**Port Angeles Fire Department**

**Community Paramedicine**

2019 Mid-Year Report

**Background**

In late 2018, the Port Angeles Fire Department (PAFD) took a “leap of faith” and moved forward with the implementation of a pilot Community Paramedicine program. The decision was a result of the recognition that several issues exist locally:

Access to primary healthcare providers in Port Angeles is not always easy. Many members of the community depend upon 9-1-1 as their primary medical provider.

PAFD call volume has been increasing annually for decades and resources have not been added to accommodate the increased volume.

The Port Angeles community is not wealthy. It is well-known that the community simply cannot afford tax increases to pay for additional emergency services.

PAFD has been seeing an increase of frequent system utilizers

The intent of the pilot program is to proactively address these issues by utilizing an existing Firefighter/Paramedic FTE from within PAFD for a one-year period beginning on January 2019.

**PAFD Pilot Program Objectives**

The primary objectives of the Community Paramedicine program are to:

Provide an increased level of health care in the community

Reduce visits to the ED

Reduce 9-1-1 calls for service

Provide referral to appropriate alternatives for health care

The intent is to meet these objectives by working with community partner agencies to identify patients who might need assistance with chronic disease management, patients who are known frequent ED users, patients who are post-discharge from either the hospital or the ED, patients who need medication management, patients who are homeless persons and other patients who are at risk. Ideally, proactive Community Paramedic interaction with these patients will help guide them to appropriate services instead of 9-1-1 or the local hospital emergency department.

**Partner Agencies**

The Port Angeles Fire Department has a long history of providing exceptional emergency medical service. Over the years, PAFD has worked very well with a number of medical service providers within the community. When it came time to identify potential community partners, it was easy to approach organizations that had a strong track record for providing outstanding service:

North Olympic Healthcare Network (NOHN)

Olympic Medical Center (OMC)

Peninsula Behavioral Health PBH)

Jamestown Family Health Clinic

Lower Elwha Tribal Clinic

PA Police Department & Olympic Peninsula Community Clinic (formerly VIMO)

Each of these organizations plays a specific and critical role in the provision of care in the Port Angeles Community, and each has a somewhat different potential connection with Community Paramedicine. All of these providers (including PAFD) face the struggle of providing service in a community that is not especially wealthy, and all are challenged to some extent by the limited funding provided by Medicaid and Medicare.

**Community Paramedic Services Provided**

Firefighter/Paramedics (FF/PM’s) work to provide emergency medical services (EMS) in response to 9-1-1 calls for service. These personnel are highly trained and are accustomed to working independently in the field, often under stressful, emergent conditions. The varied nature of the job exposes medics to all sorts of issues including trauma, cardiac conditions, chronic diseases, geriatric and pediatric conditions, substance abuse, mental health crises – basically anything and everything that can prompt a 9-1-1 call.

FF/PM’s operate within specific protocols that are determined by a physician Medical Program Director (MPD). These protocols identify the pre-hospital procedures that medics are authorized to perform and they also include a formulary that medics are allowed to utilize.

Community Paramedicine is non-traditional care. This is a first step in an effort to move fire service EMS delivery into a proactive mode, versus the traditional reactive mode that has existed for decades.

The Community Paramedic can, working within established protocols, provide a variety of actual services in the field:

Holistic 360 degree patient assessment and vital sign determination

Minor wound care

Medication reconciliation and medication administration

Chronic disease management

Evaluation of living conditions

Referral to appropriate community services

**Metrics**

Evaluating the outcomes of the pilot project is critical. The City and partner agencies require data that indicates the efficacy of the program – both from a service delivery aspect and a financial standpoint. Although an accounting of costs and cost savings is important, the evaluation of the program should also consider health outcomes and patient satisfaction.

The following data will show the number of patient contacts to date, how those patients were referred into the system, how often they used the system prior to referral and how often they used the system after referral.

A conservative estimate of costs is then provided, and potential savings are then inferred based upon the reduced use of the system after Community Paramedic intervention.

Since this is a new program, we are still developing a methodology for effectively tracking results. It is anticipated that our next report will be significantly more robust, especially since we will have a much larger data set. Certainly any recommendations for improvement will be welcomed!

