DAWN K. SMITH

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Required Skills:

(List skills needed) - Web App Development, Human Centered Design, Stand Alone Development, Java, Python, Workflow/Process Optimization, Open Source Databases (MySQL, MariaDB, etc), Technical Writing, Project Management

Preferred Team Communications:

WEBEX, Skype or Conference call

Data Sources:

Georgia Tech synthetic data will be sufficient for the project. Data can also be made available by CDC.

Other Items:

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

MULTI-SITE EMR SURVEILLANCE AND CLINICAL DECISION SUPPORT FOR HIV PREEXPOSURE PROPHYLAXIS (PrEP)

In 2012, a daily medication for the prevention of acquiring HIV infection (called PrEP) was approved and in 2014, CDC issued clinical practice guidelines for its use. CDC estimates that 1.2 million Americans have indications for its use. A clinical decision support tool is needed to assist clinicians in identifying their patients with indications for PrEP. Surveillance of the provision of PrEP and associated laboratory tests to appropriate patients is dependent on developing EMR-based data collection methods that will operate across multiple sites with different EMR systems.

PROJECT OBJECTIVES

Objective 1: using algorithms defined in the CDC guidelines, develop a FHIR-based clinical support that informs clinicians which of their patients should be offered PrEP. Objective 2 is to pull EMR data on demographics, diagnoses, lab tests, and medications for use in an algorithm that defines PrEP patients for surveillance purposes.

SUCCESSFUL PROJECT

The clinical decision support tool would integrate EMR data (age, sex, specific ICD codes, keywords in history and notes field) to deliver information to the clinicians about whether a patient should be offered PrEP. The surveillance interface would extract data to identify patients who had initiated, continued, or stopped PrEP along with critical demographic, visit-specific, and lab data. This extracted data would be available for integration with the same data from EMR systems used in a surveillance networks of clinical sites.

Intellectual Property: Project involves a government agency so the resulting project is made available to the public. Students do not own IP. Students will be recognized as contributors