

The County of Peterborough



To: Chair and Members of Committee
From: Randy Mellow, Chief of Paramedics
Date: June 14, 2018

Subject: PCCP 2017 Year End Performance Report

Recommendation: Receive for information

Overview:

The purpose of this report is to provide the Joint Services Steering Committee with an update regarding Paramedic Service call volume and response time statistics for the County and City of Peterborough. This report will serve as a summary of current paramedic system performance as well as anticipated requirements in order to meet future demands.

Background:

The Consolidated Municipal Services Management Agreement (2014-2018) designates responsibility for the operation of the public ambulance service for the City and County of Peterborough to the Corporation of the County of Peterborough. Under the County's management, land ambulance service is delivered for the County and City by Peterborough County/City Paramedics (PCCP)

PCCP serves a population base of 138,236 and has 3,848 square kilometers of area to cover. At maximum staffing, there are 10 ambulances on the road and the annual on-the-road staffing hours for one year is approximately 68082 for paramedics. There are 5 full time and one seasonal ambulance station located throughout the County and City of Peterborough.

PCCP Administration is responsible for developing deployment plans that establish ambulance placement, staffing and deployment patterns. This deployment plan is issued to the MOHLTC operated Central Ambulance Communications Centre (CACC) which has ultimate control over vehicle dispatch. The CACC maintains and shares data associated with many EMS performance metrics such as call volume and response time statistics. In 2009, PCCP implemented an Electronic Patient Care Report (ePCR) system providing for increased accuracy and reporting of paramedic service performance data.

For the purpose of this Departmental Update, a combination of CACC dispatch and ePCR data will be referenced to report on current PCCP call volume and response times.

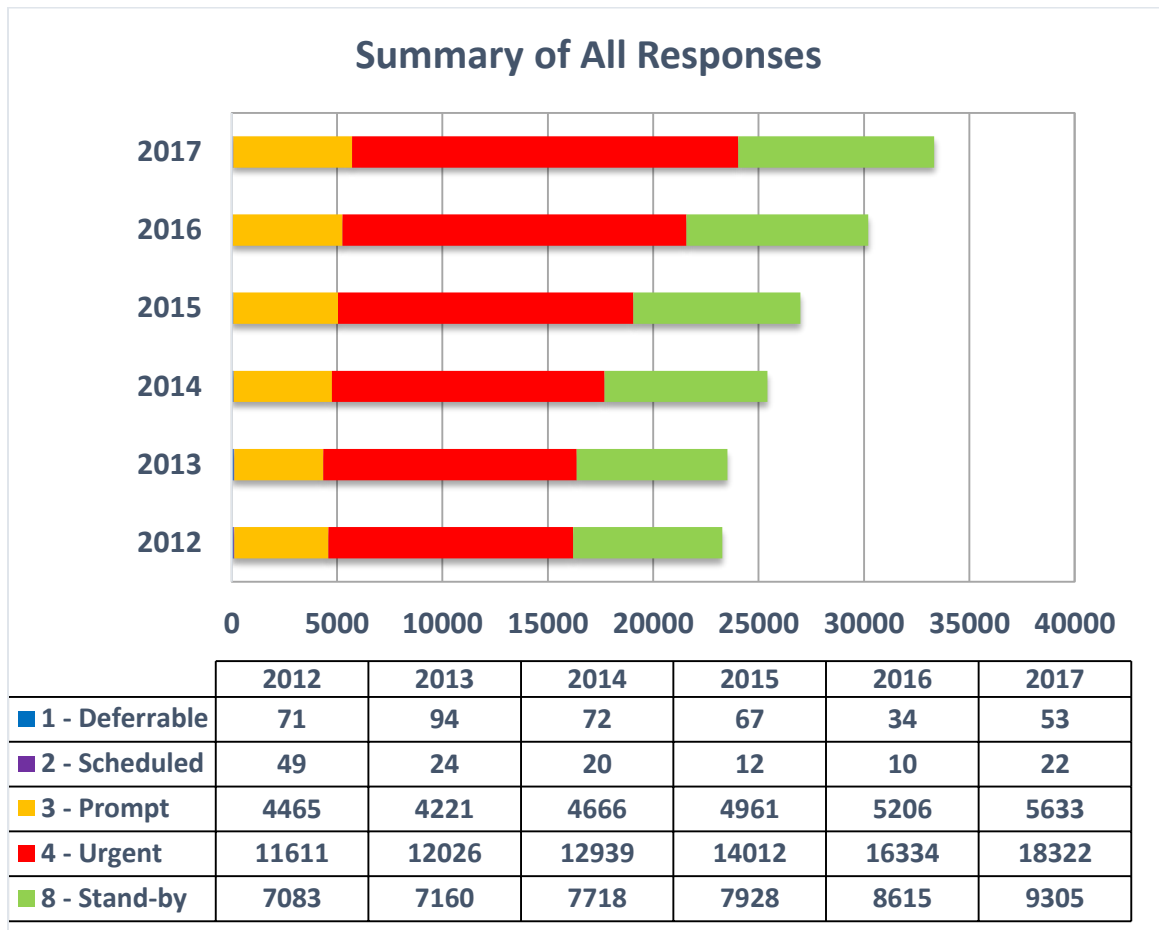
Analysis:

