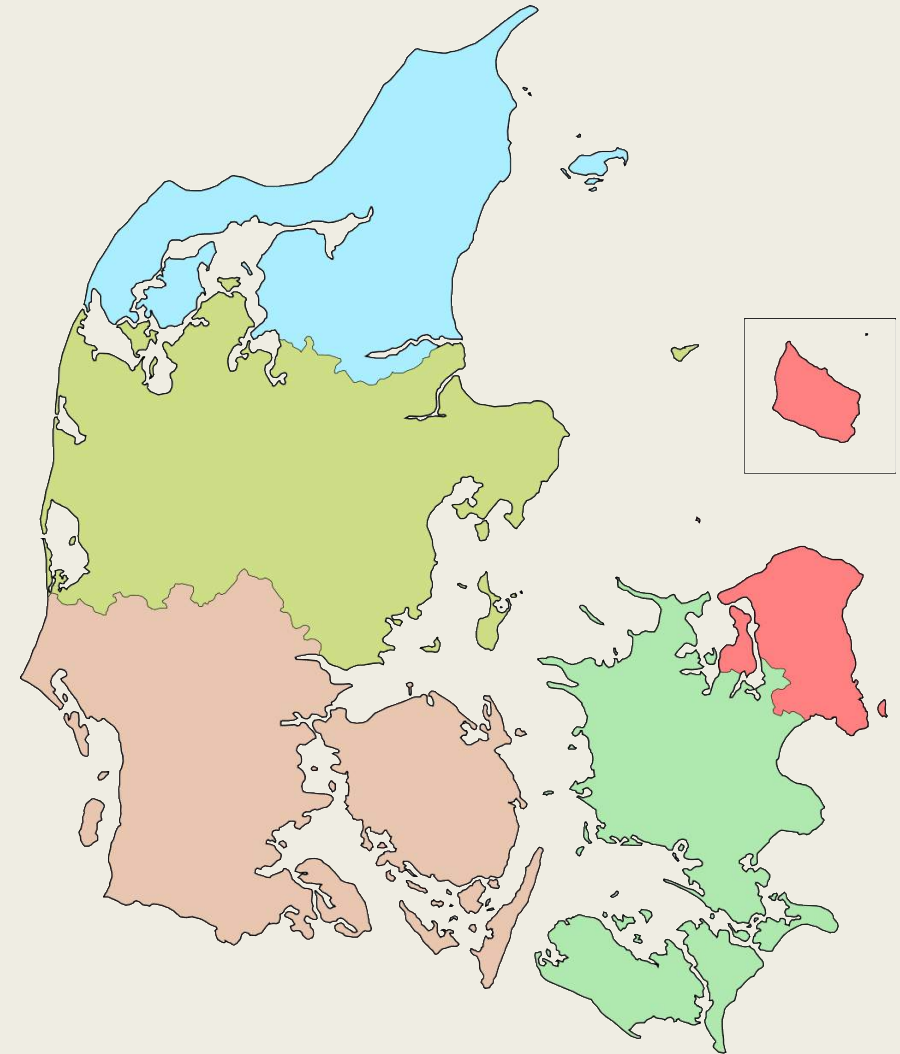# DIGITAL HEALTHCARE

The Danish Way

Jacob Thorsted Sorensen, MD, PhD

Aarhus University Hospital, Denmark

Denmark

- 5,8 mill inhabitants
- Public healthcare
- High taxes
- 5 governing regions (primarily healthcare)
- Uniform standards
- Efficient infrastructure

Prehospital care

Digital Healthcare – The Danish Way

- Prehospital
  - *Patients*
  - *Healthcare professionals*

- In-hospital
  - *Patients*
  - *Healthcare professionals*

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Digital Healthcare – The Danish Way

