



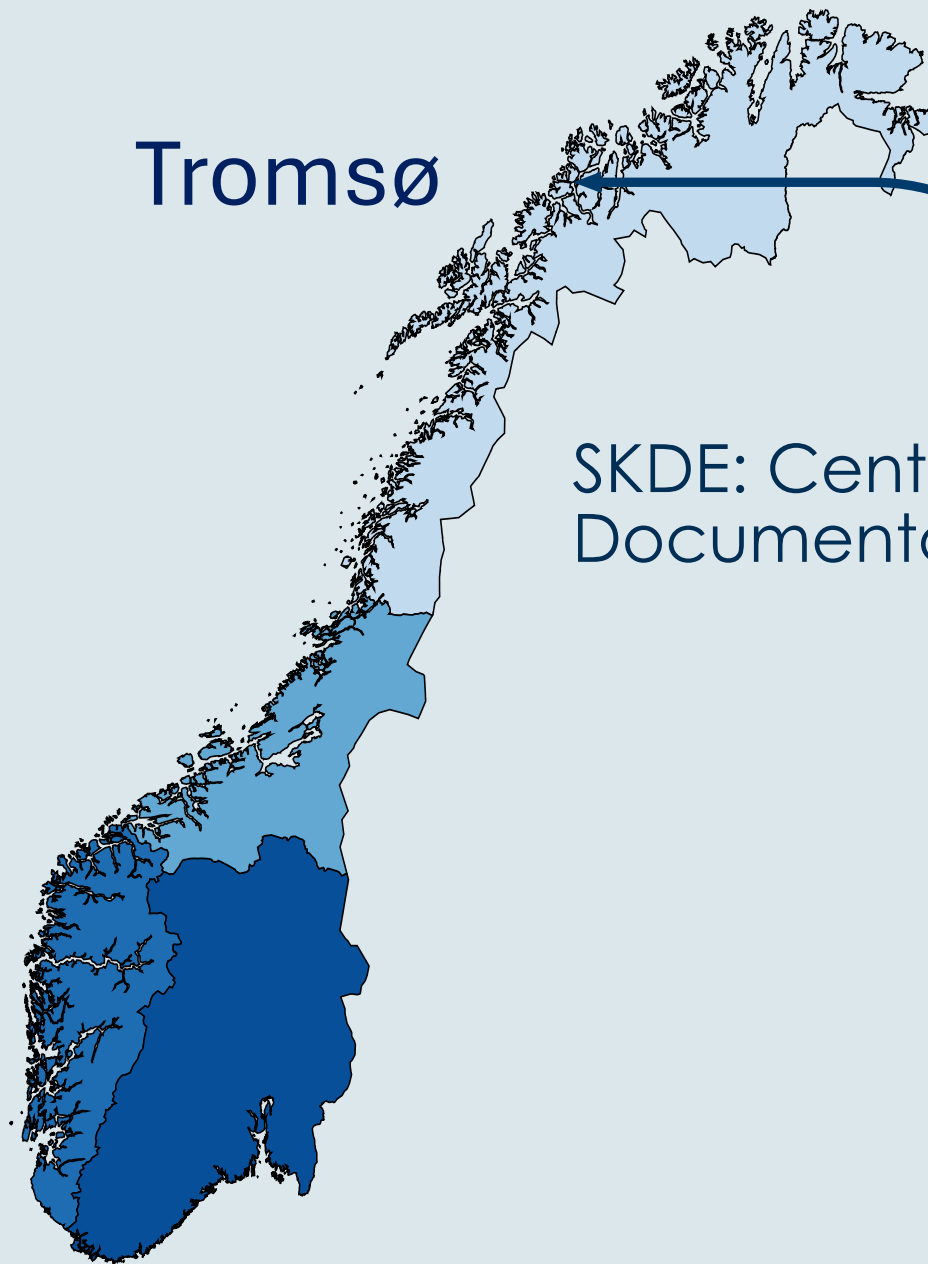
Eva Stensland,
Director, SKDE, Norway

Variations in Health Care Delivery: Insights from Norway

An aerial night photograph of a city in Norway, likely Trondheim, showing a dense urban area with numerous lights reflecting on a large body of water. The city is surrounded by snow-covered mountains under a dark blue twilight sky. The lights from the city and the water create a vibrant contrast against the dark background.

Eva Stensland,
Director, SKDE, Norway

Tromsø



SKDE: Center for Clinical
Documentation and Evaluation

SKDE: Center for Clinical Documentation and Evaluation



Clinical quality registries



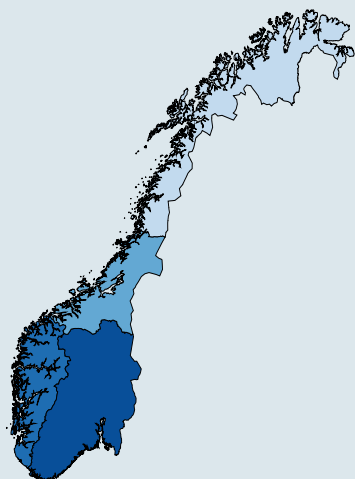
Health atlases



Research



Low-value healthcare



metodebok.no

Manuals and guidelines

Norway: 5.5 mill inhabitants

4 Regional Health Authorities
(RHA) for specialist healthcare

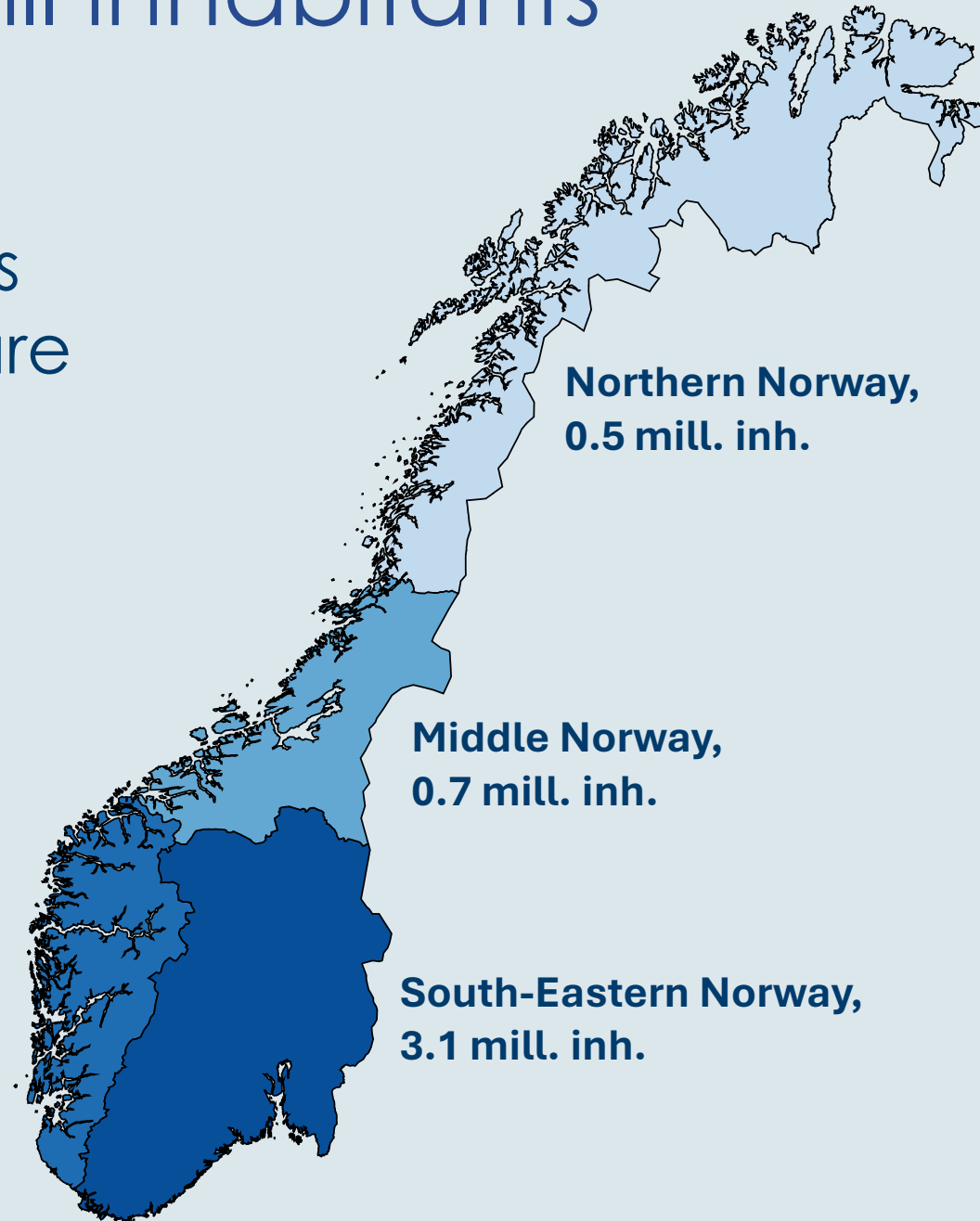
- 19 public hospital trust
- - 50 local hospitals

**Western Norway,
1.2 mill. inh.**

**Middle Norway,
0.7 mill. inh.**

**South-Eastern Norway,
3.1 mill. inh.**

**Northern Norway,
0.5 mill. inh.**



Why health atlas in Norway?


▶ Health care is mainly publicly funded

▶ Helseforetaksloven: (Health Trust Act):

The purpose of the Health Trusts is to provide **good and equitable** specialist health services to all who need them, regardless of age, gender, place of residence, economy and ethnic background

▶ Aims for the Norwegian health atlas project

- ▶ Reveal unwarranted variation
- ▶ Engage clinicians, politicians and management
- ▶ Stimulate change in clinical practice



HELSEATLAS NO | ENG MENU

Equitable health services – regardless of where you live?

In Norway, it is a goal for the entire population to have an equal supply of health services across geography and social groups. The health atlas is a tool for comparing the population's use of health services in different geographical areas, regardless of where the patients are treated.

