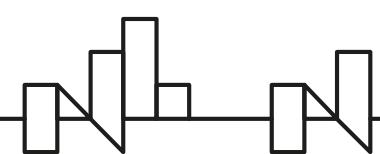


# E-health in Norway and Polish-Norwegian Cooperation

# The Norwegian Centre for E-health Research

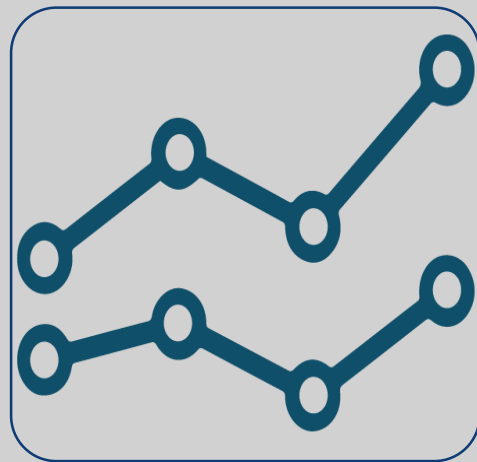
The national centre will support national needs for research and analysis in e-health, telemedicine and mobile health, including evaluation research and health technology assessment of e-health.





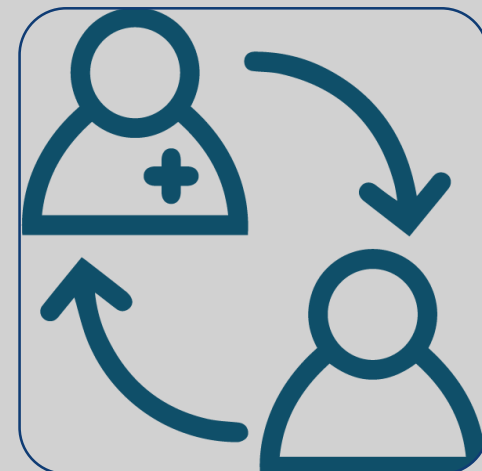
# Norwegian Centre for E-health Research

- An interdisciplinary research center.
- The Centre contributes to increasing the level of knowledge on e-health through collaboration, research and dissemination of knowledge.
- The Centre aims to be a nationally leading and internationally recognized research institution.
- Four focus areas:



## Health data and analysis

Research on how health data can be used to predict, detect and treat disease.



## Holistic patient processes

Research on digital solutions that promote holistic patient processes.



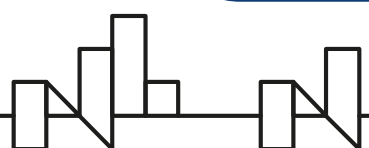
## Digital healthcare

Research on the national, digital health services.

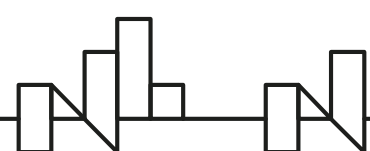


## Personal e-health

Research on how welfare technology affects the health care of the inhabitants.







