

**Cervical Cancer Awareness Campaign for Marginalized Communities in Chhattisgarh's
Jagdalpur District**

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Abstract

Background: Cervical cancer remains a leading cause of morbidity and mortality among women in India, especially within marginalized tribal populations. In Jagdalpur, Chhattisgarh, limited healthcare access, low literacy, and cultural stigma exacerbate the disease burden. Despite being preventable through HPV vaccination and regular screening, awareness and uptake of these measures remain critically low.

Methods and Materials: A community-based cervical cancer awareness campaign was designed and implemented in Jagdalpur using a mixed-methods approach. The campaign combined educational workshops, mobile screening units, and HPV vaccination drives. Culturally tailored interventions such as folk media, tribal leader engagement, and local language materials were employed. Data collection included pre- and post-campaign surveys, focus group discussions, and service uptake monitoring to assess the impact.

Results: The campaign engaged over 5,000 participants, with notable increases in awareness and behavioral changes. Awareness of cervical cancer rose from 28% to 75%, while knowledge of HPV vaccination and Pap smears increased by 51% and 53%, respectively. More than 1,200 women underwent Pap smears and 520 adolescent girls received the HPV vaccine. The campaign demonstrated that community involvement and cultural sensitivity significantly improve health engagement and service utilization.

Conclusion: The Jagdalpur cervical cancer awareness initiative highlights the effectiveness of community-driven, culturally appropriate strategies in reducing health disparities. Future efforts should focus on policy integration, infrastructure support, and sustained community health education to ensure long-term impact and replicability in similar underserved settings.

Keywords: *Cervical cancer prevention, HPV vaccination, Tribal health, Community health education, Public health campaign*

Cervical Cancer Awareness Campaign for Marginalized Communities in Chhattisgarh's Jagdalpur District

Cervical cancer is the fourth most common cancer among women globally, and in India, it accounts for a substantial proportion of cancer-related deaths among women. Despite being preventable and treatable when detected early, many women in marginalized communities lack access to adequate healthcare and awareness. The tribal populations in Jagdalpur, characterized by low literacy rates and limited healthcare infrastructure, are particularly vulnerable. This study outlines a comprehensive approach to creating awareness and reducing cervical cancer mortality in this region.

Project overview

This project aims to design, implement, and evaluate a culturally sensitive cervical cancer awareness campaign for marginalized communities in Jagdalpur, Chhattisgarh, addressing barriers to prevention, diagnosis, and treatment.

Problem Statement

Cervical cancer remains one of the leading causes of cancer-related deaths among women in India, particularly in underserved and tribal regions like Jagdalpur. Limited awareness, socio-cultural taboos, and inadequate access to preventive healthcare exacerbate the situation, leaving many women vulnerable to this preventable disease. Tackling these barriers requires a comprehensive and localized approach to education, community engagement, and resource allocation.

Project Setting

The campaign is set in Jagdalpur, the administrative headquarters of the Bastar district in Chhattisgarh. The area is predominantly rural, with a significant tribal population living in Remote villages and hamlets. Healthcare facilities in this region are sparse, and existing public health infrastructure struggles to meet the community's needs due to limited resources and workforce shortages. The place setting for this project includes primary healthcare centers, schools, community centers, and local marketplaces where tribal and non-tribal populations converge. Collaborations will be established with key stakeholders such as the local government health department, non-governmental organizations (NGOs) focused on public health, and community-based organizations (CBOs). Accredited Social Health Activists (ASHAs), auxiliary

nurse midwives (ANMs), and tribal leaders will play pivotal roles in implementing and sustaining the campaign.

Project Relevance and Rationale

This project addresses the urgent need to mitigate the high cervical cancer incidence and mortality rates in Jagdalpur's marginalized communities. The primary issues tackled include a lack of awareness about cervical cancer, inadequate access to preventive healthcare services, and socio-cultural barriers to early detection and treatment. By implementing an awareness campaign tailored to the unique needs of this population, the project aims to bridge critical gaps in health education and service delivery.

The relevance of this campaign extends beyond its immediate health outcomes. For the local community, it represents an opportunity to enhance knowledge, reduce stigma, and improve access to life-saving interventions. It provides a replicable model for public health systems to address cervical cancer in other underserved regions.

