PUBLIC HEALTH CENTER

REPORT

on the results of the national telephone survey among adults in Ukraine on general knowledge and acceptability of vaccines and HPV (Human Papillomavirus) vaccination

Kyiv - 2025

REPORT on the results of the national telephone survey among adults in Ukraine on general knowledge and acceptability of vaccines and HPV (Human Papillomavirus) vaccination

Authors: *Mariia Rosol, Olena Zaporozhska, Yuliia Kotykovych, Sviatislav Onyshchuk*

Co-researchers: *Veronica Lea and Juliette Lee (CDC, USA)*

Data collection team: *Nelly Yesipova and Gabriella Atanasiu (Multicultural Insights, USA)*

Design: *Mariia Rosol*

Suggested citation: *M. Rosol, O. Zaporozhska, Y. Kotykovych, S. Onyshchuk. (2025) REPORT on the results of the national telephone survey among adults in Ukraine on general knowledge and acceptability of vaccines and HPV (Human Papillomavirus) vaccination.*

According to the Statute of the State Institution "Public Health Center of the Ministry of Health of Ukraine", approved by the Order of the Ministry of Health of Ukraine No. 224 of 9 February 2024,

State Institution "Public Health Center of the Ministry of Health of Ukraine" (hereinafter - PHC) *is a sanitary and preventive health care facility established by Order of the Ministry of Health of Ukraine No. 604 of 18 September 2015, under Order of the Cabinet of Ministers of Ukraine No. 909-p of 2 September 2015.*

The PHC performs the functions of the leading institution of the Ministry of Health of Ukraine in the field of public health and combating dangerous, especially dangerous, communicable and non-communicable diseases, biological safety and security, immunoprophylaxis, laboratory diagnostics of infectious diseases, hygienic and microbiological aspects of human health related to the environment, national focal point of the International Health Regulations, coordination of emergency response in the public health sector.

Funding for this study was provided by the U.S. Centers for Disease Control and Prevention (CDC). The survey materials were prepared by the State Institution "Public Health Center of the Ministry of Health of Ukraine" with

According to the Law of Ukraine No. 2811-IX of 15.04.2023 "On Copyright and Related Rights" use, reprinting, and citation of materials of the State Institution "Public Health Center of the Ministry of Health of Ukraine" posted on the website of the institution or provided upon request is possible only if the source is referenced with the name of the State Institution "Public Health Center of the Ministry of Health of Ukraine" and the following is provided:
- an electronic link to the web page with the information used (if available)
- a link to the Center's publication (protocol, research, report, article), which is the source of information.

Republishing or otherwise making public this text, images from it, and/or data, in whole or in part, under the name of a person other than the author infringes copyright and constitutes plagiarism, which is subject to three types of liability: civil (compensation for damages and/or non-pecuniary damage; recovery of income), administrative (payment of a fine) and criminal (imprisonment for up to 2-5 years).

Plagiarism includes 1) using the text or graphic data of another author without changing it, without citing and without taking credit for the work (copy & paste plagiarism), 2) combining different fragments of texts or sentences to form a new text without citing, thus presenting it as one's own thoughts (shake & paste plagiarism), 3) presenting the ideas of another author in one's own words without citing the source (idea plagiarism), and 4) translating an original text from another language without citing the source (translation plagiarism).

PUBLIC HEALTH CENTER

CONTENTS

LIST OF TERMS AND ABBREVIATIONS

HIV/AIDS – Human Immunodeficiency Virus / Acquired Immunodeficiency Syndrome

WHO – World Health Organization

HPV – Human Papillomavirus

MoH – Ministry of Health of Ukraine

CC – Cervical cancer

PHC – State Institution “Public Health Center of the Ministry of Health of Ukraine”

CATI – Computer Assisted Telephone Interviewing, a data collection method based on telephone interviews supported by computer systems to ensure quality control and efficient data collection

CDC – Centers for Disease Control and Prevention (USA)

COM-B – behaviour change model comprising three components: **Capability, Opportunity,** and **Motivation,** jointly determining **Behaviour.**

INTRODUCTION

The issue of infectious diseases, particularly human papillomavirus (HPV), remains one of the key challenges for public health. According to the WHO[1], HPV is the most common viral sexually transmitted infection and is directly associated with the development of cancer, including cervical cancer (CC). Considering the low level of public awareness, uneven access to prevention programs, and limited vaccination coverage, assessing the population's knowledge, attitudes, and practices regarding HPV and HPV vaccination is critically important.

Since vaccine hesitancy among the population may serve as a barrier to timely prevention of infection – HPV in particular – and the associated risk of developing CC, gaining an in-depth understanding of the public's knowledge, attitudes, and motivations related to vaccination is essential.

The study was conducted by the Public Health Center of Ukraine (PHC) in collaboration with the U.S. Centers for Disease Control and Prevention (CDC).

The collected information will form an analytical basis for:

- *supporting the national immunization policy through the implementation of the Order of the Ministry of Health of Ukraine No. 396 of March 5, 2025, "On Amendments to the Immunization Schedule in Ukraine," which introduces HPV vaccination;*
- *adapting communication strategies by taking into account real barriers and motivations;*
- *strengthening trust in public health decision-making based on evidence.*

This report is intended for professionals in the fields of healthcare and public health, including managers and specialists involved in immunization, implementation, planning, organization, and evaluation of vaccination programs at the national, regional, and local levels. It can be used to support information campaigns, develop training materials, prepare scientific publications, and conduct further research related to immunization.

[1] https://www.who.int/news-room/fact-sheets/detail/cervical-cancer

METHODOLOGY

In August 2024, a national telephone survey of the population of Ukraine aged 18-44 was conducted using the Computer-Assisted Telephone Interviewing (CATI) method.

The objective of the study was to assess the level of awareness, attitudes, and behavioral intentions of the population aged 18-44 regarding routine vaccination, HPV, and HPV vaccination, as well as to identify barriers and motivating factors for increasing vaccination coverage.

SAMPLE SIZE

The survey was conducted via a mobile platform using a two-phase stratified sampling design, which ensured representativeness by sex and age.

The proportion of phone numbers from each mobile operator was determined in proportion to their market share to avoid overrepresentation of any single provider.

In the first phase, mobile phone numbers were selected using random digit dialing. In the second phase, sampling was adjusted by sex and age, which enabled the formation of balanced groups within the age categories of 18-29 and 30-44 years.

A total of 1,536 respondents from all regions of Ukraine, except for temporarily occupied territories, participated in the survey[2].

SURVEY METHOD

CATI is a data collection method based on conducting interviews via telephone calls, supported by computer systems that ensure efficient process management and data capture.

Telephone interviewing enables the collection of timely and reliable information with a high response rate. However, it also has certain limitations, particularly regarding the inclusion of individuals who rarely use mobile communication or are unwilling to participate in telephone surveys.

[2] https://zakon.rada.gov.ua/laws/show/1207-18#Text

RESULTS

PROFILE OF RESPONDENTS

The survey included respondents of different ages and genders, ensuring the representativeness of the results. The gender distribution was balanced: 50% women and 50% men. The two age groups – 18-29 and 30-44 years – were also evenly represented, each accounting for 50% of the sample.

Overall, 87% of respondents either have children or plan to have them in the future. Among them, 58.5% are already parents, and 92.8% of these parents are raising children under the age of 18. This socio-demographic profile provides valuable insight into attitudes toward vaccination both in terms of personal health and in the context of responsibility for children's well-being.

ATTITUDES TOWARD VACCINATION AMONG ADULTS IN UKRAINE

The level of support for vaccination among the adult population is high: the results indicate that most respondents have a positive attitude toward vaccination as an effective measure for preventing infectious diseases (Fig. 1).