**Community Paramedic Program 6 Month Summary**

**January 1, 2019 to July 1, 2019**

**Contacts**

Throughout the course of the program, the Community Paramedic makes contact with various individuals. Based upon the need of the person contacted, the Community Paramedic will provide appropriate services. In some cases, there is a clear need to provide ongoing support of some kind. In those cases, the individual is “entered” into the Community Paramedic program. Once the needs of the individual have been met, or once a “warm hand-off” has been made to an appropriate agency, the individual will be “released” from the program.

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| Individuals contacted | **78** |
| Individuals entered into Community Paramedic program | 52 |
| Individuals discharged from Community Paramedic program | 18 |
| Individuals re-entered into Community Paramedic program | 0 |

**Origin of Referrals**

Many of the individuals seen by the Community Paramedic have been referred by some agency. To date, the majority of the referrals have come from Fire Department first responders. Before the Community Paramedicine program existed, first responders had little or no options for dealing with patients who they were seeing on a repeated basis, patients who were clearly using the 9-1-1 system inappropriately or patients who needed services that were outside the scope of traditional emergency medical services.

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| Port Angeles Fire Department | 26 |
| NOHN | 7 |
| PBH | 4 |
| Caregivers/Public | 3 |
| OMC | 1 |
| OPCC | 1 |
| Concerned Citizens - DSHS | 1 |
| **Total Referrals** | 43 |

**EMS Utilization**

Patient use of the EMS system was tracked. We looked at the six months prior to initial contact with the Community Paramedic, and then system utilization after that first contact. We then looked at the change in the amount of EMS system usage after first contact. (A negative number is an improvement!)

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| --- | --- | --- | --- | --- | --- | --- |
| **Patient** | **Number of calls for service prior to CP intervention**  **(6 month period)** | **Times the patient was transported to the ER** | **Number (ytd) of calls for service *after* CP intervention** | **Number of times the patient was transported to the ER** | **Change**  **In**  **9-1-1 use after** | **Change in ER use after** |
| R.A. | 7 | 5 | 4 | 2 | -3 | -3 |
| J.C. | 2 | 1 | 0 | 0 | 0 | 0 |
| R.K. | 2 | 1 | 1 | 0 | +1 | -1 |
| D.B. | 7 | 6 | 2 | 2 | -5 | -4 |
| E.Y. | 28 | 0 | 12 | 0 | -16 | 0 |
| M.C. | 3 | 0 | 0 | 0 | -3 | 0 |
| D.A. | 9 | 4 | 0 | 0 | -9 | -4 |
| P.S. | 2 | 1 | 1 | 0 | -1 | -1 |
| H.L. | 2 | 1 | 3 | 1 | +1 | 0 |
| R.M. | 5 | 5 | 3 | 1 | -2 | -4 |
| D.H. | 12 | 4 | 3 | 0 | -9 | -4 |
| P.C | 3 | 1 | 0 | 0 | -3 | -1 |
| J.G. | 3 | 0 | 0 | 0 | -3 | 0 |
| W.C. | 3 | 3 | 3 | 2 | 0 | -1 |
| D.C. | 14 | 6 | 7 | 2 | -7 | -4 |
| J.M. | 3 | 0 | 1 | 0 | -2 | 0 |
| E.R. | 2 | 1 | 3 | 1 | +1 | 0 |
| T.K. | 11 | 2 | 1 | 0 | -10 | -2 |
| E.E. | 0 | 0 | 1 | 1 | +1 | +1 |
| J.D. | 3 | 0 | 10 | 2 | +7 | +2 |
| M.S. | 1 | 1 | 0 | 0 | -1 | -1 |
| L.M. | 11 | 8 | 7 | 4 | -4 | -4 |
| B.P. | 3 | 0 | 0 | 0 | -3 | 0 |
| C.H. | 7 | 3 | 0 | 0 | -7 | -3 |
| D.S. | 4 | 0 | 0 | 0 | -4 | 0 |
| E.H. | 1 | 1 | 2 | 2 | +1 | +1 |
| Z.W. | 3 | 1 | 2 | 1 | -1 | 0 |
| I.J. | 7 | 3 | 0 | 0 | -7 | -3 |
| R.R. | 0 | 0 | 0 | 0 | 0 | 0 |
| Totals | 158 | 59 | 66 | 19 | -88 | -36 |

Utilizing the numbers from above we are able to show a 59% overall decrease in EMS calls with a 68% overall decrease in transports to the Emergency Room after initial contact with the Community Paramedic.

