

# **International Health Care System and Frailty**

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# Agenda

- Introduction to the Danish Healthcare System
- Healthcare transformation initiatives
- Elderly Care
  - Home Care
  - Frail Elderly citizens
  - Chronic patients

# The Danish Healthcare System

## Basic Features

Universal Coverage

Financed by general  
taxes

Free & Equal  
Access

A high degree of  
decentralization

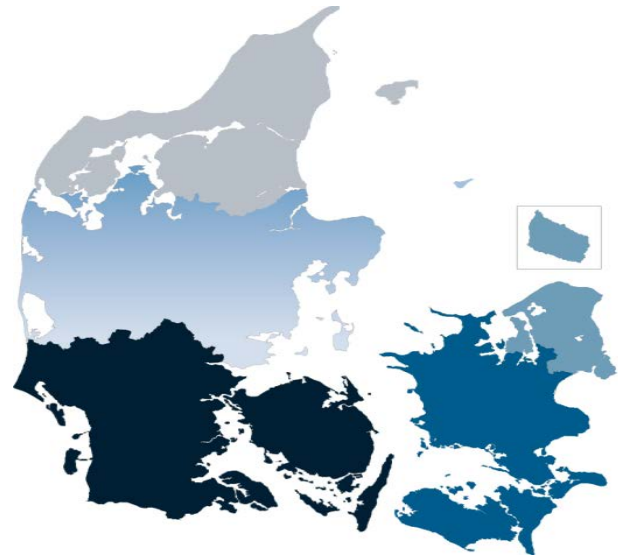
# Organization of the Healthcare System

## National Level



Ministry of Health

## Regional Level



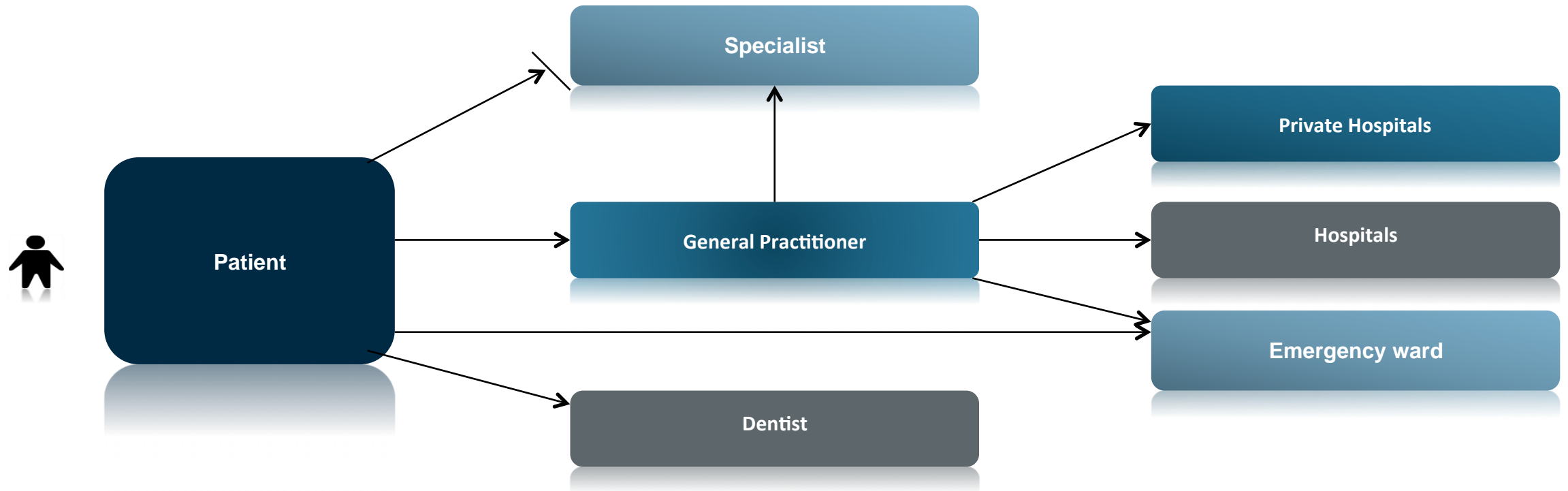
5 Regions

## Local Level



98 Municipalities

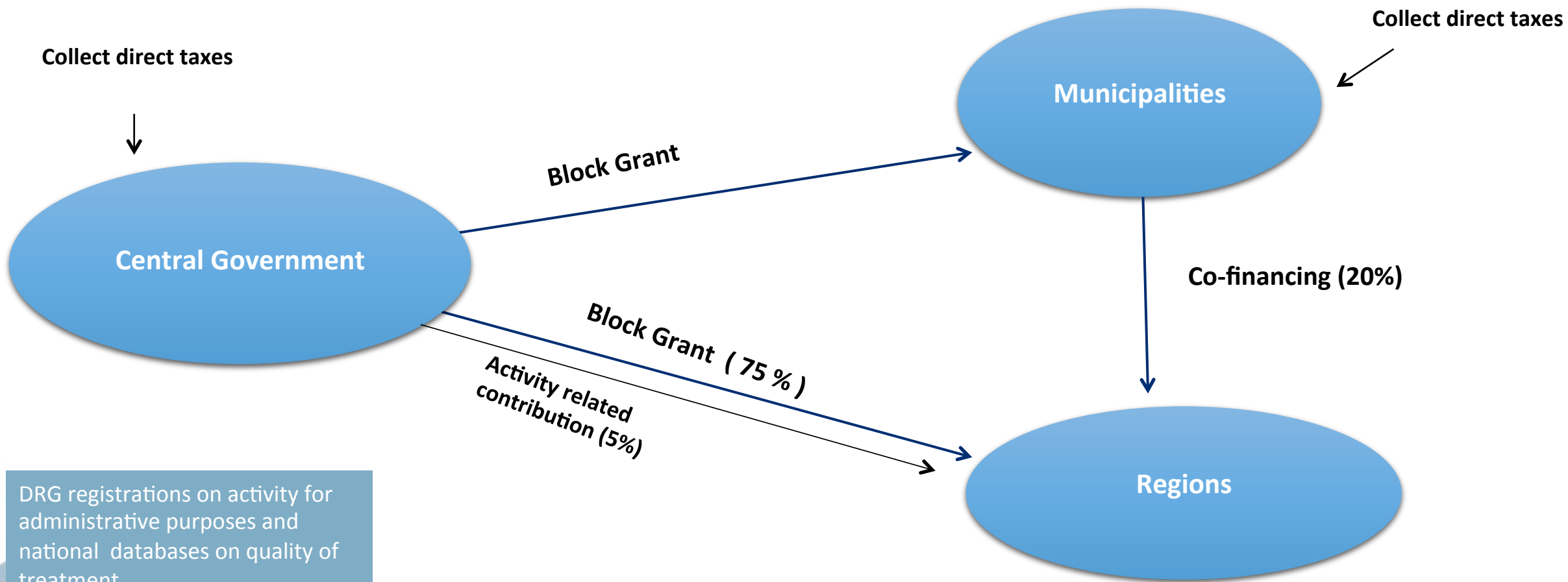
# Where to go to if you get ill?



# Financing Healthcare



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DRG registrations on activity for administrative purposes and national databases on quality of treatment

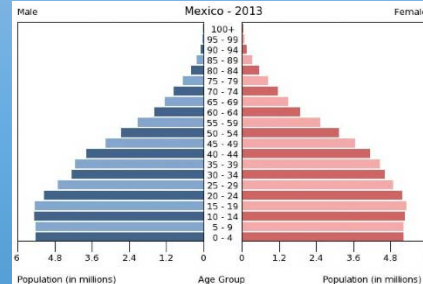
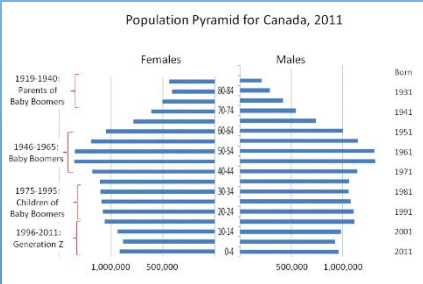
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- Elderly Care
  - Home Care
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  - Chronic patients

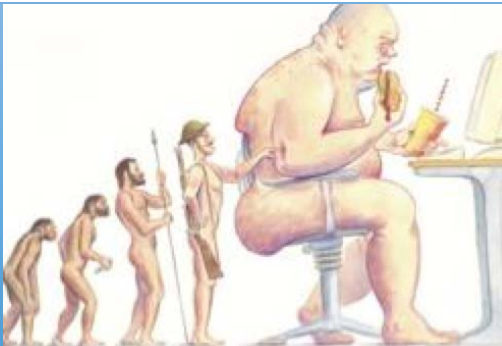
# All countries face the same healthcare challenges

## Healthcare challenges

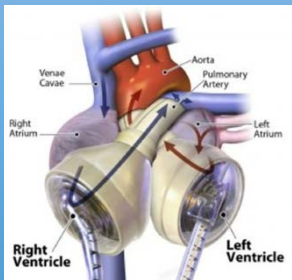
### Demographics



### Life style



### New treatments



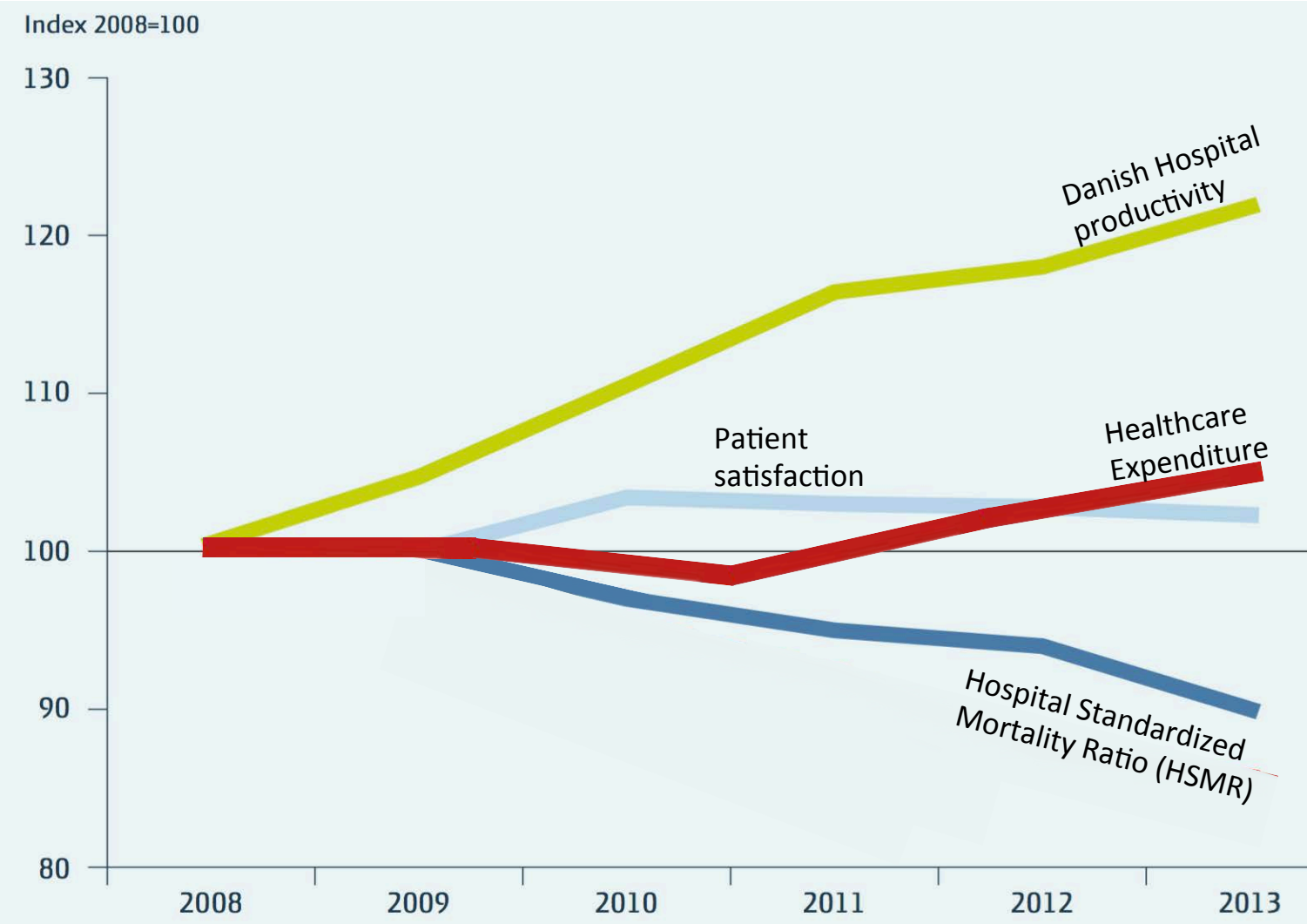
## Denmarks initiatives

- **Early detection of critical diseases, population health initiatives and patient empowerment**
  - Early detection of diseases and immediate start of treatment
    - Nationwide screening
    - Fast access to diagnostics
  - Population health and prevention initiatives
  - Primary healthcare clinics
  - E-health, telehealth and patient empowerment
  - Ambient Assisted Living
  - Personalized Medicine
  
- **High quality and effective hospital treatment**
  - High quality treatment
  - "Just-in-time" coordination and logistics
  - More outpatient treatment

