



# RENEWING HeALTH

REGIONS of Europe Working  
together for HEALTH

## *Telemedicine Pilot Prescribed Healthcare Norrbotten, Sweden*

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**Service:** Prescribed Healthcare for lifestyle health coaching.

**Service domain and objectives:** Lifestyle improvement for patients with Type II Diabetes (Cluster 1) and CVD (Cluster 6). Improve health and reduce the need for medication. Make patients more self-confident living with chronicle diseases.

**Target population:** Patients with Type II Diabetes and/or CVD.

**Target care setting and care organisations:** Four Healthcare centres at County Council of Norrbotten.

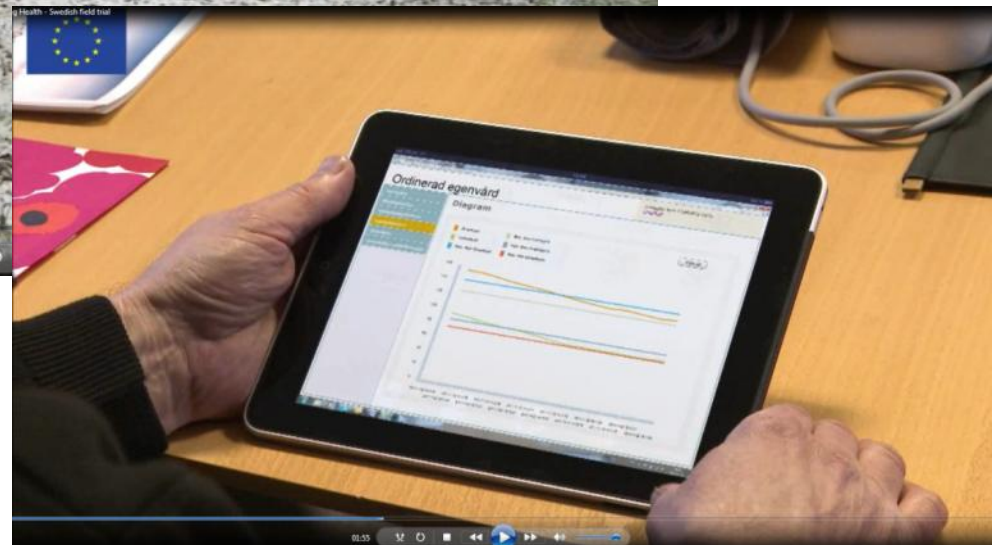
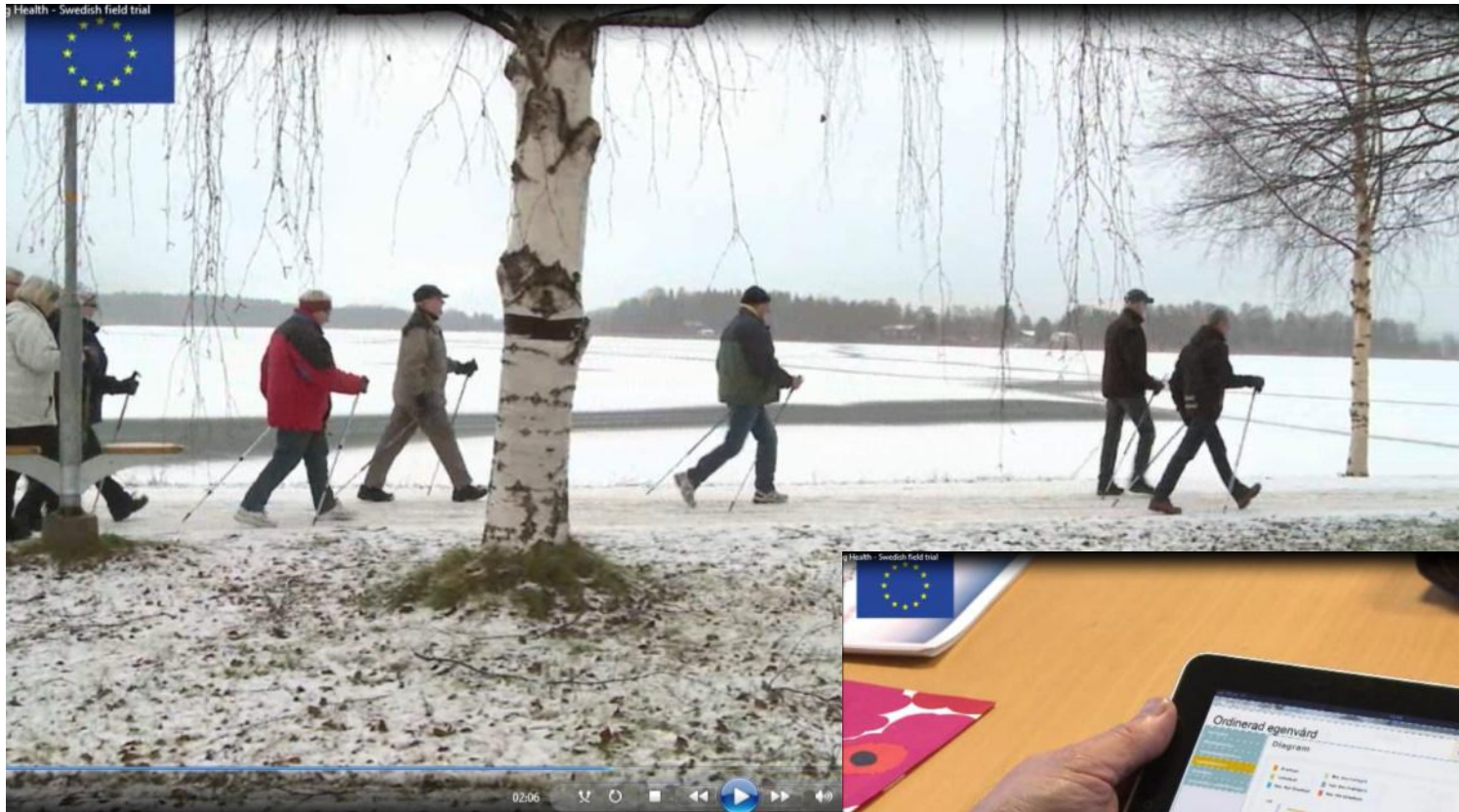
**Financial model:** Mixed model. Basic part founded by Healthcare provider. PC´s, preventive health equipment and Blood Pressure meters will mainly be purchased by individuals when service is launched large scale.

