INDIA'S HPV VACCINATION POLICY: GENDER JUSTICE, CEDAW AND BARRIERS TO EQUITABLE ACCESS

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ABSTRACT

Cervical cancer is the second most prevalent cancer occurring in women of India, being most common among women aged 15 - 44 years. The presence of Human Papillomavirus (HPV) is the primary agent for causing cervical cancer. According to a report by Banaras Hindu University published in 2019, around 23.3% of emerging cases are diagnosed in India, with a substantial death rate of nearly a quarter of global deaths. Both men and women are carriers of this sexually transmitted virus. India has a long history with HPV vaccination, with the vaccine introduced in 2008, but it has not been incorporated into the country's universal immunisation programme. There were many ethical considerations relating to trials, which have been criticised and are in direct conflict with the principles of CEDAW, which encourages equitable health care for all women. With the coming in of CERVAVAC in 2022, the future of HPV vaccination in India seems bright, but adequate policy intervention and inclusivity are required.

Against this backdrop, this research engages with linking Gender and Health with International Law, particularly CEDAW and ICESCR. This paper addresses a significant gap in existing research, which mostly focuses on the medical side of HPV and often ignores the legal, ethical and gender justice issues linked to international human rights standards. The research is organised into three sections: section 1 examines the historical trajectory, section 2 analyses the international legal framework under CEDAW, and section 3 evaluates the issue of implementation and access. It helps in evolution and controversy surrounding the HPV vaccine, assesses whether the national implementation is in alignment with CEDAW and examines whether current strategies are adequate to eliminate cervical cancer. The research draws upon reports, statistics and various case studies on cervical cancer and HPV vaccination.

The study examines India's HPV framework from both a theoretical and practical perspective, evaluating the responsibility of the State in the creation of a successful HPV vaccination drive. It argues that for a successful implementation of HPV vaccination in India, there is a need for HPV awareness among citizens through various means. The government policy

should be created, keeping in mind inclusivity and gender neutrality, and past ethical shortcomings should be corrected by following the guidelines provided in international conventions. Only through such measures can a national HPV program succeed, introducing and ultimately eliminating cervical cancer.

Keywords: HPV vaccine, cervical cancer, CEDAW, implementation, India

1. INTRODUCTION

Human Papillomavirus (HPV)is a common virus that spreads through sexual contact with types 16 and 18[1] of this leading to cervical cancer. In the global arena, cervical cancer is the 4th most common cancer. But its burden is unequal, with high-income countries having less of a burden because of their high-quality screening programmes and widespread vaccination coverage, leaving the low-income countries to be more at risk.[2] 1 in 53 women in India are prone to cervical cancer [3] with around 18.7 % mortality rate as per 2020 statistics making it the second most frequent cancer among women between ages 15-44 years old .[4]

HPV vaccination in children prevents early infection and builds immunity, which in turn eliminates HPV at its source. [5] With the help of regular screening, detection of pre-cancerous symptoms becomes easy, helping in the reduction of deaths caused by cervical cancer. National data reveals screening levels are extremely low in India compared to other countries.

More than 80 countries have introduced HPV vaccination in their national immunisation programs, of which 33 are low- and middle-income countries (LMICs).[6] Although the Drug

[1]World Health Organization, Human Papillomavirus (HPV) and Cervical Cancer, WHO (Nov. 17, 2023), https://www.who.int/news-room/fact-sheets/detail/human-papilloma-virusyears-and-cancer

[2]World Health Organization, Cervical Cancer, WHO (Jan. 2024), https://www.who.int/news-room/fact-sheets/detail/cervical-cancer;
International Agency for Research on Cancer (IARC), GLOBOCAN 2020: India Fact Sheet, World Health Organization (2021)
, https://gco.iarc.fr/today/data/factsheets/populations/356-india-fact-sheets.pdf

[3]UNICEF, A Guide Book for Master Trainers: Preventing Cervical Cancer through through HPV Vaccination in India,FOGSI, (July 24, 2024)
,https://www.fogsi.org/wp-content/uploads/2024/07/HPV-VACINATION-1.pdf

[4]ICO/IARC HPV Information Centre, India: Human Papillomavirus and Related Cancers, Fact Sheet 2023, (March 10, 2023)
https://HPVcentre.net/statistics/reports/IND_FS.pdf

[5]World Health Organization, Comprehensive Cervical Cancer Control: A Guide to Essential Practice (2d ed. 2014).

[6]Mehrotra R, Hariprasad R, Rajaraman P, Mahajan V, Grover R, Kaur P, Swaminathan S, Stemming the Wave of Cervical Cancer: Human Papillomavirus Vaccine Introduction in India, J Glob Oncol. (Sept. 2018), https://pubmed.ncbi.nlm.nih.gov/30241163past inconsistencies and future policy considerations by combining public health data with /

Controller General of India has licensed these vaccines for use since 2008,[7]India has been slow to adopt them, and it has not been included in the National Immunisation Programme due to various ethical, legal, administrative and societal issues.[8]

Recent advancements in the field show the development of India's first indigenous HPV eliminating vaccine, CERVAVAC,[9] along with the proposal of a nationwide rollout of the HPV vaccine for girls aged 9-14 in the 2024 Union Budget.[10] With States like Maharashtra, Bihar, Tamil Nadu, and Karnataka expecting to introduce drives for the same in 2026, which aligns with the WHO's vision of eliminating cervical cancer from the world by 2030.[11]

Prevention of Cervical cancer raises a serious human rights issue as it affects only women or people with a cervix, making it a gender based issue that can be avoided with adequate intervention and measures. Since India is a member of various international treaties like CEDAW, ICESR,[12] which require it to provide equal access to healthcare and take steps to improve women's health and well-being, ideals that are also enshrined in Article 21[13] of the Indian Constitution, it becomes the State's moral and legal duty to provide access to the same.

