



***Steuerung der Akut- und
Notfallversorgung:
Erfahrungsbericht aus dem Uniklinikum
Odense***

CHARITÉ

November 10th 2020

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Odense University Hospital, Denmark

November 10, 2020

Emergency medicine



..about getting the **APPROPRIATE** offer at the right time, in the right setting and at the right cost!

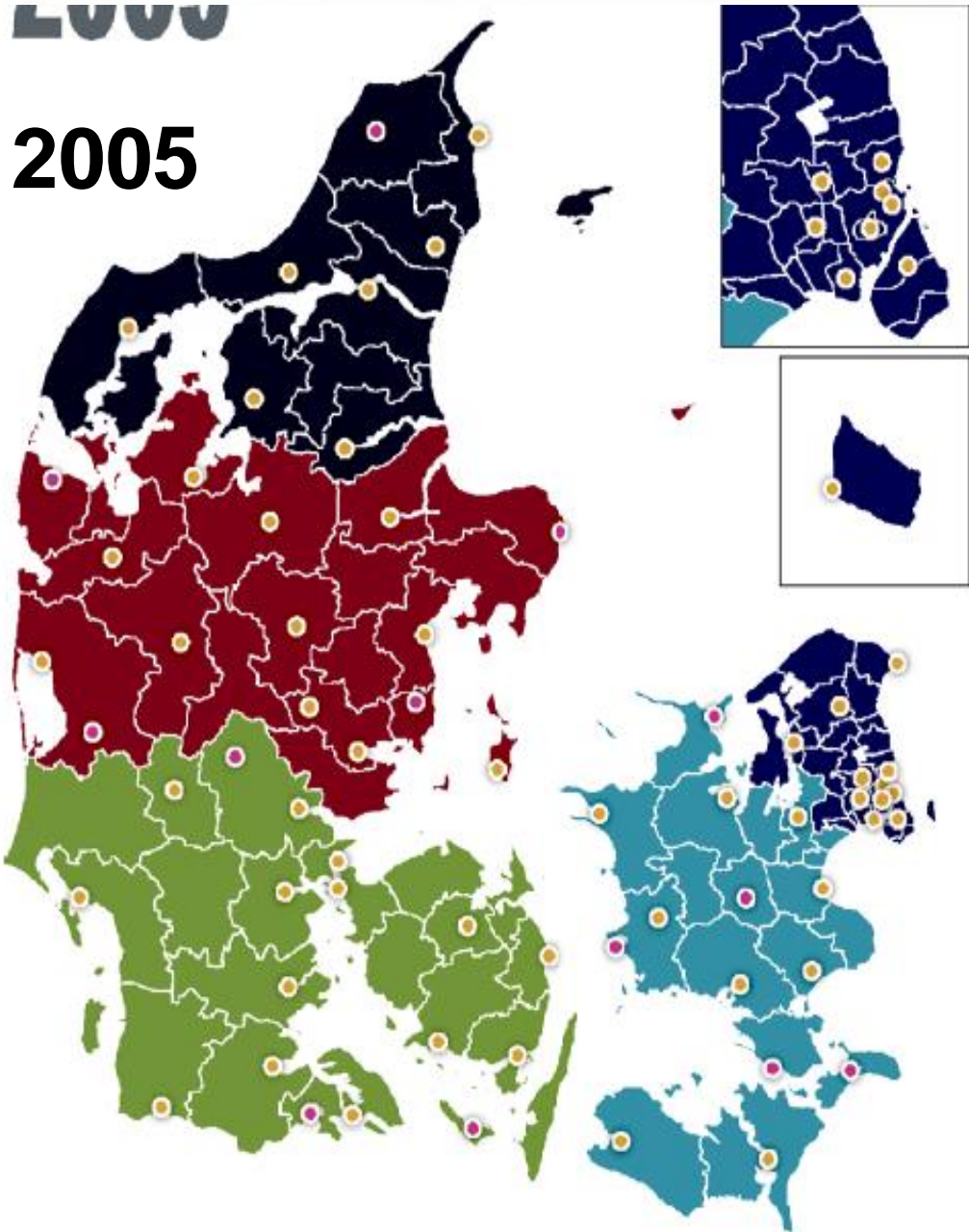
Entwicklung ZNA in DK



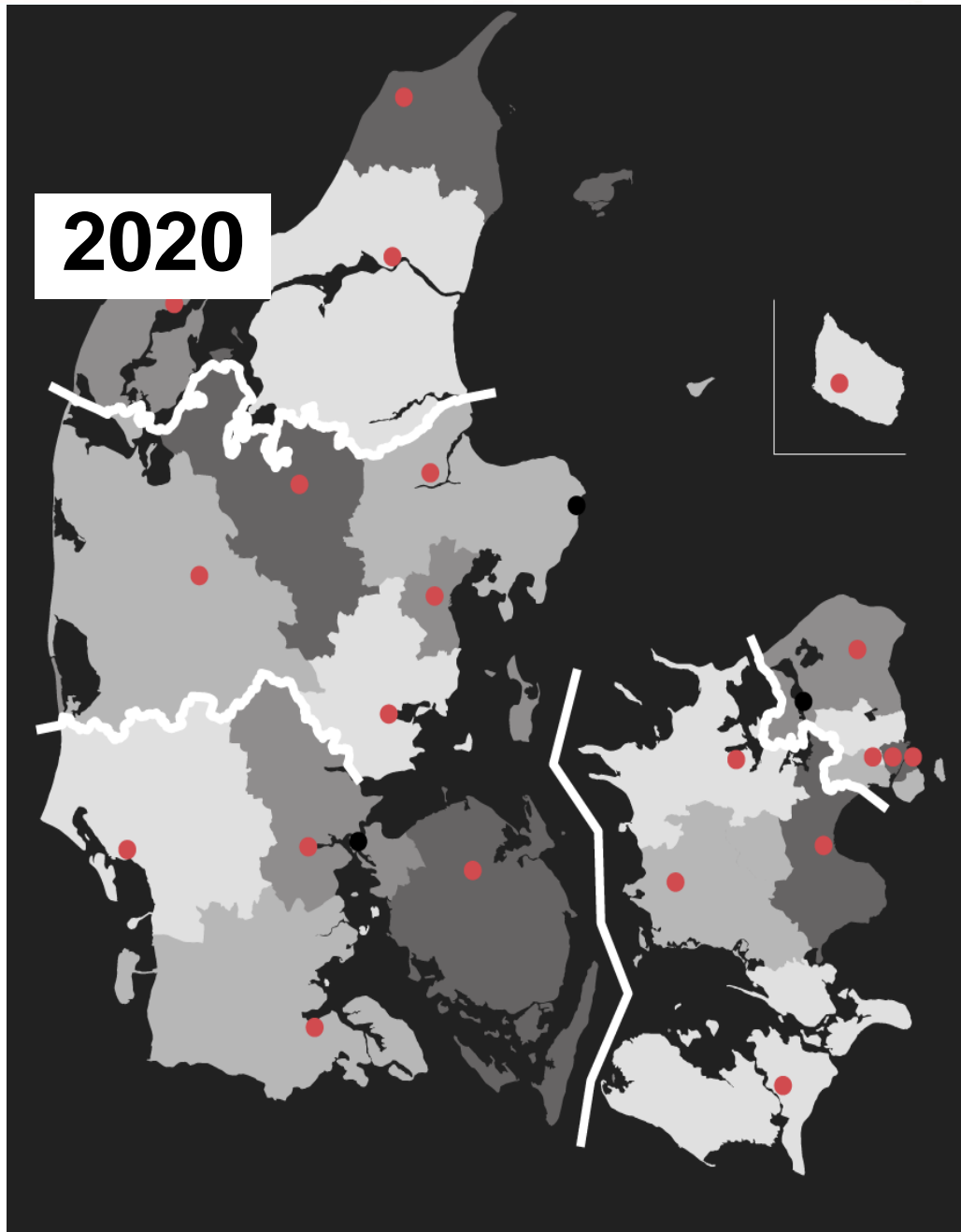
- 2007 – ‚Gestärkte Akutbereitschaft‘ Gesundheitsministerium
 - ZNAs für (beinahe) alle akuten Patienten
 - Bevölkerungsgrundlage 200.000 – 400.000 Einwohner
 - Facharzt innerhalb 30 Minuten (in Odense only)
 - Behandlungsplan innerhalb 4 Stunden
- 2008 Eröffnung der ersten ZNA
- Bis 2014: walk-in
- Seit 2014: visitierte ZNA
- 2005: 52 Akutkrankenhäuser mit Notaufnahmen
- 2020: 21 Akutkrankenhäuser mit ZNAs
- Keine privaten Akutkrankenhäuser

2000

2005



2020



Dr. Stefan Posth

Entwicklung – Digitalisierung

- 1968 Persönliche Identifikationsnummer
- 2000 EPJ (Elektronische Patientenakte)
- 2009 FMK (Medikation, Rezepte)
- 2010 MiBa (Mikrobiologie)
- 2013 PPJ (Prähospitales Journal)
- 2013 Sundhedsjournal (e-Journal, Lab, Impfungen)



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FMK – national based list of medication



<https://www.sundhed.dk/>

National access to the personal electronic health record

- OUH - FAM ▼

Aktive journaler Nulstil