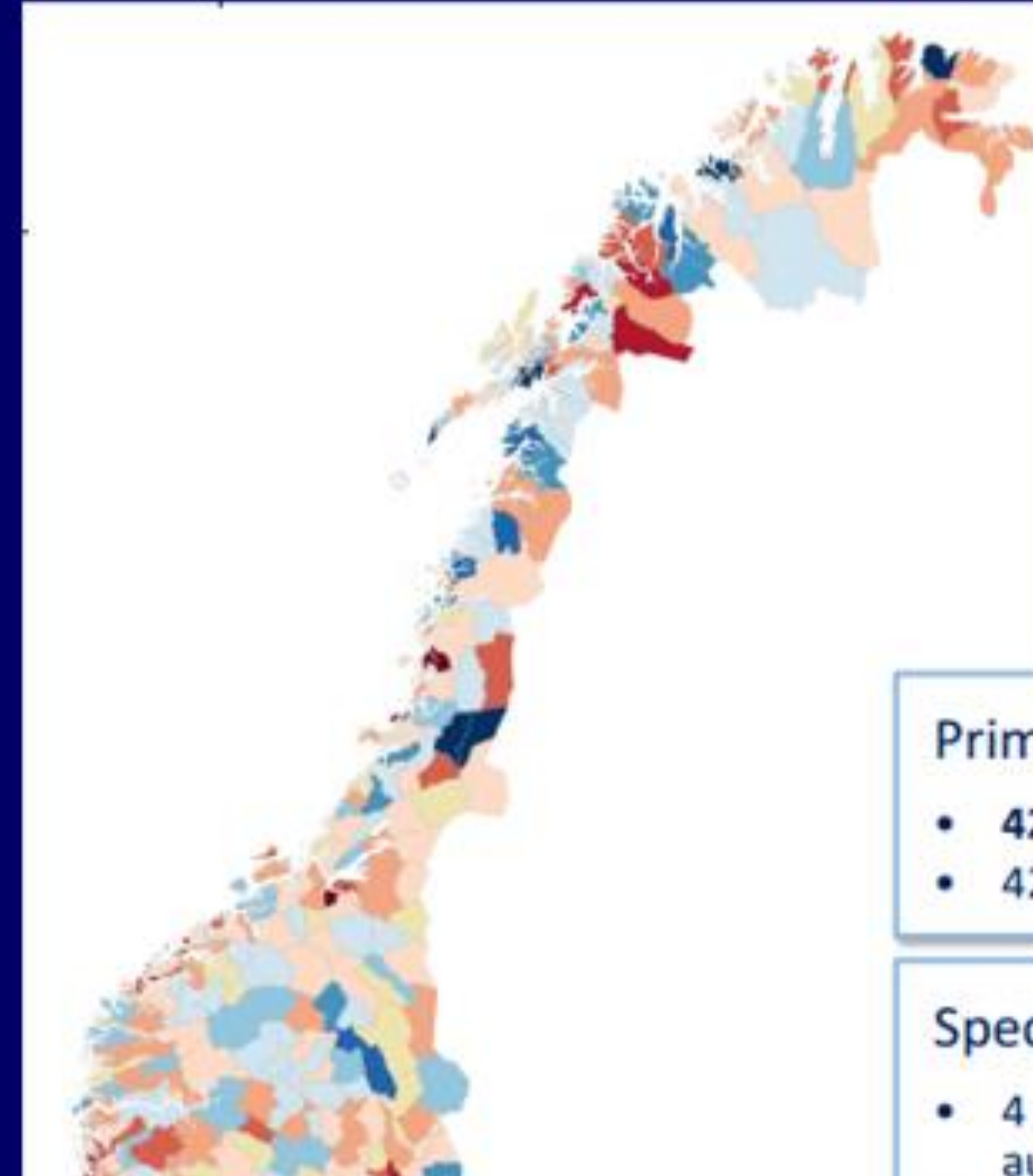




# Norway



**Population**  
5,2 million



## Primary and home care

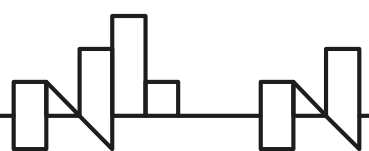
- **422 municipalities**
- **4200 GPs**

## Specialist care

- **4 regional health authorities**



# Almost 30 years with telemedicine in North