Lessons learnt from cancer screening programmes as an example for establishing the Czech National Coordination Centre

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- Organisation and policy for cancer screening programmes in the Czech Republic
- Transition to population-based screening
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Organisation and policy for cancer screening programmes in the Czech Republic
National organised screening programmes in the Czech Republic

Breast Cancer Screening Programme
- since 2002
- women aged over 45 years
- mammography every 2 years

Colorectal Cancer Screening Programme
- since 2000
- men and women aged over 50 years
  - 50-54 years – FIT every year
  - over 55 years – FIT every 2 years
  - OR primary screening colonoscopy every 10 years

Cervical Cancer Screening Programme
- since 2008
- all adult women
- annual Pap smear
Original governance model of the colorectal cancer screening programme

Ministry of Health of the Czech Republic

Czech Gastroenterological Society

Colorectal Cancer Screening Committee

Board for Colorectal Cancer Screening

Standard for providing and reporting of colorectal cancer screening procedures (Bulletin of MH, 1/2009)

Prerequisites for screening providers (equipment, staff, experience, data collection)

Target population

Screening and diagnostic methods
Data sources for monitoring of cancer screening programmes

**MONITORING OF CANCER BURDEN**
- Epidemiology of cancer in target population
- Long-term impact indicators
  
  **Source of data:** CZECH NATIONAL CANCER REGISTRY
  Institute of Health Information and Statistics

**MONITORING OF SCREENING PROCESS USING CLINICAL DATA**
- Early performance indicators at screening centres
- Detection of cancer and precancerous lesions in screening
  
  **Source of data:** CANCER SCREENING PROVIDERS

**MONITORING OF SCREENING PROCESS USING ADMINISTRATIVE DATA**
- Population-based early performance indicators
- Monitoring of programmes accessibility by target population
  
  **Source of data:** HEALTH INSURANCE COMPANIES
International comparison of colorectal cancer mortality

6.23. Colorectal cancer mortality, 2003 and 2013 (or nearest years)

Age-standardised rates per 100,000 population

1. Three-year average.
Source: Eurostat Database.

Transition to integrated population-based screening
individuals aged under 70 years were invited
individuals who had recently undergone respective screening or diagnostic care or had already been treated for the respective cancer were excluded
Number of individuals invited according to individual letter variants and programmes

First invitations in the period from January 2014 to June 2015: a total of 2,247,863 invited individuals

<table>
<thead>
<tr>
<th>Letter variant</th>
<th>Invitation to participate in</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>cervical cancer screening</td>
<td>breast cancer screening</td>
<td>colorectal cancer screening</td>
<td></td>
</tr>
<tr>
<td>1 Men in colorectal cancer screening</td>
<td></td>
<td></td>
<td></td>
<td>890,858</td>
</tr>
<tr>
<td>2 Women in cervical cancer screening</td>
<td>260,835</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Women in breast cancer screening</td>
<td></td>
<td>165,893</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Women in cervical and breast cancer screening</td>
<td>124,052</td>
<td>124,052</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Women in colorectal cancer screening ONLY</td>
<td></td>
<td></td>
<td></td>
<td>459,188</td>
</tr>
<tr>
<td>6 Women in cervical and colorectal cancer screening</td>
<td>49,852</td>
<td></td>
<td>49,852</td>
<td></td>
</tr>
<tr>
<td>7 Women in breast and colorectal cancer screening</td>
<td></td>
<td>66,995</td>
<td>66,995</td>
<td></td>
</tr>
<tr>
<td>8 Women in all cancer screening programmes</td>
<td>230,190</td>
<td>230,190</td>
<td>230,190</td>
<td></td>
</tr>
<tr>
<td><strong>Total number of invitations</strong></td>
<td><strong>664,929</strong></td>
<td><strong>587,130</strong></td>
<td><strong>1,697,083</strong></td>
<td></td>
</tr>
</tbody>
</table>

The total number of invitation does not correspond to the sum of numbers of invitations to individual programmes because many individuals were invited to multiple programmes at the same time.
Coverage by invitation and participation rates: colorectal cancer screening

Coverage by invitation by sex and age

First invitations 01/2014-06/2015, N=1,697,083
Invitations were sent to individuals aged 50-70 who had not attended FIT in the last 3 years or colonoscopy in the last 5 years AND who had never undergone colorectal cancer treatment or bowel surgery.

The total coverage by invitation was **65%** in men and **55%** in women (i.e. 35% and 45% had already been covered, respectively).

Participation rate by sex and age

The overall participation rate was **19%** in men and **21%** in women.

