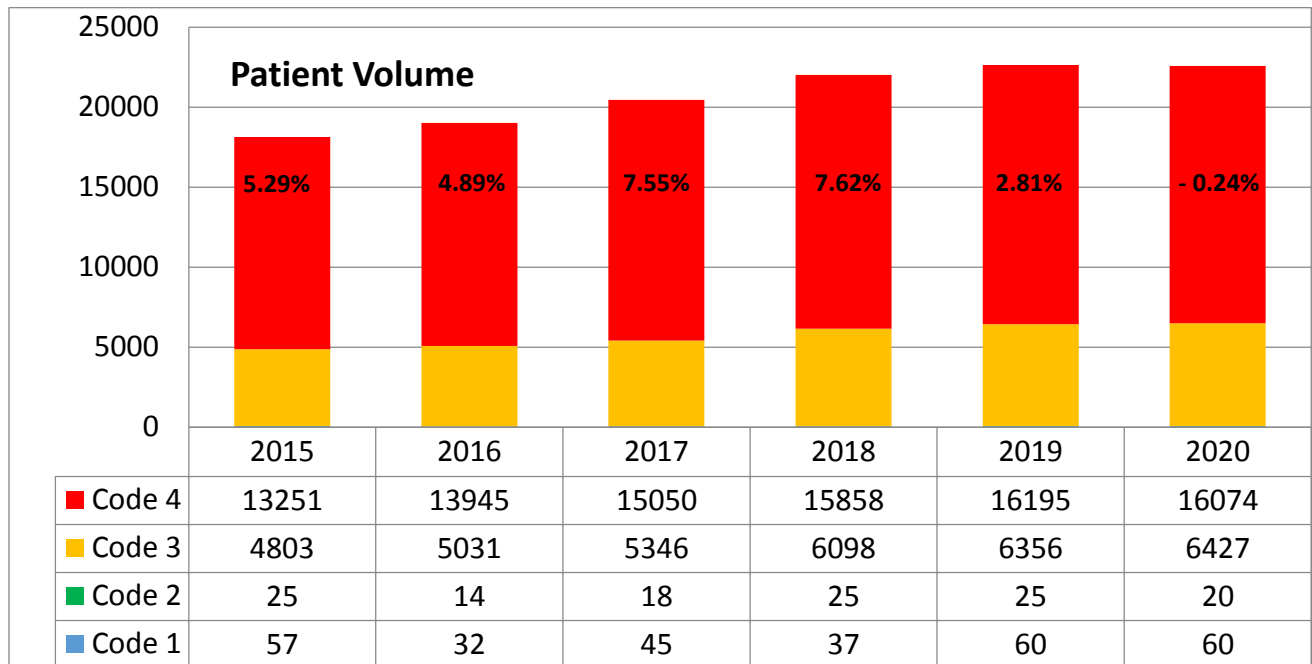


Figure 2

Response Time Performance

O-KPI RTP-1 is a measurement of response time performance against the Council approved Response Time Performance Plan (RTPP). This measurement is also reviewed and reported annually as mandated by the Reg. 257 of the Ambulance Act. As demonstrated in Figure 3 below, PCCP performance continues to exceed all targets although with some improvements of performance over the previous year.

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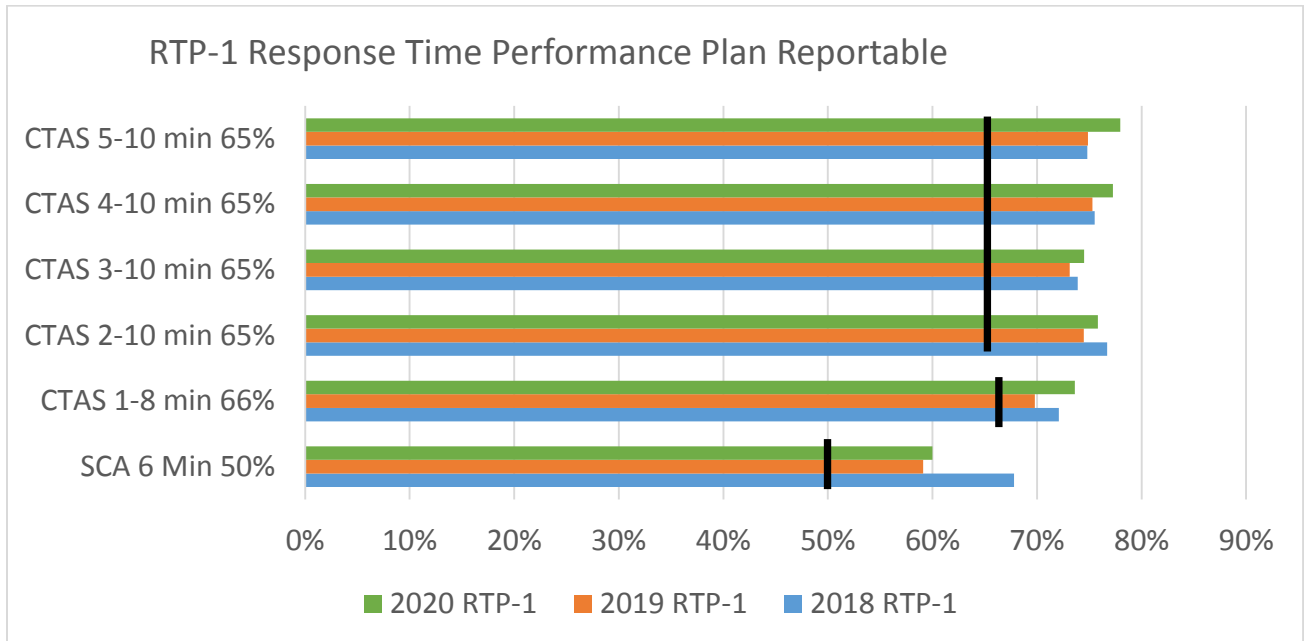


Figure 3

RTP-2 provides an analysis of urban (City of Peterborough) response time performance against the mandated (service area wide) RTPP for 2020 over 2019 and 2018. As demonstrated in Figure 4 below, PCCP Performance in the urban setting has exceeded targets in all categories.