Call Volume

In 2017, the number of Emergency/Urgent (Code 4 – Urgent/life threatening) calls dispatched was 18,322 – an increase of 12.2% over 2016 and Prompt (Code 3 – Prompt/Serious) calls was 5,633 an increase of 8.2%. **There was an overall increase of 10.4%** for all responses including incident standby calls (Code 8). (Figure 1)

Note: Total increase in Code 4/Urgent includes additional responses by the Paramedic Response Unit.

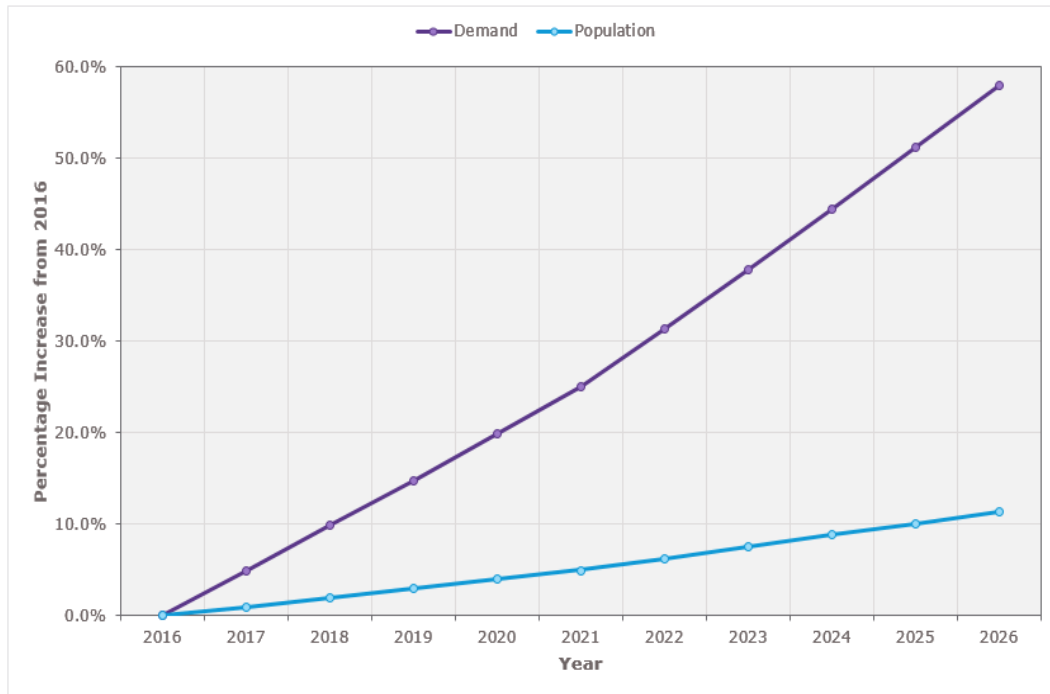
Figure 1



In 2016, the County commissioned a 10 Year Facility and Resource Plan which included Call Volume analysis and projection. In this report call volume was projected to increase at a compounding rate of approximately 5% per year. (Figure 2)

