

## **Breast Cancer Care in Kenya – A Hybrid Approach to Clinical Data Management**

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**Background:** High-quality data is essential for guiding clinical decision-making, quality improvement initiatives, national and local policy recommendations, and outcomes measurement and reporting. In Kenya, EHRs have been implemented in several disease- and goal-specific care modules, but their post-implementation usage remains low and precludes scale-up. Maintenance costs, attitudinal-behavioral limitations, and workflow interference have limited EHR implementation in other LMIC. While continued investigation will likely refine future EHR functionality, creative solutions are needed in the meantime to supplement these efforts. The aim of this study is to describe the creation and implementation of clinical forms for the secondary development of a prospective database in a multidisciplinary breast clinic.

**Methods:** We developed clinical forms and corresponding RedCAP instruments, through the following steps: (1) multidisciplinary needs assessment and plan; (2) collaborative drafting of forms; (3) iterative clinical piloting and revision; (4) harmonization of forms with RedCAP instruments; and (5) administrative approval for clinical use.

**Results:** The needs assessment identified challenges related to documentation of clinical encounters. Five clinical forms were created and edited over a period of 6 months, corresponding to ten RedCAP instruments with 469 fields. These tools capture data with potential for use as quality improvement metrics, including ECOG status, clinical and pathologic staging, barriers to care, disease status and progression, treatments and other interventions, among others.

**Conclusion:** We hypothesize that insight gained from EHR implementation in LMIC can be applied on a small scale to generate high-quality data and facilitate care in the absence of widespread EHR usage. These tools will be used both to develop a prospective database and to retroactively migrate legacy data for outcomes analysis of the multidisciplinary breast clinic at Moi Teaching and Referral Hospital in Eldoret, Kenya. Following administrative approval, a formative evaluation will be conducted during the clinical implementation phase in a hybrid effectiveness-implementation trial.