Implementation of an electronic health record system for use in humanitarian emergencies, disaster response, and conflict zones

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Figure One: fEMR in use at a mobile clinic in Guatemala.

Figure Two: Typical clinic infrastrucutre.

Objective
Despite the global expansion of electronic medical record (EMR) systems and their increased integration with artificial intelligence (AI), their utilization in disaster settings remains limited, and few studies have evaluated their implementation. We aimed to evaluate Fast Electronic Medical Record (fEMR), a novel, mobile EMR designed for resource-limited settings, based on user feedback.

Methods
We examined usage data through October 2022 to categorize the nature of its use for disaster response and determine the number of patients served. We conducted interviews with stakeholders and gathered input from clinicians who had experience using fEMR.
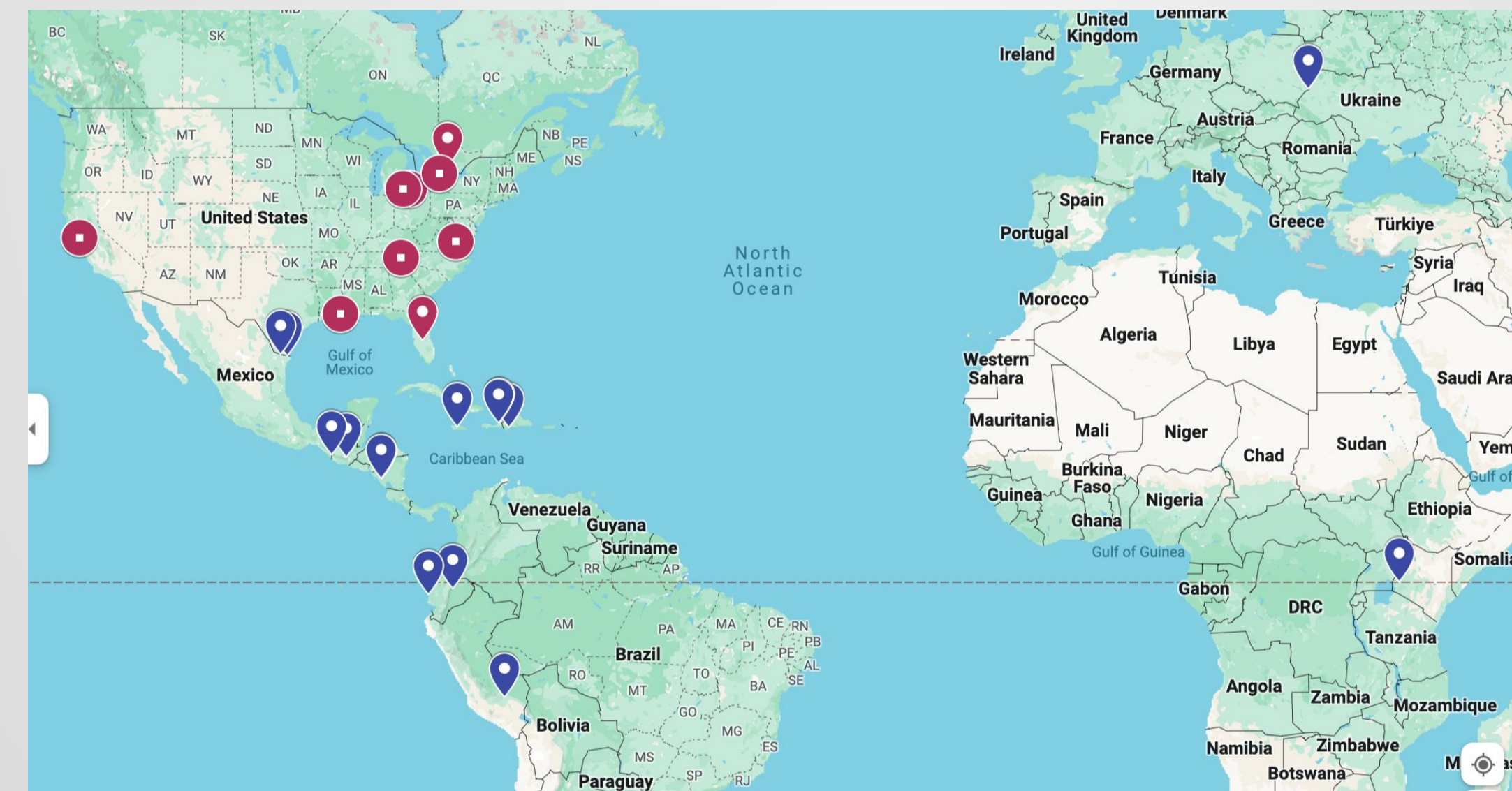

Figure Three: Deployment locations shown in blue. End-user home location shown in red.

Figure Four: An example of a patient list in the fEMR system.

Results
Over 8 years, fEMR was employed 60 times in 11 countries across four continents by 14 organizations (universities, non-profits, & disaster response teams). This involved 37,500+ patient encounters in diverse settings including migrant camps at the US-Mexico and Poland-Ukraine borders, mobile health clinics in Kenya & Guatemala, and post-earthquake relief in Haiti. User feedback highlighted adaptability, but suggested hardware and workflow improvements.

Conclusion
EMR systems have the potential to enhance healthcare delivery in humanitarian responses, offer valuable data for planning and preparedness, and support measurement of effectiveness. As a simple, versatile EMR system, fEMR has been deployed to numerous disaster response and low-income settings.