

Planning the patient's health service – A case study from Helgeland, Norway



Helgelandssykehuset



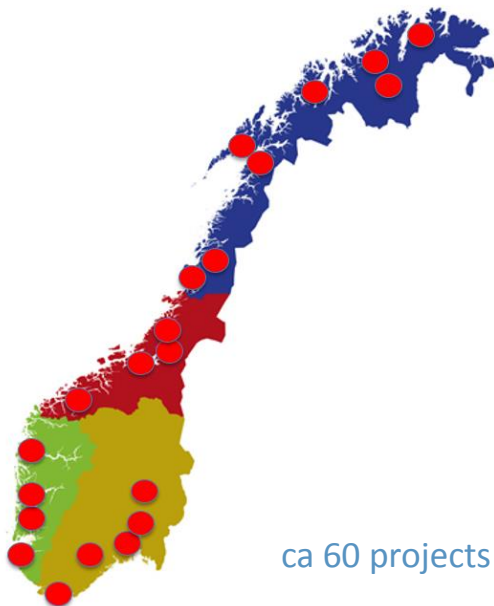
2025

EuHPN, Madrid, 25 November 2016
Healthcare Infrastructure for a Web of Care

Gunn Håberget,
Hospital planner, Sykehusbygg,
Norway

Sykehusbygg = eng. “Norwegian Hospital Construction Agency”

- Annual investments in Norwegian hospitals: 9 – 10 bn NOK = ca 1 bn Euro
- Urgent need for construction and restoration in all regions
- Current Norwegian hospital property portfolio: close to 5 mill. sq.m.



ca 60 projects

- Founded in October 2014
- Strong political will behind the agency
 - “we cannot afford not to...”
- High expectations to
 - Transmission of experience
 - Standardisation
 - Recycling of solutions
- Owned by Norway’s four regional health authorities, which in turn derives their funding from the Norwegian Ministry of Health
- ..“shall be the leading specialist for planning, construction and building restoration of hospitals in Norway”
 - ensure national know-how for hospital planning, design, engineering and construction at the highest international level
 - facilitate and contribute to progressive hospital development projects through innovation, experience, standardization, project management and best practices
 - ensure that experience from management and operation of hospital property is taken into account in new hospital development projects



Bent Høie,
Minister of
Health and Care

The objectives of National health and hospital plan

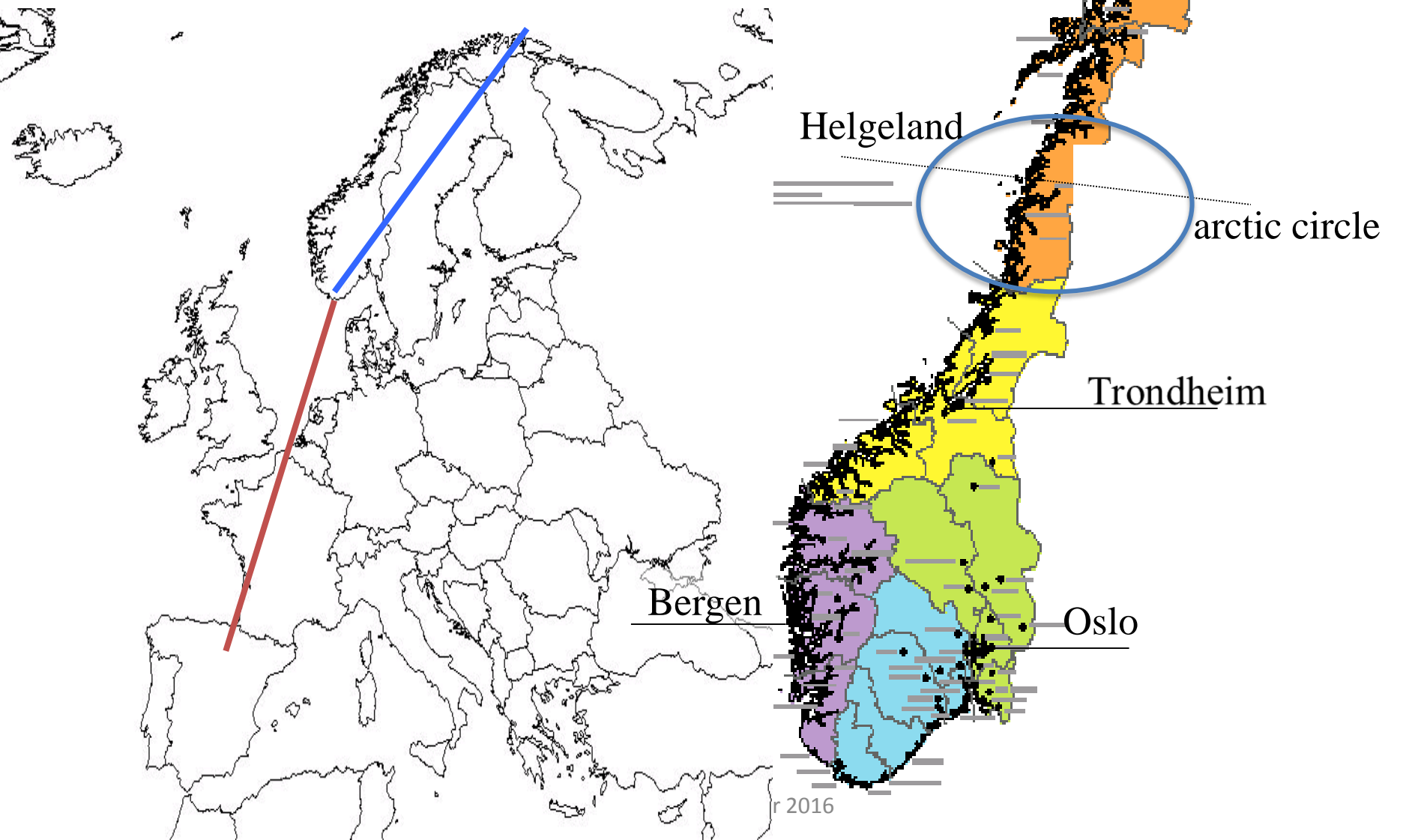
«Safe hospitals and better health care wherever you live»

