Multi-million-euro project to prevent infections from developing into cancer

Every year, more than two million people in Europe develop cancer, and one in eight of these cancer cases are caused by an infection that could have been prevented. That is why the EU as part of Europe's Beating Cancer Plan is now investing in preventing infections that can lead to cancer by making it easier to get vaccinated, tested and treated.

In Europe, far too many people are affected by cancers that could have been prevented with the right prevention and treatment. Altogether, infections such as HPV, hepatitis B and C, HIV and tuberculosis cause one in eight cancer cases in Europe.

Many of these infections can be prevented, detected earlier, and treated more effectively if patients receive the right support in time. For example, the number of people affected by cervical cancer has decreased in several countries after the HPV vaccine has been included in their childhood vaccination programmes.

The new EU-wide project, "SHIELD Joint Action," aims to make it easier to get vaccinated, tested and treated. The project is funded with almost EUR 20 million by the EU. A total of 25 European countries are partners in the project which will be coordinated by Centre of Excellence for Health, Immunity and Infections (CHIP), Rigshospitalet, Denmark.

"Too many people develop cancer through infections that we could have prevented. The SHIELD Joint Action will focus on ensuring that no one falls through the system. Ultimately, it's about saving lives and creating more equity in health across national borders and social divides," says Jens Lundgren, Professor of Infectious Diseases at the Department of Clinical Medicine, University of Copenhagen, and Rigshospitalet.

The SHIELD Joint Action will work to ensure that more people have access to HPV and hepatitis B vaccination and improve detection and testing for hepatitis B, hepatitis C, HPV, HIV, and tuberculosis.

In many European countries, vaccination, detection and testing programmes for these infections are already in place, but there are various structural barriers that mean that people are not vaccinated or receive the right treatment too late, so that the infection develops into cancer.

Although all EU countries have introduced HPV vaccination for girls, there are big differences in how many 15-year-old girls are actually vaccinated against HPV in each country. The figure ranges from 7 to 96 percent but is higher than 50% in three out of four countries.

Increasing and decreasing the efforts

A large part of the project is dedicated to leading experts developing models based on country data that can show what happens to the level of disease when you either increase or decrease a given intervention.

How quickly and how much does the number of people living with HIV increase in a country if, for example, preventive efforts like distributing clean needles to people who inject drugs are stopped? Or

how long or how often is it worthwhile to screen for cervical cancer in a country where HPV vaccination is part of the childhood vaccination programme?

The models will help countries plan more effective prevention and vaccination programmes. In the long term, this means that preventive services will be more accessible, more relevant, and more inclusive and cost-effective.

In addition, the project aims to:

- support countries in eliminating stigma and discrimination related to HIV, viral hepatitis, TB and STI, as a strategy to increase prevention, testing and treatment of these infections;
- train educators and healthcare professionals to avoid stigma in counselling and treatment;
- develop better and more accessible information about prevention and treatment for populations and patients – including vulnerable population groups;
- strengthen monitoring of vaccination coverage - especially among vulnerable groups;
- improve and tailor prevention, testing and treatment in the health, social and prison systems;
- collect and share experiences and best practices across Europe so that people receive better and more uniform services, no matter where they live.

"The project is a unique opportunity to collaborate across Europe. Both the European Parliament and the European Commission want to see an increased focus on the potential of preventing these infections. At CHIP, we are both pleased and ready to lead the ambitious SHIELD project," says Dorthe Raben, Director of Public Health and Operations, CHIP, Denmark.

The project will be launched on 15–16 December 2025, when Denmark's largest hospital Rigshospitalet in Copenhagen hosts the project's European kick-off meeting with participation of a wide range of European partners and experts from clinical, public health, policy and community bodies and opening addresses by the EU Commissioner for Health and Animal Welfare, Olivér Várhelyi, and the Danish Minister of Health, Sophie Løhde.

FACTS about SHIELD (Strategies for Health Interventions to Eliminate Infection related Cancers) Joint Action

- Runs until 31 October 2028.
- A total of 69 organisations from 25 countries are partners in the project. From EU/EEA: Denmark (Coordinator), Belgium, Croatia, Cyprus, Czechia, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Malta, Netherlands, Poland, Portugal, Romania, Spain, Sweden. From non-EU/EEA: Bosnia and Herzegovina, Moldova, Norway, Ukraine.
- There is a budget of EUR 25 million, of which almost EUR 20 million is a contribution from the European Union.
- For more information please visit https://shield.chip.dk.