



Rijksinstituut voor Volksgezondheid
en Milieu
*Ministerie van Volksgezondheid,
Welzijn en Sport*

Decision making and
implementation of the
Dutch Bowel cancer
screening program:

The role of commitment
and communication

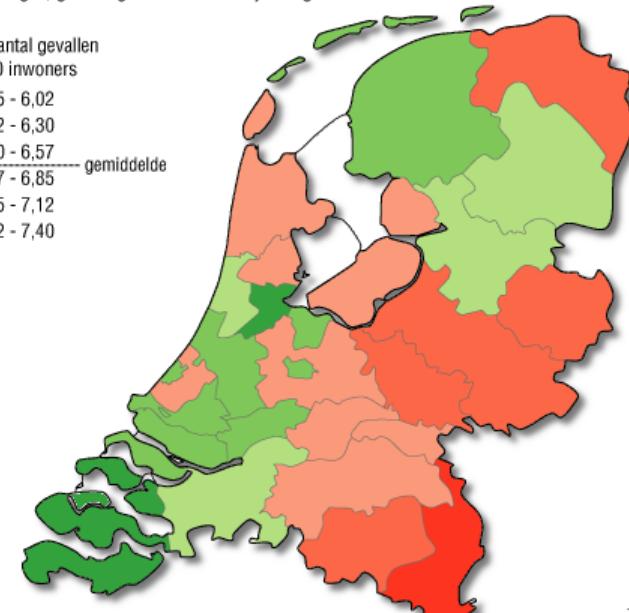
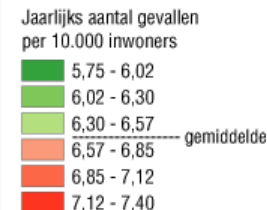
Harriët van Veldhuizen,
program director, RIVM



Bowel cancer in the Netherlands

- Bowel cancer is the **third most common cancer**
- New cases: 6,5 per 10.000 inhabitants
- In 2011:
 - ... bowel cancer was diagnosed in over 13,000 people
 - ... approximately 5,000 people died of bowel cancer
- 90% of cases occur in people aged **55 or older**

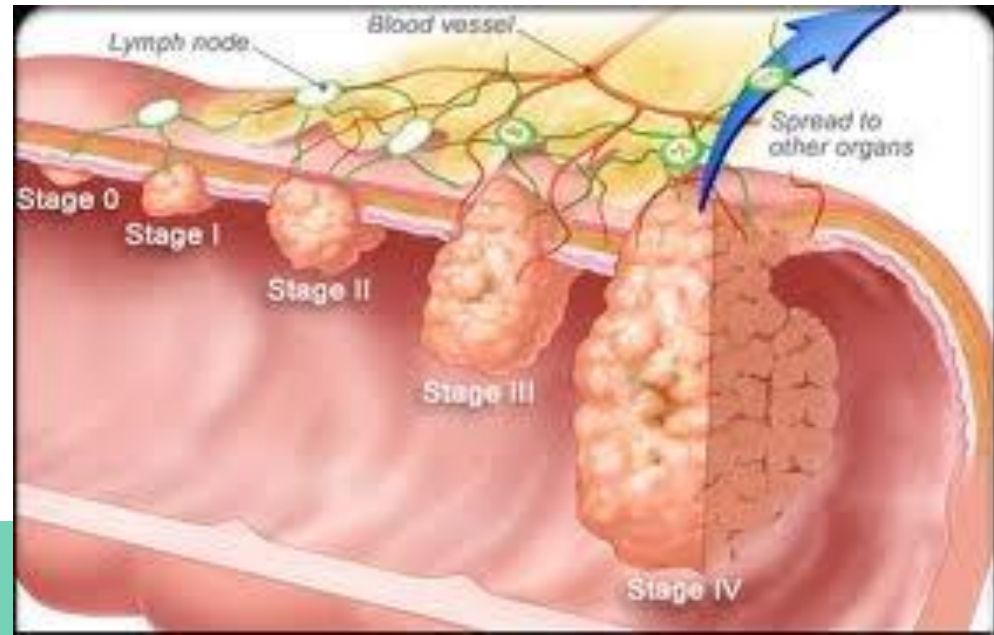
Aantal invasieve colorectaal tumoren 2003-2006
per GGD-regio, gecorrigeerd voor leeftijd en geslacht





Bowel cancer in the Netherlands

- CRC has intensive treatment, burden to the patient, high risk of complication at high costs.
- The average 5-year survival rate: **59%**
 - For stage I: **94%**
 - For stage IV: **8%**





Why screen for bowel cancer?