From an academic perspective, this project aligns with community-based research and public health education goals. It provides a platform for applying theoretical knowledge to real-world challenges, fostering skills in program design, stakeholder engagement, and impact.

Evaluation. Additionally, it contributes to the broader discourse on health equity and the role of culturally sensitive interventions in reducing health disparities.

Project Objectives

The project is structured around five core objectives:

1. **Increasing Awareness of Cervical Cancer:** Educating the community about the causes, symptoms, and risk factors of cervical cancer to dispel myths and foster understanding.
2. **Promoting HPV Vaccination:** Encouraging vaccination among adolescent girls and young women to significantly reduce the risk of cervical cancer. The objective includes addressing vaccine hesitancy through culturally sensitive communication.
3. **Encouraging Regular Screenings:** Promoting the importance of routine cervical screenings, such as Pap smears and HPV DNA tests, to ensure early detection and treatment.

4. Addressing Stigma and Misconceptions: Tackling the social and cultural stigmas surrounding cervical cancer and reproductive health through open dialogues, community discussions, and education campaigns.
5. Building Community Capacity: Empowering local communities to sustain awareness by training health workers, involving local leaders, and fostering peer networks. This objective aims to create a self-sustaining model for cervical cancer prevention and early detection.

Project Methodology

To achieve the project objectives, a participatory and multi-pronged methodological approach will be adopted:

1. Community Engagement and Mobilization: Collaborate with local leaders, community-based organizations, and healthcare workers to identify target groups and customize awareness strategies. Initial meetings and trust-building exercises will be held to foster acceptance.
2. Educational Workshops and Media Outreach: Conduct interactive workshops using visual aids, storytelling, and culturally relevant messages to educate women and their families about cervical cancer. Leverage local radio and folk media to disseminate information widely.
3. Healthcare Infrastructure Support: Partner with local healthcare providers to organize mobile cervical screening camps and HPV vaccination drives, ensuring accessibility for women in remote areas.
4. Training Programs: Train ASHAs, ANMs, and community volunteers to sustain the campaign and provide follow-up support to women who require further medical intervention.
5. Monitoring and Evaluation: Use pre- and post-intervention surveys, focus group discussions, and health outcome tracking to evaluate the campaign's impact on awareness levels, vaccination uptake, and screening participation.

Research Methods

The campaign will adopt a mixed-methods research approach to gather relevant data and insights. Key methods include:

1. Literature Review: Conduct an extensive review of existing studies, reports, and publications related to cervical cancer awareness, prevention strategies, and the socio-cultural context of Jagdalpur.
1. Expert Interviews: Engage with healthcare professionals, local leaders, and NGO representatives to gather expert opinions and contextual information about effective campaign strategies.
2. Community Surveys: Design and administer structured surveys to assess the target population's baseline knowledge, attitudes, and practices related to cervical cancer prevention.
3. Focus Group Discussions: Facilitate discussions with community members to identify barriers to cervical cancer prevention and gather input on culturally appropriate messaging and outreach methods.
4. Data Analysis: Analyze qualitative and quantitative data to identify trends, gaps, and opportunities for intervention, ensuring the campaign is informed by evidence-based insights.

Background

Epidemiology of Cervical Cancer

Cervical cancer is one of the most prevalent cancers affecting women globally, with approximately 604,000 new cases and 342,000 deaths reported in 2020, according to the World Health Organization (WHO). In India, cervical cancer ranks as the second most common cancer among women and is responsible for a significant proportion of cancer-related deaths in the country. The primary cause of cervical cancer is persistent infection with high-risk types of the Human Papillomavirus (HPV), particularly HPV-16 and HPV-18, which together account for about 70% of all cervical cancer cases worldwide. Despite the existence of effective vaccines and screening methods, disparities in healthcare access have led to a disproportionately higher burden of cervical cancer among marginalized populations.

In rural and tribal areas like those in Jagdalpur, Chhattisgarh, the burden of cervical cancer is exacerbated by limited healthcare infrastructure, low awareness levels, and cultural barriers. Women in these regions often lack access to routine health check-ups, including Pap smear and HPV DNA testing, which are critical for early detection and prevention. Moreover,

socioeconomic challenges, including poverty and limited education, further restrict their ability to seek timely medical intervention. Consequently, many cases are diagnosed at advanced stages when treatment options are limited, leading to higher mortality rates.

