



## Cervical Cancer

# Cervical Cancer Screening and HPV Vaccination in Nepal

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South Asian J Cancer 2023;12(1):53–54.

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**Introduction**

Cervical cancer screening is still an opportunistic mode of procedure. Conventional pap smear was the first method used for long, then the visual method introduced in practice. However, it has been limited to the mid-level paramedics with lesser priority in facility level. Specialist service providers put more effort on newer methods like liquid-based cytology and human papillomavirus (HPV) DNA testing but without feasible and affordable system in place. Cervical cancer prevention and control program is in place from the Department of Health Services but still the implementation part is poor. Systematic approach is being followed if the screening is a part of research or thesis from academia. Screening and treatment of invasive lesions are not linked yet in practice because of poor implementation of public-private partnership considering a huge magnitude of service from private sector.

**Private Sector Initiation**

Organized effort to screen for cervical cancer at community level was started by a private sector since 2002 through 2017 in Nepal. From 242 free health camps, more than 50,000 women were screened and identified around 2000 cases positive (4%) in visual method yielding 3.2% of CIN2+ and 0.9% positive for invasive cancer on biopsy; and 28% of positive screen test received instant treatment by cryotherapy, loop electrosurgical excision procedure, and lately thermocoagulation. HPV vaccination (Gardasil) was given to more than 30,000 girls of 11 to 13 years age between 2008 and 2014 free of cost to the

recipients with the assistance from Australian Cervical Cancer Foundation.<sup>1</sup>

**Public Sector Initiation**

HPV vaccine is available at private sector on purchase in center, but there is no utilization mechanism in place. There was successful pilot project to vaccinate in two districts in 2016 to 2017 with two doses of Cervarix, but the aim of escalating the program and incorporating it in the regular vaccination program was not fulfilled. Thus, the first target from 90-70-90 is halted.<sup>2</sup>

The National Guideline for Cervical Cancer Screening and Prevention 2010 aimed to screen at least half of women in the age group of 30 to 60 years, which was revised to 70% in 2017. By 2019, only 8.2% of women aged between 30 and 49 years were screened. A systematic review also revealed screening utilization by 16% only.<sup>3</sup>

**Problems**

HPV screening test is sporadically performed at tertiary facility level and limited by testing cost. This prompts to acquire a charity scheme for the availability and utilization. Low level of awareness in needy people, educational level, embarrassment in gynecological exam, geographical inconveniences, and cost are the barriers till now for the cancer screening.<sup>4,5</sup>

Liquid-based cytology is not the method of screening in Nepal because of limited availability. Programmatic initiations are started but not been properly implemented. National Guideline for Cervical Cancer screening developed in 2015 by Nepal government for the cost-effective visual inspection with acetic acid screening could not get implemented as expected. Still some nongovernment organization

DOI <https://doi.org/10.1055/s-0043-1764155> ISSN 2278-330X

**How to cite this article:** Baral G, Baral R. Cervical Cancer Screening and HPV Vaccination in Nepal. South Asian J Cancer 2023;12(1): 53–54.

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Thieme Medical and Scientific Publishers Pvt. Ltd., A-12, 2nd Floor, Sector 2, Noida-201301 UP, India

and institutions do keep screening health camps occasionally in nonprogrammatic approach. Limited population-based cancer registry in 2018 showed cervical cancer third in rank by 9% among all women's cancer next to breast and lungs.<sup>6</sup>

### Feasibility

Vaccination success is already proven by a pilot project run in two districts in 2016 to 2017. Existing health network can carry out added vaccination schedule all over the country. Single visit test and treat strategy could be delivered. Cytological testing service, precancer treatment service, and invasive cancer treatment facility are available in many teaching hospitals and cancer hospitals.

Nepal Health Training Center and Family Health Division conducted several training programs in government health facilities of different level in the past with 6 days comprehensive training package. Specialist human resource and organized societies are emerging to address the cervical cancer as their field of work. Both precancer and invasive cancer treatment facilities are emerging. These will be the sustainable stakeholders for the success of governmental initiative in the country. Thus, delegating and supporting cancer prevention and care initiatives to them would be the current solution for government.

### Challenges

Challenges are to own vaccine, to raise optimum level of awareness, to support for screening facility, to conduct different level of trainings as a program, to utilize existing stakeholders like academia, societies, and health network, build up and encourage treatment facilities, to facilitate investors on diagnostics and treatment centers, to prepare appropriate training package and to provide incentives, and to cope with the accessibility issue in hills and mountain dwellings.

### SWOT Analysis

Observed strengths are health network to grass root level, national immunization program in place, increasing specialist human resource, and several media to disseminate awareness program and messages; weakness is political

commitment and implementation, low affording power, least prioritization motive, and looking at short-term benefit; opportunities are emerging active nongovernmental organizations and increasing investors in private health facility; and threats are undue commercialization of vaccine, tests and treatment.

### Conclusions

Meeting 90-70-90 target in cervical cancer is remote in Nepal's current context and the status of most of the low-income countries would be comparable. The nonproportional and nonprioritized distribution of resources is the key problem to mitigate. The strengths, weaknesses, opportunities, and threats (SWOT) analysis of the cervical cancer prevention issue brings an optimistic solution in order to mitigate all delays and obstacles.

### Conflict of Interest

None declared.

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**Erratum:** The article has been corrected as per Erratum (DOI: 10.1055/s-0043-1764405).