Experience Implementing Electronic Health Records in the Antenatal Clinic of a Teaching and Referral Hospital in Kenya

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Abstract

Introduction: Electronic health records (EHRs) are receiving a lot of attention for their potential to improve care. Objective: To develop and implement EHRs in the antenatal clinic (ANC) of a teaching and referral hospital in Western Kenya. Results: A multidisciplinary team developed a phased implementation of EHRs in the ANC as part of a CDC-funded effort to develop and implement primary care EHRs in lower level and referral facilities in Kenya comprising a clinic registration system and initial- and return-visit encounter forms that captured and reported data required for reporting. This was successfully done, the EHR fully implemented in the ANC including a reminder system to enhance adherence to care guidelines. Conclusions: It is possible to implement EHRs in a referral hospital ANC.

Keywords:
Computerized electronic medical record systems, reproductive medicine, developing countries, Kenya

Introduction

Use of electronic health records (EHR) is receiving a lot of attention given its potential to improve care. Evidence suggests that when carefully implemented, it can have a positive impact on behaviour, as well as operational, process, and clinical outcomes. Care must be exercised, however, to avoid the mistakes and pitfalls that have been encountered with the roll-out of these new technologies as hope and hype abound in full measure. While use of EHRs is widespread in resource rich settings, its use in the resource poor countries is limited in the so-called “digital divide.” This poster presentation highlights our experience implementing EHR in an ambulatory clinic in Kenya.

Materials and Methods

Moi Teaching and Referral Hospital (MTRH) is the second largest referral hospital in Kenya. It is also the primary teaching hospital for Moi University. The Academic Model Providing Access to Healthcare (AMPATH) was formed by Indiana University, Moi University and Moi Teaching and Referral Hospital to initially provide HIV care in Western Kenya but is now providing primary care and chronic disease management. University of Toronto has joined the AMPATH consortium. Building on the AMPATH experience with EHR a multidisciplinary team developed a phased implementation of EHRs in the ANC as part of a CDC-funded effort to develop and implement primary care EHRs in lower level and referral facilities in Kenya comprising a clinic registration system and initial- and return-visit encounter forms that captured and reported data required for reporting. Responsibility for developing the system was shared between local sites and an external three-pronged support infrastructure with involvement of end-users in planning and implementation through regular meetings. Data for analysis was obtained by querying the AMRS database to obtain required information.

Results

Use of the ANC encounter forms began in October of 2010. In the 25 months since initial implementation, 5655 patients have been enrolled in the ANC and have generated 18,399 visits during which encounter forms were completed. The ANC module of the AMRS has now been accepted as part of the ANC’s infrastructure. As a result, patients are now able to leave the clinic with a detailed summary sheet which they can present to any other care provider either in this system or elsewhere. Standardized documentation is now operational which enhances both continuity and quality of care and required reporting to Kenya’s Ministry of Health. Clinical reminders are generated before the patient leaves the clinic and clinician alerted to address it. The problem of misplaced or lost patient files, which used to affect up to 30% of all files, has now been eliminated. Patient records are also available easily if the patient presents for admission to the obstetric unit.

Discussion

We successfully developed and implemented an EHR system at MTRH. Difficulties in implementation was anticipated and dealt with through involvement of end users and deploying dedicated staff to ensure system operates successfully. A collaborative effort ensured success of this intervention.

References