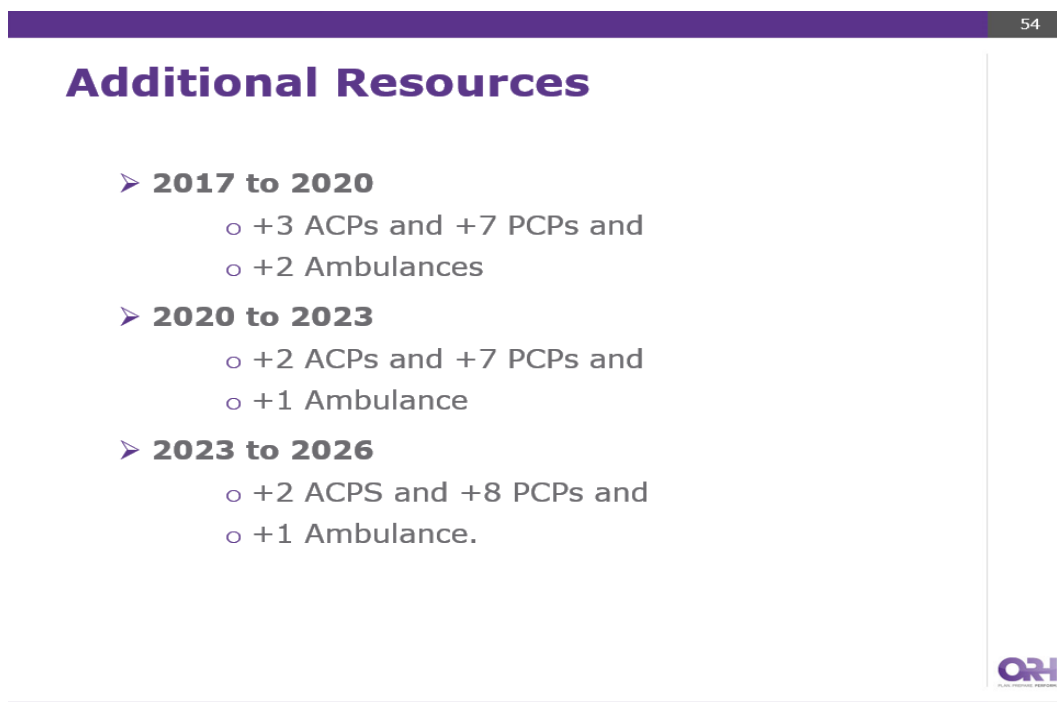
Figure 2

Projection Results



In order to meet the projected demand and maintain established performance targets, the report recommended additional resources as described in Figure 3 which includes additional 24 hours of ambulance coverage per day being added between 2017 and 2020.

Figure 3



Actual Call Volume increase has surpassed projections. As such, it is the opinion of PCCP Administration that the recommended enhancement will be required in 2019.

Ambulance Offload Delay Pressures (Figure 4)