Norway

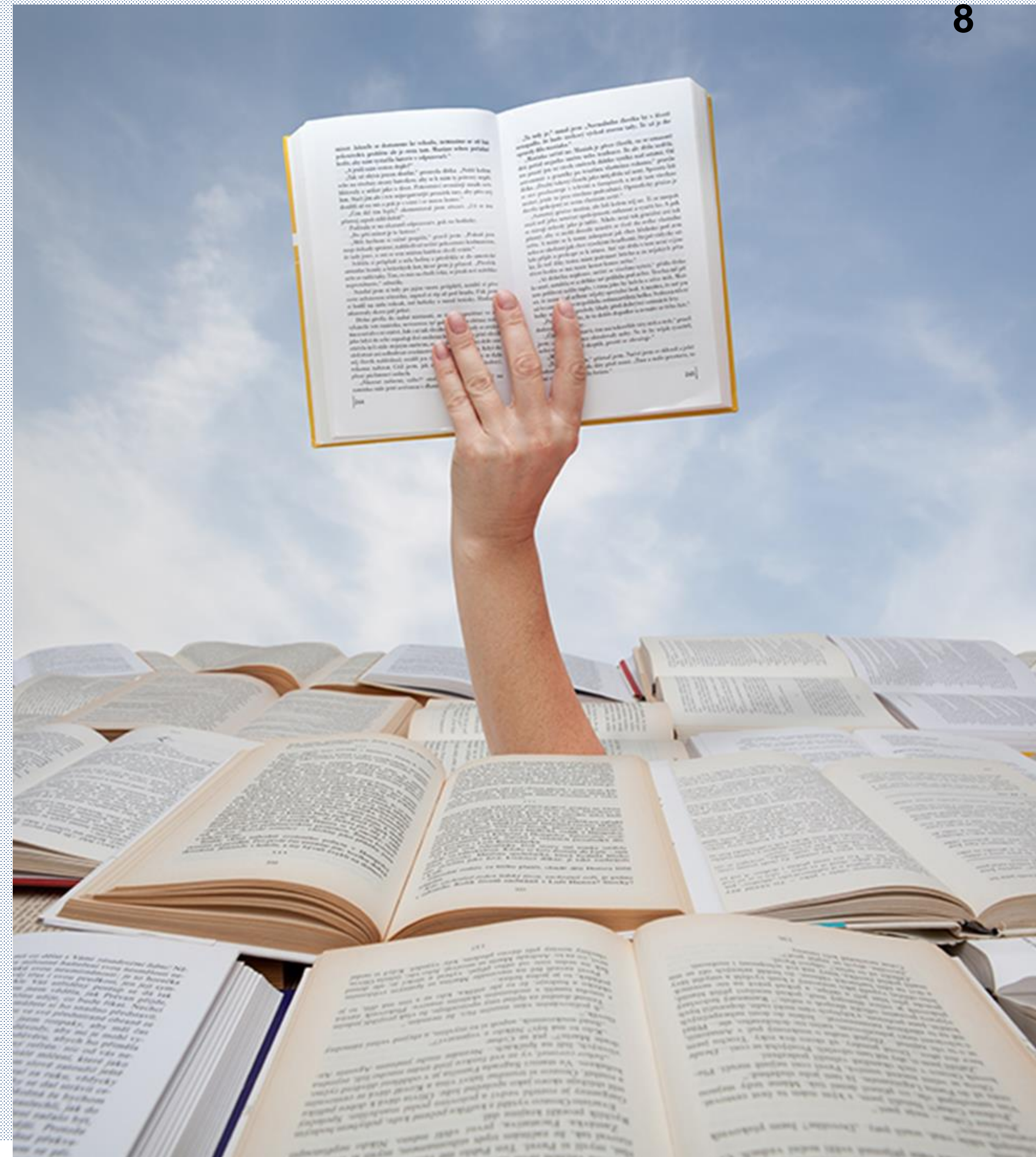
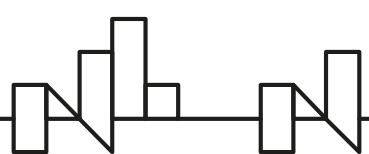






# The Norwegian Healthcare system

- Hospitals are public and owned by the state – organised in four hospital trusts.
- 356 Municipalities – Primary Care owner
- 4800 GPs who are private and «gate keepers»





