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Policy Conversations

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Community Paramedicine in Humboldt County

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Humboldt County's widespread population and rural terrain make it hard for some people to get primary care, attend regular visits for chronic disease management or receive post-hospital care. Although banned now under state regulations, community paramedicine can meet these needs by training Emergency Medical Services (EMS) workers to perform these services in patients' homes[1] — without transporting them to the hospital.

In upcoming years, community paramedicine could reduce emergency room visits, hospital readmissions and costs for patients and providers while increasing access to emergency care and providing additional revenue to EMS programs. But there are substantial challenges, such as how to pay for, train and retain paramedics and ensure that emergency services remain a priority in extremely rural areas.

Humboldt County does not have a Level I Trauma Center and there is a shortage of primary care professionals. It does have three ambulance services: Arcata Mad River, Hoopa and Willow Creek and Eureka City Ambulance Service — all independent and separate from hospitals and providers — and the Humboldt Bay Fire Department, which has trained paramedics and EMTs. Although all have a legal obligation to transport anyone who calls 911, none is certified to treat and release patients at the site. The North Coast EMS coordinates funding, certification, training and planning for the EMS programs in Del Norte and Lake counties, as well as Humboldt.

Three potential areas for conducting paramedicine in Humboldt County emerged as particularly beneficial. These include a partnership between Arcata Mad River Ambulance and the Mad River Community Hospital to conduct post-hospital follow up; Hoopa Ambulance to conduct suturing; and Humboldt Bay Fire Department or Eureka City Ambulance to conduct post-hospital follow-up or chronic disease management.

But to see how community paramedicine might work throughout the state, California has chosen 13 pilot sites[2] — two in rural areas, Butte and San Bernadino counties — to develop best practices and rules and regulations before widespread implementation. Once these pilot programs have been conducted and evaluated, California Emergency Medical Services Authority (EMSA) will likely recommend changes to the scope of practice — but this is unlikely before 2017. Before this date, Humboldt County should conduct its own needs assessment.

Some positive outcomes of community paramedicine programs currently operating in other states are the reduced number of emergency department visits and hospital readmissions for frequent users, enhanced opportunities for EMS personnel skills development and lower costs associated with emergency visits.[3]

A community paramedicine program in Humboldt County could provide care to individuals living in rural areas where regular transportation to and from a doctor is difficult. It could also provide additional revenue to EMS programs in the area by expanding the types of services that EMS workers provide.

Elsewhere in the world, community paramedicine programs are already in operation, both in several US states and many other countries, to meet the gap in primary care services and to bolster EMS.[1]

This was reflected in the 1996 EMS Agenda for the Future, which stated:[4]

The state of California has selected 13 EMS programs to conduct pilot projects to assess the feasibility of Community paramedicine in California. Of these, two are in rural areas: Butte County and San Bernadino County.[2]

Two possible components of community paramedicine programs are primary care and community-based prevention services. Some examples are:

- Chronic disease management
- Medication compliance
- Assisting elderly people after a fall
- Working with "frequent flyers" to reduce Emergency Department utilization
- Post hospital-discharge follow-up
- Pediatric immunizations
- Simple procedures, such as sutures
- Directly observed therapy for tuberculosis

Currently, community paramedicine programs are being developed across the country, but a specific set of standards and training for use nation-wide has not yet been created.[1]

Several available curricula for community paramedicine include one released by the California EMS, another from the University of Pittsburgh EmedHealth program, and a third from Community Healthcare and Emergency Cooperative for the North Central EMS Institute.[6,7,8]

Currently only Minnesota has clear licensing guidelines and legislative language around community paramedicine. In 2011, the Minnesota legislature passed a bill to authorize a statewide community paramedicine program, overseen by the EMS regulatory board and establishing clear training guidelines. In order to become a community paramedic an individual must have two years' experience and go through 120 hours of additional training.

