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National cancer screening programme in Hungary

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Abstract

In order to improve the extremely poor health status of the Hungarian population, a National Public Health Programme has been established. In its framework, a nation-wide organized screening program has been developed for earlier detection of breast, cervical and colorectal cancers. The programme development, management structure, the information and financing system and quality assurance is described. Special attention is given to the obstacles in the way of effective screening activities.

Background

It is a common knowledge that the health status of the Hungarian population is desperately bad (1). The life expectancy of both men and women – even if it has been slightly increasing over the last two decades – is still significantly below the average of most countries of the European Union. The high incidence of and the extremely high mortality from the major non-communicable chronic diseases is a major problem. Cardiovascular diseases are the leading cause of deaths being responsible for half of overall mortality, and, cancer ranks the second, causing one-quarter of all deaths. However, with regard to potential year of life lost (PYLL), cancer exceeds that of the "number one killer", the cardiovascular disease.

This is why reducing the overall mortality, and cancer mortality in particular, is a major concern of the Hungarian government. To this effect, in the year 2000, a National Public Health Programme was established (2), the overall aim of which is to improve the health status of the population, to reduce the incidence and mortality by means of appropriate interventions, such as advocating for healthy lifestyle, programmes promoting health protection and health development by all possible ways, and – most importantly - encouraging organised cancer screening programmes on a population scale, being – at present - the most promising way of the reduction of cancer mortality.

The immediate aim of screening is to identify disease or its precursor lesion in individuals without signs or symptoms of a particular disease in a community early, possibly in an asymptomatic stage, and to bring those with abnormal test result to medical attention earlier than the individual would have sought for it, in order to reduce suffering for more advanced, possibly incurable state of the disease. The ultimate aim of screening is enabling earlier intervention and management in the hope of reducing mortality.

Organized screening

In Hungary, organised screening programme – as opposed to the opportunistic one – has been developed on the basis of "the state of the art", following the recommendations made by competent international agencies, such as the International Agency for Research on Cancer of WHO (IARC), International Union against Cancer (UICC) (3), and most recently, by the European Council in 2003 (4). In this context, organised screening means periodic examination of large segments of the population by tests that are scientifically justified and can be recommended to apply as public health measure; the screening efforts are initiated by the provider health care system, and centrally financed by the government; the target population is defined and invited to attend a screening examination offered by the health care system. In this way, the population coverage of screening is fairly complete and well-recorded, and non-respondent can be identified and recalled.

According to the rules of "evidence-based public health policy", those tests can be applied as screening tool that have proved effectiveness in terms of reduction of mortality from the target disease in the target population, attributable to the screening efforts. Up to now, there are three screening modalities that satisfy these epidemiological criteria. Those are: screening for breast cancer by mammography, cytology-based screening for cervical cancer, and screening for colorectal cancer by detection of the occult blood in the stool. As to the screening strategy, the age limits of screening (the age when to commence screening, and the age when screening is no longer necessary) has been decided for each screening modality, in accordance with the state of the art (2).

In Hungary, in line with the above recommendations, efforts have been made to introduce these three screening modalities on service basis into the health care system.

Programme development and management structure

In the frame of the National Public Health Programme, a national policy decision on introduction of organised population screening for breast, cervical and colorectal cancer was made in 2001 (2). The objectives of the programme have been defined as to contribute by one-third to the planned reduction of the overall cancer mortality by some 10%.

The responsibility for the planning, development, coordination, monitoring, evaluation, and quality assurance of the screening programme has been delegated to the Office of Chief Medical Officer (5).

The "supply side" of the programme

First, the administrative capacity was developed to serve the programme. Subordinated to the Deputy Chief Medical Officer, a Screening Co-ordination Department, assisted by 20 "regional screening coordinators", employed by the county Institutes of the Service of Public Health and Medical Officers (ÁNTSZ) has been established and properly staffed (6,7).

To provide an information system for the programme, as a central database, the Cancer Screening Registry has been in operation, whose tasks are to set up the notification list as a basis for personal invitation by handling the personal identification data of those eligible for screening, receiving data from the database of the Health Insurance Fund, and, to collect process and outcome indicators for statistical purposes, for monitoring and evaluation.

Mammography units, cytology laboratories and clinical laboratories to perform FOBT have been contracted as screening units, each of them having proper diagnostic facilities required by verification of non-negative test results, and therapeutic background to take care of screen-detected cases. Early detection without early treatment does not make any sense.

Protocols have been provided to perform the call-and-recall screening in a protocol-governed way. Multidisciplinary advisory groups for each screening modality have been brought together to judge the degree to which the programme is accomplishing its aims and objectives, and a detailed manual entitled "Organised Screening in Oncology" published supporting those engaged in

screening activities.

The screening programmes have been financed from the regular health budget of the health care system, and co-financed by the Health Insurance Fund.

The current status of programme implementation

Although the "supply side", meaning the necessary prerequisites of an efficient screening activity is being met, the screening efforts in Hungary are not without any problems. The shortcomings present themselves on the "demand side" i.e. the utilisation of the offered screening, in other words, low compliance. The difficulties are manifold: the anomalies of the health care system (breast screening), paralysing effect of traditions (cervical screening), or the scarce resources and debates on methodological issues (colorectal screening). Psychological factors, such as anxiety about undesirable adverse effects, poor health behaviour of the population and the likes might be considered.

