

Health and Economic Impact of Rural Mobile Clinics

2023 NATIONAL RURAL HEALTH CONFERENCE

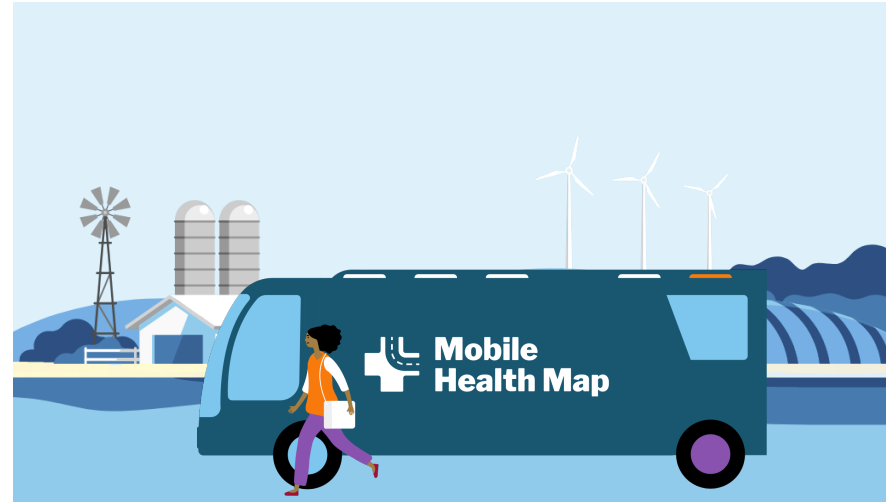
Download
the slides:



Mollie Williams, DrPH, MPH
Mobile Health Map at Harvard Medical School
May 18, 2023

What is Mobile Health Map?

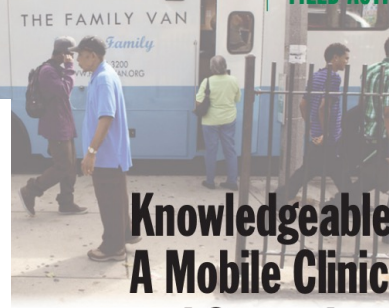
- Program of Harvard Medical School since 2009.
- Network of mobile clinics working together to measure and community the impact of mobile health care.
- Users create free, confidential, personalized dashboards of impact and quality
- Demonstrate our collective results with the Mobile Clinic Impact Tracker.
- Training and technical assistance for organizations that operate mobile clinics.



CARE TRANSFORMATION

By Zirui Song, Caterina Hill, Jennifer Bennet, Anthony Vavasis, and Nancy E. Oriol

Mobile Clinic In Massachusetts Associated With Cost Savings From Lowering Blood Pressure And Emergency Department Use



Knowledgeable Neighbors: A Mobile Clinic Model for Disease Prevention and Screening in Underserved Communities

Equity in Health (2020) 19:40 135-7

International Journal for Equity in Health

Communication Quarterly
Vol. 65, No. 4, 2017, pp. 419-435

RESEARCH

Open Access

Mobile health clinics in the United States

Nelson C. Malone¹, Mollie M. Williams^{2,3*} , Mary C. Smith Fawzi², Jennifer Bennet³, Caterina Hill², Jeffrey N. Katz¹ and Nancy E. Oriol^{1,2,4}



Mobilizing a Narrative of Generosity: Patient Experiences on an Urban Mobile Health Clinic

Heather J. Carmack, Zoey Bouchelle, Yasmin Rawlins, Jennifer Bennet, Caterina Hill, & Nancy E. Oriol

BMC Medicine

Research article

Calculating the return on investment of mobile health
Nancy E Oriol*¹, Paul J Cote⁺², Anthony P Vavasis⁺³, Jennifer Darien DeLorenzo⁺⁵, Philip Blanc⁺⁶ and Isaac Kohane⁺⁷

Background

- There are an estimated 3,000 mobile clinics in U.S. with more than 10 million patient encounters annually
- Approximately 1/3 serve rural communities
- The sector has grown rapidly over the 5 years
- Funding sources and affiliations vary
- Most patients are uninsured or have Medicaid and/or Medicare

Methods

- Mobile Health Map recruits users through many channels, including conferences, digital marketing, and referrals from partner organizations.
- Users voluntarily share aggregate data about their mobile clinics, including locations, populations served, community type, preventive services offered, and operating costs.
- Descriptive analysis of characteristics of mobile clinics.
- QALYs saved, ED visits avoided, and value estimates are calculated using methodology described by Oriol, et al., 2009.
- The incentive to share data is the ability to create a free, confidential, customized dashboard.