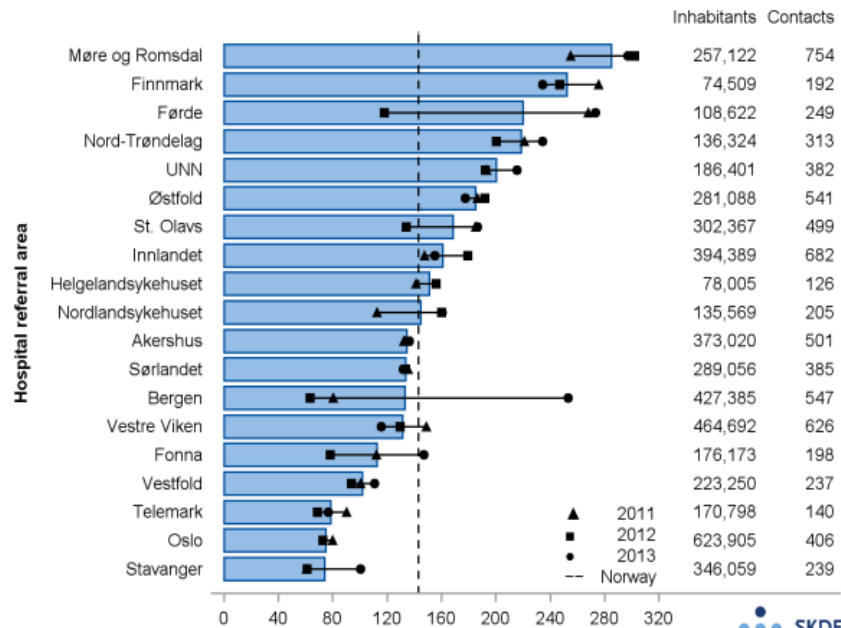
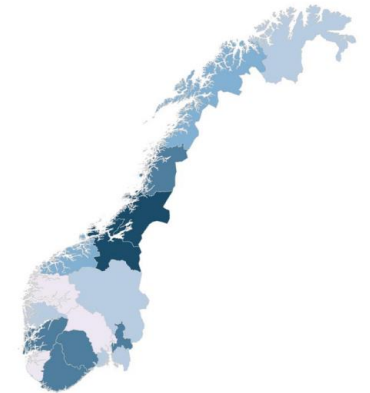
Datasources

- ▶ Norwegian patient registry (NPR): specialist healthcare
 - No of visits and patients in 2023: 8 mill visits , 2 mill patients
 - No of admissions in 2023: 757 000
- ▶ KPR: use of primary health or care services
 - No of visits and patients in 2023: 52 mill visits, 4.8 mill patients
 - Norwegian Control and Payment of Health Reimbursement Database (KUHR)
- ▶ Clinical quality registries

The day surgery atlas

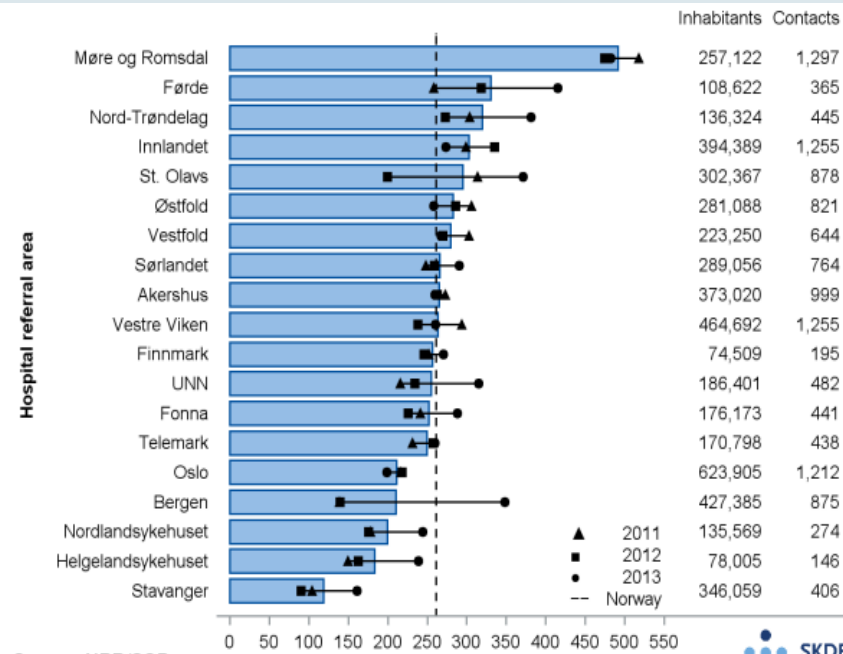
- ▶ The 12 most common day surgical procedures from 2011 to 2013
 - ▶ Unwarranted variation in 9 out of 12 procedures
 - ▶ The largest variation was found in fields with academic discussion and disagreement on indication (shoulder and meniscus surgery)

Dagkirurgi i Norge 2011-2013
Utvalgte inngrep



Source: NPR/SSB

Shoulder surgery, rates adjusted for gender and age per 100,000 population per hospital referral area, per year and as an average for the period 2011–2013

