



# Welfare & Health

Challenge And Opportunity

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Åbo Akademi 2011-06-18

**2020**  
STRATEGI

HELSE  MIDT-NORGE  
*- På lag med deg for din helse -*

# Reforming The Norwegian Healthservices

2002:

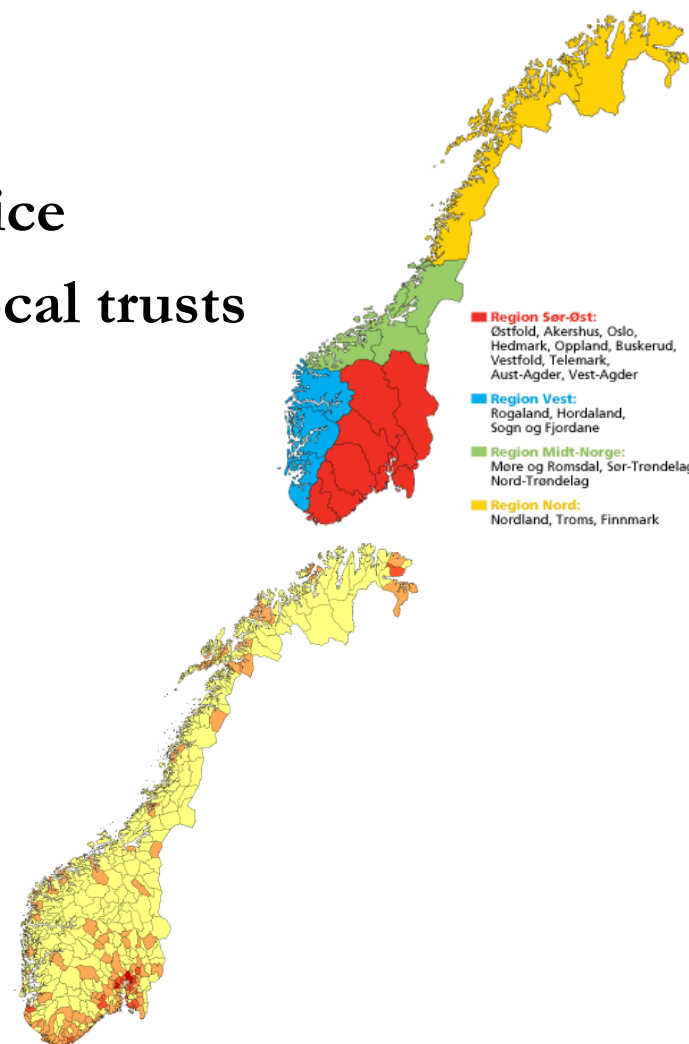
**Reforming specialized health service**


**- regional health authorities and local trusts**

2012:

**The Coordination Reform**

**- focusing on interaction  
between primary health and  
specialized health service**





2010:  
Our ambulances drove  
4.600.000 kilometers  
or  
114 times round the earth

