

The County of Peterborough
Joint Services Steering Committee

To: Chair and Members of Committee

From: Randy Mellow, Chief of Paramedics

Date: June 8, 2017

Subject: PCCP 2016 Year-end Report

Recommendation:

That Joint Services Steering Committee receive the report for information only.

Financial Impact: None

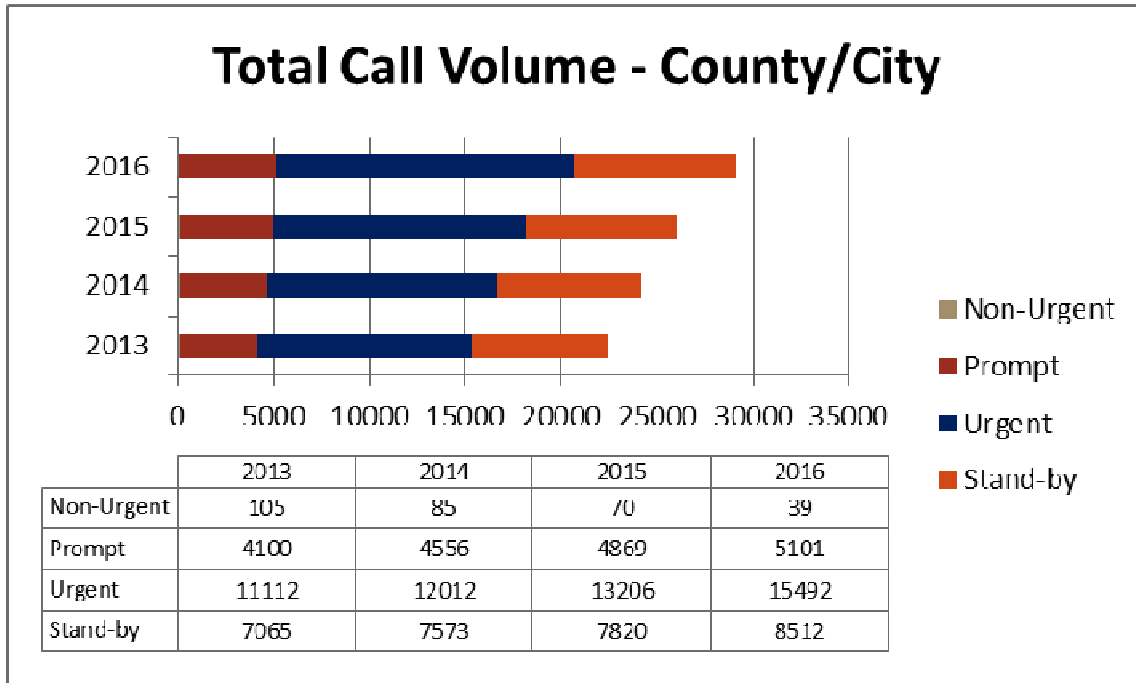
Overview:

The number one priority of Peterborough County/City Paramedic Service is to provide the best possible 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 continually analyses paramedic service call volumes, response times and patient outcomes. Additionally, factors such as patient and population demographics and health care system pressures such as Ambulance Offload Delays are examined in order to evaluate current and future deployment needs.

Call Volume:

In 2016, the number of Emergency/Urgent (Code 4 – life threatening) calls dispatched was 15,492 – an increase of 14.76% over 2015 and Prompt (Code 3 – Serious) calls was 5,101 an increase of 4.5%. There was an overall increase of 12.2% for all responses including incident standby calls. (Figure 1)