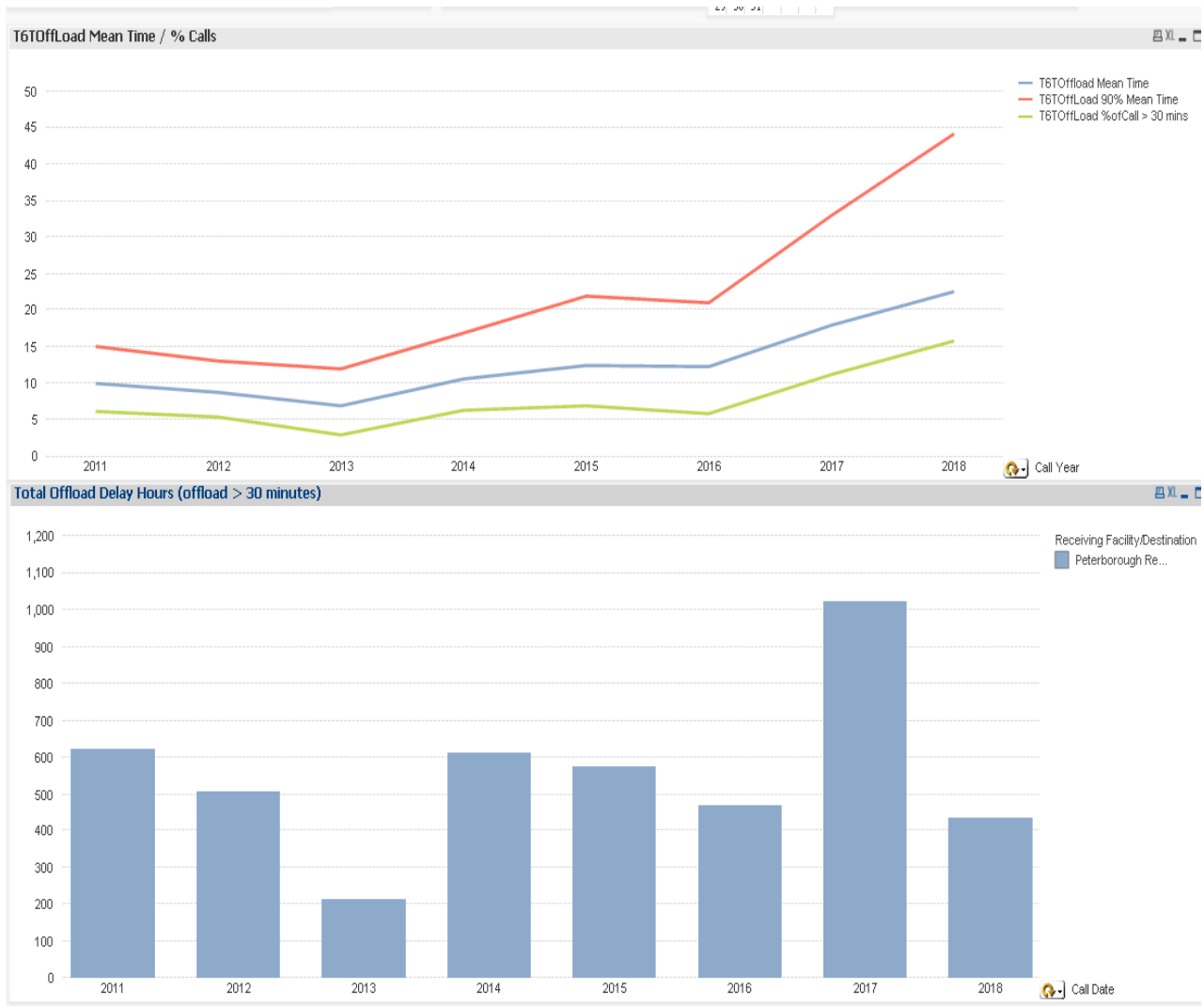
Peterborough County/City Paramedics continue to work together with Peterborough Regional Health Centre (PRHC) to reduce patient off load delays. The hospital is funded by the Ministry of Health for one 24 hour registered nurse who oversees the triaging and placement of patients who is brought in by ambulance within the emergency department.

Following the introduction of the Offload Nurse Program, some improvements were experienced in length of Offload Delays. Despite those efforts however, increased patient visits to the emergency room by both walk in patients and patients arriving by ambulance results in cumulative lost hours in hospital being similar to previous levels.

On average PCCP delivers approximately 40 patients per day to PRHC emergency room.

Ambulance Offload delay time means all minutes >30 minutes in the Offload phase of patient transfer. Calculation = Time Arrive Hospital to Offload Time less 30 minutes.