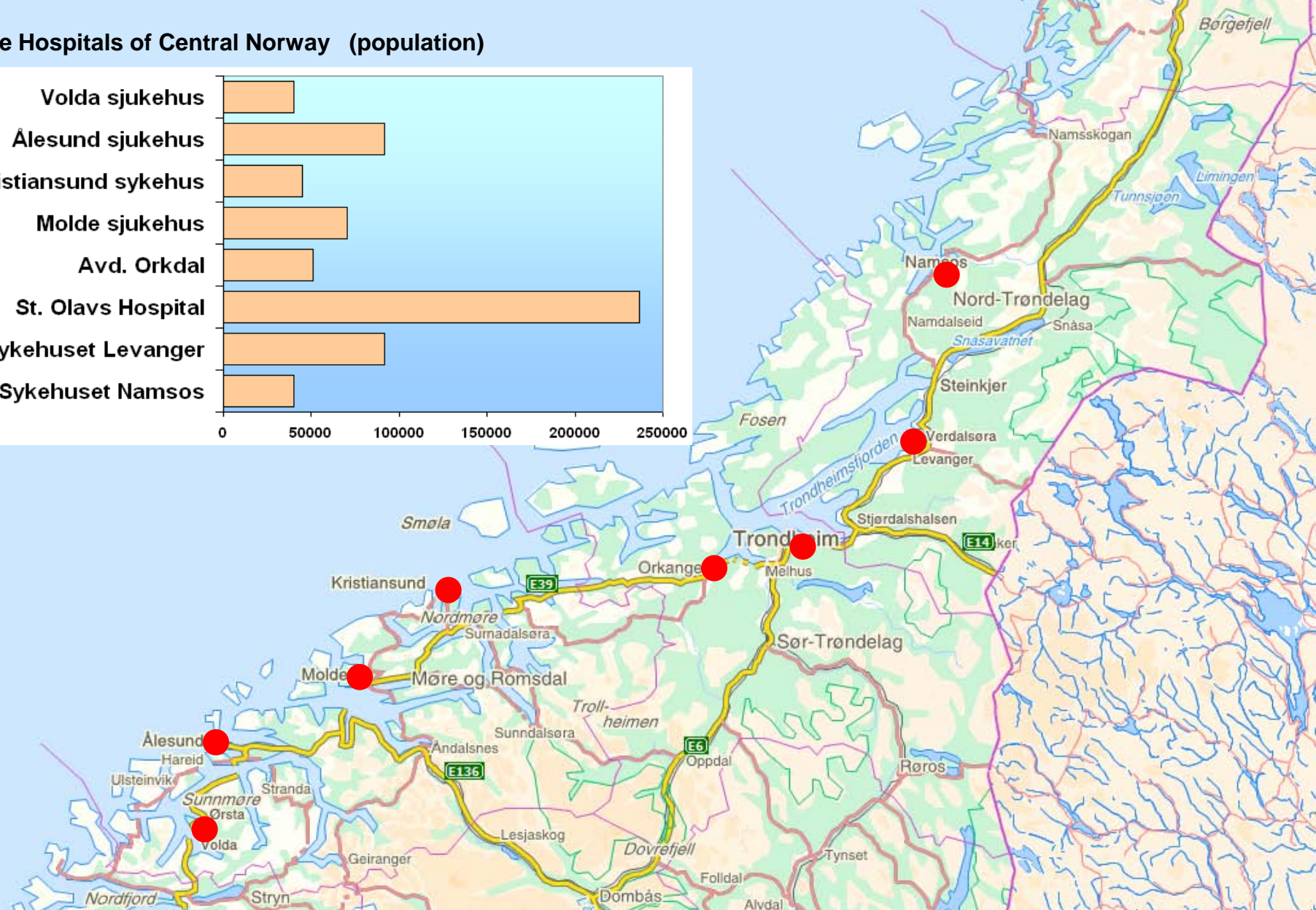
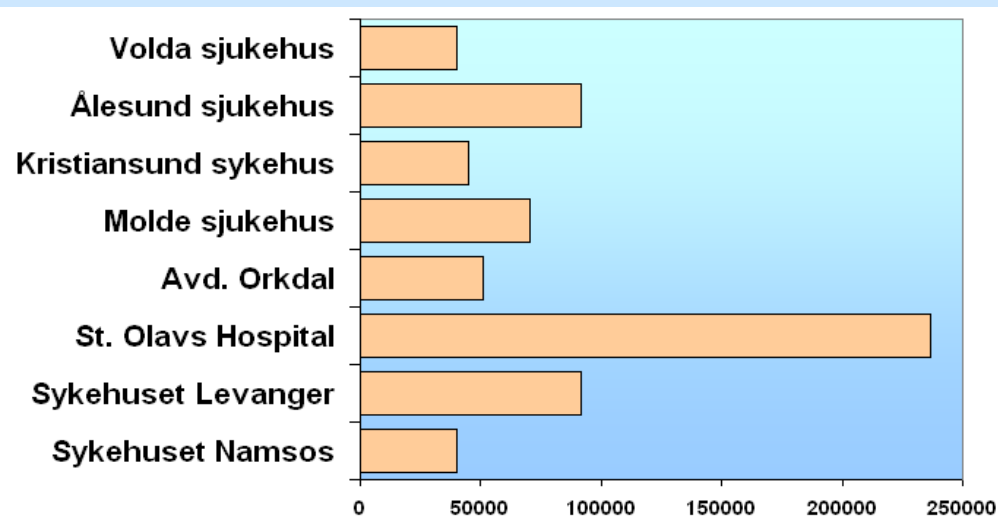
**An Ordinary Workday:  
4.000 patients**

