



# Is casemix systems still relevant in a fully tax financed healthcare system?

Pernille Rosling



## Introduction

Pernille Rosling

M.Sc. Economics

Head of department in the Danish Health Data Authority, part of the Danish Ministry of Health

Worked with the Danish DRG-system, DkDRG, and health data in general for 25 years

## The question

Is casemix systems still relevant in a fully tax financed healthcare system?

In Denmark our casemix system/DRG has been equal activity based financing, ABF

Now ABF is no longer part of the governance regime for the healthcare sector so is DRG still relevant?

3



The use of casemix in Denmark up until today

4

## Keep in mind

The Danish health care sector is fully tax financed so DRG is primarily used for redistribution of funds between sectors – not actual funding

The private hospital sector is very very small

## 2000's: The time of ABF

New government in 2001

- Increased focus on transparency into "value for money"
- Political request for an effort to a) reduce waiting times & b) increase productivity
- A large economic prioritization of the hospital sector in these years (2001-2010) – 2,5 - 3% yearly
- A choice of using DRG in the new financing – *activity-based financing*

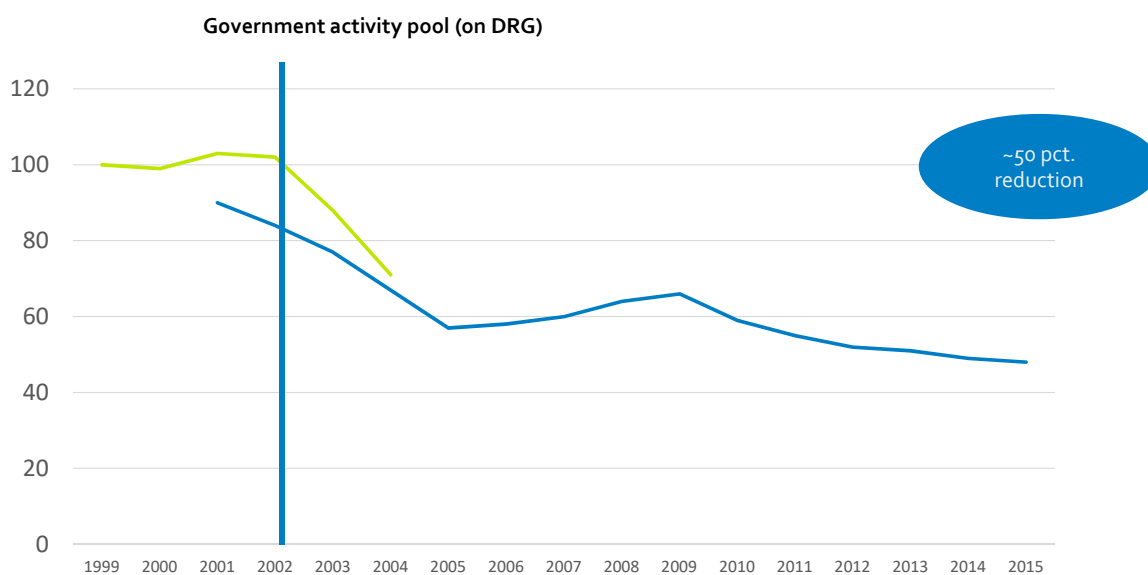
DRG in financing – 3 new things

1. Government activity pool on financing of regions (state → region) and a productivity requirement of 2 pct.
2. Requirement to regions on tariff management at hospital level
3. Municipal co-financing of the regions (hospitals) based on their citizens use of hospitals in region

## What were the effects of implementing DRG/ABF in Denmark?

### Effects of the activity financing (1/4) – waiting time decreased

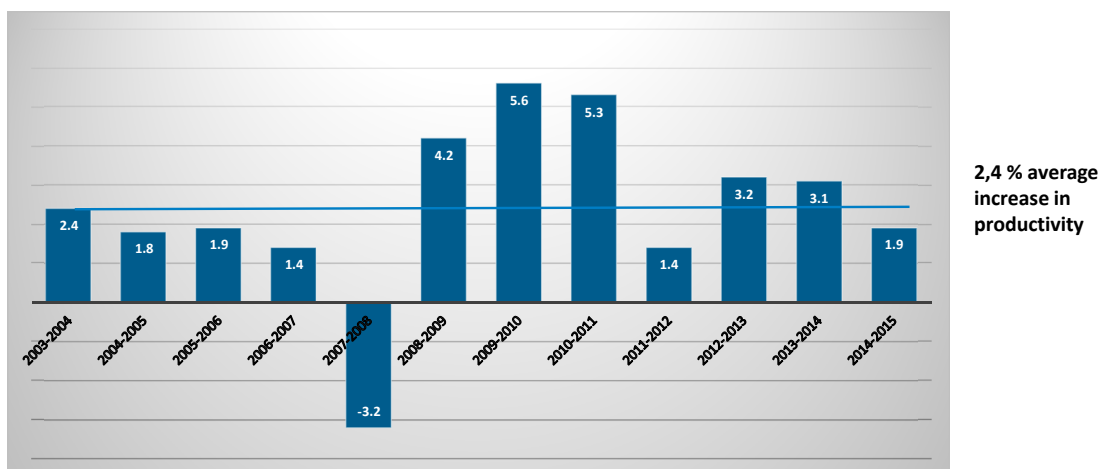
Waiting time for hospital treatment in Denmark, 1999-2015, number of days



