



PROTECT EUROPE.

PROTECTING-EUROPE

Eliminating the cancers caused
by HPV through improved
vaccination programmes

protect-europe.org

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KEY MESSAGES

- HPV causes an estimated **90,000 cancer cases in Europe each year**. Up to 30% of HPV-caused cancers are in men.
- Europe's Beating Cancer Plan, published in 2021, made gender-neutral HPV vaccination a priority. **Gender-neutral vaccination, with a 90% uptake level, is central** to the elimination of all the cancers caused by HPV.
- Healthcare professionals have a **critically important role in vaccination decision-making** by young people and their parents/carers. They must be provided with information, guidance and training about how to communicate effectively with their patients to encourage HPV vaccination.
- Public health messaging promoting HPV vaccination must, to be as effective as possible, **target specific groups, address barriers, utilise all the levels of influence on behaviour, use digital tools** and consider 'reminder and recall' systems.
- The resources developed by the PROTECT-EUROPE report – including a training programme and masterclasses for healthcare professionals and an online Hub – **will provide significant support to healthcare and public health professionals** working to improve the uptake of gender-neutral vaccination across Europe.



PROTECT-EUROPE has been the right project at the right time. Europe's Beating Cancer Plan has made HPV vaccination a priority. Not just for tackling cervical cancer but for all the cancers caused for HPV. And not just vaccinations for girls but for all sexes and genders.

The challenge is not simply to introduce gender-neutral vaccination programmes throughout the European Union, however. It is also to ensure that the vaccine reaches as many arms as possible, ideally immunising at least 90% of all young people. While a few countries have reached, or almost reached, this target, most have not.

Our project, which is based on extensive research as well as the practical experience of the many organisations involved, shows how vaccination uptake could be significantly improved through a combination of better communication between healthcare professionals (HCPs) and young people and their parents/carers and by well-designed and targeted public health messaging.

Significantly, PROTECT-EUROPE has also translated the evidence into practical online training programmes and masterclasses and made a suite of information available on a newly created online Hub.

We have an opportunity to make a significant difference, with the prize of preventing about 90,000 HPV-caused cancer cases a year in Europe.

If we don't do this now, when?



*Daniel Kelly and Plamena Nikolova
Co-Chairs, PROTECT-EUROPE Steering Committee*

INTRODUCTION AND BACKGROUND

HPV causes an estimated 90,000 cancer cases in Europe each year, **chiefly cervical cancer but also anal, penile, oropharyngeal and other cancers**. Up to **30% of HPV-caused cancers are in men**, rising to 35% in some countries. HPV also causes anogenital warts and, more rarely, a disabling breathing condition, recurrent respiratory papillomatosis (RRP). **HPV infection is most effectively prevented by the vaccination on a gender-neutral basis of at least 90% of all young people between the ages of 9 and 14 years.**

Europe's Beating Cancer Plan, published in 2021, made gender-neutral HPV vaccination (GNV) a priority. **All EU member states have now introduced, or are planning to introduce, GNV programmes** but many still have sub-optimal vaccination uptake (below 50% in several countries). The major barriers to high uptake levels are **poor access, insufficient public awareness and low vaccine confidence.**

The PROTECT-EUROPE project set out to tackle these issues **with a focus on engaging and influencing** European Union (EU) member states' health ministries, national agencies and vaccination services, civil society organisations involved in public health promotion, and clinicians with a role in vaccination. The project showed how vaccination uptake could be significantly improved through a combination of **better communication between healthcare professionals (HCPs) and young people and their parents/carers and by well-designed and targeted public health messaging.** The project also developed, and delivered, online training programmes and masterclasses for HCPs and created a suite of information available on a newly created online Hub.

PROTECT-EUROPE was developed and delivered by a consortium of more than **30 organisations from 16 EU countries** under the co-ordination of the European Cancer Organisation (ECO). The consortium members were from a wide range of backgrounds and brought multi-disciplinary skills and experience to the project. There were academic, university-based organisations, national and international NGOs (including patient associations), and clinical/professional groups.

