

# Integrated care and digital health care services related to the case-mix and financing system in Norway

PCSI conference in Bled 2024

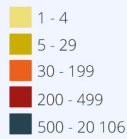
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## Agenda

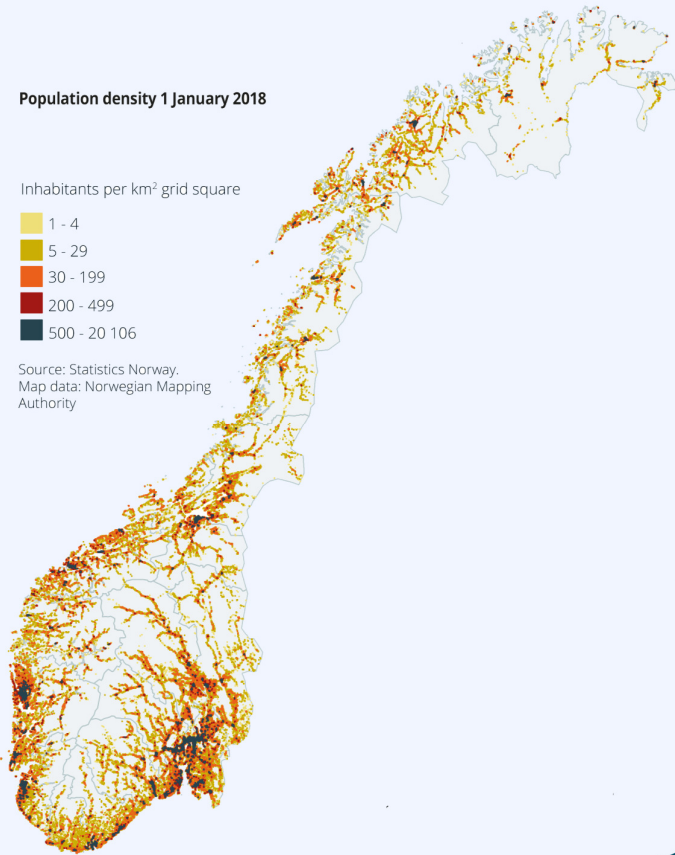
- A brief introduction to Norway's health system
- Case-mix and activitybased funding
- Pay-for-performance
- Our focus on digital health services and integrated care

## Population density 1 January 2018

Inhabitants per km<sup>2</sup> grid square



Source: Statistics Norway.  
Map data: Norwegian Mapping Authority



## Geography and demographics

- Population: 5.5 million
- 15 counties and 357 municipalities
- Large variation in the size of municipalities
- 8 out of 10 people live in urban areas
- Aging population, especially in rural areas
- Life expectancy: 82.6 years
- Fertility rate: 1.48 children per woman

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## Who has access and what costs are covered?

Every documented resident of Norway is entitled to publically-funded healthcare services. Residents from the EU and EEA have the same entitlement to health services as Norwegians.

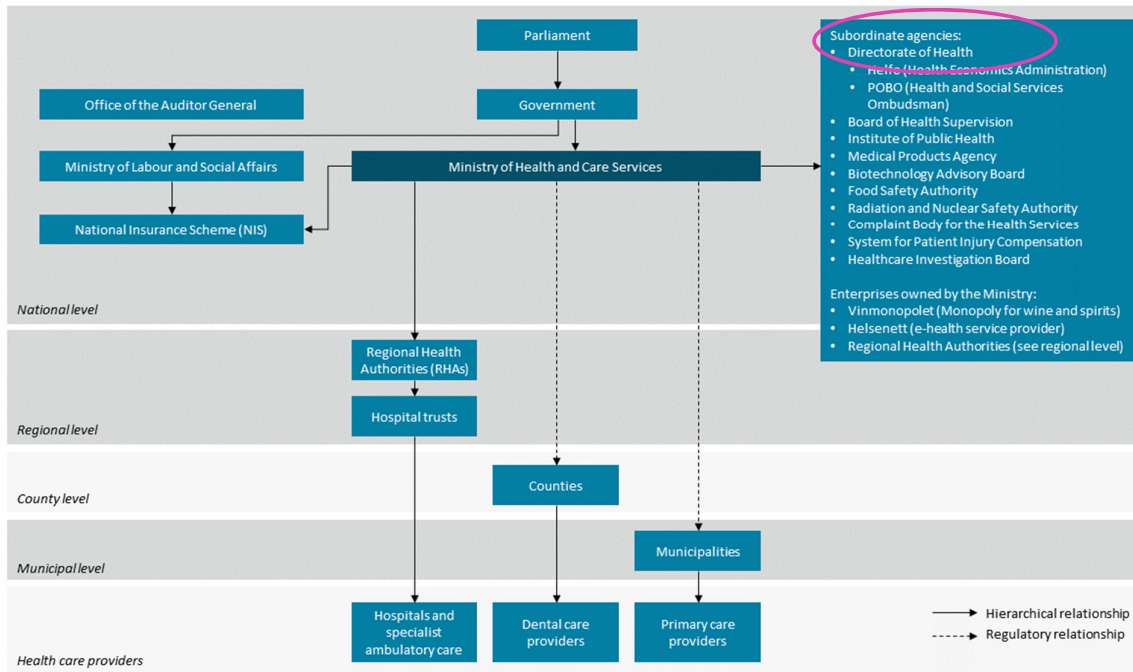
### Free-of-charge:

- In-patient care in public and private hospitals contracted by regional health authorities
- Home-based services, including nursing is usually free-of-charge
- Medical examinations during and after pregnancy
- Healthcare for children under 16, including child vaccination

### Co-payment:

- GP visits
- Out-patient hospital care, radiology and laboratory services
- Physiotherapy
- Prescription drugs on the "blue list"
- (Long-term institutional care for people with disabilities and the elderly)

# The healthcare sector



## Norwegian Directorate of Health:

**Mandate:** improve health of individuals and the community as a whole

**Roles:**  
Advisory  
Legislative  
Implementation  
Emergency response

Separate financing systems for the specialized health care and the primary care (the municipalities responsibility - blockgrant)

# Funding of hospitals in Norway

	Somatic healthcare	Mental health and substance abuse treatment
Inpatient care	Block grant 60%	Block grant 100%
	Activitybased funding 40%	
Outpatient care	Block grant 60%	Block grant 75%
	Activitybased funding 40%	Activitybased funding 25%

## Activitybased funding in Norwegian hospitals:

Strive to focus on the content of the health care and make a reimbursement system neutral to

- which health personnel in hospital provides the care,
- where the health care is given (e.g. at home), and
- technology (video, telephone, patient reported)

# The case-mix groups in Norway



- Use NordDRG framework
- Discuss changes with nordic experts
- Different approach between countries to some areas of the case-mix system

## Norwegian system:

- Ordinary DRGs (covers the whole hospital stay; both inpatient and outpatient)
- Some groups covering patient administered drug treatment, digital home monitoring, teambased health care (including cooperation with the municipalities)
- Hospital at home give same groups and reimbursement as in hospital. For outpatient visit at home - additional payment)

Periods  
of  
health  
care



The Norwegian classification tool (inkl a DRG Grouper, DRG-logic and the financing rules) is available and free to use for everyone (necessary software are on our webpages. ).



Limited market for other groupers in Norway and therefore no certification process for groupers like in many other countries.  
Our tool can easily be integrated in different information systems.



## Integrated care and digital health care in a case-mix system

Activity and cost data from all hospitals

Multipurpose

40% activitybased funding



Recent years a focus on developing case-mix groups that support the aim of



integrated care



digital health care

## Case-mix groups supporting integrated care and digital health care services – activitybased reimbursement

Telephone and videoconsultations – ordinary DRGs

Outpatient visits at home – ordinary DRGs

Patient reported outcome and remote monitoring – groups covering a period

Online treatment program – groups covering a period

Reimbursed treatment (together with the primary care) – groups covering a period

Collaborative meeting with the primary care and others – groups covering a period