# Danish citizens are happy with their lives and with healthcare services



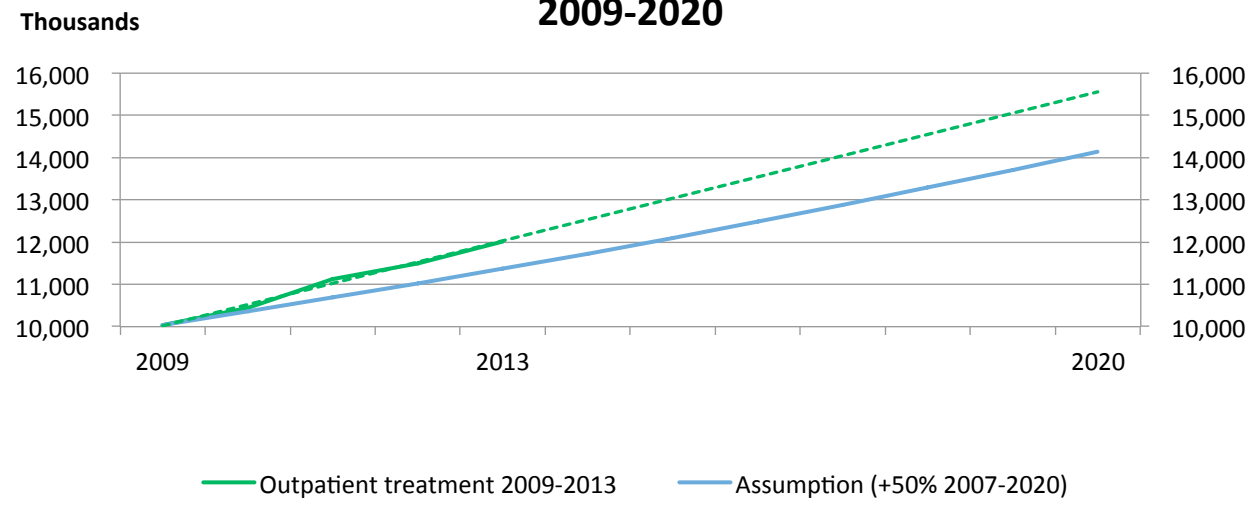
Healthcare  
DENMARK



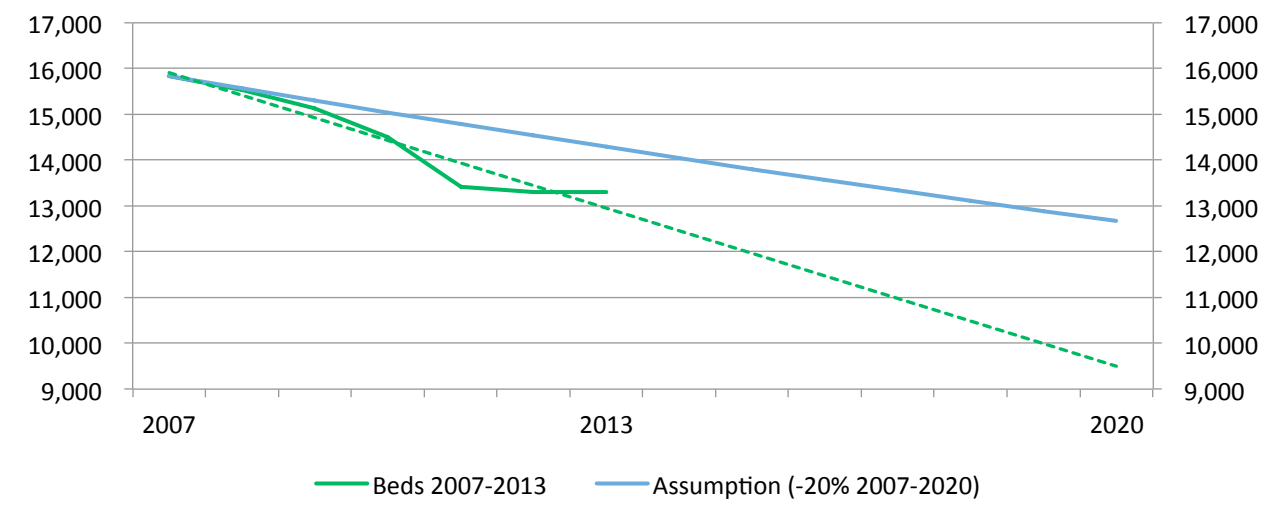
Life satisfaction and happiness: #1	1 2 3 4	Access to healthcare: #2
Satisfaction with health: #2		Health services: #4
<b>Denmark ranking,</b>		
<b>Quality of life in Europe report 2012</b>		

# Outpatient treatment vs. inpatient treatment

### Outpatient treatment 2009-2020

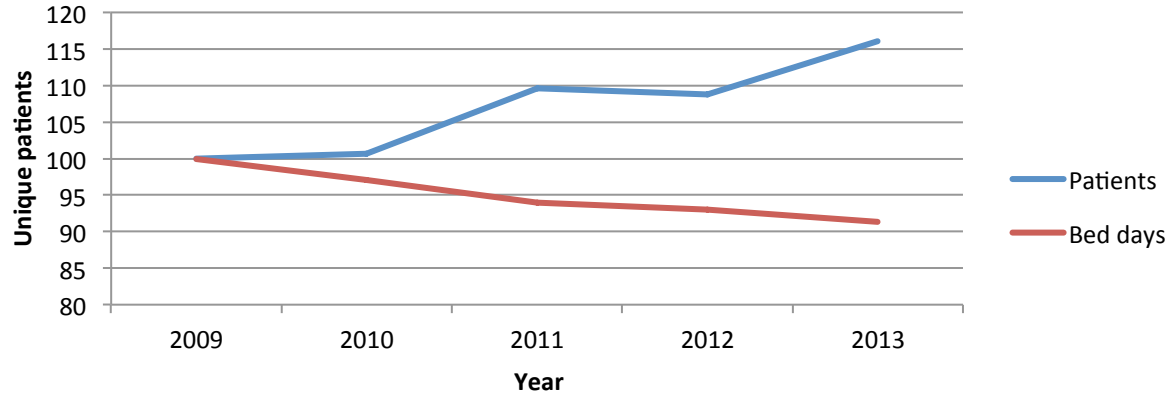


### Beds 2007-2020

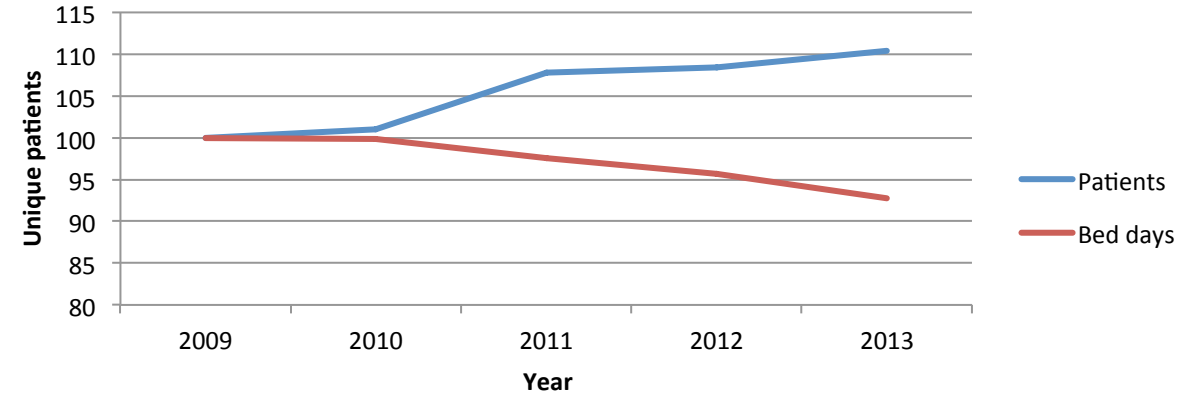


# Unique patients vs. bed days (2009 = index 100)

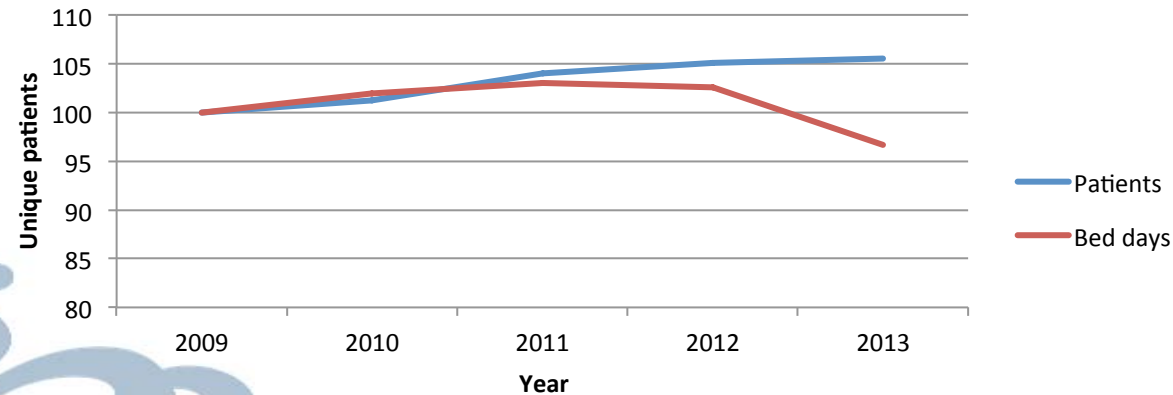
## Cancer



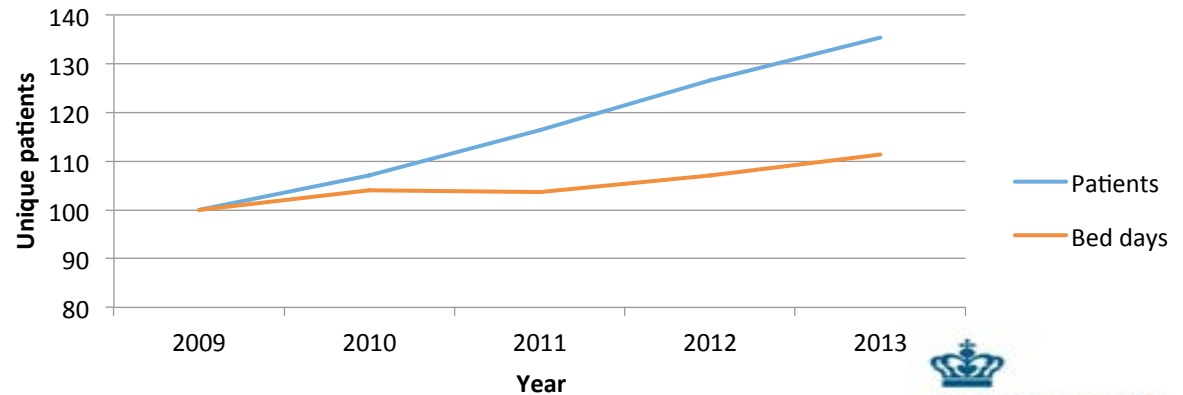
## Cardiovascular diseases



## COPD

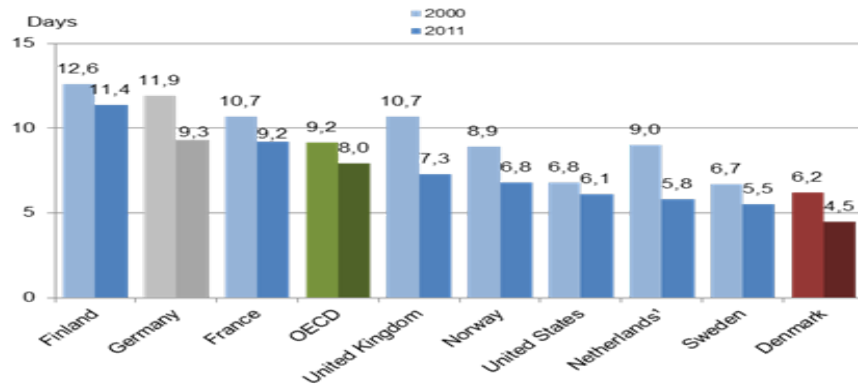


## Type II diabetes

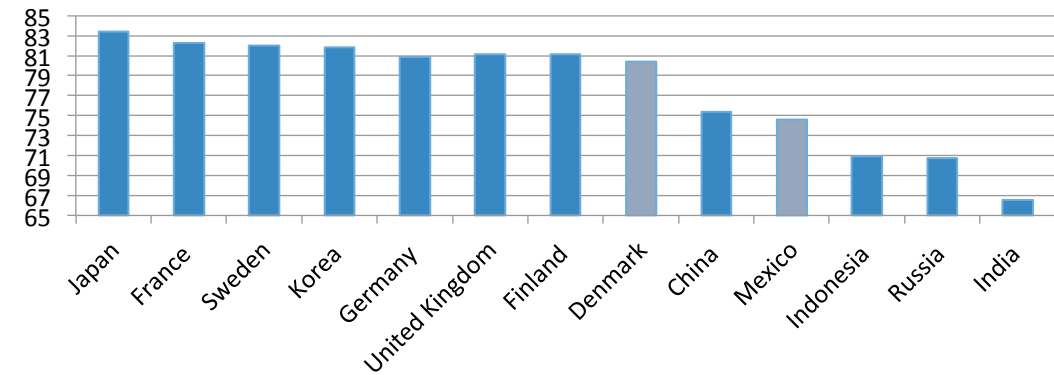


# Some results and challenges

The average length of stay in hospitals is low...

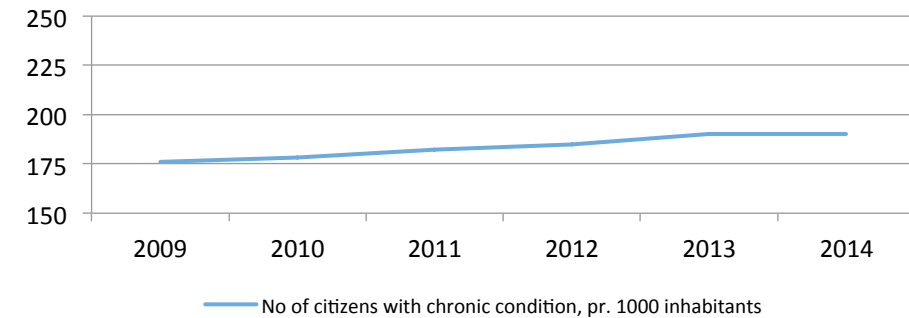


But average life expectancy not as high as in similar countries...

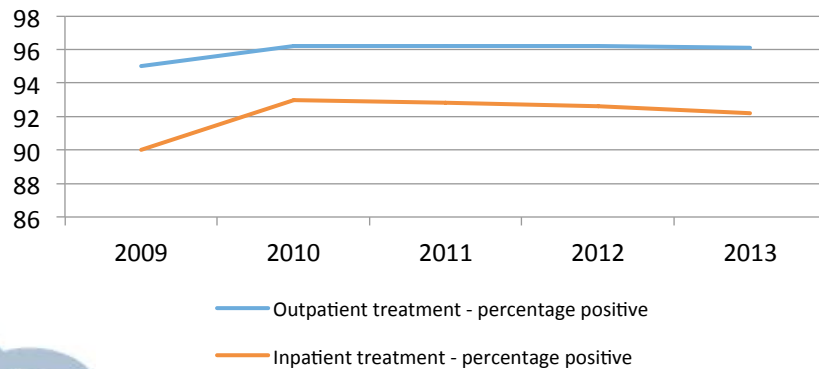


Source: OECD Health Statistics 2015.

...and the number of citizens with a chronic condition is rising



...and patient satisfaction is very high



## Ongoing work in the Ministry of Health

### The right to fast diagnose and treatment

- Maximum waiting of 30 days

### Cancer Strategy IV

- Holistic and coherent approach to cancer treatment

### Targeted effort for the elderly medical patients

- New action plan.
- Focus among other on prevention, treatment and follow-up at home.

### Action plan for dementia

- Denmark as a dementia-friendly country. Individual tailored solutions. Focus on relatives.

