BUILDING ELECTRONIC HEALTH RECORD SYSTEMS IN RESOURCE LIMITED ENVIRONMENTS; EVALUATING OPTIONS.

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This project seeks to provide a practical approach to addressing the substantial financial barriers faced by small independent clinics hoping to implement electronic patient health records. Software packages provided by Cerner, Epic, Allscripts, etc. offer robust Electronic Health Record systems (EHR) that facilitate interdepartmental collaboration, robust reporting, and an improved ability to incorporate patients into their own healthcare. However, these packages are often unaffordable and require a full-time IT staff. Despite these obstacles, alternative software solutions may exist for small clinics operating with very limited resources.

In this study, I seek to first describe a novel use of REDCap, a research data collection tool as a platform to perform many of the same operations provided by commercial EHRs. This description seeks to serve as a guide for small clinics seeking to implement a fully-featured EHR while taking into account the incredible financial, technological, and logistical limitations encountered in resource limited environments. I will elucidate   Secondly, I will compare this usage of REDCap to the features provided by commercial EHRs, specifically Epic, and Fusion Practice.

The method of this study is to query available literature in order to delineate and describe the major challenges faced by resource limited healthcare clinics trying to implement an EHR in their clinic for the first time. I will use the literature to define standards for a successful EHR implementation in resource limited environments to drive a comparison between REDCap and other commercial EHRs. The comparison seeks to understand to what degree each EHR platform meets those predefined standards in the hopes of elucidating the potential avenues a developing clinic can take as it seeks to manage patient health information cheaply and effectively.

Preliminary work on this project has focused on delineating and defining the common problems faced by small clinics as they learn to manage large amounts of patient health information (PHI, specifically in environments where electricity and internet connectivity are not consistent. This involves literature reviews on EHR implementations in resource-limited in order to propose standards required by EHR platforms in order to ensure sustainable health information management in less than ideal conditions. Additionally, I will begin to investigate the features offered by other commercial EHRs, such as safeguards present to prevent errors in PHI, and compare and contrast the benefits and limitations of these software packages, to the free-to-use data collection tool REDCap.