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Improving cervical cancer screening in Baltic, central, and eastern European countries

Cervical cancer is a disease with a high social and psychological burden, for which screening has shown efficacy and cost effectiveness.[1] However, implementation of cervical cancer screening has been proving difficult in several European countries (eg, Bulgaria and Romania), resulting in delayed adoption of effective treatment. After a 2010 European Parliament resolution called for the enactment of cancer prevention programmes (mainly cervical, breast, and colon cancer), some European Union member states set up screening programmes, while others began to implement organised cervical cancer screening.[2] Notably, organised screening is more effective than spontaneous screening in reducing cervical cancer incidence and mortality.[3] However, even in some European countries with organised screening, coverage is inadequate. The incidence of cervical cancer is higher in women who have not been invited to screening or have not accepted the invitation to be screened.[4] These considerations suggest a close connection between scientific evidence (ie, incidence and mortality rates) and the implementation of a sound screening programme.

In *The Lancet Oncology*, Salvatore Vaccarella and colleagues[5] provide comprehensive information about cervical cancer incidence in six Baltic and central and eastern European countries (BCEE)—Estonia, Latvia, Lithuania, Belarus, Bulgaria, and Russia—as well as projections for cervical cancer rates for 2017–40 in these countries. A previous article[6] reported high cervical cancer incidence in BCEE states, without estimating future projections, and had suggested that preventive actions should be urgently implemented. The latest study by Vaccarella and colleagues therefore completes the information about cervical cancer in BCEE states, and its findings are interesting for many reasons. The authors used population-based registry data and an age–period–cohort model approach to develop cervical cancer incidence projections in two scenarios: no change (ie, continued absence of screening; scenario A) and introduction of screening from 2017 onwards (scenario B). Without effective screening programmes, cervical cancer incidence is expected to continue to rise in nearly all six BCEE countries studied, whereas the adoption of effective prevention and screening would achieve a gradual reduction of up to 50–60% in cervical cancer by 2040.[5] In this age–period–cohort model, the period effect could be viewed as the result of the enactment of effective screening programmes that would reduce the cervical cancer incidence trend and the cohort effect as the action exerted by human papillomavirus (HPV) vaccination on the cohorts that would subsequently undergo screening. The period effect will also correlate with screening coverage.

These findings portray a dismal scenario, and should stimulate further consideration because they

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emphasise the need for urgent adoption of health policy actions and initiatives tailored to each country and area. Such policies should aim, on the one hand, to improve cervical cancer prevention and screening, and on the other, to manage the large number of cervical cancer cases that are expected in clinical practice. The findings of the study by Vaccarella and colleagues suggest the value of studying neighbouring countries such as Romania, which is characterised by high mortality and incidence rates and low screening coverage.[1] Additionally, all the countries reviewed by the authors have a high incidence of cervical cancer, largely opportunistic screening, low screening coverage, and use of the Pap smear as the primary test (except in the St Petersburg area of Russia, where the HPV test is in use). Screening in BCEE countries could be re-organised by replacing the Pap smear with the more sensitive HPV test,[2] thus creating a new era for cervical cancer screening in these countries. A further strategy to enhance participation is self-sampling, which has shown adequate accuracy in HPV testing.[7] Indeed, according to a 2015 study,[8] home mailing of a self-sampling kit proved effective in increasing screening participation, even in programmes that used the HPV test as the primary test. This approach would be especially useful for young women aged younger than 39 years, for whom screening is a high priority, but might also make testing more practical and acceptable to older women (aged older than 59 years). In addition to increasing participation directly, this approach might also ensure high rates of compliance in subsequent rounds of screening.

Although well designed, the study by Vaccarella and colleagues has some minor limitations, especially with regards to the data from Russia. These data must be considered with caution, both because they come from local registries (rather than the population-based cancer registries used for the other countries) and because the International Classification Disease, 9th revision, codes are not always accurate.[6] Indeed, several deaths from uterine cancer are sometimes simply coded as tumour of the uterus, which provides no information about whether they were caused by cervical cancer or tumours of the body of the uterus.[4] According to Mathers and colleagues,[9] the quality level of data coming from Russia is D2 (ie, suboptimum). This low quality might result in skewed projections and strategies. Nonetheless, the projections estimated by Vaccarella and colleagues provide a useful scenario that could be reassessed if higher quality data from Russia become available. The continuous improvement in the quality of epidemiological data collection provides crucial support to public health decision-makers. Russia is actually a high-income country[10] and could therefore potentially afford to increase health-care spending and improve the quality of its epidemiological data.

In conclusion, cervical cancer screening programmes in BCEE countries should be based on existing European guidelines and harness the facilities, personnel, and economic structures available in each country and area. However—and crucially—this is not merely a health-related issue, because prioritisation of cancer prevention will also go a long way towards reducing social inequalities in these countries.

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