Personalised Medicine

National Telehealth by 2019

# The Danish eHealth and Telehealth plan

- National EHR and E-health architecture
- International standards
  - HL7
  - Continua Health Alliance
- First fully regional telehealth implementations
- Coordinated strategy:
  - Ministry of Health
  - Danish Regions
  - Danish Municipalities



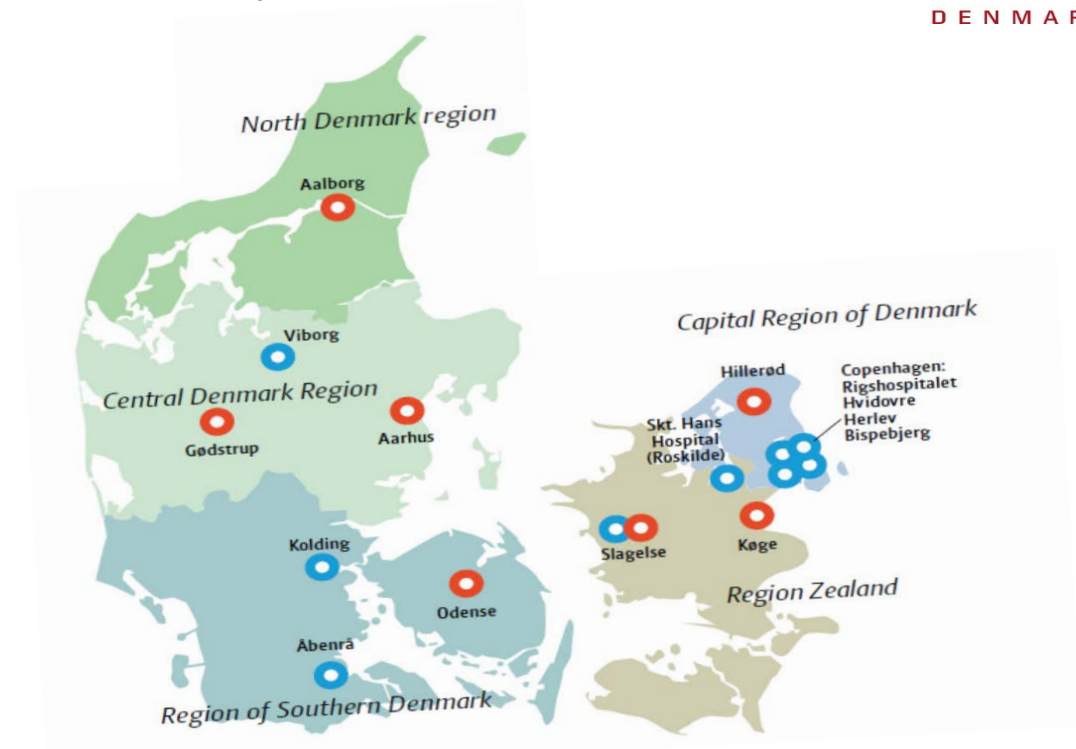
# The eHealth and telehealth strategy will align with the 2013 – 2020 Assisted Living strategy

- Full scale implementation of proven solutions
  - Ceiling lifts
  - Digital rehabilitation
  - Selected robot technology
- Full scale Smart Home implementation
- Smart Home technology for disabled citizens
- Coordinated strategy:
  - Ministry of Health and Prevention
  - Danish Regions
  - Danish Municipalities

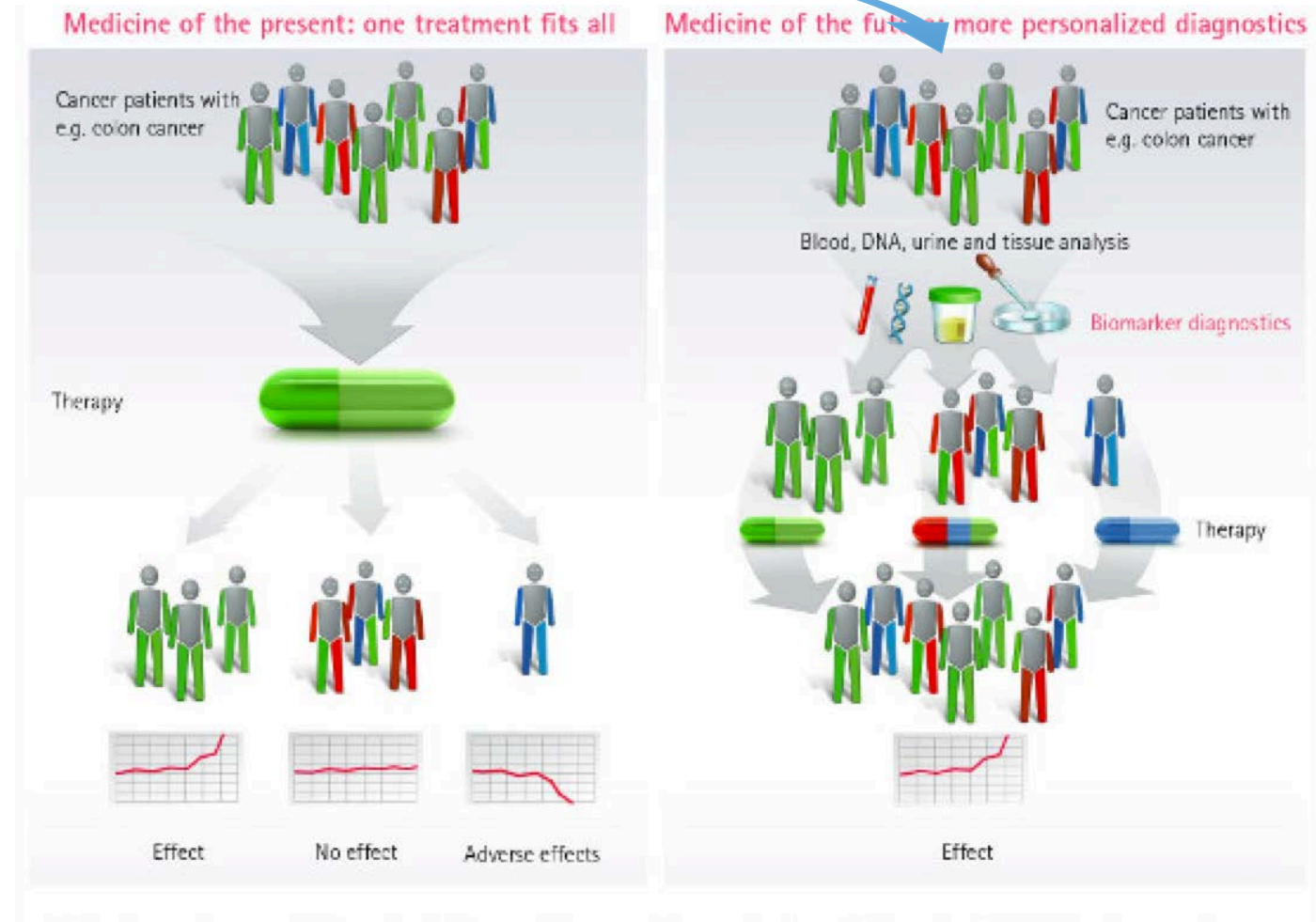


# 16 new hospitals will be the backbone of patient centric healthcare

- **Public-private partnerships**
- **New innovations**
- **Danish design**
- **Green technology**



# Personalised Medicine will increase treatment efficiency and reduce adverse effects:



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# Health care and social care compared

## Health care

- Hospital based health care services provided primarily by public hospitals in five regions
- Primary care provided by private practitioners fully funded by the regions
- 40 public hospitals, 107,000 FTE's, 82bn DKK public spending
- 3,500 GP's & 900 specialists in private practice, 15bn DKK public spending

## Social care

- Nursing care, homecare, nursing homes, assisted living and training funded and provided by the 98 municipalities
- Social psychiatry, assisted living for disabled adults and substance abuse programs
- 900+ nursing homes, 109,000 public FTE's and 40bn DKK public spending on "elder care"
- 30,000 public FTE's and 27bn DKK public spending on "specialised social care"

# How it all started – the caring hand of the universal welfare state



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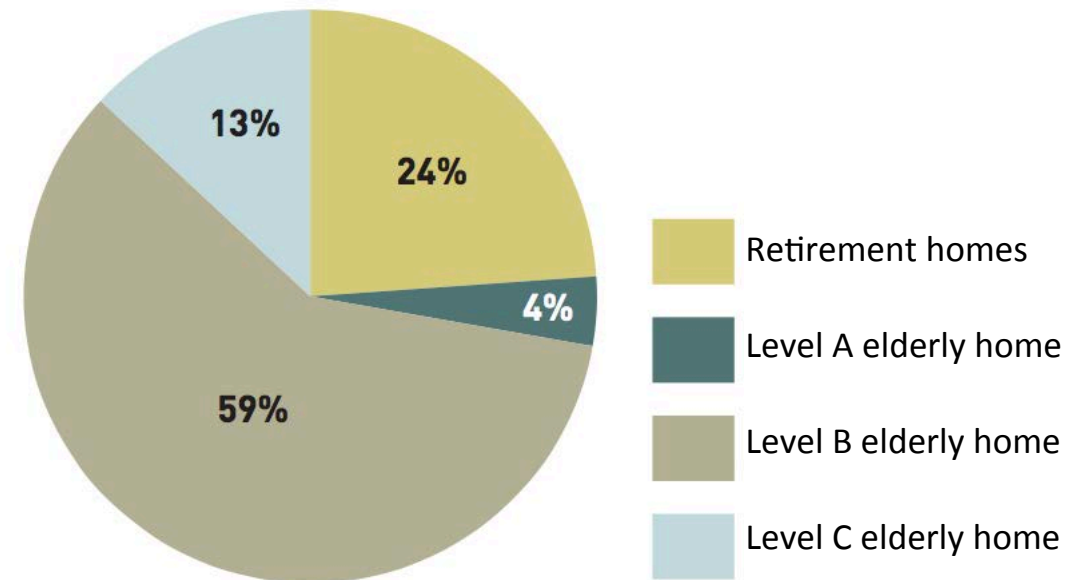


# From 1987 retirement communities replaces retirement homes in Denmark

## Supported Elderly Home Levels (2005):

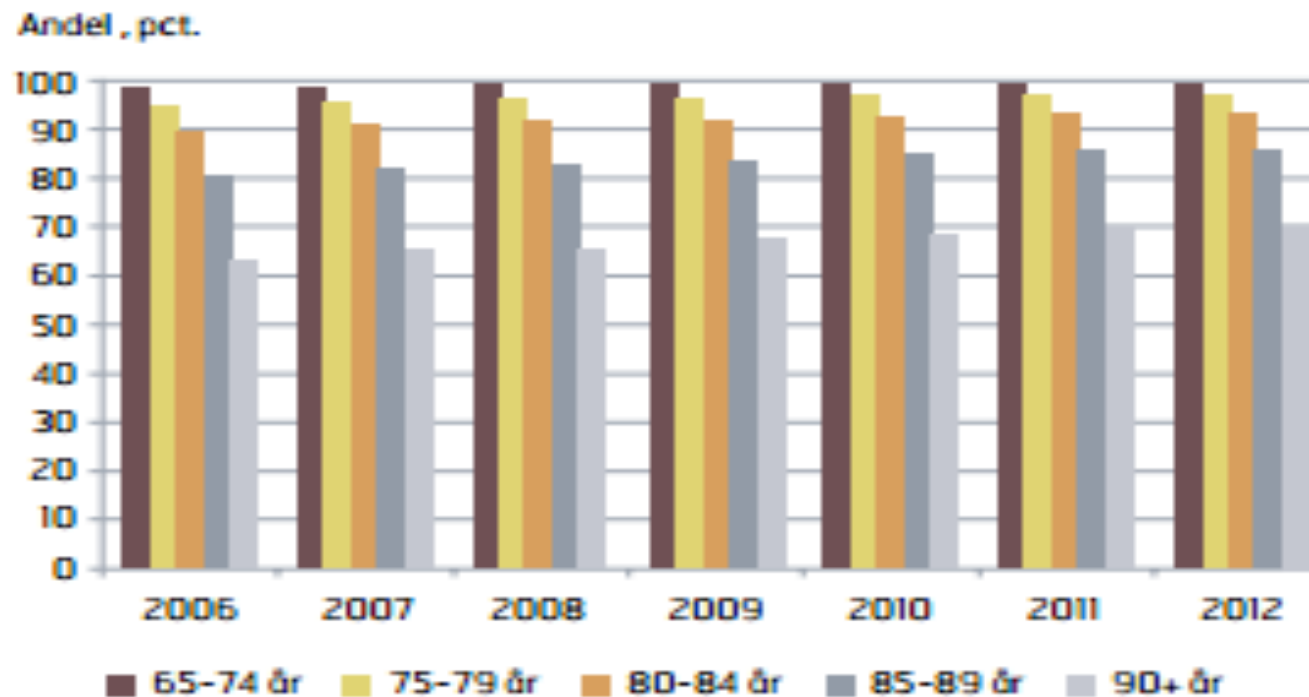
<b>Level A:</b> <ul style="list-style-type: none"> <li>• 24x7 care and nursing</li> <li>• Services and therapy</li> </ul>	<b>60%</b>
<b>Level B:</b> <ul style="list-style-type: none"> <li>• Homecare nursing support</li> <li>• Some services (e.g. food)</li> </ul>	<b>30%</b>
<b>Level C:</b> <ul style="list-style-type: none"> <li>• Limited homecare nursing support</li> </ul>	<b>10%</b>

In 2005 24% of 80+ age Danes live in retirement homes:



*“As long as possible in your own home”*

### Number of Danish elderly citizens in own home – age intervals – 2008-2012



Increase from 2006-2012:

- +8% age 85-89 years
- +8% age >90 years

Kilde: Danmarks Statistik, Statistikbanken tabel RESIDI og FOLK2.