This study examines India's journey with HPV vaccination through an Interdisciplinary lens, examining the past inconsistencies and future policy considerations, by combining public health data with a human rights and legal analysis. It uses National survey findings, WHO, GLOBOCAN and National Health mission reports to show how vaccination access is extremely low and unequal across the country.

The study also draws on recent empirical evidence and, by keeping in mind the international frameworks and the Indian constitution, the paper demonstrates how current policies fail to protect women's right to health and equality.

It argues that the delayed introduction of HPV vaccination is not only a scientific failure but a

[7]Rengaswamy Sankaranarayanan et al., Current Status of Human Papillomavirus Vaccination in India's Cervical Cancer Prevention Efforts, 20 LANCET ONCOL. 1486, 1486–95 (2019).
[8]Arindam Basu et al., HPV Vaccination in India: Ethical, Legal, and Policy Challenges, 8 INDIAN J. MED. ETHICS 1, 4–7 (2017).
[9]Arindam Basu et al., HPV Vaccination in India: Ethical, Legal, and Policy Challenges, 8 INDIAN J. MED. ETHICS 1, 4–7 (2017).
[10]Ministry of Finance, Union Budget 2024–25, Budget Speech ¶ 39 (Feb. 1, 2024)
[11]World Health Organization, Global Strategy to Accelerate the Elimination of Cervical Cancer as a Public Health Problem 5–6 (2020).
[12]International Covenant on Economic, Social and Cultural Rights art. 12, Dec. 16, 1966, 993 U.N.T.S. 3.
[13]India. Const. art. 21.

result of a lack of directional governmental policy. The study also provides legal, ethical, and inclusive frameworks that can be incorporated within India's immunisation policy.

2. INTERNATIONAL TREATIES AND THE CONSTITUTION

India is a party to several international human rights treaties that recognise health as a basic human right. Two of the most important treaties in this context are the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) and the International Covenant on Economic, Social and Cultural Rights (ICESCR).[14] By ratifying these treaties, India accepted legal obligations to protect women's health, prevent discrimination and ensure access to preventive health, including cervical cancer prevention.

2.1 CEDAW

India ratified CEDAW in 1993.[15] Under Article 1 of CEDAW,[16] discrimination against women includes any action or failure to act that harms women's enjoyment of their rights, including the right to health. When the State fails to prevent a disease that only affects women, despite available medical solutions, the harm is gender based and such failure clearly falls within the meaning of discrimination under CEDAW.

Article 12 of CEDAW is the most important provision of cervical cancer prevention. It requires the State to remove discrimination in healthcare and ensure equal access to health services, especially preventive and reproductive healthcare. The CEDAW committee has made it clear that this includes vaccination, screening, early diagnosis, and access to health information.[17] Delaying or denying the same is considered structural discrimination.[18] Since cervical cancer is largely preventable through HPV vaccination and regular screening, failure to provide the services results in avoidable harm to women and violates Article 12.

CEDAW also demands substantive equality, not just equal treatment on paper. Articles 2 and

[14]Convention on the Elimination of All Forms of Discrimination Against Women arts. 1, 12, Dec. 18, 1979, 1249 U.N.T.S. 13;International Covenant on Economic, Social and Cultural Rights arts. 2, 12, Dec. 16, 1966, 993 U.N.T.S. 3.
[15]United Nations Treaty Collection, Status of Ratification: CEDAW, U.N., https://treaties.un.org
[16]CEDAW, supra note 16, art. 1.
[17]Comm. on the Elimination of Discrimination Against Women, General Recommendation No. 24: Women and Health, ¶¶ 7, 17–19, U.N. Doc. A/54/38/Rev.1 (1999).
[18]World Health Organization, Human Papillomavirus Vaccines: WHO Position Paper, 92 WEEKLY EPIDEMIOLOGICAL REC. 241, 245–47 (2017).

3 require States to take positive steps, such as making laws, creating policies, allocating budgets, and ensuring proper implementation, to remove discrimination against women.[19] In the case of HPV, scientific evidence on vaccine safety and effectiveness has existed for years. India's long delay in introducing a national vaccination programme, therefore, raises serious concerns about it.

Articles 2(f) and 5(a) require States to eliminate stereotypes and social practices that limit women's autonomy.[20] In India, the fear and stigma that vaccination may encourage sexual activity, social stigma, and lack of open discussion have slowed policy action. These attitudes reflect gender stereotypes that place control over women's bodies above their health needs. Treating HPV vaccination as morally questionable instead of medically necessary violates CEDAW's clear demand to protect women's sexual and reproductive health.[21]

2.2 ICESCR

India is also a party to the International Covenant on Economic, Social and Cultural Rights (ICESCR), which further strengthens its obligations. Article 12 of ICESCR recognises the right of everyone to enjoy the highest attainable standard of physical and mental health.[22] This article specifically requires States to take steps for the prevention, treatment, and control of diseases,[23] and create conditions that ensure access to medical services.

