Community Paramedicine Pilot Program
Summary of Evaluation

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Working Definition of Community Paramedicine

A locally determined community-based, collaborative model of care that leverages the skills of paramedics and EMS systems to address gaps in access to care identified through a community-specific health care needs assessment

- New types of community-based health care services that bridge primary care and emergency care
- Utilizes paramedics outside their traditional emergency response and transport roles

Why Paramedics?

- Trusted and accepted by the public
- In most communities--inner city and rural
- Work in home and community-based settings
- Licensed personnel that operate under medical control as part of a system of care
- Trained to make health status assessments and recognize and manage life-threatening conditions outside of the hospital
- Always available (24 / 7 / 365)

Community Paramedicine Concepts

- Post hospital discharge short-term follow-up
- Frequent EMS user case management
- Directly Observed Therapy for tuberculosis: public health department collaboration
- Hospice support
- Alternate destination to mental health crisis center
- Alternate destination to sobering center
- Alternate destination to urgent care center (Cancelled)

Methods

- Outcomes assessed across three domains
  - Safety
  - Effectiveness
  - Potential savings accrued by other parts of the health care system

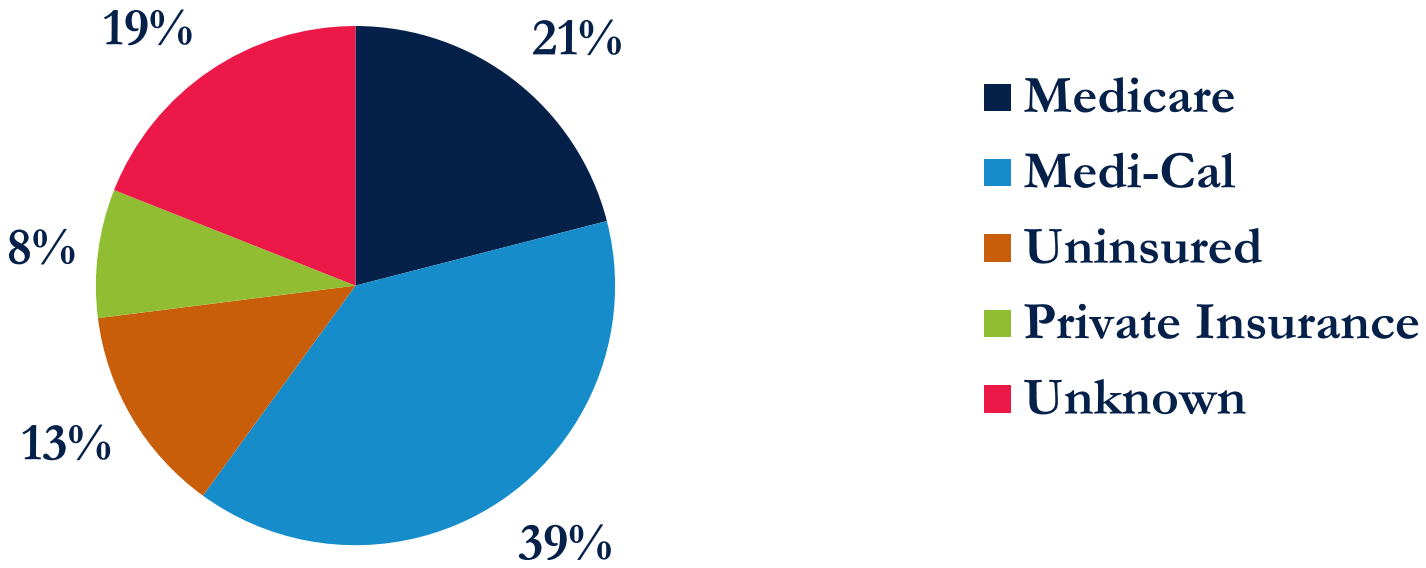
Cumulative Patients Enrolled by Concept
through March 2020*

Concept	# Enrolled
Post-Discharge Short-term Follow-Up	1,801
Frequent EMS Users	398
Directly Observed Therapy for Tuberculosis	52
Hospice	401
Alternate Destination – Mental Health	4,017
Alternate Destination –Sobering Center	2,765
Alternate Destination – Urgent Care	48§
All Projects	9,482