The overall paradigm is changing:  
*“As long as possible in your own life”*

- **Empowerment** - active participation of the citizen
- **Personalized and flexible social care** based on the citizens needs
- **Holistic approach** to citizens life situation
- **Outcome oriented**
- **Integrated Care:** Across professions and sectors
- **Coordinated**
- **Planned**
- **Evidence based** interventions

# Integrated Care relies on close coordination between Hospitals and Municipalities

## Municipality



*Homecare system*

<< Admission Notification  
Admission Response >>  
Care Report >>

<< Rehabilitation Plan  
<< Discharge Notification  
<< Care Report

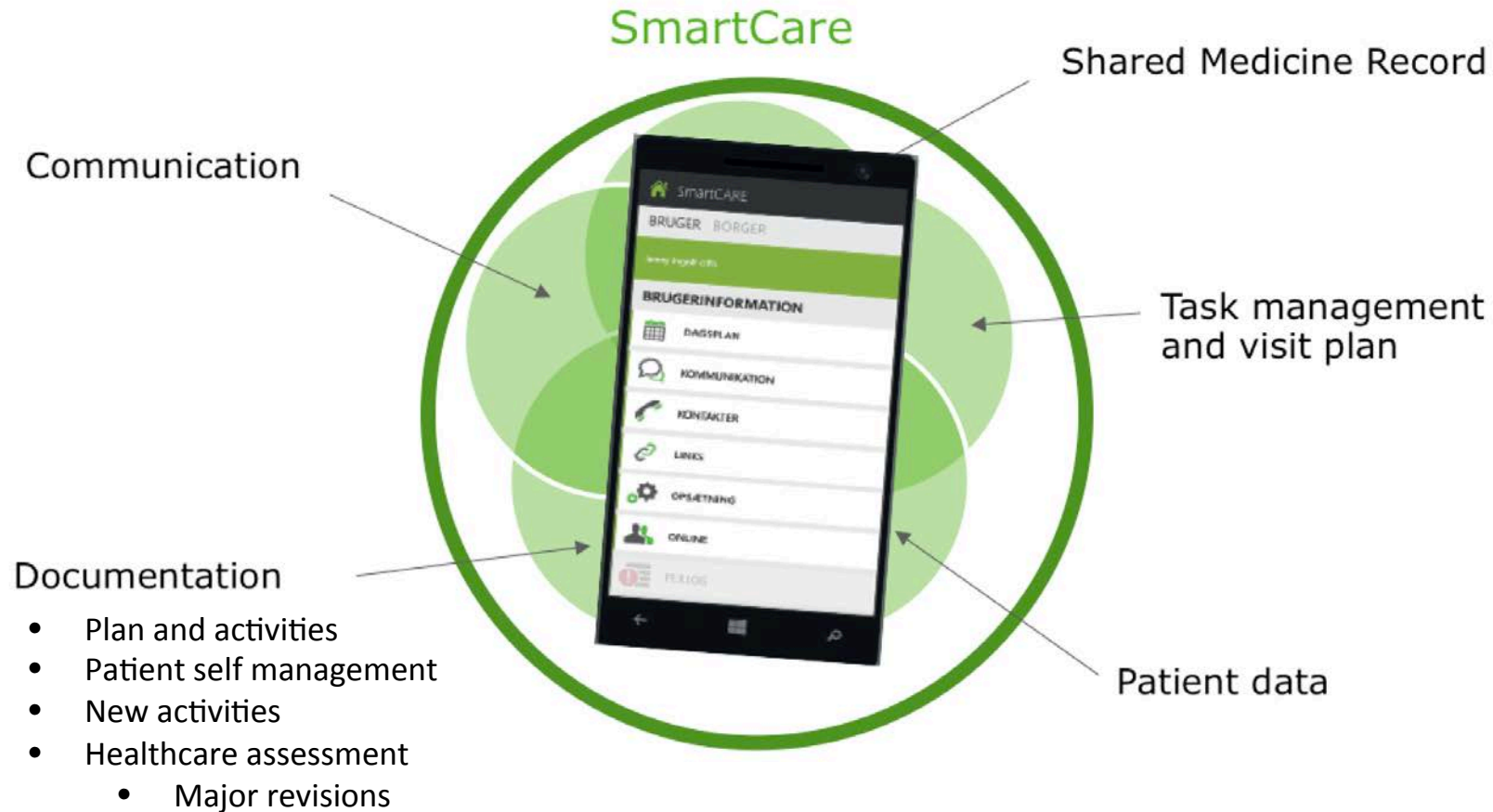
## Hospital



*Hospital PAS and/or  
EMR*

	Year	Age >65	Age 18-64	Age 0-17
Avg. length of stay at danish hospitals has been reduced by 22% for the elderly Patients during the period 2008 - 2011	2008	6,79	3,83	2,33
	2009	6,22	3,61	2,18
	2010	5,91	3,50	2,11
	2011	5,59	3,38	2,05
	2012	5,40	3,32	2,02
	2013	5,28	3,24	2,02
	Change from 2008- 2011 avg. days	-1,51	-0,59	-0,30
	Relative change - %	-22,24	-15,50	-13,08

Supporting more than 70% of elderly age >80 in their own homes require a mobile and well coordinated workforce of nurses and assistants

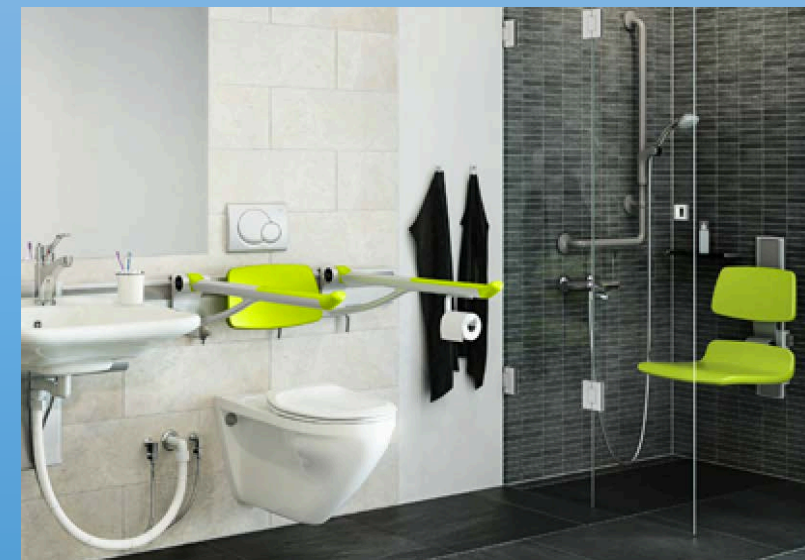
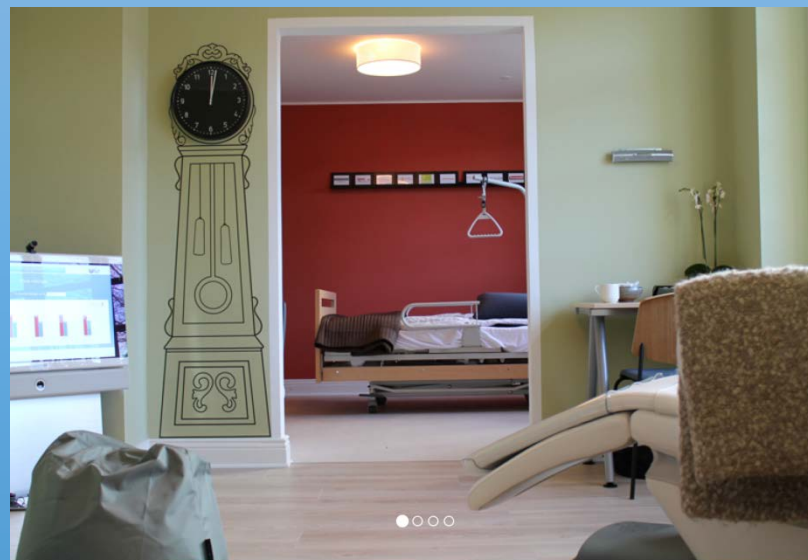
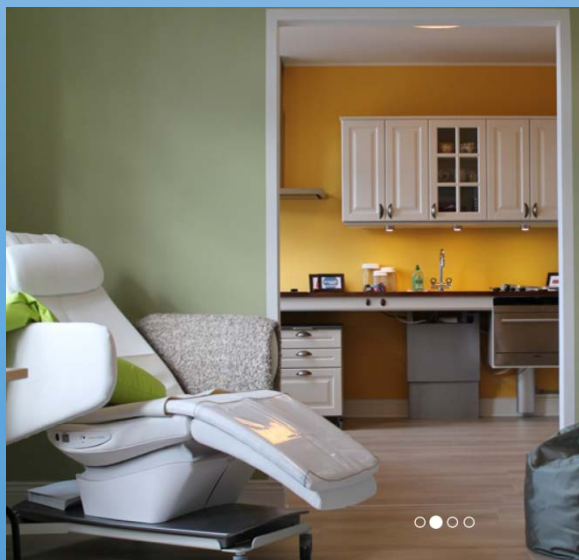


# Assisted living – the “Smart home”



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## Living labs



## Smart homes



16-05-16

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  - **Frail Elderly citizens**
  - Chronic patients

# Identifying frail citizens – municipality initiatives

1996, the law on preventive home visits:

- Municipalities must make at least one yearly preventive home visit to all citizens above age 75

Effect of preventive home visits (studies in 2001):

- Reduced mortality:
  - In eight studies investigating the general population of older people, there showed a significant reduction in the mortality rate at a so-called odds ratio, or the probability of mortality, of 0.76.
  - In five studies on mortality among frail older people, four studies conducted on the basis of drawing lots showed that the odds ratio was 0.72.
- No effect on number of hospital admissions or re-admissions
- Reduction in the number of admissions to institutional care:
  - Odds ratio 0,65 for elderly
  - Odds ratio 0,55 for frail elderly



# Identifying frail citizens – hospital initiatives

- Pre-admission follow up visits in cooperation with municipalities
- Geriatric hospital department screening initiatives:
  - Dementia
  - Nutrition
  - Fall risks

# The national initiative for early detection of frailty among elderly medical patients

## Objective

Early detection of:

- New or deteriorating diseases
- New or deteriorating disabilities
- Signs of malnutrition

## Pre-req's

- Elderly patient observations
- Home nurse education
- Patient relatives participation
- Diagnostic tools

## Actions

- **Daily observations by (home) nursing team**
  - Mental and social situation
  - The patients home and daily activities
  - Nutrition
  - Weight
- **Health status**
  - Vital signs – e.g. pulse, bloodpressure, temperature and respiratory rate
  - Chair test – e.g. sit/stand within 30 seconds
- **Screening**
  - E.g. depression
  - Pain
  - Quality of life

# Daily observations – the situation questionnaire, “the wheel” and the app

## Ændringskema

Observer og reager

Navn:	Cpr.nr.:			Dato:
<b>TEMA</b>	<b>Sæt kryds ved de svar der passer bedst</b>			<b>Bemærkning</b>
<b>Psykisk og Socialt</b>				
Humør	Glad/positiv	Neutral	Trist/negativ	
Hukommelse	God	Svingende	Glømsom	
Social aktivitet	Aktiv	Lidt aktiv	Passiv	
Søvnproblemer	Sjældent	Af og til	Ofte	
<b>Hjemmet</b>				
Hvordan ser hjemmet ud	Meget ryddeligt	Ryddeligt	Mindre ryddeligt	
Hvad klarer borger selv	Blomster	Sengeredning	Affald	
	Opvask	Toilet/bad	Post	
<b>Hverdagsaktiviteter</b>				
Generelt initiativ fra borger	Meget	Lidt	Passiv	
Graden af hygiejne	Velforberedt	Soigneret	Mindre soigneret	
Fysisk aktivitet	Meget aktiv	Aktiv	Passiv	
Fald	Aldrig	Af og til	Ofte	Obs! altid tilbagemelding ved fald
<b>Spise og drikke</b>				
Appetit	God		Skal opfordres	
Tørst	God		Skal opfordres	
Vægt	Holder vægten		Tøj hænger	
<b>Fysiske klager</b>				
Afføringsmønster	Ingen problemer	Af og til forstoppelse	Klager	
Vandladning	kontinent		Inkontinent	
Vejrtrækning	Normal	Åndenød, bevægelse	Åndenød, hvile	
Hoste	Aldrig	Af og til	Ofte	
Træthed	Aldrig	Af og til	Ofte	
Smerte	Aldrig	Af og til	Ofte	
Svimmel	Aldrig	Af og til	Ofte	



### Fokuspunkter - Hjulet

<b>Fysiske klager</b>	Syn/hørelse Åndenød Svimmel Afføring Hævede ben	Feber Vandladning Træt Smerter Hud
<b>Psykisk - socialt</b>	Isolerer sig Netværk Beklagende Søvn Passivitet	Forvirret Tab Hukommelse Tristhed
<b>Spise/drikke</b>	Kvalme Spises maden Vægttab Synkebesvær	Tandstatus Vægttab/-øgning (hænger tøjet?) Appetit Væskeindtag
<b>Hjemmet</b>	Løse tæpper/ledninger Dårlig lugt Ophobet affald	Gammel mad Snavs Generelt forfald Køleskab
<b>Hverdagsaktiviteter</b>	Usoigneret Mobilitet Aktivitetsniveau	Faldtendens Sengesøgende Alkoholproblemer
<b>Medicinindtagelse</b>	Tager borgeren sin medicin som foreskrevet?	Tager borgeren for lidt eller for meget medicin?

