2019

The AFD CORE Team Annual Report

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Executive Summary

A white paper titled AFD Mobile Integrated Health Program: Community Paramedicine White Paper, authored by Firefighter/Paramedic Riley, was completed in June of 2018. This paper identified the Anchorage Fire Department (AFD) had three notable gaps in the delivery of medical care to include inappropriate responses to behavioral and psychiatric calls, increasing numbers of low acuity incidents that are over resourced with responders and apparatus, and the significant impact of high utilizers on EMS and the entire community's medical system. Using the information from the paper, the Community Outreach, Referral and Education (CORE) Team was developed as a program to address the impact of high utilizers on the AFD EMS system.

The primary objectives of the CORE Team are:

- Improve the health and wellness of high utilizers of EMS by meeting their specific needs
- Provide alternate solutions for clients with low acuity medical conditions
- Decrease client utilization of AFD resources by 40% after 6 months when compared to the six months prior to enrollment

The CORE team enrolled its first client in late June of 2018, which marked the official start of the program. Clients were identified by data gathered with the use of the FirstWatch® surveillance triggers for three patient interactions in 30 days. Initially, five clients were identified and four were enrolled into the program. The fifth client could not be located after several months of effort. One to two new clients were added each month as the process improved and a better understanding of how and what assistance could be provided was realized.

Key Highlights for the AFD CORE Team from the first year ending in June 2019:

- 16 clients enrolled with 8 client enrolled greater than 6 months
- Over achieved initial goal with a 43% reduction in patient contacts and avoiding EMS transport and Emergency Department charges of more than $450,000
- 154 client contacts by CORE Team members
- 250 hours of Outreach and 300 hours of Case Work
- Recipient of the 2019 Zoll Pulse Award for the innovative use of data to improve patient, financial, and operational outcomes

With the success of the first year, future recommendations for the potential expansion of the program include:

- Explore methods to improve CORE Team workload issues
- Create 24 hour/7 day a week positions to support the department
- Create a senior-level administrator position to manage the program and be the liaison to the community and partners
- Obtain an MIH-CP electronic information reporting system to assess, enroll, manage and document interactions with clients
- Continue to foster relationships with MOA internal and external partners
- Provide Community Paramedicine Certification (CP-C) and Crisis Intervention Team (CIT) training for all team members

Overview

In early 2018 the AFD had the opportunity to work with the Municipality of Anchorage (MOA) Mobile Intervention Team (MIT) and the Anchorage Police Department (APD) Community Action Policing (CAP) Team. The MIT consists of Licensed Mental Health Counselor and Team Lead Melina Breland, Social Worker Tanya Vandenbos, and Firefighter/Paramedic Michael Riley representing the AFD. The team was created and supervised by the Homelessness Coordinator for the MOA, Nancy Burke. The two initial goals for the team were: 1) safety and stabilization of the Brother Francis Shelter (BFS) and Beans Café Campus, and 2) perform outreach to those that are currently homeless and camping on MOA property.

While participating with the MIT, the AFD Senior Staff saw value in simultaneously investing the time of the Firefighter/Paramedic Riley to do a community needs assessment using AFD data to look for gaps in patient care and possible solutions. Using data from AFD records, direct observations, and population studies, the three biggest gaps in the delivery of care by the AFD were identified. The three gaps are:

- Inappropriate response to behavioral and psychiatric responses by AFD and APD
- Increasing number of low acuity responses receiving the same level of AFD resources as high acuity emergencies such as a patient suffering from cardiac arrest
- Impact of high utilizers of the entire community medical system (EMS, hospital Emergency Departments, and health insurance)

In response, the AFD has established the CORE Team purposed with the mission to provide the right care, at the right time, in the right setting, with the right resources, and at the right cost. Sustainable funding source(s) and multi-disciplinary collaboration continues to be an immediate priority.

Established goals of the AFD CORE Team are:

- Improve the health and wellness of high utilizers of EMS by meeting their specific needs
- Provide alternate solutions for those patients with low acuity medical conditions
- Reduce the burden of behavioral health emergencies on the AFD, APD, and hospital EDs

Objectives of the AFD CORE Team are:

- Identify clients using real-time data or referrals from AFD and allied healthcare providers
- Stabilize clients with outreach, service navigation, and care coordination
- Utilize alternate transportation of enrolled clients to destinations other than the EDs
- Determine reasons for frequent 911 activation of non-emergent EMS responses
- Identify behavioral health care gaps through assessment and find appropriate solutions
- Respond with a team approach in real time to behavioral health emergencies within the community

High Utilizers

In February of 2018, AFD Assistant Chief Erich Scheunemann requested two data surveillance triggers to be built by FirstWatch® to enable real-time surveillance of High Utilizers. A nationally accepted metric to determine High Utilizers is two interactions with a patient within 24 hours, or three interactions with a patient within 30 days. Over the last year the "3 in 30" metric has proven to be more reliable in identifying high utilizers. The program is not 100% perfect and occasionally clients are identified much later in their crisis because of either a program problem or more commonly a misspelling in the clients name by providers in their electronic Patient Care Reports.

