

Development of an ICT solution to obtain annual, national, representative health indicator data for non-communicable diseases a – pilot study



Norwegian Centre for
E-health Research

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Introduction

World Health Assembly: (Norway consented)

- Reduce premature deaths of non-communicable diseases (NCD's) with 30% by 2030 (from 2010)

World Health Organization NCD's (in this context)

- Cardiovascular disease
- Cancer
- Chronic obstructive pulmonary disease (COPD)
- Diabetes

Health Indicators (underlying risk factors)

- Overweight
- Unhealthy diet
- Physical inactivity
- Harmful alcohol consumption
- Tobacco use

Objectives of pilot study

- Develop a mobile phone ICT solution
- Collect relevant data
- Examine the response rate
- Identify successes and roadblocks
- Identify two collaborative countries
- Submit a proposal to Horizon 2020 for a full study

Materials and Methods

Study population

- A random national sample of 11000 men and women
- 1000 from each of the 11 counties as of January 1, 2020
- Age 16-69 years
- Registered with a mobile phone number

Invitation

SMS from Healthcom AS, a private enterprise:

Hi Inger Torhild Gram. Do you want to participate in a national survey about health and disease? Your name is selected at random from the central population register. It is voluntary to participate. [Press here to access the survey](#). Thank you very much for your contribution! With kind regards, Norwegian Centre for E-health Research."



Illustrasjonsbilde: Colourbox

Survey questions (self-reported)

- Current weight and height (2)
- Selected questions on dietary intake (7)
- Alcohol consumption (3 from AUDIT)
- Physical activity (4 from IPAQ)
- Tobacco /e-cigarette use (3)

Data storage and analyses

- Healthcom AS will transfer de-identified data to RedCap, UNN
- Overall and by the 11 counties

Results

Response rate : Overall 21.0 %; Lowest : 18% Vestlandet; Highest 26% Trøndelag.

Distribution of participants (N=2,304)

- Sex : 38% Men - 62% Women
- Age : 14% 16-29 years; 35% 30-49 years , 51% 50-69 years
- Education : ≤ 10 years 15%, 11-13 years 41%, 14-16 years 24%, ≥ 17 years 20%

Strengths

- Random sample of the Norwegian population
- Simple survey that takes five minutes to complete
- Information about the five major health indicators for developing NCD's
- Information on important background variables of the participants

Limitations

- Low response rate
- Several personnel and technical roadblocks during last phase of the pilot project

Relevant upcoming Horizon 2020 calls

- Information and Communication Technologies
- Societal Challenges

Conclusions

We were able to provide a “snapshot” from Norway, October 2019, regarding the distribution of five important health indicators for developing NCD's. More women than men responded. The overall response rate was lower than anticipated. We are currently examining reasons for non-participation. We want to find out if we can improve and expand this survey in Norway and initiate a collaboration with two other countries with the goal of submitting an application to a relevant Horizon 2020 call, before June 30th, 2020.