gets daytreatment  
or outpatient consultation

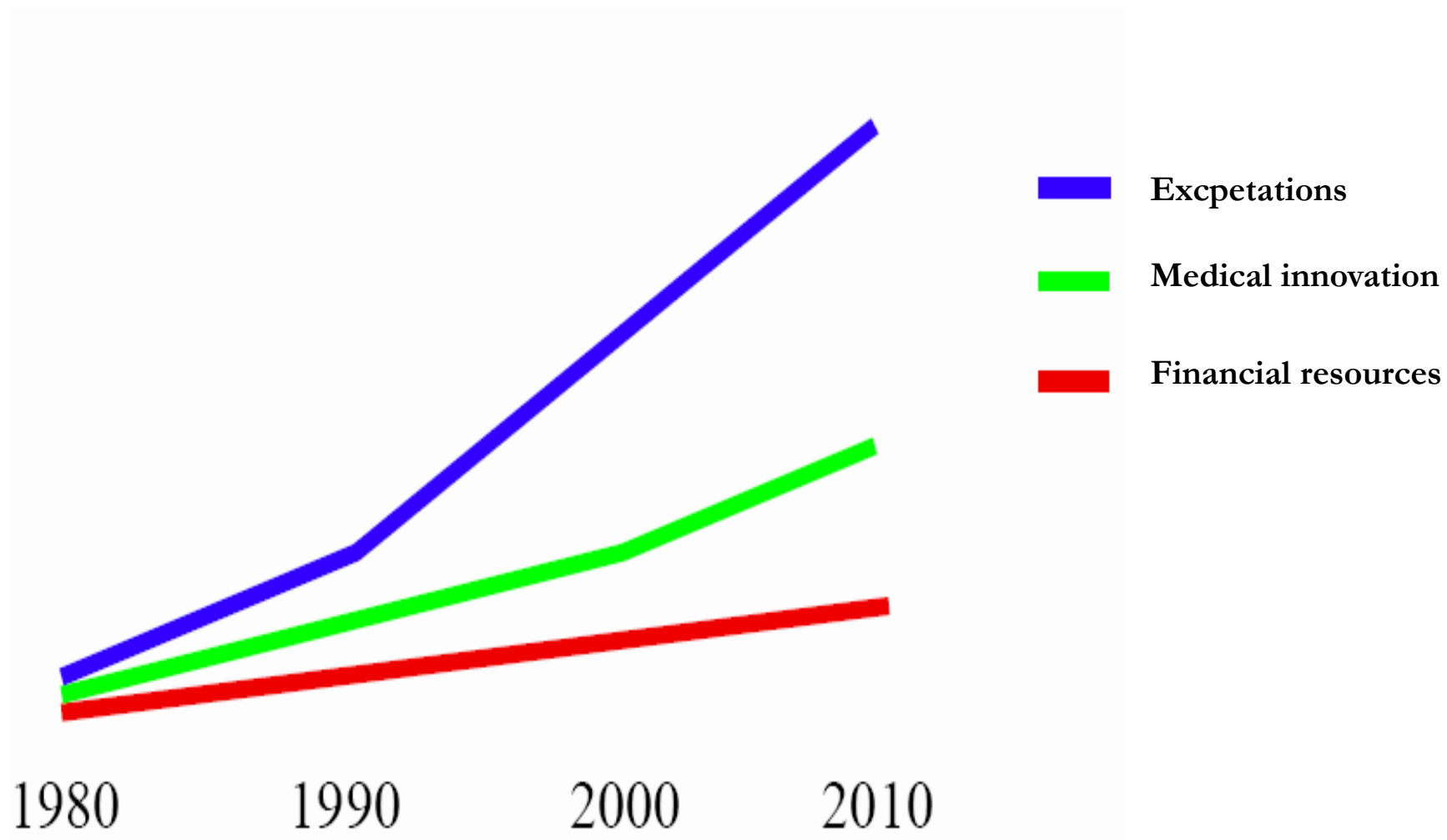
680.000 inhabitants  
depending on the hospital  
**when life is at risk**