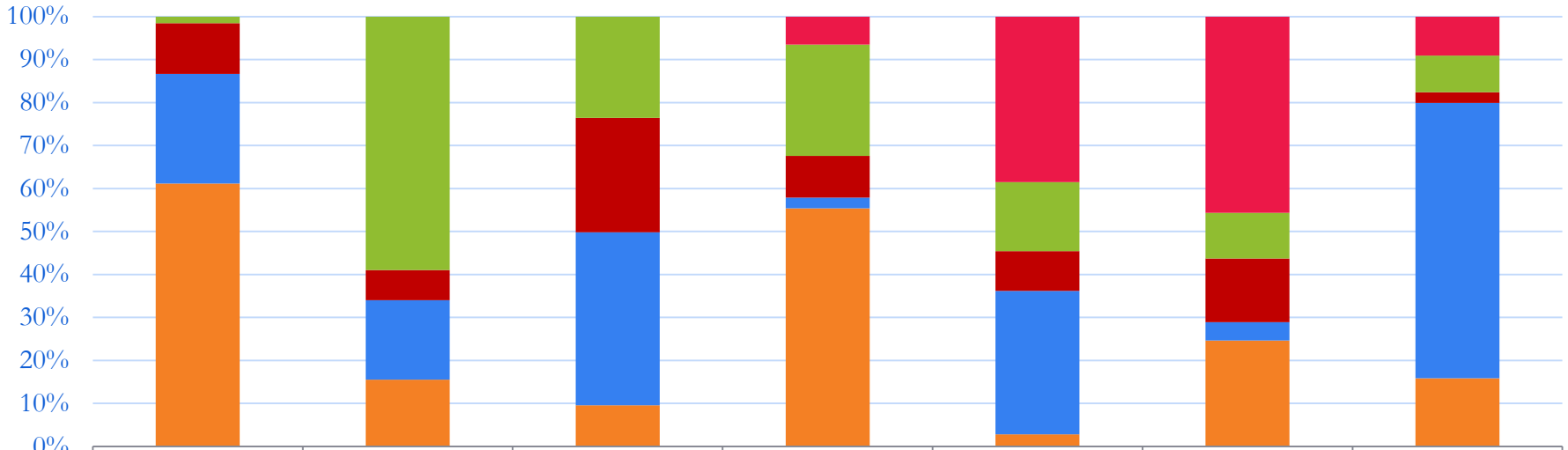
* 54 to 58 months for individual projects, depending on start date except for two alternate destination – mental health projects, two alternate destination - sobering center projects, and one frequent EMS user project.

§ Pilot projects for alternate destination urgent care have been cancelled

Enrolled Patients' Payer Types – Through March 2020



Community Paramedicine Patient Payer Mix



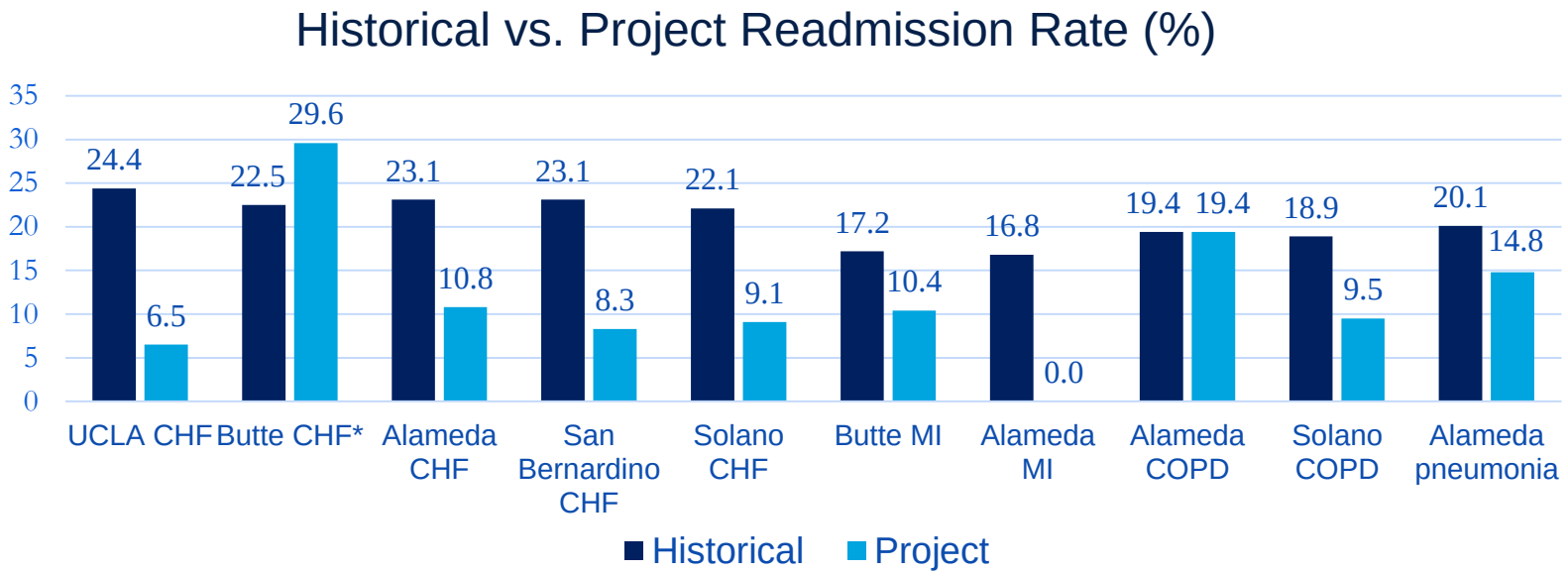
	Post discharge	Frequent 911	TB	Hospice	Alt Dest Mental Health	Alt Dest Urgent Care	Alt Dest Sobering
Unknown	0%	0%	0%	6%	39%	46%	9%
Uninsured	2%	59%	24%	26%	16%	11%	8%
Commercial	12%	7%	27%	10%	9%	15%	2%
Medi-Cal	26%	18%	40%	2%	33%	4%	64%
Medicare	61%	16%	10%	55%	3%	25%	16%