A comparison analysis was performed to compare Q1 and Q2 of 2018 against Q1 and Q2 of 2019 as one measurement of impact to the system by the work performed by the CORE Team:

- 93 high utilizers identified in 2018 vs. 96 in 2019 (Q1 and Q2)
- Percentage of impact on EMS System by the high utilizer cohort has decreased by 3.1%
- Patient contacts by the Top 5, 10 and 20 identified high utilizers has decreased by 38%, 30% and 19% respectfully
- Total EMS runs decreased by 1.18%

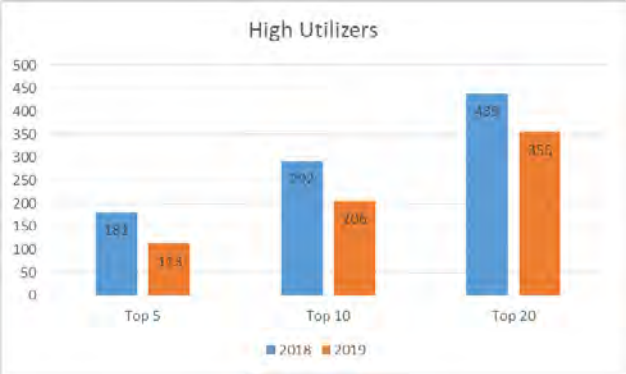


Table below includes a more complete look at the data used for the comparison analysis:

IDENTIFIED HIGH UTILIZER COHORT				
	2018		2019	
Identified Utilizers	93		96	
	Q1	**Q2**	**Q1**	**Q2**
Patient Encounters	448	526	479	435
Total EMS Responses	5815	5850	5806	5721
Impact of clients on all EMS responses	7.70%	8.99%	8.25%	7.60%
	Total # of Encounters	**Median # of Encounters**	**Total # of Encounters**	**Median # of Encounters**
Top 5	181	37	113	22
Top 10	292	28.5	206	20
Top 20	439	18.5	355	17
Demographics				
Gender	**Male**	**Female**	**Male**	**Female**
	47	48	53	43
Age	**Median**	**Average**	**Median**	**Average**
	52	51.88	58.5	56.48
Housing Status	**Housed**	**Homeless**	**Housed**	**Homeless**
	50	43	53	43

A closer look at the eight individuals that have been enrolled for greater than six months demonstrates success not just for AFD but for the entire healthcare community. The average charge by AFD for an ambulance transport of a high utilizer in 2018 was $1052.00 per transport. The State of Alaska Health Analytics and Vital Records reported in 2016 that patients with two or more ED visits in a year had mean charges of $2,931 per visit. It can be presumed that every EMS transport causes an ED visit because at this time AFD does not have alternate transport destinations for patients. Data below does not reflect any charges that occurred from hospital admissions. Several of these patients were admitted, but at this time there is not an ability to track charges that occurred from those admissions.

The following table displays the costs avoided for these eight individuals:

	256 pre-enrollment transports	139 post-enrollment transports	Costs Avoided
Estimated EMS transport charges	$269,312	$146,228	$123,084
Estimated ED visit charges	$750,336	$407,409	$342,927
Total estimated charges	$1,019,648	$553,637	$466,011

One major barrier that was recognized early on for the first few clients enrolled was transportation to medical appointments, to the pharmacy to pick up medications, or to other service providers. This often led to neglect of their health until it declined enough to need emergency care or encouraged individuals to use the ED for access to Primary Care Providers via an ambulance transport. A cab voucher program began in November of 2018 to fill this obvious need. Some quick facts are as follows:

- Four patients utilized cab vouchers for transport to medical appoints
- 26 cab rides at a cost of $354.39
- Average $13.60 a ride which is a fraction of the unrecovered costs to the AFD by the same cohort for an ambulance transport

CORE Team

The designator CORE 1 was assigned to the CORE Team response vehicle in January and a dispatch response profile was built. This brought the ability to use CAD and FireRMS to track data on actual time spent doing outreach but also brought a higher level of safety to the members working directly in the field. Prior to responding, the CORE Team member will call AFD Dispatch via phone and have them load the response to include address, client name, DOB if available, welfare check intervals, and if they will be alone or accompanied by another person or agency. This provides for increased accountability and safety, especially when responding alone.