It is acknowledged that it would be very difficult to prove a direct causal relationship between the contact with the Community Paramedic and the decreased EMS system utilization. For that reason, when attempting to predict savings as a result of the program, we are going to conservatively assume that only 50% of the reduction can be attributed to the Community Paramedic intervention.

It is important to point out that there are multiple variables that could affect the overall accuracy of the data, however we need a starting point. This is an ongoing evaluation of the program and since we have only been tracking the information for 6 months, data is limited.

The cost of a visit to the emergency room is difficult to predict. Anecdotally, we have heard that it costs the hospital at least $500 every time a patient is seen in the ER. We have also heard that the cost can rapidly rise to an average of approximately $1700 depending on imaging or tests that may be performed. For the purposes of this study, we are going to use a conservative estimate of $750 for each ER visit.

Working with the Washington State Health Care Authority (HCA) and an independent third-party consultant, the Port Angeles Fire Department recently completed a comprehensive cost of service analysis. Based upon that analysis, it was determined that it costs the Port Angeles Fire Department $2002 every time a patient is transported to the hospital. This is a known cost.

In reality, the Fire Department incurs only a few additional costs when a patient is transported as opposed to when the Department responds to a 9-1-1 call for service that does not result in a transport. Using a very conservative estimate, we have assumed that a 9-1-1 response without transport costs $1000.

Considering the above information, we conservatively estimate the savings to date to be:

44 fewer calls for 9-1-1 response x $1000 per response = savings of $44,000

18 fewer transports to the ER x $2002 per transport = savings of $36,036

18 fewer ER admissions x $750 per admission = savings of $13,500

Total mid-year savings = $95,536

Again, these are very conservative numbers that assume a relatively low ER utilization cost and assumes only 50% of the reduced EMS system utilization is due to the Community Paramedic intervention. The actual savings could easily be significantly higher than those shown.

Since the pilot program is using an existing FTE from the Fire Department, the costs for the provision of this service has essentially been $0. In order to continue the program into 2020 and beyond, the FTE would need to be replaced, at a projected cost of approximately $100,000 per year.

**Case Studies**

When it comes to health care, numbers only tell a limited part of the story. Listed below are 5 patients that were entered into the Community Paramedic Program, the issues they were facing, the actions that were taken by the Community Paramedic and the results of those actions. Every patient faces different challenges and the intent is to utilize these as an example to show the impact Community Paramedicine has had in their lives.

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| Patient | Issues | Action | Results |
| 1. | Homeless, mobility limited, uncontrolled diabetes, no primary care physician.  Prior 6 month history of EMS usage:  911 calls – 5  ER visits - 5 | Connected patient with a Primary Care Physician who prescribed insulin. Gathered the needed supplies for his medications by utilizing OPCC. Assisted patient with managing his blood sugars, made sure that he had a place to store medications at the shelter and provided assistance with follow up appointments at the clinic. | With successful management of his chronic medical conditions his mobility improved greatly. Eventually he was able to find housing and is doing well today. Prior to this intervention, the patient had been seen 5 times in a month at the ER, but while being assisted by the Community Paramedic he did not utilize the ER once. |
| 2. | Newly diagnosed atrial fibrillation and heart failure. Family began utilizing ER for primary care.  Prior 6 month history of EMS usage:  911 calls – 2  ER visits - 1 | Patient was quickly identified by responders and referred to the Community Paramedic. Met with the patient and his family and explained his condition to them, what they could expect to see, and how it could be successfully treated at home. | Patient has been able to successfully manage his medical conditions through home care procedures and follow up appointments with his primary care physician. He has also been able to avoid any further ER visits. |
| 3. | Behavioral issues, misuse of Emergency Services  Prior 6 month history of EMS usage:  911 calls – 12  ER visits - 4 | Provided information regarding the impact her actions had on the system to her case manager and care services. Worked together in an effort to change her behavior. | Through many discussions with the patient and case manager, we were able to assist her in changing her behavior. EMS has not responded or transported her once since then. |