# Health status – the home nurse bag kit

- Blood pressure device
- Ear thermometer
- Stopwatch (for measuring pulse and respiration frequency)
- Pulse oxymeter
- Blood sugar device incl. needles and strips
- Urinstix
- Observation forms for documentation of measurements and observations

# Screening

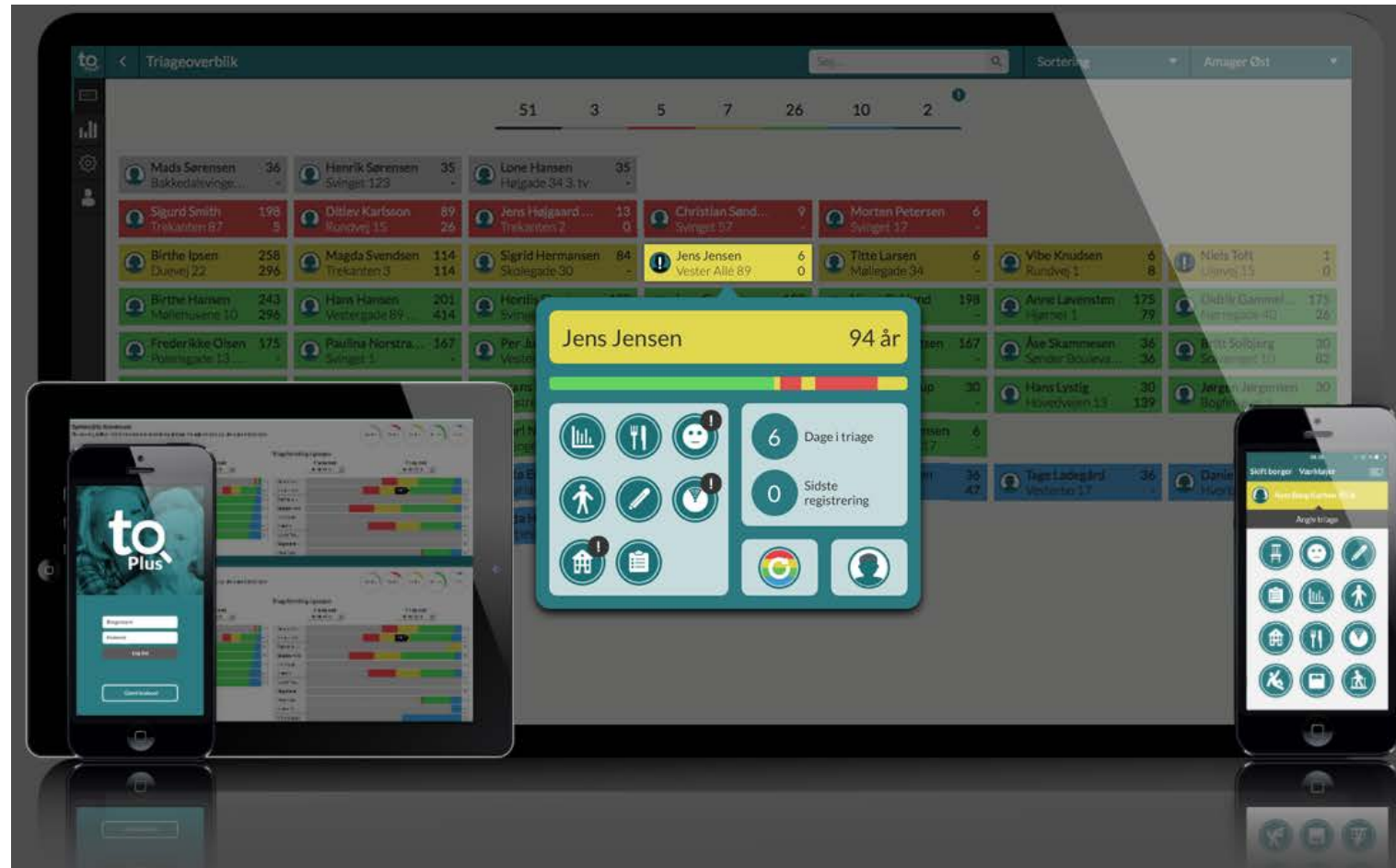
- **The Confusion Assessment Method (CAM)**
- **Mini Mental State Examination (MMSE)**
- **Mini Geriatric Depression Scale (GDS5)**
- **Verbal Ranking Scale (VRS)**
- **EUroQUALity5D (EQ-5D) (patient reported quality of life)**

# Triage registration and follow up

Red	Major deterioration – hospital admittance may be needed – or patient discharged from hospital
Yellow	Minor deterioration on one or more indicators
Green	Normal condition, no changes from last evaluation

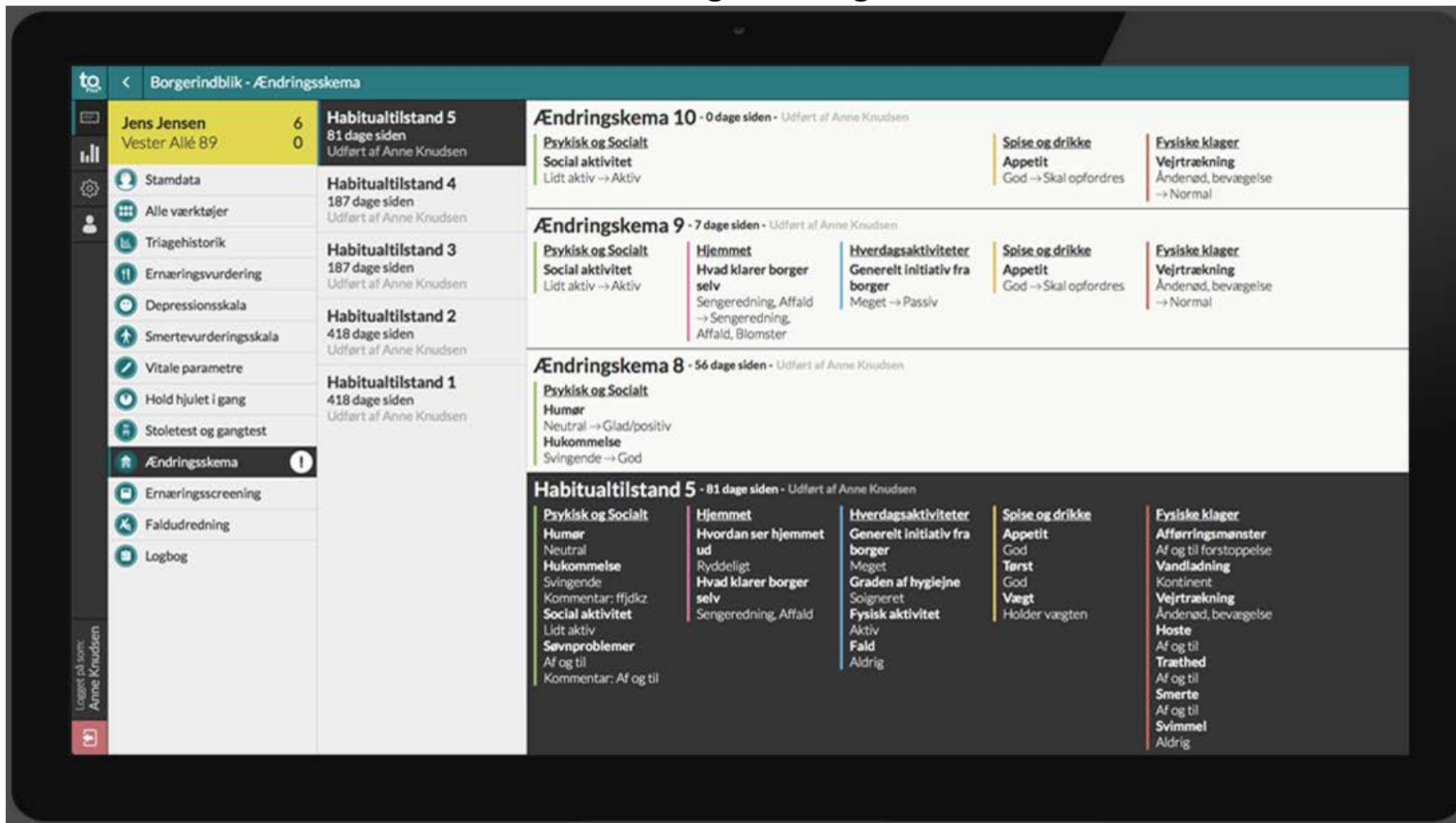
# New tools under implementation

Electronic Triage and status dashboard with registration app



# New tools under implementation

## Electronic overview and sharing of changes to health status



The screenshot displays a healthcare dashboard for a patient named Jens Jensen (Vester Allé 89). The dashboard is organized into several sections:

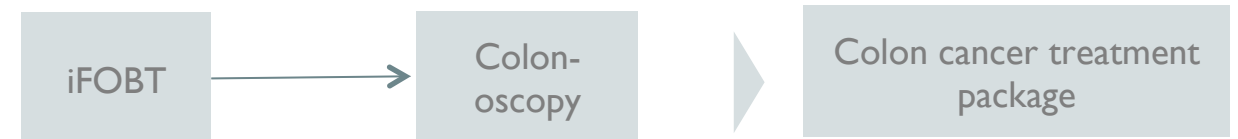
- Header:** "Borgerindblik - Ændringskema" with a back arrow and a search icon.
- Left Sidebar:** A list of navigation options including Stamdata, Alle værktøjer, Triagehistorik, Ernæringsvurdering, Depressionsskala, Smertevurderingsskala, Vitale parametre, Hold hjulet i gang, Stoletest og gangtest, Ændringskema (highlighted with a red circle), Ernæringscreening, Faldudredning, and Logbog. At the bottom, it shows "Logget på som: Anne Knudsen".
- Main Content Area:**
  - Top Section:** "Ændringskema 10 - 0 dage siden - Udført af Anne Knudsen". It shows "Psykisk og Socialt" (Social aktivitet: Lidt aktiv → Aktiv), "Spise og drikke" (Appetit: God → Skal opfordres), and "Fysiske klager" (Vejrtrækning: Åndenød, bevægelse → Normal).
  - Middle Section:** "Ændringskema 9 - 7 dage siden - Udført af Anne Knudsen". It shows "Psykisk og Socialt" (Social aktivitet: Lidt aktiv → Aktiv), "Hjemmet" (Hvad klarer borger selv: Sengeredning, Affald → Sengeredning, Affald, Blomster), "Hverdagsaktiviteter" (Generelt initiativ fra borger: Meget → Passiv), "Spise og drikke" (Appetit: God → Skal opfordres), and "Fysiske klager" (Vejrtrækning: Åndenød, bevægelse → Normal).
  - Bottom Section:** "Ændringskema 8 - 56 dage siden - Udført af Anne Knudsen". It shows "Psykisk og Socialt" (Humør: Neutral → Glad/positiv, Hukommelse: Svingende → God).
  - Bottom Section:** "Habitualtilstand 5 - 81 dage siden - Udført af Anne Knudsen". It shows "Psykisk og Socialt" (Humør: Neutral, Hukommelse: Svingende, Kommentar: ffjdkz, Social aktivitet: Lidt aktiv, Søvnproblemer: Af og til, Kommentar: Af og til), "Hjemmet" (Hvordan ser hjemmet ud: Ryddeligt, Hvad klarer borger selv: Sengeredning, Affald), "Hverdagsaktiviteter" (Generelt initiativ fra borger: Meget, Graden af hygiejne: Solgneret, Fysisk aktivitet: Aktiv, Fald: Aldrig), "Spise og drikke" (Appetit: God, Tørst: God, Vægt: Holder vægten), and "Fysiske klager" (Afføringsmønster: Af og til forstoppelse, Vandladning: Kontinent, Vejtrækning: Åndenød, bevægelse, Hoste: Af og til, Træthed: Af og til, Smerte: Af og til, Svimmel: Aldrig).

# National Colon Cancer screening

5 secretariats to monitor process and quality



1: iFOBT based test for all Danes aged 50-74



2: Home based camera pill pilot project



3: Screening for other types of cancers ?

- Organisational set-up is ready

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  - **Chronic patients**

# Are elderly people able to use Telehealth solutions ?

- The Danish Digitalization strategy – electronic mailbox by Nov. 2014
- Patient Empowerment and quality of life
- Integrated Care



The New York Times

Health


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### Denmark Leads the Way in Digital Care




Sindya N. Bhanoo/The New York Times

VIRTUAL VISIT Jens Danstrup, 77, takes his own medical readings at home and sends them over the Internet to his doctor in Copenhagen.

By SINDYA N. BHANOO  
Published: January 11, 2010

COPENHAGEN — Jens Danstrup, a 77-year-old retired architect, used to bike all around town. But years of smoking have weakened his lungs, and these days he finds it difficult to walk down his front steps and hail a taxi for a doctor's appointment.

Enlarge This Image



Sindya N. Bhanoo/The New York Times

Mr. Danstrup, who finds it difficult to walk down his front steps, can go to the doctor without leaving home, using some simple medical devices and a notebook computer with a Web camera. He takes his own weekly medical readings, which are sent to his doctor via a Bluetooth connection and automatically logged into an electronic record.

Now, however, he can go to the doctor without leaving home, using some simple medical devices and a notebook computer with a Web camera. He takes his own weekly medical readings, which are sent to his doctor via a Bluetooth connection and automatically logged into an electronic record.

“You see how easy it is for me?” Mr. Danstrup said, sitting at his desk while video chatting with his nurse at


TWITTER

SIGN IN TO E-MAIL

PRINT

REPRINTS

SHARE



# Personalised Healthcare – and Telehealth

## TeleCare Nord



- All COPD patients in Region North
- Highest number of research projects
- Evidence
- OpenTelehealth – open source platform

16-05-16

## The EPITAL project

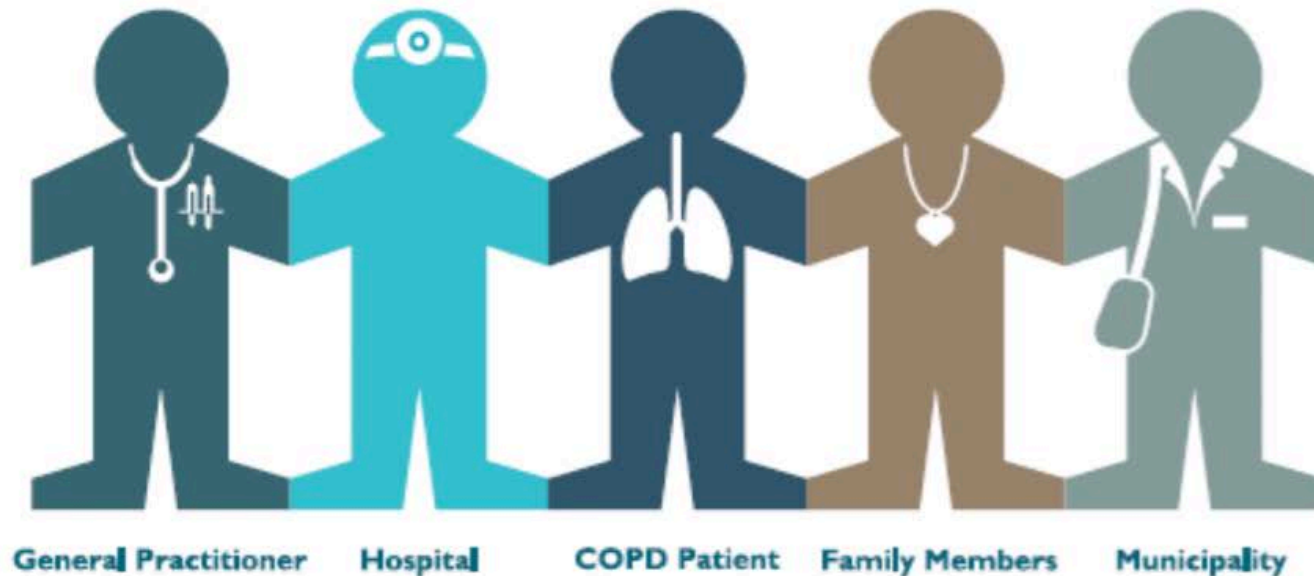


- Personalised Healthcare
- Call center and new support organisation
- Patient Empowerment