**Functionality and scaling:** Treatment instructions. Registration and visualization of preventive health and medical diagnose measurements. Medication support. Video consultation. Implementation based on a national patient portal for scalability.

**Networking of the Service with other Health-IT services:** Application is available for patients and healthcare staff. Integration with patient record system.

**Lessons already learned:** Extend the empowerment of patients.

# Introduction to the Swedish field trial



The film presented at the symposium is accessible at:  
[http://www.youtube.com/watch?v=sfta6mS8C\\_o](http://www.youtube.com/watch?v=sfta6mS8C_o)

09/12/2011

## 4 Primary Healthcare Centres (PMC) are involved

Diagnose	Invitations	Accept	Drop-out	Fullfill inclusion criterias, made baseline test	Intervention group (Drop out)	Control group (drop-out)	Total drop-out	Total field trial participants
<b>CVD</b>	3 748	610	37	573	244 (32)	281(1)	33	<b>540</b>
<b>Type II Diabetes</b>	1 048	287	121	166	69 (16)	81 (1)	17	<b>149</b>
<b>TOTAL</b>	<b>4 796</b>	<b>897</b>	<b>158</b>	<b>739</b>	<b>313 (48)</b>	<b>362 (2)</b>	<b>50</b>	<b>689</b>

## Efficient Co-Operation between professionals

- “Spider in the net” - Person that manage all practical activities.
- 2 Super-Users/PHC. Educate and provide 1<sup>st</sup> line support to patients and healthcare professionals.
- Teamwork between GP's, diabetes nurses, physiotherapists, bio-medical analytics and dietician



- Prescribed Healthcare implementation has to be **easy to use** for patients and for healthcare staff
- It has to be **easy to educate and support** elderly people with none or minor ICT competence using the technology
- Technical solution has to follow the **Swedish laws and regulations**
- The solution has to be **scalable**, i.e. easy and cost efficient to provide large scale for all public and private healthcare providers in Sweden after the field trial
- The equipment has to be **reasonable priced** and regional/local support provided



## Mina Vårdkontakter

- **National Patient Portal**
- **Secure authentication**
  - Patient: eID or one-time SMS
  - Staff: SITHS Smart-Card
- **Open Source** => All Health-care providers can offer the applications they select to their patients
- **Open architecture** for scalability and flexibility