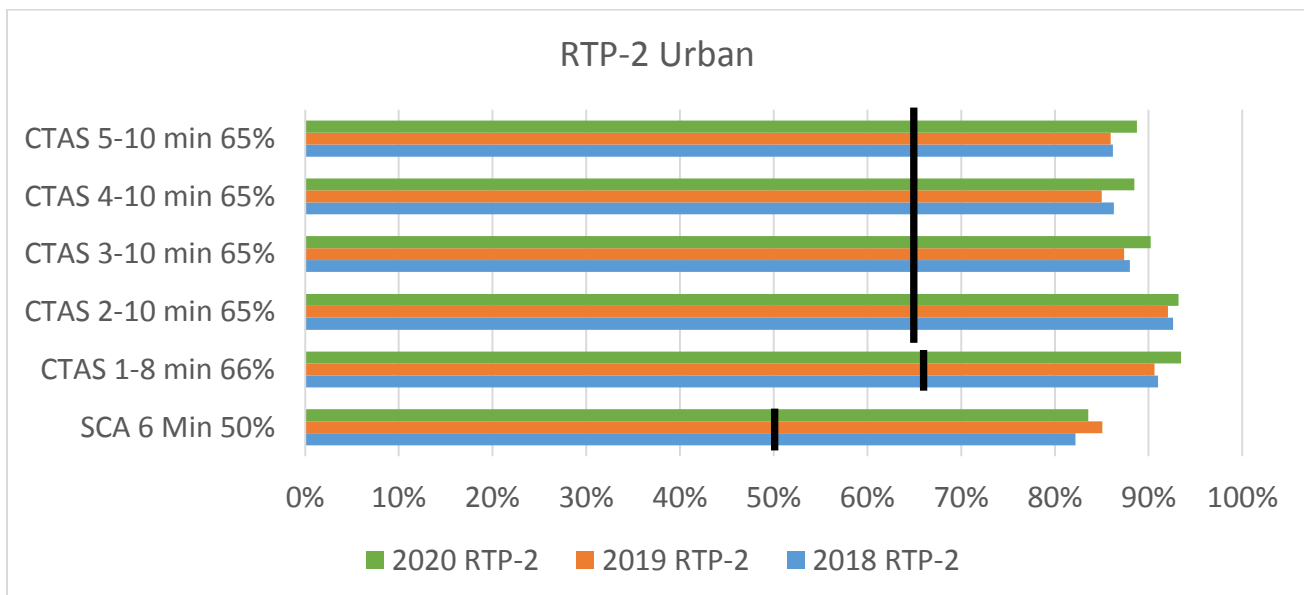


Figure 4

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Figure 5 provides an analysis of Suburban/Rural (County) response time performance against the mandated (service area wide) RTPP for 2020 over 2019 and 2018. While overall, PCCP is meeting and exceeding the reportable Response Time Performance Targets, comparison of Suburban/Rural response performance falls far short of the targets set for the service wide area as established by the RTPP. PCCP Administration is continuing to examine Suburban/Rural response times with a goal of establishing appropriate response time targets and methods to achieve and maintain service levels.

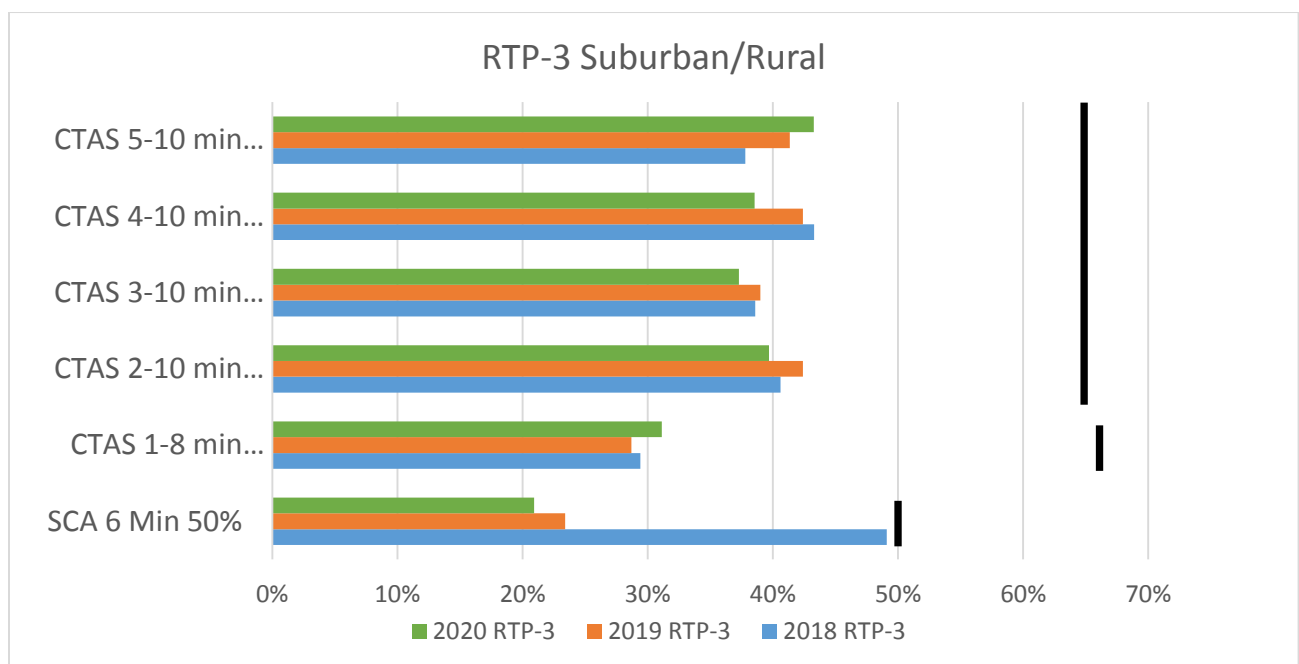


Figure 5

Volume Measures

Figures 6 & 7 below demonstrate the volume measures for both emergency Code 3 and 4 calls (V1 - Figure 6) and non-emergency calls Code 1 and 2 (V2 - Figure 7) for City, County and Combined 2020 (highlighted in green) over 2019 and 2018. Emergency responses per capita remain significantly higher in the urban setting (207/1000 pop) as compared to the rural areas (125/1000 pop).