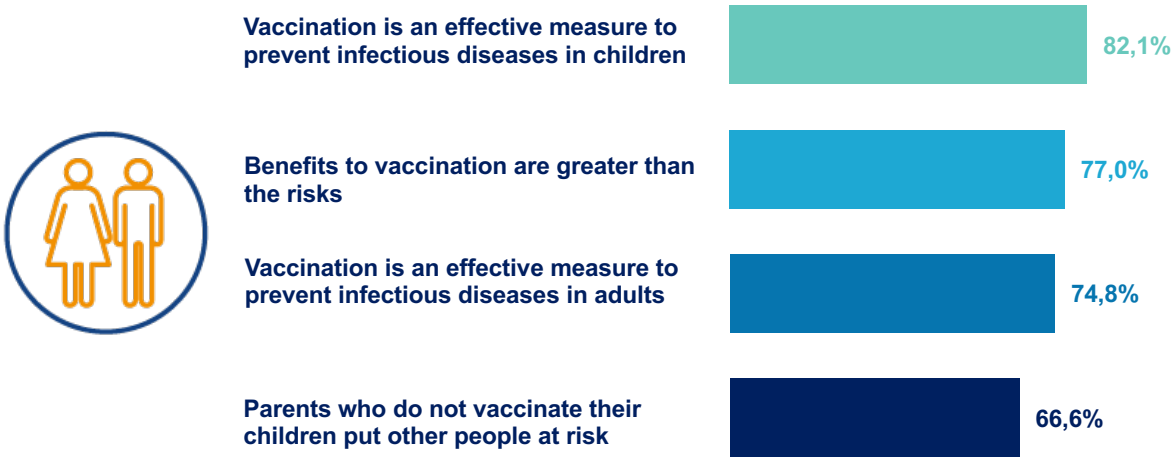

Fig. 1. Level of agreement with statements on vaccination among the adult population of Ukraine

74.8% agreed that “Vaccination is an effective measure to prevent infectious diseases in adults.” Even higher support was recorded for childhood vaccination: 82.1% consider vaccination a reliable means of protecting children’s health.

The majority of respondents also agreed that the benefits of vaccination outweigh the potential risks, as reported by 77% of respondents. At the same time, 66.6% of adults agreed that parents who do not vaccinate their children put others at risk, indicating an understanding of the public health importance of herd immunity.

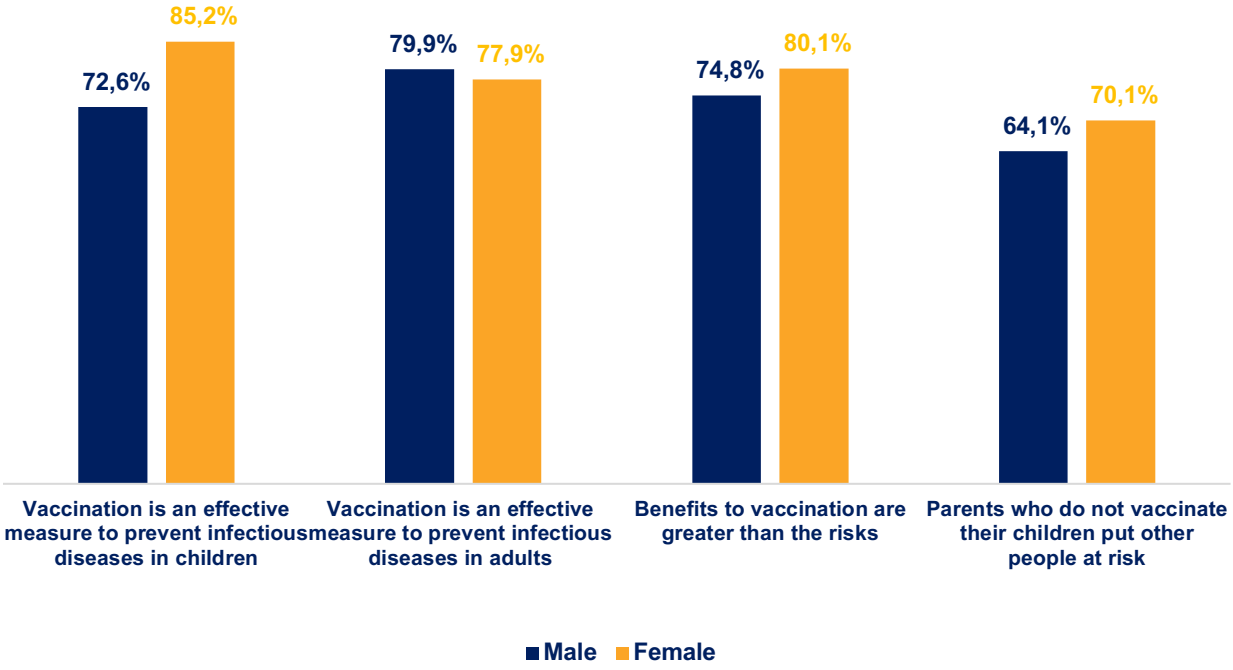

Fig. 2. Level of agreement with vaccination-related statements among male and female respondents

Women consistently demonstrated higher agreement across statements, particularly regarding risks of non-vaccination and effectiveness of childhood vaccination (Fig.2).

Remarkable that 69.1% of respondents disagreed with the statement “I am afraid of vaccinating my children (or future children)” (68% of men and 70.6% of women). This indicates that most adults do not share this fear, although a certain proportion still have some concerns.

SOURCES OF INFORMATION AND DECISION-MAKING ABOUT VACCINATION

According to the survey results, among all respondents, the most common channels for obtaining information about vaccination in Ukraine remain the Internet or social networks (71.7%) and health clinics (61.9%) (Fig. 3). At the same time, there are significant differences by gender: women are much more likely than men to obtain information from healthcare professionals (75.8% vs. 52.2%), while the level of information obtained from online sources is almost the same for both groups.

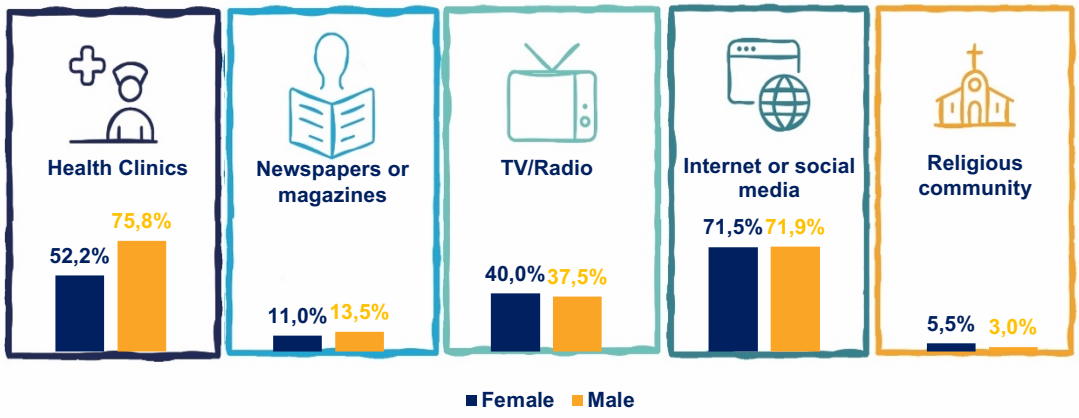

Fig. 3. Sources of vaccination information among the adult population of Ukraine, by gender

Traditional media (TV and radio) were mentioned by 39% of respondents, while print media (newspapers, magazines) have a limited influence – only 12%, and 4.5% of respondents indicated that they received information from religious communities/churches.