# Effects of the activity financing (2/4) – productivity gain

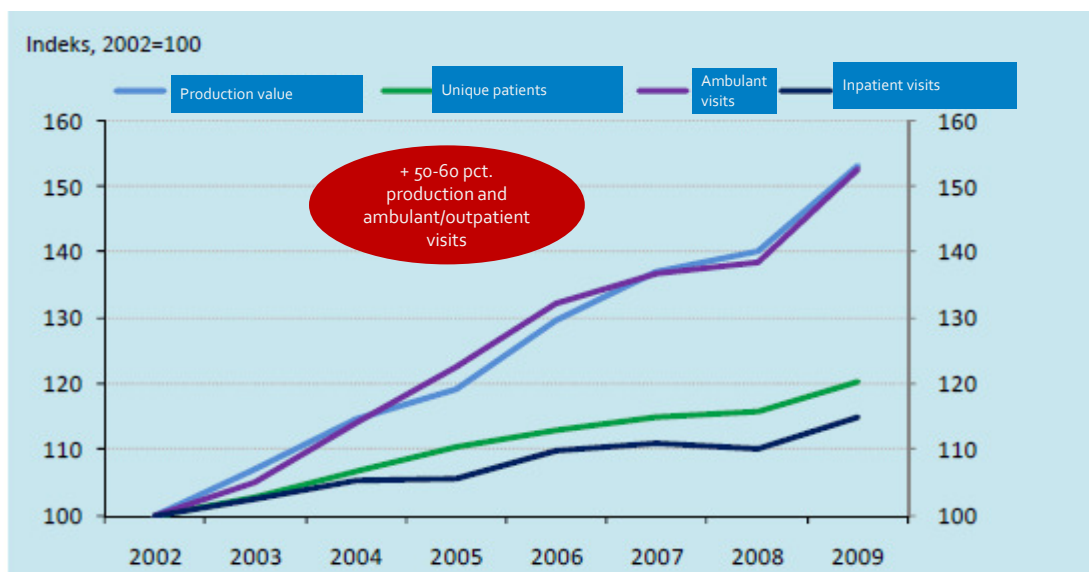
## Productivity results

Year to year changes in productivity, % for all regions



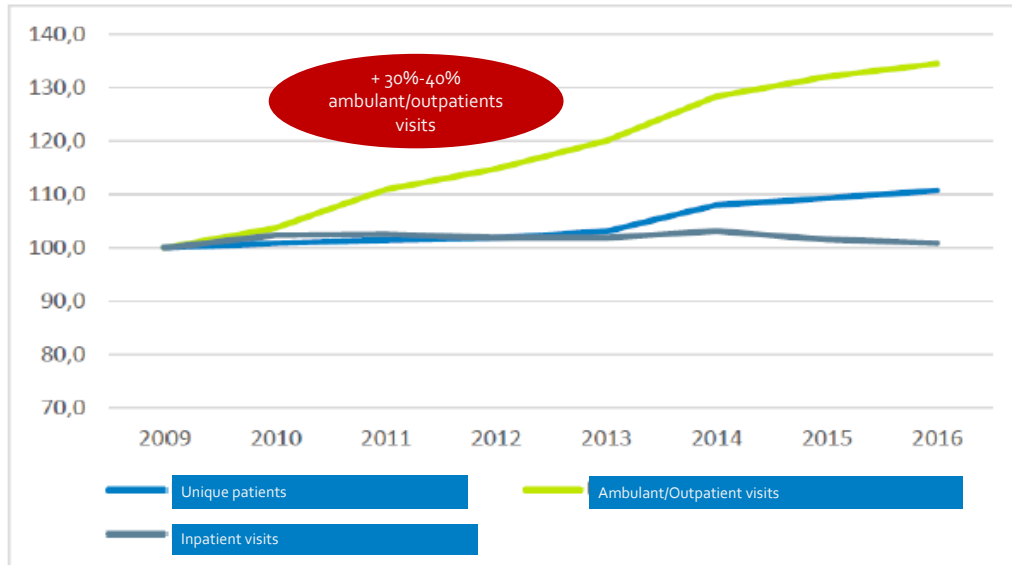
# Effects of the activity financing (3/4) – overproduction?