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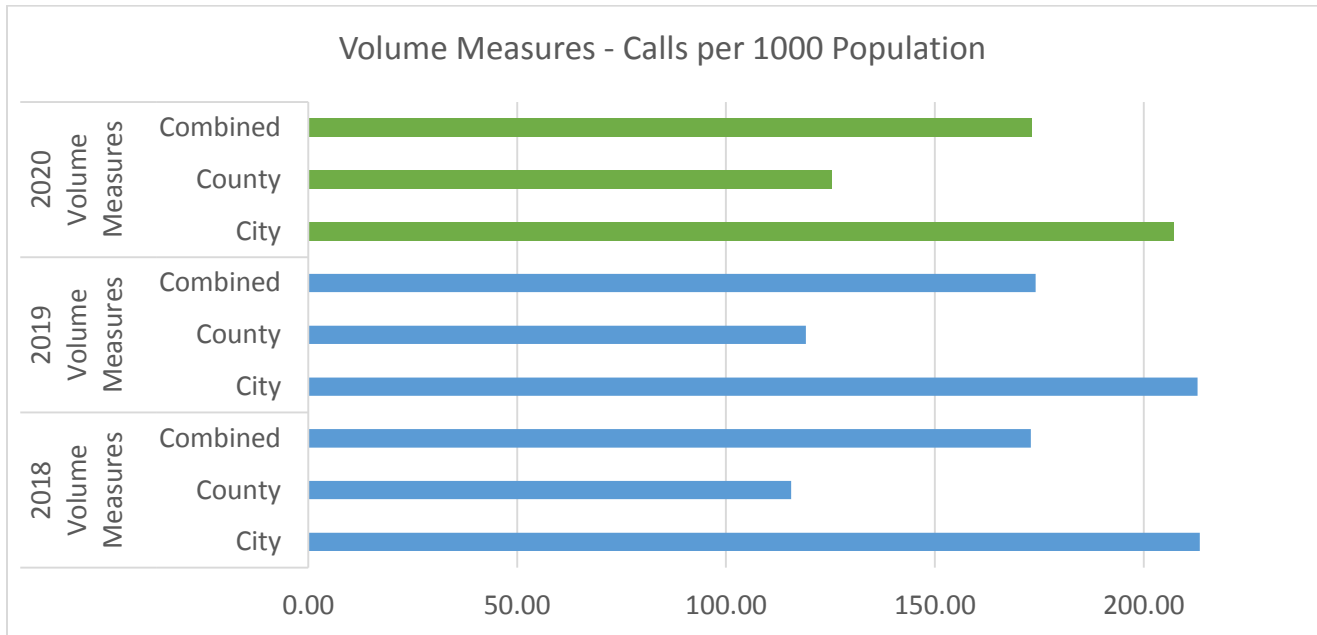


Figure 6

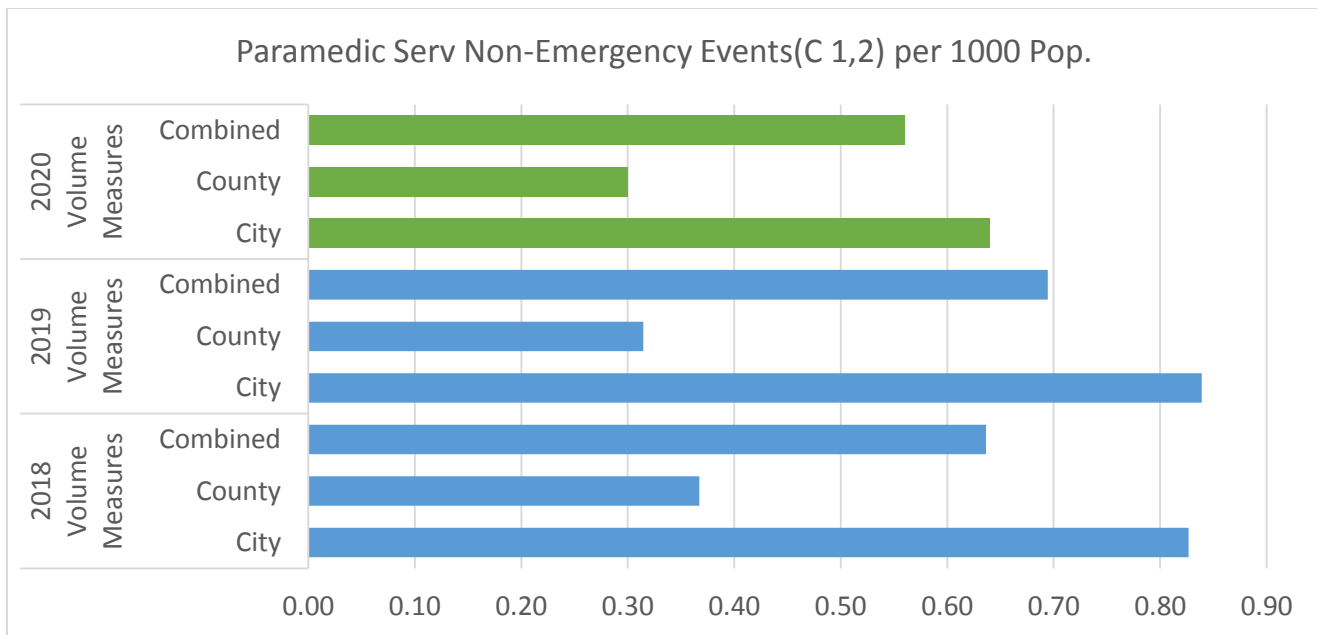


Figure 7

Utilization Measures

Measures U-1 and U-2 are measures used to demonstrate the rates of resource utilization or conversely, rates of resource availability of emergency response for the community.