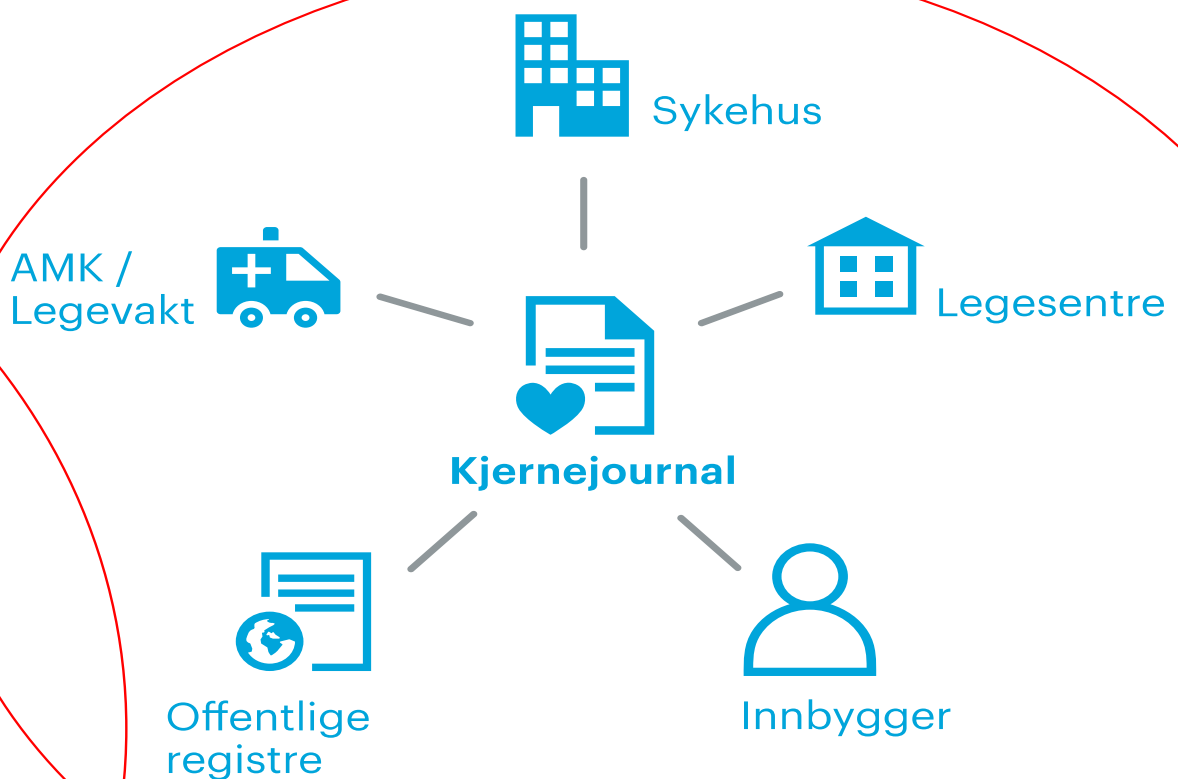
## Current National Activities



**The Health Portal**



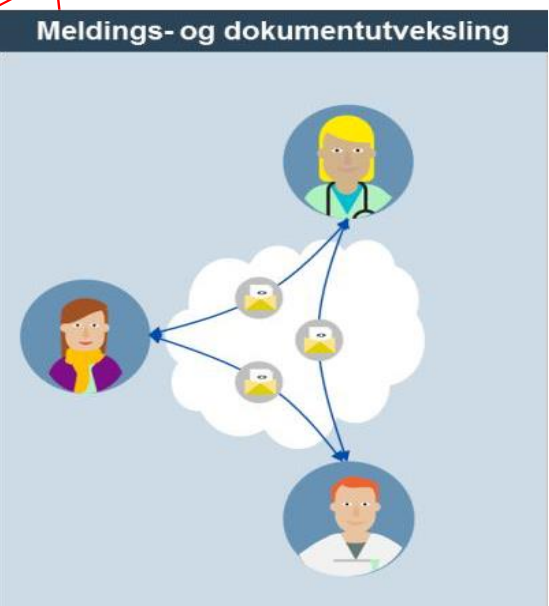
**One Health Record**



**Summary Care Record**



**The Personal Connected Care Program**



**Program for common infrastructure**



**The Health Data program**



**ePrescription**

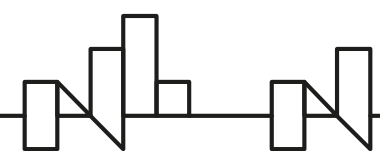


**Electronic Messaging**



# Distance treatment in Norway

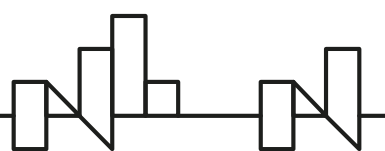
- Diversity of technological and organizational forms of medical distance monitoring boundaries to telemedicine, e-consultations and welfare technology
- Dominance of hospital-driven projects  
Diversity of diseases / conditions
- Some diagnostic areas that stands out





