DAVID QIAN

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Required Skills:

Web (HTML / JS / CSS), Mobile,

Preferred Team Communications:

Conference Call, to be discussed

Data Sources:

Simulated patient data will be provided

Other Items:

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

Team Info:

Needs a Developer, DBA, Tester. Allows one team of 4-6 members.

FHIR-ENABLED DOCUMENTATION AND SHARING OF SYMPTOMS DURING CANCER TREATMENT

Cancer patients usually receive multiple modalities of treatment, such as surgery, radiation, and chemotherapy. In addition to damaging cancer cells, radiation and chemotherapy also damage normal cells in the body, and can give rise to a wide variety of side effects that overlap in time and space. These side effects include nausea, body pain, skin changes, loss of sensation, bleeding, and elevated risk of infection. Accurate recall of the timing and quality of side effects is essential for oncologists to determine which treatments are poorly tolerated and need change or re-dosing on an individual basis. However, distorted memory during such a challenging period of patients lives often precludes thorough relaying of all complaints at follow-up appointments. Many mobile apps have already been created to address this problem, by allowing patients to log their daily symptoms and produce longitudinal summary reports. Yet, these reports can be cumbersome for physicians to review and then re-narrate (in visually unappealing prose format) for existing electronic medical record systems.

PROJECT OBJECTIVES

Design a mobile app that allows (1) patients to log daily symptoms during cancer treatment, (2) physicians to track these logs in real time, and (3) the electronic medical record to auto-populate summary information at interval appointments. A successful app will offer convenience to patients when providing data, and succinctness to physicians when reviewing data. The severity, onset, duration, and characteristics of patients symptoms should be prompted in a dynamic checkbox fashion, with minimal need for mobile keyboard. A physician may follow these symptoms using custom alerts or at his/her own leisure. At appointments, a comprehensive but visually concise summary of patient side effects since the previous appointment should auto-populate into the physicians note on Cerner (Emory electronic medical record). The ideal data sharing mechanism that is both quick and HIPAA-compliant has yet to be determined.

SUCCESSFUL PROJECT

To be determined

Intellectual Property: None