- Polypectomy, **prevention** of bowel cancer
 - 60% of 65+'ers have polyps; usually benign
 - Some polyps evolve to a malignant tumour: bowel cancer
 - Prevention of bowel cancer by removal of polyps
- **Early detection of bowel cancer**
 - Less burden for patient
 - Greater chance successful treatment

Less morbidity and mortality





Process of Decision making in the Netherlands to start a bowel cancer screening programme

2005: Start of pilot screening programmes

- GFOBT
- iFOBT (FIT)
- Colonoscopy and Sigmoidoscopy
- CT colonography



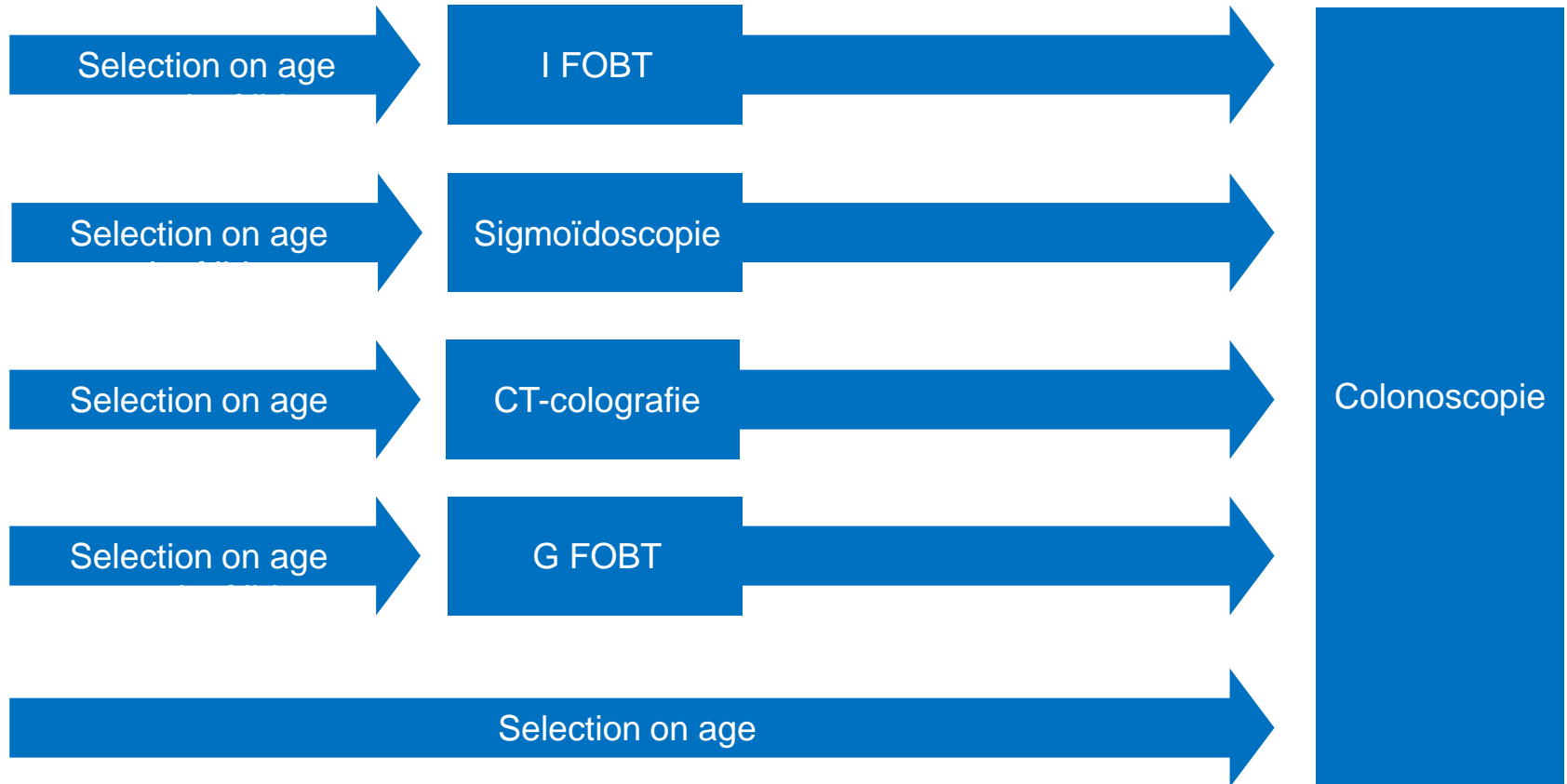
2009: Advisory report issued by the Dutch Health Council
Screening method, Health gain, cost effectiveness,
balance desirable and undesirable effects

2009 Minister of health: there is enough evidence.

Questions: Feasibility, capacity and costs -> feasibility study



Strategies





Tabel 5 The relative merit of the six screening methods.

	gFOBT	iFOBT ₇₅	Sigmoido- scopie	Colonoscopy	CT colo- nography	Molecular markers
Attendance	+	++	-	?	?	?
Evidence	++	+	±	±	±	±
Test performance	±	++	+±	++	++	+
Less burdensome	+	++			±	+
Less risk	++	++	+		+	++
Cost-effective	+	++	+?	+?	?	?
Less colonoscopy capacity needs	++	+				?

