Enhancing Coverage of HPV Vaccine: Guidelines and Policy recommendations by Medical Women's Association of Pakistan

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Collaborators:

Introduction

Cervical cancer is the third most common cancer among women in Pakistan, with more than 5,000 new cases each year and an estimated 3,200 deaths annually. Nearly all cases are caused by persistent infection with Human Papillomavirus (HPV). Mortality is high due to late diagnosis, limited screening, and lack of awareness.[1]

Pakistan is launching its first nationwide HPV vaccination campaign from 15–27 September 2025, targeting 13 million girls aged 9–14 years across Punjab, Sindh, ICT, and AJK. This rollout is supported by WHO, UNICEF, Gavi, and the Federal Directorate of Immunization (FDI), with over 49,000 vaccinators trained.[1]

The **campaign targets the single-dose bivalent HPV vaccine,** which provides protection against HPV types 16 and 18 (responsible for approximately 70% of cervical cancers). Robust evidence from multiple countries and long-term studies demonstrates that a single dose offers efficacy comparable to multi-dose regimens, ensuring strong and sustained protection against these high-risk types.[2, 3] **(Annexure I)**

The historic milestone achievement of its inclusion in Pakistan's Expanded Program on Immunization (EPI) is widely welcomed and endorsed by health professionals.

HPV vaccination also offers protection against anal, vulvar, vaginal, penile, and oropharyngeal cancers, as well as genital warts, making it a powerful tool in reducing HPV-related disease burden.

HPV Vaccine: Pakistan Campaign Details

- **Type**: Bivalent HPV vaccine (HPV-16, HPV-18).
- **Target Group**: Girls aged 9–14 years.
- **Route: Intramuscular injection** (deltoid preferred).
- **Schedule (Public/EPI):** Single dose for ages 9–14 years (*as per WHO 2022 guidance)*.
- **Geographic Rollout:** Punjab, Sindh, ICT, AJK in Sept 2025; KP in 2026; Baluchistan & GB in 2027.
- **Implementers:** Government of Pakistan, FDI, provincial EPIs, Jhpiego, WHO, UNICEF, Gavi, Gates Foundation.
- **Mechanism of Action:** Vaccine is composed of Virus-Like Particles (VLPs) (L1 protein).
- VLPs having no viral DNA (non-infectious, non-oncogenic) introduced into body and stimulate production of neutralizing antibodies
- When HPV enters the body, the antibodies eliminate the virus.

Though CDC guidelines are slightly different. **(Annexure II)**

Administration recommendations[2]
✓ Shake well before use; do not mix with other vaccines. ✓ Inspect vial for particulates/discoloration before use. ✓ Inject intramuscularly into deltoid (preferred) or anterolateral thigh. Fig 1 ☒ Not to be given intravenously, intradermally, or subcutaneously

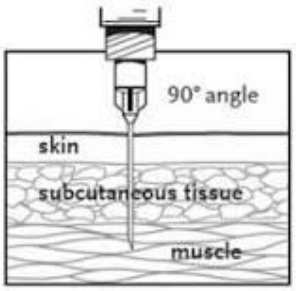

Fig.1: Intramuscular route of administration[4]

Role of Medical Women's Association of Pakistan (MWAP)

The (MWAP), a leading national organization uniquely positioned to unite diverse stakeholders, recognized the importance of building consensus before the vaccine's launch. To this end, MWAP organized a policy dialogue on 26th August 2025, successfully bringing together pediatricians, gynecologists, family physicians, pathologists, and public health experts. This collaborative effort aimed to foster partnership, consensus-building, and strong advocacy for making HPV vaccination a national health priority. All participants shared their experiences, appreciated the government for this landmark initiative to reduce disease burden, and provided valuable suggestions along with full cooperation to ensure the successful implementation of the vaccine. A consensus document was developed and shared with the relevant authorities.