Figure 4



As demonstrated in Figure 4, the cumulative hours of ambulance offload delay rose sharply in 2017 to a total in excess of 1,024 hours.

In addition to loss of ambulance availability, this equates to approximately \$102,200 in wages and benefits lost to ambulance offload.

Ambulance Availability Levels

Figure 5 below demonstrates an analysis of the number of minutes that PCCP deployed resources (ambulances) were available to respond to 911 calls broken down by number of ambulances available.

In 2017, the maximum number of regularly deployed ambulances totalled 9 during daytime hours and 6 during night shifts.

Where the graphs indicate negative available units, this represents demand for service that exceeds the deployed number of ambulance. i.e. more calls for service than ambulances available. In those occurrences, the additional calls were serviced either by “upstaffed units” called in on overtime or service was provided by another neighboring municipal ambulance service.

Figure 5

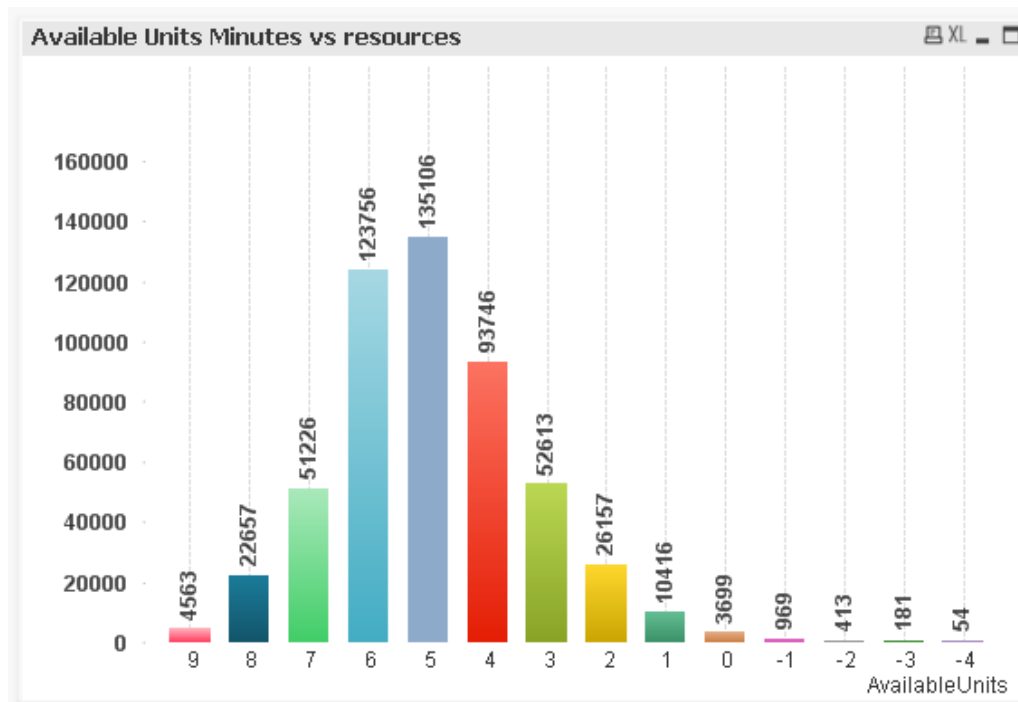


Figure 5 demonstrates that in 2017 for a period of 61 hours and 39 minutes, full deployed resource levels were committed to responses. In the previous year, the total time at full resource deployment was 32 hours 59 minutes.