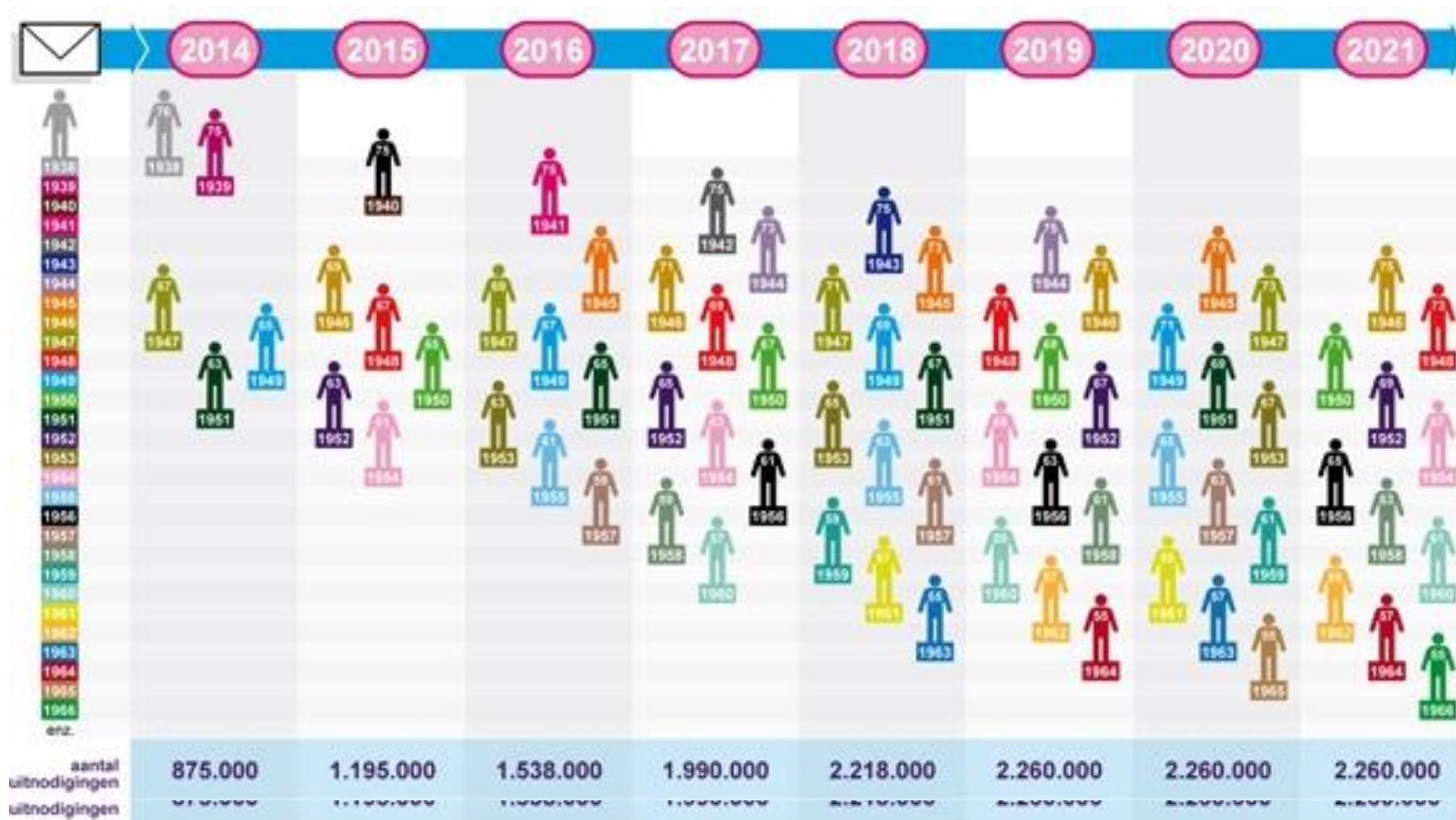
- Report Dutch Health Council, 2009

Strategy iFOBT cut off 75 ng/ml





Phased introduction





Facts and figures

(nation wide coverage in 2019)

