Research Brief: Integrating Early Detection of Breast Cancer into Rajasthan's Public Health System

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Early detection of breast cancer in Rajasthan can be strengthened through a state-led programme that combines community awareness, breast self-examination (BSE), trained frontline health workers, clinical examination, and timely referral for diagnosis and treatment. Evidence from the joint Government of Rajasthan and NIIRNCD project in Jalore, Pali, and Jodhpur indicates that this model is operationally feasible, but it must be institutionalized and better supported with diagnostics, follow-up, and programme management to achieve scale and continuity.

Background and rationale

The project was designed in line with the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke, under which screening for common cancers is expected to be supported by ASHAs, ANMs, and LHVs at PHC and CHC level. Within this framework, the Rajasthan initiative sought to improve awareness among women aged 30-65 years, train providers to identify suspected cases, and establish a referral pathway from community level to PHC, CHC, district hospital, and tertiary care.

The study covered selected blocks in Jalore, Pali, and Jodhpur districts with a target population of 400,000 women aged 30-65 years. Implementation relied on house-to-house outreach, group education, dummy-based BSE demonstrations, capacity-building workshops for health personnel, and phone and home follow-up of suspected cases.

Major Findings

The project reached 157,225 women aged 30-65 years for assessment of awareness on signs, symptoms, and risk factors of breast cancer and trained 218,978 women in BSE. Baseline awareness

of BSE was extremely low, with the executive summary reporting that less than 1 percent of women had heard about BSE, and detailed survey tables showing awareness at about 0.5 percent.

A total of 745 suspected breast cancer cases were identified through Community screening, BSE training, health- worker engagement, self-reporting, and phone follow-up, and 18 cases were confirmed. The most common symptom among suspected cases was a painless breast lump, and most confirmed cases were also associated with this symptom pattern.

Phone follow-up reinforced continuity of care and BSE practice. The report notes that 104,792 women were covered during the first follow-up round and 71,961 during the second, with about 27 percent of contacted women in the first-round reporting BSE practice and some women further educating others in their communities.

Capacity building produced measurable gains in provider knowledge. The report documents post-training improvement among medical officers, ANMs, LHVs, and ASHAs in recognition of breast cancer symptoms, risk factors, BSE, and community participation, indicating that structured training can improve frontline readiness within the state system.

Systems gaps identified

Despite positive implementation experience, the project fell short of its original target coverage, largely because of staff shortages, attrition, delayed recruitment, the need for female field workers, and COVID-19 disruption. The report states that an average of 23 field workers functioned during the project period even though a larger workforce had been envisaged for full coverage.

The most important weakness was incomplete referral uptake after women with symptoms were identified. The report notes that many suspected cases did not proceed to PHC or tertiary care because of busy schedules, not taking symptoms seriously, treatment-related anxiety, family obligations, financial hardship, distance, and lack of confidence in the health system.

Service readiness at lower levels of care also remains limited. The report specifically recommends greater availability of breast ultrasound at CHCs and district hospitals and upgrading district hospitals for FNAC, mammography, and biopsy so that early identification leads to meaningful diagnosis and treatment.

Research Brief direction

The evidence supports conversion of the current operational model from a time-bound project into a state programme executed through Rajasthan's public health system. The report itself concludes that the objectives are achievable and sustainable if the intervention is shifted from project mode to programme mode under state leadership.

A statewide programme should retain the proven community-based elements of the pilot while reducing dependence on ad hoc staffing. This means embedding BSE counselling, symptomatic screening, follow-up, and referral tracking into routine responsibilities of ASHAs, ANMs, LHVs, PHC teams, and district NCD structures.

Awareness activities should not operate in isolation. The programme should connect community messaging with documented referral, patient navigation, family counselling, and time-bound diagnostic services, because awareness without accessible follow-up will not substantially reduce delayed diagnosis.

Recommended actions

1. Train all medical and paramedical personnel in the state on early signs of breast cancer, BSE counselling, clinical breast examination, and referral protocols.
2. Launch sustained mass-media and community-based awareness efforts to normalize breast health discussions and improve understanding of early symptoms and the value of timely examination.
3. Instruct ANMs to train women aged 30-65 years in BSE and conduct annual follow-up for BSE compliance at the grassroots level.
4. Strengthen ultrasound services for breast assessment at CHCs and district hospitals to reduce delay in first-line evaluation.
5. Upgrade district hospitals to provide FNAC, mammography, and biopsy services or ensure formal referral linkage where such facilities are not available locally.

6. Establish a case-tracking mechanism from community identification to PHC review, tertiary referral, diagnosis, and treatment initiation, with reasons for non-compliance documented at each stage.
7. Expand the model district by district under the state NCD platform instead of running isolated pilots, so that monitoring, supervision, and financing become routine functions.

Implementation priorities

In the short term, Rajasthan should issue an operational order adopting the model and integrating it within existing NCD programme structures, district responsibilities, and routine review mechanisms. Standardized training materials, referral forms, follow-up registers, and district reporting formats should be used to ensure uniform implementation across all districts.

District-level implementation should be monitored using a small set of core indicators that cover the full care pathway: women counselled, women trained in BSE, symptomatic women referred, PHC attendance, referral completion, confirmed cases, and treatment initiation. Focussing on these indicators ensures that programme performance is judged on continuity of care rather than awareness alone, in line with NCD operational guidance on continuum of care.

Closing note

The Rajasthan experience demonstrates that early detection of breast cancer can be promoted through a low-cost, community-linked public health strategy built around BSE, frontline worker engagement, and referral support. Formal adoption as a state programme, combined with stronger diagnostics and follow-up accountability, would provide Rajasthan with a practical pathway to improve timely detection and reduce avoidable delay in treatment for women.