- Prehospital
  - *Patients*
  - *Healthcare professionals*

- In-hospital
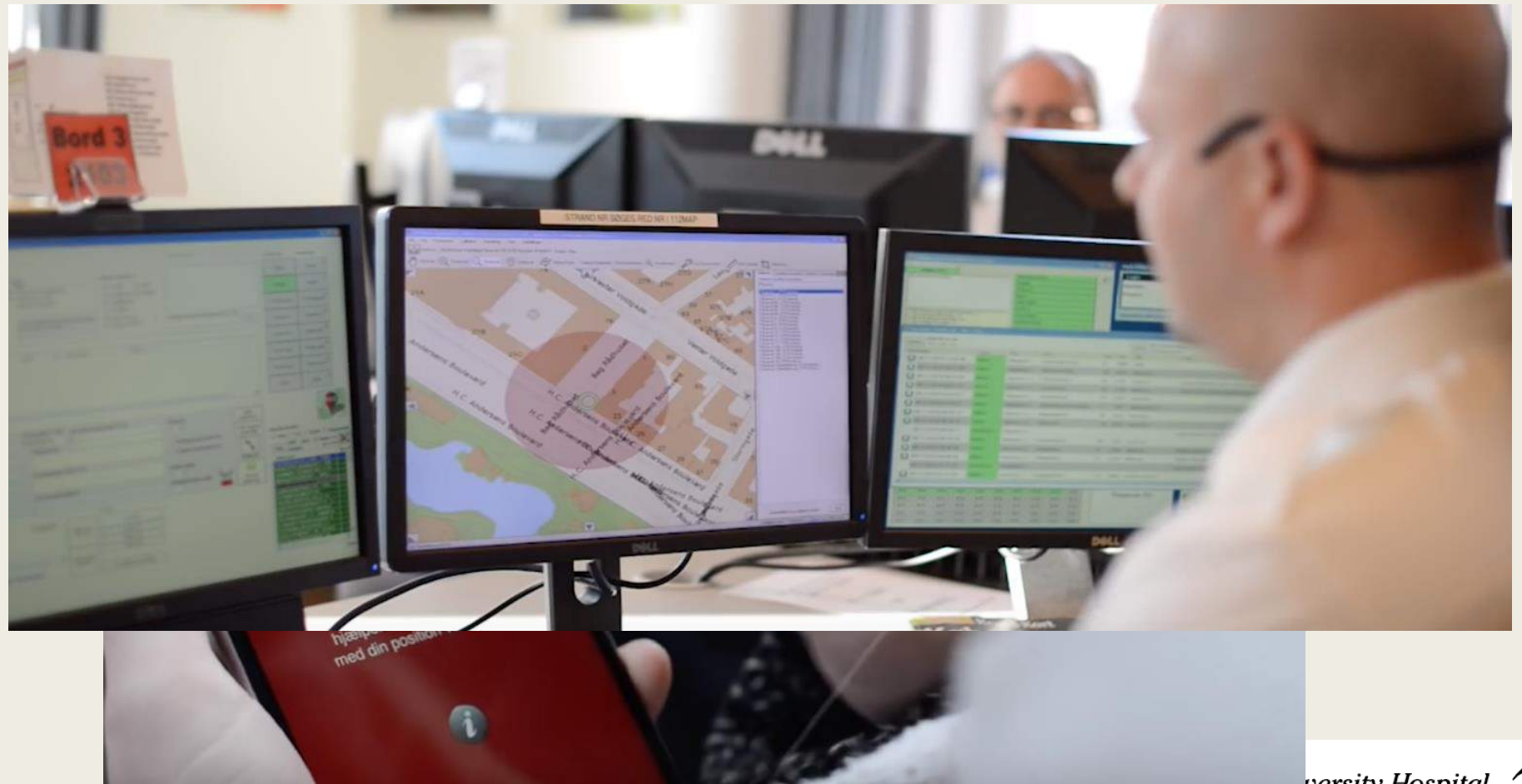 - *Patients*
  - *Healthcare professionals*

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Digital Healthcare – The Danish Way

