Evaluation and optimisation of the colorectal cancer screening programme

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Executive summary

Health Council of the Netherlands

At the request of the State Secretary for Health, Welfare and Sport, the Health Council of the Netherlands has conducted an evaluation of the colorectal cancer screening programme and reviewed what improvements could be made.

Colorectal cancer screening for all 55-75-year-olds since 2019

Colorectal cancer is a common form of cancer, with nearly 13,000 people being diagnosed in 2021. Since the early stage of colorectal cancer is clearly identifiable and develops slowly, the disease can be detected and treated at this early stage. Population screening for colorectal cancer was introduced in 2014. The programme was introduced gradually because the target group was too large to allow everyone to start at the same time. Implementation was completed in 2019, and since then, everyone between the ages of 55 and 75 has been given the opportunity to be screened once every two years. The screening relies on a stool test that is used to look for blood in faeces. If the test indicates higher haemoglobin levels than the cut-off value, this will be followed by referral for a colonoscopy. This colon examination detects and removes adenomas (an early stage of colorectal cancer) and colorectal cancer. In 2021, over 1.6 million people made use of the population screening, and colorectal cancer was detected in more than 2,700 participants.

Population screening appears to be effective

The ultimate goal of the population screening is to reduce mortality as a result of colorectal cancer. It has not yet been possible to demonstrate such a decrease, because the screening programme was only fully implemented a short time ago, and it takes years before an impact of population screening on mortality can be demonstrated. However, there are results from the trial screening programme, the current screening programme and modelling that indirectly show that the programme prevents mortality as a result of colorectal cancer. Based on those data, the Committee expects that the intended goal will be achieved in due course. The Committee considers the risk-benefit ratio of the screening programme to be favourable: the benefit (preventing death) outweighs the risks (such as unnecessary referrals for colonoscopies where no relevant abnormalities are detected and the associated burden and concern).

The current programme should not be modified at this stage

The Committee has assessed whether further improvement of the screening programme can be achieved through calibration of the cut-off value, the interval or the age limits of the target group or by applying risk stratification (distinguishing between subgroups).
This appeared not to be the case in the current situation. There are insufficient persuasive arguments in favour of modifying the screening programme at this time, given that the risk-benefit ratio is favourable under the current setup and the screening programme is still being developed. This does preclude possible improvements being made in the future. In view

of this aspect, the Committee has made a number of recommendations.

Review of potential improvements in the future

The Committee recommends carrying out a review into offering a one-off stool test (FIT) for participants around the age of 50, prior to the regular screening. In the opinion of the Committee, this may have health benefits for participants with colorectal cancer or an early stage of colorectal cancer. A trial screening programme may show to what extent health gains are indeed achieved and how significant the disadvantages are. The Committee recommends that the trial screening programme be carried out at a regional level and it should not be offered nationwide until the results are in. After all, a one-off test for participants around the age of 50 may yield insufficient health benefits and entail too many disadvantages as well as an unfavourable risk-benefit ratio.

The Committee also recommends that a review be carried out into risk stratification, so the advantages and disadvantages, participation rates, cost effectiveness and feasibility can be determined. A partial study into these aspects is already underway: Erasmus MC is reviewing various screening intervals depending on the haemoglobin levels detected in faeces.

The Committee expects risk stratification to have added value in the future. It is, however, crucial that a broad discussion be conducted beforehand to determine what the targets should be and what is regarded as an improvement to the risk-benefit ratio.

Finally, the Committee recommends continued investment in increasing the participation rate among the youngest target groups and among people with a low socio-economic status.

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