The epidemiology of cervical cancer underscores the critical need for targeted awareness campaigns and healthcare interventions, especially in underserved regions. By addressing the root causes of disparities, such as lack of education, inadequate screening facilities, and cultural resistance, these efforts can significantly reduce the incidence and mortality associated with cervical cancer in vulnerable populations.

Socioeconomic and Cultural Context of Jagdalpur

Jagdalpur, situated in the Bastar district of Chhattisgarh, is characterized by its diverse tribal population and distinct socio-cultural fabric. The region has several indigenous communities, each with its own language, traditions, and health practices. These cultural nuances significantly influence healthcare-seeking behaviour and attitudes toward diseases like cervical cancer. The literacy rate in Jagdalpur remains relatively low, particularly among women, which further compounds the challenge of effectively disseminating health information.

Economic constraints are pivotal in limiting access to healthcare services in Jagdalpur. A significant portion of the population relies on subsistence agriculture or daily wage labour, leaving little room for expenses on preventive health measures. Public healthcare facilities, while present, are often under-resourced and lack the necessary infrastructure to provide regular cervical cancer screenings or vaccinations. Though available, private healthcare options are typically unaffordable for most of the population.

Cultural beliefs and gender norms also serve as barriers to cervical cancer awareness and prevention. In many tribal communities, health decisions are influenced by male family members or community elders, and discussions about reproductive health are often considered taboo. This stigma prevents women from seeking timely medical advice or undergoing preventive screenings. Language barriers and mistrust of modern medical practices also alienate these communities from accessing healthcare services.

Despite these challenges, Jagdalpur's socio-cultural landscape offers unique opportunities for health interventions. Traditional art forms, storytelling, and community gatherings can be leveraged to create culturally relevant and engaging awareness campaigns.

Collaborating with local leaders and healers can also help bridge the gap between traditional and modern healthcare practices, fostering trust and acceptance within the community.

Project Framework and Implementation: Initial research and community assessment

The initial phase of the cervical cancer awareness campaign in Jagdalpur involved an in- depth research and community assessment to understand the specific needs, challenges, and opportunities within the targeted region. This groundwork was essential to tailor the campaign to the socioeconomic and cultural context of the marginalized communities in the district.

We began with a comprehensive demographic study of the region, focusing on population distribution, literacy levels, healthcare accessibility, and cultural practices. Secondary data from government reports and health department statistics provided a preliminary understanding of the area's health landscape. Following this, qualitative research methods, including focus group discussions and semi-structured interviews, were employed to gather first-hand insights from community members, local leaders, and healthcare workers.

These interactions revealed several key challenges: widespread misconceptions about cervical cancer, a lack of awareness about HPV vaccination and screenings, and significant cultural stigma surrounding women's reproductive health. At the same time, the community assessment highlighted potential facilitators for the campaign's success, such as the influence of tribal leaders, the central role of Accredited Social Health Activists (ASHAs), and the community's willingness to engage in culturally appropriate education initiatives. This phase also allowed us to identify logistical needs and potential barriers, such as language diversity and geographical inaccessibility, which were accounted for in the campaign design.

Campaign Strategy

The campaign strategy was developed based on insights from the community assessment, ensuring it was culturally sensitive and logistically feasible. A multi-tiered approach was adopted to address the target population's diverse needs and challenges.

The strategy focused on three core components:

1. **Educational Outreach:** Community workshops were designed to disseminate information about cervical cancer, its causes, symptoms, and prevention methods. Visual aids, storytelling, and local dialects were incorporated to ensure the content was engaging and easily understood.

2. **Healthcare Access and Support:** Mobile screening camps were organized to provide Pap smears and HPV DNA testing in remote areas. HPV vaccination drives targeted adolescent girls, with efforts made to address vaccine hesitancy through one-on-one counselling and group discussions.
3. **Community Involvement:** Tribal leaders, local health workers, and community-based organizations participated in the campaign's implementation. Their participation not only lent credibility to the initiative but also helped bridge the gap between modern healthcare practices and traditional beliefs.

Traditional media such as folk songs, street plays, and puppet shows were used alongside modern platforms like radio broadcasts to amplify the campaign's reach. The strategy also included training programs for local health workers to ensure the campaign's sustainability beyond its initial phase.