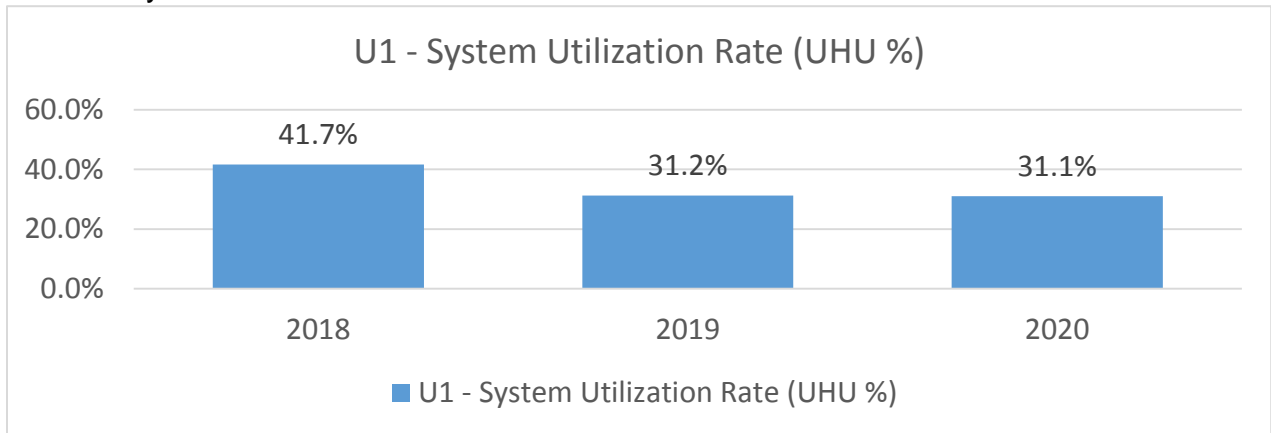


Figure 8

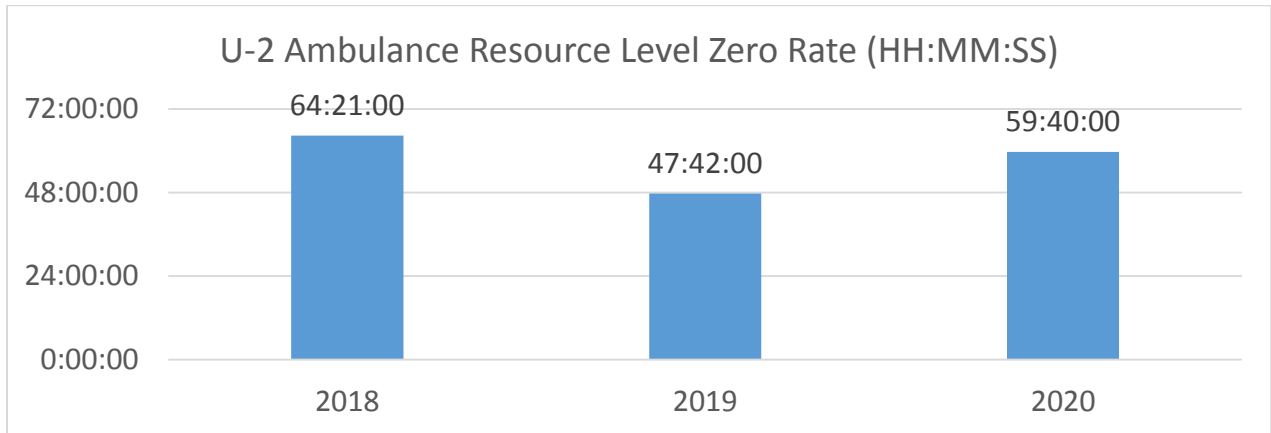


Figure 9

System Design/Deployment Measures

Charted below are the System Design and Deployment Measures. First category shows average at hospital time. Second category is Average Offload time. The last two categories are our 90th percentile at Hospital Time and 90th percentile Offload Time.

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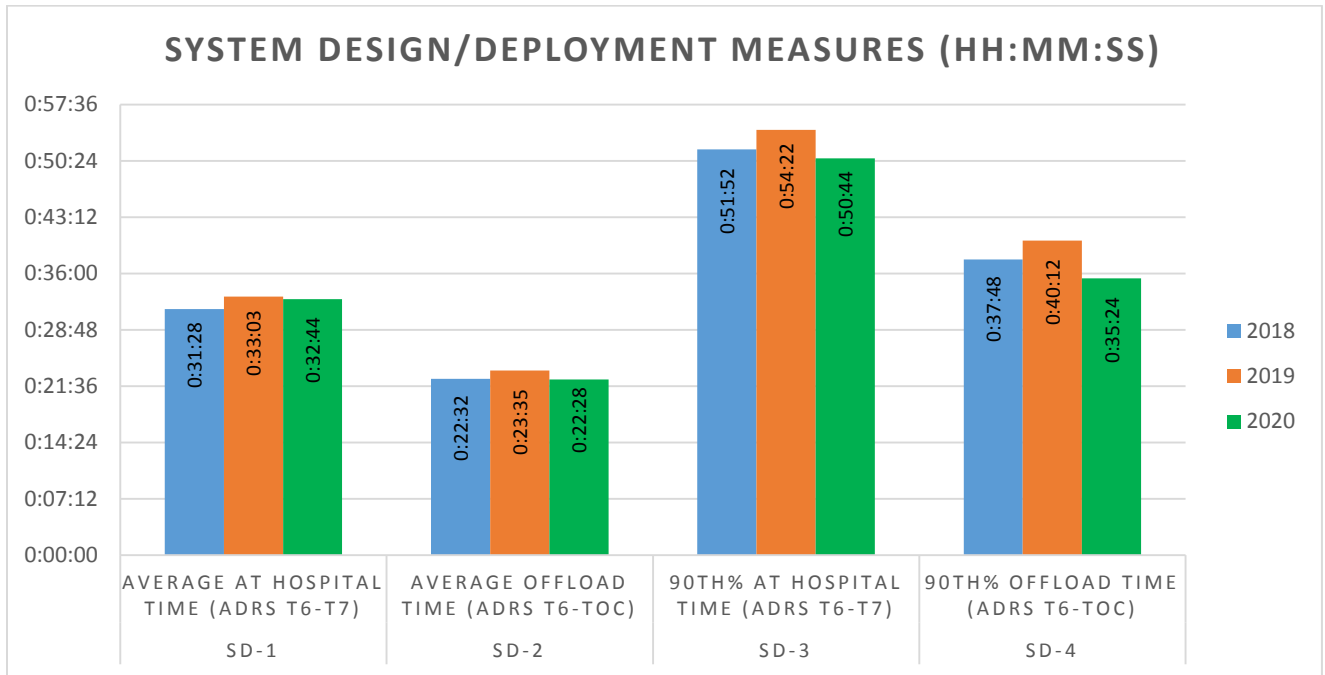


