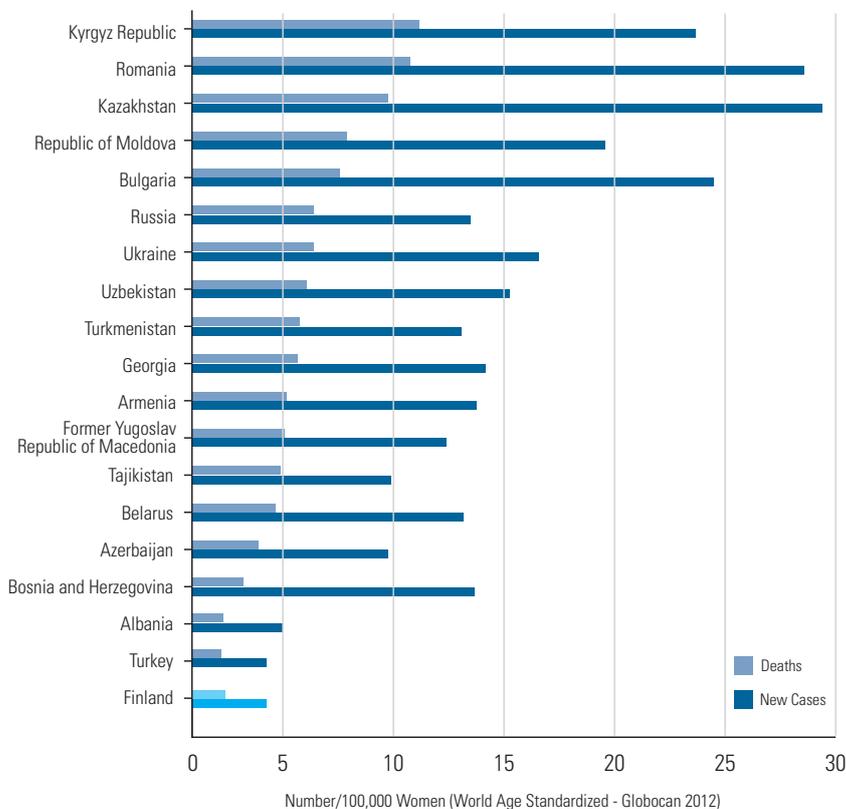


Preventing Cervical Cancer in Eastern Europe and Central Asia



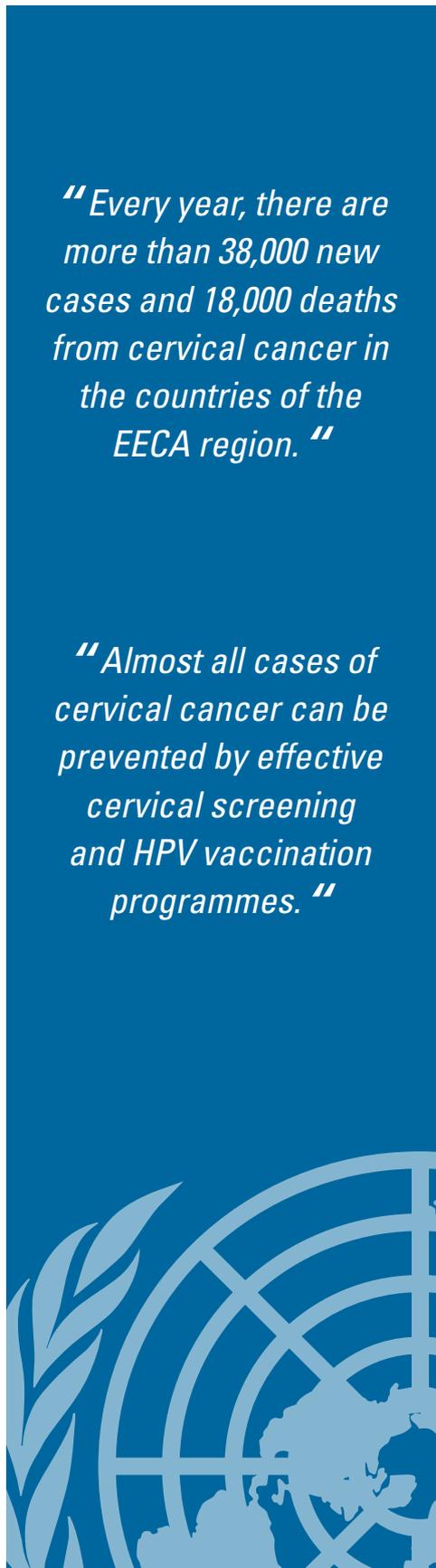
Globally, cervical cancer is the third most common cancer among women, with more than 530,000 new cases and 275,000 deaths every year.¹ Most cases occur in low- and middle-income countries where there are no cervical cancer prevention programmes. Compared to Western Europe, the number of new cervical cancer cases and deaths is up to 10 times higher in the Eastern Europe and Central Asia (EECA) region, where this disease is the second most common cause of cancer death among women. Every year, there are more than 38,000 new cases and 18,000 deaths from cervical cancer in the region.² The primary reason for the higher number of new cases and deaths in Eastern Europe and Central Asia is a lack of the high-quality cervical screening programmes that are common in Western European countries such as Finland, which now has one of the lowest cervical cancer rates in the world.³