The table below shows call types that CORE 1 has responded to in 2019. As the program expands it would be expected that CORE 1 will respond to more call types because of its mobile nature of the vehicle and the propensity for meeting clients in high call volume areas:

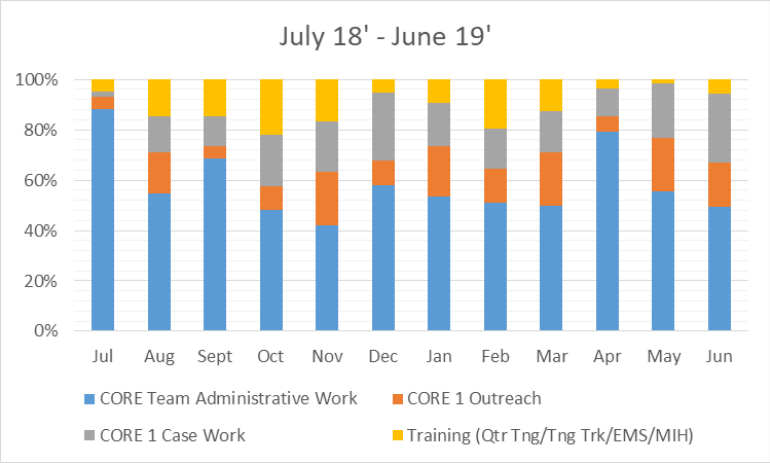
CORE 1 Responses													
2019													
Incident Type	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**	**Total**
CORE Team Call Out - 3001	1	12	16	7	17	16							69
EMS Call - 321	0	1	0	0	0	2							3
Vehicle Accident, No Injuries - 324	0	1	0	0	0	0							1
Good Intent - 600	0	0	0	0	2	0							2
Cancelled Enroute - 611	0	0	0	0	0	1							1
Transport by Non-Fire Service - 661	0	0	1	0	0	0							1
Total Responses	1	14	17	7	19	19	0	0	0	0	0	0	77

The table below demonstrates time spent on location performing outreach in-person with a client:

CORE 1 Scene Times by Minutes													
2019													
Time On Scene	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**	**Total**
Scene Time 0-20min	0	7	6	4	7	10							34
Scene Time >20min	1	5	4	2	4	2							18
Scene Time >40min	0	0	4	1	4	4							13
Scene Time >60min	0	2	3	0	4	3							12
Total Responses	1	14	17	7	19	19	0	0	0	0	0	0	77
Total Scene Time (min)	24	299	611	139	744	625	0	0	0	0	0	0	2442
Average Scene Time (min)	24	21.4	35.9	19.9	39.2	32.9							31.7

The CORE Team workload can be broken into four primary duties: administrative, outreach, case work, and training. Administrative work includes but is not limited to program development, data acquisition and interpretation, report writing, communication with past, present and future community partners, Municipal Assembly meetings, and internal meetings. Outreach and case work are all duties of a community paramedic/case manager/care coordinator. Training encompasses both required internal training to stay current as a Paramedic/Firefighter and training to learn and expand upon the new duties of the CORE Team.

The graph to the right demonstrates the amount of time spent on the four primary duties of the CORE Team by the single member of the team from inception of team to June 30, 2019:



Recommendations

The data shows that the CORE Team has a tremendously positive impact on the clients, the community, and the AFD. The impact is limited by the amount of time available to perform

case work and outreach by the team. Other limitations include no sustainable funding source, and potential limitations include lack of statutory regulations for paramedic scope of practice to perform primary care and point of care testing.

The first recommendation for the program is to increase staffing on the team from one to four. Each additional team member will have more capacity than the lone member now because they would not be consumed by the administrative duties that are currently required. Most of the administrative work would stay with the CORE Team Coordinator. This would include a "Kelly" schedule or 12 hour shifts to allow for more hours in the day to provide services to clients. This team would still be utilized on 911 calls to stay current with operations and pass on institutional knowledge that has been gained with time on the department. As the team expands, a senior-level administrative position to manage the program will ensure continued success. The senior administrator will be the face of the team for the community.

The next recommendation is securing sustainable funding source(s). Meetings are underway trying to identify sources of funding but progress has been very slow. Secure sustainable funding through billing for services or by contracting with payers and hospitals would be used to offset uncompensated care performed by AFD. Uncompensated care is the difference between charges and payments. Example: Charges – Payments = Uncompensated Care → $1052 - $303 = $851. Tracking uncompensated care initially would be used show impact for the need of funding and also provide metric for uncompensated care reduction.

Other barriers will need to be addressed such as the limitations with the current scope of practice at the state-level to allow Community Paramedics to begin providing limited primary care and point of care testing. Also their needs to be reduction of silos within the medical community to allow for more collaborative care to be performed. Lastly, there is a need to identify a single reporting platform. The platform will be used for recording outreach and case work performed, client response and medical history, and program analytics for measuring real-time performance of clients and the team.

Conclusion

Overall, the inaugural year of the CORE Team has been hugely successful. The key goal was to reduce patient contacts by enrolled clients by 40% in the first six months when compared to the previous six months. This goal was overachieved with a 43% reduction. Additionally, patient contacts by high utilizers decreased in the first two quarters of 2019 when compared to the first two quarters in 2018 saving approximately $450,000 in EMS transport and Emergency Department charges. This saving was achieved by the eight clients that were enrolled for greater six months.

The CORE Team's main goal for the next year is to increase the number of clients to expand upon the proven success of this past year. Achieving that goal requires increased capacity of the team and securing sustainable funding. The AFD should be proud of the success seen by the CORE Team but without expansion of the program no additional incremental success will be achievable.