40

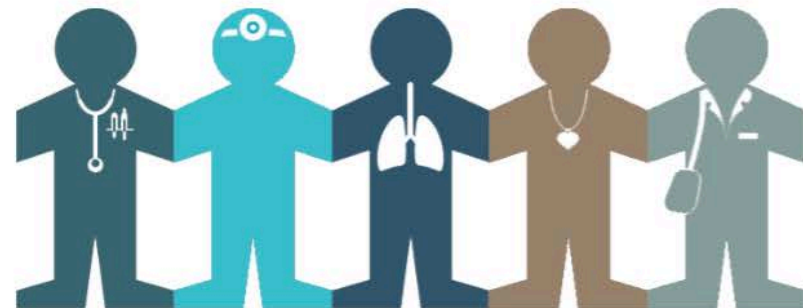
# TeleCare North

## Home monitoring of COPD patients

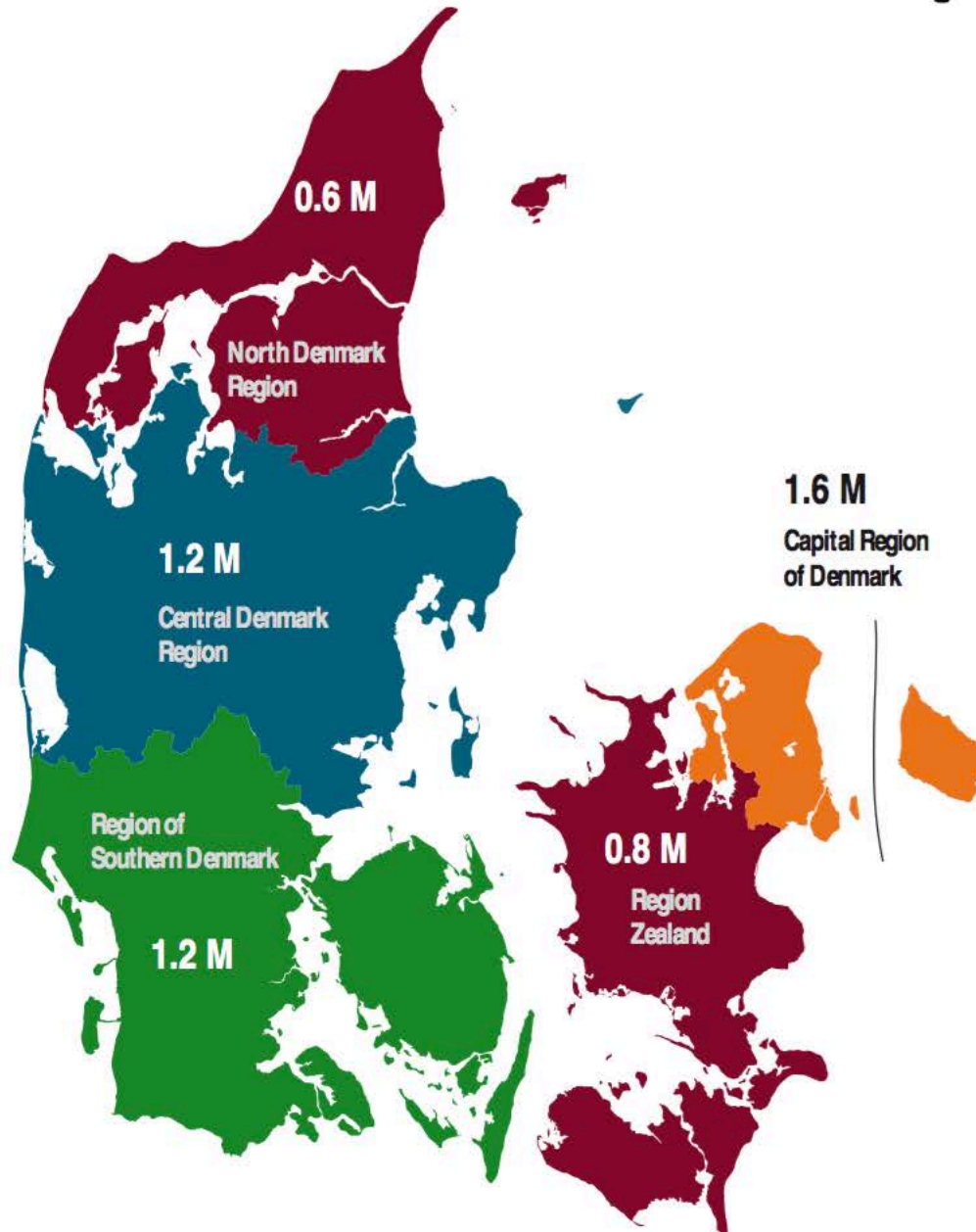


# TeleCare North

- From a R&D/ pilot program to a full scale demonstration project. First example in Europe.
- Collaboration across sectors, not only around the patient but also with the patient in relation to finding and implementing solutions that meet technical, organizational, legal and economic challenges of deploying full-scale operation.
- Evaluation- and research design, including randomized block design, geared towards gathering evidence of effect.





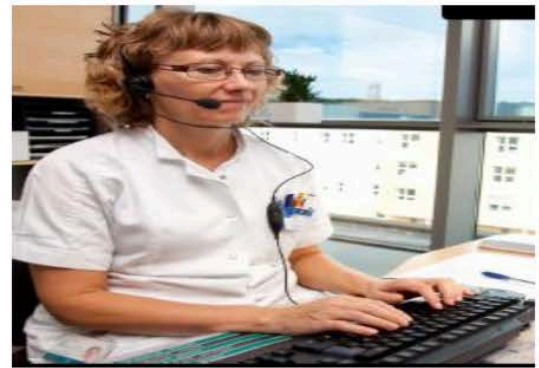
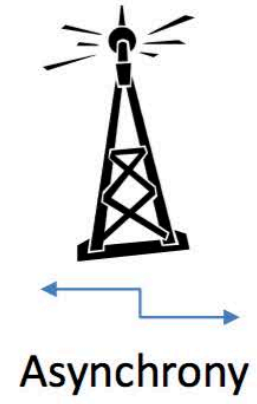
# WHO



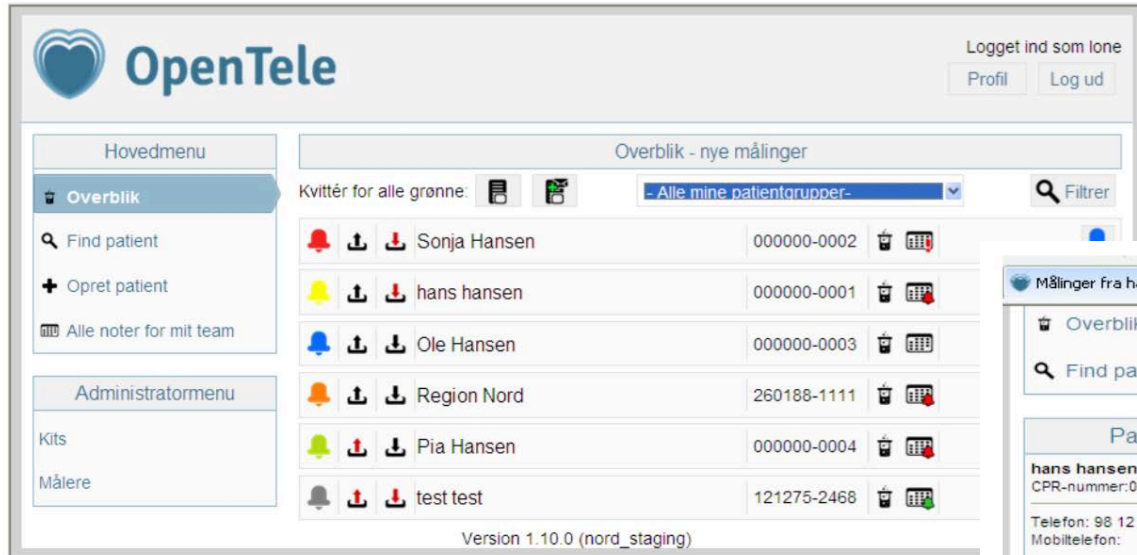
## TeleCare Nord participants

- 1256 Patients
- The Danish Lung Association
- The municipalities in North Jutland
- The GPs in North Jutland
- The North Denmark Region
- The 4 hospitals in North Jutland
- Aalborg University

# HOW

# As simple as possible – based on Open Source



The screenshot shows the main dashboard of the OpenTele system. At the top left is the 'OpenTele' logo. On the right, it says 'Logget ind som lone' with 'Profil' and 'Log ud' buttons. A central header reads 'Overblik - nye målinger'. Below this is a search bar for 'Kvitter for alle grønne' and a dropdown menu for '- Alle mine patientgrupper'. A list of patients is displayed with icons for each. On the left, there is a 'Hovedmenu' with options like 'Overblik', 'Find patient', 'Opret patient', and 'Alle noter for mit team'. Below that is an 'Administratormenu' with 'Kits' and 'Målere'. The version 'Version 1.10.0 (nord\_staging)' is shown at the bottom.

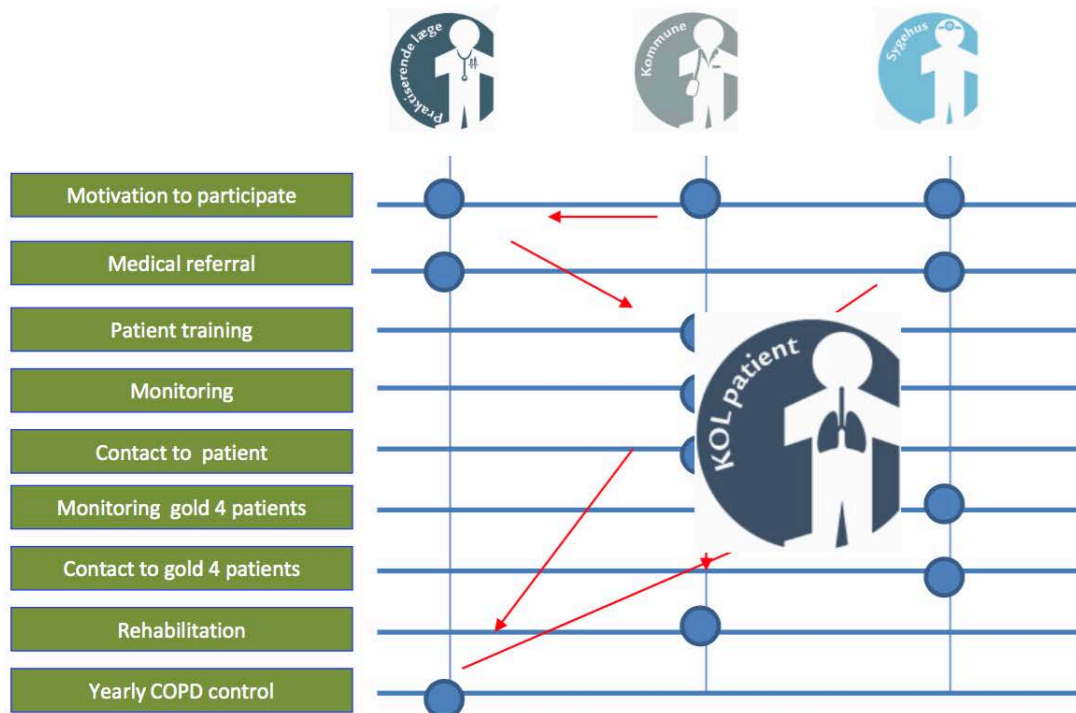


This screenshot shows the detailed view for a patient named 'hans hansen'. The left sidebar contains a 'Patientmenu' with options like 'Målinger', 'Stamdata', 'Beskeder til/fra patient (1)', 'Noter', 'Pausering', 'Grafer', 'Alle målinger', 'Udstyr', and 'Monitoreringsplan'. The main area is a table of measurements with columns for 'Spørgsmål' and dates/times. The table contains the following data:

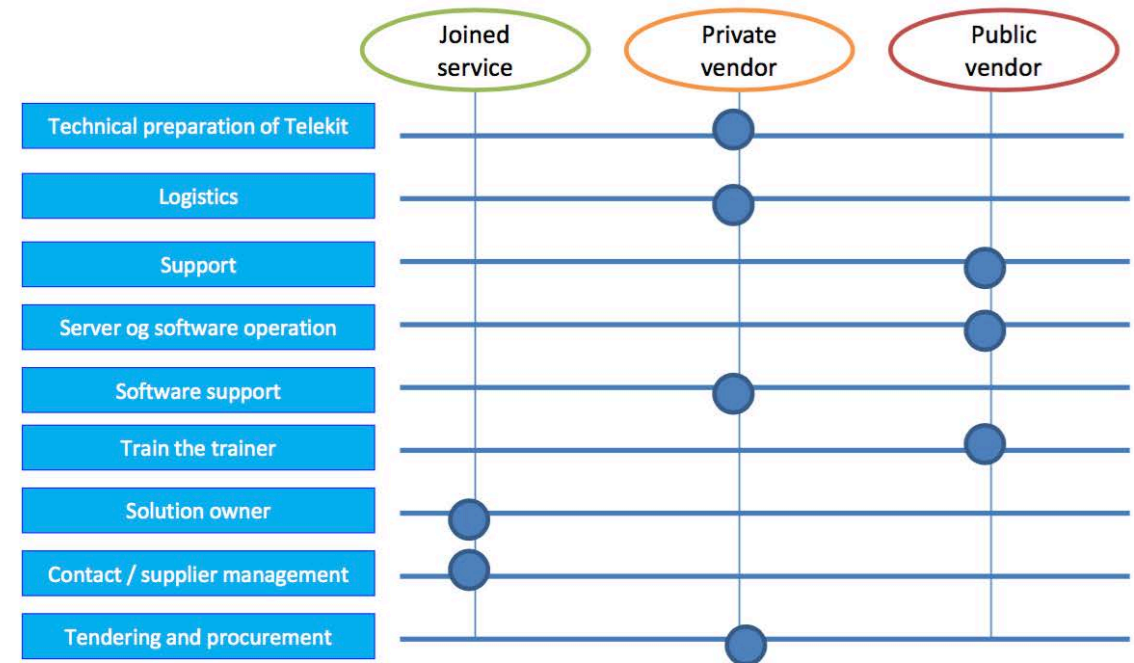
Spørgsmål	23/09 10:19	20/09 11:30	20/09 11:27	09/09 09:15
Rejse-sætte. U	Ja			
Vægt (Kg)		62,1		
Rejse-sætte. Undværre instruktion?	Ja			
Rejse-sætte test. Antal gentagelser	22			
Rejse-sætte test. Modificeret?	Hænder på lår			
Saturation (%/bpm)			98/62	
Iltmætning - lave måling?				
Saturation				
Måling af blodtryk (mmHg/bpm)			113/87, 69	
Blodtryksmåling - gentage?			Nej	
Måling af blodtryk (mmHg/bpm)				