Implementation

The implementation phase began with a formal launch event, which introduced the campaign to the community and gathered support from key stakeholders. Representatives from local government agencies, NGOs, and tribal leaders attended, reinforcing a sense of collective responsibility.

The workshops were conducted in multiple locations, with sessions tailored to different demographic groups, including women of reproductive age, adolescents, and men. For women, the focus was on preventive measures and the importance of early detection. For adolescents, the emphasis was on HPV vaccination, while men were educated about their role in supporting women's health decisions.

Mobile healthcare units were deployed to conduct screenings and vaccinations. These units were equipped with basic diagnostic tools and staffed by trained medical personnel, ensuring high-quality services. Simultaneously, a referral system was established to connect women with advanced care facilities in case of abnormal test results.

Throughout the implementation phase, regular feedback loops were maintained.

Community members were encouraged to share their experiences and suggestions, which helped refine the campaign's activities. This iterative approach ensured the campaign remained responsive to the community's needs and challenges.

Resource Allocation

Efficient resource allocation was critical to the campaign's success, given the limited availability of funds and infrastructure in Jagdalpur. The budget was carefully planned to cover key expenses such as educational materials, transportation for mobile units, medical supplies for screenings and vaccinations, and honoraria for community facilitators.

Human resources played a pivotal role in the campaign. Local health workers, ASHAs, and volunteers were trained to conduct workshops and screenings, leveraging their existing rapport with the community. Partnerships with NGOs and healthcare providers ensured access to additional expertise and resources, such as vaccines and diagnostic kits.

Physical resources included mobile healthcare vans, audiovisual equipment for workshops, and culturally relevant educational materials. The logistical planning ensured that these resources were deployed strategically to maximize coverage and impact.

Finally, time was treated as a valuable resource. The campaign's timeline was divided into clearly defined phases, with specific milestones and deliverables for each stage. This structured approach facilitated effective monitoring and ensured the campaign stayed on track, achieving its objectives within the stipulated timeframe.

In conclusion, the framework and implementation of the cervical cancer awareness campaign in Jagdalpur were meticulously planned and executed. By combining evidence-based strategies with community-driven approaches, the campaign successfully addressed the region's unique challenges, laying a strong foundation for sustainable health improvements.

Research Summary

The research phase of the cervical cancer awareness campaign provided crucial insights that informed the design and implementation of the project. Through a combination of qualitative and quantitative methods, we identified key barriers to cervical cancer prevention in Jagdalpur and opportunities to enhance community engagement and impact.

Community Knowledge and Awareness Levels

Baseline surveys revealed alarmingly low levels of awareness about cervical cancer among the target population. Over 70% of women surveyed had never heard of cervical cancer, and less than 10% were aware of the availability of HPV vaccines or the importance of routine

screenings. Misconceptions, such as the belief that cervical cancer is caused by witchcraft or other supernatural forces, were prevalent, particularly in tribal communities.

Interviews with healthcare providers highlighted systemic challenges, such as a lack of training on cervical cancer prevention and limited availability of diagnostic tools in primary healthcare settings. These findings underscore the need for targeted educational interventions and capacity building among healthcare workers.

Cultural and Socioeconomic Barriers

Focus group discussions revealed that cultural norms and taboos surrounding women's reproductive health were significant barriers to cervical cancer prevention. Many women reported feeling embarrassed or ashamed to discuss gynecological issues, even with female healthcare providers. Additionally, decision-making regarding women's health often rested with male family members, further complicating efforts to promote screenings and vaccinations. Economic constraints were another major obstacle. For many families in Jagdalpur, preventive healthcare was considered a luxury. The cost of transportation to healthcare facilities, lost wages for attending appointments, and the perceived expense of vaccinations deterred women from seeking care.

Opportunities for Intervention

Despite these challenges, the research identified several opportunities to enhance the campaign's effectiveness. Community members expressed a willingness to learn about health issues if information was presented in a culturally relevant and engaging manner. Traditional art forms, such as folk songs and storytelling, were seen as valuable tools for disseminating health messages. Additionally, tribal leaders and local health workers were viewed as trusted sources of information, making their involvement critical to the campaign's success.

The research also highlighted the potential for leveraging existing public health infrastructure, such as primary healthcare centers and ASHA workers, to deliver cervical cancer prevention services. By addressing gaps in training and resources, these platforms could play a pivotal role in sustaining the campaign's impact.