- Patient oriented health care – in which patients take an active part in their treatment and in the development of the health care system
- Appropriate number of employees with appropriate qualifications – utilizing their time and resources effectively for the best interest of the patient
- Hospitals with a clear division of labor, organized in mutually interactive and supportive teams
- Renew, simplify, improve and digitalize health care
- A health care system governed by the overriding goal of high quality and safe care
- Strengthen prehospital acute and emergency services outside hospitals

Norway -

323 700 km² - 5 mill inhabitants

Coastline



Specialized Health Care in North Norway

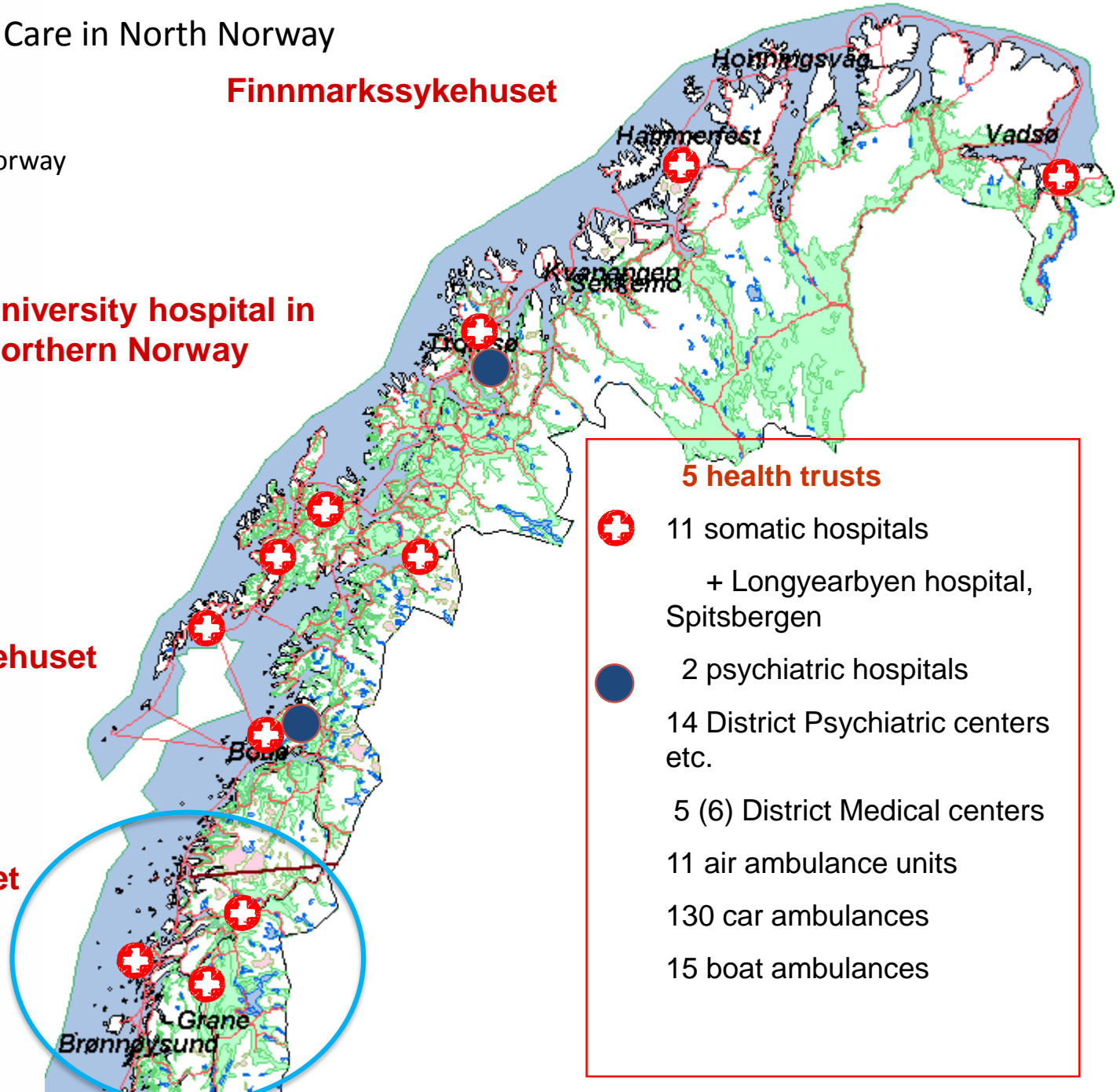
Finnmarkssykehuset

Population North Norway
~ 500 000

**University hospital in
Northern Norway**

Nordlandssykehuset

Helgelandssykehuset