# Towards Integrated Care

## Local patient related services



## Regional operating services



# PhD results



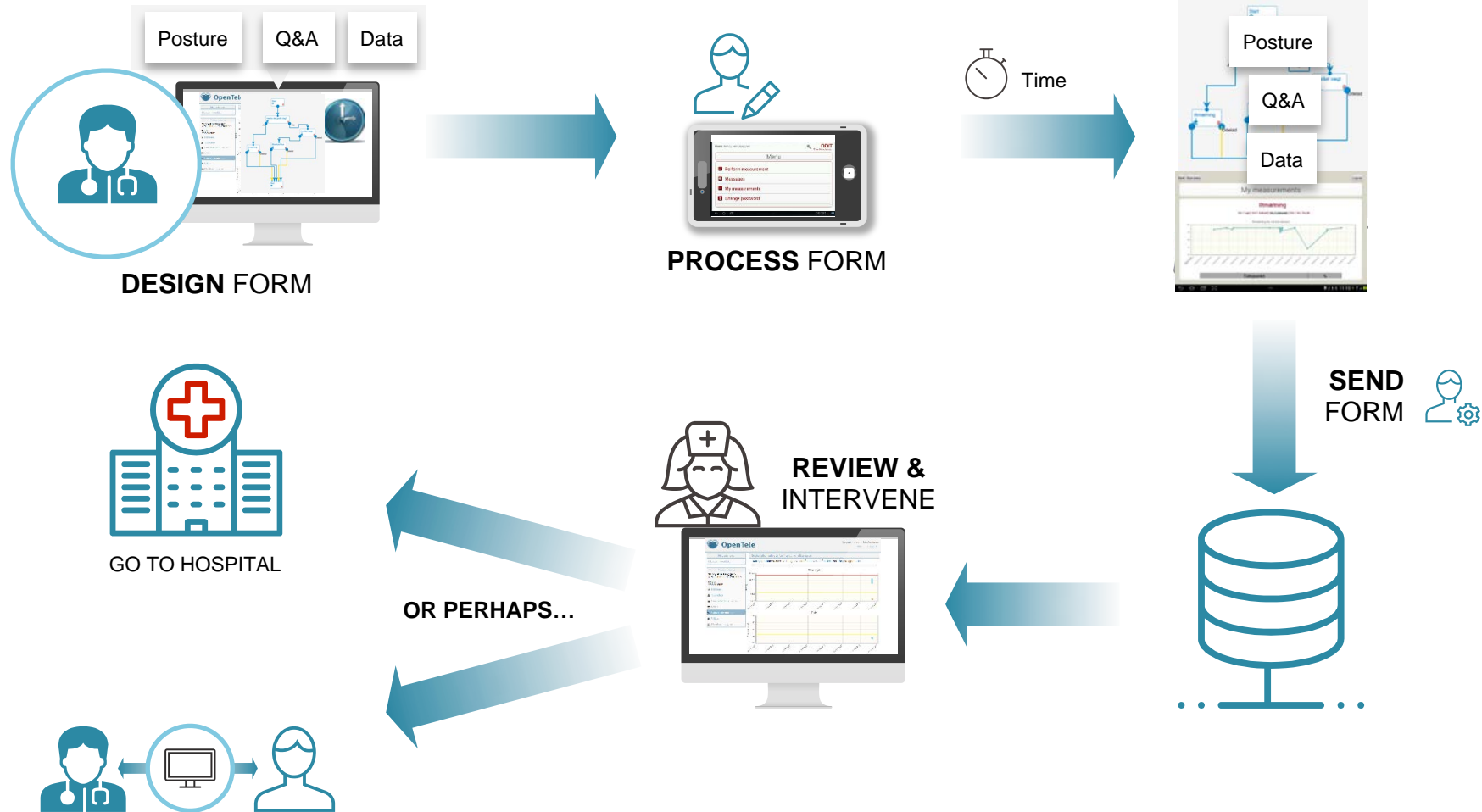
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## Health economic

- Home monitoring offers an health effect measured in qaly-ajusted life year (QALY).
- Home monitoring is more expensive - if offered to all COPD patients
- Home monitoring of patients with server COPD / GOLD 3 offers an effect measured in QALY **and** a reduces healthcost app. 7000 Dkr. /year.
- Home monitoring of patients who receives municipal nursing and care services offers an effect measured in QALY **and** reduces cost app. 9000 Dkr. /year