■ Prehospital
 – *Patients*

 – *Apps*
  ■ 1--1-2
  ■ AED (Heart starter) map

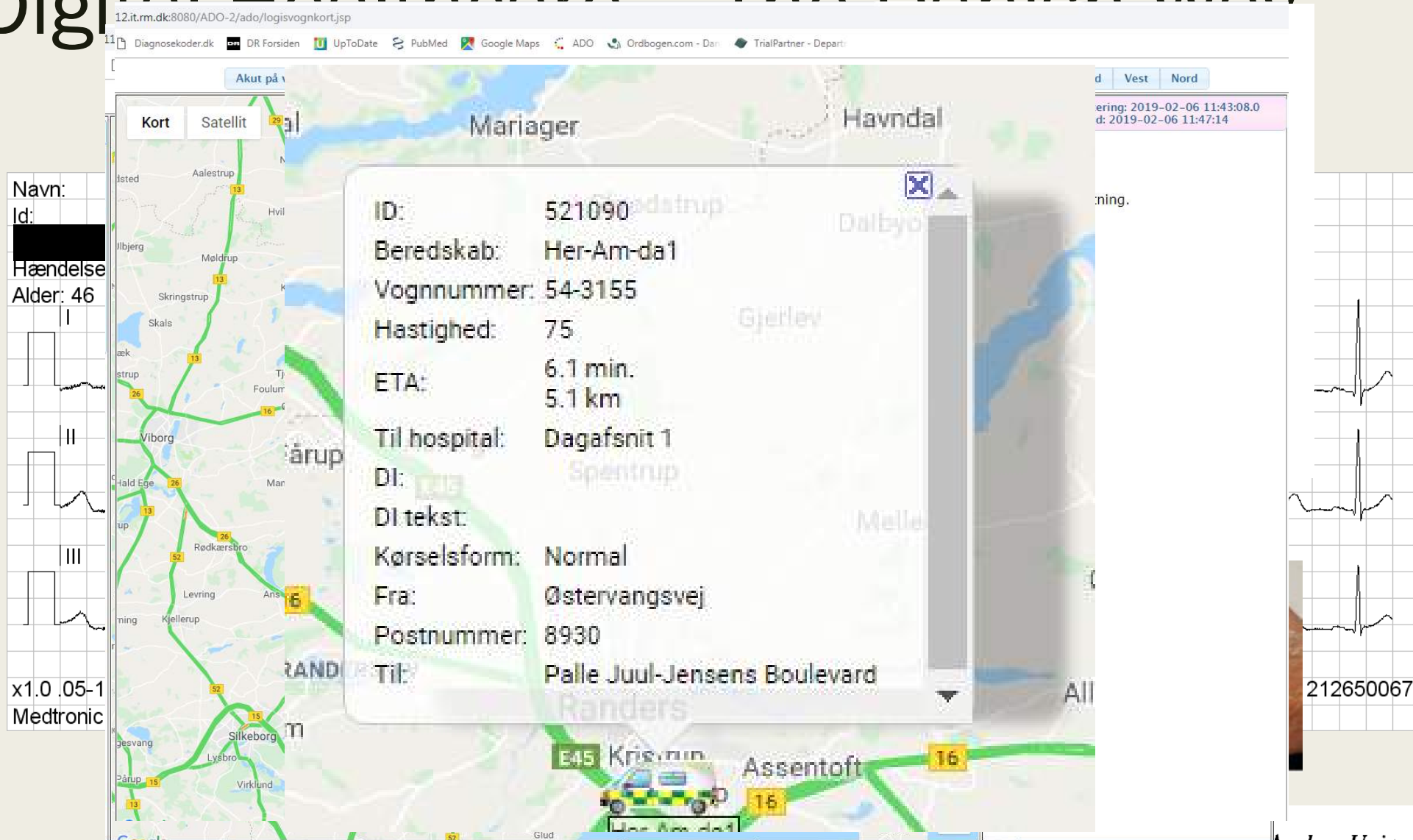# Digital Healthcare – The Danish Way

- Patients

- 1-1-2 app

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- Patient

- AED (H

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In-hospital care

Digital Healthcare – The Danish Way

- Prehospital
  - *Patients*
  - *Healthcare professionals*

- In-hospital
  - *Patients*
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Digital Healthcare – The Danish Way

- Prehospital
  - *Patients*
  - *Healthcare professionals*

- In-hospital
  - *Patients*
  - *Healthcare professionals*

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Digital Healthcare – The Danish Way

- In-hospital

- Healthcare professionals
    - Electronic patient chart
    - Access to test results
    - Access to medication
    - Access to vital signs
    - Access to imaging files
    - Patient logistics

