Introduction

The charge to our workgroup was to address the screening process: specifically, for different methods of screening or with multiple options for screening, how should a colorectal cancer screening service be organized, and what national factors might lead to different strategies for screening delivery?

For many years it has been believed that the early detection of colorectal cancer through screening could reduce the burden of this disease in the many countries worldwide in which the risk is high. During the past 30 years this belief has been transformed into a strategic reality. This transformation has resulted from a clearer understanding of the natural history of colorectal cancer as it evolves through the pre-cancerous adenoma stage, and technological advances that permit earlier detection of cancer, detection and removal of adenomas, accurate diagnostic work-up of people with positive screening tests and effective curative surgical treatment. There is now strong evidence from randomized trials and case–control studies that this approach is efficacious in reducing the incidence and mortality of this disease [1]. While additional evidence will be forthcoming over the next few years, and while new technology is emerging, there is a compelling need to turn our efforts towards the implementation of widespread screening at this time in order to save lives.

Current status of screening worldwide

Each member of the workgroup presented the status of screening activities in the country they represented. The experience of the nine countries represented in our group was supplemented with data gathered through an international survey conducted under the auspices of the World Organization for Digestive Endoscopy (OMED). This survey provided data on screening activities in 58 countries [2]. Additional published information on the status of colorectal screening worldwide was also available [3]. Each of the nine countries represented by the workgroup had at least a pilot feasibility program for colorectal cancer screening under way, but many countries represented in the survey had little or no formal screening program. It was clear that, overall, screening rates in the general population are low, but tended to be higher in organized feasibility programs. While multiple screening strategies were offered in most countries, the feasibility programs usually offered a single test, most commonly fecal occult blood testing. Flexible sigmoidoscopy was less utilized, and screening colonoscopy even less so. There was a consensus that there were insufficient resources for screening colonoscopy on a large scale in any country.

Key issues in screening

Effective implementation of screening requires an organized approach, within the framework of a comprehensive cancer control program. A multidisciplinary approach should include key professional societies, the media, industry and public advocacy groups. The role of the general population and other primary care providers in the screening strategy should be defined. High levels of provider and patient awareness and participation are essential to the success of a screening program.
The workgroup recognized that there might be considerable opportunities for screening in a community outside of an organized program. However, there are many benefits to having an organized program, including: (i) the public and providers’ greater awareness of all aspects of the disease, its prevention, diagnosis and treatment; (ii) higher quality screening; (iii) more accurate and thorough diagnostic workshop of positive screenees; and (iv) more timely treatment. Providers should be encouraged to have organized programs for these reasons, but opportunistic screening should not be discouraged when organized programs are not in place. Any screening that meets basic criteria for quality is better than none. However, providers of opportunistic screening should be encouraged to systematically follow the many guidelines that have been published and are widely available [1, 4, 5].

Barriers and challenges to screening

Poor patient/provider awareness, as well as poor integration of colorectal cancer screening into primary care practice, remains a major barrier to improving rates of screening. Having a variety of competing screening options can lead to confusion and thus may contribute to low uptake of colorectal screening. Public health messages should stress the importance of screening, and not emphasize any specific test. Inadequate resources (trained staff, too few facilities, low provider reimbursement) also are major barriers. Many challenges exist including: raising awareness in the community, raising provider awareness, integrating screening into primary care practices, communicating evidence on benefits versus risks clearly and accurately, and optimizing utilization of available financial and clinical resources. Recent evidence clearly indicates that the advantages of screening outweigh any potential for harm [6, 7].

Recommendations for action

The workgroup felt that there were several important steps required for a screening program to be successful. These steps include: planning before the program is initiated; the actual implementation of the program; and monitoring of the program in order to evaluate its success in terms of participation by the public and providers, quality, and outcome, as measured both by short-term performance and longer term efficacy.

A. Planning the screening program

(i) A target population should be identified, i.e. asymptomatic men and women, age, risk factors.
(ii) The decision to implement colorectal cancer screening should be based on the relative burden of colorectal cancer in the population to be screened.
(iii) The screening strategy (test, interval, age range) should be based on medical evidence, availability of resources and level of risk.

B. Implementing the screening program

(i) Identify the target unit for implementation, and assure communication (training and education) to providers (general practitioner and other) and the target population.
(ii) Develop and disseminate guidelines on screening, diagnosis, treatment and surveillance.
(iii) Develop methods for initial patient enrollment and follow-up.

C. Monitoring the screening program

(i) Careful, timely monitoring of the following rates: screening uptake, rescreening and follow-up of positive tests.
(ii) Compliance with surveillance recommendations.
(iii)Measurement of program quality should be in place, and evaluated regularly.
(iv) Outcomes including: detection rates; cancer stage distribution, adenoma detection, complications and, finally, effect on and population incidence and mortality.

Summary

The burden of colorectal cancer is high worldwide, and is increasing in many countries. It has the highest incidence of all digestive cancers worldwide, high mortality rates and a high cost to the community. Organized screening programs could significantly reduce mortality from colorectal cancer. Several highly effective screening strategies to achieve this goal are available today [1, 4, 5]. These screening strategies should be implemented within organized programs where possible in order to stimulate an increased awareness among the public and providers of the burden of the disease and the potential to reduce this burden through effective screening, diagnosis and treatment. When organized screening is not possible, opportunistic treatment in the community should be encouraged within the framework of available resources and guidelines. In either instance, a large effort on the part of multidisciplinary groups including providers, public advocacy groups, the media and industry is required. In order to reduce the burden of colorectal cancer, numerous issues related to the choice of public health strategies need to be resolved. Is colorectal cancer screening better delivered in ‘stand alone’ settings or co-located in comprehensive centers with other cancer screening programs (e.g. Pap smear, mammography)? Can we develop an international terminology for describing the quality and effectiveness of screening programs? How do we maximize participation rates in the face of multiple colorectal cancer screening strategies, and different cultural orientations to
the variety of testing strategies? What is the potential of emerging technologies?

On a worldwide basis, the efforts and commitments of national and international organizations should be integrated with global initiatives already under way, such as those supported by the International Digestive Cancer Alliance. This Alliance was founded by the World Organization of Gastroenterology (OMGE), OMED, the United European Gastroenterology Federation (UEGF), European Society of Gastrointestinal Endoscopy (ESGE) and the Cancer Research and Prevention Foundation (CRPF). Recently its mission and campaign goals were outlined at a meeting at the Vatican in Rome, and a preliminary report of the meeting published in the OMGE/OMED newsletter [8].

Finally, where screening is available, people aged over 50 years should be encouraged to act now, to discuss testing with their health-care provider and to be screened for colorectal cancer. The best test is the one that gets done, and any screening modality is better than none. The tendency for procrastination, i.e. to postpone action in anticipation of future, more promising technology that is more attractive, must be discouraged. In the world, approximately 2000 people will die every day from this disease. Strategies available today can cut this death toll in half.

References