5 health trusts



11 somatic hospitals

+ Longyearbyen hospital,
Spitsbergen



2 psychiatric hospitals

14 District Psychiatric centers
etc.

5 (6) District Medical centers

11 air ambulance units

130 car ambulances

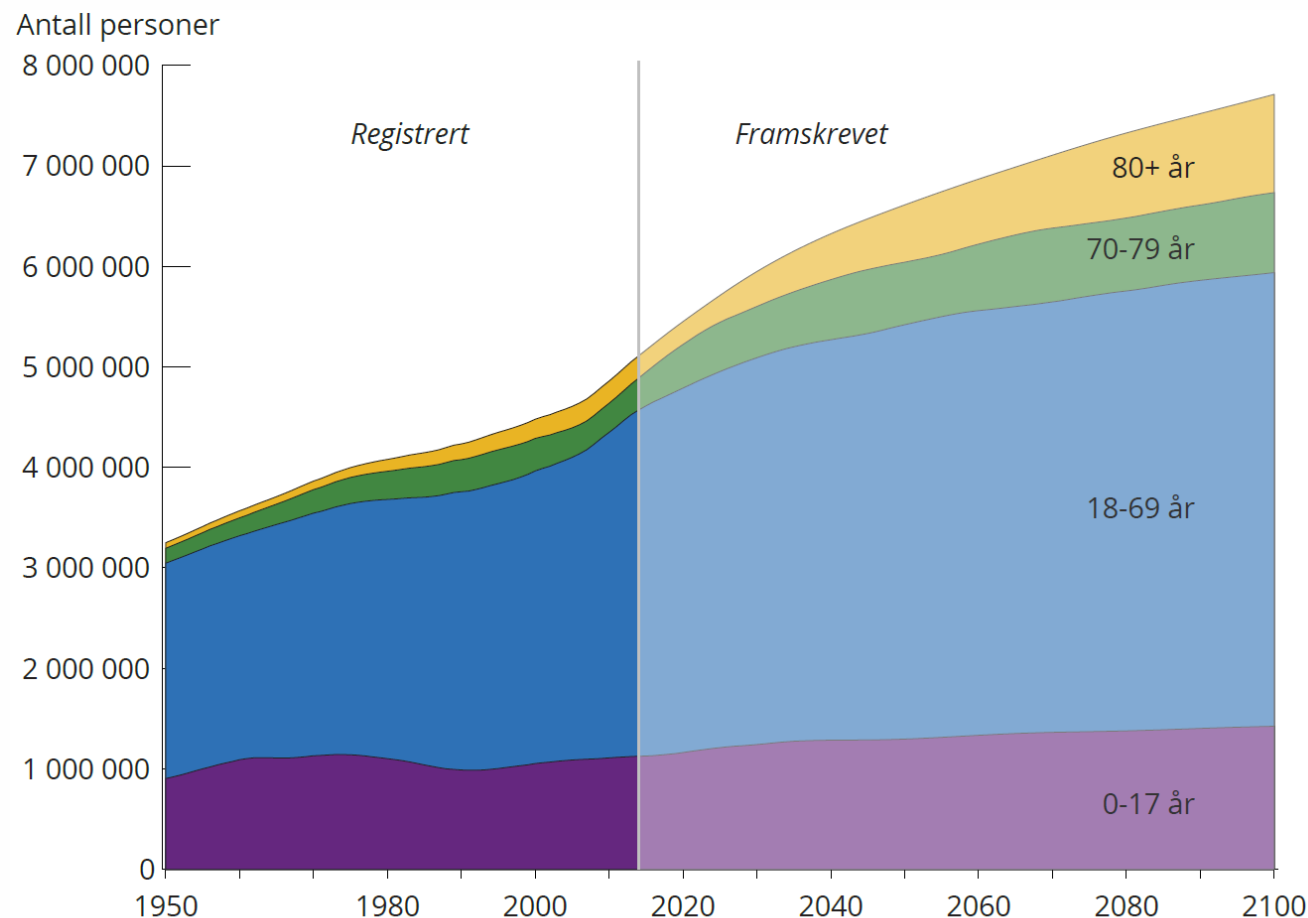
15 boat ambulances

Helgeland in Nordland county

- < 79 000 inhabitants
- 250 km coastline
- 17 municipalities
- > 50 inhabited islands
- > 20 000 inhabitants depending on boat or helicopter for emergency transport
- > 10 000 inhabitants > 2 hours to hospital
- 3 hospitals
 - Sandnessjøen – emergency surgery
 - Mosjøen
 - Mo i Rana – emergency surgery
 - + some service in Brønnøysund
- 17 ambulances 24/7 in 13 locations
- 3 ambulance boats
- 1 air ambulance + 1 ambulance plane in Brønnøysund
- 1 SAR helicopter in Bodø
- 8 general acute emergency staffed by GPs in joint municipal collaboration