In 2012, Bill 1543 passed the Minnesota legislature to allow Medicaid to reimburse for community paramedicine programs. It was the first state to formalize community paramedicine into law and provide a clear and specific reimbursement mechanism. Minnesota received a CMS Innovation grant to train 100 community medics over three years.[9]

Three levels of providers who deliver Emergency Medical Services reflect the levels of training and licensure required:

	Emergency Medical Technician (EMT)	Advanced EMT	Paramedic
Minimum Requirements	18 years of age	18 years of age, high school diploma or equivalent, EMT certification, CPR card	18 years of age, high school diploma or equivalent, EMT certification
Training	160 hours training (134 didactic, 24 clinical)	160 hours training (80 didactic and skills lab, 40 clinical, 40 field internship) 15 Advanced Life Support patient contacts	1,090 hours of training (450 didactic and skills lab, 160 clinical, 480 field internship) 40 Advanced Life Support patient contacts
Exams	National Registry of EMTs, written and skill	Local EMS agency, written and skills	National Registry of EMTs, written and skills
Certification/ Licensure	Certified by local EMS agency or public safety agency, recognized statewide	Certified by EMS agency, only valid locally	Licensed by EMS Authority, recognized statewide Accreditation by local EMS agency
Renewal	Recertification every 2 years by either 24 hours refresher course or 24 hours continuing education units and 10 skill competencies	Recertification every 2 years by 36 hours continuing education units and 6 skills competencies	License renewal every 2 years by 48 hours contuing education untis.

EMSA,2013

> Emergency Medical Services (EMS) of the future will be community-based health management that is fully integrated with the overall health care system. It will have the ability to identify and modify illness and injury risks, provide acute illness and injury care and follow-up, and contribute to treatment of chronic conditions and community health monitoring.... It will improve community health and result in a more appropriate use of acute health care resources. EMS will remain the public's emergency medical safety net.
>
> ***–EMS Agenda for the Future, 1996[4]***

For more specific details on the implementation of community paramedicine in rural areas, please see the policy brief "The Evidence for Community Paramedicine in Rural Areas: State and Local Finds and the Role of the State Flex Program."[3]

This details where different states are in the process of developing and implementing community paramedicine programs, with Minnesota at the leading edge, and many other states doing pilot programs.

Meanwhile, California has 19,000 licensed paramedics and 60,000 EMTs whose activities are conducted by a mix of agencies.[1]

In the summer of 2013, University of California, Davis conducted a feasibility assessment to evaluate whether community paramedicine programs could help contain costs and connect people to care in California. They recommended that California support 10 to 12 pilot programs for community paramedicine.[1]

Then, California EMSA released a request for a Letter of Intent for counties to conduct community paramedicine pilot programs.[6] Thirteen sites have been selected as pilot programs (full list is attached at end of document). Pilot programs are expected to provide their own funding. The pilot areas selected were primarily in more urban areas, and the farthest north was in Butte County. It will likely take at least 24 months for the pilot programs to be completed, and no changes to regulations and legislation are unlikely to occur before 2017. Here are some of them:

Alameda County EMS

This pilot program will focus on patients with congestive heart failure, asthma, chronic obstructive pulmonary disease, hypertension, diabetes, pneumonia, homeless and substance abuse patients to reduce hospital readmissions and frequent 911 calls. They are still working with their partners to develop funding sources. Brandon Rowley, EMS pre-hospital Care Coordinator, said: "By providing this service, we are hoping to help navigate our loyal customers to the proper resources and try to decrease the number of 911 calls and ED visits. Also, it would be great if we can expand the scope of practice."

Butte County, Enloe FlightCare

The site selected is Enloe FlightCare, associated with the Enloe Medical Center in Chico. The goal is to "minimize the potential influx of ambulance patients that will be non-emergent, and thus easing the burden on the local emergency departments," says Neal Cline, Senior Flight Nurse with Enloe FlightCare, and the contact person for the pilot site.

The program works to reduce readmissions among pneumonia and congestive heart failure patients by checking up on them after their release from the hospital. It will also include a patient navigation portion. Each of these will likely address 15 to 30 patients per 30 day cycle.

Expenses associated with the pilot program are not covered by California EMSA, including paying for the time of paramedics while they receive training and any point of care devices that are needed for the visits.