At the same time, among parents of school-age children, school is an important source of information: 42.2% said they receive information about vaccinations from educational institutions. This underscores the important role of schools in raising awareness about prevention.

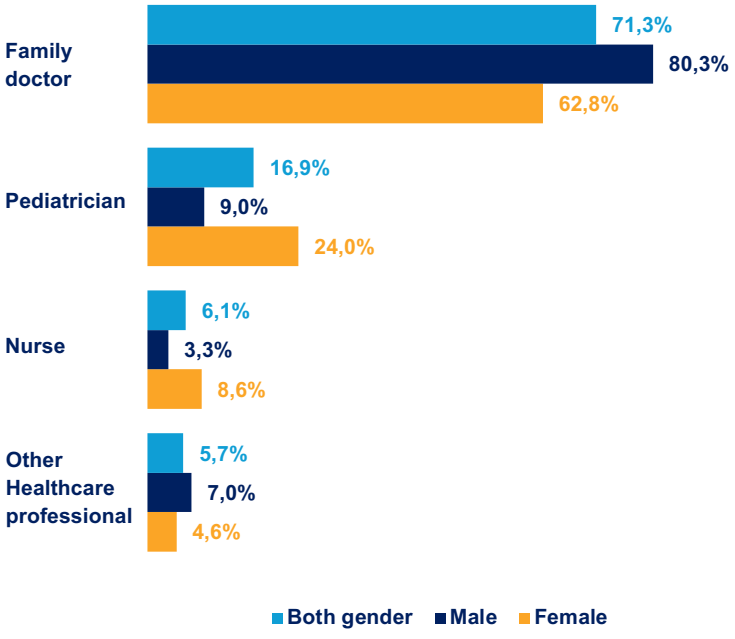

Fig. 4. Healthcare professionals consulted for vaccination information, by gender

Among healthcare professionals whom the population consults on vaccination issues (Fig. 4), family doctors play a leading role – they were mentioned by 71.3% of respondents (more often men – 80.3%). For women, pediatricians are also an important source (24% vs. 9.3% for men).

Other healthcare professionals are less likely to provide information about vaccination: nurses – 6.1%, feldshers – 0.8%, pharmacists – 0.3%, gynecologists – 0.2%.

This underscores the key role of family doctors in spreading knowledge and building trust in vaccinations.

When asked about making decisions regarding vaccination, most respondents said that they decide on vaccination independently – 57%. At the same time, women are much more likely to take responsibility for making decisions (72.5% compared to 46.1% among men).

For 25% of respondents, joint decision-making with their partner is typical. This approach is more common among men (29.6%) than women (18.4%).

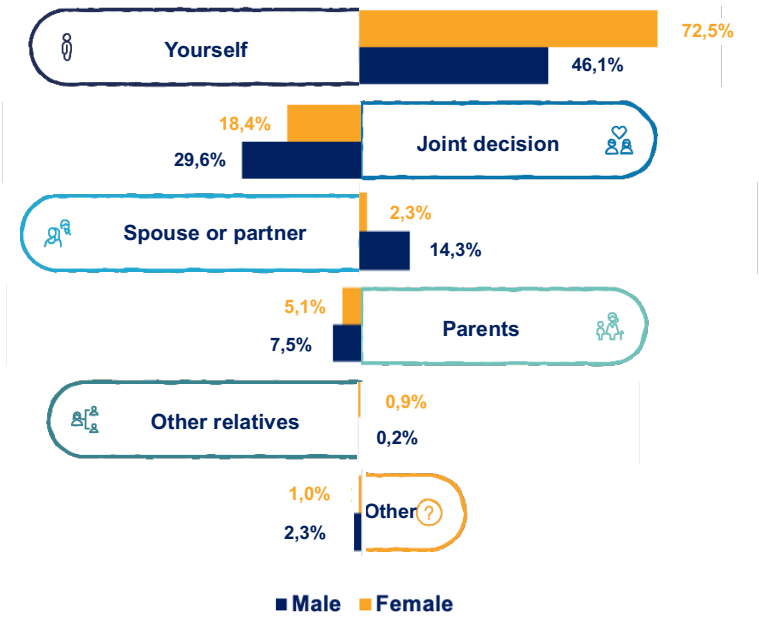

Fig. 5. Distribution of decision-making roles regarding vaccination among men and women

AWARENESS OF HPV

The results of the study showed that about 7 out of 10 Ukrainian adults (69.3%) have heard of HPV at some point.

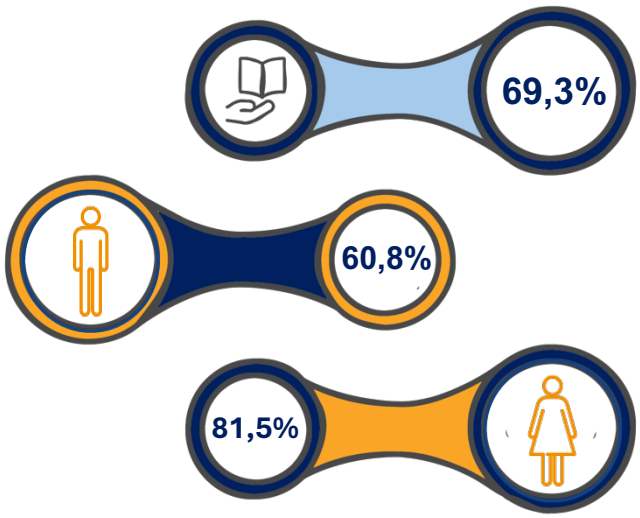

Fig. 6. Level of HPV awareness, by gender

At the same time, there are significant gender differences: among women, this indicator is 81.5%, while among men it is only 60.8% (Fig. 6).

MAIN SOURCES OF INFORMATION ABOUT HPV

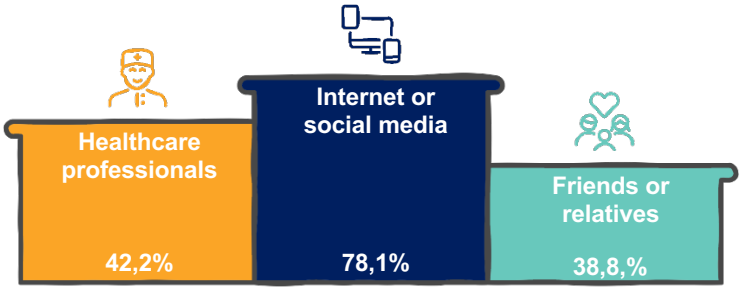

Fig. 7. Most common sources of HPV information (among respondents who had ever heard of HPV)

The main source of information about HPV for respondents is the Internet and social networks: this channel was mentioned by 78.1% of respondents (75.1% of men and 81.4% of women). In second place in terms of popularity are healthcare professionals, who were named as a source by 42.2% of respondents; women are more likely to mention this resource (48.2% compared to 36.6% among men). Friends and relatives remain an important source for 38.8% of respondents, with no significant differences by gender (Fig. 7).

TV and radio were mentioned by 23.8% of adults (22.1% of men and 25.6% of women). Newspapers and magazines were mentioned by 13.3% overall (10.9% of men and 15.8% of women). Only 4.3% of respondents mentioned their child's school. Religious communities were mentioned by 0.9% of respondents, which indicates their minimal involvement in disseminating information about HPV.