Sample Clinic Dashboard



365

Life-years Saved



\$26,481,188

Dollars Returned



4,812

Visits



\$36 : \$1

ROI



1,059

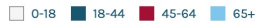
ED Visits Avoided

People Served

Race/Ethnicity



Age Group



Insurance



Top Services Delivered

Hypertension screening & treatment



Influenza immunization



Depression screening



Diabetes screening



COVID-19 tests



Our Vision & Growth

Equitable



Health Promoting



Proactive



Transparent



Effective & Efficient



Key Findings

- 312 clinics listed rural or frontier as a community type
- Among the clinics that listed rural or frontier (n=312)
 - 49% of patients were uninsured and 29% had public insurance
 - 36% of patients were White, 17% were Black, and 26% were Hispanic
 - Most common preventive services were immunizations and screening for obesity, hypertension, and depression.
 - The mean return-on-investment was \$29 : \$1
 - Mean annual operating cost was \$213,095



342
Mobile Clinics



\$169M
Dollars Returned



\$29:\$1
Return on Investment



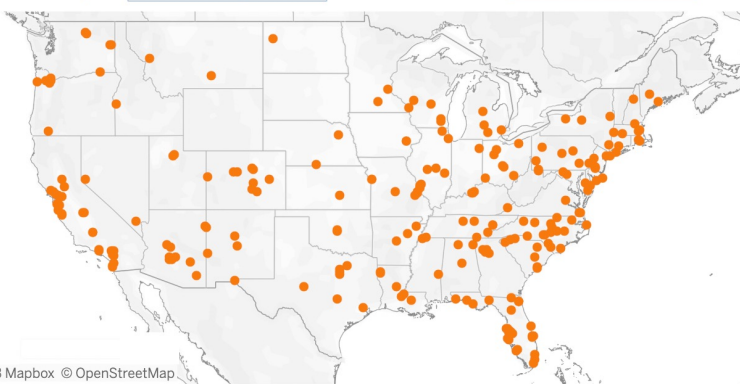
2,337
Life Years Saved



5,922
ED Visits Avoided

Default Map View: Mainland US Only

Search for Clinic Name:

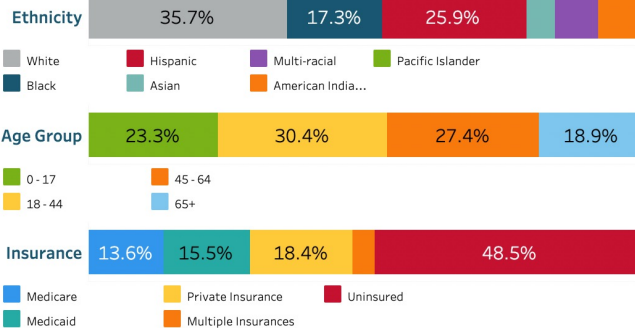


© 2023 Mapbox © OpenStreetMap

Select Map Shading

- Social Vulnerability
- Physical Health
- Mental Health
- Doctor Visits
- Dental Visits
- Uninsured
- Income
- None