Medicare Medi-Cal Commercial Uninsured Unknown

Post-Discharge Short-term Follow-Up

- Sites varied in the number of diagnoses they targeted
  - 2 sites = 1 diagnosis; 2 sites = 2 diagnoses, 1 site = 6 diagnoses
- Decreased hospital readmissions within 30 days in 8 of 10 project-diagnosis dyads
- CPs identified 316 patients (18%) who misunderstood how to take their medications or had duplicate medications and were at risk for adverse effects
- All five post-discharge projects achieved potential cost savings for payers, primarily Medicare and Medi-Cal

Project Impact on 30 Day Hospital Readmission Rate



*Estimates are not risk adjusted. All projects except Butte CHF and Alameda COPD showed statistically significant reduction in the readmission rate for enrolled patients relative to the partner hospitals' historical readmission rates (p value < 0.05).

Frequent EMS Users

- Reduced numbers of 911 calls, ambulance transports, and ED visits among enrolled patients
- Assisted patients in obtaining housing and other non-emergency services that met the physical, psychological, and social needs that led to their frequent EMS use
- EMS collaborated with many other organizations in the communities served

Directly Observed Therapy for Tuberculosis

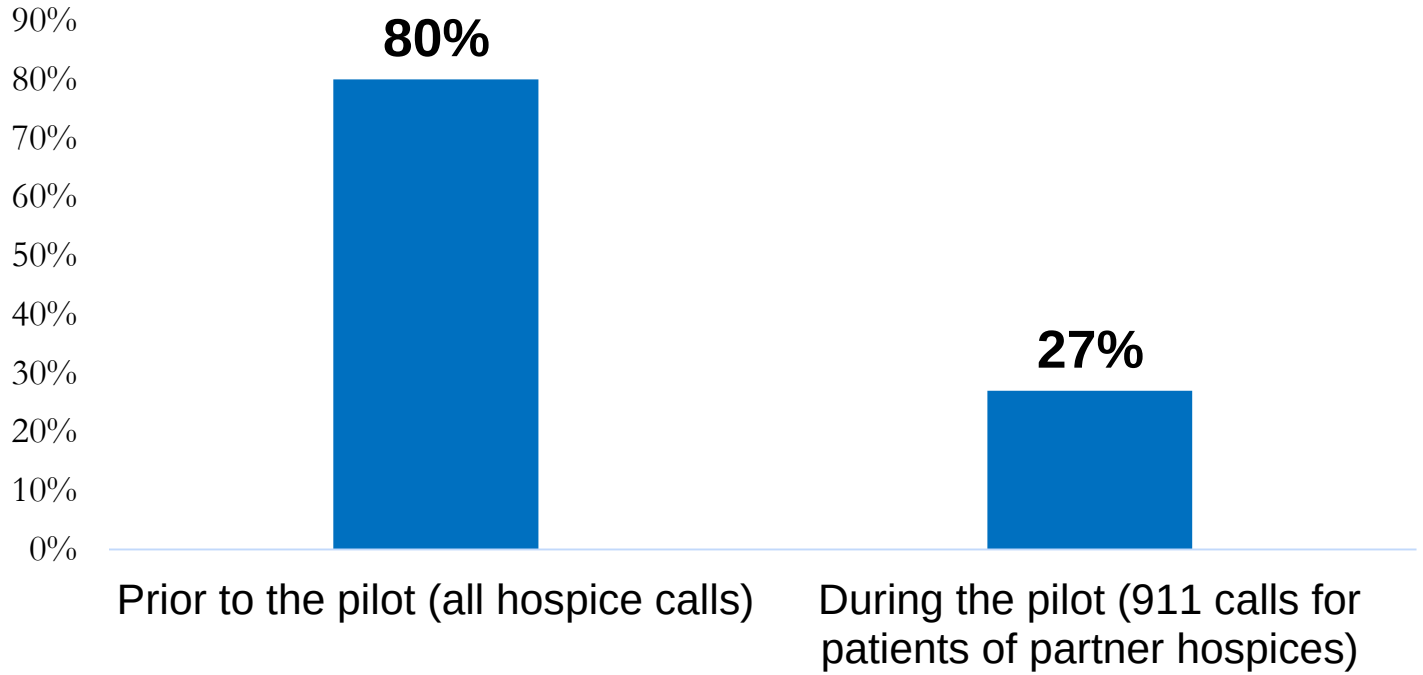
- Dispensed appropriate doses of tuberculosis (TB) medications, and monitored side effects and symptoms that could necessitate a change in treatment regimen
- CPs achieved better compliance (99.4%) than community health workers (93.3%) and because they were able to serve patients who could not access care on weekdays during daytime hours
- Demonstrated capability for collaborative work with public health professionals