1 million more Norwegians in 2030

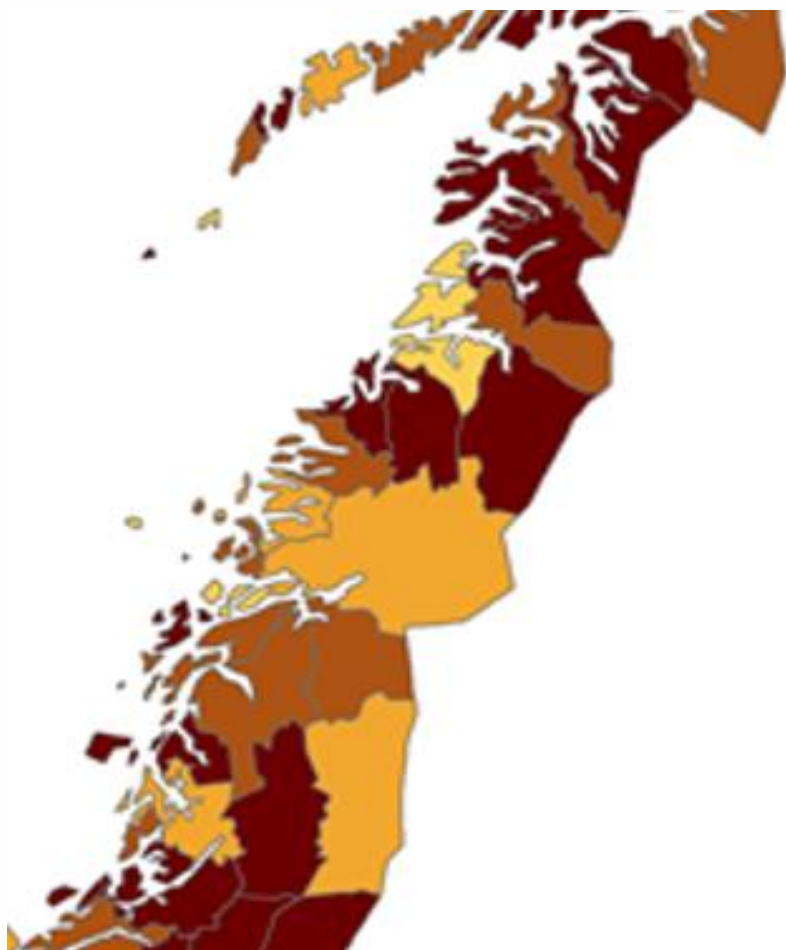


Kilde: Statistisk sentralbyrå.

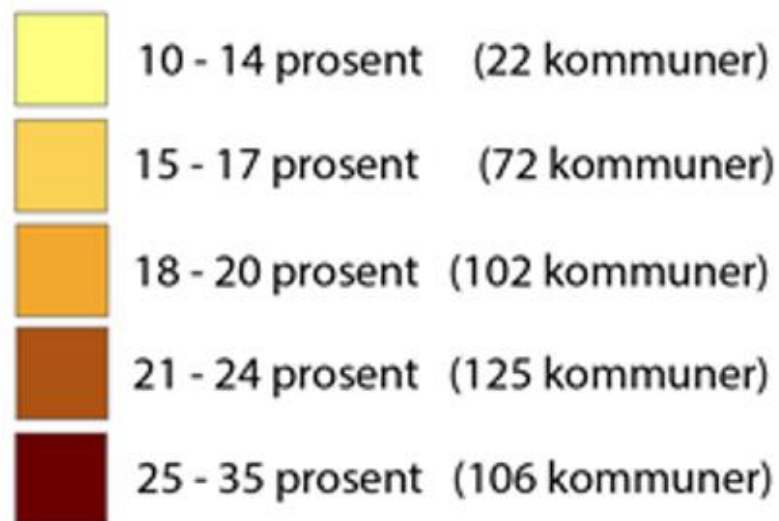
Challenges due to a reduction in population will increase

| Age | HELGELAND | | | NORWAY |
|---------|-----------|-----------|--------------------|--------------------|
| | Year 2012 | Year 2025 | Change 2012 - 2025 | Change 2012 - 2025 |
| 0 – 17 | 16.797 | 17.258 | 2,80 % | 13,9 % |
| 18 – 44 | 24.715 | 24.702 | -0,10 % | 11,4 % |
| 45 – 66 | 22.656 | 21.986 | -3,00 % | 12,6 % |
| 67 – 79 | 8.055 | 10.984 | 36,40 % | 53,2 % |
| 80 – 84 | 1.968 | 2.583 | 31,30 % | 34,6 % |
| 85+ | 1.993 | 2.284 | 14,60 % | 7,3 % |
| Total | 76.179 | 79.797 | 4,70 % | 16,3 % |