People Served

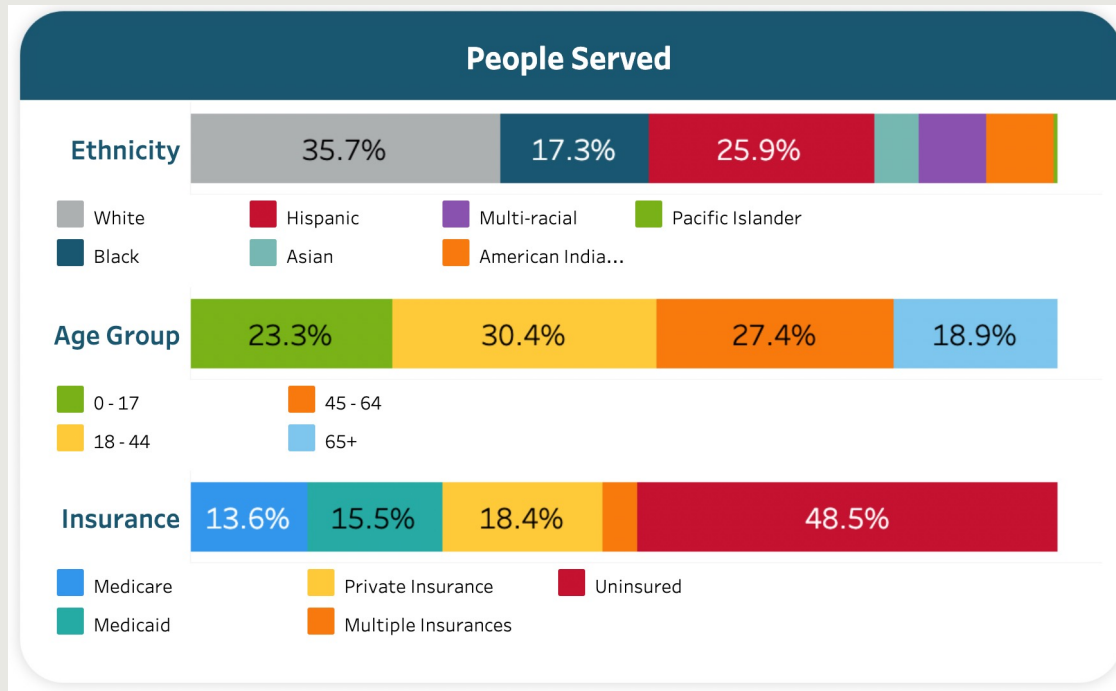


Top 5 Services Delivered



- Obesity Screening
- Blood Pressure Screening
- Flu Shots
- Childhood Immunization
- Depression Screening