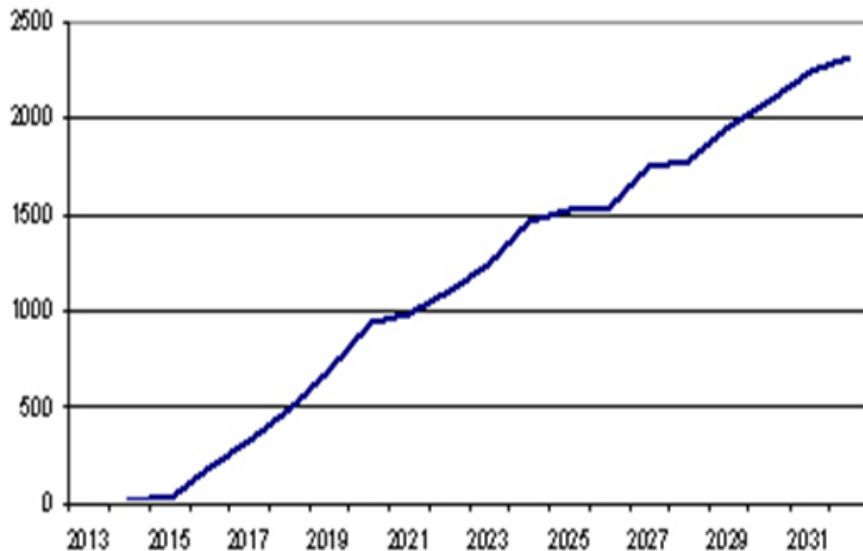
Target population (men and women 55-75 jaar)	4,4 mln
Number of invitations per year (time interval invitation 2 years)	2,2 mln
Number of screeningtests (iFOBT) per year (expected participation: 60%)	1,3 mln
Number positive iFOBT per year	85.000
Number colonoscopies after positive iFOBT per year (85% uptake)	72.000



Evidence

health gains

- The average 5-year survival rate for bowel cancer is: **59%**
- The forecast 5-year survival rate after screening : **85%**

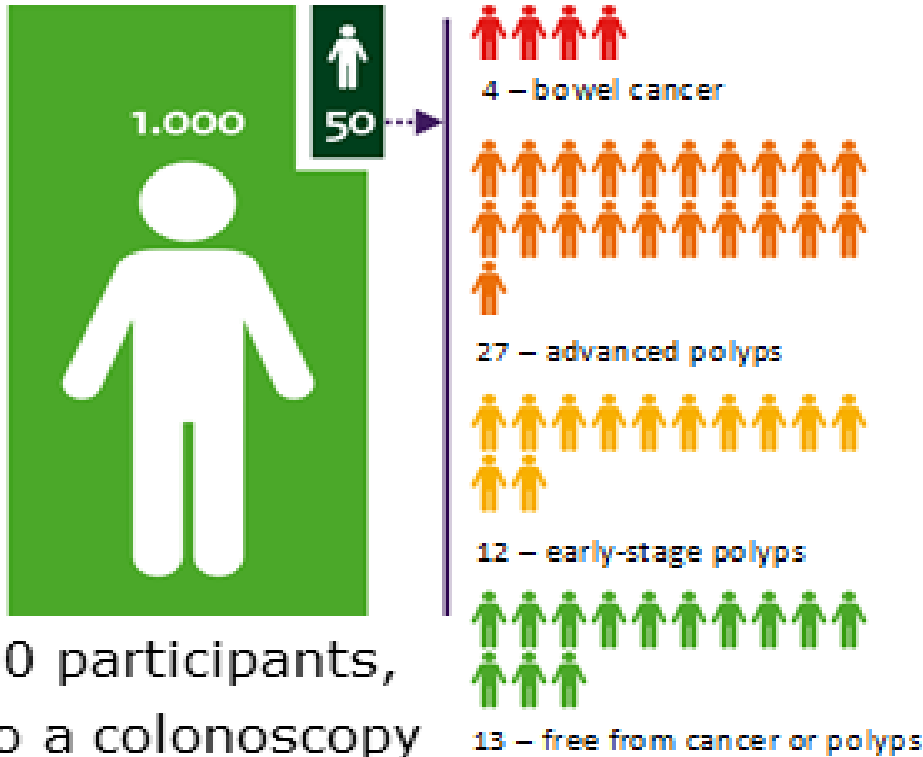


Forecast:
*in the longer term
assuming full Implementation*
**2,400 deaths prevented
each year**



Chance of abnormalities in colonoscopy

What are the possible outcomes?



Out of 1000 participants,
50 undergo a colonoscopy



Advantages vs disadvantages

Advantages

- Early detection of polyps.
- Treatment less burden.
- Fewer deaths from bowel cancer.
- Stool test is free.



Disadvantages

- Anxiety, overtreatment.
- Does not provide 100% certainty, people can be falsely reassured.
- Risks associated with colonoscopy.
- Possibility of having to pay for part of treatment.



