

# IMPROVING EMERGENCY CARE: MOBILE BLOOD LABS ON AMBULANCES

*“Rural EMS agencies have to think about taking care of patients for hours, not minutes, and you need every possible tool. That’s what mobile blood labs are for Booker EMS.”*

- JONATHAN SELL, BOOKER EMS

Mobile blood labs, or point-of-care testing, represent one of the latest tools that Texas EMS agencies are using to enhance patient outcomes. The labs help EMS professionals make accurate patient assessments, which are used by physicians and other clinicians to assist their clinical decisions.

One study found that point-of-care testing has demonstrated that it can positively affect pre-hospital care in **30 percent** of its uses.\* For rural areas, which may be taking care of patients for hours due to the long travel distances, a mobile blood lab can be a valuable tool.



## MEDSTAR MOBILE HEALTHCARE’S POINT-OF-CARE TESTING

MedStar Mobile Healthcare’s mobile integrated healthcare (MIH) service in Fort Worth relies on point-of-care testing to determine a patient’s health care status, which can determine whether an on-scene treatment intervention can be performed to prevent an unnecessary emergency department visit.

## BLANCO COUNTY EMS

Nothing makes the receiving emergency department staff happier than when you walk in the door with labs in hands. They’re even happier when you walk in with initial labs in hand, explain your treatment plan, and follow-up labs showing improvement and/or complete resolution of the issue. It alleviates a lot of the workload, as the nursing staff isn’t scrambling to draw labs, and allows the staff to focus on a proper transfer of patient care. Our handoffs are a lot more similar to a handoff between the emergency department and admitting unit of the hospital, and we have time to give a detailed report and summary of interventions, working diagnoses, etc. When our crews are encoding a patient report and providing a critical lab value, many times the nurse taking the report will pause and ask, “Wait, is this a transfer?” The nurse will assume that he or she misheard and that the patient is coming from another facility. However, once our EMS crew tells the hospital staff that it is a scene call, it’s typically followed by a “radio high five.”

- BEN OAKLEY, BLANCO COUNTY EMS

## BOOKER EMS

Booker EMS was picking up cardiac patients who we felt certain were having a heart attack, but they had no ST elevation on the EKG, which is the definitive way to determine an MI based on an EKG alone. We would take them to the local ED where there would be a one- to two-hour delay while they did one key thing: assess for troponin. The local emergency department would take 30 to 60 minutes to run it, and then do the rest of their protocol before starting the transfer process. The patient was getting delayed by one to two hours from getting to a cath lab for the care they needed. With a mobile blood lab, Booker EMS has the ability to bypass local emergency department on a regular basis for positive troponin reading to instead go straight to a percutaneous coronary intervention.

Having labs has also completely eliminated the transport for cardiac arrest. We have effectively addressed all of the reversible causes of cardiac arrest that the emergency department can assess and/or treat, so we have eliminated the incredibly dangerous and unnecessary transport of cardiac arrest. We work them, and if we get return of spontaneous circulation (which we are now over 50 percent on compared to almost never before the whole process started) we then transport.

- JONATHAN SELL, BOOKER EMS

\*Gruszecki AC, Hortin G, Lam J, et al. Utilization, reliability, and clinical impact of point-of-care testing during critical care transport: Six years of experience. Clin Chem. 2013;49(6):1017-1019.