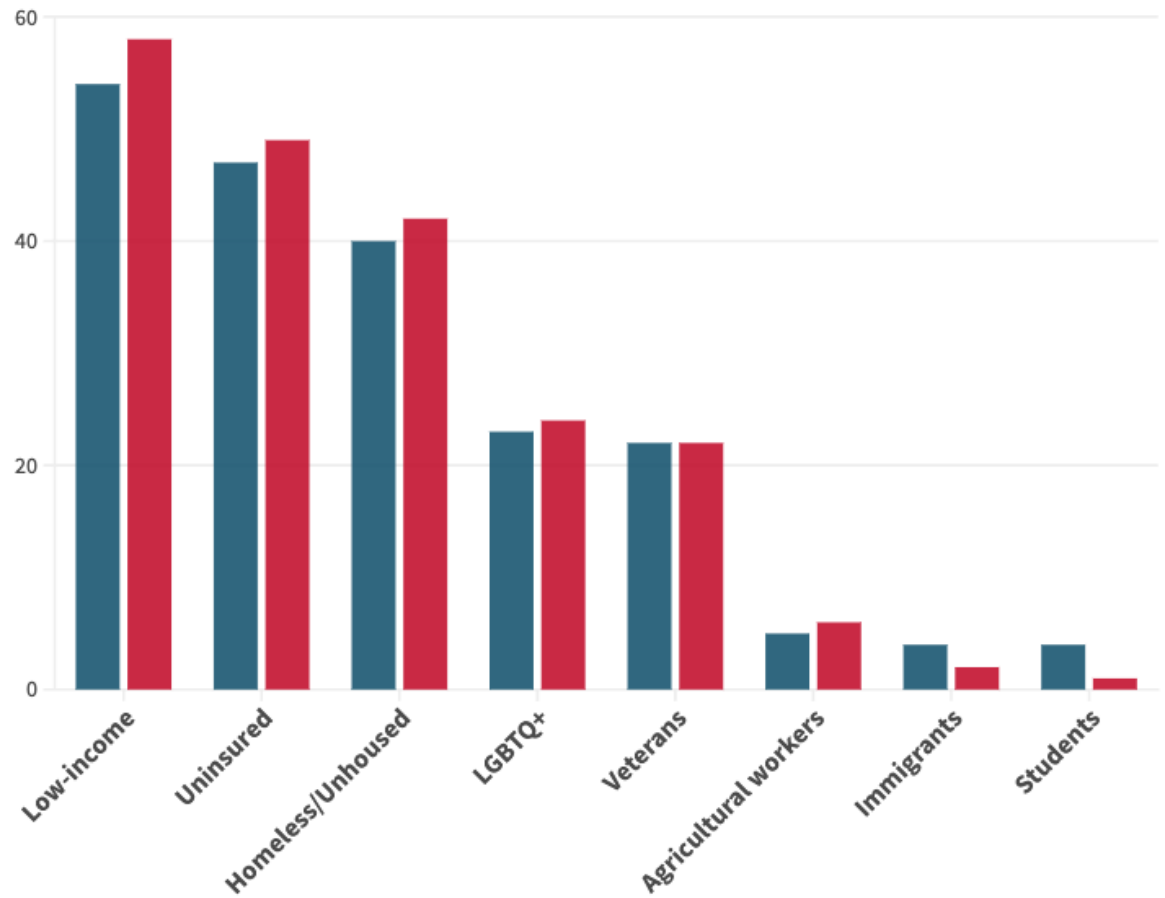


Patient Demographics of Rural Clinics



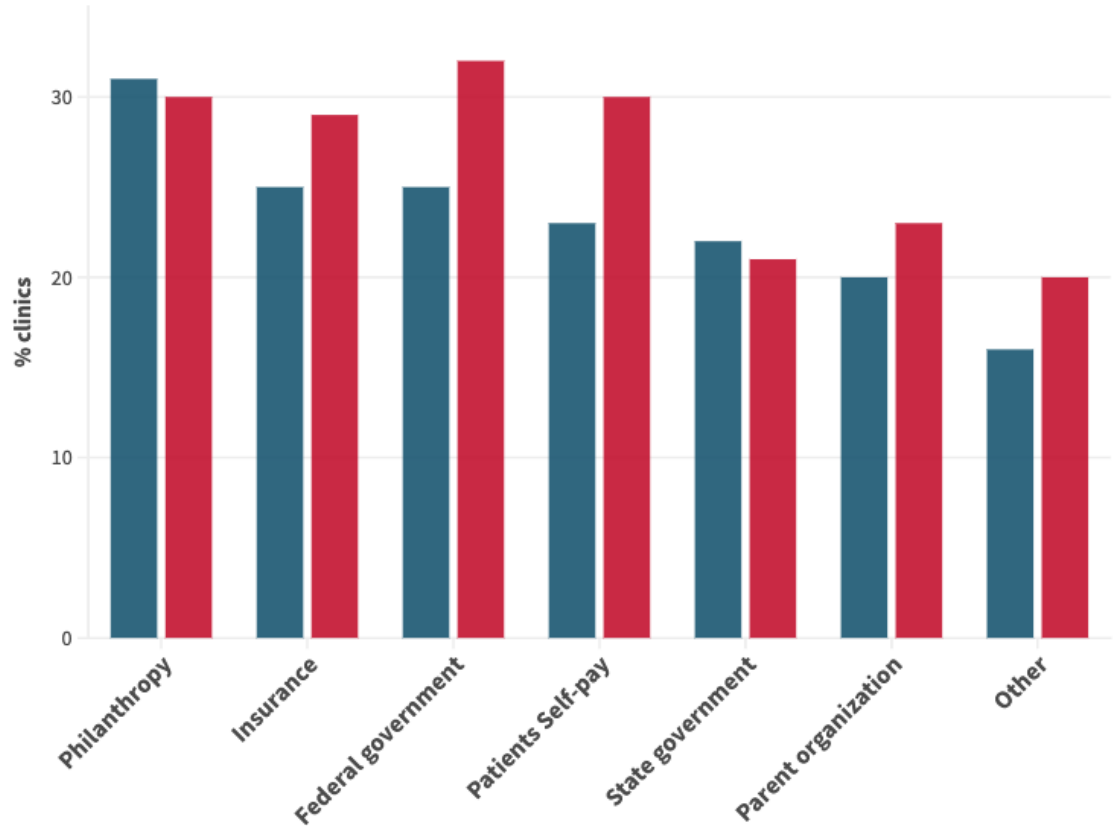
Populations Served

-  Rural or Frontier +
-  Rural or Frontier Only





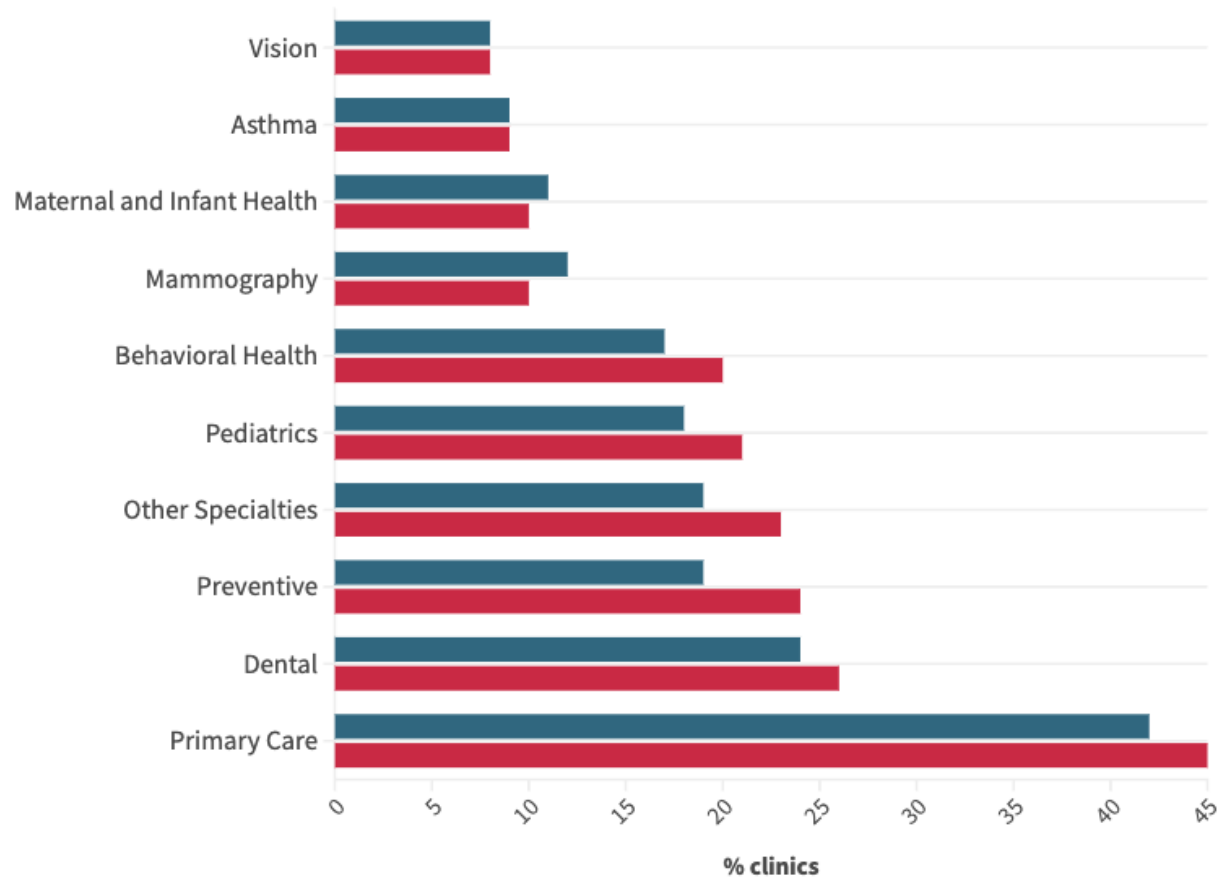
Funding Sources

- Rural or Frontier +
- Rural or Frontier Only



Service Types

-  Rural or Frontier +
-  Rural or Frontier Only



Economic Analysis



2,337

Life Years Saved



5,922

ED Visits Avoided



\$169M

Dollars Returned



\$29:\$1

Return on Investment

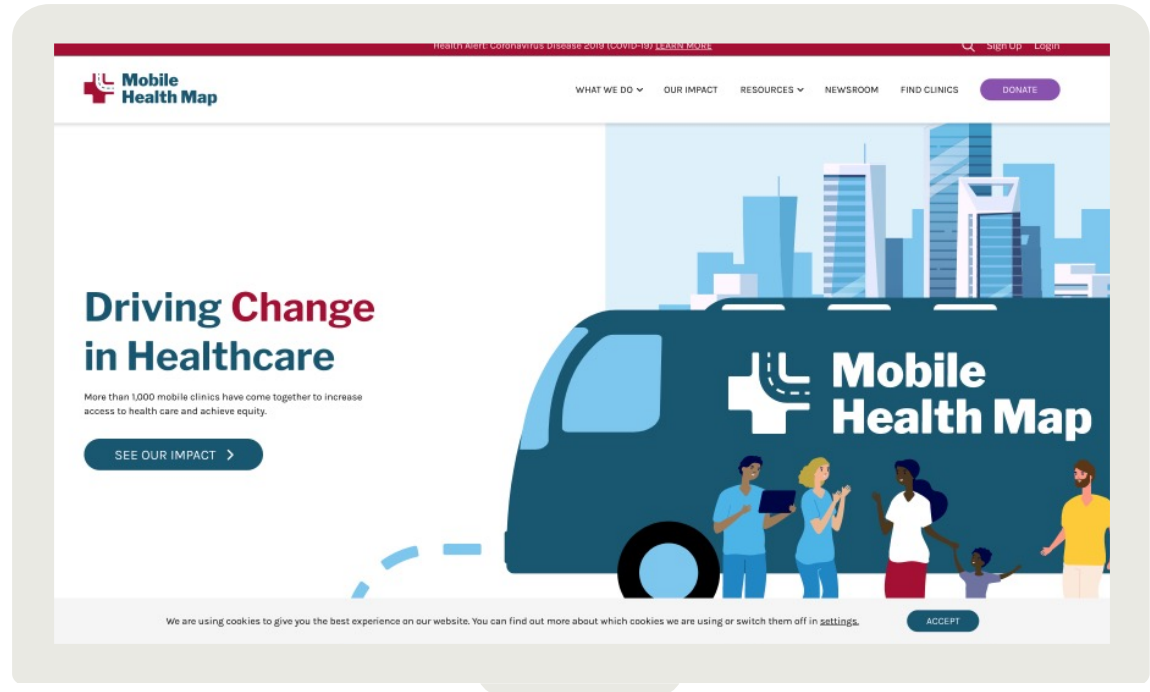
Metric	How calculated	Data sources
QALY/service	Value assigned based on ranking of clinical preventable burden for services rated as A/B by USPSTF	Tolley G et al. Valuing Health for Policy: An Economic Approach. 1994.
Life-years saved (QALYs)	# services provided x QALY/service	Maciosek MV et al. Priorities among effective clinical preventive services. Am J Prev Med. 2006.
ED Visits avoided	22% of visits	Cunningham PJ. What Accounts For Differences In The Use Of Hospital Emergency Departments Across U.S. Communities? Health Affairs. 2006
\$ returned	QALY x Value per statistical life year (VPSLY) + ED visit savings	Tolley G et al. Valuing Health for Policy: An Economic Approach. 1994.
Return on investment	# returned/annual operating costs	Calculated
ED visit savings	# ED Visits avoided x average cost	Massachusetts Division of Health Care Finance and Policy Analysis in Brief Analysis of 2005 Preventable ED Visits Boston 2007

Discussion

- Mobile clinics deliver high-value care to underserved populations in rural communities.
- Additional research is needed to understand the unique facilitators and challenges faced by mobile clinics that serve rural and frontier communities
- The field is at a pivotal point as many mobile clinics transition from pandemic-related services to other types of care.
- There are opportunities to expand the reach of mobile clinics to serve other populations including students (school-based health centers), immigrants, and agricultural workers.

Contact us:

www.mobilehealthmap.org



Mollie_Williams@hms.harvard.edu