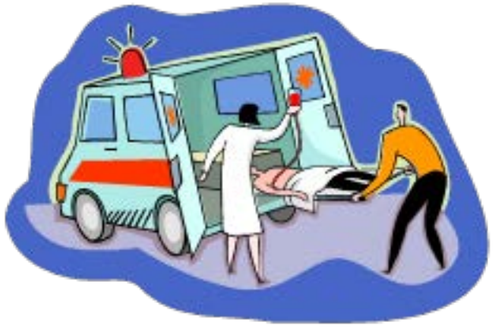
Los Angeles County, Hospital Association of Southern California

This will focus on reducing hospital readmissions within 30 days. The ambulance is owned by the hospital association, which makes it easy to conduct community paramedicine activities that benefit the hospital, and

simplifies the process of funding. They will focus on patients with myocardial infarction and congestive heart failure.

Orange County

The focus of this program will be on moving specific patients to alternate destinations such as urgent care centers. Patients with isolated closed extremity injuries, lacerations with controlled bleeding, soft tissue injuries, and isolated fever and cough will be transferred to urgent care centers rather than the emergency department. The pilot program has the goal of enrolling at least 100 patients and will train 27 community paramedics at three fire departments, all of which provide Advanced Life Support and Basic Life Support first response.



San Diego EMS

This will focus on connecting superusers to medical homes. They employ a software system to identify the top 250 to 500 users in the last two years. The program will be funded by San Diego's Advanced Life Sypport provider, Rural/Metro.

Humboldt County

Interviews were conducted in late 2013 and early 2014 with people involved in EMS in Humboldt County or with California pilot programs. They were asked about possible benefits or challenges of community paramedicine in Humboldt County.

Reducing hospital readmissions and reducing emergency room visits for "frequent flyers" came up often. Other topics were wound care, glucose checks for those with diabetes, and addressing other chronic care conditions, as well as rerouting individuals to more appropriate care than the emergency department.

Several challenges were also identified in implementing a program. The top one was funding, since community paramedicine is not reimbursed by insurance. Training experienced paramedics to conduct such activities would also be costly, and community paramedics would likely be paid more than traditional EMTs and paramedics.

Other states have addressed this hurdle, although only Minnesota currently receives Medicaid funding for community paramedicine. Other pilot initiatives were grant-funded, or paid by the local municipality or state.

Many people also said that there is also a high rate of turnover among EMTs and paramedics in Humboldt County, and it could be difficult to find anyone with the experience needed, or that once trained, an individual might leave the area.

Maintaining sufficient emergency coverage also was mentioned since, especially in the extremely rural areas, since if paramedics are in one area, it may be difficult for them to quickly travel to the site of another emergency within the catchment area.

Geography and mileage were also identified because ambulances are not reimbursed for mileage, and given the large size of Humboldt County, it could be challenging for ambulance services to recoup the costs of traveling to remote areas.

Three specific scenarios were discussed:

1. Arcata Mad River Ambulance and Mad River Community Hospital

A partnership between Arcata Ambulance and Mad River Community Hospital could follow up on patients after they are released from the hospital. Under the Affordable Care Act, hospitals are penalized if too high a percentage of patients are readmitted after discharge. Arcata Ambulance could ensure that they are complying with medication regimens and following doctor's orders. This could also benefit the Arcata Ambulance by providing a regular source of revenue.

Mad River Community Hospital already has a discharge coordinator, so linking a patient to a community paramedic could be relatively easy. This plan would be contingent upon changing reimbursement and regulations so that community paramedics could deliver these services and be compensated for them.

2. Humboldt Bay Fire Department or Eureka City Ambulance

Since the Fire Department is paid for through local property taxes, rather than through reimbursement through insurance companies, this would allow for greater flexibility.

Tim Citro, Captain at Humboldt Bay Fire, said they already see many patients who would benefit from community paramedicine. One was a woman who was in diabetic shock because she had recently been discharged from the hospital and had not been correctly taking her medications. A community paramedic could have checked on the patient after she was released from the hospital to ensure that her blood sugar was controlled.

A partnership between Eureka City Ambulance and St. Joseph's Hospital to conduct follow up on patients released from the hospital is also possible, though there is the problem of reimbursement.