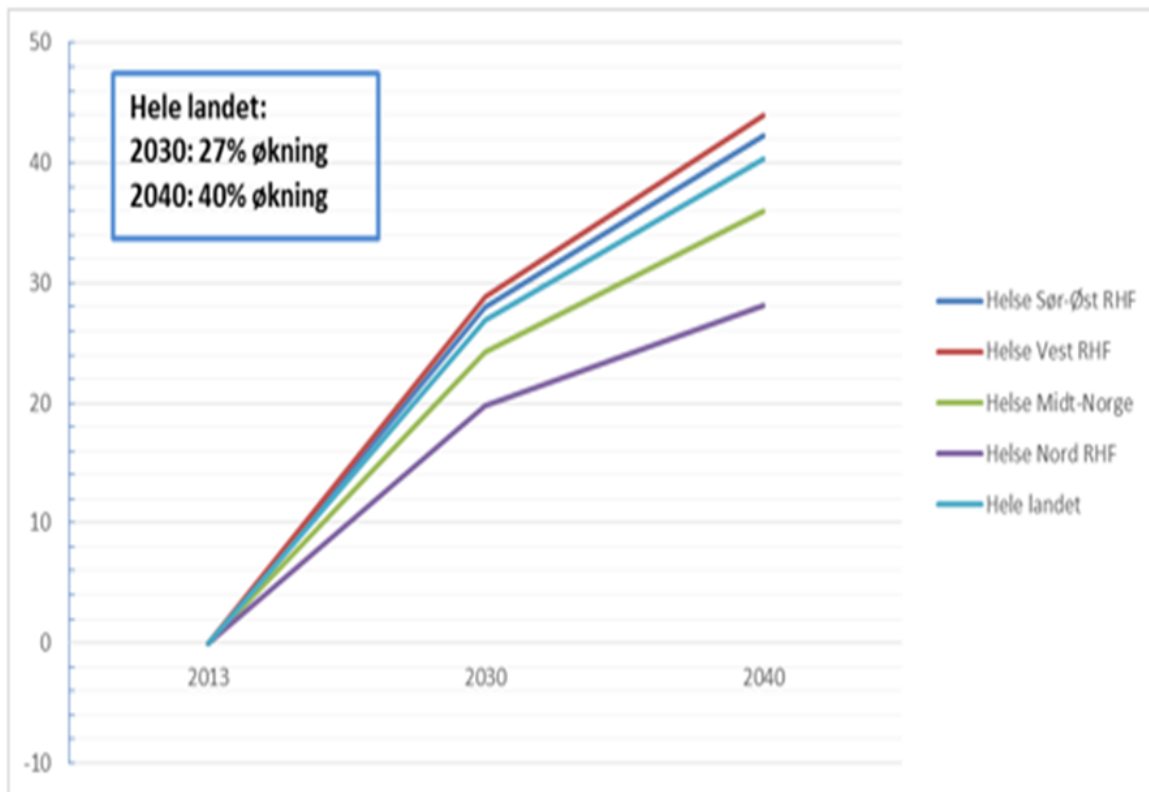
Development in population Helgeland



Demographic changes - the number of + 67 per municipality at Helgeland



Increasing health personnel proportionally is not possible



Statistisk sentralbyrå, middelalternativ for befolkningsframskrivning

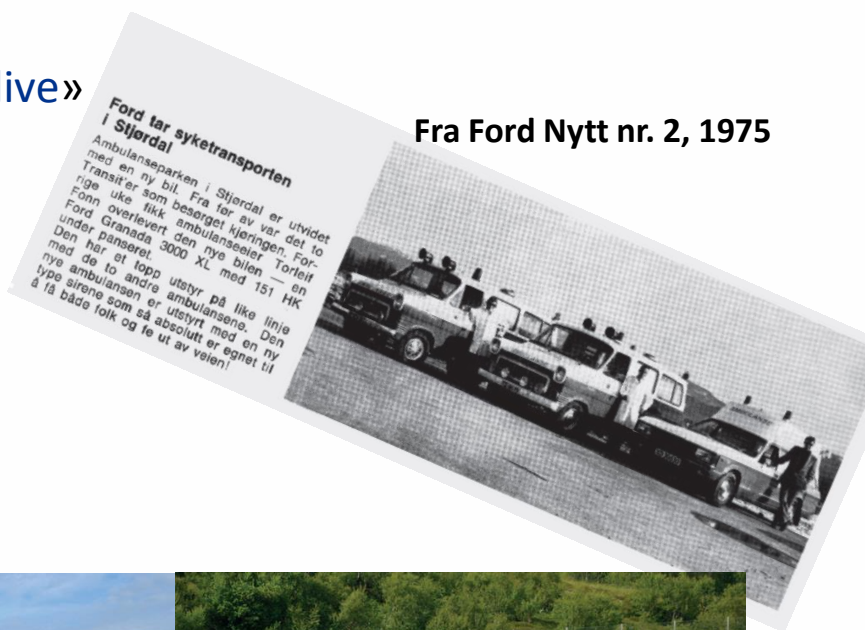
Status today Helgeland:

- Lack of personell with appropriate qualifications
- Relay system
- Turnover
- Recruiting challenges



«safe hospitals and a better healthcare wherever you live»