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

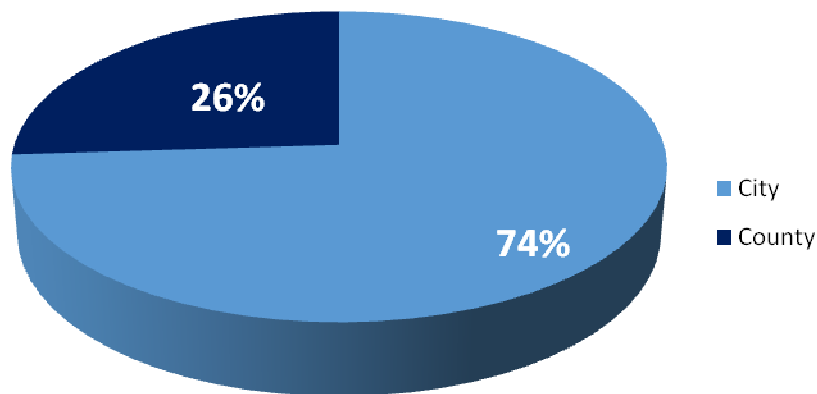


City call volume continues to represent the majority at 74% of the total responses performed by PCCP totalling 17,378 out of a total call volume of 20,632. (Figure 2)

Figure 2

Percentage of Calls in 2016 - County vs. City

(All call responses except for Stand-bys (Code 8))



Paramedic Response Unit:

The Paramedic Response Unit (PRU) is a single Paramedic first response SUV that was implemented in July of 2016 to deal with slower response times. The unit is mobile 24 hours a day covering the west end of the city and Cavan Monaghan Township. As Figure 3 indicates, the PRU has had a significant impact on response times and averages 270 calls for service per month.

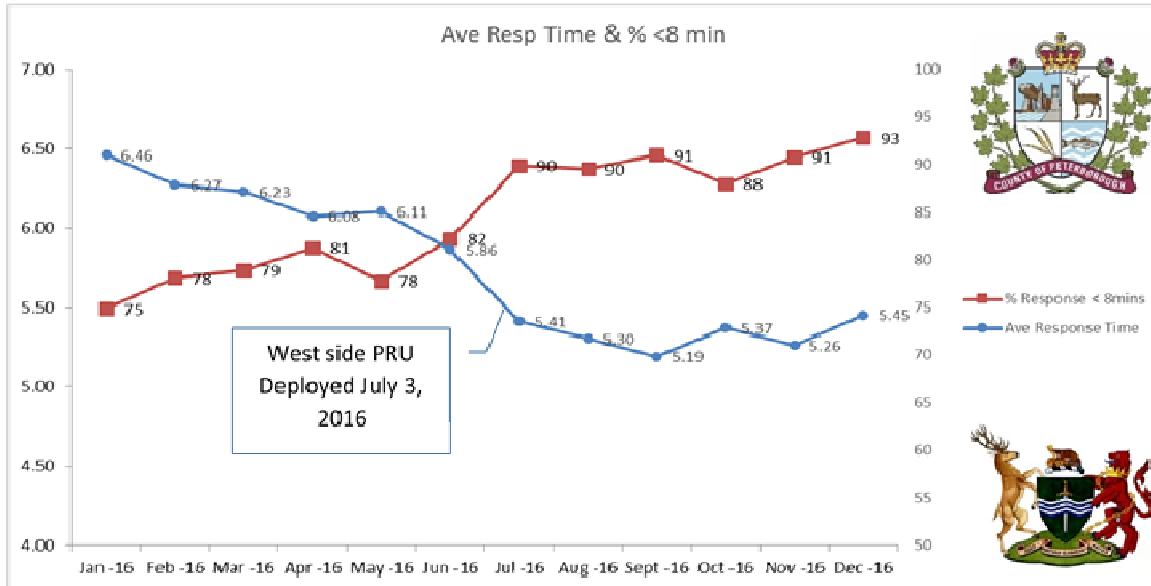


Figure 3

Call volumes broken down by individual stations (Figure 4) is representative of both call volume increase as well as adjustments in deployment strategies.

