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Required Skills:

(List skills needed) – Web (HTML / JS / CSS), To Be Discussed

Preferred Team Communications:

Conference Call, Skype, WebEx / GoToMeeting, Google Hangouts

Data Sources:

To Be discussed, Work done during the last two semesters to develop the format of these apps

Other Items:

Project has time zone flexibility. Mentors and students will determine a good time for virtual meeting

Team Info:

Needs a Developer, Analyst, Tester, Project Manager. Allows one team of 4-6 members.

PEDIATRIC TBI- CLINICAL DECISION SUPPORT FOR IDENTIFICATION AND MANAGEMENT

FAs attention to concussion and traumatic brain injury (TBI) has grown in recent years, there has been an increase in the number of pediatric patients with concussion (also known as mild TBI, or mTBI) seen in a variety of healthcare settings that include emergency departments, urgent care setting and primary care providers. However, many providers have insufficient time and training to systematically assess and manage patients with suspected mTBI, thus limiting adoption of best practices to ensure diagnosis and management consistency. The consequence of missing mTBI diagnosis includes the failure to recommend appropriate treatment and management; this may contribute to prolongation of symptoms and increased risk of re-injury. Even when mTBI diagnosis is made, there are inconsistencies in TBI assessment, the comprehensiveness of discharge recommendations, and substantial variation in management protocols. Research is needed to identify the best ways to educate providers and support clinical decision making at the point of care to facilitate pediatric mTBI diagnosis, management, and treatment, to improve patient outcomes.

Children with TBI navigate two systems of care - health systems and school systems. There are challenges, inconsistencies, and gaps in current systems of care for children with TBI, particularly for children who are transitioning to school after acute care. Communication of medical information to parents and school personnel is inconsistent and requires parent authorization, which contributes to gaps in care and potentially poorer health, education, and social outcomes for children. Primary care providers, who are seeing and increasing number of children with mild TBI, have demonstrated difficulty in translating important management concepts such as return to school into clinical practice. A recent study suggests that intervention using clinical decision support embedded in electronic health records along with in-person training can effectively change provider behavior. Further research indicates that parents frequently make errors related to the knowledge and execution of discharge instructions, especially for complex discharge instructions, limited English proficiency and if they have public insurance.

CDC's Division of Unintentional Injury aims to assess the feasibility of using Fast Healthcare Interoperability Resources (FHIR) to promote evidence-based diagnosis and management of TBI in children. The aim is to improve medical diagnosis at the time of injury by using evidence-based guidelines made more available to clinicians. Another goal is to improve communication between clinicians, families, and schools to improve post injury management. We are particularly interested in the applicability of this technology in rural health systems and primary care providers' practices.

PROJECT OBJECTIVES

- 1) to test a provider interface developed in previous semesters that provides clinical decision support that are informed by evidence-based guidelines for the diagnosis and management of Mild Traumatic Brain Injury in Children and
 - 2) test a parent/patient app that alerts parents about symptom monitoring and follow-up, and aids in communication between parents and the healthcare and school settings.
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Intellectual Property: None

SUCCESSFUL PROJECT

To Be Discussed. This project was part of the previous two semesters in which the classes developed a format that is available on the GA Tech Server