3. Hoopa Ambulance

Hoopa Ambulance covers a large, sparsely populated area with two ambulances. Most of their patients are transported to Mad River Community Hospital, a trip that can take anywhere from up to an hour to three hours. Given the long distance to the hospital, it's essential that an ambulance be available to maintain emergency medical coverage, and that critically ill patients are transported to the hospital as soon as possible.

However, community paramedic services still could be beneficial, such as suturing and wound care. Rod Johnson, Director of the Ambulance Service, estimated that about 50% of the 1,200 calls they received needed emergency medical care. There is no medical care available at night when the medical center is closed, and patients call the ambulance service to be transported to Arcata.

Post-hospital follow up could be a good fit as well, but there would likely be challenges in keeping emergency medical coverage in place if paramedics are otherwise occupied. "Community paramedicine couldn't take away from the emergency aspect. There is no backup close by," said Johnson.

K'ima:w Medical Center already has a public health outreach program where a nurse visits patients in their homes, and many patients with chronic medical conditions are already being seen locally.

One of the major challenges for Hoopa Ambulance is training and retaining qualified paramedics and EMTs since there is a high degree of turnover. Traveling out of the area to obtain training could be also be difficult.

Before anything can happen, Humboldt County should conduct an in-depth needs assessment which includes data on what conditions are most commonly addressed by EMS, as well as gap areas that could be met with community paramedicine.

This policy brief could guide the way, but a more in depth analysis of data is needed. The Health Resource and Services Administration (HRSA) has created an evaluation tool for community paramedicine Programs. It will include demographic data on the area and evidence of collaboration around community.[10]

About the Author

Alison Newman has an MPH from Oregon State University and a BA in Anthropology from The George Washington University. Before coming to the California Center for Rural Policy, Alison worked as the Viral Hepatitis Prevention Coordinator in the HIV/STD/Hepatitis Program at the Vermont Department of Health. In 2008-2009 Alison researched access to maternal healthcare in Kandy, Sri Lanka through the Fulbright Program. She loves traveling, hiking, knitting and exploring the world through food.

Sites tentatively chosen to be pilot programs for Community Paramedicine in California:[2]

Project #	Lead Agency	LEMSA	Pilot Concepts	EMS Providers
CP001	UCLA Center for Pre-Hospital Care	Los Angeles	Alternate Destination	Santa Monica, Glendale & Pasadena Fire Departments
CP002	UCLA Center for Pre-Hospital Care	Los Angeles	Post Hospital Discharge Follow Up (CHF)	Burbank & Glendale Fire Departments
CP003	Orange County Fire Chief's Assoc	Orange County	Alternate Destination	Fountain Valley, Huntington Beach & Newport Beach Fire Departments
CP004	Butte County EMS	S-SV EMS	Post Hospital Discharge Follow Up	Butte County EMS, Inc
CP005	Ventura County EMS Agency	Ventura	Directly Observed Treatment of TB	AMR Ventura, Gold Coast Ambulance & LifeLine Ambulance
CP006	Ventura County EMS Agency	Ventura & Santa Barbara	Hospice Support	AMR Ventura & Santa Barbara
CP007	Alameda County EMS Agency	Alameda County	Post Hospital Discharge & Frequent 911 Callers	Alameda City & Hayward Fire Departments
CP008	San Bernardino County Fire Dept	San Bernardino County	Post Hospital Discharge Follow Up	San Bernardino County Fire Dept
CP009	Carlsbad Fire Dept	San Diego	Alternate Destination	Carlsbad Fire Dept
CP010	City of San Diego	San Diego	Frequent 911 Callers	San Diego City Fire Dept & Rural Metro Corp
CP011	San Joaquin County EMS Agency	San Joaquin County	Post Hospital Discharge Follow Up	AMR San Joaquin County
CP012	Mountain Valley EMS	Stanislaus County	Alternate Destination Mental Health	AMR Stanislaus County
CP013	Medic Ambulance	Solano County	Post Hospital Discharge Follow Up	Medic Ambulance

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- Kayce Hurd, Paramedic, Eureka City Ambulance
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