Assessment of Availability of cancer screening Facility across various Public Health facilities in Jaipur, Rajasthan

By-

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I. Introduction

Cancer is a leading cause of morbidity and mortality globally and in India. Early detection through effective screening can significantly reduce the disease burden, improve outcomes, and lower treatment costs. The Government of India, under the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS), has recommended screening for three common cancers — **oral, breast, and cervical** — at the primary healthcare level.

Despite national guidelines, implementation varies widely across states and districts. This study aims to assess the cancer screening facilities in public health facilities in Jaipur, Rajasthan — the capital city of the state ,to identify gaps, challenges, and opportunities for screening of cancer.

II. Review of Literature

S. no.	Author	Year	Title	Source	Findings
1.	Neha Taneja, Bhavika Chawla, Aanchal Anant Awasthi, Kumar Dron Shrivastav, Vinita Kumar Jaggi, Rajiv Janardhanan,	2021	Knowledge, Attitude, and Practice on Cervical Cancer and Screening Among Women in India: A Review	PubMed	Overall knowledge on Cervical Cancer among women was 40.22%. Knowledge of risk factors and signs and symptoms was fairly adequate among the women. 32.68% of women knew that early age of marriage was a risk factor for Cervical Cancer followed by 23.01% women who mentioned that early age of initiation of sexual activity was a common

					risk factor for Cervical Cancer.
2.	Madeleine Jones, Sujha Subramanian, Regi Jose	2023	Cancer screening behaviors and preferences among women in southern India	PubMed	14.22% of respondents in the overall group and 14.39% in the priority screening group reported receiving a prior cancer screening. Among women who had not received cancer screening, the most common reasons were "no provider recommendation" (42.18%) and not knowing they needed to be screened (40.76%).
3.	Mittra I, Mishra GA, Dikshit RP, Gupta S, Kulkarni VY, Shaikh HKA, Shastri SS, Hawaldar R, Gupta S, Pramesh CS, Badwe RA	2021	Effect of screening by clinical breast examination on breast cancer incidence and mortality after 20 years: prospective, cluster randomised controlled trial in Mumbai	PubMed	Breast cancer was detected at an earlier age in the screening group than in the control group (age 55.18 (standard deviation 9.10) *v* 56.50 (9.10); P=0.01), with a significant reduction in the proportion of women with stage III or IV disease (37% (n=220) *v* 47% (n=271), P=0.001).

4.	Bobdey, Saurabh; Balasubramanium, Ganesh; Kumar, Abhinendra; Jain, Aanchal	2014	Cancer Screening Should Cancer Screening be Essential Component of Primary Health Care in Developing Countries	PubMed	Most of the reported screening trails in India are on cervical cancer and few on breast and oral cancer screening. The pooled estimates of sensitivity and specificity of cervical cancer screening test such as visual inspection with acetic acid, magnified visual inspection with acetic acid, visual inspection with Lugol's iodine, cytology (Papanicolaou smear) and human papillomavirus deoxyribonucleic acid was found to be 68.76% and 84.02%, 63.27% and 85.43%, 81.86% and 87.03%, 63.25% and 93.17% and 75.04% and 91.66%, respectively.

III. Research Gap

Despite the existence of national programs like the National Programme for Prevention and Control of Non-Communicable Diseases (NP-NCD) and Ayushman Bharat, which mandates

regular cancer screening for oral, breast, and cervical, there is limited evidence on how effectively these guidelines are being implemented at the ground level in public health facilities.

Most of the existing studies focus on population knowledge, attitudes, and practices regarding cancer screening or on the efficacy of individual screening techniques. However, there is a lack of comprehensive research evaluating the operational status, infrastructural readiness, provider training, and systemic challenges within public sector health facilities—particularly at the primary and secondary levels.

This study addresses this gap by providing a facility-level assessment of cancer screening services, incorporating healthcare provider perspectives and practical implementation challenges in a real-world setting.

IV. Research Question

To what extent are common cancer screening services (for breast, cervical, and oral cancers) are being screened in public health facilities, and what are the key challenges and gaps in providing screening services at the public health facilities.

V. Research Objectives

1. To assess the availability of screening services for common cancers (breast, cervical, and oral) across selected public health facilities.
2. To evaluate the techniques and tools used for cancer screening at public health facilities.
3. To identify the challenges and barriers faced by healthcare professionals in carrying out routine cancer screening services.
4. To assess the level of skills of healthcare workers involved in cancer screening activities.
5. To recommend the inclusion of inputs received from the healthcare workers involved in cancer screening services at public health facilities.

VI. Methodology

1. Research Design:

- ✓ Cross-sectional Descriptive study

2. Data Collection:

- ✓ Data were collected through a **primary survey using a semi-structured questionnaire** developed on **Google Forms**. The form was disseminated to healthcare professionals working in the selected facilities. It consisted of both closed- and open-ended questions designed to capture quantitative data as well as qualitative insights related to the screening of breast, cervical, and oral cancers.

3. Sampling Method:

- ✓ Convenience sampling

4. Data Collection Tools:

- ✓ Qualitative tool- Questionnaire

5. Study Duration:

- ✓ 3 months

6. Sample size:

- ✓ The study included a total of **10 public health facilities** across of different levels.

VII. Plan of Analysis

Quantitative Analysis:

- Proportion of facilities conducting cancer screening.
- Distribution of types of cancer screened.
- Frequency and mode of screening

Qualitative Analysis:

- Thematic analysis of open-ended responses on challenges
- Drawing inferences from the IDI and KII done with the the healthcare workers
- Suggestions from healthcare workers to improve services.