**Case Studies (continued)**

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| Patient | Issues | Action | Results |
| 4. | Obesity, chronic lung disease  Prior 6 month history of EMS usage:  911 calls – 11  ER visits - 2 | Assisted Home Health in managing care of patient’s conditions. Currently working with the patient to continuing the exercises provided by physical therapy to improve her health. | Patient condition has improved greatly. Prior to Community Paramedic intervention she was unable to leave her apartment without the assistance of a wheel chair and care giver. Today she is able to utilize her rolling walker for all of her outside activities. She has not been to the ER once since Community Paramedic began services. |
| 5. | Colon Cancer, no primary care physician - Patient refused any treatment for her condition but was suffering effects of the disease which required intervention.  Prior 6 month history of EMS usage:  911 calls – 1  ER visits – 1 | This particular case is typical of those seen frequently. After being notified of the patient situation, Community Paramedic was able to find her a primary care physician and connect her with hospice services. | Early assessment and referral by the responders helped prevent multiple unnecessary ER visits. Patient was placed into hospice and care has been provided by hospice and her physician. Currently, patient is comfortable at home and has not utilized emergency services since. |

**Gaps in the System**

One of the things that we wanted to accomplish with this program was to identify the reasons people are forced to over utilize the 911 system and the Emergency Room. During the past 6 months there were multiple issue we noted in people’s lives that would result in them feeling like they had no other option other than to call an ambulance and be transported to the hospital. Listed below are some of these issues the community paramedic has faced and the solutions that have been provided. These are all real situations and the results has saved the system from being unnecessarily burdened. More importantly, the community members were able to avoid unneeded costs and stress connected with use of the emergency medical system.

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| Issues | Solutions |
| I need help but the health care system is confusing and difficult to navigate. | Community Paramedic works as a patient advocate to navigate the system and connect patients with Physicians, In-Home Cares Services, Pharmacies, Home-Health Nurses, Occupational Therapists, Physical Therapists, and Hospice Care. |
| I have a wound or injury that does not require an Emergency Room visit, but I don’t know where else to turn. | Community Paramedic provides in-home assessment and medical treatment without burdening the patient by transporting them to the Hospital. Community Paramedic then determines if the wound or injury requires higher level intervention and as necessary connects the patient with their doctor or Home Health Nursing services. |
| I was just released from the hospital but Home Health services have not yet started and I need help now. | Encourage clinics to contact the Community Paramedic and ask for help. The CP will respond and stabilize the patient in their home until Home Health is able to begin visits, usually within 2 or 3 days, thereby avoiding unnecessary Emergency Room visits. |
| My Patient called and I am not sure what medical issues they are experiencing. My only option is to call 911 for a medical transport and Emergency Room evaluation. | Patient Navigators and Clinical Nurses can call the Community Paramedic to respond and evaluate the patient. The Community Paramedic can make a determination regarding the level of care required and report directly back to the clinic providing information based on a medical assessment. |
| My patient who suffers from behavioral issues has missed their appointment to receive long acting injectable anti-psychotic medication. This is a concern because without this medication they will make inappropriate decisions resulting in police intervention and transport to the emergency room. | Respond directly to the patient and administer the injectable medication at their home, helping them maintain a level state of mind. Then evaluate and report findings directly to the clinic. |

Once again, these are just a few of the gaps that were identified in the last 6 months. The Community Paramedic Program is not intended to replace any services that already exist in our community. Home Health Nurses, Occupational Therapists, Physical Therapists, field social workers, mental health professionals, and in home care givers are all irreplaceable and provide an extremely necessary function in community health. The purpose of this program is to quickly respond to individuals in crisis, identify their needs, and work with the patient to connect them with services. Follow-up assessments can then be made to assure that patients are receiving the assistance they require. The Community Paramedic is able to prevent situations which cause patients to believe they have no other option than to utilize emergency services for their non-emergent needs. We are continuing to work toward finding other areas where gaps exist and how this position can bridge them.

**End Note**

The Port Angeles Fire Department is a proud organization. Although relatively small, the organization has a huge responsibility that it takes very seriously. This Department is staffed with exceptional personnel – personnel who genuinely care about the community that they serve, the community that they live in. These personnel are well trained, hard-working, dedicated, compassionate public servants. The Community Paramedicine project has been embraced by the Department, and it is seen as a logical next step in the continuum of care. It is hoped that continued successes of the program will enable the program to exist beyond this first one-year pilot period and, if possible, even be expanded. There is a clear need.