Activity development (2002 – 2009)



# Effects of the activity financing (4/4) – overproduction?

Activity development (2009 – 2016)



## Criticism of the use of DRG? (1/2)



*“The revolt is spreading. The requirement of 2 pct. productivity in health care no longer makes sense, says both nurses, politicians and experts”*

*Front page on national newspaper: “It has now come so far that hospitals are forced to chase DRG instead of focusing on what is good for patients” (2017 / 2018)*

## Criticism of the use of DRG? (2/2)

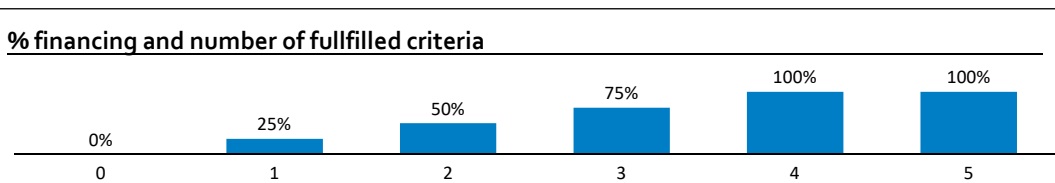
- Steady increasing criticism of the use of DRG, intensifying in 2010-2018.
- Criticism mainly from health staff (especially doctors but also unions)
- Criticism **not** of the DRG-system itself but on the use of DRG from the state level on a continued requirement on a productivity increase.
- A central factor for criticism probably that significantly lower degree of growth in funding from 2-3 % in the 2000's to 0-1% in 2010's.
- A supporting point for the criticism: A wide acceptance from experts in Denmark that it probably wasn't wise with a overall push for more higher production level in the hospitals because:
  - *More activity needs to be moved to primary care*
  - *Maybe no longer as many "easy-fix" in terms of productivity gains*

## Reform of the state financing in 2019

- Removal of the productivity requirement and government activity pool (1,5 bil. kr.) from **1st january 2019**. We can shift our focus because we have achieved very high productivity increases over the span of years DRG has been used as a financing tool.
- Give more freedom to the regions (and hospital) to own choice of "financing" model
- Many hospitals "returned" to "modern fixed budget" instead of activity financing:
  - Roughly fixed budget decided by the regions based on information on DRG-activity and other business intelligence.
- **Instead:** New governmental pool of 1,5 bil. kr. of resultbased financing "Nearby-financing"
  - Incentive on results with focus on more treatment close to the citizens home (out-of-hospitals)
  - 5 criteria to fulfill to receive full pool of finance
  - Criteria to high extent build on the DRG-system

# Resultbased financing – “Nearby financing”

- 1,5 bil. kr. (~1,5 pct.) as conditional financing based on the regions live up to 5 criteria (divided between the regions)
- **Purpose:** Be a strategical incentive to change perspective to focus on how to move patients out of hospitals (connectivity between primary care and hospitals)



Criteria for the region	Is it measured using DRG?
1 Reduce # of hospital episodes pr. citizen	Yes, hospital episodes is measured as the number of <b>overall DRG hospital episodes</b>
2 Reduce hospital activity per cronic ill patient in the region	Yes, hospital activity measured as the <b>DRG-activity</b> but defined only as that activity relevant to cronic diseases (e.g. diabetes)
3 Reduce number of hospital readmissions	-
4 Increase number of virtual hospital contacts	Yes, virtual hospital contacts measured as the number of the DRG hospital episodes that is grouped to the DRG-group for telemedicine
5 Implementation of a specific IT-solution	-



## DRG in Denmark today



## DRG today



*A common language*

## DRG today

- DRG is a recognized management information tool at both ward level, hospital level and macro level
  
- Multiple purposes:
  1. Transparency in activity at aggregated level
  2. Transparency in cost at aggregated level
  3. Transparency in cost at micro-level (using the cost database)
  4. Important key numbers are based on the DRG-system (e.g. the indicators in "Nearby Financing")

So YES – DRG is still relevant in a fully tax financed health care system !!

## Health Structure Commission 2024

The government has set up a commission to conduct and investigate models of the future organization of the health care system.

Among other things the commission must take into account geography, organization and financial management, quality standards, patient rights and free choice.

The commission is expected to hand in its final report in June 2024.

---

<sup>19</sup> [https://commission.europa.eu/system/files/2023-05/2023-Denmark-NRP\\_en.pdf](https://commission.europa.eu/system/files/2023-05/2023-Denmark-NRP_en.pdf)

Thank you