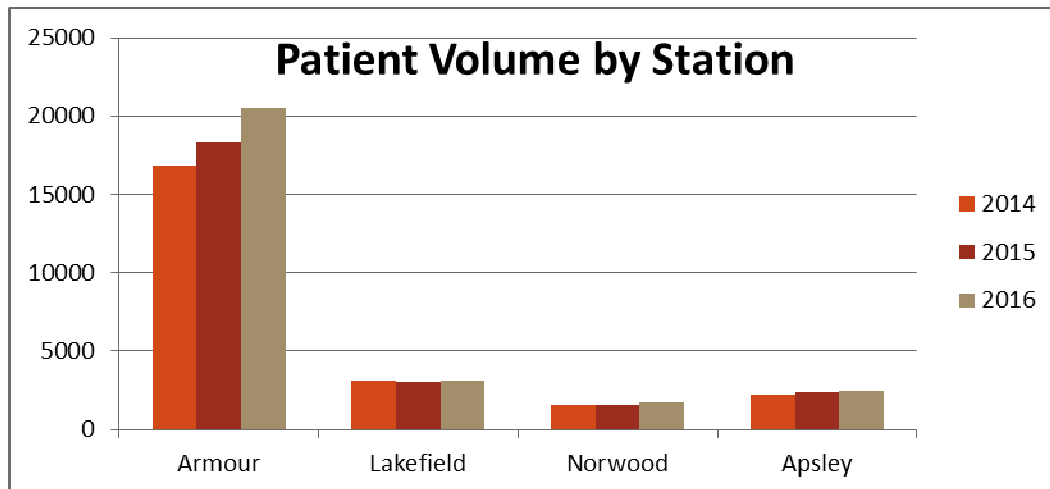
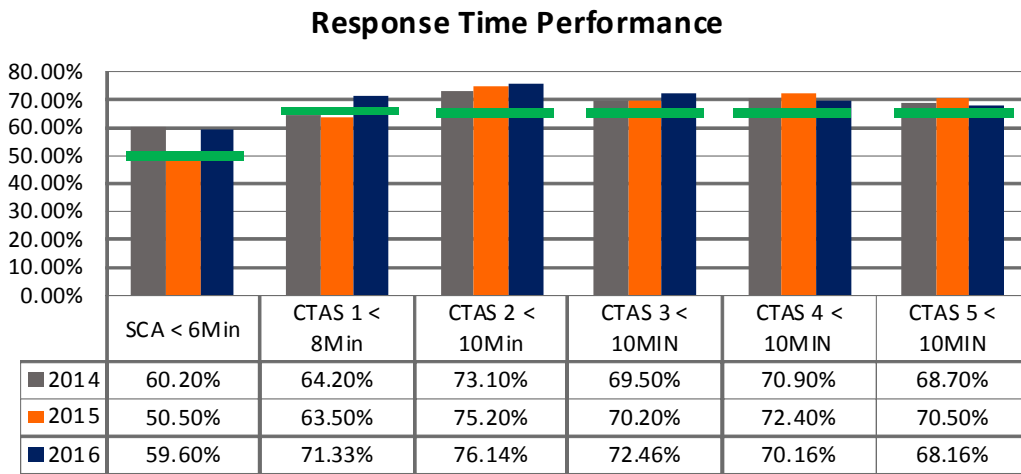


Figure 4

Response Time Performance:

Figure 5 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 2016. Implementation of the Paramedic Response Unit (PRU) and deployment strategies focused on the City's west side can be attributed to these improvements.



County and City Response
Figure 5

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%

Cross Border Calls

Figure 6 depicts the Priority 3 and 4 calls completed by PCCP in external Counties and by other Paramedic Services within the Peterborough County boundaries.

