REPORT ON THE 2007 INTERNATIONAL WORKSHOP ON HUMAN PAPILLOMAVIRUSES AND CONSENSUS RECOMMENDATIONS FOR CERVICAL CANCER PREVENTION

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SUMMARY

National and international experts in cervical cancer prevention met at the International Workshop on Human Papillomaviruses and Consensus Recommendations for Cervical Cancer Prevention to review the current evidence and assess the potential for improvement in cervical cancer prevention and to develop plans for implementation of cervical cancer prevention programmes in Croatia. Key recommendations were developed and adopted during the course of the meeting. The process of bringing national experts together with internationally recognized experts in an open forum for the development of consensus recommendations could serve as a model for other countries seeking to implement or improve cervical cancer prevention programmes.

Key words: cervical cancer, prevention, screening, HPV vaccination, Southeast Europe, Croatia

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INTRODUCTION

Elucidation of the causal role of oncogenic Human papillomavirus (HPV) types in cervical cancer (1) has led to rapid advances in HPV testing and vaccination in recent years with the prospect of further improvements in cervical cancer prevention.

Approximately 9,000 women develop cervical cancer and about 4,600 die from the disease each year in Southeast Europe (Albania, Bosnia & Herzegovina, Bulgaria, Croatia, Cyprus, Greece, Former Yugoslavian Republic of Macedonia, Moldova, Romania, Serbia & Montenegro and Slovenia) (2, 3). In most of these countries, opportunistic cervical cancer screening has been practiced for decades although cancer rates show that the effect of these approaches is limited, while the burden of disease could still be substantially reduced by implementation of organised, population-based screening programmes.

Croatia initiated opportunistic screening in 1953 and subsequently saw cervical cancer incidence rates drop from 26 to 14/100,000 women-years (4, 5). However, incidence rates have remained stable for the past 15 years and the country is now seeking to establish an organised, population-based screening programme to achieve further reductions in this disease. In order to ensure the optimal efficacy of this programme, an international workshop on HPV and cervical cancer prevention was held from 18 to 21 April, 2007, in Cavtat, Croatia, to review the current evidence and develop consensus recommendations on cervical cancer screening and HPV vaccination. An international colposcopy training course held under the auspices of the European Federation for Colposcopy was held a day after the workshop.

The workshop was organised by the Ruder Bošković Institute, the Croatian Society for Colposcopy and Cervical Pathology of the Croatian Medical Association, the Croatian Society for Clini-
Cervical Cancer Screening

Over 80% of cervical cancer cases and deaths can be prevented by effective, organised screening programmes (6).

The burden of cervical cancer in Croatia, although lower than in some new EU member states and applicant countries, is still a significant public health problem (2, 7, 8).

Despite considerable expertise and available resources for cytology-based screening (8), Croatia has yet to implement an organised screening programme aiming for further reduction of the burden of cervical cancer, as recommended by the Council of the European Union in 2003 (9) and the European Guidelines for Quality Assurance in Cervical Cancer Screening (10).

Plans for the implementation of an organised screening programme have been prepared by the members of the 2003 Working Group of the Croatian Ministry of Health and Social Welfare (4, 8, 11). A summary of recommendations for Croatia was prepared by the members of the 2003 Working Group and presented at the current meeting. The participants of the International Workshop on HPV and Consensus Recommendations for Cervical Cancer Prevention endorse and support the proposal of the 2003 Croatian Working Group to implement an organised cervical cancer screening programme.

Implementation of the screening programme should begin with population-based pilot projects in which the adequacy of all programme elements, including quality assurance, is successfully demonstrated. This will permit timely and appropriate modifications during the rollout phase.

Prior to sending initial invitations, and prior to expansion of successfully piloted activities to other parts of the country, the responsible authorities are advised to consult internationally recognized experts in cervical cancer screening to ensure that the following key points have sufficiently been taken into account:

- Uniform national screening policy (targeted age groups, eligibility, screening test and interval) based on population-based screening
- Mechanisms to discourage unorganized screening due to its inherent limitations with respect to quality assurance (QA) and cost-effectiveness.
- Financial plan and sufficient resources for all components of the screening programme, including the infrastructure for data collection and QA, and management of screen positives.
- Professional guidelines and legally binding, comprehensive QA regulations for organised screening fulfilling the standards and recommendations of the EU guidelines (9). Special provision should be made for: population-based invitation and evaluation; specialized training; uniform documentation and continuous monitoring and quality improvement based on a computerized information system covering the entire screening process; feedback to health professionals with the purpose to inform and educate; programme coordination; and certification.
- Framework for evaluation and monitoring based on complete cancer registration and linkage with screening data bases.
- Coordinating institution with overall responsibility for programme implementation and QA.
- Programme evaluation, including requisite organizational aspects.
- International collaboration and cooperation in QA and evaluation.
- Comprehensive information on the programme, adequately addressing the needs of the target population, the general public and the media, health professionals, stake-holders and decision-makers.
- Encouragement of high participation of women in screening and compliance to recommended management of screen-positives through appropriate, balanced, evidence-based information of the benefits and risks, which enables women to make an informed choice.

HPV Vaccination

The participants in the workshop also note that HPV vaccines have shown efficacy in prevention of cervical cancer precursors related to the HPV types included in the vaccine. This development is welcomed, because the vaccines have the potential to improve cervical cancer control through primary prevention. However, many aspects of immunization policy need to be clarified (12), and the greatest impediment to widespread implementation is the current excessive cost of the vaccine.

Although prophylactic vaccination is likely to provide important future health gains, cervical screening must be continued. HPV vaccination and screening are complementary preventive strategies. Neglecting screening in favour of vaccination has the potential to paradoxically lead to an increase in the cervical cancer burden (13). Therefore, implementation of vaccination should not replace implementation of organised screening. If resources are limited, priority should currently be given to implementation of a population-based screening programme. Furthermore, if HPV vaccination is implemented it should only be offered through a population-based approach, with a population-based vaccination registry and other monitoring mechanisms that can be linked to the screening and cancer registries (14).

Management of Abnormal Cervical Smears

A group of experts attending the workshop developed additional consensus recommendations for the management of
abnormal cytology and cervical intraepithelial neoplasia (CIN), which are on line with the European Guidelines for Quality Assurance in Cervical Cancer Screening (10).

CONCLUSION

The process of international cooperation and collaboration in reviewing the evidence and assessing the prospects for cervical cancer prevention in a multidisciplinary workshop was highly effective in reaching an expert consensus on recommendations for Croatia. This exercise could be useful for other countries preparing to implement or improve cervical cancer prevention programmes.

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REFERENCES


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