Preventing a widespread and deadly disease through vaccination and screening is a direct obligation under this provision. When India delays or limits HPV vaccination, it fails to fully realise the right to health, which is guaranteed by ICESCR. Article 2(1) of ICESCR allows States to realise rights based on available resources progressively, but this does not mean indefinite delay.[24] States must take concrete steps using maximum resources available. Article 2(2) also requires that all rights be exercised without discrimination, including discrimination based on sex. Article 3 of ICESCR further strengthens this obligation by requiring equal rights

[19]CEDAW, supra note 16, arts. 2, 3.
[20]CEDAW, supra note 16, arts. 2(f), 5(a).
[21]Arindam Basu et al., HPV Vaccination in India: Ethical, Legal, and Social Issues, 8 INDIAN J. MED. ETHICS 1, 5–7 (2017).
[22]ICESCR, supra note 16, art. 12.
[23]Comm. on Econ., Soc. & Cultural Rights, General Comment No. 14: The Right to the Highest Attainable Standard of Health, ¶¶ 16, 25, U.N. Doc. E/C.12/2000/4 (2000)
[24]ICESCR, supra note 16, art. 2(1); General Comment No. 14, supra note 27, ¶ 30.

for men and women in the enjoyment of all economic, social, and cultural rights.[25] If women are denied effective preventive healthcare for a disease unique to them, equality under Articles 2 and 3 is compromised.

ICESCR also recognises the importance of access to scientific progress. Article 15 guarantees the right of everyone to enjoy the benefits of scientific advancement.[26] HPV vaccines are an example of scientific progress that can save lives. Delaying access to such vaccines, especially when affordable options like Cervavac exist, denies women the benefits of science. Its own constitutional framework strongly supports India's international obligations under CEDAW.

2.3 Indian Constitution

Although the Constitution does not expressly mention the right to health, the Supreme Court has consistently interpreted Article 21 (Right to Life) to include the right to health, medical care, and a life with dignity.[27] This interpretation becomes important in cases involving preventable diseases such as cervical cancer.

In **Consumer Education and Research Centre v. Union of India** (1995),[28] The Supreme Court clearly held that the right to health is an essential part of the right to life under Article 21 and that the State has a positive duty to protect the health of vulnerable groups. Similarly, in **Paschim Banga Khet Mazdoor Samity v. State of West Bengal** (1996),[29] The Court ruled that failure to provide timely medical treatment violates Article 21. If denial of emergency treatment violates the right to life, then prolonged failure to provide preventive healthcare, such as vaccination against cervical cancer, also weakens this right. Preventive care is an essential part of meaningful health protection.

The constitutional protection of women's health was again strengthened in **Laxmi Mandal v. Deen Dayal Harinagar Hospital** (2010),[30] where the Delhi High Court explicitly recognised reproductive health as a constitutional right under Articles 21, 14, and 15.[31] The Court held that

[25]ICESCR, supra note 16, arts. 2(2), 3.
[26]ICESCR, supra note 16, art. 15(1)(b);
Department of Biotechnology, CERVAVAC: India's Indigenous HPV Vaccine, Ministry of Science & Technology (2023).
[27]India Const. art. 21.
[28]Consumer Educ. & Research Ctr. v. Union of India, (1995) 3 SCC 42 (India).
[29]Paschim Banga Khet Mazdoor Samity v. State of W.B., (1996) 4 SCC 37 (India).
[30]Laxmi Mandal v. Deen Dayal Harinagar Hosp., 2010 SCC OnLine Del 3392 (India).
[31]India Const. arts. 14, 15, 21.

failure to provide reproductive healthcare amounts to discrimination and violates women's right to live with dignity. This judgment is directly relevant to HPV vaccination, which is a preventive reproductive health measure meant only for women and girls.

When the State fails to provide such protection, it violates not only Article 21 but also Article 14 (Right to Equality) and Article 15 (Prohibition of Discrimination on Grounds of Sex). Although Indian courts have not yet ruled directly on HPV vaccination, decisions related to HIV and sexual health provide useful guidance.

This gap between constitutional ideals and real-world implementation is clearly visible in HPV policy, where women from poor, rural, tribal, and marginalised communities suffer the most from delayed and weak vaccination efforts.

3. HISTORICAL TRAJECTORY OF HPV VACCINATION IN INDIA

The early introduction of HPV vaccination in India began in the late 2000s when global evidence already showed strong protection against cervical cancer.[32] The Public Health sector saw its first introduction in 2009, with pilot projects implemented by State governments of Andhra Pradesh and Gujarat in collaboration with the ICMR and the Programme for Appropriate Technology in Health (PATH), a US-based not-for-profit nongovernmental organisation.[33]

The Bill and Melinda Gates Foundation funded the programme with vaccines donated by GSK and MSD.[34] These projects were conducted in two cities, Khamam in Andhra Pradesh and Vadodara in Gujarat.[35] Though it was labelled as a demonstration study, it followed serious ethical and regulatory violations. Following DCGI guidelines, the project was suspended in March 2010 due to the deaths of 7 girls in these two districts, 5 in Khamam and 2 in Vadodara.[36]