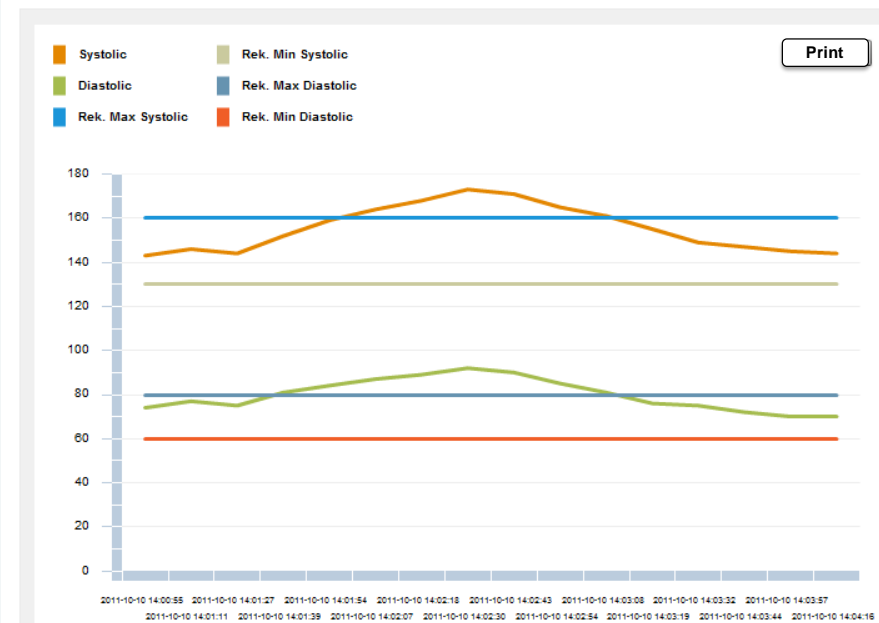
## Mina vårdkontakter

### Prescribed Healthcare

Logged in as Patient  
[Logg-out](#)

Start
Messages
Video consultation
<b>Own activity</b>
Calendar
Personal Configuration

### Diagram



## Prescribed Healthcare

- Treatment **instructions** through video messages and other descriptions
- Own preventive healthcare and medical diagnose **measurements**
- **Medication** information, alarms and follow-up
- **Video consultations**



Step meter



Blood pressure



Glucos



Pulse watch

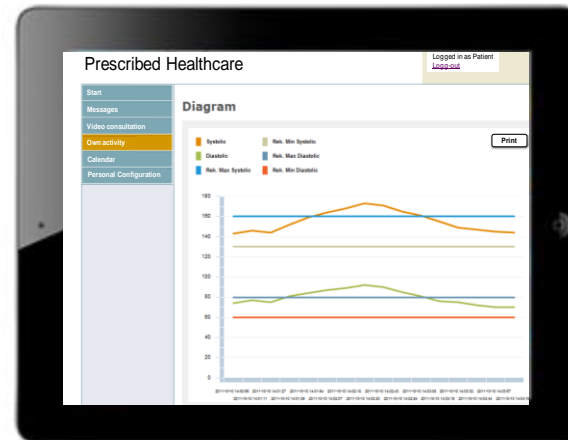


Zenicor 2-channel ECG



Cuaguchek PK

Tablet-PC



# Evaluation Cluster 1 (Type II Diabetes) and Cluster 6 (CVD)

Primary outcome	C1	C6
Health related quality of life as measured by the SF 36 v2 questionnaire	X	X
HbA1C	X	
Secondary outcome	C1	C6
Blood pressure	x	X
Blood lipids	x	x
Physical activity	x	X
Body weight	x	X
Smoking habits.	x	X
Alcohol consumption.	x	X
Sense of Coherence (SOC)-13 questionnaire.	x	x
EQ-5D questionnaire (Quality of Life)	x	x
Economic evaluation	C1	C6
Investments, Running-costs and Economic effects (work time)	X	X

**C1:** *Northern Norway, Norrbotten, South Karelia and Carinthia*

**C6:** *Norrbotten and South Karelia*



## Patients

- *Education of life style impact on health is important*
- *Extend the empowerment of patients*
- *Patients with own computer manage well (91% penetration)*
- *Patients with no web-experience need more support*
- *Patients engagement are impressive!*



## Healthcare professionals

- *Health development plans have to be individual for each patient*
- *Nurses and Physiotherapists are mostly involved, but request stronger engagement from GP's*
- *Equipment*
  - *CE Certified Diagnose equipment and SW applications*
  - *Approve usage of general PC's for data transfer*