There was also a significant contingent of young people's organisations and a sports body, the Romanian Football Federation. Specialists in monitoring and evaluation were engaged throughout the project to provide ongoing feedback and a detailed assessment at its conclusion. An EU4Health grant covered 80% of the project's costs with the remainder met by consortium members. The project began in January 2023 and was completed over two years.

90.000

Cancer cases in Europe each year are caused by HPV.

30%

Percentage of HPV-caused cancers are in men.



HPV is **primarily transmitted through sexual contact** and **almost all (up to 90%) of sexually active people will acquire HPV at some point in their lives**. There are around 200 different types of HPV and, of these, 12 are associated with a high risk of cancer. The prevalence of high-risk (ie. oncogenic, or cancer-causing) HPV infection is substantial – at any one time, 22% of men in Europe have a high-risk HPV infection; the equivalent figure for women is about 4%, rising to about 21% in Eastern Europe. In men who have sex with men (MSM) specifically, the prevalence is much higher.

Most of those with a high-risk HPV infection never experience significant symptoms or medical consequences and their bodies clear the infection within a year or two. But some people, particularly those who are immunocompromised (eg. because they are HIV+), may go on to develop a persistent infection and, subsequently, a pre-cancerous lesion or a cancer caused by HPV.

To protect everyone effectively, and more quickly, **vaccination must be delivered on a gender-neutral basis with an uptake rate of at least 90%**. This ensures 'herd protection' (when enough people are immune to protect the whole population). Vaccinating females alone, as was the case when HPV vaccination was first introduced in Europe in 2006, does not sufficiently protect men who have sex with unvaccinated women and does not at all protect men who have sex with men. There are also no screening programmes available to men to enable the early diagnosis of HPV-related cancers. Female-only vaccination programmes leave unvaccinated women at risk of infection from men.

Gender-neutral HPV vaccination (GNV) removes from females the sole responsibility for preventing HPV infection and helps to overcome stigma about female vaccination based on unfounded concerns that it encourages 'promiscuity'. GNV programmes are additionally more resilient to unexpected falls in uptake, for example as a result of a crisis of vaccine confidence, a pandemic, conflict or a natural disaster.

HPV vaccination is a very safe procedure and its impact of HPV vaccination on cancer incidence is clear with data from Denmark, Sweden, England and Scotland showing a major impact on cervical pre-cancers and cancers.

PROTECT-EUROPE set out to meet the challenge of ensuring that vaccination uptake rates throughout the EU rise to match those of the best-performing countries and ultimately reach 90% for all.

THE PROJECT FINDINGS

HCP communication with young people and their parents/carers

HCPs **have a critically important role in vaccination decision-making** by young people and their parents/carers. This means that HCPs must be well-informed about vaccination and able to communicate information effectively on a culturally sensitive basis with the support of an accessible set of patient information resources. PROTECT-EUROPE identified and developed **26 detailed recommendations** which aim to improve HCPs' knowledge and skills.

The recommendations for HCPs include:

- Providing comprehensive and understandable information for all levels of literacy
- Sharing information from reputable sources and alert about unofficial ones
- Using a presumptive approach when presenting HPV vaccination
- Giving a strong recommendation to vaccinate
- Addressing doubts and questions
- Taking every opportunity to vaccinate – and create these opportunities
- Adapting recommendations for each gender
- Getting to know the population served and be aware of socio-cultural differences
- Using support materials and offer young people, parents/carers the possibility to choose the type
- Considering delivery of HPV vaccination through schools and educational centres.

Public health messaging

It is also vital that **public health messaging promoting HPV vaccination is as effective as possible**. There is a dearth of evaluative research in this area but there is sufficient evidence to show that effective public health campaigns share some common elements.

