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Number of Annual Service Requests: 46,000
Number of Ambulances: 68
Business Type(s): Privately-Held Corporation
Project Participants: James Pierson, COO/VP, JPierson@medicambulance.net
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Entry Categories: Innovation in EMS

Situational Analysis: Medic Ambulance Service is the exclusive ALS service provider in Solano County, a HRSA-designated medically underserved area with a physician provider to population ratio of 81.1 per 100,000. In 2014 we became aware of an opportunity to participate in a Community Paramedicine Pilot initiated through California State EMSA. After collaborating with our LEMSA and our community hospitals we unanimously concluded that the 23% average readmission rates for each CHF and COPD patients was taking a crippling toll on the hospitals' reimbursement and increasing Emergency Department wall-times.

Since starting in January of 2015 Medic Ambulance Service enrolled six Paramedics into approximately 300 hours of additional training focused on the biopsychosocial needs of patients with CHF or COPD. In 2017 five additional Paramedics underwent this training. The education has continued through monthly case reviews and peer-to-peer lessons-learned where the entire team brainstorms innovative solutions to our patient's challenges.

From the beginning Medic Ambulance Service was poised on creating a sustainable model that would persevere past the period of being a pilot or grant funding. We made this goal of preservation well-known to all stakeholders and after quickly proving our value through low readmission rates we had a sustainable funding source, happy to pay for our Community Paramedicine Services.

- Project Goals:
1. Reduce the readmission rates of patients with CHF or COPD.
 2. To create a sustainably funded model to ensure the project remains available to our community and is replicable in other areas.
 3. Provide superior customer service.
 4. Teach patients how to improve their health by appealing to the patient's values.
 5. To provide these services at a lower cost than was otherwise available.

Planning & Implementation: Planning Phase: The project was planned based upon the results of our community needs assessment. The findings indicated that there is a substantial difficulty within our

community to access restorative medical aid. Each Community Paramedic underwent over 300 hours of focused training on the management of CHF and COPD, cultural sensitivity, and rehabilitative services.

Implementation Phase: To ensure compliance with the strictest regard for patient outcomes and program oversight Medic's Community Paramedicine Program is IRB approved, reports at least monthly to a Steering Committee with diverse medical and nonmedical expertise, 100% charting review by a Registered Nurse, and utilization of, EMS Survey Team, a third-party patient surveyor.

These highly trained Community Paramedics began seeing patients in September of 2015 and the most common question we are asked by our local hospitals is when can we help them lower their readmission rates for patients with chronic conditions other than CHF or COPD. With our sustainable and reproducible model we intend to keep filling healthcare gaps and mold healthcare delivery to suit the needs of every community we serve!

Results: Our goals with this project are built upon the IHI Triple AIM to improve the patient experience of care, improve the health of populations, and reduce the per capita cost of health care. We are absolutely meeting these foundational goals!

300 patients have been referred to the program (196 enrolled)
384 visits have been completed

Our measures and objectives reveal that our enrolled population has only a 7.7% unplanned readmission rate; as opposed to a 23% rate of those not enrolled.

During home visits it was discovered that:

51.5% of patients had medication errors

43.7% of the patients that thought they were taking all their medications correctly weren't

75% of patients needed help understanding their discharge instructions.

These enrolled patients also self-identify an average overall health rating improvement of 13% between their pre-enrollment and post -enrollment health. During this same interval our patients understanding of their hospital discharge instructions has risen by 11.2%, understanding of when to take medications improved 5.2%, and understanding of their medication side effects improved by 11.5%.

EMS Survey Team, a third party patient surveyor, attempts phone contact with all enrolled patients. These scores are recorded and measured against the 147 different EMS services they contract with. Our program is the #1 rated provider with a total score of 96.92/100.

"It's been a very good experience. She (the Community Paramedic) explained everything so I could understand." - Patient

"There's a lot of people out there who need this, especially those without insurance." - Patient

"My blood pressure started going up and it wouldn't come down. I had medication but it wasn't helping." - Patient who was not taking her medication at the correct frequency.

"She (a patient) feels more comfortable." - Patient's daughter

"This is a pilot program but everyone so far is very pleased with how it is working." - Director of case management at a referring hospital.

"If I get sick I know they're gonna be there for me and that I'm not alone." - Patient

Impact: As a third generational, family-owned EMS provider, nothing is more important to us than the community we serve as the exclusive ALS provider. Our creation of this program not only demonstrated proof of concept but also continues to grow and adapt to meet the needs of our populations through changing the landscape of health care.

The impact of this program's success has been marked with already saving the health care system \$420,000 in readmission costs, improved health literacy in vulnerable populations, reducing overuse on the 9-1-1 and Emergency Department systems, and catalyzing positive health changes through empowerment.

It is projected that over 44% of the patients enrolled into this program have a functional health literacy defined as "below basic", the lowest possible category per the National Assessment of Adult Literacy, compared to 14% of American adults that fall into this category. At this level of health literacy the dates of appointments and clearly defined times to take medications are often understood, but the understanding of how negative lifestyle choices, such as smoking, poor diet, and recreational drug use affect their management of diseases is not universally comprehended.

Budget: This program occupies 5% of the operation budget.

[Click here for video.](#)

- **300 Patients** have been referred to the program (196 enrolled).
 - **7.7%** unplanned readmission rate.
- **384 Visits** have been completed.
- **13.3%** of patients seen outside of their permanent residence
- Discovered medication errors in **51.5%** of patients.
- **75.0%** of patients needed help understanding their Discharge Instructions.
- Patients' average self-identified improvements between pre and post CP interventions.
 - **Overall health rating improved by 13.0%.**
 - **Hospital discharge instruction understanding improved by 11.2%.**
 - **Understanding of when to take medications improved by 5.2%.**
 - **Understanding of medication side effects improved 11.4%.**
 - **Anxiety/Depression improved 7.9%.**