Thus, most Ukrainians have already heard about HPV, but the level of awareness among women is higher. The most important channels for disseminating information remain the Internet and social networks, followed by healthcare professionals. This underscores the need for more active participation by the healthcare system and educational institutions in disseminating verified information about HPV and infection prevention.

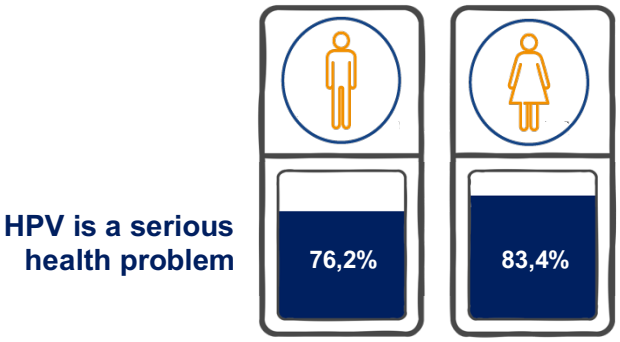

Fig. 8. Perceptions of HPV as a serious health issue, by gender (among respondents who had ever heard of HPV)

Overall, 79.7% of respondents agree with the statement that “HPV is a serious health problem” (Fig. 8).

Therefore, despite significant awareness of the scale of the problem, there are still gaps in the knowledge of some of the population about the transmission routes and consequences of HPV infection.

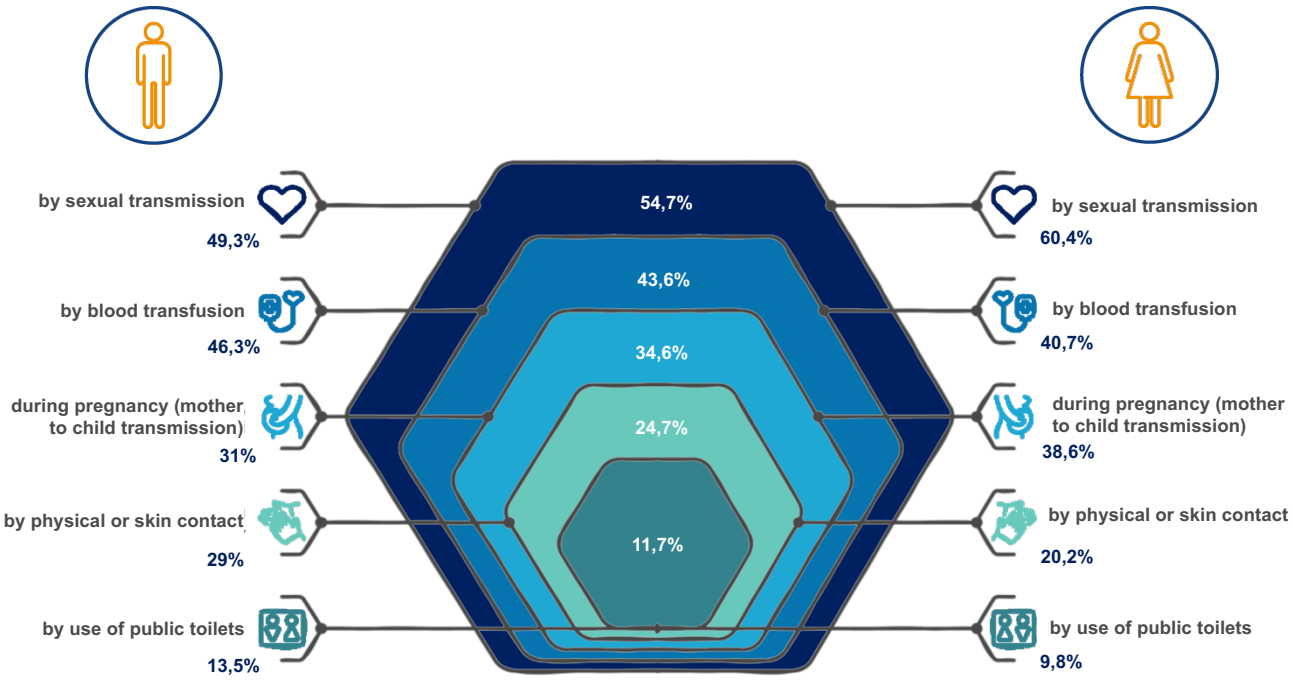

Fig. 9. Awareness of HPV transmission routes among men and women (multiple responses allowed; among respondents who had ever heard of HPV)

Among the knowledge about HPV transmission routes (Fig. 9), respondents most often indicated sexual transmission – 54.7% overall (60.4% among women and 49.3% among men). 43.6% of respondents mistakenly believed that HPV can be transmitted through blood transfusions. Some respondents mentioned everyday routes, such as use of public toilets or physical or skin contact, which indicates widespread misconceptions about the mechanisms of infection.

The survey results show that, according to respondents, HPV can affect both women and men, i.e., the infection is not limited to certain specific population groups.

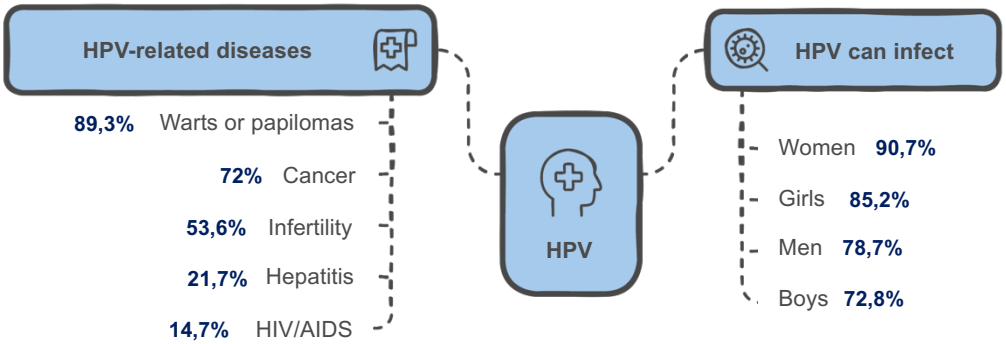

Fig. 10. Respondents' perceptions of HPV-related diseases and vulnerable population groups (multiple responses allowed; among respondents who had ever heard of HPV)

Most often, HPV was associated (Fig. 10) with warts/papillomas (89.3%) and cancer (72%). At the same time, some respondents mentioned diseases that are not caused by HPV infection, in particular infertility (53.6%), hepatitis (21.7%), and HIV/AIDS (14.7%).

This indicates confusion in perceptions of HPV and other sexually transmitted infections.

Among preventive measures (Fig. 11), respondents most often mention condom use (71.6%), vaccination (67.9%), and personal hygiene (47.6%). It is important to note that the level of knowledge about prevention does not always correlate with behavior: even with awareness, vaccination rates remain low.