[32]World Health Organization, Human Papillomavirus Vaccines: WHO Position Paper, 84 WEEKLY EPIDEMIOLOGICAL REC. 118 (Apr. 10, 2009).
[33]Indian Council of Medical Research & Programme for Appropriate Technology in Health, Report of HPV Vaccine Demonstration Projects in India (2009).
[34]Ministry of Health & Family Welfare, HPV Vaccination Demonstration Projects in India: Gardasil (Andhra Pradesh) and Cervarix (Gujarat) (Gov't of India); SAMA Resource Group for Women & Health, The HPV Vaccine: Science, Ethics and Public Health 14–16 (2010).
[35]Parliamentary Standing Committee on Health and Family Welfare, Seventy-Second Report on Alleged Irregularities in the Conduct of Studies Using Human Papilloma Virus Vaccine ¶¶ 2.1–2.4 (Aug. 2013).
[36]Ministry of Health & Family Welfare, Government of India, Press Release on Suspension of HPV Vaccination Project (Mar. 2010).

A parliamentary inquiry was initiated on April 6th 2010,[37] followed up by a deeper inquiry in 2011, whose report is the 72nd parliamentary standing committee report.[38]

The committee ruled out the possibility of the drug being the cause of death, but rather external issues, such as ethical lapses, a lack of consent and awareness, and misuse of government inventory. The project was seen as a tool to bring the drug to Indian markets, benefiting large corporations.[39]

With the submission of the Parliamentary Report, the vaccination programme in India entered a phase of prolonged uncertainty and inaction. Though the vaccine was not the cause of deaths, it was not introduced in a National rollout programme. As a result, instead of reforming consent procedures and strengthening ethical safeguards, the government chose to distance itself from vaccination. This marked a major turning point where concern over controversy outweighed concern for long-term public health.

It was only around 2017 that HPV vaccination re-entered the public health discussion in a limited manner through State-level initiatives. Sikkim became the first State to introduce HPV vaccination as part of its public health programme,[40] targeting adolescent girls through school-based delivery. This initiative was later followed by similar efforts in Delhi and Punjab.[41] These State-led programmes demonstrated that HPV vaccination could be safely and effectively implemented within India's public health system when supported by political will and administrative commitment. However, these initiatives remained confined to a few States and did not lead to a nationwide rollout.[42]

The government continued to cite concerns, which became less convincing over time as international evidence was in favour of HPV vaccination and prices of vaccines began to fall. Public health experts repeatedly pointed out that delaying vaccination would cause preventable

[37]Rajya Sabha Secretariat, Department-Related Parliamentary Standing Committee on Health and Family Welfare-Evidence Taken (Apr. 6, 2010).
[38]Parliamentary Standing Committee on Health and Family Welfare, Seventy-Second Report ¶¶ 4.12–4.19 (Aug. 2013).
[39]Amita Baviskar & Sarah Hodges, HPV Vaccines, Global Health and India, 45 ECON. & POL. WKLY. 32, 35–36 (2010).
[40]Government of Sikkim, Department of Health & Family Welfare, Launch of Statewide HPV Vaccination Programme (2018).
[41]National Health Mission, Best Practices Compendium on Non-Communicable Diseases 61–63 (2020).
[42]Prabhat Jha et al., Cervical Cancer Prevention in India, 381 LANCET 2158, 2160–61 (2013).

cases of cervical cancer and unnecessary loss of life, but still, no policy progress was followed.

A significant development occurred in 2022 with the launch of Cervavac,[43] India's first indigenously developed HPV vaccine. The Serum Institute of India produced Cervavac in collaboration with the Department of Biotechnology and the ICMR.[44] The introduction of a domestically manufactured vaccine was a major step forward, as it addressed the government's long-standing concerns regarding affordability. Cervavac was expected to make large-scale HPV vaccination more financially viable for the public health system.

Despite the promise shown by Cervavac, its introduction did not immediately cause a nationwide vaccination programme. Rollout remained limited, and the government continued to rely on pilot programmes and selective implementation.[45] Even after overcoming cost and supply barriers, the absence of a clear national policy continued to delay widespread access.

In 2024, the Union Budget made a notable announcement regarding the expansion of HPV vaccination for girls. The Finance Minister stated that efforts would be made to encourage HPV vaccination as part of preventive healthcare.[46] While this announcement was welcomed as a positive signal, it lacked specific details regarding timelines, funding allocation, target populations, and mechanisms for implementation. Without clear follow-up measures, the budgetary mention risked remaining a policy intention rather than a binding commitment.

As of the present, HPV vaccination in India continues largely through pilot programmes rather than universal coverage.

4. CRITICAL ANALYSIS OF PRESENT STATUS OF HPV VACCINATION IN INDIA

CEDAW recognises indirect discrimination, which happens when government policies appear neutral but end up harming women more than men.[47] India's long failure to introduce a national HPV vaccination programme is a clear example of this. Even though global health bodies have recommended HPV vaccination for many years and vaccines have been available, India did

[43]Department of Biotechnology, Government of India, Press Release on Launch of Cervavac (Sept. 1, 2022).
[44]Serum Institute of India, Cervavac: India's Indigenous HPV Vaccine (2022).
[45]NITI Aayog, Strategy for Cervical Cancer Elimination in India 22–24 (2023).
[46]Nirmala Sitharaman, Union Budget Speech 2024–25, ¶ 42 (Feb. 1, 2024).
[47]Convention on the Elimination of All Forms of Discrimination Against Women art. 1, Dec. 18, 1979, 1249 U.N.T.S. 13.

not act in time.