Project analysis and evaluation

The cervical cancer awareness campaign was analyzed and evaluated to measure its effectiveness in achieving the stated objectives. This chapter presents an in-depth assessment of participation

and engagement, impact on knowledge and behaviour, and long-term implications for community health.

Community Involvement and Outreach:

The campaign reached approximately 5,000 women and their families across multiple villages in Jagdalpur. Attendance at workshops and screenings exceeded initial expectations, with community members showing a strong interest in learning about cervical cancer prevention. The involvement of tribal leaders and local influencers played a key role in driving participation, as their endorsement lent credibility to the initiative (see Table 1).

Feedback from participants indicated high levels of satisfaction with the campaign's content and delivery. Women appreciated the use of local dialects and culturally relevant examples, which made the information accessible and relatable. Additionally, including men in discussions about women's health helped foster a supportive environment for behavioural change.

Awareness and Behavioural Transformation

Post-campaign surveys revealed a significant increase in awareness about cervical cancer. The proportion of women who could correctly identify risk factors and preventive measures rose from 10% to 65%. Similarly, knowledge about HPV vaccination and the importance of regular screenings improved dramatically.

Behavioural changes were also evident. Over 1,000 women underwent Pap smear tests during the campaign, many of whom reported that they would not have sought screening without the initiative. Additionally, vaccination uptake among adolescent girls increased, with over 500 girls receiving the HPV vaccine during the campaign period. These outcomes demonstrate the campaign's effectiveness in translating awareness into action (see Table 2).

Sustained Community Benefits

While it is too early to fully assess the campaign's long-term impact, initial indicators suggest promising outcomes. Community members have expressed a desire for continued education on health issues, and local health workers report increased confidence in addressing cervical cancer prevention. Establishing a referral system for women requiring advanced care is another positive step toward improving health outcomes in the region.

Challenges:

Several critical challenges, which can be grouped into logistical, cultural, and systemic issues, were encountered during the campaign's implementation. Adaptive strategies were used to overcome each challenge and achieve the campaign objectives.

Infrastructure and Access Issues:

One of the primary challenges was accessing remote and underserved villages. Poor road infrastructure and limited transportation options made it difficult for teams to deliver educational sessions and healthcare services. Mobile health vans were deployed to address this, and local volunteers were recruited to facilitate outreach efforts.

The limited availability of medical supplies and trained personnel also posed significant hurdles. The high demand for screenings and vaccinations occasionally led to resource shortages. Partnerships were established with regional healthcare providers and NGOs to secure additional resources and staff to mitigate this.

Addressing Social Stigmas:

Cultural norms and stigmas surrounding reproductive health created resistance among some community members. Many women felt uncomfortable discussing cervical cancer or participating in screenings. Male gatekeepers within families and communities often viewed such topics as inappropriate, further limiting women's access to services.

To overcome these barriers, the campaign adopted a culturally sensitive approach. Tribal leaders and respected community figures were involved as advocates, and messaging was tailored to align with local values. Health education sessions emphasized the role of cervical cancer prevention in ensuring family well-being, which resonated with the community.

Challenges in Measuring Impact:

Accurate data collection was challenging due to linguistic diversity and varying literacy levels among participants. Standardized survey instruments often failed to capture the nuances of local contexts. Additionally, the transient nature of some tribal populations made follow-up difficult. Local facilitators fluent in regional languages were trained to administer surveys and conduct interviews to improve data reliability. Technology, such as mobile data collection apps, was also introduced to streamline the process and minimize errors.

Challenges in Long-Term Viability:

Ensuring the sustainability of the campaign's impact was a critical concern. While initial outcomes were promising, the need for continued funding and capacity building was evident. Many health workers expressed concerns about maintaining the campaign's momentum without external support.

To address sustainability, the campaign focused on strengthening local health systems. Training programs for healthcare providers were expanded, and community health committees were established to oversee ongoing efforts. Advocacy for policy changes at the state level aimed to secure long-term funding for cervical cancer prevention initiatives.

Recommendations:

The findings of this campaign underscore several critical areas for future focus, providing a pathway to enhance the sustainability and impact of cervical cancer prevention efforts. The following recommendations are derived from our experience and insights gained during the campaign.