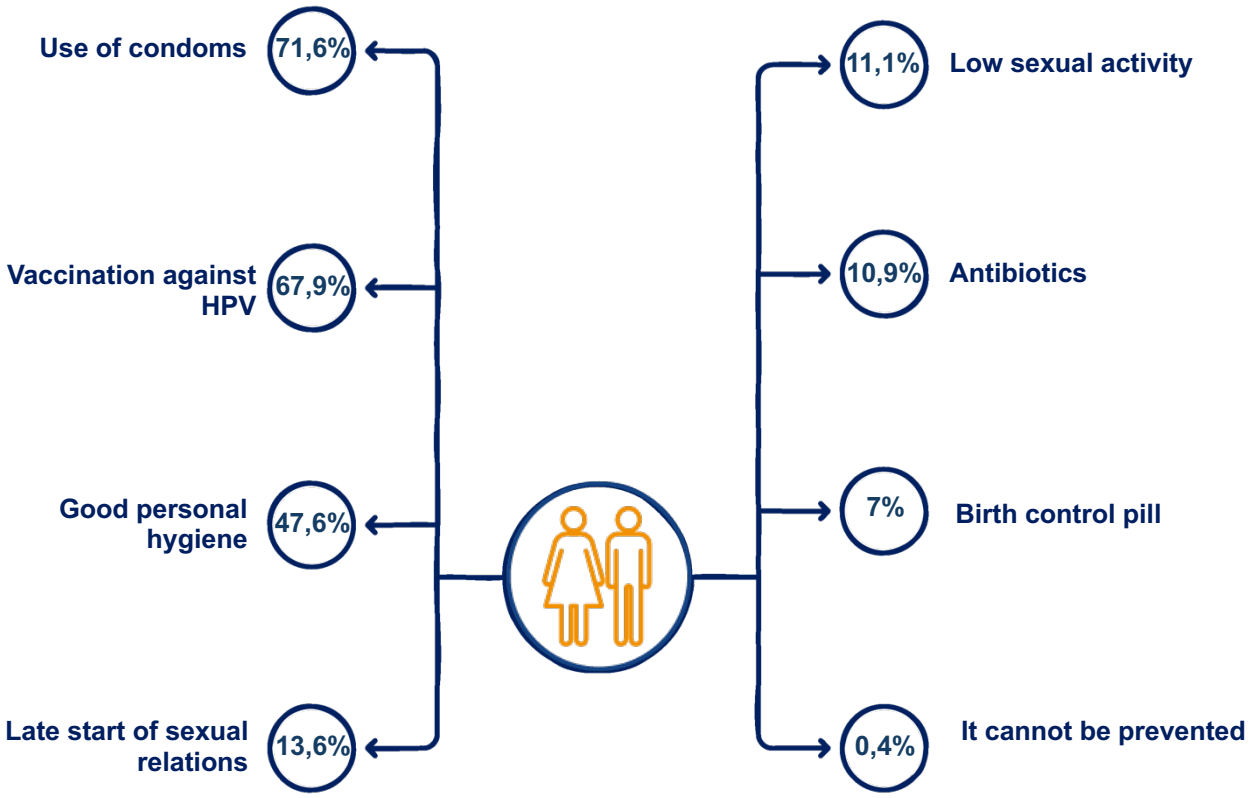

Fig. 11. Respondents' perceptions of HPV prevention measures (multiple responses allowed; among respondents who had ever heard of HPV)

VACCINATION AGAINST HPV

Among all respondents, 36.1% reported that they had heard about the HPV vaccine (Fig. 12). At the same time, there was a significant gender difference: awareness was significantly higher among women (51.7%) than among men (25.2%).

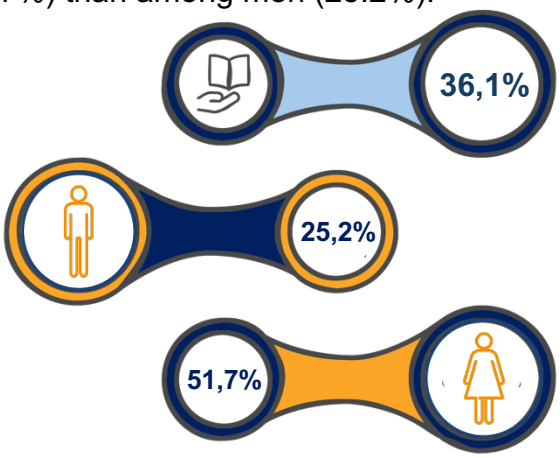

Fig. 12. Overall awareness of the HPV vaccine and awareness by gender

SOURCES OF INFORMATION ABOUT HPV VACCINATION

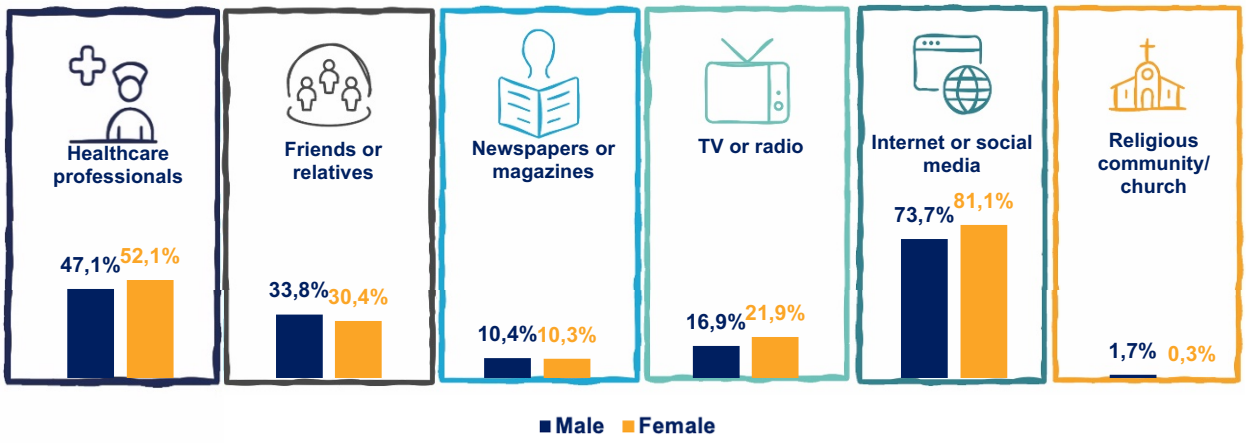

Fig. 13. Sources of information about HPV vaccination among the adult population of Ukraine, by gender (among respondents who had ever heard of the HPV vaccine)

Among those who had heard about the existence of the HPV vaccine (36.1% of respondents), the most common sources of information were the Internet and social networks, which were used by 78.1% of respondents (73.7% of men and 81.1% of women). This demonstrates the important role of digital channels in shaping knowledge about vaccination.

Information from healthcare professionals was received by 50.1% overall, 47.1% of men and 52.1% of women, which underscores the importance of consultations with specialists and the need for their active participation in educational campaigns.

Friends and relatives remain an important source – 31.8% overall, 33.8% of men and 30.4% of women. Newspapers and magazines, as well as TV and radio, were used by 10.3% and 19.9% of respondents, respectively, with women turning to radio and television more often than men. Religious communities had virtually no influence on vaccine awareness – only 0.9% of respondents obtained information from this source.

The school where the child studies is an important channel for 6.2% of respondents, but this figure is significantly higher among women (8.1%) than among men (2.0%).

Overall, the data shows that integrating several formats is the best way to raise awareness about the HPV vaccine. For example, providing information online with consultations from medical professionals and, importantly, taking into account the role of the social environment.

ATTITUDES TOWARDS HPV VACCINATION

The vast majority of respondents who have ever heard of the HPV vaccine consider HPV vaccines to be effective (90.5%) and to have more benefits than risks (90.3%).