Utilizing data derived from an analytics component of the ePCR system, the number of ambulance response requests within the City and County that exceeded the deployed resources has been calculated and analyzed. These data are represented graphically in Figure 6 by graphically displaying “Number of Next Code 4 Calls” (calls exceeding resource levels) and the “Next Call Service ID” (what ambulance service provided response)

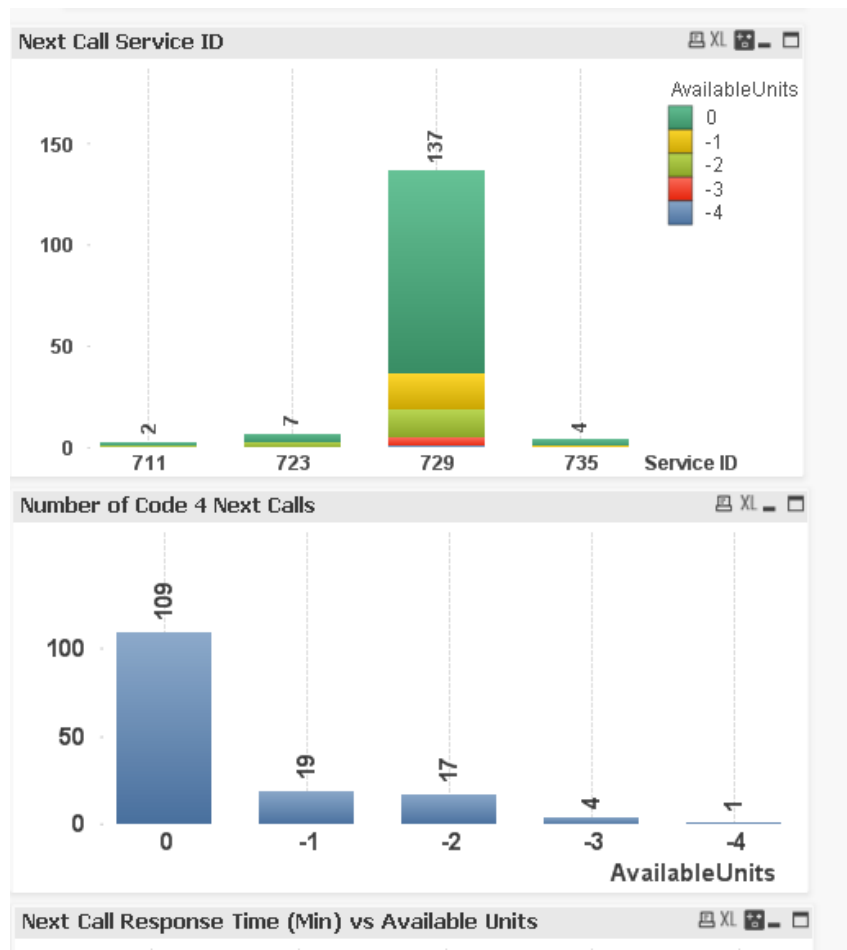
As is demonstrated by Figure 6, in 2017 there was 150 calls for service that occurred when all available regularly deployed PCCP resources were already committed to calls (Zero Deployed Resource Availability).

The 150 calls for service which exceeded deployment capacity were serviced by the following:

- 137 by PCCP
- 7 by Northumberland
- 4 by City of Kawartha Lakes
- 2 by Hastings County

This data demonstrates demand for ambulance service is frequently exceeding PCCP deployed resources. Further it demonstrates that heavy reliance on overtime staffing (upstaffing) is required to attempt to meet demands and there appears to be an increasing need for reliance on cross-border response to meet the community needs.