Figure 1: New Cases & Deaths from Cervical Cancer in the Countries of the EECA Region Compared to Finland¹



“Every year, there are more than 38,000 new cases and 18,000 deaths from cervical cancer in the countries of the EECA region.”

“Almost all cases of cervical cancer can be prevented by effective cervical screening and HPV vaccination programmes.”



Causes of Cervical Cancer

Cervical cancer can be caused by any one of about 15 carcinogenic (or 'high-risk') types of the human papillomavirus (HPV).⁴ HPV is a very common sexually transmitted virus and most adults will have had an HPV infection at some time.⁵⁻⁸ However, almost 90 per cent of HPV infections are cleared naturally by the immune system and it is only persistent infections that increase the risk of cervical cancer.⁹⁻¹¹

HPV infections can lead to the development of precancerous lesions. These lesions will disappear once the HPV infection has been cleared but if the infection persists, they can progress to cervical cancer over a period of about 10 years.¹²⁻¹⁵ There are no treatments for HPV infections but the precancerous lesions can be removed using simple and effective outpatient procedures. However, these lesions do not cause any clinical symptoms and can only be identified by cervical screening.

Reasons to Prioritise Cervical Cancer Prevention

A key reason to prioritise cervical cancer prevention is because it primarily affects younger women, with the majority of cases occurring between 35 and 45 years of age. This is a time when most women are working, caring for their families, or doing both, so the social impact of cervical cancer is greatly increased because it removes mothers from their families and workers from the economy.

Another key reason is because almost every case could be prevented. Well-organised screening programmes can reduce cervical cancer rates by up to 80 per cent or by up to 90 per cent if combined with HPV vaccination of adolescent girls.¹⁶

Cervical cancer is the second most common cause of cancer death among women in Eastern Europe and Central Asia, where it is associated with enormous personal distress, social disruption, and financial costs for women, their families, and the health systems.

Furthermore, because cervical screening works by finding and removing precancerous lesions to prevent the cancers occurring in the first place, cervical screening reduces both new cases and deaths from cervical cancer. In comparison, breast screening works by finding early-stage cancers that can be treated more effectively and less expensively, with the most effective programmes reducing the number of deaths by less than 25 per cent but the number of new cases remaining the same.¹⁷ The effectiveness of colorectal screening is even lower (less than 18 per cent)¹⁸ while there are no reliable data to show that prostate screening provides any reduction in the number of deaths so current recommendations are against screening populations for this cancer.¹⁹

Finally, cervical cancer risk can now also be reduced by vaccination against HPV. There are two commercially available HPV vaccines, both of which target carcinogenic HPV types 16 and 18 that together cause about 75 per cent of cervical cancers.