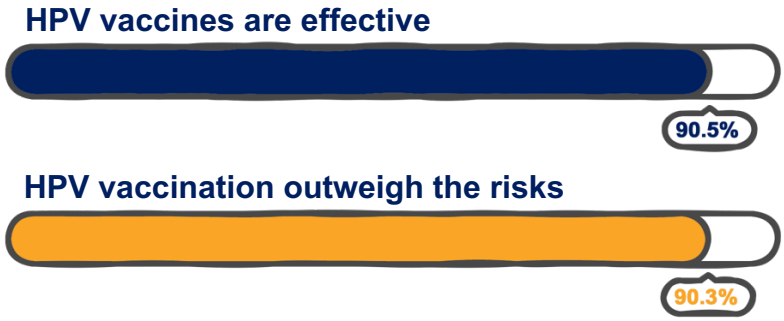

Fig. 14. Perceived effectiveness and benefits of the HPV vaccine among the adult population of Ukraine (among respondents who had ever heard of the HPV vaccine)

Most respondents express high confidence in the efficacy and safety of the HPV vaccine. Thus, 90.5% generally consider it effective. A similar trend is observed in terms of the benefit-risk ratio: 90.3% generally believe that the benefits of vaccination outweigh the risks.

Regarding the need for vaccination of children (Fig. 15), 87.1% of respondents who have ever heard of the HPV vaccine generally consider it mandatory for girls, with women more likely to support this (90.2%) than men (82.7%). As for boys, 74.9% of respondents consider vaccination necessary. This indicates higher awareness and support for vaccination specifically for girls.

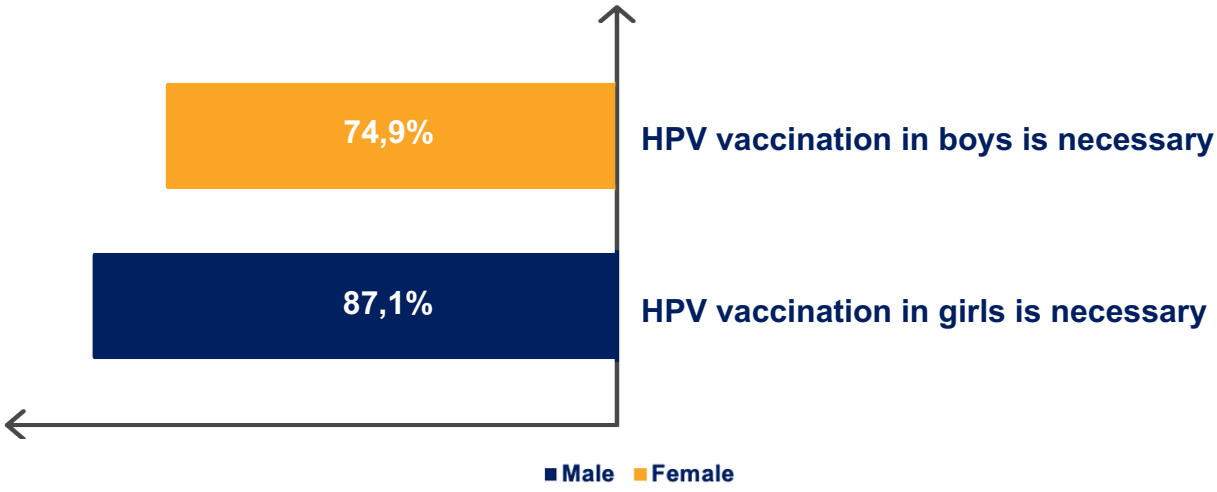

Fig. 15. Respondents' views on the necessity of HPV vaccination for children of different genders (among respondents who had ever heard of the HPV vaccine)

Respondents were aware that the HPV vaccine prevents various diseases (Fig. 16). Overall, 78.3% believe that the vaccine prevents cancer (71.6% among men and 83.0% among women). About half of respondents believe that the vaccine protects against warts (51.8%), and more than two-thirds believe it protects against papillomas (68.5%). Fewer respondents believe that the vaccine prevents infertility (29.1%), hepatitis (14.0%), or HIV/AIDS (12.4%), which indicates the spread of myths or insufficient accurate information about the vaccine's effects.

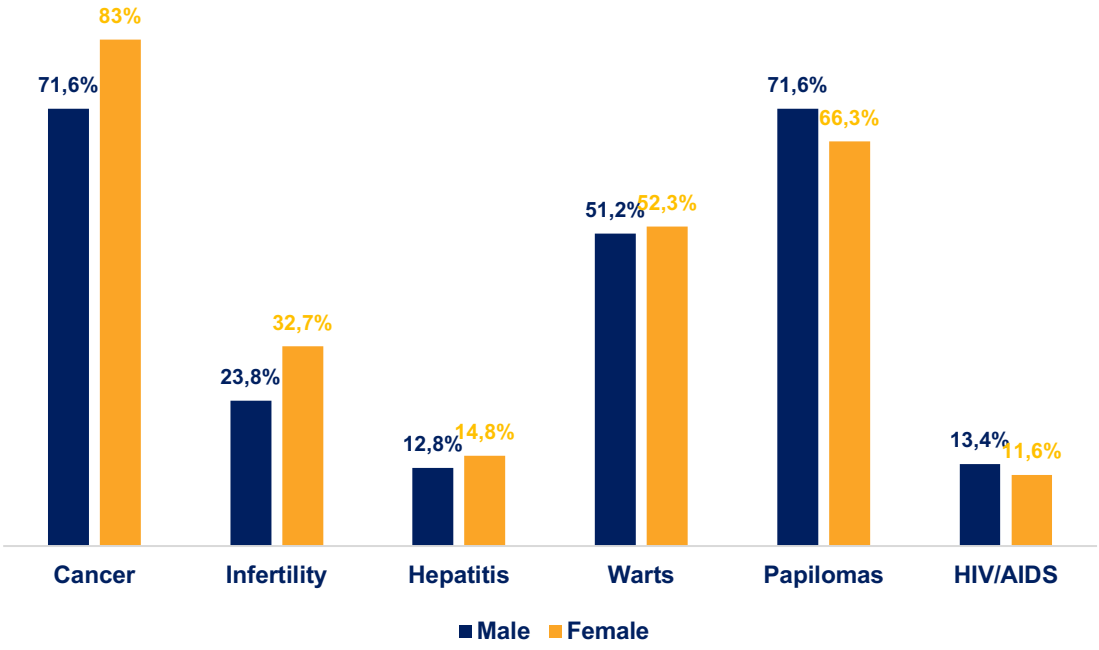

Fig. 16. Common perceptions among men and women regarding diseases preventable by the HPV vaccine (among respondents who had ever heard of the HPV vaccine)

INTENTION TO VACCINATE ONESELF AND CHILDREN

The overall level of support for HPV vaccination is very high, with significant gender differences (Fig. 17):

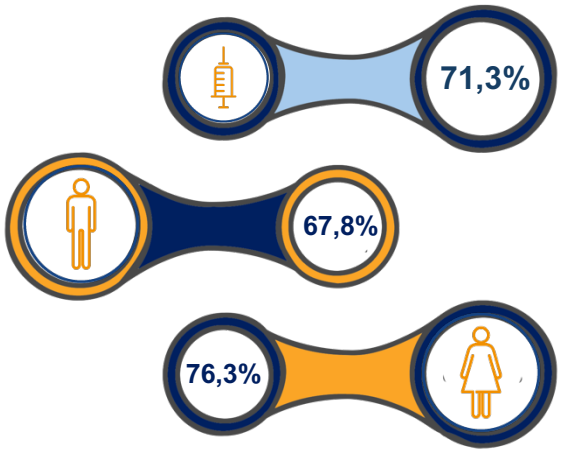

Fig. 17. Intention to receive HPV vaccination, by gender

Among all respondents, 71.3% are willing to be vaccinated against HPV, as recommended by a doctor (67.8% of men and 76.3% of women). This indicates a high level of trust in medical recommendations, especially among women.

Regarding the vaccination of children (Fig. 18), 69.7% of respondents are willing to vaccinate their son or daughter (including future children) (66.7% of men, 73.8% of women).