- Dr. Wajiha Rizwan, President MWAP and Associate Professor of Pediatrics at University of Child Health Sciences highlighted that public sensitization is as critical as technical rollout, calling for the mobilization of pediatricians, gynecologists, family physicians, and religious leaders. She reaffirmed MWAP's commitment to leading awareness campaigns and sustained advocacy to make HPV vaccination a routine practice nationwide. Professor Shamsa Humayun, Senior Vice President MWAP and Professor of Obstetrics and gynecology, emphasized the need to tackle misconceptions and cultural barriers, ensure affordable access, educate caregivers on vaccine efficacy, and strengthen public-private partnerships to achieve universal HPV vaccine coverage. Prof. Ayesha Humayun, Advisor MWAP (Public Health expert and Principal Shaikh Khalifa Bin Zayed Al-Nahyan Medical College) shared a behaviors' modification strategy aimed to increase vaccine acceptance among fathers/decision makers. (Annexure III)
- Stakeholders across disciplines welcomed the inclusion of the HPV vaccine in Pakistan's EPI, recognizing it as a critical step toward reducing HPV-related disease burden. Prof. Waheed uz Zaman (Virologist) and Prof. Saira Rathore (Histopathologist) from Chughtai Labs shared local data highlighting the linkage of HPV not only with cervical cancer but also with oral and throat cancers. Public health experts, Prof. Saira Afzal (Dean IPH), Dr. Aminah Khan (Country Director, Jhpiego Pakistan), Prof. Mulazim Hussain Bukhari (President PAP), Dr. Sadia Yousaf, Mr. Bilal Chaudry, Dr. Tanveer Ahmad and Dr. Mian Tariq (President, PAFP) stressed the need for community-level mobilization, social media

campaigns, gender-sensitive counseling, and surveys to gauge public response, highlighting the importance of political and religious support. Pediatric experts, including , Dr. Kaleem Malhi, Secretary General, PPA (Punjab), Prof. Naveed Hotiana, Dr. Naeem Zafar, Dr. Irfan Naeem, Dr. Ali Arshad, Dr. Azhar Farooq and Dr Asfand Tariq emphasized that pediatricians who administer most vaccines must be fully engaged to address parental concerns, overcome compliance challenges, and serve as vaccine advocates. They called for sensitization of healthcare providers, involvement of religious leaders, and public education to counter misconceptions, stressing that men should also be allies in awareness efforts. Renowned gynecologists and cervical cancer specialists, Prof. Rashid Latif Khan, Prof. Samia Malik, Prof. Nabila Shami, Prof. Noreen Akmal, Prof. Syeda Shaista Waheed, and Prof. Amna Zia Eusaph, Prof. Yousaf Latif Khan, Dr Rabia Wajid urged integration of HPV vaccination with robust screening programs, engagement of clergy and family influencers, and multidisciplinary collaboration for effective implementation.

- Prof. Akhtar Sohail Chughtai, CEO, Chughtai Labs, advocated for a national cervical cancer screening program and cancer registry, and pledged institutional support, with Chughtai Labs announcing plans to make the HPV vaccine commercially available soon.
- At the end following policy recommendations were drafted.

Policy Recommendations

1. **Overcoming Healthcare Professionals' Hesitancy**

   Training workshops and continuous professional development should be prioritized to address healthcare professionals' hesitancy in recommending the HPV vaccine. Building confidence among providers is essential for strengthening vaccine uptake.

2. **Integration into the Expanded Program on Immunization (EPI)**

   The HPV vaccine should be sustained as a routine component of the national immunization schedule to ensure equitable access and long-term protection for all eligible girls.

3. **Public Sensitization**

Awareness campaigns should involve *ulama*, teachers, community leaders, media celebrities, and social media influencers. Their engagement is critical to counter myths, improve acceptance, and enhance community ownership.

4. **Healthcare Worker Training**

   The counseling and communication skills of vaccinators and frontline healthcare providers should be strengthened so they can effectively address misconceptions and guide families in making informed decisions.

5. **Multi-sectoral Collaboration**

   Professional associations such as MWAP, PMA, PPA, SOGP, and PAFP, along with NGOs and policymakers, should work together in a coordinated manner to develop a comprehensive response to HPV prevention and control.

6. **Cancer Registry and Screening Framework**

   A National Cervical Cancer Registry should be established, and organized screening programs should be scaled up across Pakistan to monitor disease burden, track outcomes, and support evidence-based planning.

7. **Male Engagement**

   Efforts should highlight the importance of men acting as allies, recognizing both their own health risks from HPV and their role as key decision-makers in many households in Pakistan.

8. **Sustained Advocacy**

   Advocacy should combine social media strategies with community-level outreach to maintain long-term momentum and ensure that HPV prevention remains a public health priority.

The Medical Women's Association of Pakistan (MWAP), in collaboration with PPA Punjab, Chughtai Laboratories, and other partners, commits to mobilizing health professionals, public health experts, and community leaders to ensure that every girl in Pakistan is protected against HPV and its related cancers.