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SYSTEMATIC
COLUMNA eHealth platform

Columna Clinical Information System

Columna Clinical Logistics

Columna Service Logistics

Columna Patient Logistics

Columna Cura

Columna Citizen

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Columna – Integrated Electronic patient records

- Initial implementation (Pharma module) 2004

- Booking module 2006

- First version of integrated Columna 2010

- Complete implementation 2013

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Columna in Central Denmark Region

■ Fully implemented solution and in 24/7 use

1 Joint solution for somatic and psychiatric patients

10 hospitals in Central Denmark Region

3400+ beds in somatic and psychiatric hospitals

20.000+ different users per day

6.7 million citizens are registered
  (1.7 million are patients with registered data)

2.400 admitted patients per day

>25.000 medication prescriptions per day

>40.000 lab results per day

6.500 lab results per hour in peak

> 80,000 information exchanges per. month with primary health service
and citizens to support the continuum of care

HIMMS Level 6 expected to be accredited autum 2015

■ Somatic
■ Psychiatric
■ Hospice

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Digital Healthcare – The Danish Way

■ In-hospital

■ Patient logistics
  – *Procedural progress*
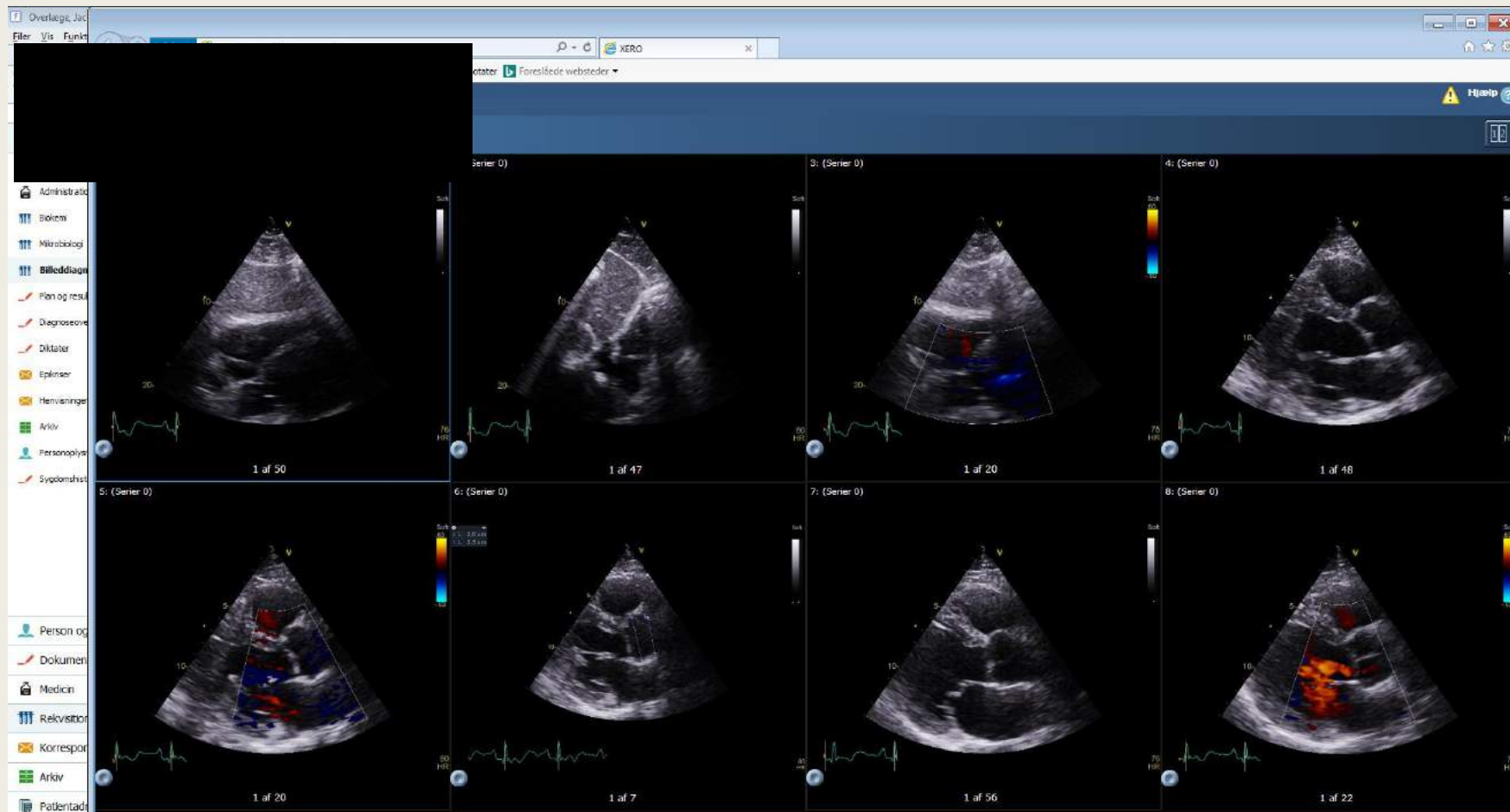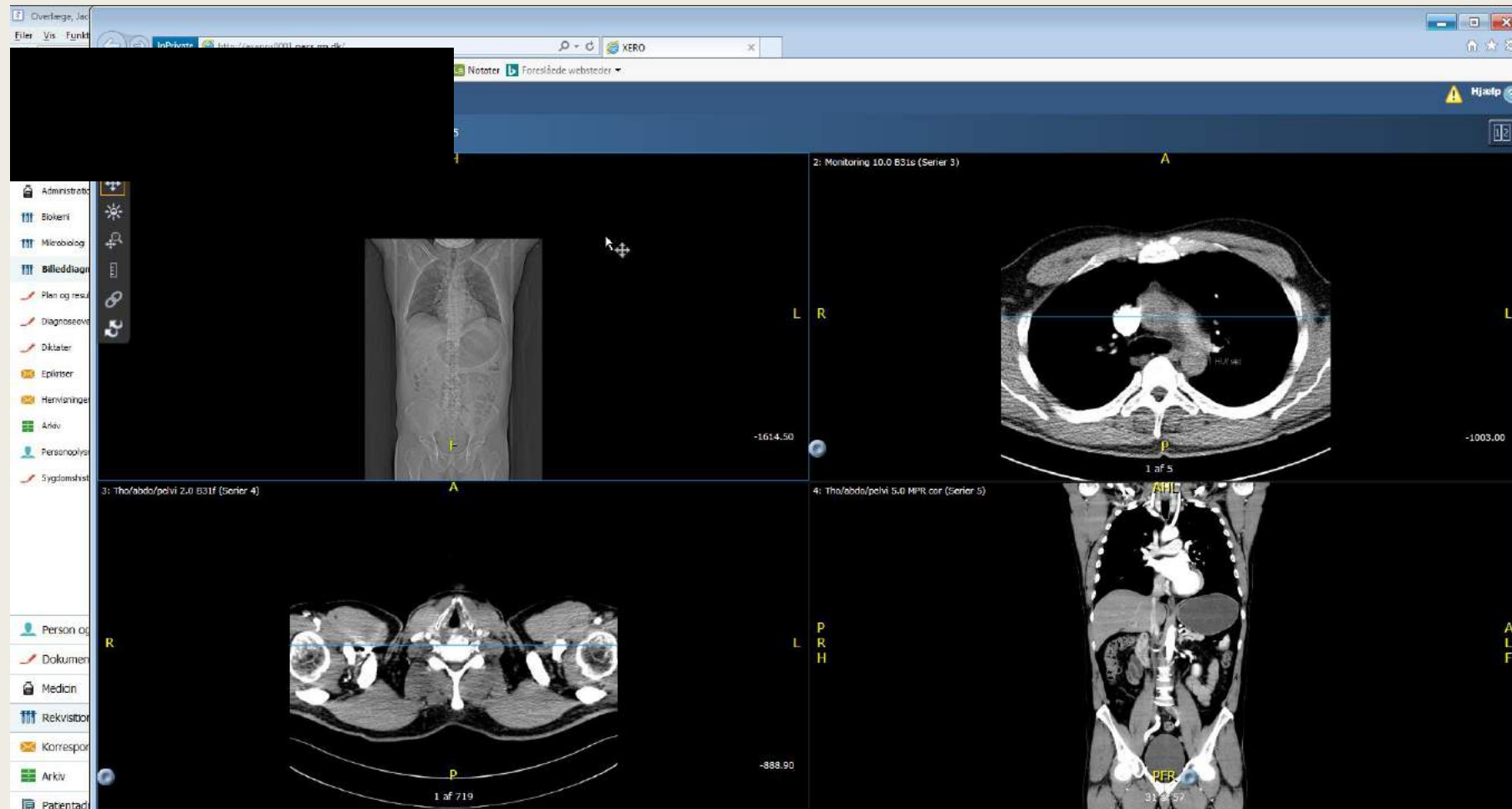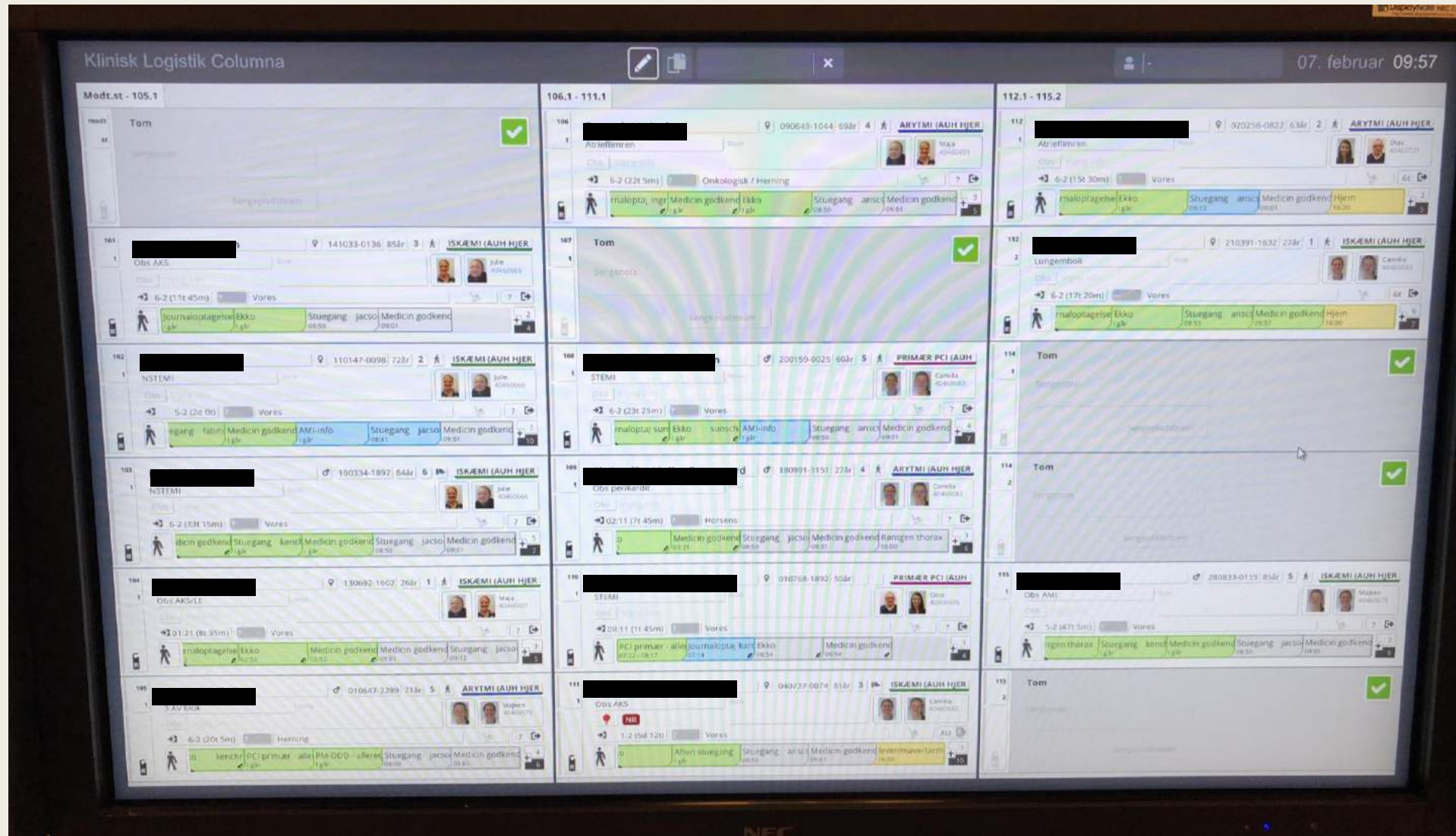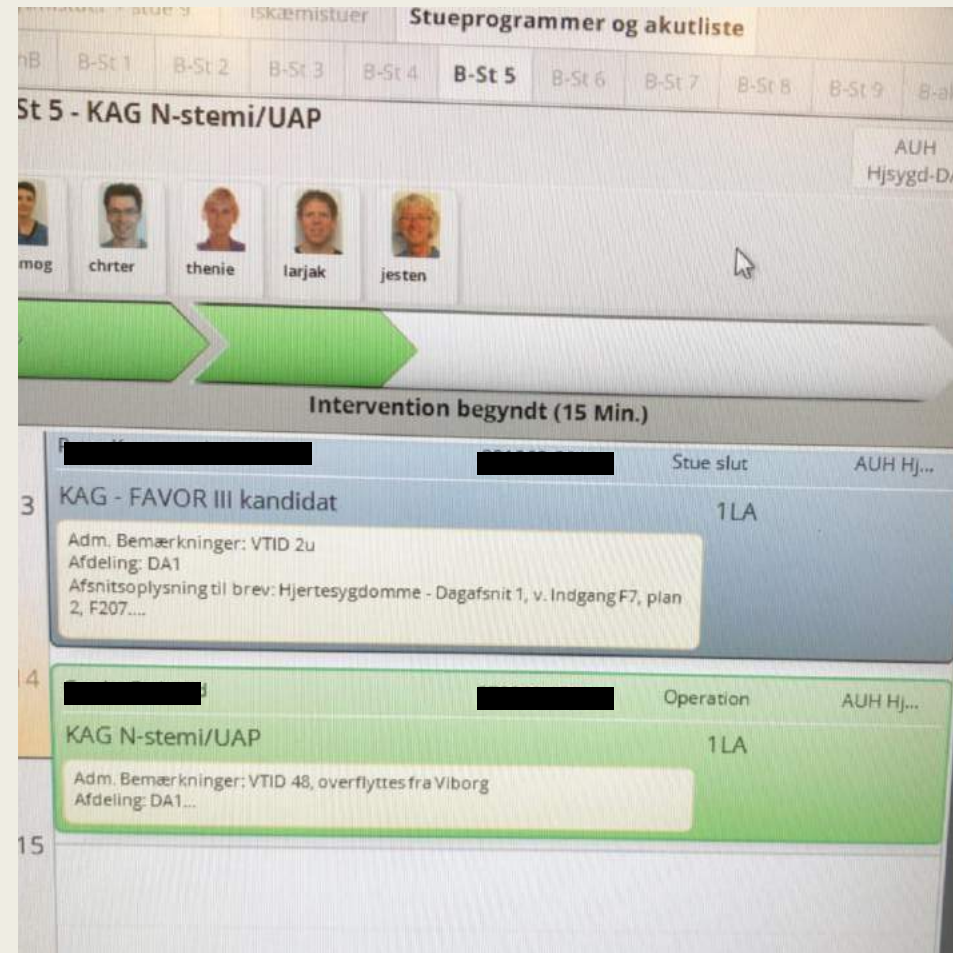   ■ Cetrea – Clinical logistics

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- Perspectives
  - *Out-patient follow up from home*
  - *Patient monitoring via apps – data harvest*
    - Vital signs
    - Heart rhythm
    - Pacemakers
    - Weight
  - *Patient education*
  - *Efficient planning of multiple procedures*
  - *Research registries*

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- ■ Follow-up – Visits, blood samples etc.

- ■ Patients
  - – *Sundhed.dk – Secure, web-based access to health records*
  - – *Smartphone-enabled*

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Thank You!

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