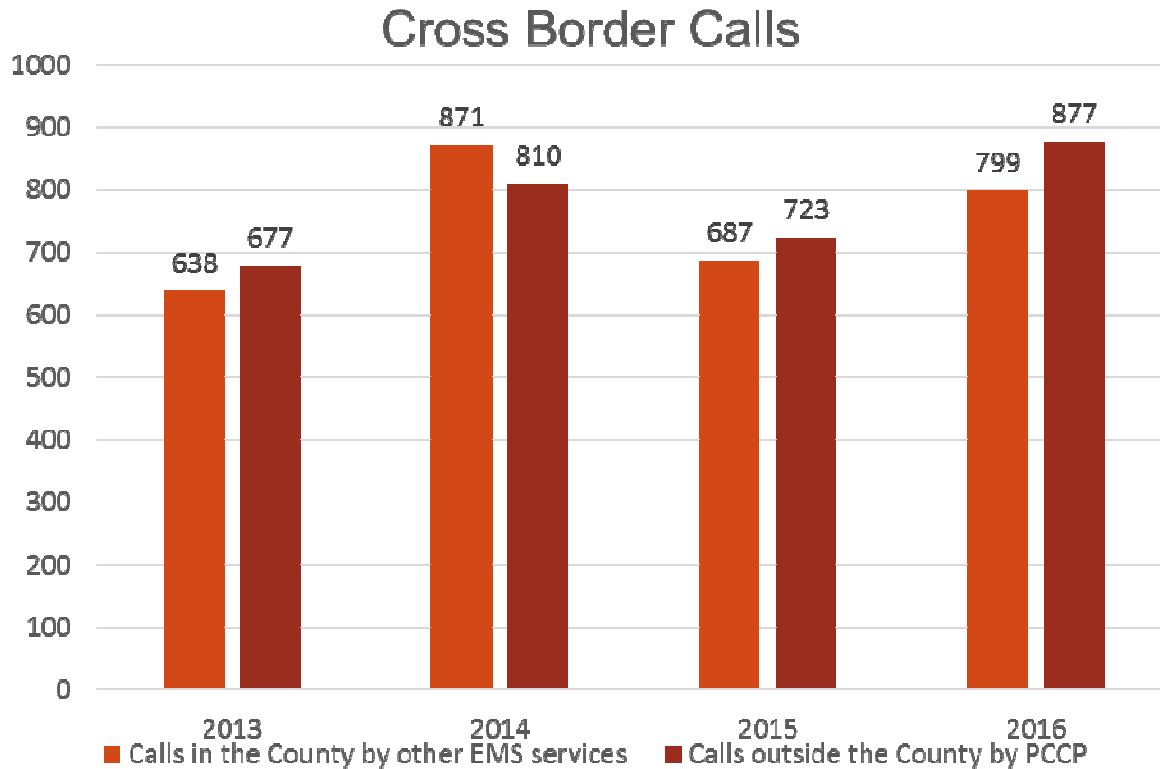


Figure 6

Offload Delay Pressures (Figure 7)

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. Over the past several years there has been definite improvements 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 35 patients per day to PRHC emergency room.