Screening for breast cancer started is 2002 (8). All over the country, 42 mammography screening units are in place, supported by all the necessary diagnostic and therapeutic background. The compliance with the offered screening is rather high: approaching but not reaching the target (60%). The outcome of breast screening is comparable with those in other countries. However, the number of those receiving mammography examinations outside the programme, in other health care settings is nearly as high as of those screened within the programme. This is because many women – not waiting for the biannual invitation but by diagnostic referral – go to unauthorized mammography, even if those radiologists performing mammography outside the programme are in lack of skill for "looking for needle in a haystack". Another reason is the mammography check-up of those receiving hormone replacement therapy because of osteoporosis.

The cervical screening was introduced in 2004 (9). However, it can be judged as a qualified failure so far, as the compliance is unacceptably low. This is because cervical screening has a long tradition in Hungary. Traditionally, the "gatekeepers" of opportunistic screening were the gynaecologists; and the traditional practice when "cervical screening" was equivalent to "gynaecological screening" has become fixed in the mind of the public. The great majority of eligible women – not waiting for an invitation letter, or receiving but ignoring one – go to a gynaecologist who perform a complete gynaecological examination along with smear-taking for cytological examination. In this way, a fairly high number cervical screening takes place outside the organised screening settings (10). All of our efforts to change this "traditional protocol" have proved to be in vain so far. In an effort to bring this obsolete to the current "state of the art", most recently, model programmes are on their way on a small scale: smears are taken by midwives, and in non-negative case, the patient is referred to gynaecologist by the midwives. The early experiences are encouraging.

As to colorectal screening, country-wide activity has not yet been initiated because of a debate between the gastroenterologists and the public health community on the strategy of screening (11). The clinicians argued for the "one-step" strategy recommending colonoscopy examination "once in a life time" (that seems to be impracticable on a population scale) , while the public health community was for the "two-step" strategy, meaning biannual immunologic detection of occult blood in stool, followed in all non-negative cases by colonoscopy to verify or to rule out the suspected lesion. After a period of hesitation, a Consensus Conference was held in late 2008 that decided for the immunological occult blood testing. Following that, model programmes with limited scope and scale have been carried out so far, with cooperation of volunteer primary care practices. The early experiences are encouraging so far, and we are prepared to extend the screening activity – depending on availability of resources - country-wide in the near future.

Quality assurance

Quality assurance of each component of screening process is an integral part of the programme; however, until recently, there have been two legal obstacles to implement. One, to link any health-related of any individual (screening data are considered such) to any individual had been strictly prohibited by the "data protection law", thus the screening registry could only handle anonym, aggregated data. Second, the record linkage between various databases, for example data exchange between National Screening Registry and National Cancer Registry was also forbidden by law. Recently, the data protection law has changed, overcoming these obstacles. As a result, reorganisation of information support system of screening programme, and, establishing working links with the National Cancer Registry has been in progress. From now on, a comprehensive quality assurance system would be operated, all the necessary quality indicators, including interval cancers, the most valuable indicator of the programme, could be created and followed (12).

Conclusions

In Hungary, since the Government expressed its political will to improve the health status of the population, and, further this line, following a policy decision to screen, a frame for nation-wide screening programme has been established that – in line with the competent international recommendation and protocol – is capable of providing screening for early detection of breast, cervical and colorectal cancers. The workable system is in place; however, its enormous potential for reducing mortality from respective cancers is not fully exploited. The obstacles of full utilisation of the system are identified, and efforts to overcome them are made. We strongly believe that – in the not too far future – the national screening program would be able to achieve its overall objective: contribution to the reduction of mortality from the target diseases of screening.

References

1. Ádány R (ed): Health status of the Hungarian population on the turn of millenium. Medicina. Budapest. 2003. (In Hungarian)
2. "Public Health Program for the Healthy Nation 2001-2010". Egészségügyi Közlöny 2001/16. 2001. augusztus 21. (In Hungarian)
3. Hakama M, Miller AB, Day NE. Screening für Cancer of the Uterine Cervix. IARC Scientific Publications No.76. IARC Lyon. 1986.
4. Council Recommendation of 2 December 2003. on cancer screening.Official J. Eur. Union 2003/878/EC. Pp. 34-38.
5. 1991. XI. Act on the Service of Public Health and Medical Officers modified by 2001.XXXIV. Act. (In Hungarian)
6. Kovács A, Döbrőssy L, Budai A: A programme for organized population screening. In: Dózsa Cs. Sebestyén A. (eds) Prevention and traetment of Head- and Neck tumours. OEP. Pécs. 2003. pp. 31-54. (In Hungarian)
7. Kovács A, Döbrőssy L, Budai A et al: The status of population screening in Hungary in 2006. Orv. Hetil. 148:435-440. 2007. (In Hungarian)
8. Kovács A, Döbrőssy L, Budai A et al: The status of breast screening in Hungary in 2006. Orv. Hetil. 148: 879-885. 2007. (In Hungarian)
9. Kovács A, Döbrőssy L, Budai A et al: The status of cervical screening in Hungary in 2006. Orv, Hetil. 148: 535-540.2007. (In Hungarian).
10. Kovács A, Döbrőssy L, Budai A et al Cervical screening in Hungary: why the "English model" works, and the "Hungarian model" does not? Eur. J. Gynec. Opncol. 29: 5-9. 2008.
11. Döbrőssy L, Kovávs A, Budai A et al: Debeted issues in colorectal screening: conflict between clinical and publis health viewpoints. Orv. Hetl.2011. In Press (In Hungarian)
12. Kovács A. Döbrössy L, Nagy A. et al: New avenues in the quality assurance of organized screening. IME 10. 26-30. 2011. (In Hungarian)

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