# Some services

- Psychiatry
  - Video based, internet based
- Kols/diabetes/heart and blood vessels
  - Home monitoring and virtual consultations
- Rehabilitation
  - Video consultations
- Home dialyses
  - Communication via iPad
- E-consultations
  - xx% of GPs offer e-consultations

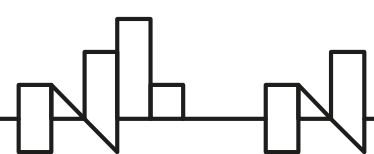






# Mental Health

- increased availability of professionals in the specialist health service
- saved transport expenses and time as a result of less travel
- competence raising through collaborative meetings in connection with discharge and guidance / follow-up of patients
- environmental benefits





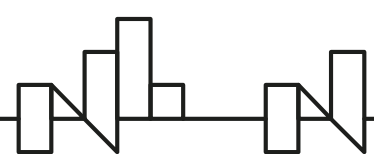


# Diabetes

The University of Bergen has carried out a research project related to remote follow-up of diabetic foot ulcers. 182 patients have been involved.

The results point to:

- No difference between the groups in terms of wound healing time, survival and consultation.
- Fewer amputations in the group who received telemedical follow-up.
- The patients in both treatment groups were equally satisfied with the follow-up they received.



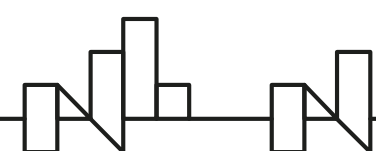
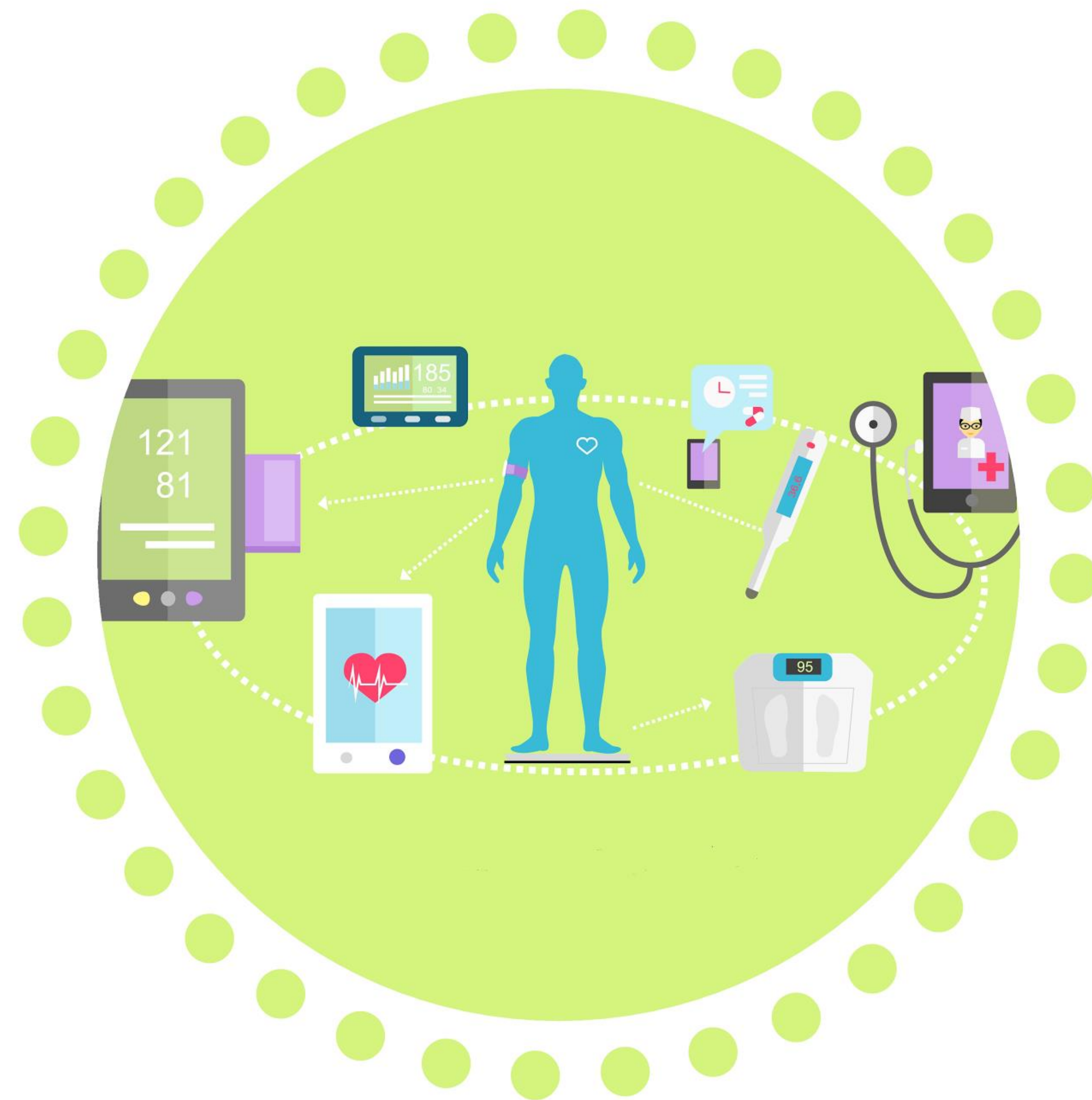