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

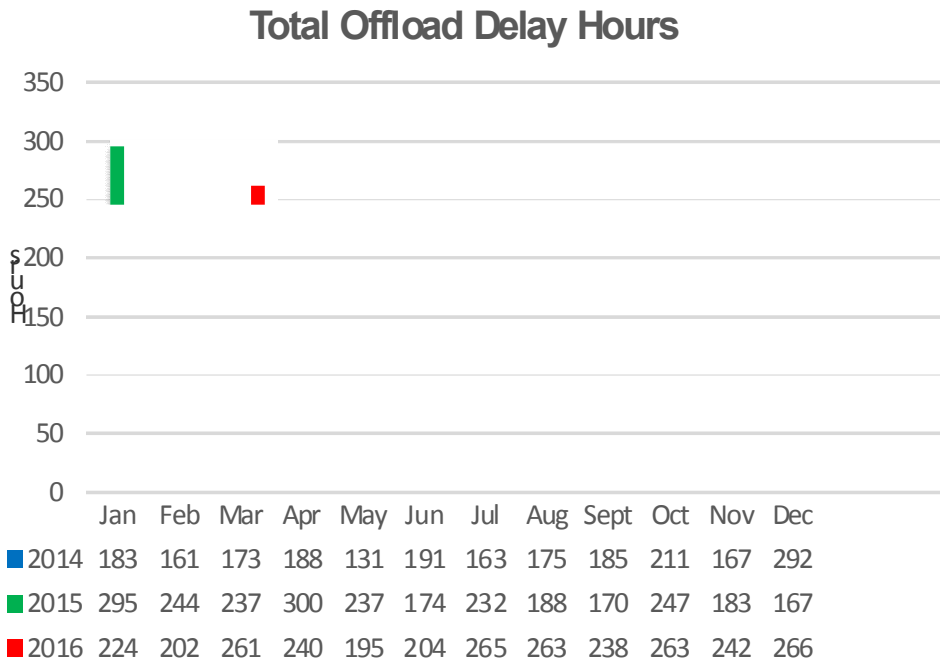


Figure 7

Figure 8 demonstrates the average amount of time PCCP crews spend on each portion of a priority 4 (P4) ambulance call. (2015 Statistics)

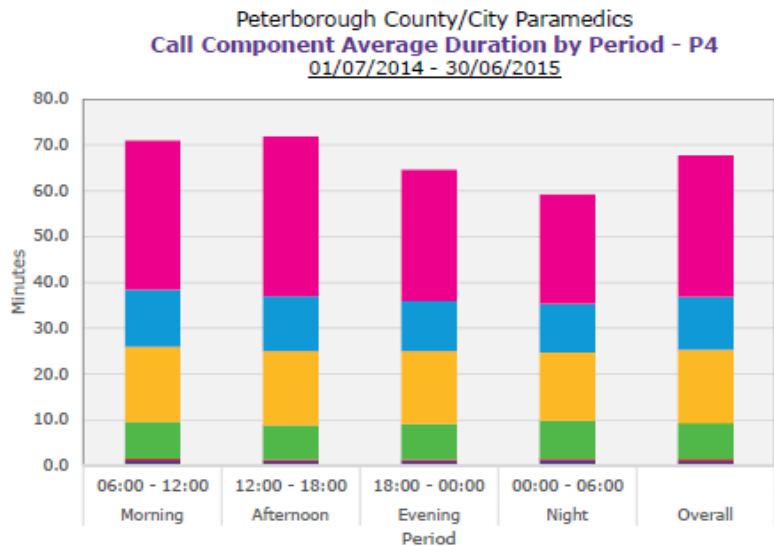


Figure 8

Age Demographics

In 2016, of all the patients assessed by Peterborough County/City Paramedics, the majority of the patients (55.12%) are in the age category of 61 to 80 years of age. As discussed in previous years, Peterborough County/City Paramedics is experiencing increasing demand from an aging population (Figure 9).

