The City of Mesa, Arizona implemented the Community Care Initiative as an innovation derived from community paramedicine-based practices. Community paramedicine is a theoretical grassroots approach to community health and safety that was synergized by the passage of the Affordable Care Act (ACA). The ACA affects any entity that provides health services. The City of Mesa was proactive after the ACA became public law and began to evaluate the future impact on services. To undertake this endeavor, city leaders and The Mesa Fire and Medical Department personnel, analyzed data and correlated it to the spirit of the Act, which aims to lower healthcare delivery costs, improve efficiency in healthcare delivery, and improve citizen heath. With these objectives, the Community Care Initiative was created to deliver the right response, the right care, and the right services to 911 utilizers and Mesa citizens. In September 2014, Mesa was awarded $12.5 million from a Centers for Medicare and Medicaid Innovation Grant to test the Community Care model over three years.

The Community Care Initiative is a public-private partnership that links firefighter-paramedics with nurse practitioners, physician assistants, and licensed behavioral health counselors. The nurse practitioners and physician assistants are provided by Mountain Vista Medical Center (a hospital based in Mesa), and the licensed behavioral health counselors are provided by Crisis Preparations and Recovery (a local small behavioral business). The paramedics, physician assistants, and counselors respond 24 hours a day, seven days a week, in two-person teams, to 911 requests for services that are identified as low-acuity or behavioral health related. The program also includes registered nurses in the 911 dispatch center to help manage low-level 911 callers and serve as care coordinators for the community care units. At times, the nurses can offer validated medical advice over the phone, which prevents units from being deployed.

The services provided by these units are similar to services provided by an urgent care facility: in-depth patient evaluations, behavioral health evaluations, suturing, minor trauma evaluations, prescription services, immunizations, health education, referral services, primary care consultations, post-hospital discharge follow-ups, and minor diagnostic testing. The difference is that services are provided directly in the patient’s home or the place where the 911 call was initiated. This allows providers to observe hazards, additional obstructions to care, the need for social services, and general living conditions. Interventions from the 911 visit also including managing population health, which include influenza and other vaccinations, self-maintenance, fall risk, medication education, health education and alcohol or drug dependence intervention. The goal is to treat callers at the call points, provide them with definitive care, and refer them back to their primary care physicians. The research literature suggests patients’ active engagement with their primary care physician lessens the costs to healthcare and better manages patient health. From an emergency medical services standpoint, this engagement reduces system demand, educates on better health seeking behaviors, and manages our community’s health.

The problem identified in our data was that the 911 system evolved from one that handled medical emergencies to one that is now used a crutch for low-acuity health services. These non-emergency 911 calls for service come from all ages and socio- economic background. Non-emergency caller complaints typically stem from a variety of issues or symptoms: cold-like symptoms, urinary problems, minor fall injuries, medication refills, the need for post-hospital follow up, nausea, low-grade fever, chronic pain, abdominal pain, sore throat, behavioral health, and anxiety. Unfortunately, under the pre-innovation 911 system, the only definitive care paramedics could offer the patient was an ambulance ride to the emergency room. The lack of flexibility to aid these low acuity patients was costly and demanding to the system.

This problem in healthcare is not unique to Mesa, but shared in all 911 emergency systems where medical care is provided. According to Health and Human Services and the Department of Transportation (2013), the status quo of unnecessarily transporting low-acuity medical patients has been shown to have a causative relationship with emergency room overcrowding, delayed care, and a cost of nearly $1.1 billion for Medicare patients alone. They further suggested that by diverting the estimated 15 percent of Medicare patients needing only low-acuity care, the system would save $600 million annually (p. 4-10). In the Mesa system nearly 43 percent of the 27,877 ambulance transports are low-acuity type services. This could easily translate to better costs savings and services from our community care treat-or-refer model. The following diagram shows a workflow of services prior to intervention:

The following is a diagram of the Community Care model:

Prior to being awarded the grant, the city piloted a small-scale version of the program with its aforementioned partners. The city utilized existing resources and the partners donated their personnel in-kind. The pilot tested 983 patient encounters, with 532 treated and referred from August 2012 to February 2013, for a cost savings of $1,066,128 to the healthcare system (Smith, 2012).

**Program Implementation Costs**

 The Centers for Medicaid and Medicare grant helped the city create a full-scale test model. The implementation costs to start the program were approximately $4 million: 35 full time equivalent positions, insurance billing services, supplies, and the purchase of additional technologies to support data collection.

**Tangible results or measurable outcomes of the program**

The city’s IT department built a data warehouse as a suppository of all data collected, not only for the fire department but also its partners. This allows for data analysis of not only the program but also thousands of variables to address future research questions. The outcome measures for the program included cost savings (to the city and healthcare), identifying barriers to care, deployment efficiency, population health cluster assessments, basic demographics (age, race, insurance, sex, etc.), frequency of immunization administration, consumer satisfaction assessment, hospital readmission reduction, and revenue to drive sustainability after the grant period.

**Lessons learned during planning, implementation, and analysis of the program**

The lessons learned during implementation mainly stem from the public-private collaboration. For example, because both the fire department and hospital had independent human resource policies, management was needed to coordinate employee development and progressive discipline. The fire department and hospital assigned liaisons to find similarities in their policies and close the gaps where differences existed. A second challenge was identified in data collection. Not many entities are willing to share data; to overcome this, we promoted ways that data sharing would benefit the organizations and their customers. This approach allowed the program to gain data-sharing agreements with insurance payers, hospitals, and universities, all of which play critical roles in healthcare.

**Closing**

The Community Care Initiative is proving successful in delivering the right response, the right care, and the right patient outcomes. Additional cities, such as Anaheim, CA; Los Angeles, CA; Littleton, CO; South Metro, CO; Green Valley, AZ; Scottsdale, AZ; and Sun City, AZ have begun piloting similar programs based on Mesa’s success.