Figure 10

Figure 11 depicts the percentage of staff, which are Advanced Care Paramedic (ACP) versus Primary Care Paramedic (PCP). In 2020, the service hired additional staff due to COVID-19 concerns, however staff numbers did not significantly increase due to a number of retirements and resignations. A number of staff completed the ACP program at a local college raising our ACP percentage to 32.50% in 2020 over 2019's 32.09%.

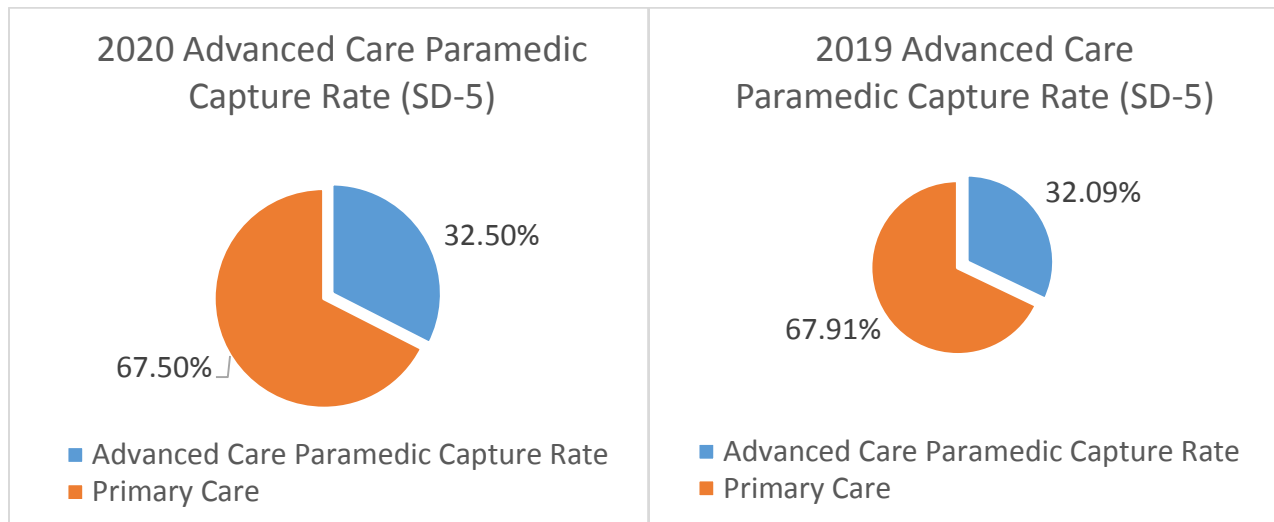


Figure 11

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Finance/Funding Measures

Figure 12 compares data for 2020 over 2019 and 2018 for Operating Cost per Capita, Operating Cost per Event and Operating Cost per Unit Hour. As demonstrated, despite increased call volumes and inflation, 2020 costs did not significantly change over the 2019 and 2018 rates.

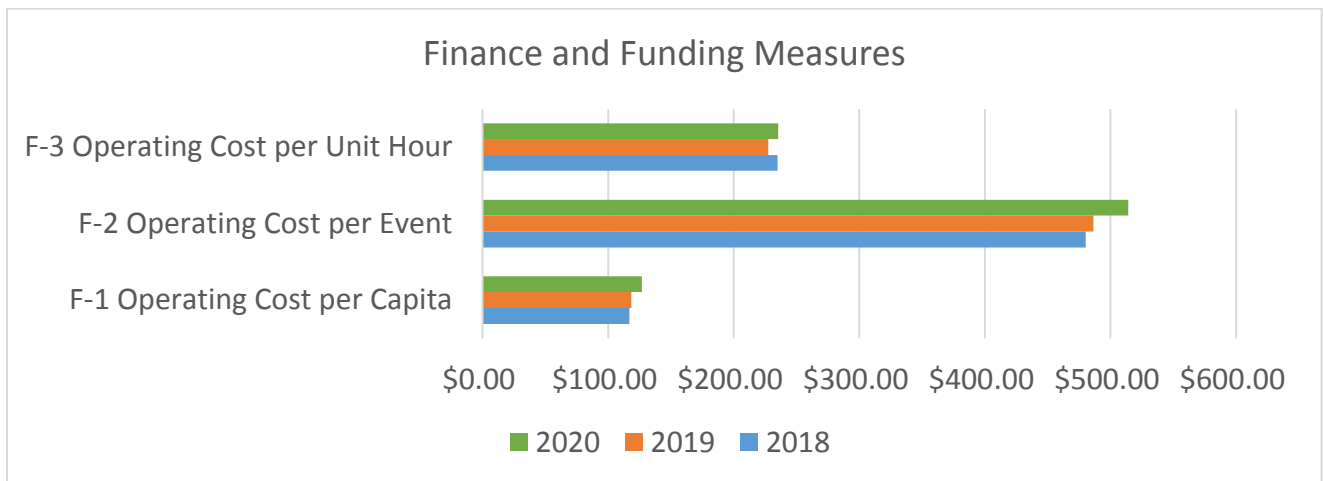


Figure 12

Fleet Measures

Figure 13 below depicts cost per kilometer for both Fleet Maintenance and Fleet Operating (non-capital) Costs. Total fleet operating costs decreased by \$0.013 per kilometer in 2020 over 2019 with total per kilometer at \$0.652 in 2020 over 2019 \$0.644.