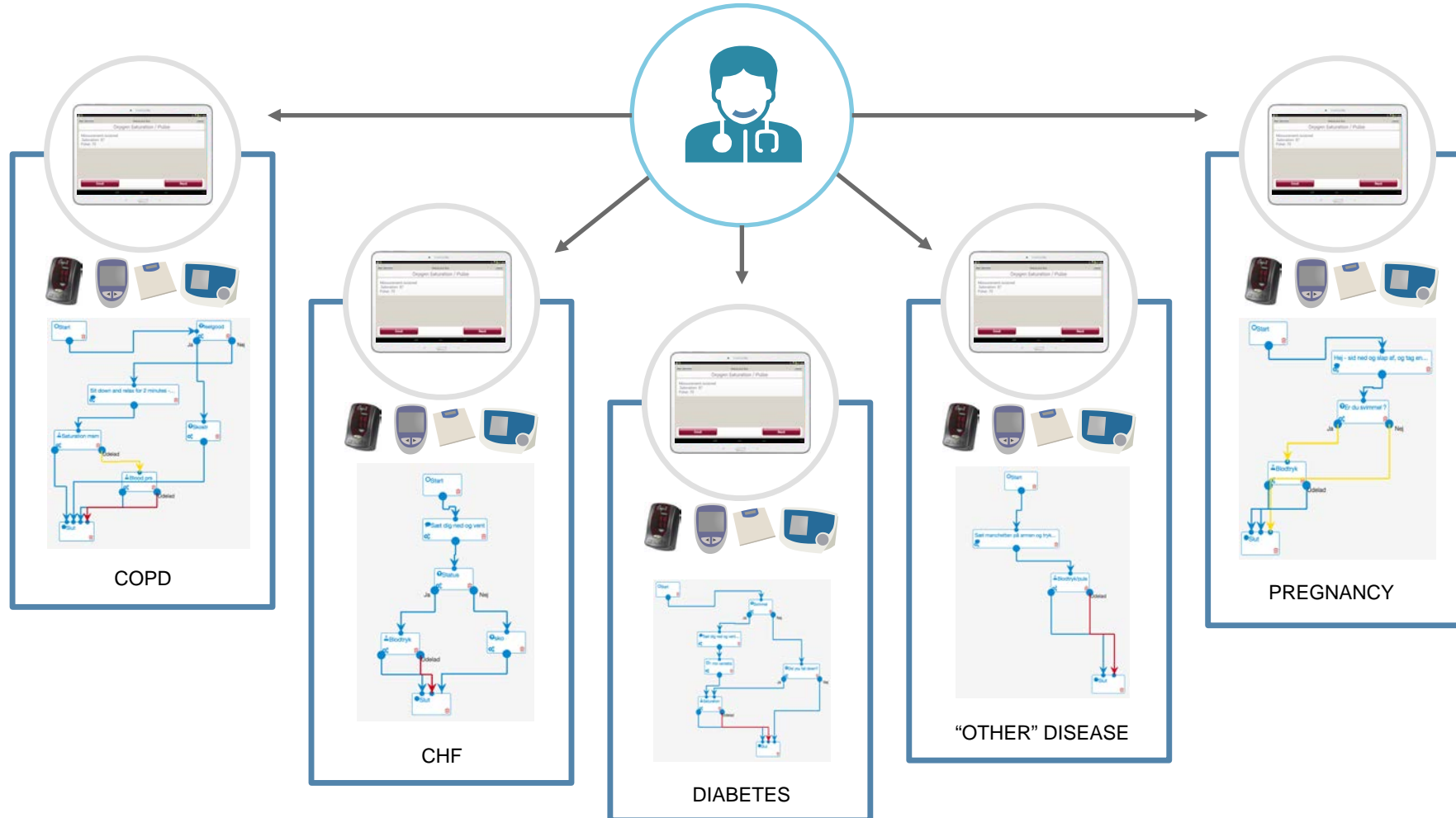



OPEN TELE SIMULATED CONSULTATION



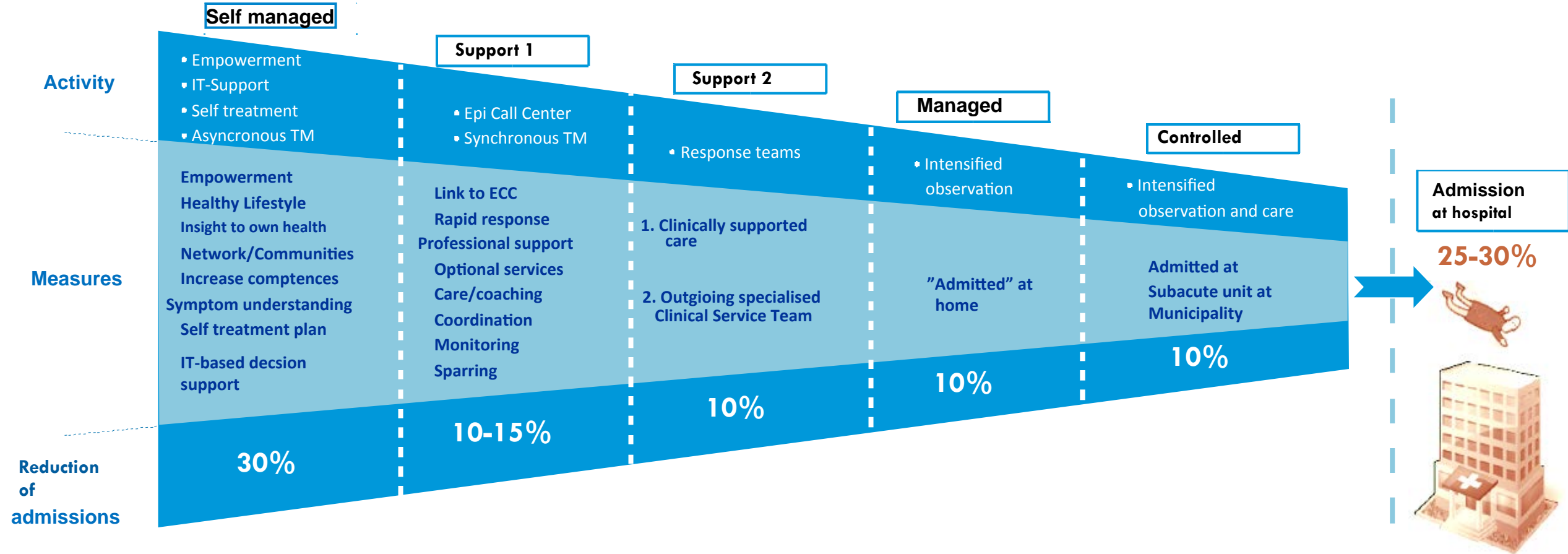
SIMPLE, SCALABLE, STANDARDIZED

# OpenTelehealth REMOTE PATIENT MONITORING - solution



Medical device class 2  Generic platform with flexibility to adapt

# "The Funnel"



# Citizen - Summer 2014

Medical box – rescue medication

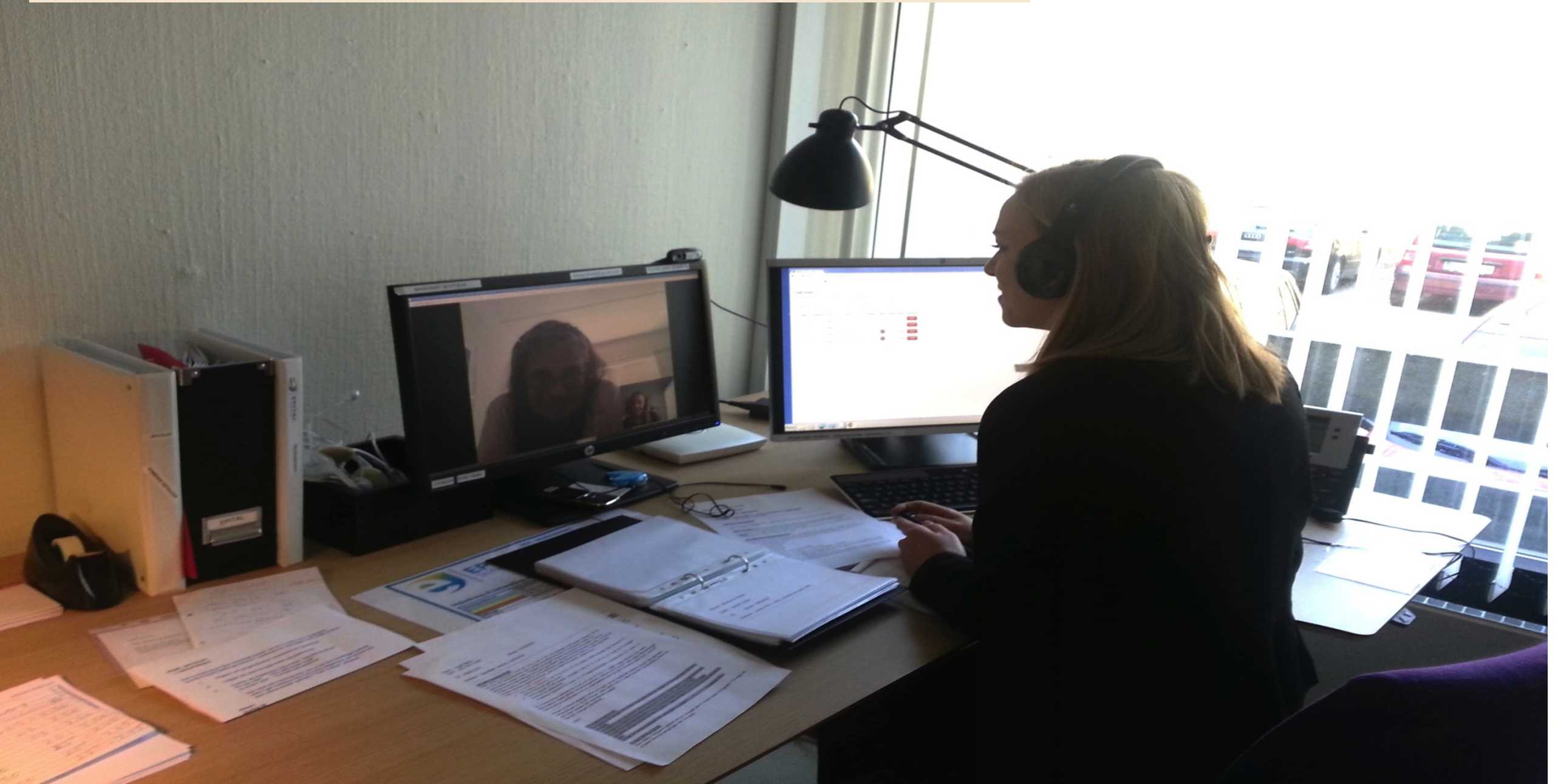
e-health navigator

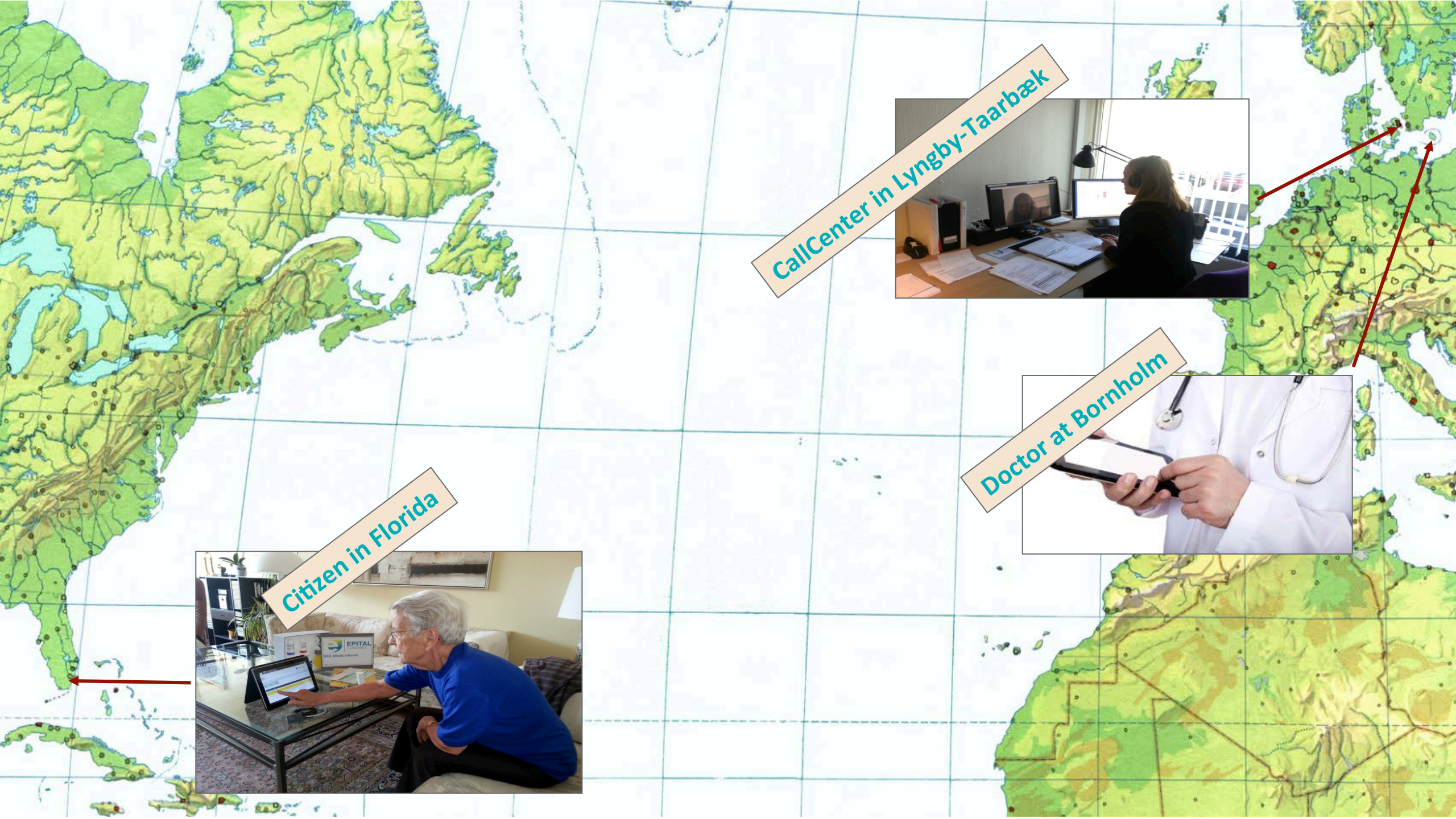
e-health monitoring devices

 EPITAL  
SUNDHED®  
KOL Medicinkasse



# CallCenter, Lyngby-Taarbæk, – Summer 2014





Citizen in Florida



CallCenter in Lyngby-Taarbæk



Doctor at Bornholm



# Agenda

- Introduction to the Danish Healthcare System
- Healthcare transformation initiatives
- Elderly Care
  - Home Care
  - Frail Elderly citizens
  - Chronic patients



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# Healthcare

# D E N M A R K

INNOVATING BETTER LIFE

Hans Erik Henriksen, CEO Healthcare DENMARK  
[heh@healthcaredenmark.dk](mailto:heh@healthcaredenmark.dk)

The 2<sup>nd</sup> most deadly cancer in the world is tackled either with expensive and invasive or cheap, but inaccurate procedures

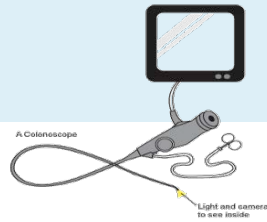
**Colorectal Cancer**

- 2<sup>nd</sup> most deadly cancer
- Curable with early detection
- 150-200M in EU&NA at risk



**Standard Colonoscopy**

- Rigid, expensive procedure
- Risk of internal damage
- Often unnecessary



**iFOBT Stool Test**

- Cheap, mass deployment
- High false positive & negative rate
- Confused patients and overloaded healthcare systems

## Even though innovative technology is available to improve colorectal cancer screening it is hardly used

### Technology Innovation

- Capsule takes video of colon
- Expert analyzes images
- Result delivered within days



### Innovator's Dilemma

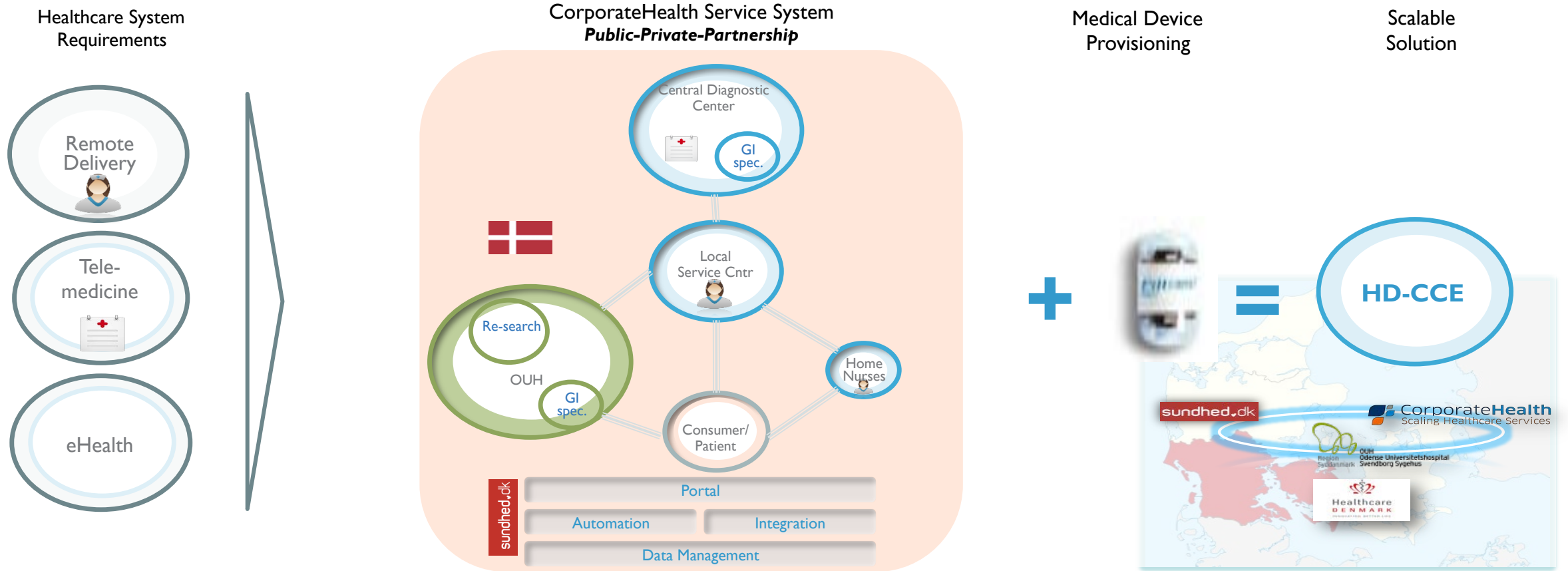
- Marketed to GI specialists
- High prices, low acceptance
- No impact on screening rates



Medtronic PillCam COLON II for Colon Capsule Endoscopy (CCE)

*Just 4,000 colon capsules have been sold across the world in one year*

# To make capsule screening usable we have developed an IT-enabled service delivery system that addresses healthcare requirements in private-public partnership



## Medical HD-CCE service offerings that CHI offers via the service platform

Offering	Type	Process	Status/ Comment
1. Hospital Small bowel diagnostics	SB		<ul style="list-style-type: none"> <li>• Cost efficient Remote Reading Services</li> <li>• Local Staff upon request</li> <li>• Training Hospital staff 2.</li> </ul>
2. National iFOBT-positive HD-CCE Filter	C2		<ul style="list-style-type: none"> <li>• Single payer market offering only</li> <li>• Customer: Payer agreements needed</li> <li>• (Trials II 3000, Intereg.Trial 30000...)</li> </ul>
3. Hospital Incomplete Colonoscopy	C2		<ul style="list-style-type: none"> <li>• Specialized offerings to hospitals</li> <li>• Reducing Cost by CT avoidance</li> </ul>
4. Hospital Risk surveillance patients	C2		<ul style="list-style-type: none"> <li>• General Hospital Offering</li> <li>• Need reimbursement Scheme</li> </ul>
5. Hospital IBD diagnosis validation	C2/SB		<ul style="list-style-type: none"> <li>• New clinical trial: Medical effectiveness</li> <li>• Specialized offerings to hospitals</li> </ul>
6. GPs Symptomatic patients	C2/SB		<ul style="list-style-type: none"> <li>• GP “Lab Service” offering</li> <li>• Acceptance GP and Patients</li> </ul>

## Our solution has been implemented in a private public partnership with Sundhed.dk the national healthcare portal of Denmark

The screenshot shows the Sundhed.dk web portal interface. At the top, there is a red header with the 'sundhed.dk' logo. Below the header is a navigation bar with five main menu items: 'Min side', 'Patientdata', 'Klinikadministration', 'Litteratursøgning', and 'Min opsætning'. Underneath this is a secondary navigation bar with various service links, including 'Kamerapille Tarmscreening' which is highlighted in red.

The main content area is titled 'Kamerapille Tarmscreening'. It contains a brief description of the screening process and a set of filter buttons: 'Mine patienter', 'Aktive patienter', 'Ikke-tilmeldte patienter', 'Gennemførte patienter', and 'Afbrudte patienter'. Below the filters is a section for 'Undersøgelsens patientoplysninger' (Investigation patient information) with the following details:

- Patientnavn: Test Patient99
- Patientid: 108
- CPR: 1209670099
- Telefon: 12345678
- Status: Igang
- Ansvarlig afdeling: Kirurgisk Afdeling A
- Sygeplejerske: Pemille Mahnfeldt (with a dropdown arrow and a 'Tildel' button)

Below this is the 'Undersøgelsens forløb' (Investigation process) section. It features a list of steps on the left: 'Kriterier for deltagelse', 'Bekræft deltagelse', 'Aftale dato/tid og sted', 'Pulver/væske modtaget', 'Faste begyndt', and 'Udrensning begyndt' (which is highlighted in red). The main text area for 'Udrensning begyndt' states: 'Patienten er nu igang med udrensning. Her kan du notere, hvis der er afvigelser fra den planlagte procedure, som patienten er bedt om at følge forud for undersøgelsen. Ved klik på Næste bekræfter du på vegne af patient, at udrensning er gennemført.' Below the text is a 'Starttidspunkt for udrensning' (Start time for cleansing) field with the value '16.03.2015 13:00'. A calendar widget is displayed below the time field, showing the month of March 2015. The calendar highlights the 16th of March at 13:00.

Marts - 2015							
Man	Tir	Ons	Tor	Fre	Lør	Søn	
9	23	24	25	26	27	28	1 13:00
10	2	3	4	5	6	7	8 13:30

## Stepwise we are building out a combined pan European and International service platform for remote CCE services

### How the Partners can benefit from the North European service platform and partnership

#### 1. Pan European CCE diagnostic service and research applications

- + Direct research collaboration and partnering in EU projects: UK, NL, DK, DE and beyond

#### 2. Fast ramp-up of CCE services on existing platform

- + Medical evaluation provided by CHI: No time-consuming work for Dundee's professionals
- + Service resources employed by CHI: No extra staffing employed by University, but still new Scottish work force
- + Data management operated by CHI: Tailored data integration and policy compliant operations

#### 3. High quality provisioning of service

- + High-touch preparation of patient
- + Quality-consistent reading of videos

#### 4. Variable, low cost service introduction and delivery

- + Paid for per procedure without up-front investments
- + Productivity and efficiency focus with continuous improvements
- + Central demand-/supply-management even for large volumes

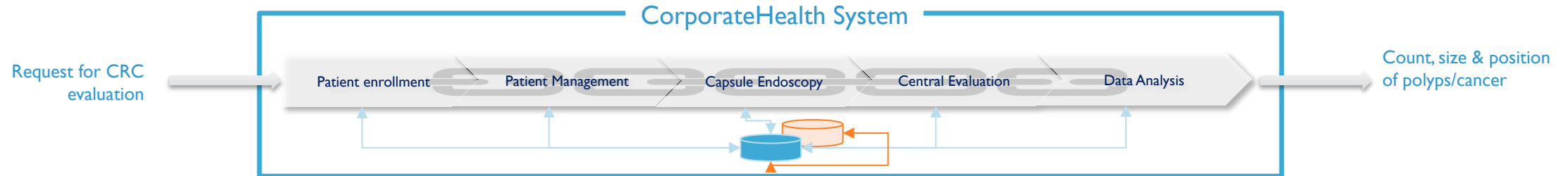
#### 5. Data-driven, continuous feedback-loop

- + Data analysis of procedure quality shared with clinical and research teams
- + Rapid introduction of improvements impacting all users and patients
- + Visibility of key performance parameters



## Summary of CorporateHealth main value propositions

- **By offering an IT-enabled services model that keeps patients out of the hospital and delivers top quality capsule endoscopy evaluations, CRC screening can be introduced for research or clinical purpose quickly and cost effectively**
- **As an agile, highly collaborative company CorporateHealth is used to work in public-private-partnerships that make the fusion of research and clinical application possible**
- **Our service delivery system leverages proprietary IT and standardized workflows to establish a highly efficient and effective process chain acting like a black-box “laboratory” to the payer/provider**





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