Other arguments

- Cost per life year gained: €2200
Limit for assessment of effectiveness of prevention programmes in NL : max. €20,000
- Complications occur in approx. 2 out of 1000 colonoscopies
- Repeated screening : sensitivity bowel cancer up to 80-90%



2009: Pending decision, enough evidence

Factors affecting the strength of evidence

- Quality of evidence
- Uncertainty about the balance desirable-undesirable effects
- Uncertainty or variability in values and preferences
- Uncertainty intervention is wise use of resources



[Details >>](#)



But what if or how to

- Capacity of colonoscopies is not sufficient: waiting lists
- Quality of endoscopists or iFOBT labs is different: complications / intervals
- GP does not refer a screened person with positive iFOBT and hemorrhoids
- Death of complication after colonoscopy
- Target group doesn't want to wait: Opportunistic screening
- Finance of screening program and extra colonoscopies

START OF FEASIBILITY STUDY

[Details >>](#)



Lead-up to the launch of national bowel cancer screening programme

- 2010- April 2011: Feasibility study and action plan conducted by the National Institute of Health and Environment
- June 2011: Ministerial decision: Start preparations
- Sept 2013: Start of pilot
- Jan 2014: National launch





Funding in two systems

Screening programme

- Ministry of Health funds:
 - RIVM for coordination
 - Screening organisations for execution of program



Follow-up: Colonoscopy, treatment and surveillance:

- covered by Health Insurance Act
- Financial agreements on annual budget by government, health insurance companies and hospitals

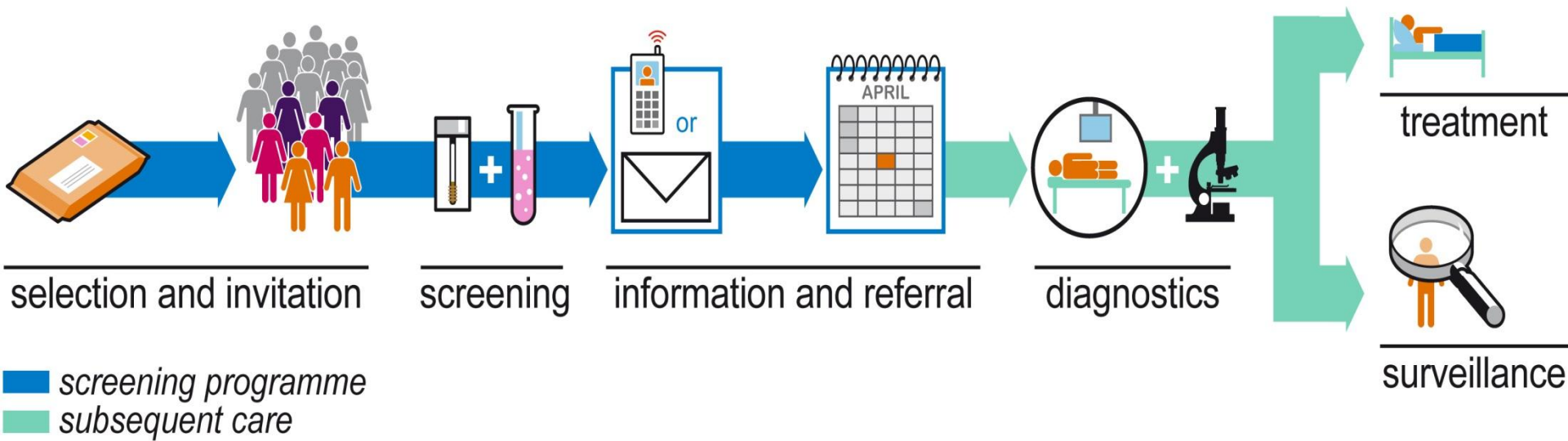


Alignment of screening and care

Effective, efficient and reliable

PRIMARY PROCESS

Schematic representation of the bowel cancer screening programme, including subsequent care





Organization of the program

- **Commissioner:** Ministry of Health
- **National Coordination:** RIVM

Advice: National Committee

Quality standards, finance, communication, monitoring & evaluation, IT

- **Operation**
 - 5 screening organizations (also breast and cervix screening)
 - 3 iFOBT laboratories
 - 70-90 centres for colonoscopy
 - 50 pathology laboratories
 - 8500 general practitioners







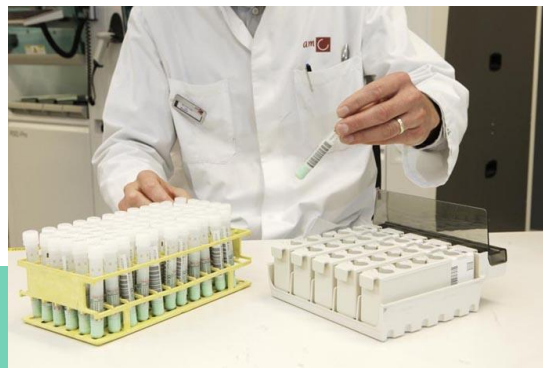
National uniformity, high quality and small delays in all steps of chain