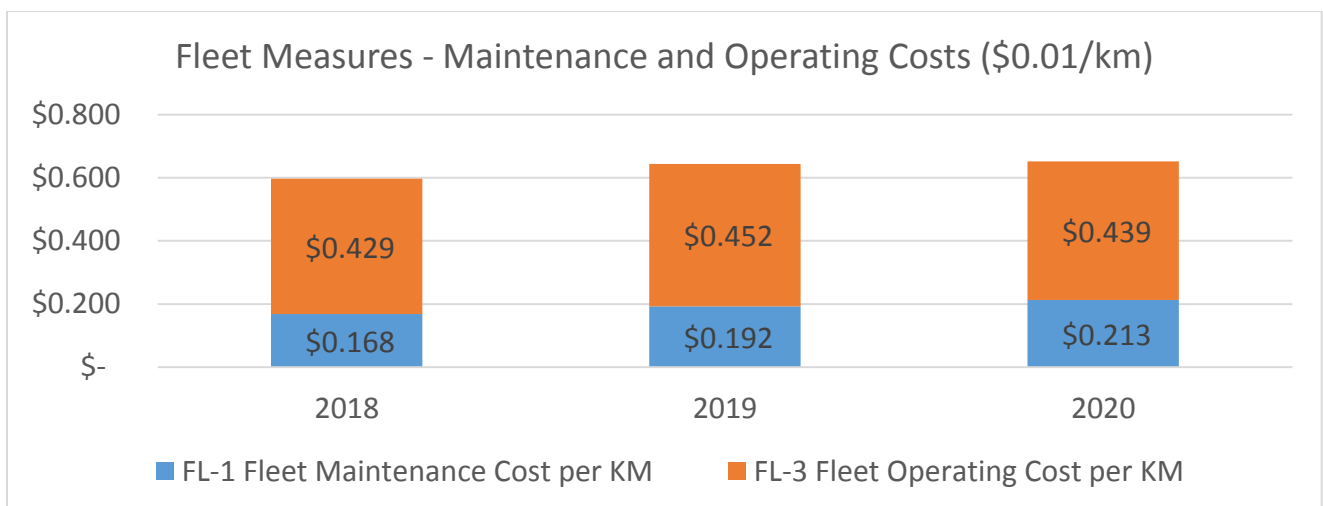


Figure 13

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Figure 14 below demonstrates a rate of vehicle collisions on a downward trend per 100,000kms. In 2020, rates indicate a reduction of collisions from 1.15 to 0.99 instances per 100,000 kms.

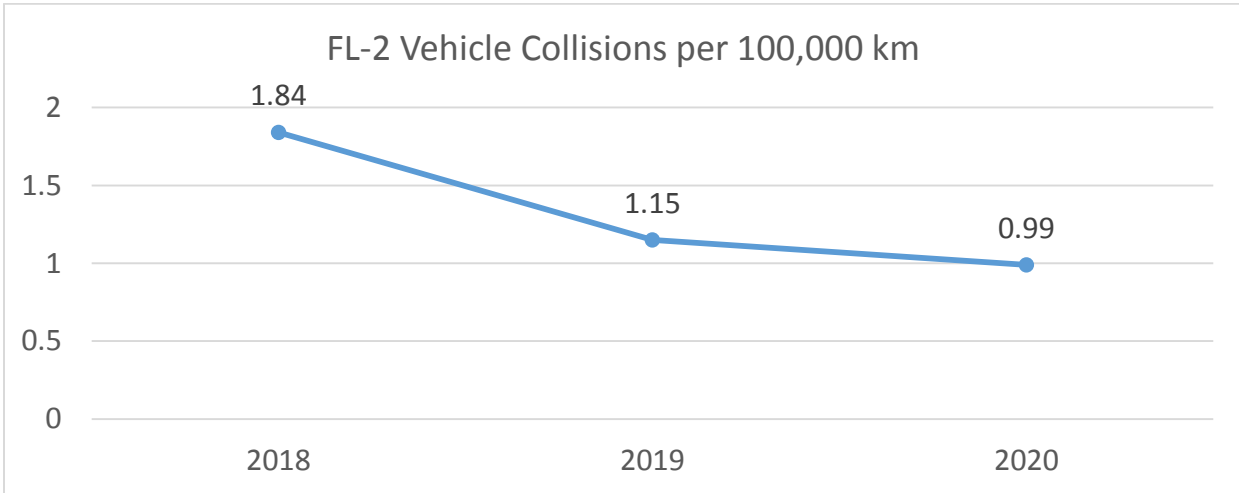


Figure 14

Carbon Emissions Measures

Total Annual Fleet Carbon Emissions and total Carbon Emissions per Capita measures saw a slight decrease in 2020 over 2019 however; the Total Output per Response saw a slight increase in 2020 over 2019.