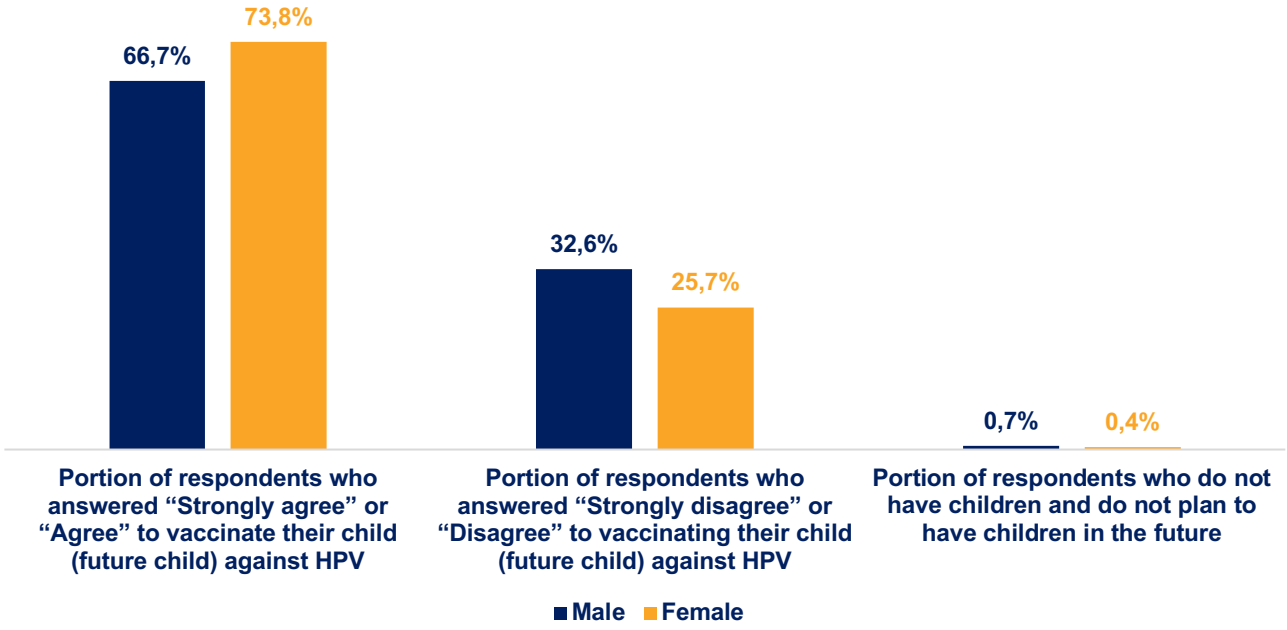

Fig. 18. Willingness to vaccinate children against HPV among men and women

Among those who did not initially plan to vaccinate their child, some respondents (29.1%) are willing to consider vaccination after receiving additional information about the risks of serious diseases associated with certain types of HPV (men – 34.6%, women – 19.4%).

However, 53.4% of respondents, including 49.0% of men and 61.3% of women, still do not plan to vaccinate their children, and 17.5% need additional information before making this decision (Fig. 19).

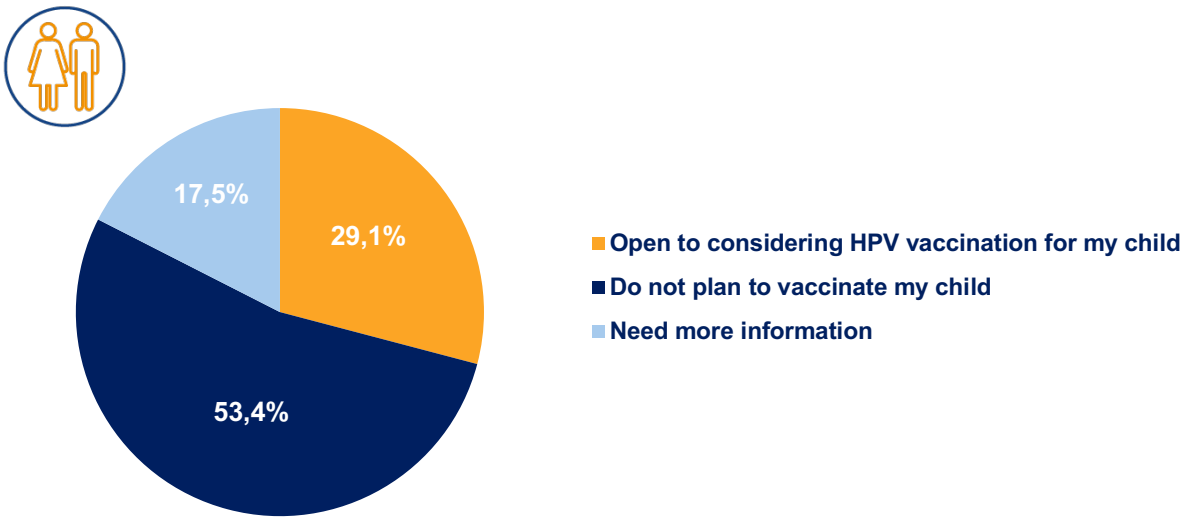

Fig. 19. Decision to vaccinate a child against HPV after receiving additional information about the risks

BARRIERS TO HPV VACCINATION

An assessment of the survey results on barriers to vaccination (Fig. 20) indicates that reluctance or inability to receive HPV vaccination is most often associated not with a single dominant factor, but with a combination of organizational, informational, and individual reasons. Respondents pointed to both structural constraints – such as the cost and availability of the vaccine, the absence of a recommendation from a doctor, or the lack of convenient opportunities for vaccination – as well as subjective beliefs, including a perceived lack of personal risk of infection, doubts about the necessity or effectiveness of vaccination, and concerns about potential side effects. At the same time, some respondents emphasized insufficient information, the expectation of additional research, or a lack of knowledge about where vaccination services are available.

This multifactorial nature highlights the complexity of the issue and the need for comprehensive approaches to address it. As emphasized in the WHO Tailoring Immunization Programmes (TIP) toolkit ?[3], such barriers can be examined through the lens of the COM-B model, which identifies three key determinants of behaviour: Capability, Opportunity, and Motivation.

Respondents' answers suggest that refusal or postponement of vaccination is driven by a range of factors that can be grouped according to the COM-B framework:

Capability (capability, knowledge and information):

- 13,2 % of respondents indicated a need for more information or additional research;
- 5% reported not knowing where the vaccine can be obtained.

These findings point to gaps in knowledge and practical information, without which individuals may lack confidence in making a vaccination decision.

Opportunity (opportunity (social, physical), external conditions):

- 19.9% reported a lack of time or opportunity to get vaccinated;
- 11.7% considered the vaccine too expensive or not affordable (women – 14.8%, men – 7.1%);
- 9.8% reported that vaccination was not recommended by a doctor.

These are structural barriers that restrict access even among individuals who may be otherwise motivated.

Motivation (motivation, beliefs and attitudes):

- 15.4% did not perceive themselves to be at personal risk of infection (men - 18.4%, women - 13.4%);
- 7.6% considered vaccination unnecessary or ineffective;
- 2.2% reported fear of side effects.

These results demonstrate the prevalence of individual beliefs that reduce willingness to vaccinate. This contrast suggests that barriers are not rooted in negative attitudes toward vaccination per se, but rather in issues related to accessibility, practical opportunities, and insufficient education.