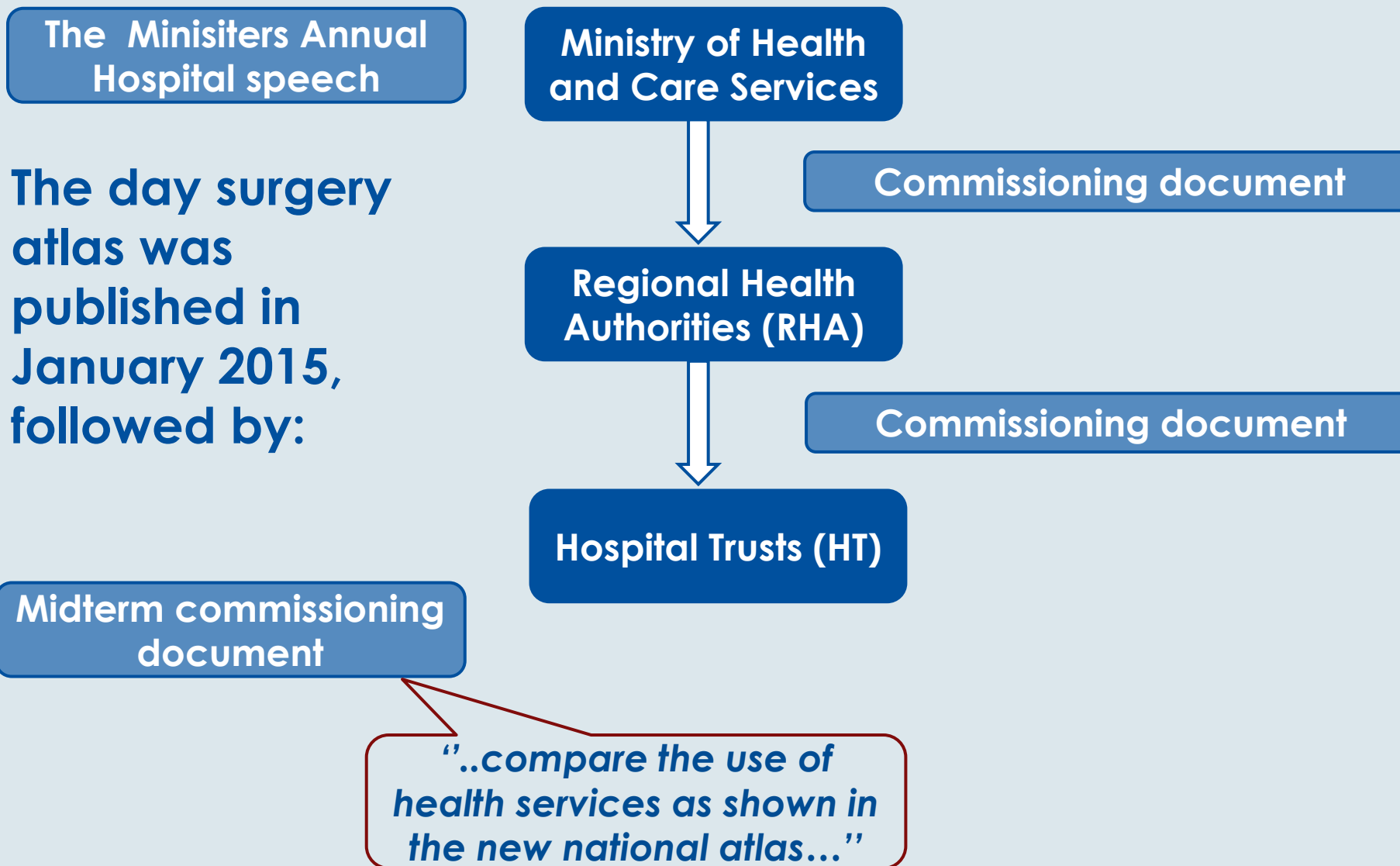


Source: NPR/SSB

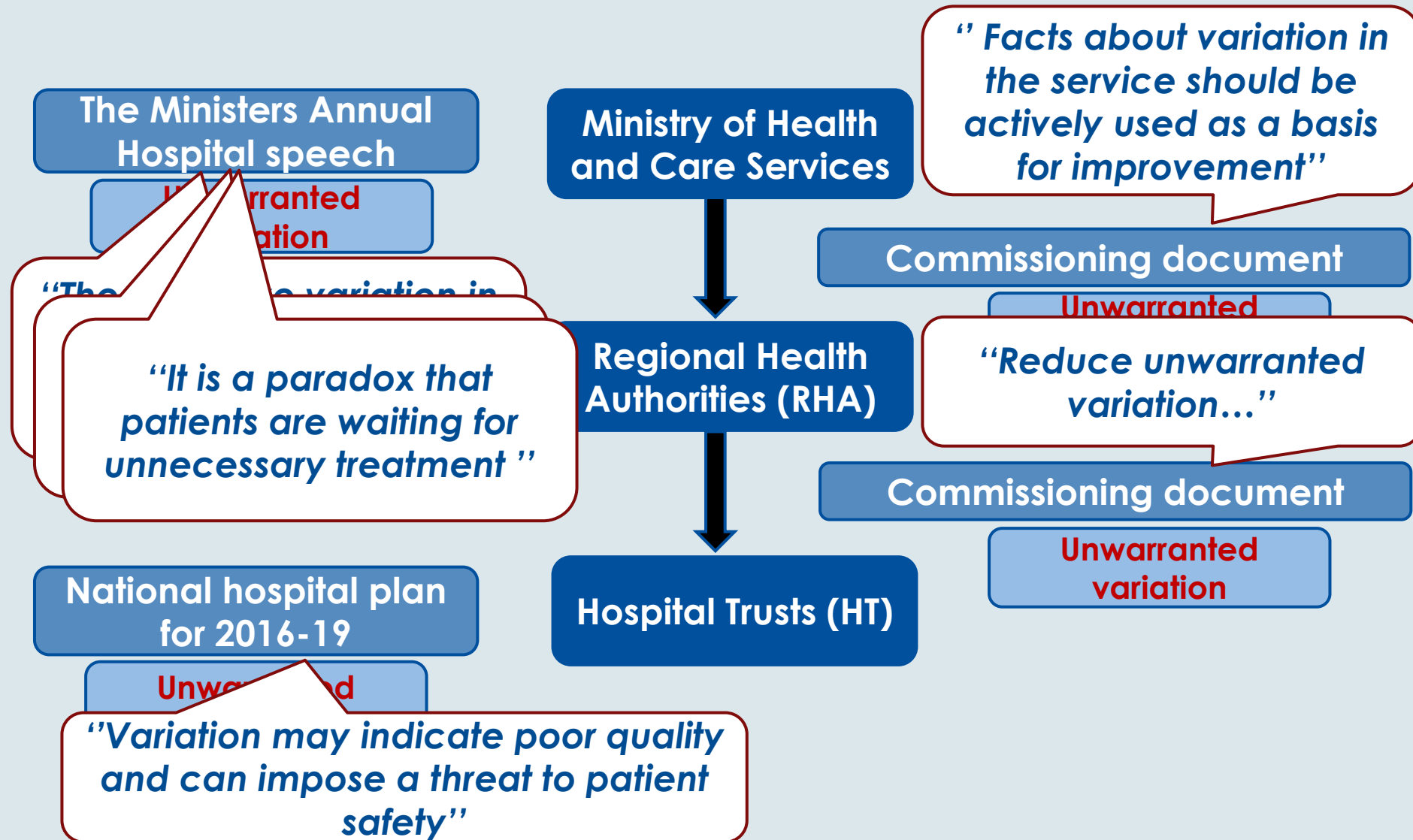
Meniscus surgery, rates adjusted for gender and age per 100,000 population per hospital referral area, per year and as an average for the period 2011–2013

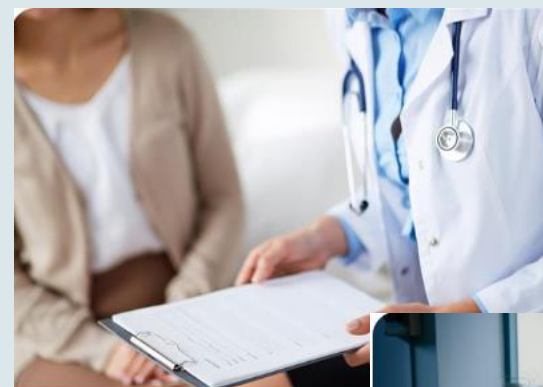
2015

Variation not mentioned



2016





Published January 13 2015

Day surgery atlas

The atlas dealing with day surgery was the first of its kind. The atlas was launched in January 2015 and has received attention, both nationally and internationally.



Published September 11 2024

Radiology - MRI part 1

Health Atlas for Radiology part 1 provides an overview of selected outpatient MRI examinations during the period 2018-2022.



Published April 29 2022

Chronic diseases

The health atlas for chronic diseases looks at health service use for patients who had repeated contact with the general practitioner and specialist health service.



Published January 18 2021

Healthcare Quality Atlas

The health atlas for quality in necessary health services is based on information on just under 100,000 patients and treatments annually, some of whom may have received the same treatment several times or have several diseases.



Published April 03 2019

Obstetrics

The health atlas for obstetrics is the second of two atlases in the series on gynecology and obstetrics prepared by SKDE on the initiative of the Norwegian Gynecological Association.

Publisert: 05.09.2024

Helseatlas medisinsk biokjemi

Helseatlas for medisinsk biokjemi gir oversikt over bruken av utvalgte offentlig finansierte laboratorieundersøkelser innenfor området medisinsk biokjemi i perioden 2021-2023.



Primary Care Atlas

The atlas shows variation in the use of GPs and primary care clinics, emergency admissions and the place of residence for people with chronic diseases.



Published January 08 2019

Gynaecology

The health atlas for gynecology, we have mapped geographical variation in the use of a selection of specialist health services within the region in the period 2015-2017.



Published November 01 2018

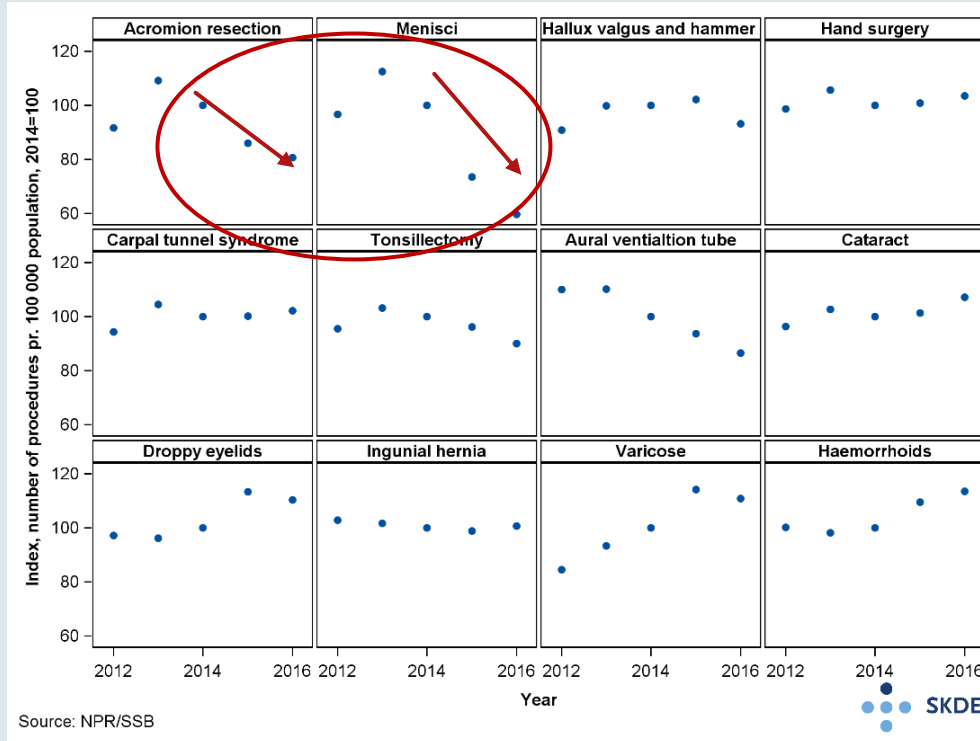
Day surgery atlas

The second health atlas on day surgery describes the development in and variation between the health trusts' admission areas for day surgery procedures as in the first day surgery atlas, this time period 2013-2017.

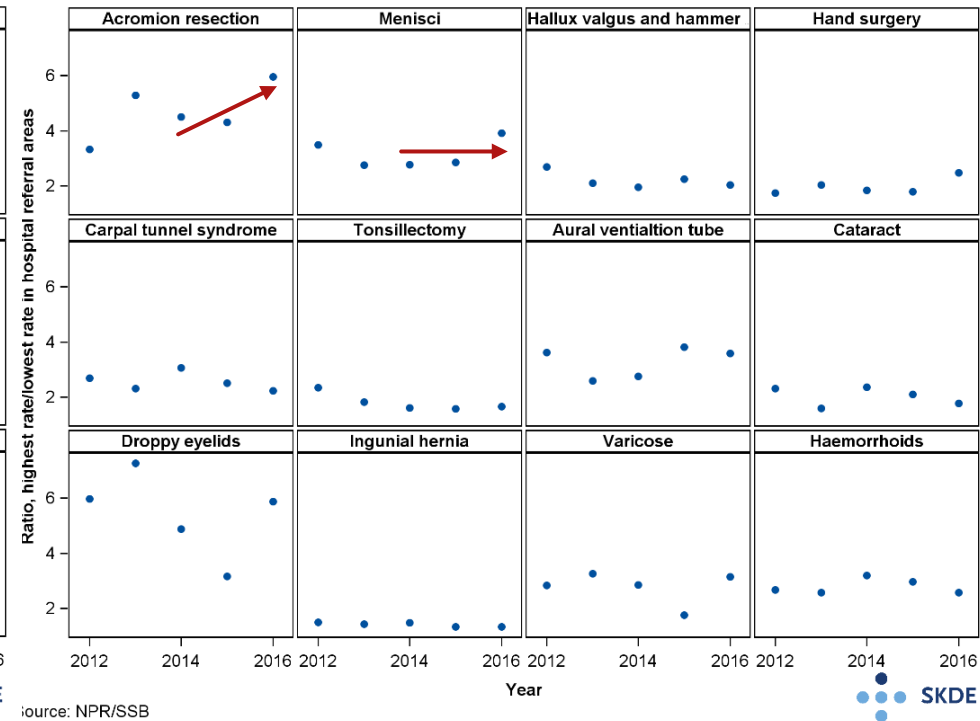
Update day surgery atlas - change “without governance”