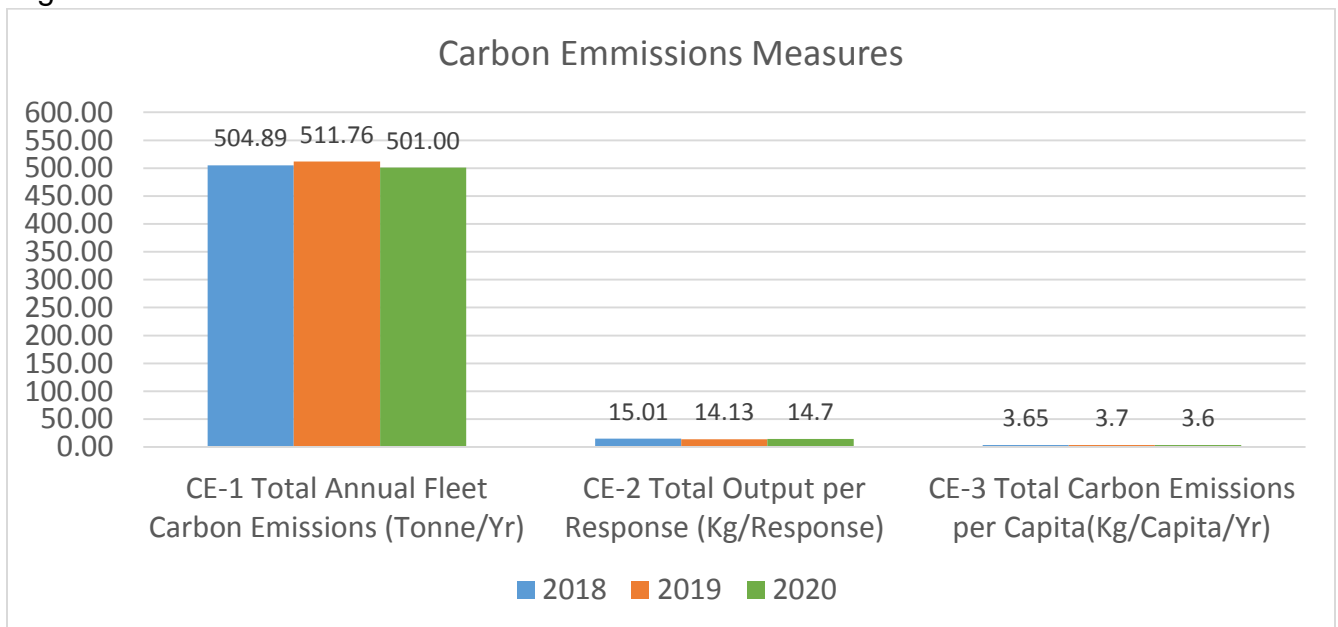


Figure 15

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Satisfaction Measures

Figure 16 shows PCCP saw an increase in commendations in 2020 over 2019 with a slight increase in complaints received per 1000 responses. In addition, a significant improvement was realized in the time for Complaint Investigations.

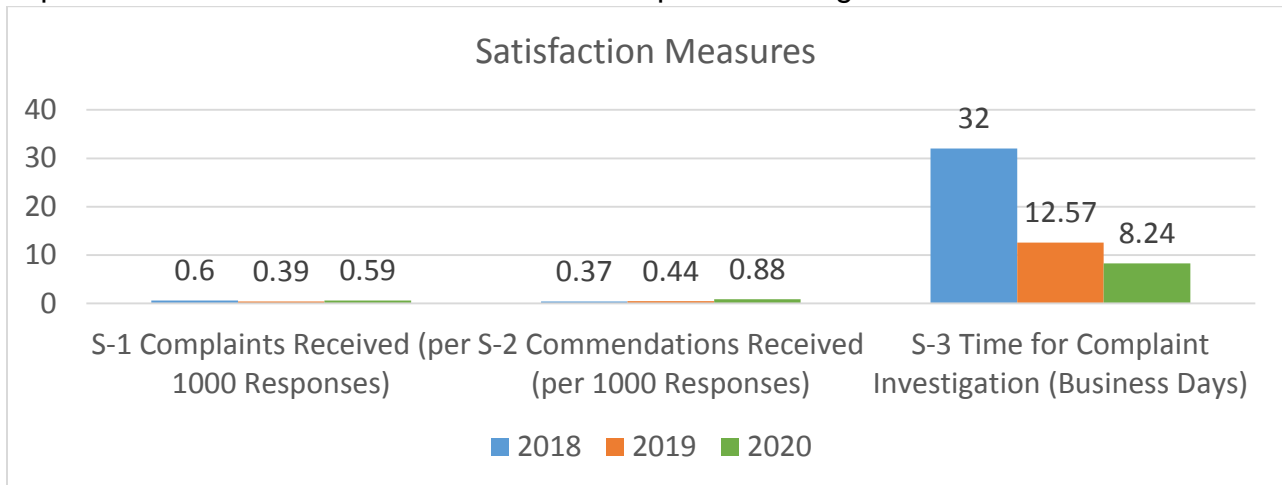


Figure 16

Occupational Health & Safety

Figure 17 demonstrates OHS 1 through 4 which evaluates injury rates and resultant lost time claims. Frequency Rate for Injury and Lost Time remains low, however lost time hours per claim is mainly associated with mental health injuries.

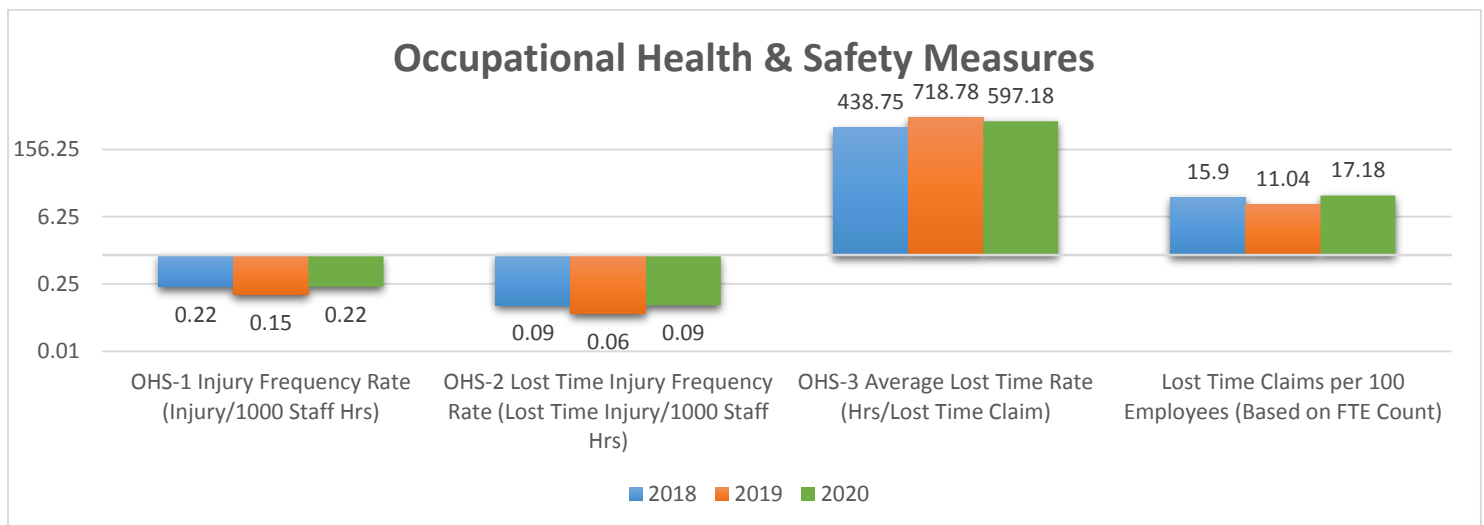


Figure 17

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Human Resource Measures

Service levels enhancements in 2019 resulted in improved levels of service as demonstrated in HR-1 & 2.