These include:

- Targeting specific groups (eg. pre-teens, or young adults in catch-up campaigns) and addressing barriers, such as misinformation or vaccine hesitancy, by providing clear information about the benefits and safety of HPV vaccination.
- Promoting gender-neutral vaccination from a gender equality perspective.
- Taking account of all the levels of influence on vaccination behaviour when developing interventions. This means involving young people (including social influencers or ambassadors), parents and public health organisations at the local and national levels.
- Using face-to-face or personal digital devices and/or school initiatives linked to vaccination, and employing age-appropriate language.
- Consider introducing a 'reminder and recall system' which includes phone calls, text messages, (e-) mailed letters, and/or outreach visits.
- Tailoring messages that resonate with specific cultural values and beliefs. Social media and eHealth platforms may be particularly useful in this context as they can easily be adapted.

TRAINING, SUPPORT AND DISSEMINATION

The project findings were translated into a **wide range of practical outputs**, chiefly training programmes, masterclasses and other tools aimed primarily at HCPs and others with an interest in the HPV field.

Online training courses

The online training course focused on **knowledge and communication skills about HPV vaccines** and a train-the-trainer course was also developed. The main course is a 20-hour, seven-module, online programme. The train-the-trainer option contains the same content but has an additional module focusing on the skills needed to deliver the 20-hour course locally. Both courses are free, self-paced, delivered in English and hosted on a virtual learning platform, [e-oncologia.org \(e-oncologia.org/cursos/hpv-vaccines-from-prevention-to-confidence-building/\)](http://e-oncologia.org/cursos/hpv-vaccines-from-prevention-to-confidence-building/), which is managed by the **Catalan Institute of Oncology (ICO)**.

The courses, which are accredited by the European Accreditation Council for Continuing Medical Education (EACCME), are assessed and certificates available on completion if students pass an exam which tests their knowledge after each module.

Masterclasses

10 masterclasses were delivered, covering a **wide variety of themes and topics, all connected with the project's aim of improving HCPs' knowledge of HPV vaccination and their communication with young people and their parents/carers**. The first nine masterclasses were each 60 minutes long, free and online on an open-access basis. Video recordings of the completed online masterclasses are available on the project Hub and website.

The masterclass topics included the epidemiology of HPV, the optimal settings for delivering vaccination, the evidence for single-dose vaccination programmes, vaccine safety, the economics of HPV vaccination, and communicating with young people and their parents/carers.

The Hub

An **online repository for HCPs, stakeholders, parents, young people, and policymakers to access resources** on HPV vaccination, the Hub includes the project's outputs, best practices, training modules and public awareness tools. The Hub was developed jointly by ECO and the International Papillomavirus Society (IPVS) and was launched on 4 March 2024, International HPV Awareness Day.

The Hub has been designed with a focus on sustainability beyond the two years of the project. ECO and IPVS will continue to maintain and update the site while consortium partners will use it as a platform for the dissemination of the project's outputs.

Dissemination

PROTECT-EUROPE utilised a wide range of tactics to **ensure that its target audiences were aware of the project and its findings**. A key goal was to drive traffic to the Hub.

The first step was to create a strong visual identity for the project – with a distinct logo and style guide – to help ensure the project's profile and credibility with stakeholders, target audiences and more widely. A PROTECT-EUROPE website (protect-europe.org) was created and hosted on ECO's main website. Separate from the online Hub, the website aimed to be the public face of the project delivering updates on the project activities and findings and being a clear point of contact with the consortium.

ECO used its strong social media presence and large audience to **promote, disseminate and amplify the project's key messages and outputs**, including the training courses. All project posts used the hashtag #PROTECTEUROPE. The completion of PROTECT-EUROPE was celebrated at a special hybrid **'Showcase Event'** held in Brussels on 22 November 2024, immediately after the European Cancer Summit. The main project findings were presented and there was a special video address by Marcia Cross (a Golden Globe nominee with lived experience of anal cancer) and Lillian Kreppel from the HPV Cancers Alliance.