When considering HPV vaccination, it is important to note:

- Neither vaccine protects against all the HPV types that can cause cervical cancer, so cervical screening remains necessary to protect women against cancers caused by these other HPV types; and
- The current vaccines provide their optimal protection when given to adolescents before the start of sexual activity and vaccine effectiveness is much lower when given to sexually active adults.

It is also important to note that the full benefits of HPV vaccination will only be realised once the majority of the at-risk population (75 per cent or more) has been vaccinated, something that has proven difficult to achieve in many countries.

The organised cervical screening programme launched in England in 1988 is estimated to save the lives of more than 4,500 women every year.²⁰

Challenges & Opportunities

European guidelines for cervical screening specify that such screening should be delivered through organised programmes.²¹ The fundamental elements of an organised cancer screening programme are summarised in Table 1.

“Currently, where screening exists in the EECA region, it is generally opportunistic, rather than organised.”

Currently, where screening exists in the EECA region, it is generally opportunistic, rather than organised. Opportunistic screening occurs when people are screened at their own request or while attending a doctor for other reasons, but there is no system in place to recruit people, monitor attendance or follow-up, and ensure all component services are of high quality. Opportunistic screening has been shown to over-screen groups with higher socioeconomic status who have a lower cancer risk but under-screen vulnerable groups, who have a higher cancer

risk. As a result, opportunistic screening provides sub-optimal cancer reductions, increases the harms (such as over-diagnosis, over-treatment with clinical complications, etc.), increases health inequalities, and wastes healthcare resources. In contrast, organised screening programmes are designed specifically to maximise the benefits while minimising the harms for the population being screened. Organised cancer screening programmes provide the optimal balance between benefits and harms, ensure the benefits are equitably delivered across all social strata, and deliver the most cost-effective reductions in cancer rates.

In addition, the majority of EECA countries offer cervical screening and cancer treatment free of charge but very few cover the cost of following-up a positive screening test or the treatment of precancerous lesions. As the objective of cervical screening is to identify precancerous lesions that can be removed so the cervical cancers do not develop in the first place, it is pointless to offer cervical screening for free unless the follow-up of positive screening tests and the treatment of precancerous disease are also free.

A further concern is that very few EECA countries collect the quality assurance data required for effective programme operation. The cervical screening process includes a number of subjective judgements so strict quality control to optimise these services is a prerequisite to the safe and cost-effective delivery of cervical screening.

Finally, the two commercially available HPV vaccines have been licensed in almost all EECA

countries so HPV vaccination is widely available but primarily through private providers on a patient-pay basis. Programmes providing free HPV vaccination to adolescents have been launched only in the Former Yugoslav Republic of Macedonia (2009) and Kazakhstan (2013), while Uzbekistan is planning to launch a programme in 2015.

Table 1: Fundamental Elements of an Organised Cancer Screening Programme

1	A stable budget sufficient for the on-going costs of all of the services required to deliver the programme.
2	A central administration with responsibility for screening policy and coordinating all elements of the screening process including recruitment, recall, follow-up, monitoring, quality assurance (QA), and continuous quality improvement (CQI).
3	Access to a current database of the target population for recruitment, monitoring, and CQI.
4	A central screening registry to record screening and follow-up test results, treatment outcomes, etc. that are needed for call, recall, follow-up monitoring, and QA/CQI.
5	Access to a cancer registry for CQI and programme audit.
6	Evidence-based training standards, clinical guidelines, performance indicators, and standards.
7	A comprehensive QA policy covering the entire process from initial recruitment to the management of disease.
8	Education programmes for the general public and for healthcare providers.
9	Mechanisms to identify and recruit disadvantaged groups within the target population.