Cervical cancer is preventable, yet it continues to affect women from poor, rural, and marginalised communities the most. By not including HPV vaccination in the Universal Immunisation Programme (UIP),[48] The State effectively denied women access to preventive healthcare that men do not need. This creates unequal protection and violates Article 12 read with Article 3 of CEDAW,[49] as well as Articles 14 and 15 of the Indian Constitution,[50] which guarantee equality and prohibit discrimination based on sex.[51] Equality does not mean treating everyone the same; it means taking special steps when a problem affects only one group. The government failed to do this.

The argument often made by the government that HPV vaccination is too expensive also does not hold up under international law. Both the CEDAW Committee and the ICESCR clearly State that lack of resources cannot be used as an excuse when harm is preventable and affects women in a gender-specific way. This is especially true when affordable solutions are available. India's later development of an indigenous vaccine shows that cost was not an impossible barrier, but rather an issue of political priority.

4.1 Institutional Failure After the PATH Incident

One of the most serious failures in India's HPV policy is how the government reacted to the PATH Vaccine Demonstration Project. While ethical violations occurred during the project, especially regarding informed consent, the correct response should have been reform and stronger safeguards. Instead, the government responded by stepping away from HPV vaccination completely. This silence lasted for more than a decade.

This response shows a lack of due diligence, which both CEDAW and ICESCR require from States.[52] Due diligence means learning from mistakes, fixing systems, and preventing future harm. The PATH incident could have been used to improve consent procedures, create

[48]World Health Organization, Global Strategy to Accelerate the Elimination of Cervical Cancer as a Public Health Problem (2020);
[49]CEDAW, arts.12, 3.
[50]India Const. arts. 14, 15.
[51]Comm. on the Elimination of Discrimination Against Women, General Recommendation No. 25: Temporary Special Measures, ¶¶ 6–8, U.N. Doc. CEDAW/C/2004/I/WP.1 (2004).
[52]Comm. on Econ., Soc. & Cultural Rights, General Comment No. 3, ¶ 10, U.N. Doc. E/1991/23 (1990);Comm. on the Elimination of Discrimination Against Women, General Recommendation No. 33: Women's Access to Justice, ¶ 51, U.N. Doc. CEDAW/C/GC/33 (2015).

adolescent-friendly health systems, and build trust among communities. Instead, it became an excuse for inaction. This failure placed the burden of cervical cancer prevention entirely on women, who were expected to seek screening in systems that are poorly funded, inaccessible, and socially uncomfortable.

4.2 Parliamentary Recognition Without Action

The government's failure becomes clearer when looking at Parliamentary reports that acknowledged the problem but did not lead to clear policy change.[53] Parliamentary discussions and committee reports recognised the seriousness of cervical cancer and the potential of HPV vaccination.[54] However, recognition did not translate into a national policy, funding commitment, or inclusion in UIP. This gap between discussion and action shows weak political will. Under CEDAW, merely acknowledging a problem is not enough; States must take concrete steps to eliminate discrimination.

4.3 Fragmented State-Level Rollouts and Inequality

Instead of a national programme, India relied on State-level initiatives, such as those in Sikkim, Delhi, and Punjab, starting around 2017.[55] While these programmes were positive steps, they also exposed serious inequality. A girl's chance of being protected against cervical cancer depended entirely on the State she lived in. This approach violates the principle of substantive equality under CEDAW Article 2(c), ICESCR Articles 2 and 3, and Article 14 of the Constitution. Equality cannot depend on geography.[56] State-level programmes also lack long-term stability. They depend on political will, funding priorities, and the administrative capacity of individual States. This makes access uncertain and uneven, particularly for girls in rural and tribal areas.

4.4 Moral Anxiety and Lack of Public Awareness

Another major problem is the government's reluctance to openly discuss HPV vaccination

[53]Parliamentary Standing Committee on Health and Family Welfare, Seventy-Second Report on Alleged Irregularities in the Conduct of Studies Using Human Papilloma Virus Vaccine (Aug. 2013).
[54]Rajya Sabha Secretariat, Evidence Taken by the Department-Related Parliamentary Standing Committee on Health and Family Welfare (2010–2013).
[55]Government of Sikkim, Department of Health & Family Welfare, Launch of Statewide HPV Vaccination Programme (2018); National Health Mission, Best Practices Compendium on Non-Communicable Diseases 61–63 (2020).
[56]Convention on the Elimination of All Forms of Discrimination Against Women art. 2(c); International Covenant on Economic, Social and Cultural Rights arts. 2, 3; India Const. art. 14

because of its link to sexual health, which transforms it into a socially sensitive topic rather than a medical necessity. This reflects harmful gender stereotypes that assume vaccination might encourage sexual activity. Such thinking directly violates Article 5(a) of CEDAW,[57] which requires States to eliminate stereotypes that harm women. The lack of strong, nationwide awareness campaigns has led to misinformation, fear, and hesitation among parents. When compared to other vaccines, the silence around HPV shows how women's health is often treated as uncomfortable or optional. This moral anxiety compromises women's health and well-being.