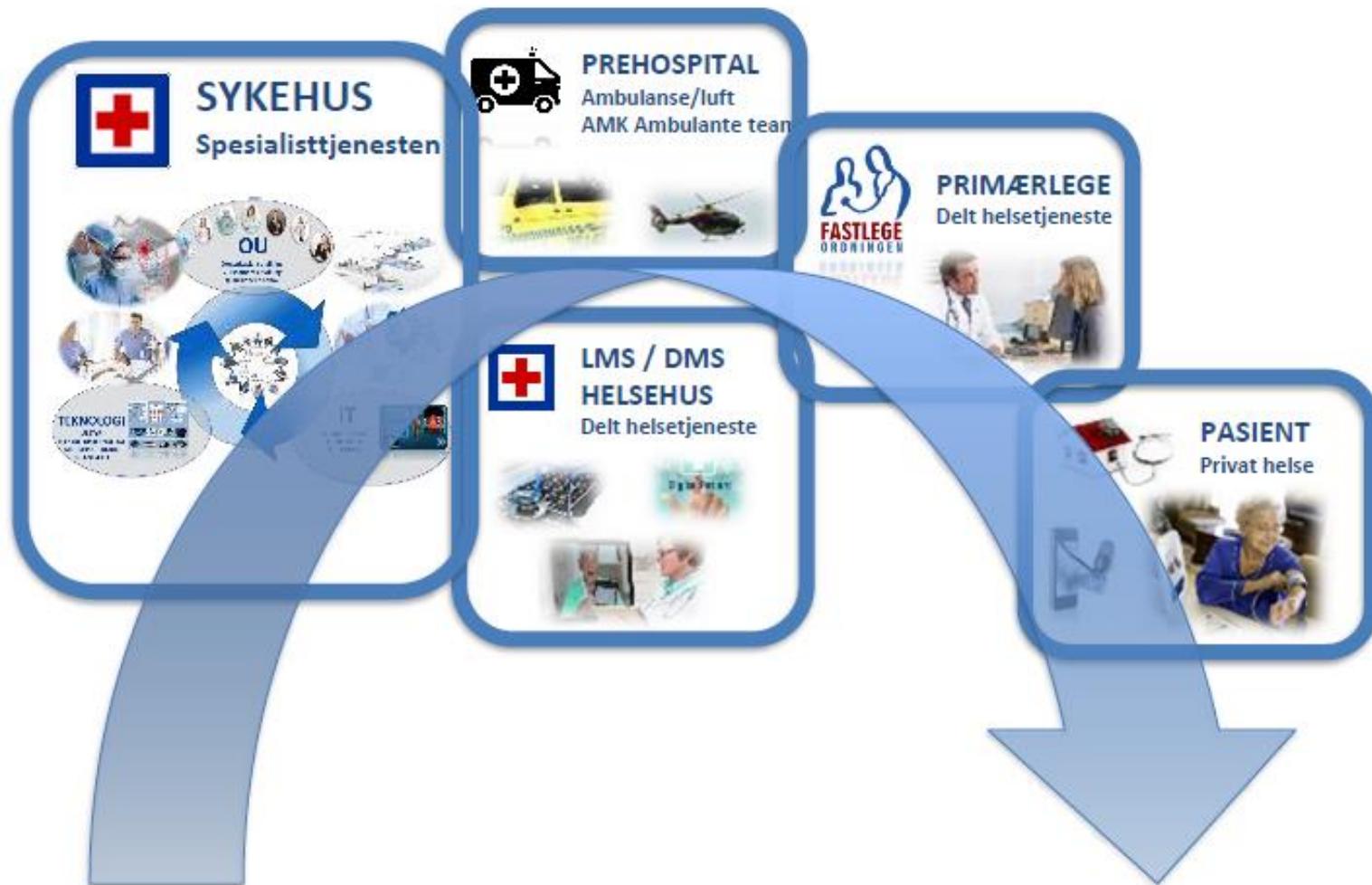
A lot has happened in 40 years



Emergency medicin in Helgeland, 2016



Innovation in technology provides new opportunities



Technological development entails greater opportunities to manage and treat patients outside the hospital, and in their home

Examples of technology in use and in the near future

- Prehospital diagnoses



From transportation to advanced prehospital diagnostic and treatment

- ECG
- Stroke ambulance with a CT in Østfold (pilot)



- Joint solutions for communication
- Telemedicine
- Videoconference
- Tele-stroke diagnoses and treatment
- «COPD-suitcase» - home diagnoses and aid
- Diabetes treatment at home
- Mental health treatment via Skype or video conference
- Self-diagnoses «Doctor Watson»
- And much more.....



- Welfare technology – increased knowledge

- E-health
- mHealth
- Apps
- Sensors
- Diagnostic MTU for home use

- Nanotechnology
- Genetic engineering and customized medicine
- Virtual real time conference projected in VR unit
- Monitoring patients at home



The Project

Helgelandssykehuset 2025

Region: Helse Nord RHF

Owner: Helgelandssykehuset HF

Phase: Up front planning (Idefase)

Size: Depends on chosen alternative

Cost: 3-4 mrd NOK = 350 000 Euro

Sykehusbygg HF: Project management

Plan:

Completing phase: Spring 2018

Completing project: 2025

About the project:

The trust of Helgeland is currently investigating several options for combining one or more hospitals with one or more local medical centers.

The vision is to maintain and further develop a hospital that provides the population good and progressive specialist health service.



Helgelandssykehuset



2025

District medical center – DMS (LMS)

Health care services provided by one or more municipalities in collaboration with specialized health care services to patients before and after, or instead of hospitalization.