Number of operations

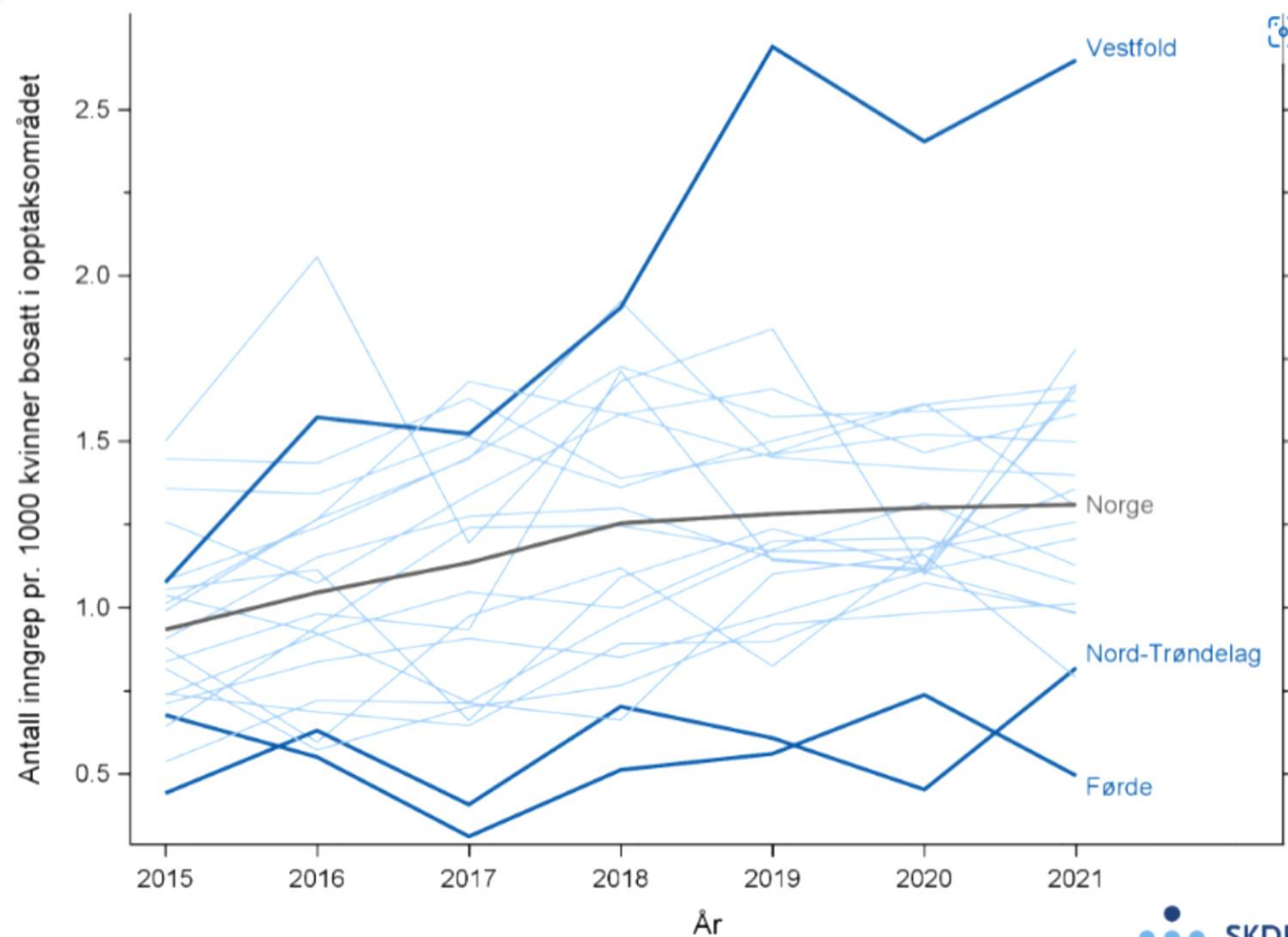


Ratio of variation



- ▶ Big reduction where overtreatment is suspected
- ▶ No obvious relation between changes in volume and ratio of variation over the time period

Surgical treatment for endometriosis - timetrend 2015-2021



Kilde: NPR/SSB

Figur: Antall inngrep for endometriose pr. 1 000 kvinner i perioden 2015-2021.

How can we understand variation?

Fundingsrud & Lian 2022

- ▶ Exploring explanations for variation in outpatient medical services for children
- ▶ Qualitative study
 - ▶ 17 interviews with senior doctors in six hospitals
- ▶ Cultural factors dominate
 - ▶ Views on medicalization/disease vs. normality
 - ▶ Different use of guidelines

Tidsskrift for velferdsforskning

Universitetsforlaget

VITENSKAPELIG PUBLIKASJON

Årgang 25, nr. 1-2022, s. 1-15
ISSN online: 2464-3076
DOI: <https://doi.org/10.18261/tfv.25.1.4>

Geografiske ulikheter i tilbudet av polikliniske tjenester til barn og unge ved norske sykehus

et kulturperspektiv

Geographical Inequalities of Out-Patient Medical Services to Children and Adolescents in Norwegian Hospitals

A Cultural Perspective

Hans Petter Fundingsrud

Rådgiver, Kvalitets- og forskningsavdelingen, Helse Nord, klinikkoverlege, Barne- og ungdomsklinikken, Universitetssykehuset Nord-Norge

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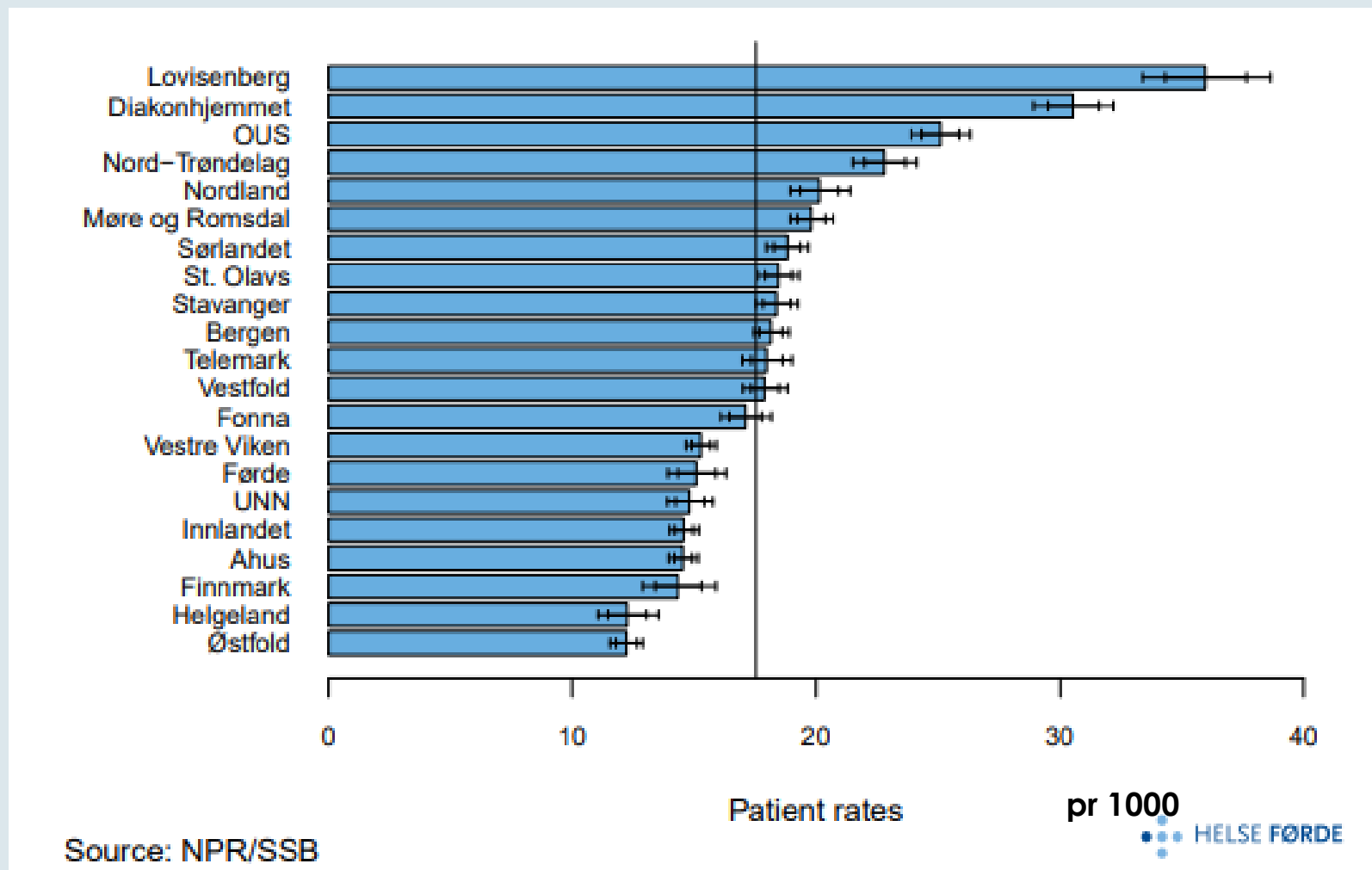
Health atlases – what have we learned?

- ▶ Health atlases have been instrumental in engaging the Ministry of Health
- ▶ Updated data for professional acceptance
- ▶ Clinical participation is crucial
 - identifying relevant topics
 - legitimacy
 - ownership to results and challenges

Health atlases – what have we learned?

- ▶ Documentation of unwarranted variation does not alone lead to desired change
- ▶ Examples of successful improvement, but fragmented
- ▶ Unresolved questions:
 - ▶ How can we understand/explain variance?
 - ▶ What is the “right/target” level?

Outpatient mental healthcare treatment among elderly (>65 years)



What is the «right» level?

Undertreatment?

Behandlingsenheter  Opptaksområder 

> Private

 Fagområder

Søk... 

> Hjerte- og karsykdommer

> Kreft

> Luftveier

> Diabetes

> Nervesystemet

> Muskel og skjelett

> Mage og tarm

> Gynekologi

> Nyre

▲ Kvalitetsindikator for 2023

Nasjonalt hoftebruddregister

Operasjon innen 24 timer (tilstrebtes)

Andel hoftebrudd som blir operert innen 24 timer etter bruddtidspunktet.

ØNSKET MÅLNIVÅ: ≥ 80 %


Nasjonalt

HN RHF


HMN RHF

HV RHF


HSØ RHF

49% 


3887 av 7931

48% 


340 av 707

56% 

642 av 1141

49% 

752 av 1534


47% 

2153 av 4549


Operasjon innen 48 timer

Andel hoftebrudd som blir operert innen 48 timer etter bruddtidspunktet.

ØNSKET MÅLNIVÅ: ≥ 90 %

83% 


6590 av 7931

79% 


562 av 707

84% 

962 av 1141

83% 

1280 av 1534


83% 

3786 av 4549

Protese ved dislokerte lårhalsbrudd

Andel hoftebrudd hos pasienter over 70 år med dislokert lårhalsbrudd med protese.


ØNSKET MÅLNIVÅ: ≥ 90 %

99% 


3177 av 3217

99% 


273 av 275

98% 

445 av 456

98% 

532 av 543


99% 

1927 av 1943


Sementert stamme ved bruk av protese

Andel sementerte proteser hos hoftebruddpasienter over 70 år behandlet med protese.


ØNSKET MÅLNIVÅ: ≥ 90 %

96% 


3568 av 3710

80% 


264 av 332

98% 

493 av 504

97% 

665 av 685


98% 

2146 av 2189


Ikke-reopererte proteser innen et år

Andel ikke-reopererte pasienter etter ett år, alle primæroperasjoner for hoftebrudd siste 5 år.