The previous coverage by colorectal care had been slightly higher for women. The participation rate was slightly higher for women.
Participation rates in colorectal cancer screening invitees according to their participation in other programmes

Women aged 50-70 (eligible for all programmes)
First invitations 01/2014-06/2015, N = 806,225

Participation rate

The invitation was more effective in women participating already in another programme
Coverage by examination: original situation and the impact of the project

- diverse historical trends of coverage were achieved in different screening programmes: either by spontaneous participation or by primary care referral
- following the pilot invitation project, a substantial increase in coverage was observed notably for colorectal cancer screening; there was only a small effect in cervical cancer screening
International recommendations and establishment of the CNCC
Successful evidence-based cancer screening needs a competent, multidisciplinary and transparent governance structure with political, financial and stakeholder support.
Recommendations from CanCon project

- Implementation of population-based screening should be a carefully managed multistep process through the phases of coordinated planning, piloting, roll-out and continuous improvement.

5. Continue, modify or discontinue
   - Long-term evaluation
   - Accurate communication
   - Safeguard sustainability
   - Continuous quality improvement
   - Prospective evaluation of new methods
   - Modification or stopping as indicated

4. National rollout
   - Early evaluation of outcome and adverse effects
   - Training
   - Reducing barriers and social inequalities
   - Modification or stopping as indicated

3. Piloting
   - Testing all programme components
   - Early indicators on performance and outcome
   - Training
   - Reducing barriers and social inequalities
   - Rollout, modification or stopping as indicated

2. Planning, feasibility and policy
   - Coordination, evaluation, QA teams
   - Governance structure and legal frameworks
   - Policy objectives and targets
   - Planning and testing policy, protocols, indicators
   - Information technology and systems
   - Contracting and training staff and centres

1. Consensus building and pre-planning
   - Acquisition and synthesis of evidence
   - Baseline conditions and capacity
   - Health economics and prioritization
   - Communication strategy
National Strategy for Disease Prevention

Health 2020 – European policy framework and strategy for the 21\textsuperscript{st} century

HEALTH 2020 – National Strategy for Health Protection and Promotion and Disease Prevention

National Action Plan for the Development of Medical Screening Programmes including strategic areas:
- Ensure adequate governance and \textbf{decision making} about cancer screening programmes
- Ensure \textbf{innovations} of screening programmes according to the \textbf{current scientific evidence}

Operational Programme Employment 2014–2020 (European Social Fund)
Investment priority 2.2: Enhancing access to affordable, sustainable and high-quality services, including health care and social services of general interest
Projects for establishing the CNCC PreSeD

Project 1: **Czech National Coordination Centre**

Establishing a system for the support of early disease detection programmes in their entire life cycle

Project 2: **Data infrastructure**

Establishing a team for data analysis and appropriate data infrastructure

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Structure of the Czech National Coordination Centre

Czech National Coordination Centre for Prevention of Serious Diseases

National Council for the Implementation and Governance of Early Disease Detection Programmes

Panel of experts for early disease detection

Steering committees (SCs)
- SC 1
- SC 2
- SC 3
- SC ...

Working groups (WGs)
- WG 1
- WG 2
- WG 3
- WG ...

Management office of the National Coordination Centre

President of the National Council for the Implementation and Governance of Early Disease Detection Programmes (IHIS Director)

Executive Director

Scientific Director
Stakeholders represented in the Council

- Ministry of Health (health insurance, healthcare, and legislation sections)
- Institute of Health Information and Statistics
- Parliament of the Czech Republic, Chamber of Deputies: Committee on Health
- Parliament of the Czech Republic, Senate: Committee on Health and Social Policy
- Health insurance companies
- Czech Medical Association of J. E. Purkyne

- Medical and other professionals represented in the Panel of Experts
National Coordination Centre teams

- **National Coordination Centre Board**
  - IHIS director (President of the National Council)
  - Executive Director
  - Scientific Director
  - Office management and National Council secretariat

- **Technical teams**
  - Methodology, data analysis, scientific evidence
  - Web development
  - Database development and data collection
  - Project management of pilot projects

- **Support from the existing IHIS teams**
  - Management of public procurement, contracts, accounting, HR
  - Management of IT infrastructure and the National Health Information System
  - General data analysis teams

Capacity building support: Joint workplace with Masaryk University in Brno
Conclusions
Colorectal cancer screening programme in the Czech Republic has been gradually strengthening its organisational aspects, including governance, policies, and data collection.

Population-based recruitment component has been established in 2014 in cooperation with health insurance companies.

Following national experience and international recommendations (namely from CanCon project) national coordination centre was established in 2017.