Strengthen Community Engagement:

The campaign revealed that building community trust is crucial for driving meaningful engagement. Community leaders and influencers should be actively involved from the inception of future projects. These individuals serve as cultural bridges, helping to address concerns and ensure that messaging aligns with local values. Traditional art forms like folk music and storytelling can be harnessed to create culturally relevant and emotionally resonant health education content.

Enhance Healthcare Infrastructure:

Addressing infrastructural gaps is essential for scaling cervical cancer prevention initiatives. Investments should be made in training healthcare providers, equipping them with the knowledge and tools necessary for effective screenings and vaccinations. Ensuring a steady supply of critical medical resources, such as HPV vaccines and diagnostic kits, will enhance the reliability and reach of preventive services.

Address Economic Barriers:

Financial constraints emerged as a recurring barrier to accessing preventive care.

Introducing subsidized vaccination programs and covering transportation costs for women from remote areas can significantly improve participation. Mobile health clinics can also reduce logistical challenges and bring services closer to underserved populations.

Improve Monitoring and Evaluation:

The campaign highlighted the need for robust data collection mechanisms tailored to the socio-cultural context of the region. Future initiatives should develop tools that accommodate linguistic diversity and varying literacy levels. Leveraging technology, such as mobile apps for real-time data capture, can streamline monitoring efforts and provide actionable insights.

Advocate for Policy Support:

Collaboration with government agencies is critical for sustaining long-term impact.

Policymakers should prioritize cervical cancer prevention by integrating it into existing public health programs. Partnerships with NGOs and private entities can also help secure the funding and resources needed to expand outreach efforts. By aligning with national health priorities, future campaigns can gain the institutional support necessary for success.

These recommendations provide a strategic roadmap for advancing cervical cancer prevention in marginalized communities, ensuring that the lessons learned from this campaign are effectively applied to future efforts.

Conclusion

The cervical cancer awareness campaign in Jagdalpur demonstrated that targeted interventions, when executed with cultural sensitivity and community involvement, can significantly improve health outcomes in marginalized populations. By addressing barriers to awareness, access, and acceptance, the campaign empowered women to take proactive steps toward cervical cancer prevention.

The findings revealed a transformative impact, with marked improvements in awareness, screening uptake, and vaccination rates. These outcomes highlight the potential for community-driven initiatives to address complex public health challenges. Despite the logistical, cultural, and systemic hurdles encountered, the campaign successfully established a foundation for sustained efforts in cervical cancer prevention.

The campaign's success underscores the importance of collaboration between local communities, healthcare providers, and policymakers. By leveraging local knowledge and fostering trust, the

initiative navigated cultural barriers and created meaningful change. The engagement of tribal leaders and the adaptation of messaging to align with local values were particularly effective strategies.

Future efforts should prioritize the sustainability of these outcomes through continued investment in healthcare infrastructure, community education, and policy advocacy. Establishing a referral system and training healthcare providers were significant achievements that must be built upon to ensure lasting impact.

In conclusion, the Jagdalpur campaign is a model for addressing health disparities in underserved regions. It demonstrates that significant strides can be made in tackling the right combination of community engagement, resource allocation, and policy support.

Preventable diseases such as cervical cancer. Continued efforts are essential to build on this progress and extend its benefits to other marginalized communities.

Reference

Abu-Rustum, N. R., Yashar, C. M., Arend, R., Barber, E., Bradley, K., Brooks, R., Campos, S. M., Chino, J., Chon, H. S., Crispens, M. A., Damast, S., Fisher, C. M., Frederick, P., Gaffney, D. K., Gaillard, S., Giuntoli, R., Glaser, S., Holmes, J., Howitt, B. E., & Lea, J. (2023). NCCN Guidelines® Insights: Cervical cancer, version 1.2024. *Journal of the National Comprehensive Cancer Network*, 21(12), 1224–1233. <https://doi.org/10.6004/jnccn.2023.0062>

Ampofo, A. G., Boyes, A. W., Khumalo, P. G., & Mackenzie, L. (2022). Improving knowledge, attitudes, and uptake of cervical cancer prevention among female students: A systematic review and meta-analysis of school-based health education. *Gynecologic Oncology*, 164(3), 675–690. <https://doi.org/10.1016/j.ygyno.2021.12.021>

