**Background and Development**

The Student-Run Free Clinics at Tulane University School of Medicine (TUSOM) are a collective of independently-run free clinics that partner with different community organizations or pre-existing clinics to provide services to those who are in the most need in the New Orleans community.

**Tuberculosis Testing Program**

Over the past several years, disparate Tuberculosis testing programs at clinics have been united into one program that coordinates supplies and labor centrally as an interclinic service.

**Student Clinic Council**

Clinics and interclinic service programs collaborate through the Student Clinic Council (SCC), a unifying body streamlining services through collaboration and collective effort. This body also provides the clinics with a project management team to assist in reaching clinic goals.

**Innovative Technologies**

Officer and Communications Advisor, our Chief Information Security Technology Specialist in the Office Of Medical Education. Our advisor endorsed our project as beneficial to the Tulane Faculty, Staff and Student collaboration.

Launching this EHR required collaboration of students, faculty and staff. We began by discussing our options with our Faculty Advisor and Instructional Technology Specialist in the Office Of Medical Education. Our advisor endorsed our project as beneficial to the Tulane Faculty, Staff and Student collaboration.

**TB EHR Task Force**

Staff Chief Information Officer, Student Operations Officer, Student Technology Officer, Student TB Leader, Faculty Advisor, Staff Chief Information Officer, Technology Specialist, Assistant, Office Manager, Office Manager, Office Manager, Office Manager.

**Priorities for the EHR**

- **Accessibility**: all authorized users can access and analyze records for community impact assessment
- **Synchronicity**: eliminate the need to repeat testing when patients visit multiple sites within the year

**Creation of the Questionnaire**

To ensure all clinics are following recommended processes for screening, several sources were consulted when designing the questionnaire:

- CDC recommended guidelines on TB testing and diagnosis
- WHO’s guidelines in their 2016 Global tuberculosis report
- Local expert on tuberculosis clinical director of Wrangle TB clinic Dr. Juzar Ali

**Formatting the User Interface**

The Form was constructed using Excel Visual Basic for Applications programming language (Microsoft) and open-source VBA code provided by Contexture. The final product consists of a data entry form for adding and reviewing individual encounters as well as an aggregate patient data form for quick viewing of test completion status and record navigation.

Data is compiled in a separate sheet to serve as a back-end database for collective data evaluation. The EHR is hosted in an online, HIPAA-secure, cloud storage platform (Box), with web-based direct access using BoxEdit.

**Implementation and Results**

**Implementing**

Implementing a new EHR across multiple clinics required significant clinic leader investment. The EHR was beta tested for one month at one site and then all sites for three months. The EHR was edited to improve usability based on feedback from TB clinic leaders. The student leader was tasked with shepherding the EHR into use at every site.

One issue that required troubleshooting was the creation of duplicate source spreadsheets where the spreadsheet was used simultaneously by two different sites. This can be resolved with an administrator merging the two sheets, this is undesirable. Users need to lock their spreadsheet when they use it, and must remember to unlock it when they are done.

**Quantitative Results**

The EHR allows us to assess the reach of our TB program. The EHR has been active for 9 months and has been used in 1428 TB testing encounters. Our records indicate 53 positive test results with referrals for follow-up and 32 previous positives. We currently have an estimated cost savings of $125.50 to date, due to 25 repeat tests that have been prevented. This is approximately a 1.82% savings of our tuberculosis budget.

At this time, our tracking ends at the patient encounter data. We are currently developing a system for tracking the follow-up of our TB skin test positive patients and documenting our cost savings. Clinically, we document test placement and test interpretation well, but need to improve our protocols for documenting patient no-shows.

**Qualitative Results**

"The EHR is a vital tool in our TB screening program. It allows us not only to better coordinate data across all testing sites, but to ensure safety of patient data."— Kyle Leonard, New Orleans Mission

"Once I got the hang of it, the EHR made it very easy to verify if a patient had received a recent TST. The EHR definitely allowed us to cut down on repeat testing."— Andrew Schock, Ozanam Inn

"The EHR has been a net positive development for us. It has allowed us to move from paper to paperless which has been great, and I like that I can add data from any computer."— Tom Fox, Bethel Colony South

**Key Achievements**

- Developed and implemented a custom TB EHR at no cost
- Integrated our patient record keeping among five TB clinic sites
- Identified cost-savings protocols as a result of our data analysis
- Created a platform for quality improvement and continuity of care

**Acknowledgements**