Figure 6

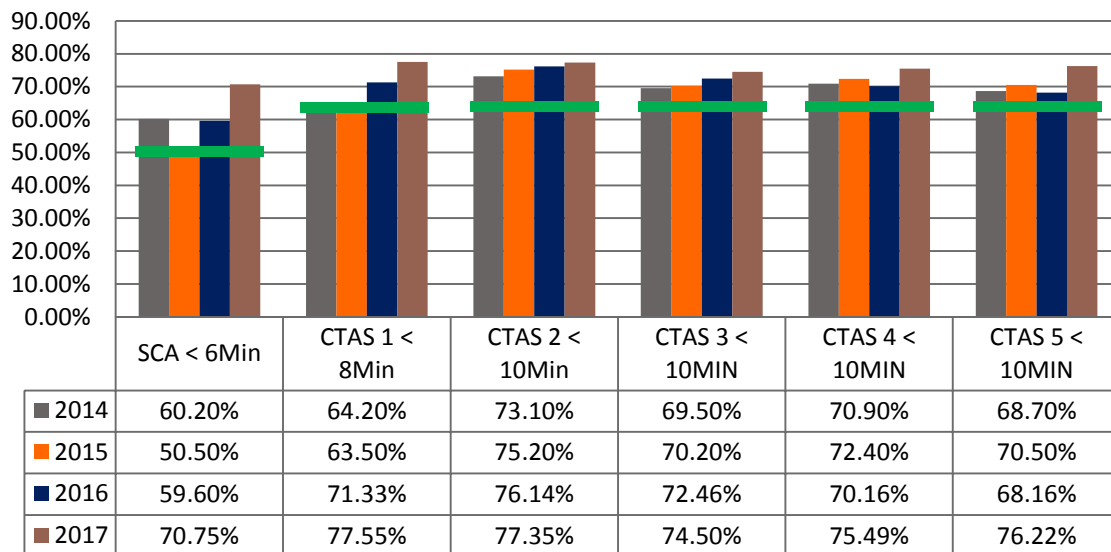


Response Time Performance:

Figure 7 below depicts County and City response times to specific patient acuity (CTAS) levels. Despite a significant increase in call volume, PCCP was successful in achieving all 6 targets included in the new provincially mandated and Council approved response time plan in 2017. Implementation of the Paramedic Response Unit (PRU) and deployment strategies focused on the City's west side can be attributed to these improvements.

Rising call volumes and subsequent increase in "zero ambulance availability" have necessitated reassigning the PRU deployment (single medic 24x7) to a 12 hour staffed ambulance. While this change is expected to improve ambulance availability, there will be an expected deterioration of response time performance in 2018

Figure 7



Performance Targets					
SCA 6 MINS.	CTAS 1 8 MINS	CTAS 2 10 MINS.	CTAS 3 10 MINS.	CTAS 4 10 MINS	CTAS 5 10 MIN
50 %	66%	65%	65%	65%	65%

Financial Impact

Immediate financial impact associated with this report have been considered and accounted for within the 2018 PCCP operating budget. Those costs include items such as:

- Wages for upstaffing (calling in additional staff) at times of peak call volume,
- Meals for paramedics while on extended offload delay
- Costs of increasing volume of medical supplies
- Increasing vehicle costs due to call volume increase

It is further anticipated that the 2019 PCCP operating budget will have to include increased staffing as mentioned above and in the 10 Year Plan, to staff an additional 24 hour ambulance.

Due to the expected timing for approval of the County 2019 budget, it is anticipated that the new positions would be hired with a start date of approximately April 1, 2019. The estimated cost for wages and benefits, related to the proposed service expansion, would approximate \$900,000 in 2019 (full year cost is estimated as \$1,200,000).

Further, it is anticipated that other ancillary costs for things such as paramedic expenses, administrative expenses, vehicle fuel and insurance and patient care items will increase as well (related to the hiring of new staff and another vehicle being added to the fleet). It is anticipated that this will result in a further budget increase of approximately \$110,000 for 2019.

In addition to the operating expenses outlined above, in order to proceed with the service expansion we will require the purchase of one additional ambulance vehicle. In order to prepare for inevitable enhancements, the PCCP Capital Asset plan has provision for 2 additional ambulance vehicles scheduled to be added to the fleet in 2020. The proposed addition of a 24 hour ambulance only in 2019 would allow for a reduction to one additional vehicle (in 2020) however that purchase would be necessary in 2019.

The anticipated capital cost to purchase and equip the new ambulance is estimated as \$222,000 for 2019. This includes the cost of the vehicle, stretcher and other required equipment.

As the Ministry of Health and Long Term Care (“Ministry”) bases their annual funding on the prior years budget, staff understand that they will not contribute funding towards the service expansion in the first year of introduction (i.e. 2019). Therefore, it is expected that the City and the County will share the full cost of the service expansion in 2019.

