New study shows crowdsourced traffic data could save lives

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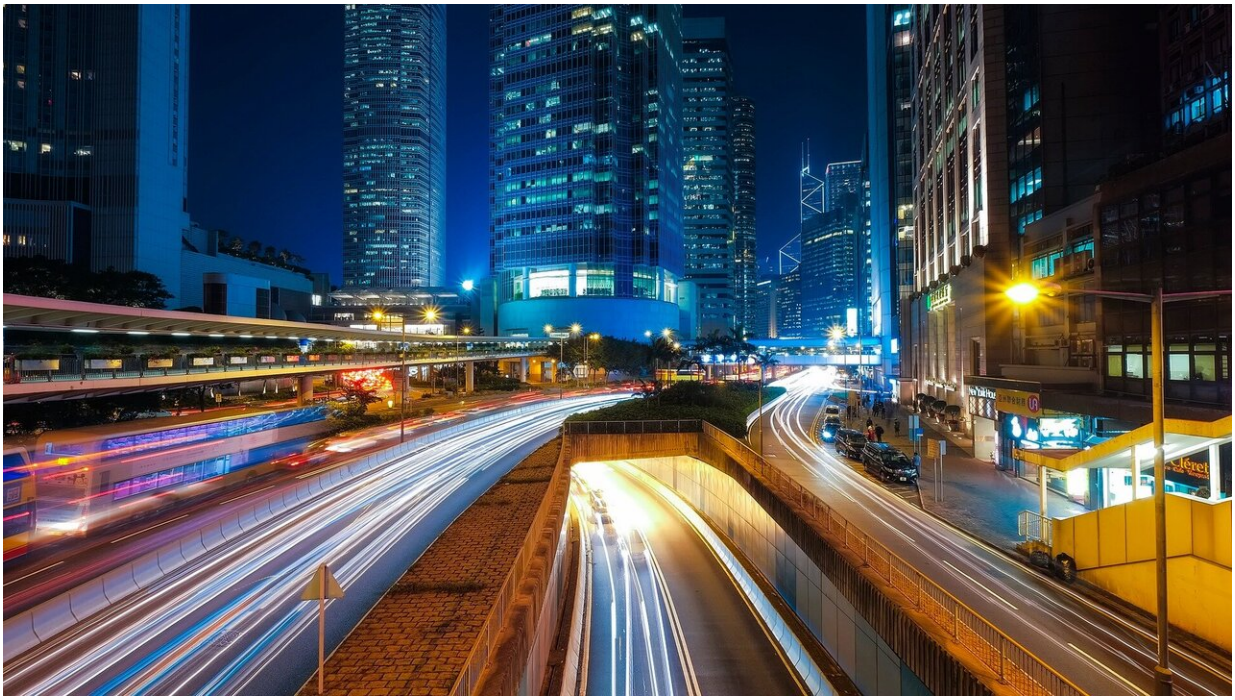

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A new University of California, Irvine-led pilot study finds, on average, Waze "crash alerts" occur two minutes and 41 seconds prior to their corresponding California Highway Patrol (CHP)-reported crash. These minutes could mean the difference between life and death.

The paper titled, "Crowdsourced Traffic Data as an Emerging Tool to

Monitor Car Crashes," was published today in *JAMA Surgery*.

"According to our research, it takes emergency medical service (EMS) units an average of seven to 14 minutes to arrive on scene after a 911 call," said Bharath Chakravarthy, vice chair of research and academic affairs for the UCI School of Medicine, Department of Emergency Medicine and one of the researchers on the study. "Crowdsourced traffic data might help to cut that time by as much as 60 percent."

The study reports that crowdsourced data, collected by software applications like Google's Waze, are highly correlated with conventional reporting data that are often costly to collect and suffer from reporting lag-time. The ability to use crowdsourced user-generated traffic data has several immediate clinical implications for treatment and mortality rates among motor vehicle crash victims as well as for improving efficiency around emergency department operations in the United States.

"The potential is game-changing. Trauma surgeons could be notified earlier, diagnostic testing could be prioritized for crash victims, and blood and other life-saving equipment could be made available sooner," said Chakravarthy. "These pre-hospital and hospital level resources, if activated sooner, could aid in increasing quality and rapidity of patient care and potentially reduce morbidity and mortality."

Every day, more than 100 deaths and 2.5 million emergency department visits result from motor vehicle crashes, making it one of the leading causes of death in the United States. Reducing ambulance and emergency department treatment response time for crash victims could dramatically save lives.

Further research is needed on the integration of crowdsourced traffic data as a tool to monitor car crashes and reduce associated mortality, including the potential risks of implementing this approach.

More information: *JAMA Surgery* (2019). DOI: 10.1001/jamasurg.2019.1167