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Abstract Title: A Smartphone Application to Aid in the Evaluation, Treatment and Clinical Trial Enrollment of the Acute Stroke Patient

Press Release Title: New Apps May Help Detect Seizures, Treat Strokes

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Background: During treatment of patients with acute stroke, practitioners must perform many tasks simultaneously, including diagnosing, treating, and screening/enrolling in clinical trials. These tasks often must be performed in parallel, and in the timeliest manner possible. Especially for those unfamiliar with local processes or resources, a smartphone application can aid in these tasks.

Design/Method: A smartphone application compatible with iOS and Android operating systems was constructed for the Stroke Team at the University of Texas at Houston. It features a hierarchical structure, with four components. First, a phone dialer function allows access to critical personnel directly from the phone. Second, references for clinical trials and other data such as treatment protocols is available. Next, a timekeeper function allows recording of benchmark times (including symptom onset, arrival time, head CT acquisition time and tPA administration time). Once times are recorded, the application updates time windows in real-time. Finally, a tool allows users to screen patients for eligible clinical trials automatically: by entering basic data such as age, modified Rankin Scale and NIHSS, the application determines whether the patient may be eligible for ongoing clinical trials. The application allows emailing of these data to the user for inclusion in official documentation, or notification of appropriate personnel.

Conclusions: A smartphone application that centralizes various disparate resources may allow for more efficient management of the acute stroke patient. Further, such an application may allow easy screening for clinical trials by new practitioners as they learn of the various inclusion criteria for their studies.

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