Quality assurance:

- Quality standards and indicators
- Benchmark & audit centres and labs
- Monitoring and evaluation of program

Risks, for example colonoscopy:

- Expected differences in quality endoscopists
- Interval cancers
- Complications





Quality of colonoscopy; differences between endoscopists

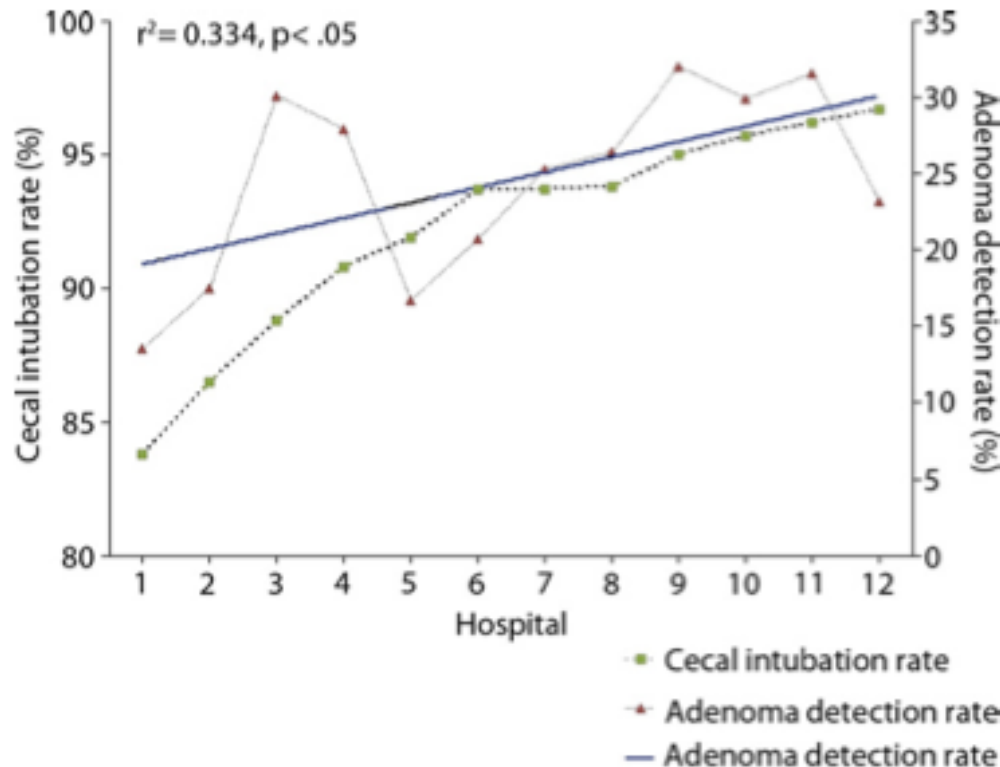


Figure 2. Correlation between adjusted cecal intubation and adenoma detection rate.

Admission programme

- Registration 100 colonoscopies
- E- learning
- Examination skills
- 250 endoscopists passed the exam