Acknowledgment:
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Annexure I

WHO 2022 Updated Recommendations on HPV Vaccination Schedule

Available from: https://www.who.int/news/item/20-12-2022-WHO-updates-recommendations-on-HPV-vaccination-schedule

- ✓ WHO 2022 guidelines suggest for 9-20 years of age one or two doses schedule can be used as efficacy trials have found that the efficacy of 1, 2, or 3 doses was the same after 10 years in this age group. This is an off-label recommendation.
- ✓ 21 years of age, 2 doses schedule can be used
- ✓ In immunocompromised people at least 2 doses, but ideally 3 doses, if programmatically feasible.

Annexure II

CDC Recommendations on HPV Vaccination Schedule

(CDC Recommendations)[4]		
Doses	**Schedule**	**Target Population**
2 doses	0, 6–12 months*	Ages 9–14 years (except immunocompromised)
3 doses	0, 1–2, 6 months**	Ages 15–26 years, immunocompromised persons, and adults 27–45 years

Other dose Regimens: In a two-dose schedule of HPV vaccine, the minimum interval is 5 months between the first and second dose.
** In a three-dose schedule of HPV vaccine, the minimum intervals are 4 weeks between the first and second dose, 12 weeks between the second and third dose, and 5 months between the first and third doses

Annexure III

Barrier (what stops parents/caregivers)	Behavioral driver to target	Intervention / Activity	Key message (short samples)	Trusted messenger(s)	Channel / Delivery	KPI / Monitoring	Timing
Myths: vaccine causes infertility / unsafe	Perceived risk of vaccine; low perceived benefit	Rapid myth-busting campaign: short videos, illustrated flyers, mosque announcements, FAQ cards at PTM	"HPV vaccine prevents cancer — it does **not** affect fertility. Doctors worldwide recommend it."	Pediatricians, gynecologists, ulemas and religious scholars Male family heads	Short video (30–45s) + poster + mosque khutbah inserts + WhatsApp forwards	% of fathers reporting fertility concern (pre/post); reduction in rumor mentions on social listening	Pre-launch & campaign week
Concern about "promiscuity" / cultural taboo	Social norms, moral framing	Frame as **family protection / future saver**; use testimonials from local respected fathers	"I vaccinated my daughter to protect her future — it's a father's duty."	Local male community leaders, imams, respected fathers	Community meetings, men-only sessions, workplace talks, radio	Number of men's sessions held; % positive attitudinal shift in short surveys	During campaign
Low trust in health system / government	Trust & credibility	Use non-governmental credible faces (MWAP doctors), co-signature of campaign with ulema & MWAP	"This vaccine is provided by health experts and supported by local doctors and religious scholars."	MWAP senior women doctors + selected ulema	Joint press conference, local TV interviews, mosque announcements	Attendance/airtime metrics, social listening sentiment	Pre-launch
Parents not reached by school-based messaging	Opportunity / access	Direct SMS/WhatsApp to fathers; home visits by male mobilizers; workplace outreach	"Vaccination day at [School name]. Bring your daughter — it's free and safe."	LHW + trained male mobilizers + school heads	SMS + WhatsApp + house visits + workplace briefings	% fathers receiving message; session turnout vs. list	5–7 days before sessions

Decision deferred to elders / family head	Social influence & norms	Engage family decision-makers: spot meetings with grandfathers & male elders; public pledges by clan leaders	"Our family protects its daughters — we support vaccination."	Village/UC elders, councilors	Community jirgas/UC meetings, mosque compound meetings	Uptake in households with elder engagement vs. control	Early microplanning
Fear of side effects / AEFI anxiety	Perceived control & safety	Show AEFI readiness (first-aid kits, doctors present); publicize transparent AEFI reporting	"If any side effects occur, trained doctors are present, and we will follow up."	Hospital Pediatricians, DHA EPI officers	On-site demonstrations, short flyers, video of AEFI protocol	AEFI report rate; % fathers aware of AEFI process	At sessions & in pre-materials
Lack of time / convenience	Practical barriers (opportunity)	Weekend/evening sessions, mobile outreach in workplace areas; short waiting times	"5–10 minutes — vaccination during school PTM or weekend session."	School principals, employers	School sessions, mobile vans, workplace clinics	% dropouts for "timing" reason; session throughput	Campaign days + mop-up
Rumors spreading on WhatsApp / social media	Information environment	Rapid response team: rumor tracker, official WhatsApp channel, short corrective videos with ulema & doctors	"This is misinformation — here's verified info from MWAP & ulema." (link)	MWAP and other medical association communications lead + ulema spokesperson	WhatsApp, Facebook groups, local pages	Rumor count per week; speed of correction (hrs)	Ongoing, daily monitoring