ØNSKET MÅLNIVÅ: ≥ 90 %

96% 


8208 av 8568

96% 


811 av 849

96% 

1180 av 1235

96% 


1544 av 1615


96% 


4673 av 4869


30 dagers overlevelse


Andel pasienter som er i live 30 dager etter behandling for hoftebrudd.

93% 

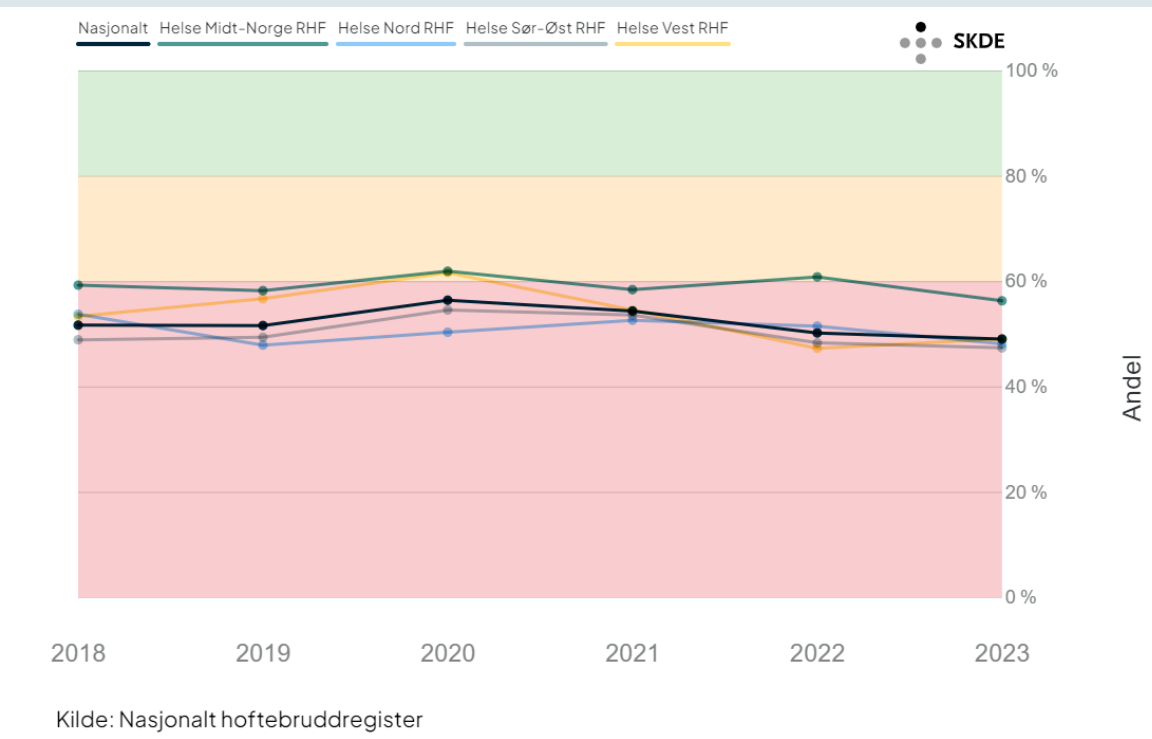
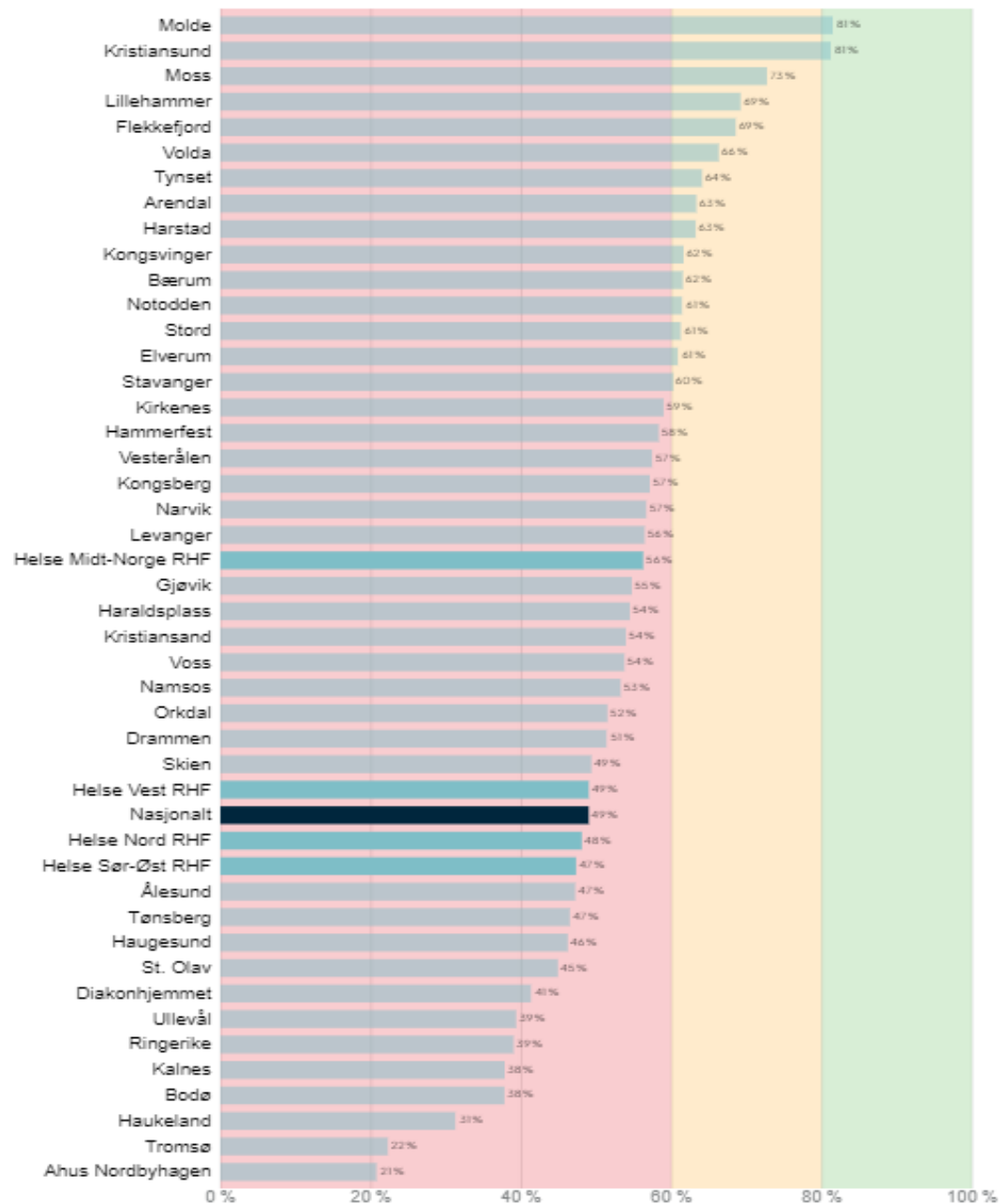
91% 