Hospice Support

- Provided hospice patients and their families with psychosocial support and administered medications in consultation with a hospice nurse until nurse could arrive
- In accordance with patient wishes, reduced rates of ambulance transports to an ED
- Potential savings for Medicare and other payers by reducing unnecessary ambulance transports, ED visits, and hospitalizations

Percent of 911 Calls for Hospice Patients Resulting in Transport to ED

(56 months data; N=401 hospice patient calls to 911)



Alternate Destination – Mental Health

- Performed medical screening of patients to determine whether they could be safely transported directly to a mental health crisis center
- Four projects enrolled 4,017 persons through March 2020
- Across the four projects, 28% to 44% of patients screened were transported to a mental health crisis center
- These projects help reduce ED overcrowding by transporting people with mental health needs to crisis centers that specialize in acute psychiatric care
- Strongly supported by law enforcement because these projects reduce the amount of time required for mental health calls

Alternate Destination – Mental Health

- 98% of patients enrolled were evaluated at the mental health crisis center without the delay of a preliminary ED visit
- Over study period (55 months), 2% of patients required subsequent transfer to the ED (86 patients); only 9 of the 86 were admitted for inpatient medical care, 76 were treated in an ED and released or transferred to a psychiatric facility, and 1 left the ED before receiving care
- Potential savings for payers, primarily Medi-Cal, due to reduced ED visits and subsequent transports to mental health centers

Alternate Destination-Sobering

- Performed medical screening of patients to determine whether they could be safely transported directly to a sobering center
- Enrolled and transported 2,765 patients since February 2017
- Forty-six patients (2%) were transferred to an ED within six hours of admission to the sobering center due to medical complaints; only 5 of the 46 was admitted for inpatient medical care, 35 were treated in an ED and released or transferred to a psychiatric facility, and 6 left the ED without being seen
- Potential savings for payers, primarily Medi-Cal, due to reduced ED visits

Alternate Destination – Urgent Care

- Insufficient data to make firm conclusions about this model
- No patients experienced an adverse outcome, although two patients were transferred to an ED following admission to an urgent care center
- Nine patients were rerouted to an ED because the urgent care center declined to accept
- Projects closed: Multiple barriers to this model in California, although successful in other states

Potential Cost Savings

Accrue Primarily to Hospitals and Payers

Post Discharge	**UCLA** $403,284 $2,619/pt	**Butte** -$23,634 -$24/pt	**Alameda** $140,180 $1,008/pt	**San Bernardino** $489,702 $2,148/pt	**Solano** $408,878 $1,448/pt
Frequent EMS Users	**Alameda** $95,992 $1,297/patient		**San Diego** $551,760 $14,912/patient		
Hospice				**Ventura** $318,097 $793/patient	

Potential Cost Savings

Accrue Primarily to Hospitals and Payers

Alt Destination Urgent Care	**UCLA** **$624** **$52/patient**	**Orange** **$3,016** **$89/patient**
Alt Destination Mental Health	**Stanislaus, Gilroy, Fresno, Los Angeles** **$4,302,100** **$1,059/patient**	
Alt Destination Sobering Center	**San Francisco and Los Angles** **$956,851** **$346/patient**	

Conclusion

- Specially trained paramedics can provide services beyond their traditional and current statutory scope of practice in California
- Projects have improved patients' well-being
- No adverse outcomes for patients
- No other health professionals displaced
- In most cases, yielded savings for health plans and hospitals