Summary of Key Points

WHO Position Paper on Vaccines against Human Papillomavirus (HPV) May 2017
Selected types of HPV cause cervical cancer, anogenital warts, and other anogenital and head and neck cancers:

- HPV types 16 and 18 cause about 70% of cervical cancers.
- HPV types 6 and 11 cause about 90% of anogenital warts.

528,000 cases of cervical cancer and 266,000 women deaths each year:

- Most cases (>85%) in less developed regions.
- Most in females not screened or who do not receive early treatment.
Vaccines

- Three prophylactic, highly efficacious vaccines available:
  - Bivalent vaccine:
    - Non-infectious protein antigens for HPV 16 and 18.
  - Qudarivalent vaccine:
    - Non-infectious protein antigens for HPV 6, 11, 16, and 18.
  - Nonavalent vaccine:
    - Non-infectious protein antigens for HPV 6, 11, 16, 18, 31, 33, 45, 52 and 58.

- Neither vaccine will treat women with current HPV infection or related disease: HPV vaccines most efficacious in HPV naive individuals i.e. if administered before sexual debut.
WHO Position

- Recognizing the importance of cervical cancer and other HPV-related diseases as global health problems, WHO recommends that routine HPV vaccination should be included in national immunization programmes.

- For the prevention of cervical cancer, the WHO-recommended primary target population for HPV vaccination is girls aged 9–14 years, prior to becoming sexually active.
WHO Position
Vaccination schedule

- The current evidence supports the recommendation for a 2-dose schedule with adequate spacing between the first and second dose (0, 6-15 months) in those aged 9–14 years.
  - An interval no greater than 12–15 months is suggested in order to complete the schedule promptly and before becoming sexually active.
  - If the interval between doses is shorter than 5 months, a third dose should be given at least 6 months after the first dose.

- Individuals ≥15 years and older
  - 3-dose schedule (0, 1–2, 6 months)

- Individuals known to be immunocompromised and/or HIV-infected (regardless of whether they are receiving ART).
  - 3-dose schedule (0, 1–2, 6 months)
WHO Position
Choice of HPV vaccine

- Current evidence suggests that from the public health perspective the bivalent, quadrivalent and nonavalent vaccines offer comparable immunogenicity, efficacy and effectiveness for the prevention of cervical cancer, which is mainly caused by HPV types 16 and 18.

- The choice of HPV vaccine should be based on:
  - assessment of locally relevant data;
  - the scale of the prevailing HPV-associated public health problem (cervical cancer, other anogenital cancers, or anogenital warts);
  - the population for which the vaccine has been approved;
  - unique product characteristics, such as price, supply, and programmatic considerations.
WHO Position
Vaccination of multiple age cohorts

- The initial vaccination of multiple cohorts of girls aged 9–14 years is recommended when the vaccine is first introduced.

- Vaccination targeting multiple age cohorts of girls aged between 9 and 18 years together at time of HPV vaccine introduction would result in faster and greater population impact than vaccination of single age cohorts, due to the estimated increase in direct protection and herd immunity.
WHO Position
Secondary target groups

- Vaccination of secondary target populations e.g. females aged ≥15 years or males only recommended if:
  - Feasible;
  - Affordable;
  - Cost-effective;
  - Does not divert resources from vaccinating primary target population;
  - Does not divert resources from effective cervical cancer screening programmes.
WHO Position
Strategy for implementation

● HPV vaccines should be introduced as part of a coordinated and comprehensive strategy to prevent cervical cancer and other diseases caused by HPV, including
  – Information to women on risk reducing behaviours, screening, diagnosis and treatment of precancerous lesions and cancer.
  – Training of health workers

● HPV vaccine introduction
  – The introduction of HPV vaccine should not undermine or divert funding from developing or maintaining effective screening programmes for cervical cancer

● Opportunities should be sought to link the introduction of HPV vaccination to other vaccinations carried out at this age (e.g. diphtheria and tetanus vaccination) and programmes targeting young people.
  – However, the introduction of HPV vaccination should not be deferred because other relevant interventions cannot be implemented at the same time
WHO position
Co-administration and interchangeability

Co-administration:
- Can be co-administered with other non-live and live vaccines using separate syringes and different injection sites.
- Co-administration of HPV vaccination with a booster dose of tetanus-diphtheria vaccination should be considered for programmatic reasons.

Interchangeability:
- Limited data available.
- Efforts should be made to administer the same vaccine for all doses.
- However, if the vaccine used for prior dose(s) is unknown or unavailable, either of the HPV vaccines can be administered to complete the recommended schedule.
WHO Position
Special populations

● Can be administered safely to immunocompromised and/or HIV-infected:
  – HIV testing not a prerequisite for vaccination.

● Pregnant women
  – HPV vaccination of pregnant women should be avoided due to lack of data, though no adverse effects in mother or offspring have been observed.
  – If a young female becomes pregnant after initiating the vaccination series, the remaining dose(s) should be delayed until after the pregnancy is completed.

● Lactating women
  – Breastfeeding is not a contraindication for HPV vaccination.

● No special recommendations for travellers and health care workers:
  – Should follow the vaccine recommendations for the general population.
For more information on the WHO HPV position paper, please visit the WHO website:

www.who.int/immunization/documents/positionpapers