93% 

94% 

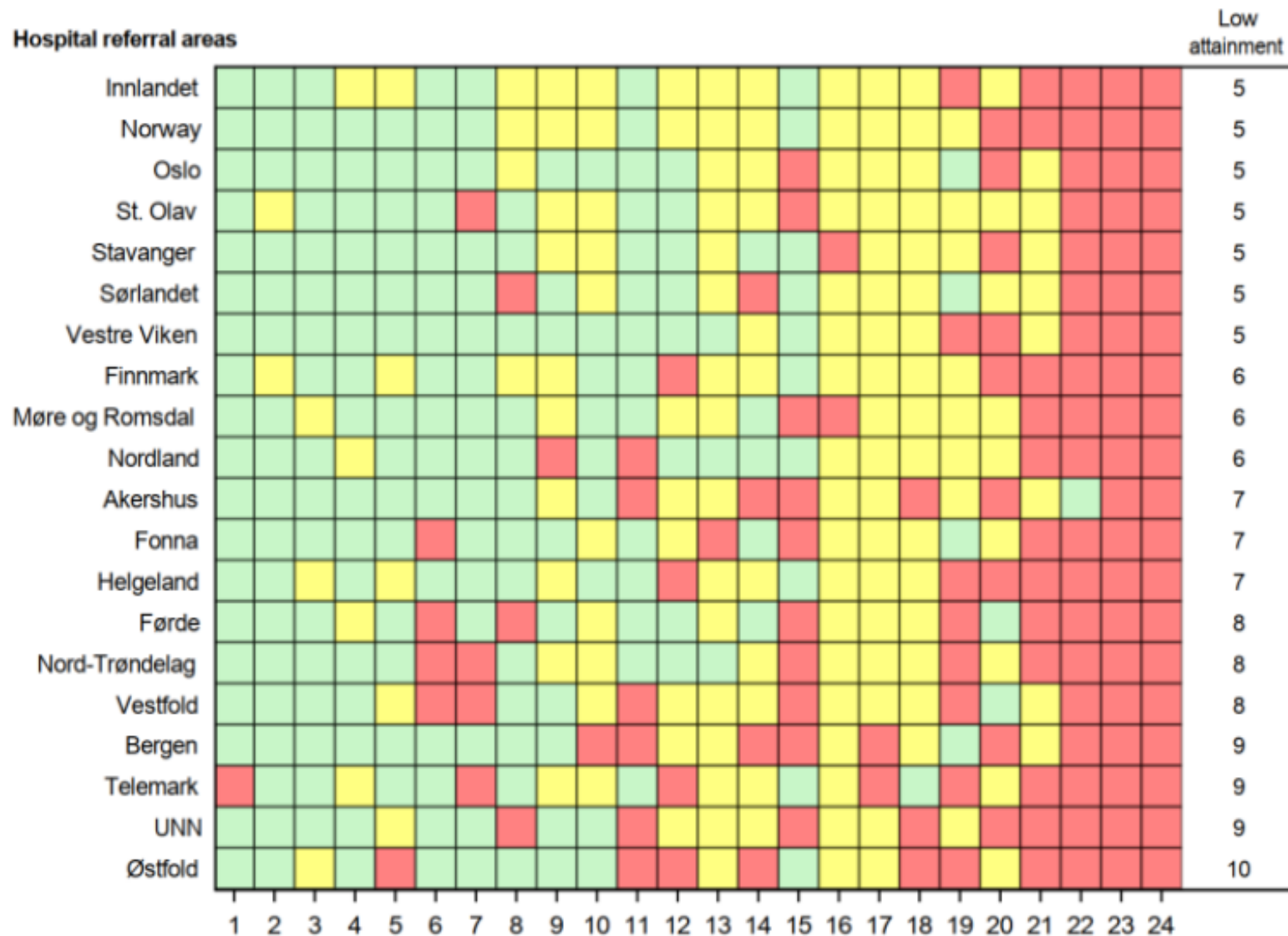
93% 

Operation within 24 hours after hip fracture



Kilde: Nasjonalt hoftebruddregister

Healthcare quality atlas



1. Colon cancer, survival ++
 2. Stroke, thrombolysis
 3. Breast cancer, primary surgery
 4. Lung cancer, curative therapy
 5. Diabetes in adults, HbA1c <= 53 mmol
 6. Rectal cancer, laparoscopy ++
 7. Prostate cancer, radical treatment ++
 8. Hip fractures, cemented stem
-
9. Prostate cancer, clear surgical margin
 10. Vascular surgery, carotid stenosis
 11. Rectal cancer, without relapse ++
 12. Diabetes in adults, HbA1c < 75 mmol
 13. Breast cancer, breast-conserving surgery
 14. Kidney, hemodialysis
 15. Colon cancer, laparoscopy ++
 16. Heart attack non-STEMI, examined 72 h.
-
17. Diabetes in children, HbA1c < 53 mmol
 18. Hip fractures, surgery 48 h.
 19. Lung cancer, survival
 20. Diabetes in children, HbA1c < 75 mmol
 21. Heart attack STEMI, reperfusion
 22. Kidney, home dialysis ++
 23. Invasive cardiology, pressure measurement ++
 24. Kidney, BP < 130/80

Timely reperfusion in STEMI-myocardial infarction

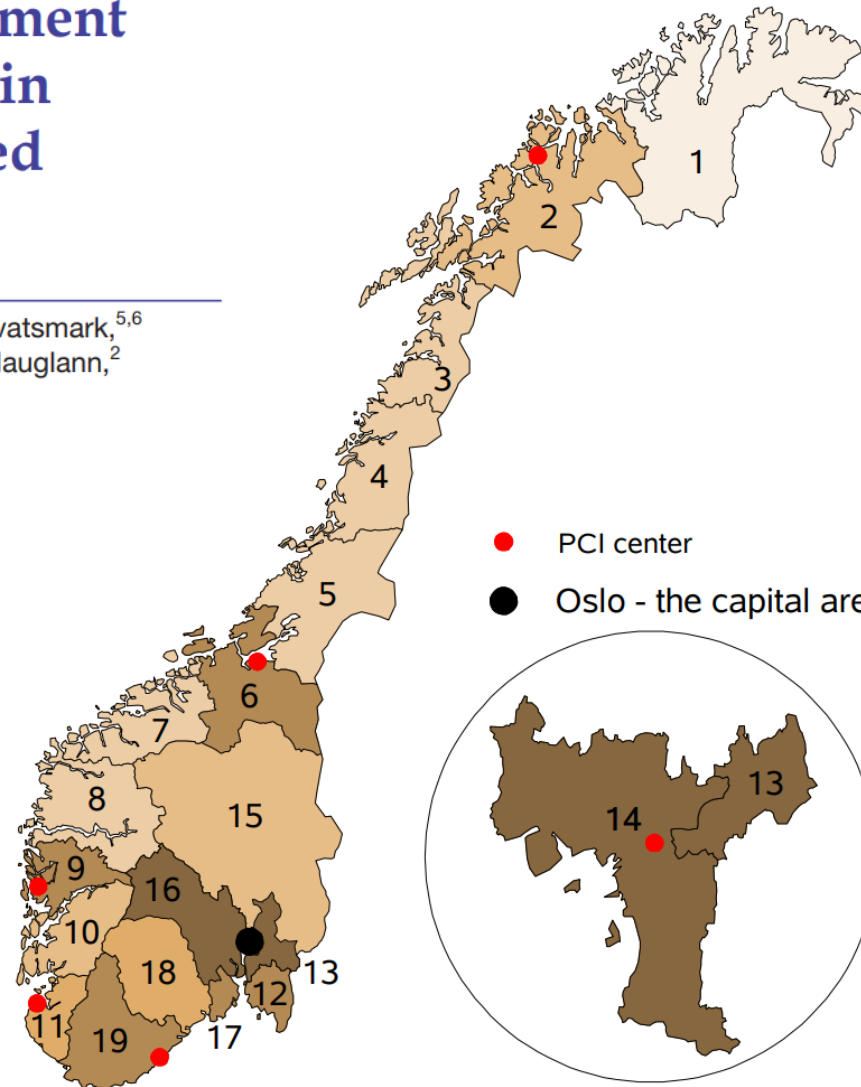
Open access

Original research

BMJ Open Exploring variation in timely reperfusion treatment in ST-segment elevation myocardial infarction in Norway: a national register-based cohort study

Bård Uleberg ^{1,2}, Kaare Harald Bønaa ^{3,4}, Ragna Elise Støre Govatsmark ^{5,6}, Frank Olsen ^{1,2}, Bjarne K Jacobsen ^{1,2}, Eva Stensland ^{1,2}, Beate Hauglann ², Barthold Vonen ^{1,2}, Olav Helge Førde ^{1,2}

- 56% got timely reperfusion
- PCI: 84%
- Thrombolysis: 16%



North RHA:

- 1. Finnmark 13.4%
- 2. UNN 43.5%
- 3. Nordland 17.4%
- 4. Helgeland 21.7%

Central RHA:

- 5. Nord-Trøndelag 28.9%
- 6. St. Olavs 68.4%
- 7. Møre-Romsdal 25.6%

West RHA:

- 8. Førde 27.0%
- 9. Bergen 72.4%
- 10. Fonna 43.9%
- 11. Stavanger 56.1%

South-East RHA:

- 12. Østfold 63.4%
- 13. Akershus 80.0%
- 14. Oslo 81.4%
- 15. Innlandet 33.6%
- 16. Vestre Viken 75.0%
- 17. Vestfold 68.5%
- 18. Telemark 46.7%
- 19. Sørlandet 71.4%

Low value healthcare

Evidence based interventions

NHS

All category 1

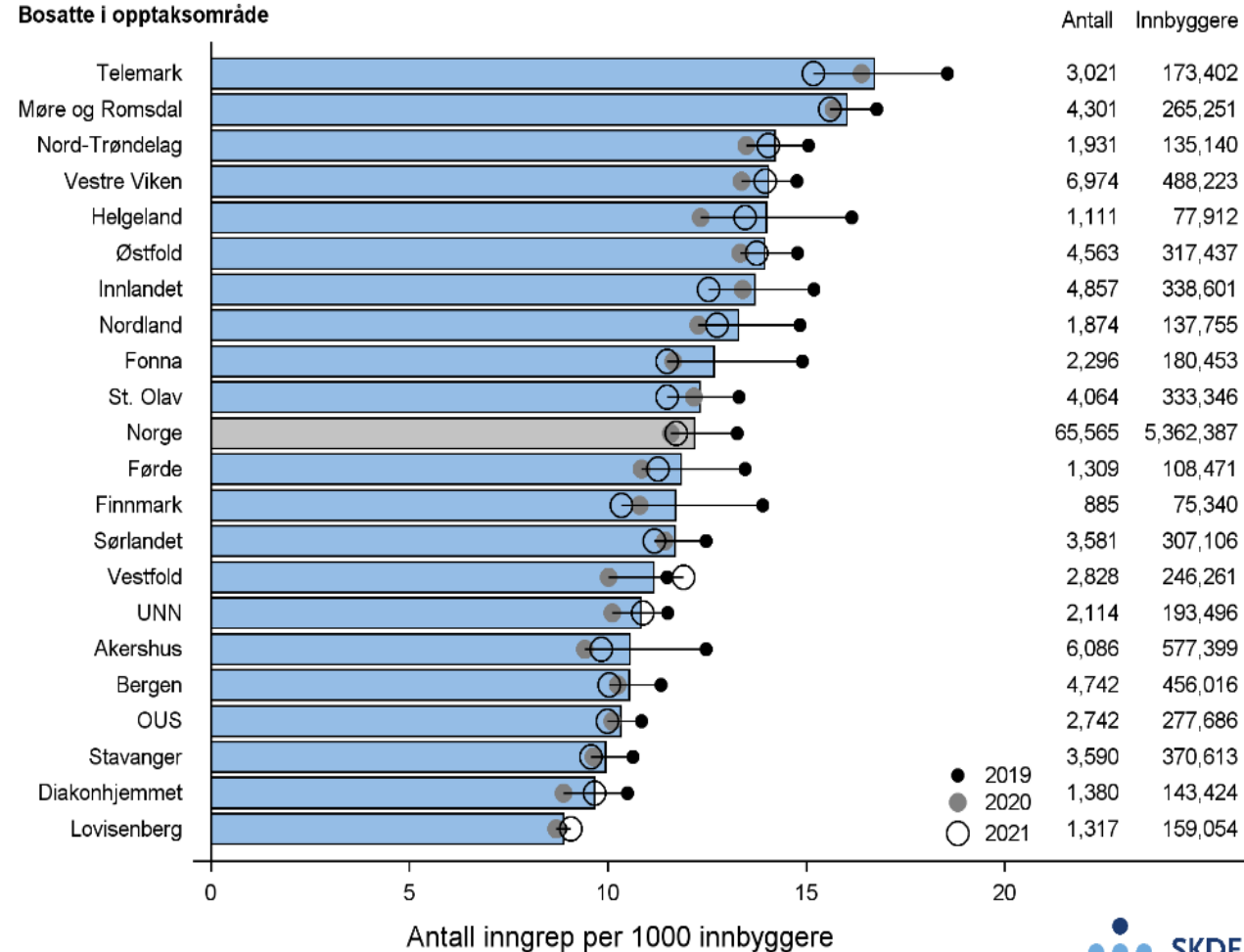
- Snoring surgery
- Dilatation and curettage
- Knee arthroscopy for patients with osteoarthritis
- Injections for non-specific back pain