Due to lack of clarity in 2019 provincial funding and COVID-19 pandemic in 2020, PCCP amended work plans to reduce expenses, which resulted in a reduction of Paramedic Continued Education hours.

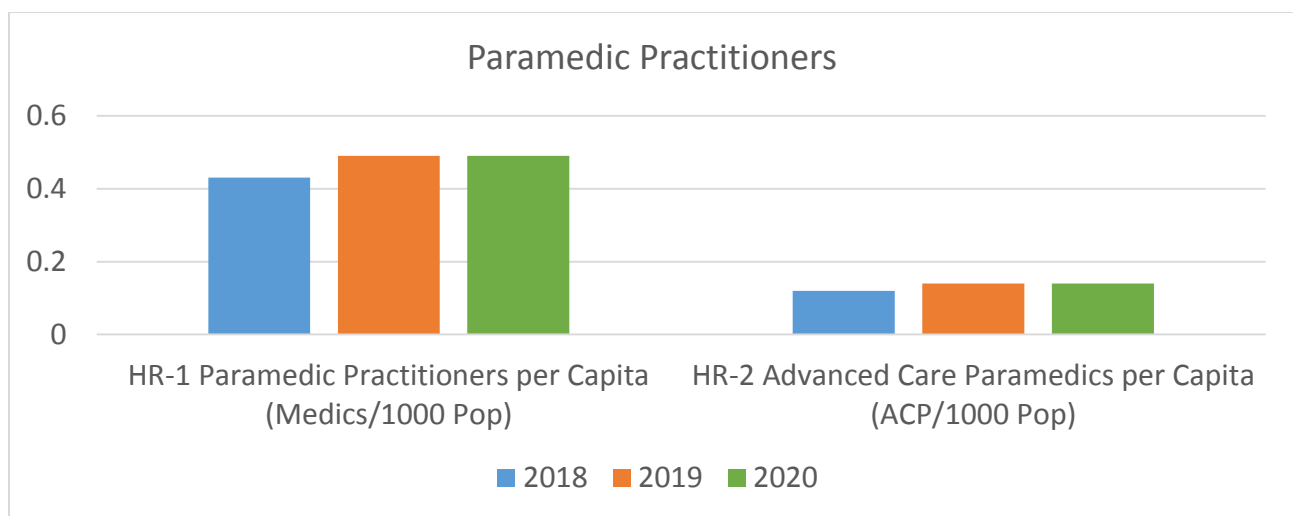


Figure 18

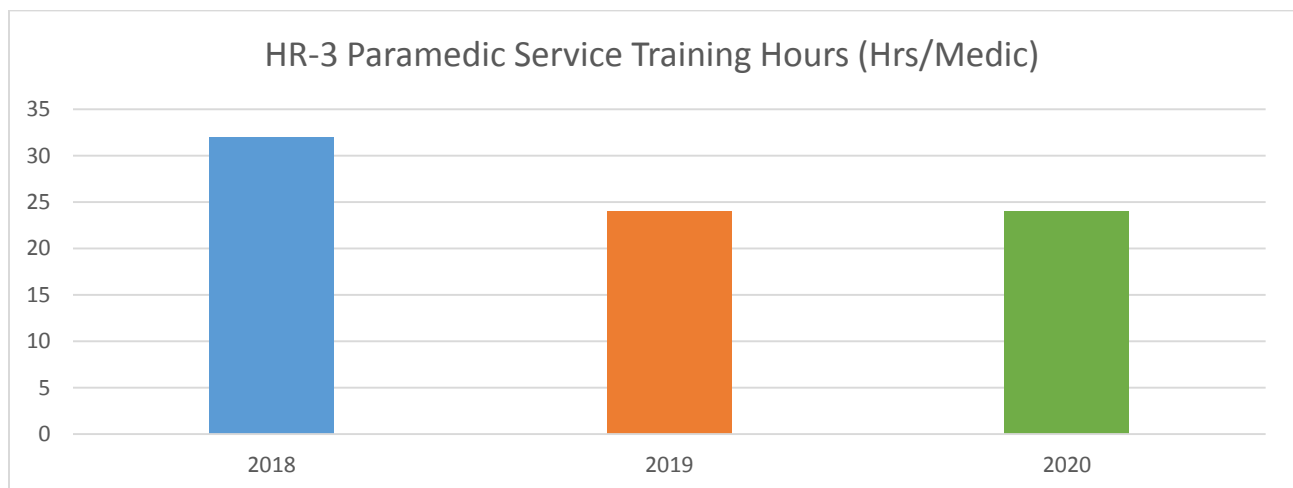


Figure 19

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Financial Impact

No additional costs are anticipated related to annual evaluation of KPIs. Data within this report will be utilized to continue strategies for operational efficiencies.

Anticipated Impacts on Local and/or First Nations Communities

None

Link to County of Peterborough Strategic Plan Priorities

To provide high quality services to residents, businesses and Townships.

- | | |
|----------------------------------------------------|--------------------------------------------------------------|
| <input checked="" type="checkbox"/> Communications | <input checked="" type="checkbox"/> Financial Responsibility |
| <input type="checkbox"/> Housing | <input type="checkbox"/> Industry & Business |
| <input type="checkbox"/> Infrastructure | <input type="checkbox"/> Organizational Development |

In consultation with:

1. A-CAO Sheridan Graham
2. Deputy Chief Chris Barry, PCCP Operations
3. Deputy Chief Don Oettinger, Professional Standards

Communication Completed/required: None at this time

Attachments

1. PCCP 2020 Operational Key Performance Indicator Summary Report, Excel
2. PCCP 2020 O-KPI, PowerPoint
3. PCCP 2020 O-KPI Graphic, PDF

Respectfully Submitted,
Original Signed by:
Randy Mellow
Chief of Paramedics

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