

DIGITAL OUTREACH AND PUBLIC HEALTH: EVALUATING SOCIAL MEDIA INTERVENTIONS ON HPV-RELATED CANCERS AWARENESS AND VACCINE ACCEPTANCE IN BOSNIA AND HERZEGOVINA

Authors

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Background

- Over 730,000 cancer cases in 2020 were linked to HPV infection
- Cervical cancer is the most common HPV-associated malignancy, followed by anogenital and oropharyngeal cancers
- Cervical cancer ranks 4th among female cancers globally, with 342,000 deaths in 2020
- Transitional countries like Bosnia and Herzegovina face greater burden due to limited screening and vaccination programs

Objective

To explore low-cost public health interventions in a middle-income country without national prevention strategies, focusing on the potential of social media to improve health outcomes, equity, and public attitudes.

Methodology

- 01 Design:** Three cross-sectional online surveys (April 2021 to May 2025)
- 02 Interventions:** Two social media campaigns combining webinars and video outreach:
 - HPV and Cervical Cancer – Prevention is Imperative (2021)
 - HPV Doesn't Discriminate – Get Informed, Get Protected (2025)
- 03 Participants:** Heterogeneous sample of social media users from Bosnia and Herzegovina, across all age groups
- 04 Survey Tool:** Structured questionnaire assessing demographics, HPV-related knowledge, and attitudes

Analysis

- Focused on awareness of HPV infection, vaccine eligibility, and openness to vaccination (Figure 1)
- Incomplete surveys excluded; responses dichotomized
- Descriptive statistics via SPSS v21
- Distributional changes and linear trends tested using Chi-square
- Event Timeline: Summary of campaigns and survey waves (Figure 2)

Conclusion

Social media interventions may have positively influenced HPV vaccine awareness, attitudes, and acceptance in Bosnia and Herzegovina, demonstrating the potential of digital outreach in resource-limited settings.

Results

- **Demographic shifts:**
 - Male representation increased from **3.8%** to **12.0%** ($\chi^2 = 32.596$, $p < 0.001$)
 - Young adult participation rose from **29.5%** to **44.2%** ($\chi^2 = 45.112$, $p < 0.001$)
- **HPV vaccine awareness and understanding:**
 - Awareness of HPV vaccine rose from **64.2%** to **90.9%** ($\chi^2 = 167.642$, $p < 0.001$)
 - Understanding that the vaccine is intended for both sexes increased from **54.8%** to **71.4%** ($\chi^2 = 38.986$, $p < 0.001$)
- **Attitudes toward vaccination:**
 - Openness to HPV vaccination grew from 44.0% to 64.9% ($\chi^2 = 67.544$, $p < 0.001$)
- **Real-world impact:**
 - By 2025, nearly **10,000 individuals** in Bosnia and Herzegovina were vaccinated
 - This marks a major shift from **zero availability** prior the first intervention three years earlier

Figure 1. Questions selected for the purpose of this analysis.

Q1: Sex

R: Female; Male; Prefer not to say

Q2: Age

R: Under the age of 20; 21–30; 31–40; 41–50; ≥ 51

Q3: Is there a vaccine against HPV?

R: Yes; No; Yes, but it is not available in our country; I do not know

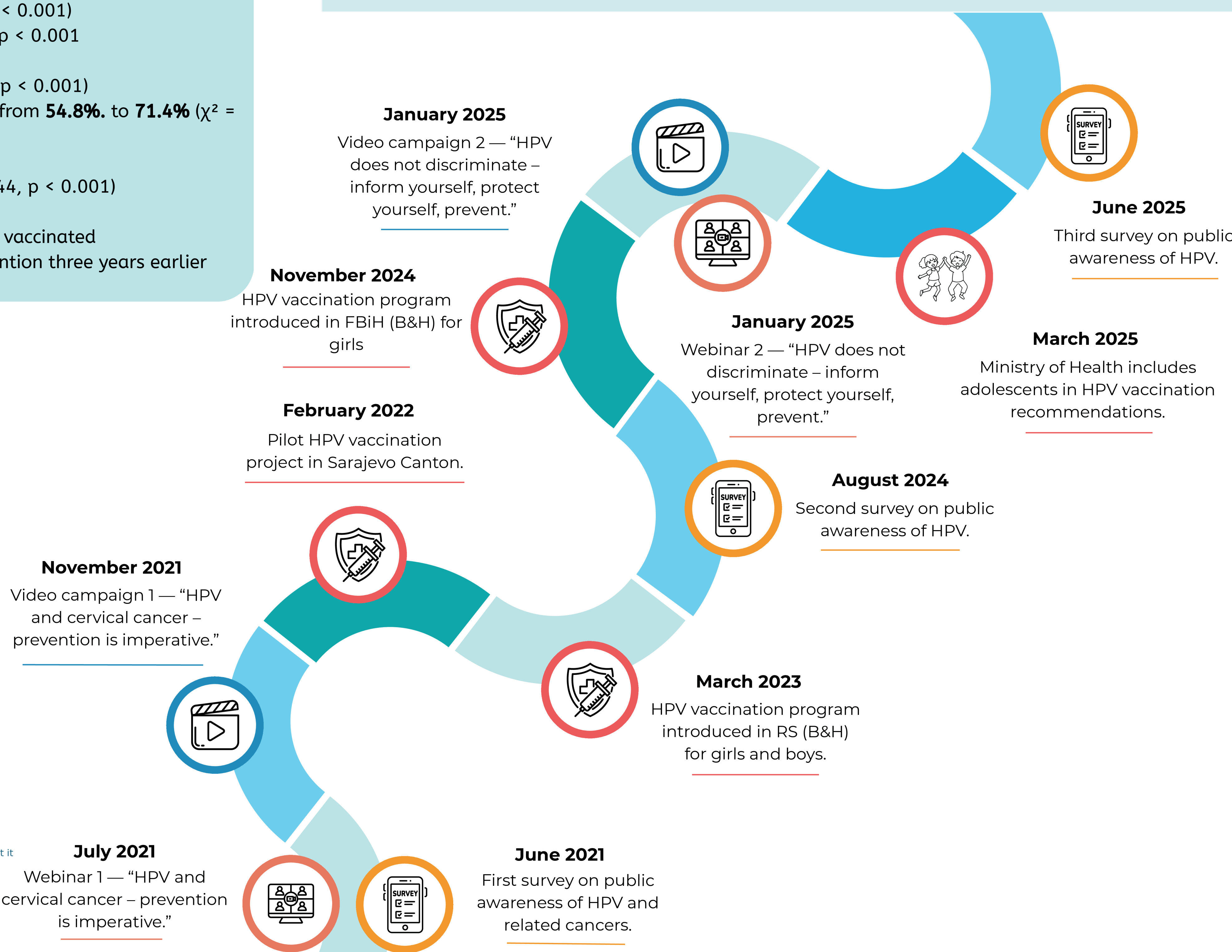
Q4: Who is the HPV vaccine intended for?

R: Girls only; Both girls and boys; Boys only

Q5: Would you or your child get vaccinated against HPV?

R: Yes, surely; No, not at all; Yes if available for free; Probably, but now I do not feel safe due to lack of knowledge about it

Figure 2. Event Timeline: Summary of campaigns and survey



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