CONCLUSION

PROTECT-EUROPE has made a significant contribution to the development and implementation of high-uptake gender-neutral HPV vaccination programmes across the EU's 27 member states. It has analysed and identified the key factors underpinning effective communications between HCPs and public health services and young people and their parents/carers. This learning has been converted into accessible training, education and a suite of other tools that will improve knowledge and skills and help to undermine the pernicious impact of misinformation and fake news on HPV vaccine confidence.

All the project consortium members, as well as ECO's 50-strong HPV and Hep B Action Network members, will incorporate the learning from the project into their own work programmes and continue to disseminate it. The academic publishing that took place during the project, and which will continue after its conclusion, will help significantly.

ECO and consortium members will also be seeking further funding, from the EU and others, to continue to develop the learning and interventions developed by PROTECT-EUROPE. There is also an opportunity to extend the project's approach to another vaccine-preventable cancer-causing infection, Hepatitis B (HBV), reflecting the Council of the EU's recommendation to member states to improve cancer prevention by boosting the uptake of both HPV and HBV vaccination programmes.

PROTECT-EUROPE will help to reduce suffering, save lives and accelerate the elimination of HPV and all the cancers it can cause in all sexes and genders.

"HPV causes 5% of cancers worldwide. That need not be. More and better communication is paramount, and PROTECT-EUROPE will help provide that. It is hard to overstate the importance of this new initiative and why I have worked closely with ECO to launch it. I look forward to further collaboration on such matters, especially as I am now part of ECO's National and European Parliamentarians for Cancer Action."



Alin Mituta,
Former MEP, Member of National and European Parliamentarians for Cancer Action

RECOMMENDATIONS



It is vital that all countries' vaccination programmes are delivered on a gender-neutral basis with a target uptake of 90% to ensure effective 'herd protection', programme resilience, stigma reduction and greater gender equality.



Because of the critically-important role of HCPs in promoting vaccination uptake, it is essential that they receive appropriate advice, guidance and training on effective communication with young people and their parents/carers. This support for HCPs should be available both pre- and post-qualification.



Post-qualification education for HCPs should be provided on a continuous and ongoing basis and training and guidance programmes widely disseminated to targeted audiences. Programmes should also be available in as many languages as possible.



HCPs must be fully aware of, and reflect in their practice, the need to communicate appropriately with different demographic groups.



HPV vaccination programmes are best delivered through schools and should be supported by targeted, interactive educational interventions that boost young people's understanding of HPV and increase their willingness to receive the vaccine.



Social media and e-health platforms can play a useful role and can be adapted for specific communities by tailoring messages that resonate with socio-cultural practices and beliefs. Platforms should interactively share health information, testimonials and positive stories about vaccination.



Public health messaging promoting vaccination should be evaluated both in terms of process and outcomes in order to improve understanding of the specific determinants driving HPV vaccination awareness and acceptance.



Resources supporting the work of professionals involved in promoting uptake, such as the Hub developed for the PROTECT-EUROPE project, must be maintained on a long-term basis. They must also be freely and widely accessible to all.



Regular environmental scanning is required to ensure that local, national and global factors that could influence the uptake of HPV vaccination are reflected in the support provided to HCPs.



All countries should appoint a national HPV elimination Board or committee comprising a range of specialists, such as gynaecologists, gynaec-oncologists, school nurses, sexologists, andrologists, epidemiologists, pathologists, public health professionals, general practitioners, patient experts, young generation representatives, the government, and other organisations. Each Board would be tasked with creating a national HPV elimination strategy which would include communications.



“We all want to prevent cancer. Rarely, however, do we have a vaccine that will actually do that – and against multiple cancers – saving lives. It is essential to do everything in our power to get that message across and challenge the sceptics head-on, based on the wealth of scientific evidence we have at hand. PROTECT-EUROPE is the dynamic approach that we desperately need.”



Andreas Charalambous,
Past-President, European Cancer Organisation

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Consortium Partners



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