Reasons for non-follow up after a positive FIT in the Dutch CRC screening program

Preliminary results of the ARCUS study

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Dutch national CRC screening program

• Implemented in 2014

• Age 55-75

• Biennial FIT screening at cut-off 47 μg Hb/g

• Postal mail: invitation, information brochure & FIT

• Brochure: advise to see family physician in case of symptoms
Dutch national CRC screening program

- FIT+ → letter with appointment for intake colonoscopy within 3 weeks
- Colonoscopy + pathology result within 7 weeks
- Accredited colonoscopy center within 40 km (25 miles)
- Possibility to change appointment
- High participation rate: 73.9% (2016)
Findings at colonoscopy after positive FIT

Rates of advanced neoplasia in the Netherlands

<table>
<thead>
<tr>
<th>General population</th>
<th>FIT +</th>
</tr>
</thead>
<tbody>
<tr>
<td>[WAARDE]%</td>
<td>[WAARDE]%</td>
</tr>
<tr>
<td>Advanced neoplasia</td>
<td>No advanced neoplasia</td>
</tr>
</tbody>
</table>

Program-adherence after positive FIT

Netherlands 2016

FIT+ 5.5%

Colonoscopy 83%
No colonoscopy 17%

Explained 6 - 8%
- CT colonography
- Intake: advise against
- Colonoscopy elsewhere

Unexplained 9 - 11%

Lucinda Bertels
Rates non-adherence after positive CRC screening

<table>
<thead>
<tr>
<th>Country</th>
<th>Non-adherence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy</td>
<td>8%</td>
</tr>
<tr>
<td>Slovenia</td>
<td>9%</td>
</tr>
<tr>
<td>France</td>
<td>9%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>17%</td>
</tr>
<tr>
<td>Australia</td>
<td>30%</td>
</tr>
<tr>
<td>England</td>
<td>43%</td>
</tr>
<tr>
<td>Qatar</td>
<td>44%</td>
</tr>
<tr>
<td>United States</td>
<td>47%</td>
</tr>
</tbody>
</table>

Worldwide:
- 8%
- 9%
- 9%
- 17%
- 30%
- 43%
- 44%
- 47%

References:
- Denis B, Gendre I, Perrin P. Journal of Medical Screening. 2015;22(2):76-82.
- Parente et al. Endoscopy 2013; 45(01): 27-34
Known factors associated with (non)adherence in CRC screening

- **Socio-demographic factors**
  - Minority ethnic group
  - Low socio-economic position
  - Remoteness

- **Lifestyle and healthcare factors**
  - Poor health behavior
  - Severe disability
  - Poor health insurance

- **CRC and screening factors**
  - Previous screening
  - Positive family history CRC
  - Positive health beliefs/knowledge

Quantitative research methods
Qualitative research

• Understanding human behavior in its context

• Data is collected through interviews and participant observation

• Data is analyzed by themes from descriptions

• Data is reported in the language of the informant

• Often exploratory

Minchiello et al. 1990, p.5
Interview study
December 2016 – November 2017

FIT+
no colonoscopy

- Family practice
- Email elderly organisation
- Facebook

21 interviews

- 6 male, 10 female
- Age 57-70, mean age 64
- 10 lower education, 6 higher education
- 1 non-Caucasian

5 persons had recent colonoscopy

16 interviews

3 might do colonoscopy at later stage

13 will probably not do colonoscopy
Methods interview study

• Analysis
  - Interviews transcribed verbatim
  - Data saturation
  - Thematic analysis
    - Open coding using MAXQDA (1 researcher)
    - Discussion of results (3 researchers)

• Preliminary results
Preliminary results: often found motives

- Reasons are always complex and multifactorial

  - Low risk perception for CRC
    
    “I’m convinced I don’t have cancer”

    - Often related to bodily experiences:
      
      “I don’t feel sick”
      “I don’t have any symptoms”
      “I know my body”

    - And/or influential factors:
      
      “I exercise and I eat well”
      “It doesn’t run in my family”
Preliminary results: often found motives

• Alternative explanation for blood loss
  “Hemorrhoids”
  “I had a hard stool”

• Had expected negative FIT / not realized consequences of positive FIT
  “I didn’t expect anything to come out of it”

• Resentment against colonoscopy
  “My neighbor told me it was very unpleasant”
  “I heard it is very embarrassing”
Preliminary results: often found motives

- **Aversion** against the way the screening was set up
  - “Distant”
  - “Cold”
  - “Unfriendly”
  - “Coercive”

- **Unwilling** to visit a hospital that’s unknown and far away
  - “I don’t like to go to an unknown hospital”
Preliminary results: less often found motives

• Other things on mind – major life events
  “My life was very hectic with the passing of my friend”

• Fatalism / not wanting treatment
  “Nobody goes before their time”

• Fear of complications
  “I’m afraid it will cause me to have another fistula”

• Distrust towards screening organisation
  “It’s in their financial interest to do the investigation”
Preliminary results: unexpected finding

• 3 women (of 10) took unfavorable FIT result less serious than unfavorable mammography in breast cancer screening

“With a mammography there really is something to see so I can really imagine it. This I find a bit vague. That’s the difference”

(female, 57, lower education)
Conclusion

• Dutch program with low threshold for participation resulting in 9 – 11% unexplained no follow-up colonoscopy after FIT+

• Low risk-perception for CRC might be most relevant underlying cause

• This knowledge could help optimize program-adherence rates
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