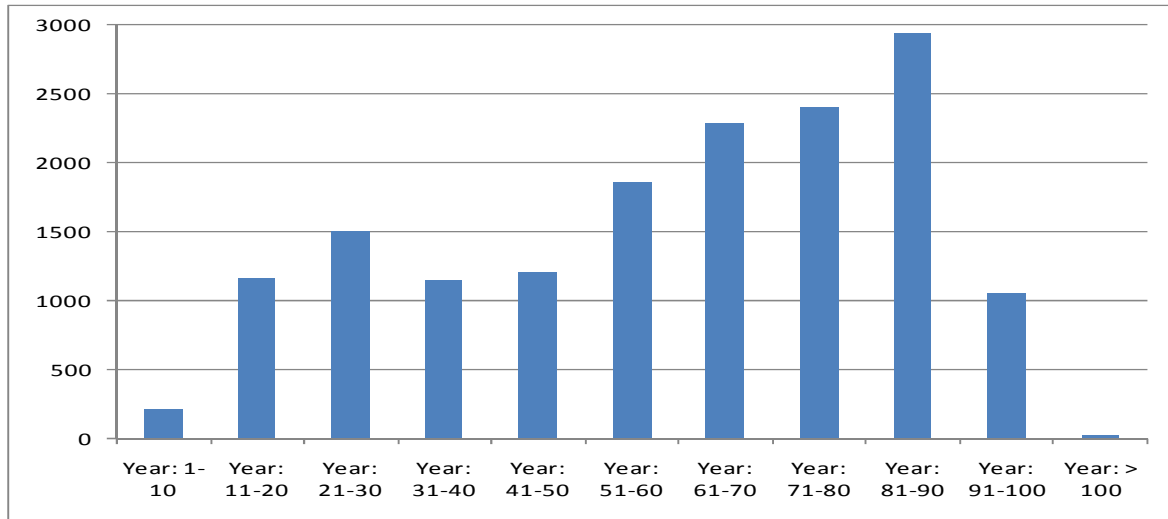


Figure 9

Frequency of call type categories

Figure 10 illustrates a breakdown of high acuity emergency calls for 2016. The top 5 clinical problems were respiratory distress 11%, musculoskeletal trauma 9%, cardiac angina 8%, seizures 6%, and altered level of consciousness 5%.

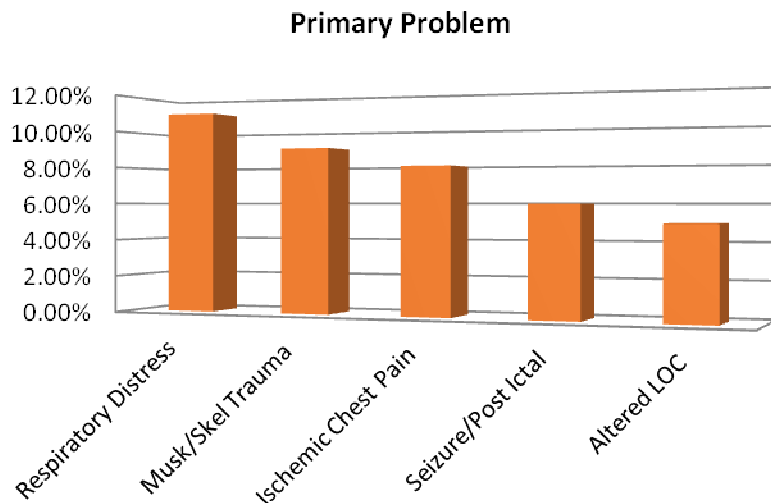
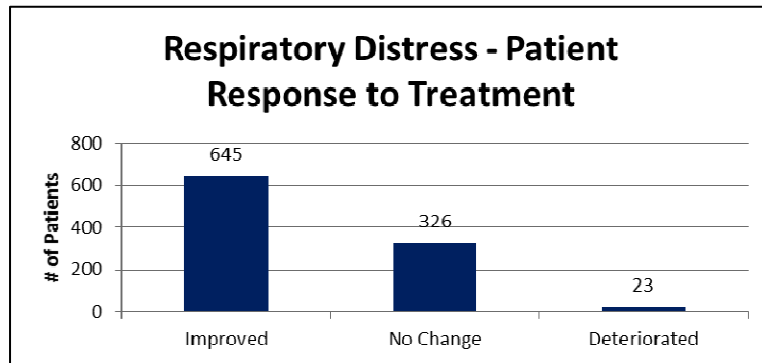