4.5 Cervavac and Current Pilot Programmes

The launch of Cervavac in 2022, India's first indigenous HPV vaccine, was a significant development.[58] However, its impact has been limited due to slow rollout and a lack of clear policy direction. The availability of a low-cost Indian vaccine further weakens the government's earlier claims about financial constraints. The 2024 Union Budget announced plans to expand HPV vaccination for girls, but it did not provide clear timelines, funding details, or implementation strategies.[59] Budget announcements without follow-up planning risk becoming symbolic rather than effective. Instead of using Cervavac to immediately scale up a national programme, the government continued with limited pilots, mostly school-based vaccination, such as in Tamil Nadu. While this is a positive step, these programmes alone are not enough. Under CEDAW and ICESCR, the State has an obligation to move from pilots to universal coverage. Continuing to rely on pilots means accepting partial protection and continued inequality.

5. POLICY GAPS AND ISSUES TO ADDRESS

Despite solid scientific evidence and a strong legal backing in support of the HPV vaccine in India, it has still not been incorporated in the Universal Immunisation Programme, which aims to provide free vaccines to all children and pregnant women across the country.[60] This gap between justification and actual outcomes is not only rooted in stigma and uncertainty

[57]Convention on the Elimination of All Forms of Discrimination Against Women art. 5(a), Dec. 18, 1979, 1249 U.N.T.S. 13.
[58]Department of Biotechnology, Government of India, Press Release on Launch of Cervavac (Sept. 1, 2022); Serum Institute of India, Cervavac: India's Indigenous HPV Vaccine (2022).
[59]Nirmala Sitharaman, Union Budget Speech 2024–25, ¶ 42 (Feb. 1, 2024).
[60]Ministry of Health & Family Welfare, Government of I .ia, National Vaccine Policy (2011).

regarding vaccine effectiveness but also reflects deep structural, as well as socio-cultural issues embedded in India's Public Health framework.[61] Perpetual inequalities along lines of class, creed, gender, caste, and geography have influenced the speed and form of vaccine adoption. Addressing these inequalities is immensely important to transform select pilot programmes in some States into a comprehensive national policy.

The introduction of the HPV vaccine for girls aged 9-13 in the Union budget 2024 signals a novel policy intent but is not accompanied by appropriate implementation strategies and micro planning, which makes it a symbolic decision rather than a transformative policy. Effective integrations need more than just political intent, it demands for persistent interaction and coordination between administrative institutions, healthcare professionals and ground-level workers. Bureaucratic authorities, healthcare professionals, educational institutions, Frontline workers at Anganwadi, parents and children are all important stakeholders in the vaccine ecosphere. Without collaboration, constant support and monitoring, it is unlikely to translate into a national-level outcome.

5.1 Vaccination as a governance challenge

Introduction of HPV vaccine in the UIP will be one of its kind, as it targets adolescent girls aged 9-13 before their sexual debut for maximum effectiveness, unlike most vaccines in the UIP which are administered to pregnant women, infants and small children, except for Tetanus and adult Diphtheria vaccines. This marks a major shift in the focus of immunisation and brings in the intricacies of consent, autonomy, social ideas around adolescent health and parental control, while also being a gender specific issue.

Therefore, India's experience with the HPV vaccine will have broader and far-reaching implications on its future immunisation policy. How India operationalises an adolescent gender specific public adolescent health initiative would help set a precedent for future vaccines targeting older age groups and preventing varied communicable as well as non-communicable diseases.

5.2 Institutional and Financial Constraints

Though the HPV vaccine is highly cost-effective as compared to actual cervical cancer

[61] Asha Iyer, Gita Sen & Piroska Östlin, The Intersections of Gender and Class in Health Status and Health Care, 54 ECON. & POL. WKLY. 49, 49-56 (2009),Diphtheria

treatment, with WHO [62] reports even confirming that one dose of the vaccine is sufficient for prevention. With the Development of CERVAVAC, whose use would drastically reduce costs, the policy is not adopted due to short-term fiscal burdens. Maintaining cold chain infrastructure, storage capacity and transportation costs vary throughout different States. Rural areas in particular face a workforce shortage of skilled medical practitioners. There is an uneven distribution of PHCs throughout the country, which further deepens the disparity in access. The nationwide rollout would require adequate infrastructural development for long-term sustenance and tangible outcomes.

5.3 Social norms and stigma

Social resistance becomes a major hindrance to HPV vaccination. Lack of awareness and misconceptions persist due to the dearth of public campaigns and awareness forums that have framed the vaccine in a negative light. Moreover, the responsibility for prevention has been placed on women and girls, further marginalising the issue. How these issues will be addressed would help shape policy discourse within the country.[63]

5.4 Need for Inclusionary Methods

Existing HPV pilots in Delhi, Punjab and Sikkim[64] rely heavily on school-based delivery mechanisms. Though these mechanisms give us direct contact with a large number of adolescents, it also systematically ignores a large chunk of the population that is out of school due to poverty, marriage, migration, disability, and caregiving responsibilities. This model risks only immunising a certain, already organised, formalised class of citizens while deepening inequality by ignoring those who face harsher repercussions of the disease burden. Given the State-wise changes and district-wise changes in educational institutions, it is necessary to have an inclusive policy to address the diverse cohort of adolescents.[65]