Policy Recommendations

The social and economic burdens of cervical cancer have clearly been recognised across the EECA region as cervical screening and cervical cancer treatment are offered free of charge in the majority of EECA countries. However, the key elements required for safe and cost-effective cancer prevention are missing in the vast majority of EECA countries. Therefore, government policy should focus on establishing the national mechanisms required for the progressive implementation of organised cervical prevention programmes that will ensure these services are of high quality and can be equally accessed by all women in the target population.

Legislative Review

Legislation should be reviewed and revised as necessary to ensure the efficient integration of cervical cancer prevention into the health system and the health services involved in cervical screening (taking the initial screening test, processing the

screening test, counselling women with a positive screening test result, follow-up of a positive screening test by colposcopy and biopsy, and the treatment of precancerous lesions) are provided free for all women in the target population.

“Government policy should focus on establishing the national mechanisms required for the progressive implementation of organised cervical prevention programmes.”

Cancer Registry

The availability and reliability of data on cancer rates is one of the key issues to be addressed and

strengthening the capacities of national cancer registries to meet international standards should be considered a priority. Cooperation with technical institutions is essential to review the current status of the National Cancer Registry, to identify capacity gaps, and to implement recommendations for any improvements that may be required.

National Cervical Cancer Prevention Advisory Boards

A national cervical cancer prevention ministerial advisory board, composed of representatives of all relevant national stakeholder groups and supplemented with external expertise as required, could be established with the authority and resources needed to:

- Undertake a full capacity assessment to quantify the services required for cervical cancer screening and HPV vaccination programmes (i.e. a comprehensive cervical cancer prevention programme).
- Estimate the capacity-building requirements and costs for implementing a cervical cancer prevention programme, based on the outcomes of the capacity assessment.
- Decide on the most cost-effective sequencing of programme implementation actions, based on the estimated capacity-building requirements and costs relative to the benefits provided.
- Establish the cancer screening coordination office within the relevant national agency (such as the National Institute for Public Health) as an organisation with the authority and resources to direct the implementation and operation of the cervical screening programme including:
 - Preparing and publishing cancer screening policy documents including:
 - ◆ Cancer screening policy
 - ◆ Cancer screening service specification
 - ◆ Cancer screening QA and CQI policies
 - Leading review and revision of legislation affecting the delivery of the health services required for the cancer screening programme to ensure the legislative environment facilitates the safe and cost-effective operation of the cervical screening programme.
 - Preparing a structured plan for the progressive building of the capacities needed to deliver the cervical screening programme, based on the cancer screening service specification and the results of the capacity assessment.

- Effectively coordinating the cervical screening programme with the HPV vaccination programme to optimise reductions in cervical cancer rates.

Progressively Establish the Cervical Cancer Prevention Programme

It is essential for policy-makers to recognise that taking a screening test or administering HPV vaccination are very small parts of a cervical cancer prevention programme, and that these programmes will not provide safe and cost-effective reductions in cervical cancer rates unless the organisational elements outlined above are also implemented. Without these organisational elements, it is highly likely that any screening or vaccination that is done will provide little or even no reductions in cervical cancer rates while still costing the health system a substantial amount of money.

The implementation of cancer prevention programmes is challenging because it requires the coordinated interaction of multiple health services at all levels of the health system. Therefore, the steps outlined in Section 3.3 above are essential and these programmes therefore need to be progressively implemented over a period that is compatible with available budgets.

The key elements for successful cervical cancer prevention are therefore:

- Preparation of a comprehensive implementation plan that effectively addresses national institutional capacities and is compatible with health-sector priorities
- Progressive but sustained implementation of the plan over a period that is compatible with the mobilisation of technical and financial resources
- Building upon and strengthening the capacities of the existing health services so the programme is implemented as an integral part of the health system, not as a separate vertical service
- Approaching cervical cancer prevention in this fashion will optimise the safety and cost-effectiveness of the prevention programme, ensure its sustainability, and maximise the benefits for the health system as a whole.

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