- 1) Municipal services & Intermunicipality services
- 2) Specialist health care
- 3) Collaboration
- 4) Arena for joint competence



Planning DMS in Brønnøysund



Municipale services in DMS:

- General practitioner services
- Intermunicipal Primary care acute and emergency services, run by GP's
- Acute care unit with 2 beds
- Health center
- Center for promoting health and preventing illness
- Gymnasium and pool
- Physiotherapy, occupational therapy, speech therapist
- Laboratory services

Not included in DMS., but located close by:

- Nursing homes with short and long term care
- Daycenter, home based care

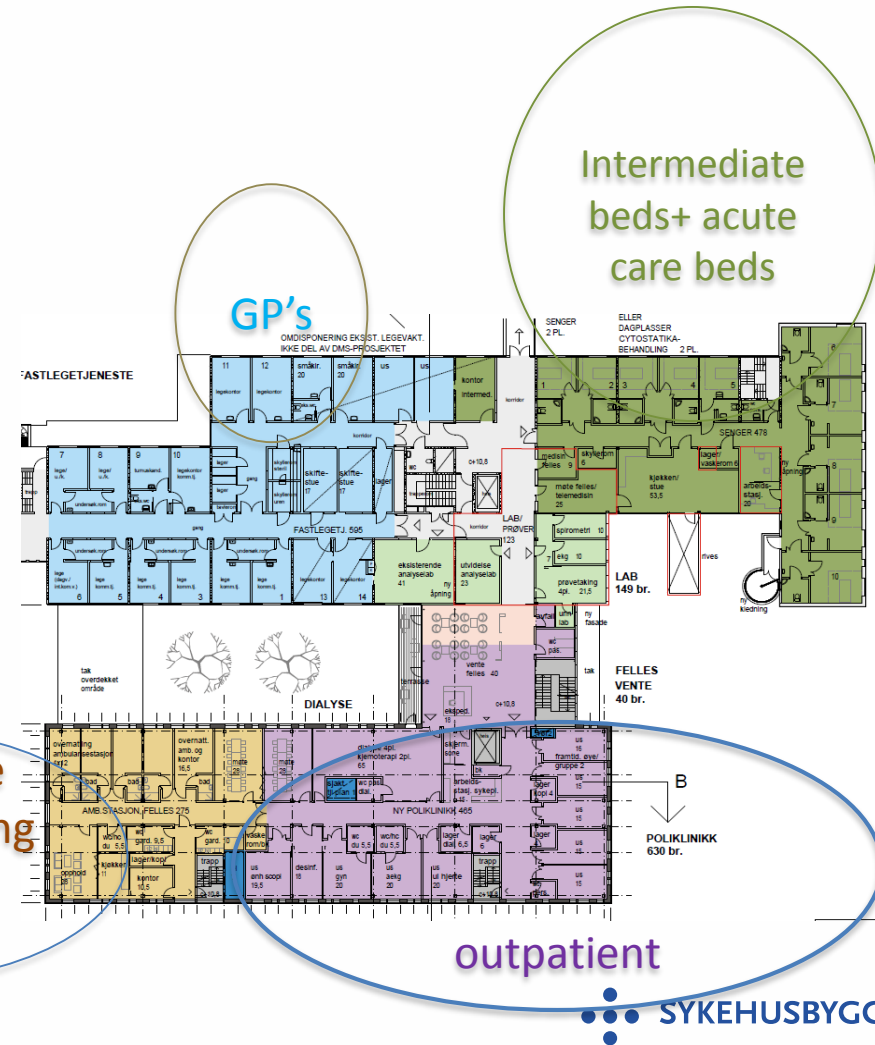
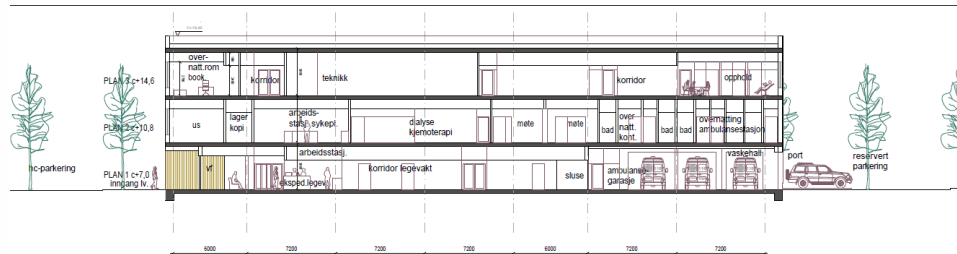
Cooperation between the two parts:

- Intermediate care unit in primary care
- Mental health care (outpatient)
- Living quarters for personell in Prehospitale services as car-ambulance, air ambulance and ambulance plane