# Pasient-generated data

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How can we use patient-generated data to improve the treatment and offerings of patients?

How can we strengthen patients' ability to self-mastery using technology?





# Research platform for diabetes



**BG Bluetooth adapter**



**Smart step counter**



**T1D, Photo Diary, Child**



**Diabetes Diary Android versjon**



**Diabetes Diary iPhone versjon**

**Social media**



**Data in the cloud**

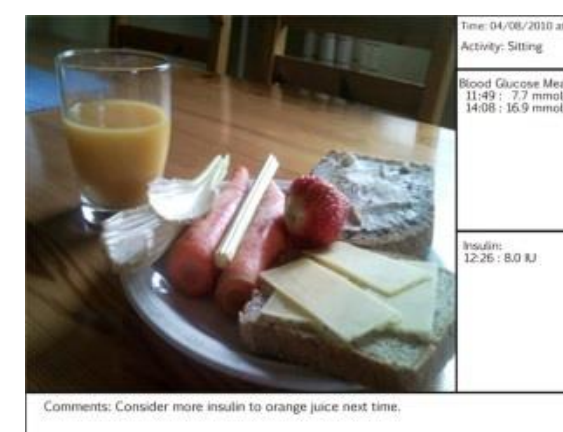


**Wearables/ Sensors/robotics & AI**



**Data sharing**

**Pebble app**

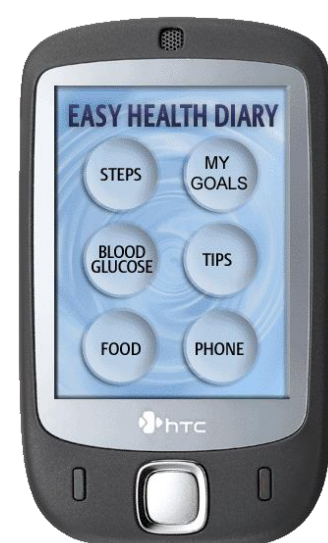


**T2D, RCT**

**T2D app ver.2**



**T2D app ver.1**



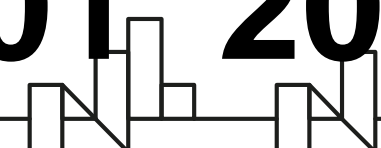
**T1D, SMS Child → parents**



**BG Bluetooth prototype**



2001 2003 2005 2007 2009 2011 2013 2015 2017







# A SECURE HEALTHCARE ENVIRONMENT FOR INFORMATICS RESILIENCE

Kick-Off Meeting 17-18/09/2020

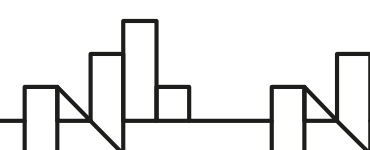


European  
Commission

Horizon 2020  
European Union funding  
for Research & Innovation

This project has received funding from the European Union's Horizon 2020 Research and Innovation program under grant agreement No 883275.