Arbyn, M., Weiderpass, E., Bruni, L., de Sanjosé, S., Saraiya, M., Ferlay, J., & Bray, F. (2019). Estimates of incidence and mortality of cervical cancer in 2018: A worldwide analysis. *The Lancet Global Health*, 8(2), e191–e203. [https://doi.org/10.1016/S2214-109X\(19\)30482-6](https://doi.org/10.1016/S2214-109X(19)30482-6)

Bhatla, N., & Singhal, S. (2020). Primary HPV screening for cervical cancer. *Best Practice & Research Clinical Obstetrics & Gynaecology*, 65, 98–108. <https://doi.org/10.1016/j.bpobgyn.2020.02.008>

Bruni, L., Serrano, B., Roura, E., Alemany, L., Cowan, M., Herrero, R., Poljak, M., Murillo, R., Broutet, N., Riley, L. M., & de Sanjosé, S. (2022). Cervical cancer screening programmes and age-specific coverage estimates for 202 countries and territories worldwide: A review and

synthetic analysis. *The Lancet Global Health*, 10(8), e1115–e1127. [https://doi.org/10.1016/S2214-109X\(22\)00241-8](https://doi.org/10.1016/S2214-109X(22)00241-8)

Cibula, D., Raspollini, M. R., Planchamp, F., Centeno, C., Chargari, C., Felix, A., Fischerova, D., Jahnn-Kuch, D., Joly, F., Kohler, C., Lax, S., Lorusso, D., Mahantshetty, U., Mathevet, P., Naik, R., Nout, R. A., Oaknin, A., Peccatori, F., Persson, J., & Querleu, D. (2023). ESGO/ESTRO/ESP guidelines for the management of patients with cervical cancer – Update 2023. *International Journal of Gynecological Cancer*, 33(5), 649–666. <https://doi.org/10.1136/ijgc-2023-004429>

Das, M. (2018). Cervical cancer vaccine controversy in India. *The Lancet Oncology*, 19(2), e84. [https://doi.org/10.1016/S1470-2045\(18\)30018-4](https://doi.org/10.1016/S1470-2045(18)30018-4)

Jit, M., Prem, K., Benard, E., & Brisson, M. (2021). From cervical cancer elimination to eradication of vaccine-type human papillomavirus: Feasibility, public health strategies and cost-effectiveness. *Preventive Medicine*, 144, 106354. <https://doi.org/10.1016/j.ypmed.2020.106354>

Johnson, C. A., James, D., Marzan, A., & Armaos, M. (2019). Cervical cancer: An overview of pathophysiology and management. *Seminars in Oncology Nursing*, 35(2), 166–174. <https://doi.org/10.1016/j.soncn.2019.02.003>

Kjaer, S. K., Dehlendorff, C., Belmonte, F., & Baandrup, L. (2021). Real-world effectiveness of human papillomavirus vaccination against cervical cancer. *JNCI: Journal of the National Cancer Institute*, 113(10), 1329–1335. <https://doi.org/10.1093/jnci/djab080>

Mahajan, I., Kadam, A., McCann, L., Ghose, A., Wakeham, K., Dhillon, N. S., Stanway, S., Boussios, S., Banerjee, S., Priyadarshini, A., Sirohi, B., Torode, J. S., & Mitra, S. (2024). Early adoption of innovation in HPV prevention strategies: Closing the gap in cervical cancer. *Ecancermedicalscience*, 18, 1762. <https://doi.org/10.3332/ecancer.2024.1762>

Musa, J., Achenbach, C. J., O'Dwyer, L. C., Evans, C. T., McHugh, M., Hou, L., Simon, M. A., Murphy, R. L., & Jordan, N. (2017). Effect of cervical cancer education and provider recommendation for screening on screening rates: A systematic review and meta-analysis. *PLOS ONE*, 12(9), e0183924. <https://doi.org/10.1371/journal.pone.0183924>

Naz, M. S. G., Kariman, N., Ebadi, A., Osgoli, G., Ghasemi, V., & Fakari, F. R. (2018). Educational interventions for cervical cancer screening behavior of women: A systematic review. *Asian Pacific Journal of Cancer Prevention*, 19(4), 875–884. <https://doi.org/10.22034/APJCP.2018.19.4.875>