## The Hospitals of Central Norway (population)

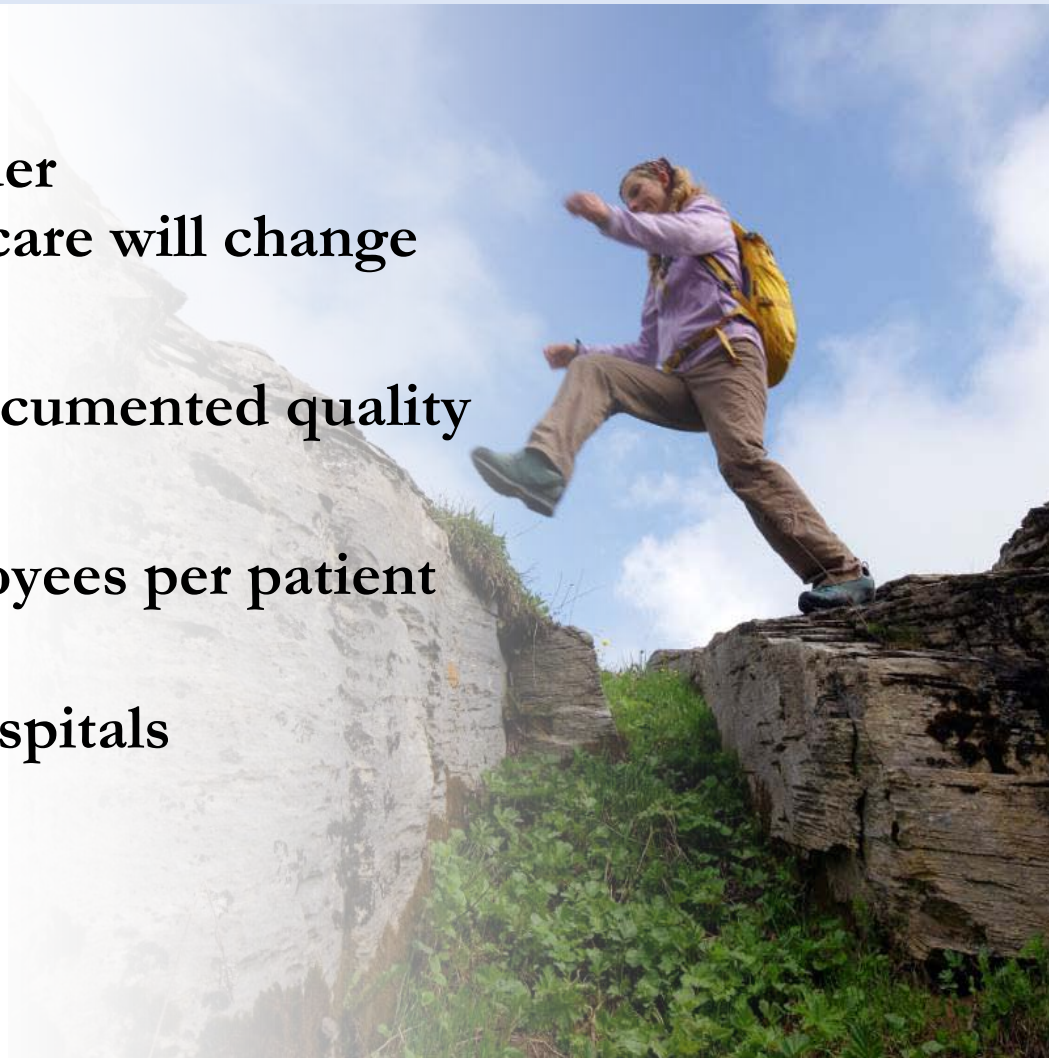


# Ambitions And Reality



# Four Major Challenges Towards 2020

- The population gets older and the need for healthcare will change
- Stronger demand for documented quality
- Fewer healthcare-employees per patient
- Economic growth in hospitals will decrease



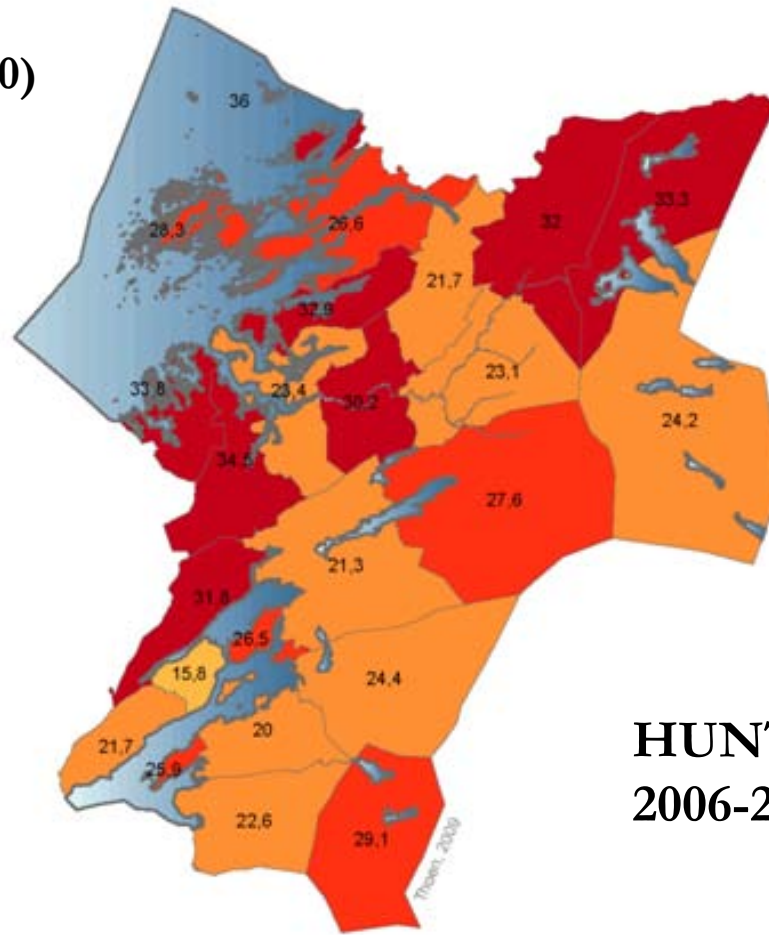
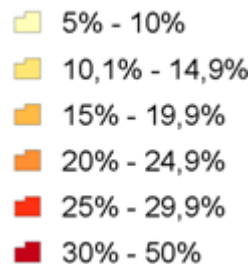


# The Changing Need For Healthcare... due to lifestyle

Adult men (30-69 years)  
prevalence obesity (BMI >30)  
in county of  
North-Trøndelag

**HUNT**  
**NTNU**

Kristian Midthjell  
Jostein Holmen  
Steinar Krokstad  
2010



**HUNT 3**  
**2006-2008**

# A Globale Challenge



**2010:**

More than 220 million people worldwide have diabetes.

**2005:**

1.1 million people died from diabetes

80% of diabetes deaths occur in low- and middle-income countries.

Almost half of diabetes deaths occur in people under the age of 70 years;  
55% of diabetes deaths are in women.