- **The HEIR Project**





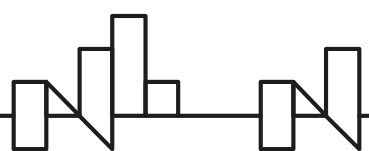






# Home Dialyses

- Several hospitals carry out projects / services with home dialysis using technology.
- At University Hospital in North-Norway, the service is documented with increased patient satisfaction and saved time for hospital staff.



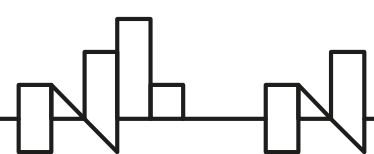






# E-consultations

- 27% e-consultations by the GP











Norway

grants



# "Tackling social inequalities in health with the use of e-health and telemedicine solutions"



Project implemented under the Programme „Health” in Poland

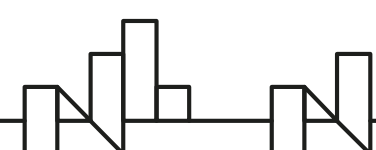
Norway Grants 2014-2021

Project Promoter: Ministry of Health, Department of Innovation

Project Partner: Norwegian Centre for E-health Research

Duration of the project: January 2020 – April 2024

Total budget: 5 800 000 EUR (Norway Grants: 85%, Polish state budget co-financing: 15%)

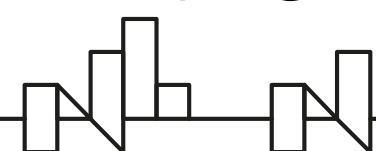




## "Tackling social inequalities in health with the use of e-health and telemedicine solutions

Aim of the project and the Programme „Health” in Poland: “Reducing social inequalities in health”

- The objective is intended to be obtained by equalizing access to health care services
- Changes of the procedures conducted in medical entities and promotion of telemedicine through pilot projects may in the long term contribute to achieving tangible impact in the health care system, such as improving cost-effectiveness ratio, developing effectiveness and accessibility of medical procedures and the comfort of their implementation.