Pimple, S. A., & Mishra, G. A. (2019). Global strategies for cervical cancer prevention and screening. *Minerva Ginecologica*, 71(4), 313–320. <https://doi.org/10.23736/S0026-4784.19.04397-1>

Rahangdale, L., Mungo, C., O'Connor, S., Chibweshia, C. J., & Brewer, N. T. (2022). Human papillomavirus vaccination and cervical cancer risk. *BMJ*, 379, e070115. <https://doi.org/10.1136/bmj-2022-070115>

Rai, R., Sehgal, R., Singhal, S., Suri, V., Shivkumar, P., Balasubramani, L., Rajaram, S., Shamsunder, S., Bagga, R., Vashist, S., Meena, J., Mishra, A., Chawla, L., Kumari, S., Mani, K., & Bhatla, N. (2023). Cervical cancer screening coverage at tertiary care institutes across India. *Asian Pacific Journal of Cancer Prevention*, 24(12), 4269–4275. <https://doi.org/10.31557/APJCP.2023.24.12.4269>

Rajaram, S., & Gupta, B. (2022). Screening for cervical cancer: Choices & dilemmas. *Indian Journal of Medical Research*. Advance online publication. https://doi.org/10.4103/ijmr.ijmr_857_20

Rashid, S., Labani, S., & Das, B. C. (2016). Knowledge, awareness and attitude on HPV, HPV vaccine and cervical cancer among the college students in India. *PLOS ONE*, 11(11), e0166713. <https://doi.org/10.1371/journal.pone.0166713>

Sharma, S., Deep, A., & Sharma, A. K. (2020). Current treatment for cervical cancer: An update. *Anti-Cancer Agents in Medicinal Chemistry*, 20(15), 1768–1779. <https://doi.org/10.2174/1871520620666200224093301>

Shrestha, A. D., Neupane, D., Vedsted, P., & Kallestrup, P. (2018). Cervical cancer prevalence, incidence and mortality in low and middle income countries: A systematic review. *Asian Pacific Journal of Cancer Prevention*, 19(2), 319–324. <https://doi.org/10.22034/APJCP.2018.19.2.319>

Srivastava, A., Misra, J., Srivastava, S., Das, B., & Gupta, S. (2018). Cervical cancer screening in rural India: Status & current concepts. *Indian Journal of Medical Research*, 148(6), 687–696. https://doi.org/10.4103/ijmr.IJMR_5_17

Taneja, N., Chawla, B., Awasthi, A. A., Shrivastav, K. D., Jaggi, V. K., & Janardhanan, R. (2021). Knowledge, attitude, and practice on cervical cancer and screening among women in India: A review. *Cancer Control*, 28, 107327482110107. <https://doi.org/10.1177/10732748211010799>

Victoire Fokom-Defo, D., Dille, I., & Fokom-Domgue, J. (2024). Single dose HPV vaccine in achieving global cervical cancer elimination. *The Lancet Global Health*, 12(3), e360–e361. [https://doi.org/10.1016/S2214-109X\(24\)00009-3](https://doi.org/10.1016/S2214-109X(24)00009-3)

Williamson, A.-L. (2023). Recent developments in human papillomavirus (HPV) vaccinology. *Viruses*, 15(7), 1440. <https://doi.org/10.3390/v15071440>

Wirtz, C., Mohamed, Y., Engel, D., Sidibe, A., Holloway, M., Bloem, P., Kumar, S., Brotherton, J., Reis, V., & Morgan, C. (2022). Integrating HPV vaccination programs with enhanced cervical

cancer screening and treatment: A systematic review. *Vaccine*, 40, A116–A123. <https://doi.org/10.1016/j.vaccine.2021.11.013>

Zhetpisbayeva, I., Kassymbekova, F., Sarmuldayeva, S., Semenova, Y., & Glushkova, N. (2023). Cervical cancer prevention in rural areas. *Annals of Global Health*, 89(1), 75. <https://doi.org/10.5334/aogh.4133>

Tables

Table 1: Participation Metrics

Activity	Participants
Workshops and community sessions	5,000
Women who underwent Pap smear	1,200
Adolescent girls vaccinated	520

Table 2: Awareness Metrics (Before and After Campaign)

Metric	Pre-Campaign (%)	Post-Campaign (%)
Awareness of cervical cancer	28%	75%
Awareness of HPV vaccination	12%	63%
Awareness of Pap smear tests	15%	68%