Complications and experience endoscopist

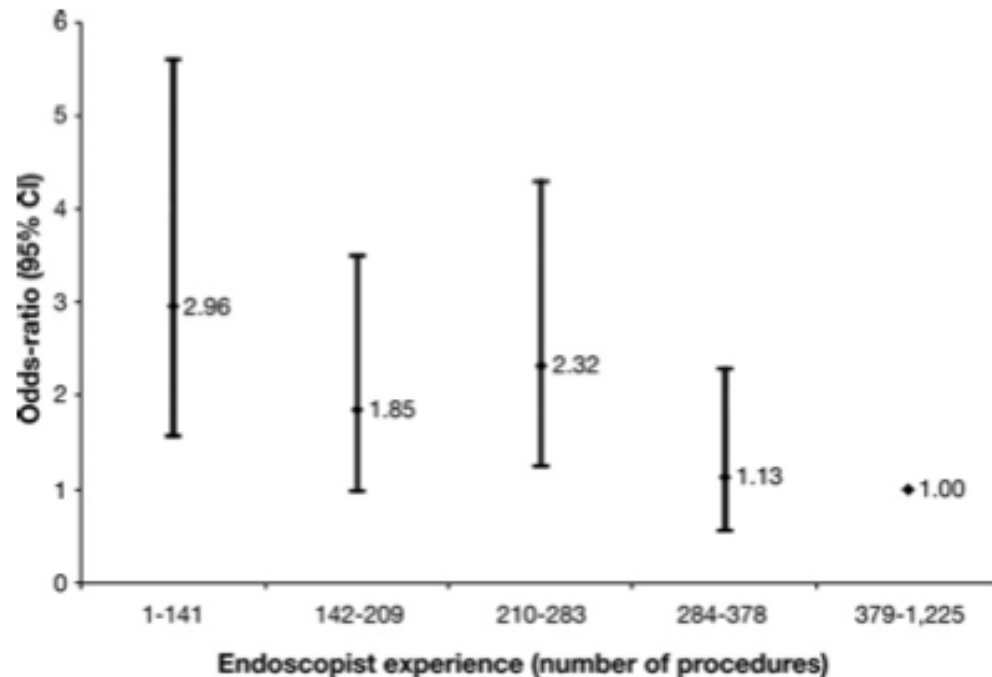


Figure 1. Results from multivariable model in Table 5 showing odds ratio for colonoscopy-related bleeding or perforation according to annual colonoscopy volume of endoscopist.

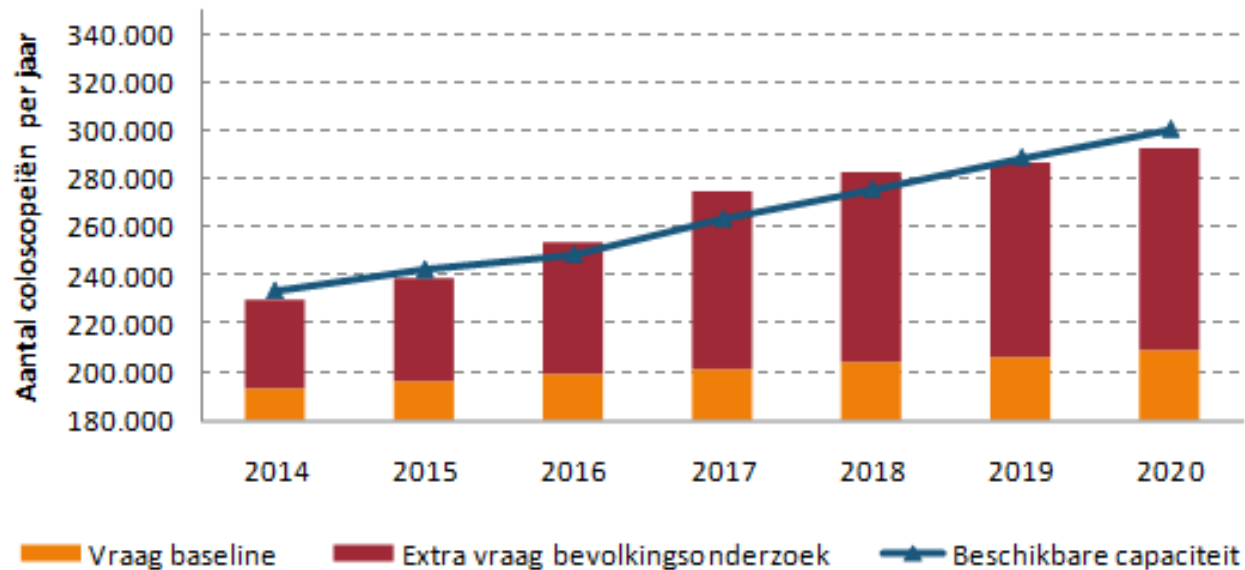
Protocol for the authorization and auditing of colonoscopy centres and endoscopists