[62]World Health Organization, Human Papillomavirus Vaccines: WHO Position Paper (2022 Update), 97 Wkly. Epidemiological Rec. 645 (Dec. 16, 2022).
[63]World Health Organization, Comprehensive Cervical Cancer Control: A Guide to Essential Practice (2d ed. 2014).
[64]Danish Ahmed et al., Human Papillomavirus (HPV) Vaccine Introduction in Sikkim State: Best Practices from the First Statewide Multiple-Age Cohort HPV Vaccine Introduction in India-2018-2019, 25 VACCINE 2345, 2345-52 (2020).
[65]PATH, Shaping a Strategy to Introduce HPV Vaccines in India: Formative Research Results from the HPV Vaccines: Evidence for Impact Project (2009), https://www.path.org/cervicalcancer

5.5 Limited Domestic Data

The existing data on HPV Vaccination is all Western clinical and epidemiological data. There is a relative scarcity of India-specific studies[66]. While Global data is rich and supports vaccination as safe, the lack of Indian data is another reason for skepticism amongst the people. There is a need to strengthen domestic research capacity to generate context-specific evidence aiding in creating an adaptive, informative policy design.

6. EMPIRICAL PATTERNS AND INSIGHTS FROM DISTRICT AND STATE-LEVEL DATA

District and State level data on cervical cancer, health infrastructure, population and female literacy reveal significant infrastructural and demographic disparities that will have far-reaching consequences on policy formation. Appendix 1 shows the district-level burden of cervical cancer, along with State-level populations, infrastructure and literacy rates. Though southern States have a higher age-standardised ratio as compared to the northeast, it does not consistently correlate with PHC availability, displaying that it is not only necessary to increase infrastructure, but also to create effective preventive policies.

Regions with lower literacy rates and a higher female population show multifaceted barriers like consent, awareness and access to services. Positive differences between the age standard ratio and crude rates indicate delayed detection and underscreening, furthermore strengthening the need for a uniform vaccine policy and public awareness campaigns. These patterns suggest that, though a uniform vaccine policy is necessary, region-sensitive targeting and monitoring are also necessary for effective outreach, reiterating the goal of substantive equality.

7. RECOMMENDATIONS IN POLICY

To tackle these identified challenges, a robust, well-coordinated, multidimensional policy that addresses all fiscal, infrastructural, socio-cultural, and demographical sensitivities is required

7.1 Financing and Resource Allocation

The creation of a specific HPV vaccine fund within the National Budget would aid in planned

[66]Ranjitha S. Shetty et al., IAPSM's Position Paper on the Human Papilloma Virus (HPV) Vaccine for Adult Immunization in India, 49(2 Suppl.) INDIAN J. COMMUNITY MED. S125, S125–S131 (Dec. 2024), https://doi.org/10.4103/ijcm.ijcm_738_24.

financing, leading to more tangible, well-calculated outcomes. The funds given to each State should be decided based on their burden of disease, population to be vaccinated and whether existing infrastructure can cope with the demand. This would mean equitable distribution of resources, reinforcing ideas of fiscal and resource federalism. Also, with the procurement of domestically produced vaccines, the cost-related burden reduces, making the vaccine more sustainable and affordable.

7.2 Separate Urban Rural Delivery models

A vaccine strategy cannot exist in isolation and needs to align with the demographic contexts. Within States, strategies for urban and rural areas should differ. While school-based community programmes might help in urban and high-enrollment areas, community outreach programmes are necessary to reach out-of-school adolescents. Anganwadis, Public Health centres, and community-specific programmes in the case of tribal areas are techniques to ensure broader coverage.

7.3 Capacity Building and Training

Effective implementation would require well-skilled, trained medical professionals. Familiarity with governmental technologies like the digital vaccine management app, e-vin, consent procedures and reporting guidelines established by the AEFI[67] in case of adverse events, including mandatory reporting within 24 hours and use of the SAFEVAC site for timely reporting. Strengthening and training of human resources is an essential prerequisite before the implementation of the programme. [68]

7.4 Ethical Delivery Frameworks

Standard, ethical and informed consent should be taken from parents, children and guardians. Before implementing the programme, the State should provide all information about the vaccine and the disease burden to the beneficiaries, reducing misconceptions and stigma. This can be done through various strategies, including advertising, social media campaigns, community outreach by ASHA workers or in Gram Sabhas and Panchayats. Along with

[67]Ministry of Health & Family Welfare, Government of India, Adverse Effects Following Immunisation: Operational Guidelines (National Health Mission 2015).
[68]Neerja Bhatla, NAMS Task Force Report on Cervical Cancer, 57 ANNALS NAT'L ACAD. MED. SCI. (INDIA) 1, 1–15 (2024).

Information sessions in schools, the vaccine information can be added to the RKSK[69]as a way to reach more adolescents. Pictorial vaccine schedules can be given to parents and children to have an informed understanding of the issue and its implications.