**WHO projects that diabetes deaths will double between 2005 and 2030.**

Healthy diet, regular physical activity, maintaining a normal body weight and avoiding tobacco use can prevent or delay the onset of diabetes.



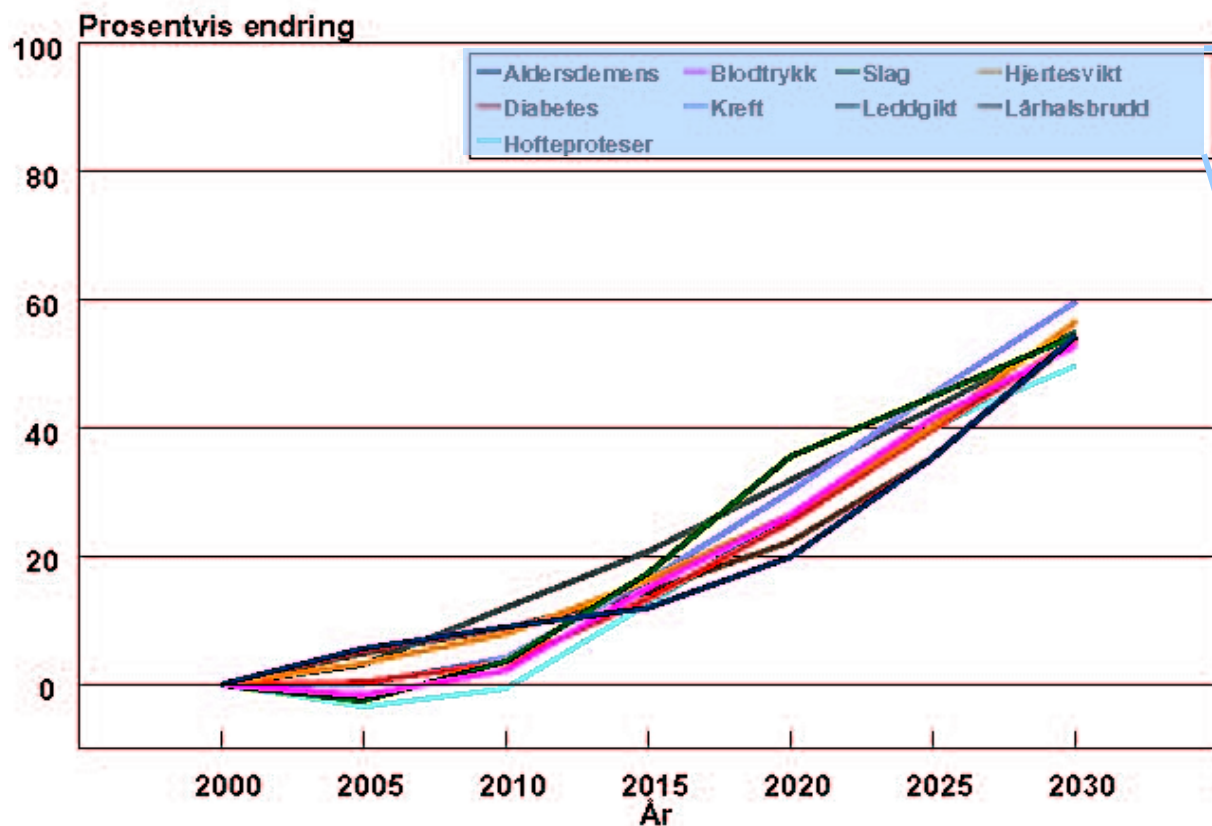
Kilde: Health First Europe/2007

“The amount of people with diabetes in the world will increase from about 130 million people in 2003 to more than

300 million people in 2025. This disease has the capacity to cripple health systems as they are today.”



