Case study

Scaling Trusted, High-Impact **AI Care Navigation**

Bringing AI-enabled cardiac diagnostics to the point of care

TOPICS: AI-Enabled Care Navigation | Care Transitions | Clinical Decision Support | Emergency & Acute Care | Health Equity

About the organization

ALIVECOR®

AliveCor is dedicated to improving cardiac care through personalized, AI-driven insights accessible to patients and healthcare providers wherever care happens. Founded in 2011, the company introduced the first FDA-cleared personal EKG device. Today, its Kardia products and clinical services support cardiac monitoring and clinical decision-making beyond traditional healthcare settings. AliveCor has recorded more than 400 million EKGs, served over 5 million users, and contributed to more than 250 peer-reviewed studies.

The opportunity

Portable, AI-enabled cardiac diagnostics offer an opportunity to bring hospital-grade testing capabilities directly to patients in emergency and prehospital settings. In rural communities where access to hospitals and advanced emergency medical services may be delayed, equipping first responders with diagnostic tools can enable earlier identification of cardiac emergencies, faster communication with receiving hospitals, and more coordinated transitions to definitive care.

The challenge

Kern County, California, serves a largely rural population where patients experiencing chest pain or suspected cardiac emergencies may be 30–60 minutes or more from the nearest hospital.

- The first responders on scene are often Basic Life Support (BLS) crews operating fire engines without 12-lead EKG capabilities.
- Crews traditionally had to wait for Advanced Life Support (ALS) paramedics or hospital-grade equipment to obtain diagnostic-quality cardiac readings and identify potential ST-elevation myocardial infarction (STEMI).
- Delays in identifying and treating STEMI can worsen patient outcomes, making the initial emergency response period a critical gap in cardiac assessment and care coordination.

The approach

Kern County EMS is deploying AliveCor's Kardia 12L (K12L), a portable, AI-enabled, diagnostic-grade 12-lead EKG device designed to bring advanced cardiac assessment capabilities directly to a variety of healthcare settings, including emergency response.

The approach follows AliveCor's *Detect, Inform, Alert, and Connect* model:

- **Detect:** First responders use K12L to capture diagnostic-grade 12-lead EKG readings at the

patient's side, either at the scene or during transport, without waiting for ALS personnel or hospital equipment. AI-supported analysis helps identify likely STEMI and other actionable cardiac findings.

- **Inform:** EKG tracings and AI-flagged findings can be shared with receiving emergency departments before the patient arrives, providing clinicians with earlier access to diagnostic information.
- **Alert:** Early identification of potential cardiac emergencies allows receiving teams to consider advance activation of cardiac catheterization resources, reducing the need to begin the diagnostic process only after hospital arrival.
- **Connect:** Patients can transition directly from prehospital care to a hospital team that has already received their cardiac information and can prepare for appropriate intervention.

The technology also addresses a significant equipment access barrier. At approximately $1,800 per device, compared with $20,000–$60,000 for conventional portable 12-lead EKG machines, K12L makes it more economically feasible to equip BLS fire engines and other first-response units with advanced cardiac diagnostic capabilities.

The impact

The Kern County deployment and supporting clinical research demonstrate the potential to expand access to timely cardiac diagnostics and improve prehospital care coordination:

- ✔ **100 Kardia 12L devices designated for deployment** across public and private EMS providers in Kern County, including Hall Ambulance, Liberty Ambulance, and county fire agencies. The initiative is described as the first countywide deployment of AI-powered 12-lead EKGs in California.[1]
- ✔ **Diagnostic performance comparable to standard hospital 12-lead EKGs** demonstrated in independent validation research published in 2024, including major determinations such as bundle branch blocks and ischemia.[2]
- ✔ **29% reduction in EKG acquisition time** demonstrated in a 2025 study evaluating Kardia 12L, supporting the potential for faster diagnostic assessment in emergency settings.[3]

At the time of the source case study, Kern County-specific outcomes, including reductions in door-to-balloon time, catheterization lab pre-activation rates, and patient outcomes, had not yet been reported. The source indicated that the rollout was expected to conclude in February 2026.

> "They are small, ultra-light, fast and easy to deploy and designed specifically for the realities of emergency response."
>
> **— Jeff Farris**
> *Medical Director, Kern County EMS*

[1]https://www.bakersfield.com/news/kern-county-debuts-new-portable-ai-powered-ecg-machines/article_4ca37b2a-a308-42ca-96e6-448077eaf36a.amp.html
[2]https://alivecor.com/press/press_release/new-study-shows-alivecors-kardia-12l-ecg-system-performs-equivalently-to-a-standard-12-lead-ecg
[3] https://pubmed.ncbi.nlm.nih.gov/40917177/