[3] iris.who.int/bitstream/handle/10665/329448/9789289054492-eng.pdf?sequence=1&isAllowed=y

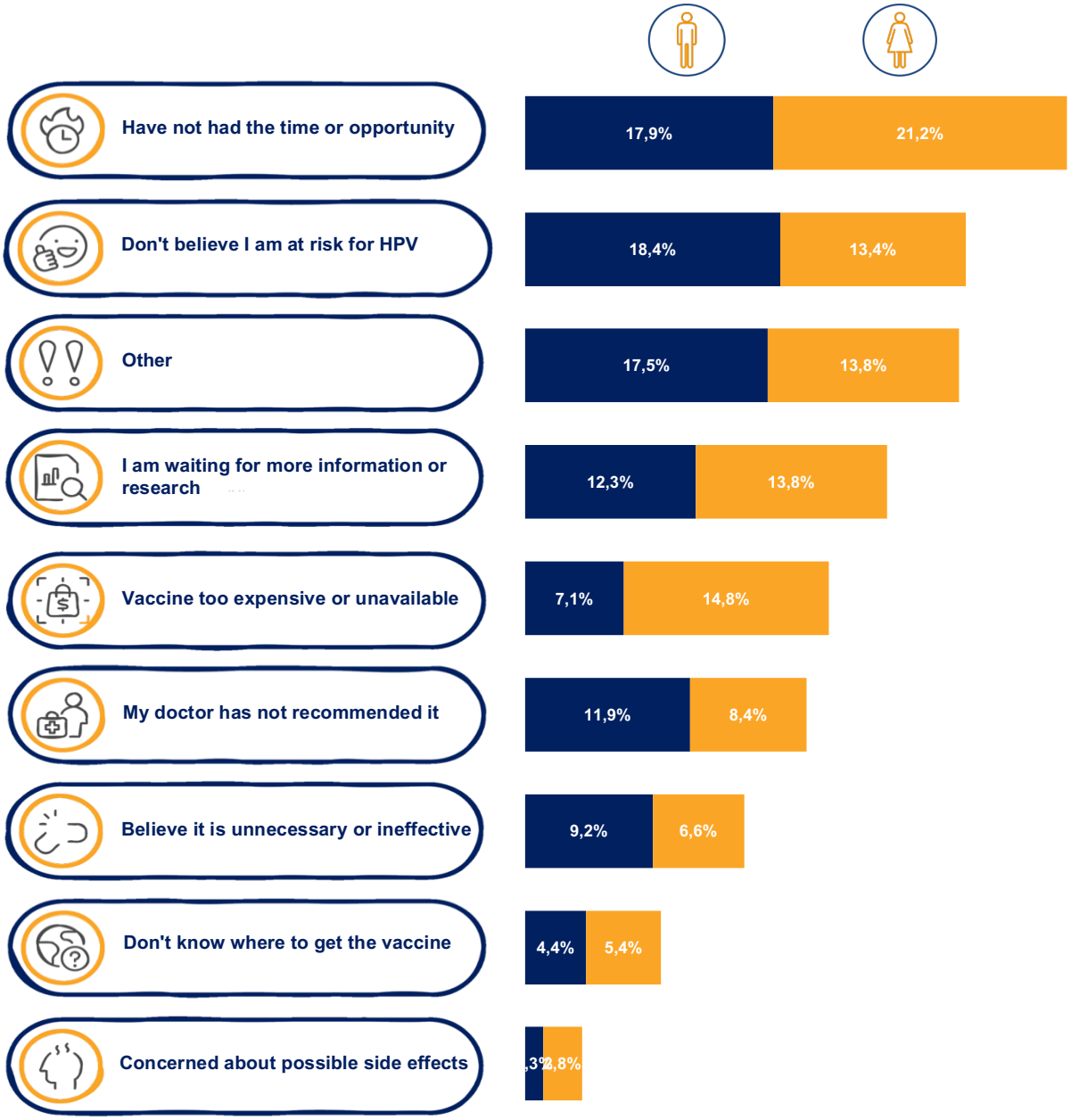

Fig. 20. Reasons for refusing or postponing HPV vaccination, by gender

It is important to emphasize that "behaviour arises at the intersection of capability, opportunity, and motivation,"[4] and that achieving sustainable vaccination coverage is nearly impossible without simultaneously strengthening all three components. Motivation is largely shaped by knowledge and opportunity (context): lack of information reinforces uncertainty, while high costs or the absence of a healthcare provider's recommendation increase the likelihood of delaying or refusing vaccination.

[4] https://iris.who.int/bitstream/handle/10665/352505/WHO-EURO-2022-4886-44649-63372-eng.pdf

At the same time, the proportions of respondents selecting individual response options are relatively small. This suggests that the findings reflect general trends rather than an exhaustive list of reasons. Additionally, 15.3% of respondents selected “Other” for not being vaccinated, indicating the presence of additional factors not captured by the predefined response options.

Further research is needed to gain a deeper understanding of how knowledge, accessibility, and motivation interact in the decision-making process.

Overall, the findings underscore that overcoming barriers to HPV vaccination in Ukraine requires comprehensive solutions – not only information campaigns aimed at increasing awareness, but also the creation of enabling conditions for vaccine access, the reduction of financial barriers, and the strengthening of the role of healthcare professionals in building trust. Only through such an integrated approach can existing awareness be translated into actual vaccination practice.

CONCLUTIONS AND RECOMMENDATIONS

The results of the telephone survey indicate an overall positive attitude toward vaccination among the adult population. However, the level of awareness regarding HPV and available prevention measures remains insufficient. Although most respondents recognize HPV as a serious health issue and can identify basic preventive measures, the findings reveal widespread misconceptions about routes of transmission and potential consequences of infection, pointing to gaps in fundamental knowledge.

The data also demonstrate clear gender differences: women showed higher levels of awareness of HPV and the HPV vaccine, as well as greater willingness to be vaccinated. A substantial proportion of the population receives information about vaccination from the internet and social media, while consultations with healthcare professionals have a significant influence on shaping behavioural intentions.

At the same time, practical, informational, and motivational barriers reported by respondents continue to hinder vaccination decision-making. Taken together, these factors indicate a gap between generally positive attitudes toward vaccination and actual preventive behaviours related to HPV. This underscores the need for more consistent knowledge-building efforts, improved service accessibility, and strengthened trust in information sources.

Based on the findings, it is **RECOMMENDED** *that:*

- ***For public health professionals:***
    - *When planning information and communication activities on HPV prevention, take into account the prevalence of misconceptions regarding transmission routes, clinical outcomes, and the preventive effectiveness of vaccination.*
    - *Differentiate communication strategies in line with the identified gender differences in awareness levels and attitudes toward vaccination.*
    - *Prioritize digital channels as the primary environment for disseminating evidence-based information on HPV and vaccination.*
    - *Provide training for healthcare system professionals to enhance competencies in primary prevention of HPV-associated cancers and to strengthen trust in vaccination.*

- ***For local governments:***

    - *Facilitate the creation of organizational conditions to improve access to vaccination at the local level.*

    - *Strengthen coordination between healthcare providers and the public sector on HPV prevention issues.*

- ***For healthcare professionals*** *(family physicians, pediatricians, obstetricians-gynecologists, nurses):*

    - *Ensure the provision of unified, evidence-based information to patients regarding the effectiveness and safety of HPV vaccination.*

    - *Promote continuous professional development in HPV prevention and risk communication.*

- ***For non-governmental organisations and media:***

    - *Ensure dissemination of scientifically sound information on HPV and vaccination in the public information space.*

    - *Limit the spread of misinformation and myth-based narratives related to vaccination.*

    - *Use digital communication platforms as a key tool for educational and awareness-raising activities.*

PUBLIC HEALTH CENTER

phc.org.ua