# "Everything" Increases



Dementia  
Bloodpressure  
Stroke  
Hearth disease  
Diabetes  
Cancer  
Arthritis  
Broken hip  
Hip replacement

# The Number of Patients Getting Treatment...

Case: Central Norway – 680.000 inhabitants

**2009:**

- 911.654 outpatient consultations
- 78.893 day-treatments
- 125.000 overnight patients

**7,9 : 1**

# Mobile Technology – Accelerating Mobile Medicine



Hans Tarp viser potensielle sekere hvordan portable ultralyddapparat fungerer. Her er det Anne Ose Kristensen (t.v.) som blir undersøkt av Maria Helvig Foto: JÄNNE HELEN JULIUSSEN



Students testing portable ultrasound at the university in Trondheim

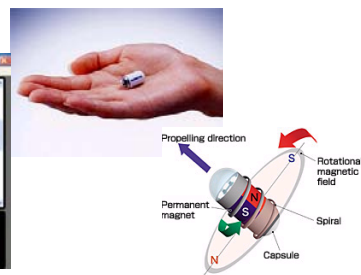
## Moderne acute medicine



## Dialysis at home or local medical unit



## Capsule endoscopy



# Hospitals and ambulances in Central Norway



**More than  
115 units  
vehicles, boats,  
helicopters  
and aeroplane  
located at  
more than  
60 stations**



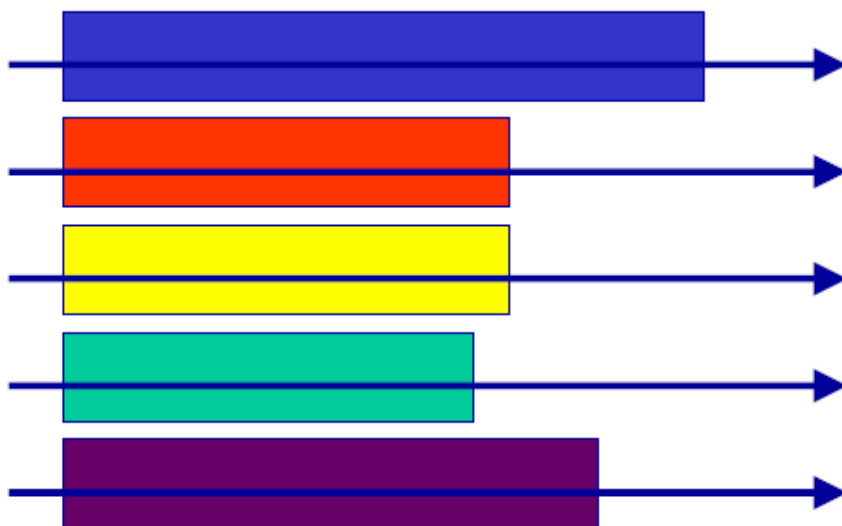
# The Personell Challenge

- Today  
**every 6.th child**  
from primary school is  
recruited for healthcare and  
social work
- Healthcare and service at same  
level as of today in 2025,  
implicates recruitment of  
**every 4.th child**  
from primary to become  
a healthcare or social worker
- .... and in 2035  
**every 3.rd child**



# Today's Education

## The education of professionals



# Future Needs

From a healthcare perspective we'll need

- more and well educated personell
- lifesaving technology
- inventions for more efficient healthcare
- tech for the elderly population
- telemedicine and mobile/desentralized medicine-tech

# Give us simple and efficient technology for the growing patient groups

- not only sophisticated high-tech  
for the few



*"If you believe  
research is  
expensive*

*-*

*try disease....."*



Mary Lasker

1901 – 1994

American Health Activist

Low income countries

Middle income countries

High income countries

# Gapminder World Chart 2006

Children dying before age 5 per 1000 live births (log)

Health

Money

Gross National Income per capita - in US dollar by exchange rate (log)



**Population (millions)**

**Regions**

- Americas
- Arab states
- Asia & Pacific
- Europe & Central Asia
- Sub-Saharan Africa

2006 data for countries & territories from UN Statistics Division, Institute for Health Metrics and Evaluation and others sources as stated in: "Gapminder documentation 2007:1" at: [www.gapminder.org/publications](http://www.gapminder.org/publications).

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GAPMINDER

2020 STRATEGI

HELSE MIDT-NORGE  
- På lag med deg for din helse -