7.5 Monitoring and Accountability

A dynamic and intensive reporting framework is necessary to ensure coverage. Daily reports to the State immunisation officer, as in Sikkim, is a practical way to ensure accountability. Periodic yearly or quarterly surveys by the Ministry of Health and Family Welfare, along with periodical meetings between States to discuss positive and working implementation strategies, would help ensure a more accountable system. A tiered system of reporting on various levels can also be developed to ensure transparency. Data should be publicly available for scrutiny.

7.6 Future Policy extension

Once stable coverage is achieved within the target group, further addition of adolescent boys and phased extension to women aged 14-21in the programme may enhance herd immunity[70] and help reach larger population cohorts. [71]

Therefore, the HPV Vaccination policy is not dependent on vaccine procurement alone. Its success depends on ethical governance, institutional coordination, and sustained attention to social context, without which universalisation risks remaining aspirational.

8. CONCLUSION

The trajectory of HPV vaccination in India illustrates the complex relationship between public health governance, gender justice, and the implementation of international legal obligations. The analysis demonstrates that the principal challenge has not been the absence of scientific evidence, vaccine availability, or legal justification, but the inability to translate these factors into a coherent national policy framework. The prolonged policy stagnation following the PATH controversy, continued reliance on fragmented State-level initiatives, and the absence

[69]Ministry of Health & Family Welfare, Government of India, *Rashtriya Kishore Swasthya Karyakram* (National Health Mission 2014).
[70]World Health Organization, Global Strategy to Accelerate the Elimination of Cervical Cancer as a Public Health Problem (2020).
[71]Karuna Nidhi Kaur et al., Gender-Neutral HPV Vaccine in India: Requisite for a Healthy Community: A Review, 12 J. COMMUNITY HEALTH MGMT. 45, 45–52 (2025).

of universal coverage have produced unequal access to preventive healthcare, particularly for women and girls belonging to rural, tribal, and socio-economically marginalised communities.

The emergence of Cervavac and recent governmental commitments have created a significant policy window for intervention. However, the effectiveness of future vaccination efforts will depend on whether implementation strategies address existing structural disparities relating to awareness, infrastructure, consent mechanisms, and outreach to out-of-school adolescents. The findings suggest that cervical cancer prevention must be understood not merely as a health-sector objective but as a question of substantive equality and rights-based governance. Consequently, the success of HPV vaccination in India will be determined not by vaccine procurement alone, but by the State's capacity to institutionalise an equitable, accountable, and inclusive framework capable of transforming constitutional and international commitments into measurable public health outcomes.

Appendix 1

particulars						Number of PHCs *3			% share of female child pop. in to			Female litera ratio *4
City/district *1	Region	State	Crude Rate	ASR Rate	ASR - Crude	Rural	Urban	Total	0–6	0–14	0–18	7 yrs & above
New Delhi	North	UT	11.2	13	1.8	5	551	556	12	27	32.9	86.2
Chandigarh	North	UT	6.9	8.1	1.2	0	51	51	11.8	25.6	32.9	86
Sangrur	North	Punjab	9.5	9.4	-0.1	397	124	521	10.8	24.3	32.3	75.8
SAS Nagar	North	Punjab	8.4	10.2	1.8	397	124	521	10.8	24.3	32.3	75.8
Mumbai	West	Maharashtra	8.2	7.9	-0.3	1906	906	2812	11.6	26.1	33.4	82.3
Wardha	West	Maharashtra	9.8	8.5	-1.3	1906	906	2812	11.6	26.1	33.4	82.3
Pune	West	Maharashtra	8.9	10.1	1.2	1906	906	2812	11.6	26.1	33.4	82.3
Aurangabad	West	Maharashtra	12.2	14.6	2.4	1906	906	2812	11.6	26.1	33.4	82.3
Ahmedabad	West	Gujarat	6.8	6.8	0	1483	353	1836	12.6	28.2	35.8	78
Bangalore	South	Karnataka	15.6	18.4	2.8	2132	392	2524	11.6	25.9	33.3	75.4
Chennai	South	Tamil Nadu	15.1	14.1	-1	1419	444	1863	10	22.9	29.6	80.1
Trivandrum	South	Kerala	9	6.7	-2.3	780	165	945	9.8	22.1	28	94
Kollam	South	Kerala	9	6.7	-2.3	780	165	945	9.8	22.1	28	94
Manipur	Northeast	Manipur	5.3	6.5	1.2	74	22	96	12.8	29.5	37.7	76.9
Dibrugarh	Northeast	Assam	4	4.6	0.6	920	89	1009	14.9	32.9	40.7	72.2
Meghalaya	Northeast	Meghalaya	4.9	7.8	2.9	122	25	147	19	39.4	48.4	74.4
Mizoram	Northeast	Mizoram	19.5	23	3.5	57	9	66	15.3	32.3	40.3	91.3
Tripura	Northeast	Tripura	8.5	9.3	0.8	110	10	120	12.4	27.7	35.5	87.2
Bhopal	Central	Madhya Prade	10.8	12.8	2	1440	328	1768	14.8	33.4	41.6	69.3

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*2 Registrar Gen. of India, Census of India 2011, at tbl. C-14 (Gov't of India 2011).

*3 Ministry of Health & Family Welfare, Health Dynamics of India (Infrastructure and Human Resources) 2022–2023, at 112–14 (Nat'l Health Mission, Gov'

*4 Registrar Gen. of India, Census of India 2011, at tbl. C-14 (Gov't of India 2011).

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