All category 2

- Breast reduction
- Removal of benign skin lesions
- Grommets for Glue Ear in children
- Tonsillectomy for recurrent tonsillitis
- Haemorrhoid surgery
- Hysterectomy for heavy menstrual bleeding
- Chalazia removal
- Arthroscopic shoulder decompression for subacromial pain
- Carpal tunnel syndrome release
- Dupuytren's contracture release in adults
- Ganglion excision
- Trigger finger release
- Varicose veins

Norway

Bosatte i opptaksområde



Kilde: NPR/SSB

Reducing low-value health care in a national and systemic approach

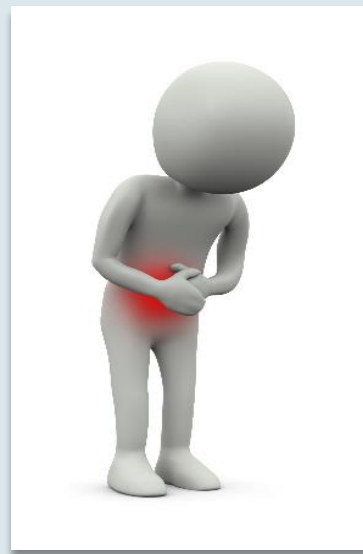
- ▶ National reassessment programme in Norwegian specialist health care. SKDE has a coordinating role
- ▶ How?
 - ▶ Identify procedures of low-value healthcare for de-implementation
 - ▶ An expert group of clinicians in each specific field will assess evidence-based knowledge to
 - ▶ Produce recommendations for **target level** of activity
 - ▶ Suggest specific **measures** to reach recommended activity levels
 - ▶ Medical directors of the four regions is the steering committee
 - ▶ Each region will be in charge for implementing the change of practice needed to reach the target level of activity



Selected procedures



Shoulder surgery



Upper endoscopy

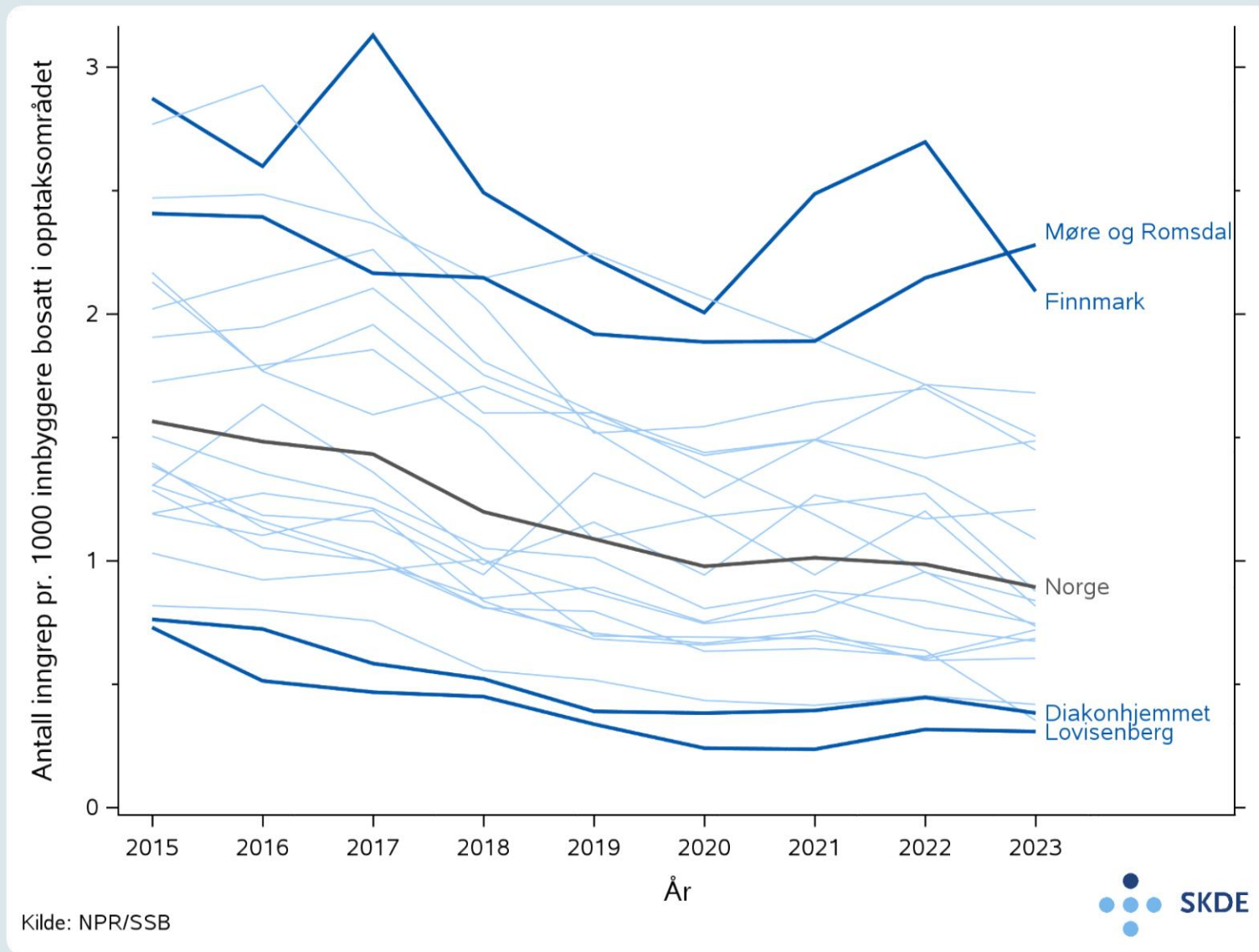


Coronary angiography

Selection criterias:

- ▶ Risk of patient injury
- ▶ Volume and geographical variation
- ▶ Use of resources

Shoulder surgery – time trend



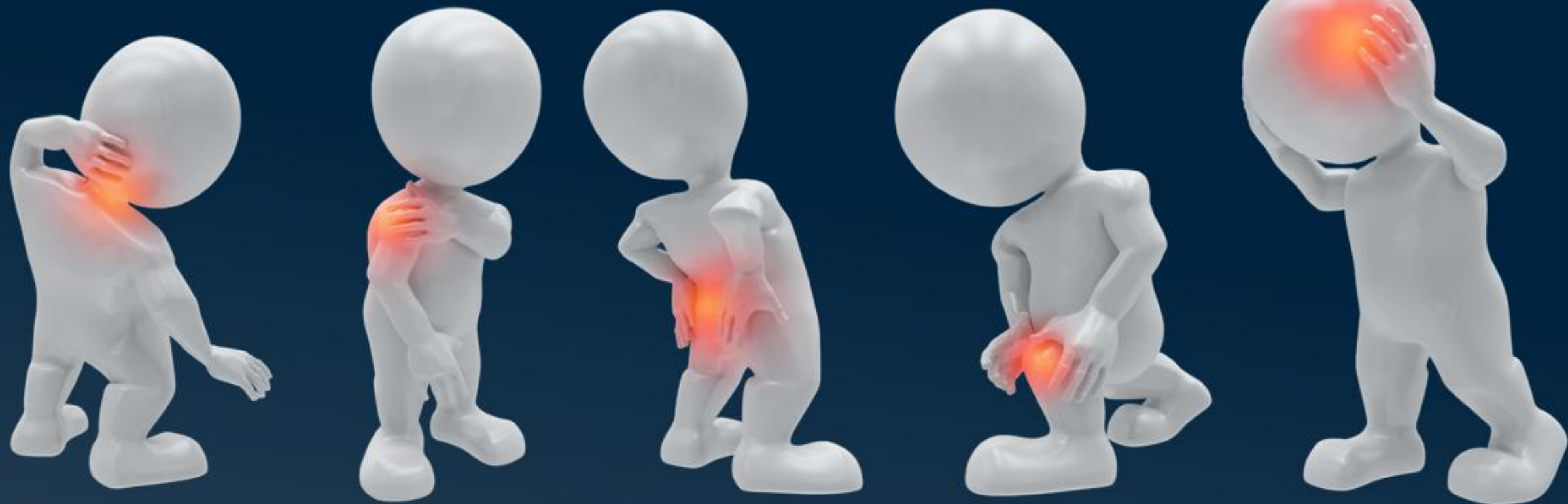
Assignment from The Ministry of Health and Care services in 2023

- ▶ *The four regional health authorities shall... reduce unwarranted variation and map variation in the use of **laboratory, imaging and radiological services**, and to implement measures to reduce overuse of these services. SKDE shall be involved in this effort.*
- ▶ Western region holds the leadership and SKDE has produced three health atlases
- ▶ The project is still ongoing, and the work on defining specific measures in radiology and lab is in the final phase.