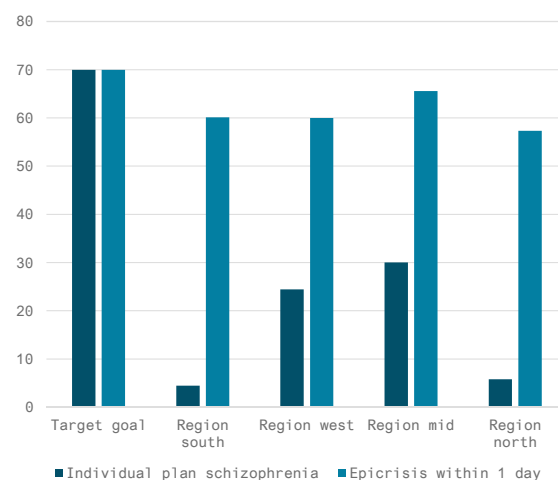
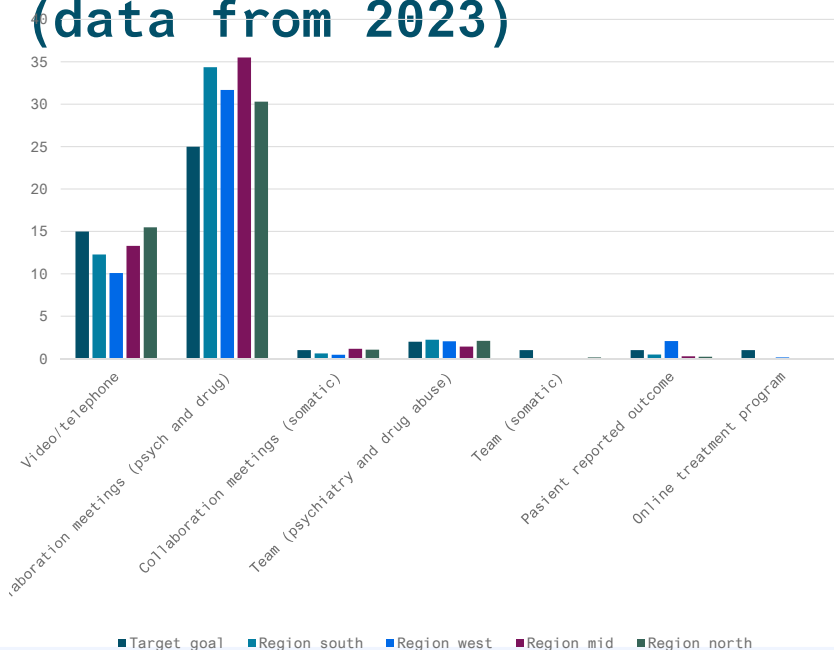
# Pay-for-performance model in Norway - to support and increase digital health care and collaboration with the primary care

Indicator	Performance target in percent 1)	Weighting in the model (in percent)
Video and telephone consultations	15	24
Collaborative meetings with the primary care and other (e.g. school, job) (resp. mental health care and somatic treatment)	25 1	20 7
Teambased health care (resp. mental health care and somatic treatment)	2 1	7,5 3
Patient reporting outcome	1	4
Online treatment program	1	7,5
Individual plan for those diagnosed with schizophrenia	70	3
Epicrisis sent within 1 day	70	24

1) Performance target, is often related to the total number of outpatients visits.  
 Some of the indicators are new – therefore low target number.



## Achieved indicatorscore per region (data from 2023)



# Digital health services in the DRG-system

Video- and telephone consultations group to same DRGs as physical visits (approximately 225 DRG groups)

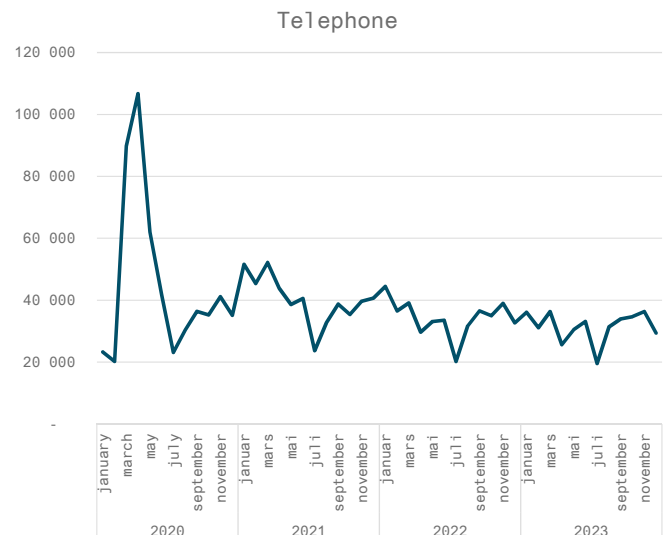
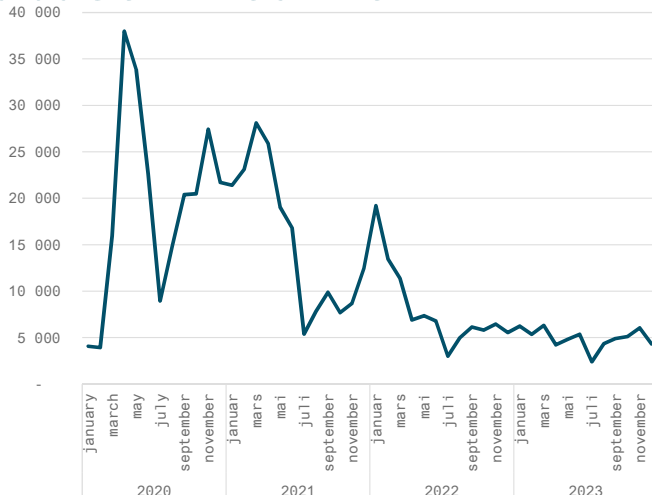
The same DRG independent of who provide the health care (doctor, nurse, other personnel. -> clinical guidelines and

Have an indicator in our pay-for-performance model (15% of all outpatient contacts)