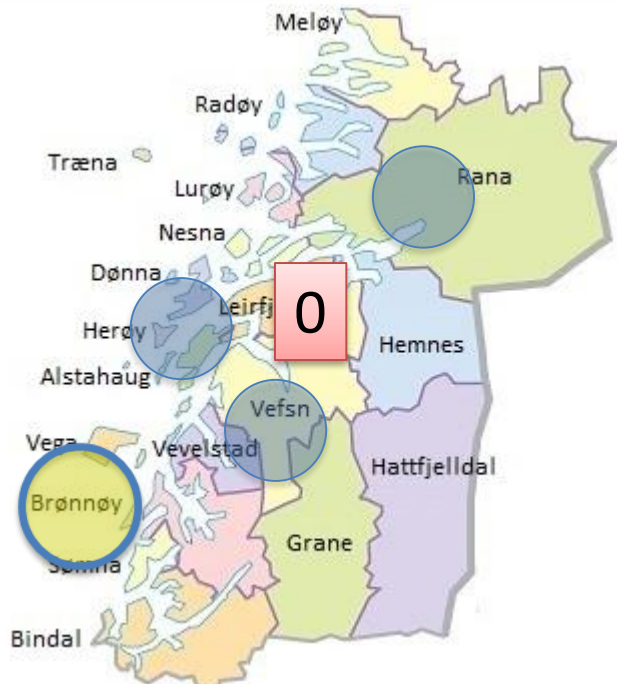
Specialist health services:

- Specialist outpatient services like cardiology, ENT, eyetreatment, dermatology and phototherapy, pulmonary medicine, gynecology
- Radiology – CT + conventional radiography
- Cytostatics
- Dialysis
- Maternity and childbirth

Sketches — (not yet decided)

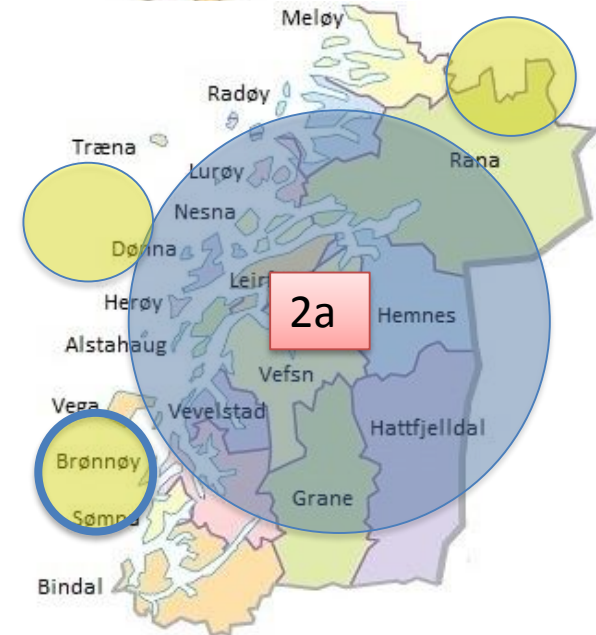


3 alternatives



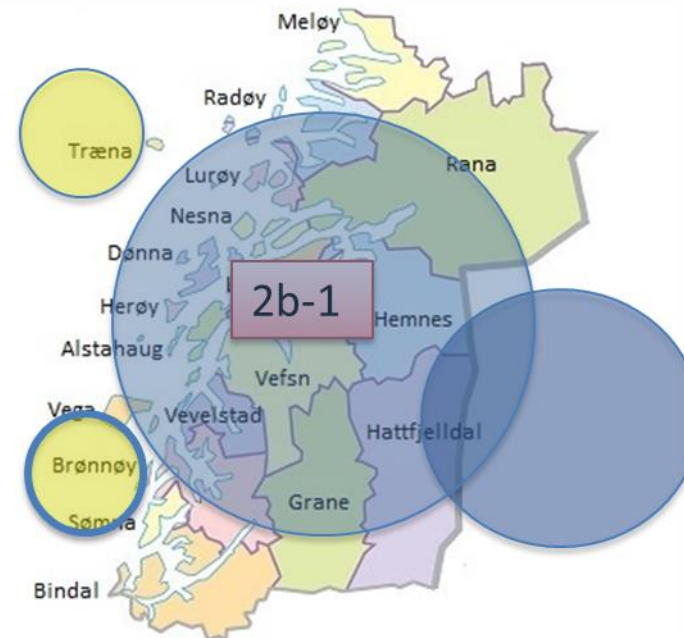
Alt 0:

As today, 3 hospitals
+ DMS Brønnøysund



Alt 2a:

1 hospital
+ 1 – 3 DMS



Alt 2b-1:

1 large emergency hospital
+ 1 small hospital
+ 1 – 2 DMS

Experience so far..

- Interdisciplinary collaboration requires enormous good management in relation to patient care
- Localization of hospitals and emergency services triggers strong emotions. This has to be taken into account in planning
- Collaboration on emergency preparedness is essential to establish trust
- There might be a conflict of interest between recruiting personnel in the question of centralization versus decentralization healthcare in areas with scattered settlements
- There is a strong will in the municipalities to create a viable DMS in Brønnøysund. Patients benefit, especially those with cronic diseases and travel distances. Their GP might benefit too, sharing competence and knowledge with the specialist
- We have yet to solve the challenges concerning the patients suffering from mulitmorbidity. Patient plans are diagnosis based, and not easy adapted to the reality of the municipalities
- Mutual knowledge, understanding and respect is vital for collaboration
- Allow the patient to be the Boss of their life!



Thank you for listening



www.helgelandssykehuset.no

www.sykehusbygg.no

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