- 90 colonoscopy centres are authorized



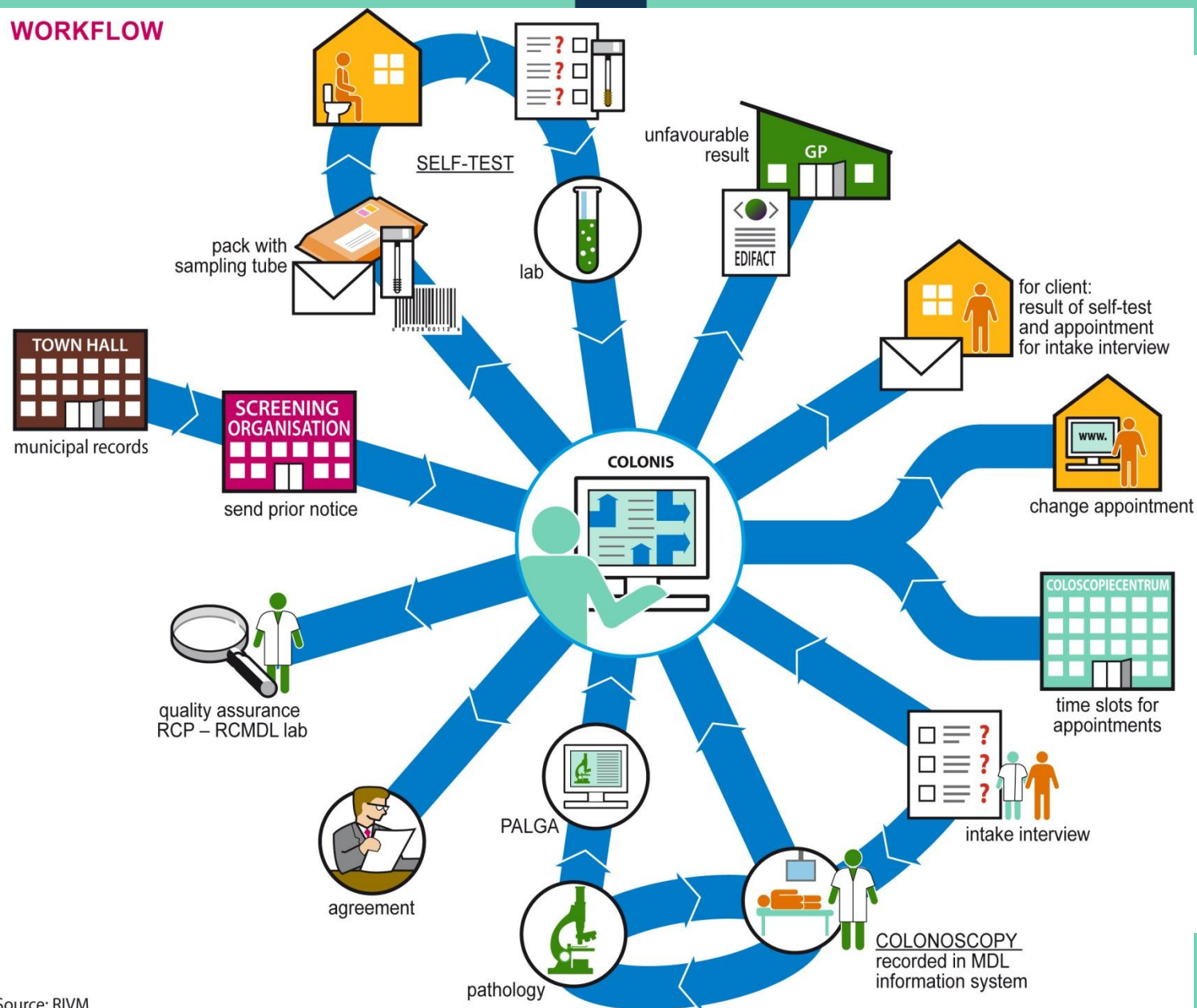
Challenge in terms of colonoscopies: National scheduling system

De trend coloscopieën ingezoomd





WORKFLOW





Communication public

Target group

Starting point: informed choice

Uniform communication products

- letters and leaflets
- animations and films on website
- translations

General public

Creating awareness

- Website
- Articles in newspapers and magazines and on websites
- Flyer





Communication professionals

Informing professionals involved about their tasks as effectively as possible

- Regional meetings
- At launch: documentation set
- Website and newsletters
- Channels of screening organisations and professional groups





Managing Unexpected discussions

❑ **Quality of iFOBT that was tendered**

- in vitro research but few publications on yield in literature
- > Role of National Committee
- > Expert meeting
- > minister decided to Start Program (delay 4 months)
- > minister decided to start research comparing the tests

❑ **Selective procurement of colonoscopies by a health insurance company.**

- > Investments on quality, no contract
- > Commotion in professional group of gastroenterologists

Importance of communication



Unexpected attention in the media

Hospitals that were authorized for program

FOKKE & SUKKE
DOEN MEE AAN DE PILOT

WOW!
DEZE MOET JE
OPSTUREN AAN HET
DARMKANKER-
ONDERZOEK!



RGVT



Unexpected first results of the program

- Higher attendance rate
- Higher positivity rate
- Waiting times for colonoscopy
- More colonoscopies expected



Framing

- Successful program; target group wants to participate
- Due to good monitoring system: short term adaptation in the program was reached
- Decision minister: different scenario's are given



Conclusion

- Do not start a screening program without evidence
- Evidence isn't enough for succesful implementation of a program, also
 - › Commitment of all parties involved; investment in strong collaboration; especially in times of crisis
 - › Procesmanagement and issuemanagement
 - › Tight projectmanagement: managing deadlines
 - › Good collaboration with Ministry: commissioner
 - › Investment in continuous communication with professionals
 - › Framing of communication message to the public
 - ›