Between 10 and 15% of all outpatient contacts are a video- og telephoneconsultation



## Number of video- and telephone consultations from january 2020 until december 2023 – mental health and drug abuse treatment



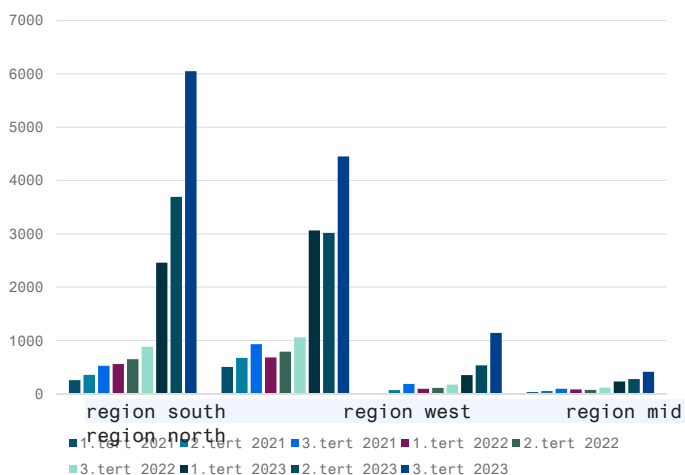
## DRGs for digital health care

- Grouping based on diagnosis and procedures
- Describe an activity that lasts over a period of time
  - «Monitoring and interpretation of remote-reported data from pacemaker or ICD»
  - «Internet based treatment program»
  - «Long-term asynchronous follow-up based on patient reported outcome»

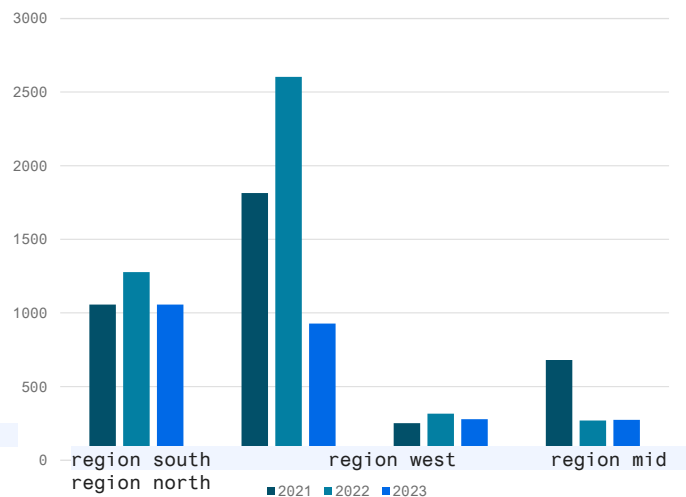
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## Patient reported outcome in case-mix groups covering four months activity (reimbursement per tertiary – number of patients per period)

Somatic health care – 12 groups based on main diagnosis



Mental health and drug abuse treatment





## Integrated care – reimbursement per period covering the activity for a month

### Patient centered health care teams

- Regulated by national guidelines
- Hospital in cooperation with the municipality
- Interdisciplinary
- Create good transitions between hospitals and further follow-up in the municipality
- Most of this health care is given outside the hospital

### Collaboration activities

- The contact shall support health care and patient interaction and be necessary for further treatment of the patient
- Meeting between hospital and primary health care service, Child Welfare Service and other (with or without the patient)



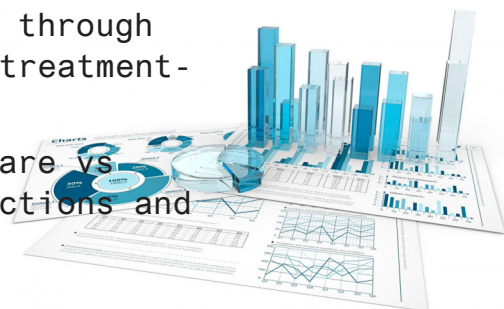
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## General obstacles and difficulties

New ways of providing health services challenge our system with two main authority levels

Financing integrated care and digital health services is challenging both for hospitals and municipalities (especially for small municipalities)

- Reinforced by different financial sources/systems
- Access to data from the remote care software, through the ordinary patient record and sharing data/treatment-/self-care plans
- Different cultures within specialist health care vs community-based healthcare – diagnoses vs functions and needs



Legal issues  
Helseinnspektoratet

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# Digital health care

The main challenges when creating a casemix system



Interaction, and patients shifting between the authority levels



New and undeveloped area

High rate of medical changes  
Lack of evidencebased research  
Less personnel intensive  
«Personal» medical equipment at home  
Artificial intelligence (AI)  
Different kind of app's



Challenging both by means of

Definitions  
Activity data  
Categories in the case-mix system  
Cost calculations

