

## TeleEmergency Medicine: Transforming Acute Care through Virtual Technology

**Authors :** Ashley L. Freeman, Jessica D. Watkins

**Abstract :** TeleEmergency Medicine (TeleEM) is an innovative approach leveraging virtual technology to deliver specialized emergency medical care across diverse healthcare settings, including internal acute care and critical access hospitals, remote patient monitoring, and nurse triage escalation, in addition to external emergency departments, skilled nursing facilities, and community health centers. TeleEM represents a significant advancement in the delivery of emergency medical care, providing healthcare professionals the capability to deliver expertise that closely mirrors in-person emergency medicine, exceeding geographical boundaries. Through qualitative research, the extension of timely, high-quality care has proven to address the critical needs of patients in remote and underserved areas. TeleEM's service design allows for the expansion of existing services and the establishment of new ones in diverse geographic locations. This ensures that healthcare institutions can readily scale and adapt services to evolving community requirements by leveraging on-demand (non-scheduled) telemedicine visits through the deployment of multiple video solutions. In terms of financial management, TeleEM currently employs billing suppression and subscription models to enhance accessibility for a wide range of healthcare facilities. Plans are in motion to transition to a billing system routing charges through a third-party vendor, further enhancing financial management flexibility. To address state licensure concerns, a patient location verification process has been integrated through legal counsel and compliance authorities' guidance. The TeleEM workflow is designed to terminate if the patient is not physically located within licensed regions at the time of the virtual connection, alleviating legal uncertainties. A distinctive and pivotal feature of TeleEM is the introduction of the TeleEmergency Medicine Care Team Assistant (TeleCTA) role. TeleCTAs collaborate closely with TeleEM Physicians, leading to enhanced service activation, streamlined coordination, and workflow and data efficiencies. In the last year, more than 800 TeleEM sessions have been conducted, of which 680 were initiated by internal acute care and critical access hospitals, as evidenced by quantitative research. Without this service, many of these cases would have necessitated patient transfers. Barriers to success were examined through thorough medical record review and data analysis, which identified inaccuracies in documentation leading to activation delays, limitations in billing capabilities, and data distortion, as well as the intricacies of managing varying workflows and device setups. TeleEM represents a transformative advancement in emergency medical care that nurtures collaboration and innovation. Not only has advanced the delivery of emergency medicine care virtual technology through focus group participation with key stakeholders, rigorous attention to legal and financial considerations, and the implementation of robust documentation tools and the TeleCTA role, but it's also set the stage for overcoming geographic limitations. TeleEM assumes a notable position in the field of telemedicine by enhancing patient outcomes and expanding access to emergency medical care while mitigating licensure risks and ensuring compliant billing.

**Keywords :** emergency medicine, TeleEM, rural healthcare, telemedicine

**Conference Title :** ICMIT 2024 : International Conference on Medical Informatics and Telemedicine

**Conference Location :** New York, United States

**Conference Dates :** June 03-04, 2024