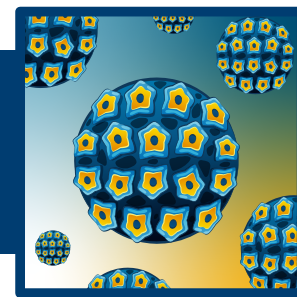


Student Council President's Perspective

UNIT: GOING VIRAL!

LESSON 3: YOUR VOICE MATTERS!

Activity 3A: Time for T!



TEXAS BIOMEDICAL
RESEARCH INSTITUTE
HEALTH STARTS WITH SCIENCE

Student Council President

As the president of the Student Council, they wish for students to have control over their decisions and to have a safe learning environment.

Brief Perspectives:

- › Students and families should make personal health decisions.
- › School is a public space with shared responsibility.

The Student Council President used search engines and AI to find information about HPV vaccines.

From the World Health Organization (WHO)



World Health
Organization

As of 2022, 122 of 195 (63%) a World Health Organization (WHO) member states have introduced HPV vaccinations nationally (Figure 2) [51]. Given the initial indications for cervical cancer, HPV vaccine policies have focused more on vaccination of eligible females. Eight years after the initial introduction of the HPV vaccine, 120 million women worldwide were reported to have been administered at least one dose of the HPV vaccine between 2006 and 2014 [52]. Globally, only 15% of females in the targeted age range are estimated to be fully vaccinated [53,54].

From the Advisory Committee on Immunization Practices (ACIP)

Because HPV infections are not treated, the clinical indications for HPV testing are to identify women at risk for HPV-associated cervical disease and to guide follow-up decisions for those with disease. HPV cannot be cultured directly from patient specimens, so tests require detecting HPV genetic information. Most commercially available assays detect DNA. Because HPV is cell-associated, cellular samples are required. The Food and Drug Administration (FDA) has approved clinical HPV tests for detecting clinically significant levels of any of 14 high-risk HPV types (HPV 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66, and 68) from cervical specimens (see Cervical Cancer Screening). HPV tests are approved either for use with the Papanicolaou (Pap) test for routine screening in women aged >30 years or for following up certain abnormal Pap test results. One HPV test has been approved for primary cervical cancer screening but is not currently part of national recommendations (21). There are no other approved indications for clinical HPV testing. HPV tests are not recommended or approved for use in men or adolescents, for detection of HPV in partners, or at anatomic sites other than the cervix.

MIDDLE & HIGH SCHOOL LEVEL

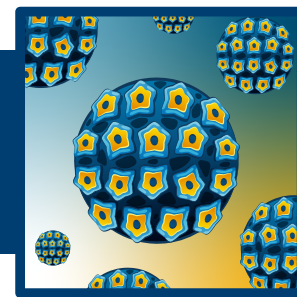
Teacher Enrichment Initiatives (TEI) | NIH SEPA | ©2026 | TxBiomed.org
NIH SEPA Project #1R25GM142021-01A1 | Some graphic elements courtesy of [Freepik](https://www.freepik.com)

Student Council President's Perspective

UNIT: GOING VIRAL!

LESSON 3: YOUR VOICE MATTERS!

Activity 3A: Time for T!



From the Centers for Disease Control (CDC)

Abstaining from sexual activity (i.e., refraining from any genital contact with another person) is the surest way to prevent genital HPV infection. Persons also can lower their chances of becoming infected with HPV by being in a monogamous relationship with one partner, limiting their number of sex partners, and choosing a partner who has had no or few previous sex partners. However, even persons with only one lifetime sex partner can be infected with HPV. Consistent and correct condom use can reduce the risk for HPV and HPV-associated diseases (e.g., genital warts and cervical cancer). A limited number of prospective studies have been conducted evaluating male condom use and HPV; one prospective study among newly sexually active women attending university demonstrated a 70% reduction in HPV infection when their partners used condoms consistently and correctly. Randomized clinical trials of male circumcision demonstrate a lower risk of HPV infection among circumcised males as well as among their female partners. Neither routine surveillance for HPV infection nor partner notification is useful for HPV prevention. Genital HPV infection is so prevalent that most partners of HPV-infected persons have already acquired HPV themselves.



From the Centers for Disease Control (CDC)

Females and Males Aged 9–26 Years:

Data on immunogenicity in females are available from phase II and III efficacy trials conducted among females aged 16–26 years and immunogenicity trials conducted among children and adolescents aged 9–15 years. In all studies conducted to date, more than 99% of females had an antibody response to all four HPV vaccine types 1 month after the third dose. High seropositivity rates were observed after vaccination regardless of sex, race/ethnicity, country of origin, smoking status, or body mass index. Vaccination produced antibody titers higher than those after natural infection: among females aged 16–23 years, anti-HPV 6, 11, 16, and 18 geometric mean titers (GMTs) 1 month after the third dose were higher than those observed in participants who were HPV seropositive and PCR negative at enrollment in the placebo group. Antibody titers declined over time after the third dose but plateaued by 24 months. At 36 months, HPV 16 GMTs among vaccinees remained higher than those in participants in the placebo group who were seropositive at baseline; HPV 6, 11, and 18 GMTs were similar to those seropositive in the placebo group (113). At 36 months, seropositivity rates in vaccinees were 94%, 96%, 100%, and 76% to HPV 6, 11, 16, and 18, respectively. In the follow-up of females in the phase II or phase III efficacy trials, there was no evidence of waning efficacy among participants who became seronegative. This suggests that loss of detectable antibody by the cLIA, seen particularly for HPV 18, is not associated with loss of protection. Data from a revaccination study in which vaccinated females were given a challenge dose of vaccine 5 years after enrollment demonstrated an augmented rise in antibody titer, consistent with immune memory.

MIDDLE & HIGH SCHOOL LEVEL

Teacher Enrichment Initiatives (TEI) | NIH SEPA | ©2026 | TxBiomed.org
NIH SEPA Project #1R25GM142021-01A1 | Some graphic elements courtesy of [Freepik](https://www.freepik.com)