Figure 10

Clinical Performance

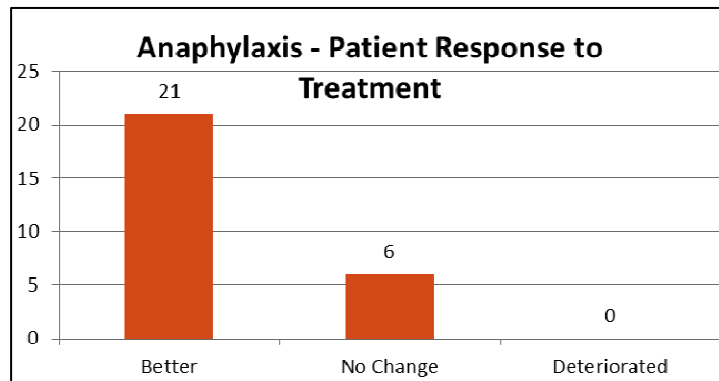
The Professional Standards Division is responsible for designing and implementing pathways enabling PCCP to meet and exceed regulatory standards and best practices. This is achieved through training, performance feedback, and benchmarking and program implementation, medical equipment review. The following are a number of examples clinical performance indicators demonstrating positive patient response to clinical interventions.



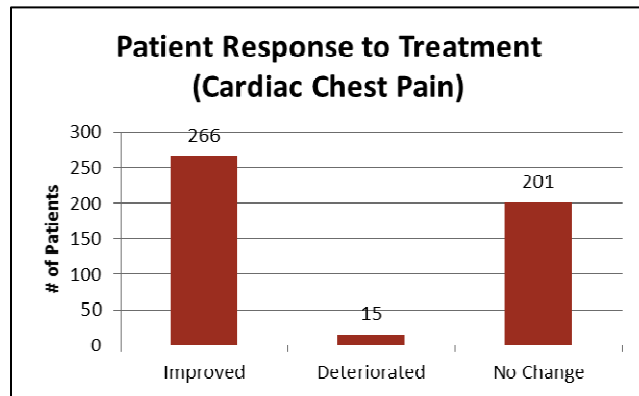
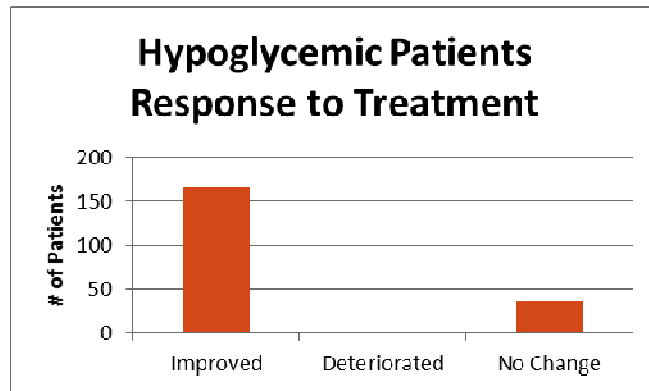
71 % of patients experiencing respiratory distress, improved after being treated by PCCP. The response time, on scene time, and treatment modalities are essential to reducing mortality and improving clinical outcomes. The average

response time for the sickest patients (CTAS 1) was 9.1 minutes, and the average on scene time for these patients was 9.6 minutes.

Anaphylaxis is a severe, systemic allergic reaction. Sever cases may result in complete obstruction of the airway, cardiovascular collapse, and death. There was clinical improvement in 78% of patients presenting with anaphylaxis.



Hypoglycemia is an emergency that must be treated as soon as possible. In keeping with this approach, the PCCP average response time to the most critically ill patients (CTAS 1) is 6.9 minutes. There was clinical improvement in 83% of diabetic hypoglycemic patients treated. Given PCCP's rapid patient transport times to the ED, even more patients may have improved after paramedics transferred care to the hospital (PCCP does not have access to PRHC outcome data).



496 patients were treated as having a cardiac angina (excluding STEMI patients). It is imperative these patients be evaluated, treated and transported as quickly as possible to the emergency department.

The average response time for the sickest patients (CTAS 1) was 9.9 minutes, and the average on scene

time for these patients was 12.7 minutes.

Summary:

PCCP remains committed to continual analysis of performance and seeks system improvement opportunities. Throughout 2017, the department will continue to examine response statistics, system pressures and where necessary adjust deployment in order to continue to deliver paramedic services that meet the needs of the residents and stakeholders of the community.

Respectfully submitted,

Original signed by

Randy Mellow,
Chief of Paramedics