# Development of models

## The development of models within 7 fields

Cardiology

Geriatry

Mental health

Obstetrics

Diabetes

Palliative care

Chronic diseases

## Activities

Participation in expert groups

Presentation of Norwegian e-health solutions

Presentation of Polish e-health solutions

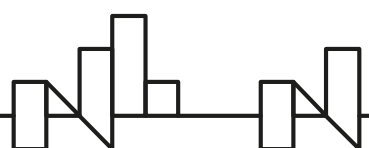
Development of the models

## E-health research's role

Participation in expert groups

Sharing own and relevant research

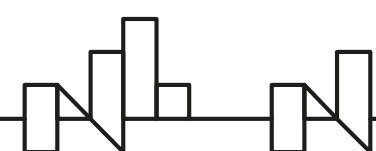
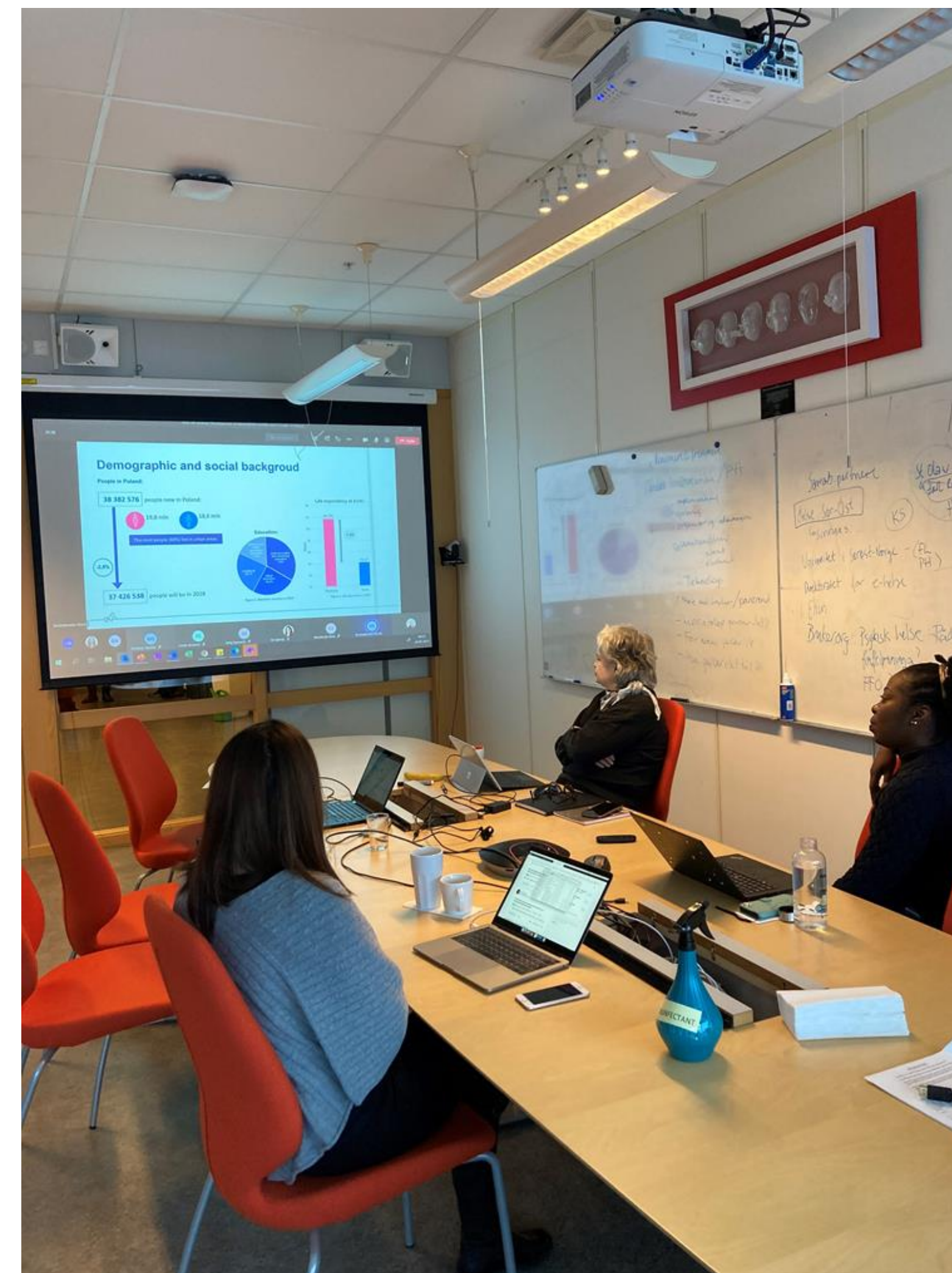
Discuss and give feedback to presented ideas and models by Polish experts







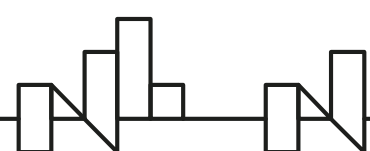
# International collaboration in times of Covid





## "Telemedicine models

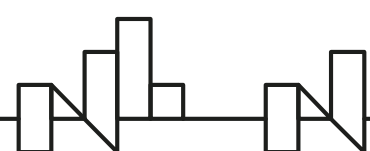
- Within the 7 areas, standards of telemedicine procedures will be developed.
- The models will cover different forms of cooperation within the given field and the experts will decide on the most appropriate form of procedures to be tested in pilot projects
- Working groups assigned to the development of seven model solutions will consist of Polish and Norwegian experts, with the involvement of the Norwegian Partner – the Norwegian Centre for E-Health Research.
- After the development of models, proposed solutions will be tested as pilot projects by supra-regional hospitals and institutes, chosen in the open call.
- The next step will be evaluation and preparing recommendations for models, identifying the ones that should be financed from public sources in the future.
- In the end of the project, when the final version of models is elaborated, the successful models will be submitted to the Agency for Health Technology Assessment and Tariff System (AOTMiT) for funding verification.





## "Other activities in the project:

- Organisation of dissemination workshops on telemedicine and e-health pilot projects
- Evaluation of models and their application
- Organisation of trainings for medical staff on the use of computers, including software specific for telemedicine and e-health
- Preparation of webinars on mental health and other health problems, in cooperation with Norwegian Centre for E-Health Research
- Organisation of a nationwide awareness campaign on telemedicine and mental health
- Organisation of an opening and closing conference, as well as mid-term information and promotion event





# Thank you!

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