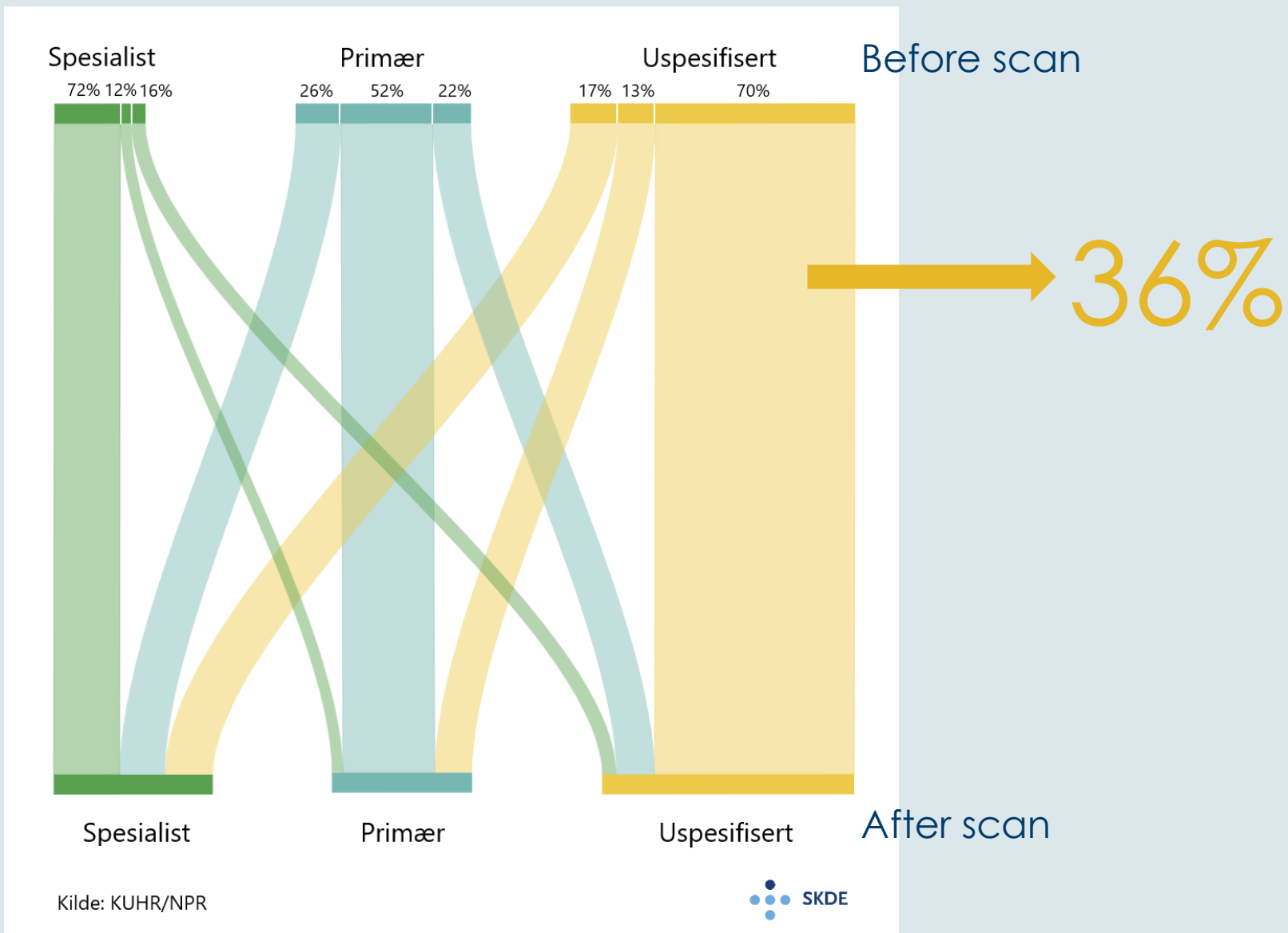
Outpatient MRI-scans

- 500 000 patients
- 606 000 MRI scans
- 393 mill. NOK (33 mill Euro)

60%

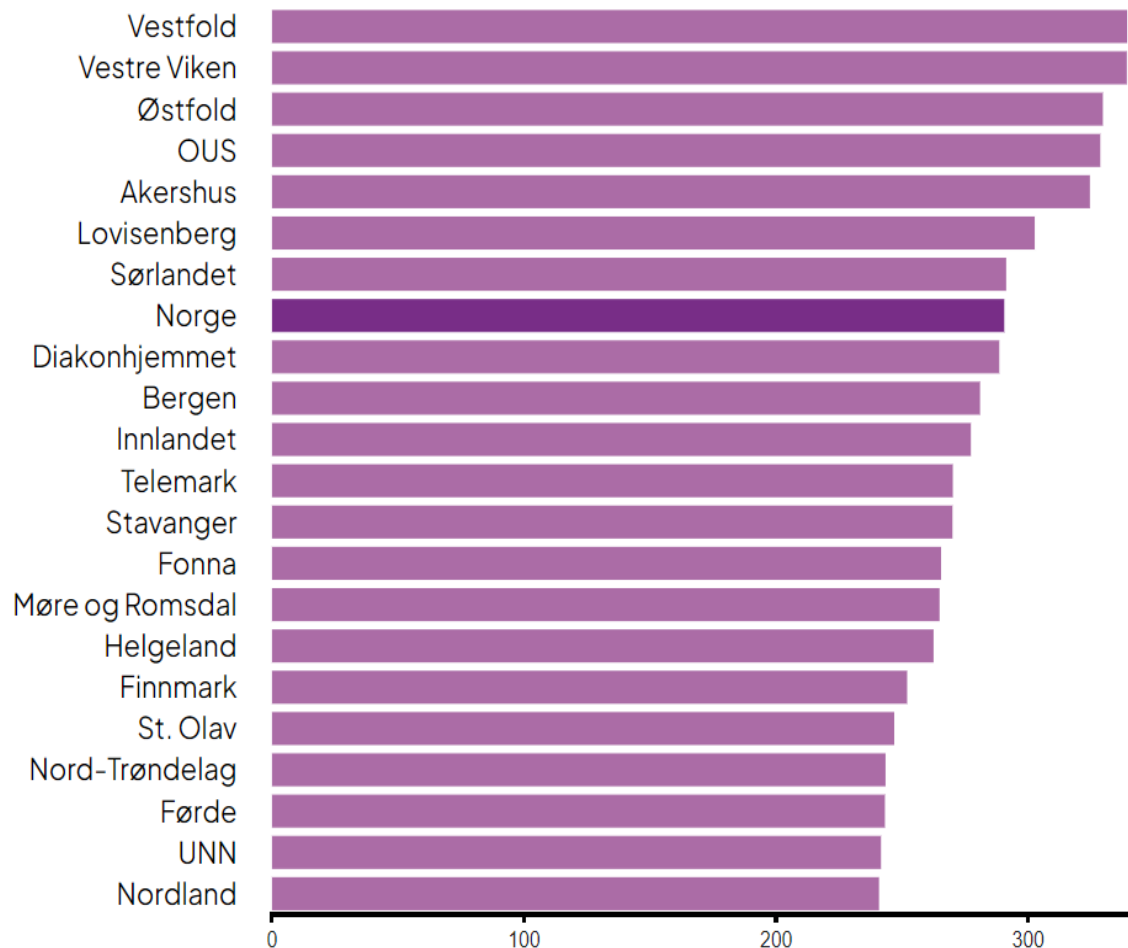


MRI Spine



Health atlas laboratory services (biochemistry)

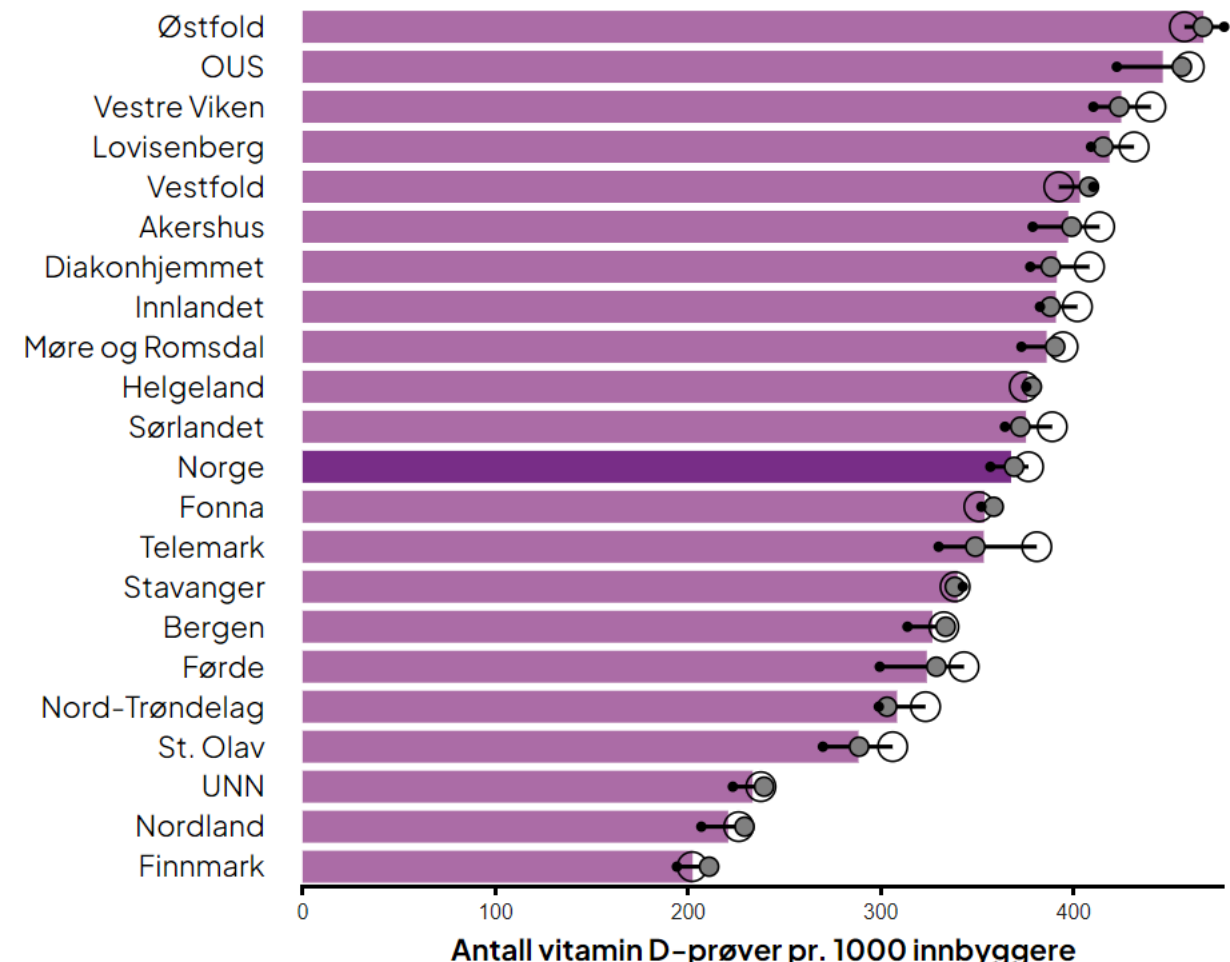
Opptaksområder



Expences pr inhabitant

Cost: 130 mill Euro. Save 24 mill Euro?

Opptaksområder



Antall vitamin D-prøver pr. 1000 innbyggere

• 2021 ● 2022 ○ 2023

2 mill tests. Save 4 mill Euro?

How can we reduce variation in Norway?

- ▶ We need to work together nationally - between regions
- ▶ A combination of “top down” governance and professional engagement can be instrumental in obtaining desired change
- ▶ De-implementation is difficult:
We have systems for implementing new methods – but not for de-implementation

Future work with our health atlases

- ▶ Include new datasources: eg. information about socioeconomy
- ▶ Yearly updates of analyses
- ▶ Partnerships: clinicians are crucial
Who do we need to collaborate with to change practice?

Thank you!

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helse-nord.no](mailto:Eva.stensland@helse-nord.no)

