

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 33% by 2030, relative to 2015 levels.

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 has transferred the de-identified data to RedCap, University Hospital of North Norway

Results

Response rate : Overall 21.0 %;

Lowest : 18% Vestlandet; Highest 26% Trøndelag.

Distribution of participants (N=2,303)

- Sex : 38% Men - 62% Women
- Age : 14% 16-29 years; 35% 30-49 years , 51% 50-69 years
- Education : ≤ 10 years 13%, 11-13 years 34%, 14-16 years 25%, ≥ 17 years 28%

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 the last phase of the pilot project

Relevant 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.