The preliminary estimated budget impact on the City and County for 2019, is as follows:

Expense Type	Total Estimated 2019 Expense \$	City Impact 2019 Budget \$	County Impact 2019 Budget \$
Salaries & Benefits	\$900,000	\$527,580	\$372,420
Paramedic Costs	\$20,000	\$11,725	\$8,275
Administrative Costs	\$30,000	\$17,585	\$12,415
Vehicle/Insurance	\$28,500	\$16,706	\$11,794
Patient Care	\$31,500	\$18,465	\$13,035
Capital	\$222,000	\$130,136	\$91,864
Total	\$1,232,000	\$722,197	\$509,803

It is expected that the Ministry of Health and Long Term Care will begin contributing their share (approximately 50%) of operating and annual amortization expenses in 2020. However, as the 2019 budget will only incorporate expenses for the period from April 2019 to December 2019, the 2020 funding allocation from the Ministry will not be based upon a full year. The 2020 budget will include full expenses for salaries and benefits (and other ancillary costs), however, the Ministry will not be fully contributing towards the expansion costs until 2021.

It is important to note that the Ministry will only fund operating expenditures on an annual basis and will not fund capital purchases, however, they will fund annual amortization expenses (the County budget process does not fund amortization, but does fund contribution to reserves for asset replacement).

Based upon the 2019 budget, it is anticipated that the Ministry funding will increase by approximately \$517,950 in 2020.

Based on the above, the impact on 2020 is forecasted as follows:

Expense Type	Total Estimated 2020 Expense \$	Estimated 2020 Ministry Expense \$	City Impact 2020 Budget \$	County Impact 2020 Budget \$
Salaries & Benefits	\$1,200,000	\$450,000	\$439,650	\$310,350
Paramedic Costs	\$20,000	\$10,000	\$5,862	\$4,138
Administrative Costs	\$30,000	\$15,000	\$8,793	\$6,207
Vehicle/Insurance	\$36,500	\$14,250	\$13,043	\$9,207
Patient Care	\$31,500	\$15,750	\$9,233	\$6,517
Amortization	\$44,400	\$12,950		
Asset Replacement	\$44,400		\$26,027	\$18,372
Total	\$1,406,800	\$517,950	\$504,608	\$354,791

In 2020, it is anticipated that the City and County budget impacts will reduce by approximately \$217,589 and \$155,012, respectively, over the 2019 budget.

The impact on the 2021 is forecasted as follows:

Expense Type	Total Estimated 2021 Expense \$	Estimated 2021 Ministry Expense \$	City Impact 2021 Budget \$	County Impact 2021 Budget \$
Salaries & Benefits	\$1,200,000	\$600,000	\$351,720	\$248,280
Paramedic Costs	\$20,000	\$10,000	\$5,862	\$4,138
Administrative Costs	\$30,000	\$15,000	\$8,793	\$6,207
Vehicle/Insurance	\$36,500	\$18,250	\$10,698	\$7,552
Patient Care	\$31,500	\$15,750	\$9,233	\$6,517
Amortization	\$44,400	\$22,200		
Asset Replacement	\$44,400		\$26,027	\$18,372
Total	\$1,406,800	\$681,200	\$412,333	\$291,066

Anticipated Impacts on Local and/or First Nations Communities

As outlined within this report, Paramedic Services deliver to the City and County are directly affected by demand for service and external pressures such as offload delay. This report and the recommendations within are intended to inform and assist the County in meeting its mandate to provide Paramedic Services meeting the needs of the local and First Nations Communities.

Link to County of Peterborough Strategic Plan Priorities

Collaboration Shared Services

Improved Essential Infrastructure

Financial Sustainability and Fiscal Responsibility

In consultation with:

1. CAO Troy Speck
2. Finance

Communication Completed/required:

N/A

Attachments

None

Respectfully Submitted,
Original Signed by
Randy Mellow
Chief of Paramedics

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