

<https://doi.org/10.29289/259453942024V34S1036>

Integrated health technological solution for the resolution of breast cancer screening actions: Itaberaí Project

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Objective: This study aimed to present the technological solution of the ITABERAÍ Project, characterizing a set of services and applications to integrate actions from the registration of study participants to the follow-up of altered cases.

Methodology: The technological solution involves integrating the mobile application (Rosa App) with the web system (RosaWatch). The App was developed for use by the Community Health Workers (CHW), in collecting data on study participants, and the system was created for the follow-up of altered cases, from suspicion to diagnostic confirmation and initiation of treatment, and is used by coordinators of the National Health Strategies (NHS), regulation, specialists, and participating study centers. The graphical interface of the App was developed in Dart/Flutter, and the Backend was written in Python/Flask for the creation of the application programming interface (API), responsible for communication between the database and the application. For the relational database, MySQL is used. The web system was designed in Python/Flask, and for HTML pages, CSS/Bulma and Javascript were used. For analysis and interpretation, the database is exported to the RedCap Platform. **Results:** Currently, there are 98 users, all of whom have received training for the use of the technological platforms, with good acceptance and high rates of proper completion. So far, 3101 women have been randomized, with 1607 (51.8%) in the control group and 1494 (48.2%) in the intervention group; of these, 235 (15.7%) have already completed Cycle 2 of the trial. The App is in version 1.8, and the web system is in version 1.1. **Conclusion:** The technological solution proved to be an important strategy for consolidating information and facilitating the follow-up of altered cases identified by both CHW and NHS. It is user-friendly and effective for data collection, storage, and export for analysis, which contributes to the resolution of actions for breast cancer screening and the improvement of public policies.

Support: Avon Institute and Libbs Pharmaceuticals.

Keywords: mobile applications; screening; breast cancer; community health workers.