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Breast cancer screening based on physical examination of the breast performed by community health workers: Itaberaí Project

Priscila Dias Watanabe¹, Ruffo Freitas-Júnior¹, Danielle Cristina Netto Rodrigues¹, Rosangela da Silveira Corrêa¹, Paola Ferreira de Freitas¹, Marcus Nascimento Borges^{1,2}, Maria do Carmo Egito de Sá², Leonardo Ribeiro Soares¹

¹CORA – Advanced Breast Diagnosis Center, Universidade Federal de Goiás, Brazilian Network of Breast Cancer Research.

²Municipal Health Department of Itaberaí.

Objective: The objective of this study was to evaluate the effectiveness of screening actions based on physical breast examination (PBE) performed by community health workers (CHW) for the reduction of advanced tumors (Stages III–IV) and the reduction of mortality rate. **Methodology:** This is a randomized, phase III, open-label clinical trial. Women aged 40 years or older, without a diagnosis of breast cancer, and assisted in their homes by CHW are eligible. For the randomization, the headquarters where the National Health Strategies (NHS) are located were randomized (by drawing) into control group (CG) and intervention group (IG). The intervention consisted of performing the PBE by female CHW, who receive continuous theoretical-practical training. For data collection, a system called “Rosa App” was developed. The variables used to build the App were sociodemographic data, lifestyle habits, anamnesis, information about previous exams, and information about the physical breast examination. For the follow-up of altered cases identified by the CHW, a web system was developed. The sample size calculation was defined to detect the reduction of severe cases and mortality (by 10% and 20%, respectively). For this, 80% of sample power was adopted, with a 5% Type I error, after adjusting for intracluster correlation and sample effect (0.032 and 1.892, respectively). The trial was approved by the Research Ethics Committee (CAAE 56916522.8.0000.5078) and ReBEC (RBR-39vm2nd). **Results:** For the first Participating Center (municipality of Itaberaí – Goiás), a population of 1,894 women was estimated in each group (total of 3,788). The study was activated in December 2022, and until February 29, 2024, 3,101 women were randomized, with 1,607 in the CG and 1,494 in the IG. Of these, 366 showed alterations identified in the PBE performed by the CHW, and eight received a diagnosis of breast cancer. **Conclusion:** The trial could help establish new public policy strategies for breast cancer screening.

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Keywords: clinical protocols; breast cancer; community health workers.