Worldwide socioeconomic and ethnic CRC screening inequalities: latest participation and detection rates

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Outline

• Literature review summary:

  Socioeconomic and ethnic inequalities in CRC screening participation
  
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• The latest Dutch participation and detection rates by socioeconomic status
  
  Iris Lansdorp-Vogelaar
Socioeconomic and ethnic inequalities in organized colorectal cancer screening participation

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Colorectal cancer screening

• Screening is effective in reducing CRC morbidity and mortality (14-28%)

• Health benefit must be equal for all population subgroups

• Low SES groups and ethnic minorities: ↑ CRC risk, morbidity and mortality

• Low SES groups and ethnic minorities: ↓ screening participation

• Risk: Creation or exacerbation of health inequalities within the population

Siegel et al. CA Cancer J Clin 2016
Von Wagner et al. Int. J. Epidemiol 2011
Aim

Determine:

(1) Organized programs worldwide

(2) Proportion of programs characterizing participation inequalities by socioeconomic and ethnic subgroups

(3) The variation in subgroup participation among programs collecting group-specific data
1. Organized screening programs worldwide n=24

Australia
Belgium- Flanders
Belgium- Wallonia/Brussels
Canada-Manitoba
Canada- Nova Scotia
Canada- Ontario
Canada- Saskatchewan
Croatia
Denmark
Finland
France
Ireland
Italy (>100 regions)
Japan
Korea South
Malta
Martinique
Netherlands
Slovenia
Spain- Basque
Spain- Barcelona
Sweden- Stockholm/Gotland
UK (England and Scotland)
USA- Kaiser Permanente
2. Data on participation by socioeconomic status (46%)

90% of the evidence:
Lower participation among lower socioeconomic groups
3. Variation in socioeconomic subgroup participation*

* Including data on participation in percentages 19/31 (odds ratio’s and text excluded)
Variation by ethnic subgroup participation

- Data available: 6/24 organized screening programs
  - UK, Kaiser Permanente, Slovenia, Denmark and The Netherlands
  - Data in progress: Belgium-Flanders, Finland, Sweden

- Limitations

- Conclusion: Inequalities suspected but data scarce and inconclusive
Conclusion

- Risk: Unequal CRC screening participation may create or exacerbate health inequalities
- The majority of organized screening programs do not have data on participation by SES/ethnicity
- Available data: Lower socioeconomic groups are less likely to participate in CRC screening
- Average of 150% higher participation rate for high SES
- Inequalities by ethnicity suspected but scarce and inconclusive in this review
To do

- Structurally monitor and evaluate participation by subgroups
  - Establish clear SES indicators and ethnic groups
  - Establish clear outcomes of inequalities
- Identify organizational characteristics influencing gaps in participation
- Target identified barriers
Acknowledgements


Expert Working Group Inequities of the World Endoscopy Organization
The latest Dutch participation and detection rates by socioeconomic status

Iris Lansdorp-Vogelaar

Department of Public Health, Erasmus MC University Medical Center, Rotterdam, The Netherlands
Dutch screening programme: biennial FIT 55-75y
Measuring socio-economic status

• SES based on geographical location (postcode)
• SES scores based on principal component analysis including:
  – Income
  – Employment status
  – Educational level
• Postcodes divided into quintiles based on rank of the score
Participation rate (odds ratio)

Q1 = highest quintile of SES; Q5 = lowest quintile of SES
Adherence to FU colonoscopy (odds ratio)

Q1 = highest quintile of SES; Q5 = lowest quintile of SES
Detection rate of advanced neoplasia* (odds ratio)

* Corrected for difference in adherence to FU colonoscopy; Q1 = highest quintile of SES; Q5 = lowest quintile of SES
Detection rate of advanced neoplasia* (odds ratio) and background incidence

* Corrected for difference in adherence to FU colonoscopy
Discussion points

• Individual vs. area SES

• Composite measure vs. income-based only

• Categorization in quintiles vs. continuous score
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