| Info | Dato Λ 2 | Tid Λ 3 | Patient navn | CPR-nummer | Optageadresse | Melding | Modtageenhed | ETA Modtag Λ 1 | Triage | Trauma | Kørselsform Ud Retur | Beredskab | Beredskab |
|------|-------------|------------|--------------------------|------------|---------------|---|--|-------------------|--------------------------------------|--------|----------------------------|-----------|-----------|
| | 25-06-2018 | 08:52 | Kate Rødby Nielsen | | | 08:50 (KNG): MISTANKE OM BLODPROP I HJERNEN | OUH - Odense Universitetshospital> OUH - FAM | 09:43 | ■ | | B B | 5-3561 | 52263561 |
| | 25-06-2018 | 09:24 | Carsten Harry Bæk Hansen | | | 09:25 (MAH): PERSONALE FRA BOSTED ER INDRINGER 09:23 (MAH): M/54, KRAMPER, KENDT EPILEPSI, PÅVIRKET RESP, BLEG 09:22 (112): SSyg, | OUH - Odense Universitetshospital> OUH - FAM | 10:01 | ■ | | A B | 5-3507 | 52263507 |
| | 25-06-2018 | 09:51 | Connie Jørgensen | | | 09:39 (CC): abdominal aorta aneurisme | OUH - Odense Universitetshospital> OUH - FAM | 10:34 | | | C C | 5-4507 | 21199805 |

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Ways to go for the patients

70 11 07 07

**Emergency
service in RSD**

112 – AMK

General practice



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AMK

(5 in DK)

Acute Medical
Koordination



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AMK - what can they do?

Phone picked up by a health professional. Overlook the positions of the ambulances in the Region


- a) Send an ambulance +/- an emergency physician
- a) Send a helicopter
- b) Get the patient to the right hospital in the first step – e.x. STEMI
- c) Send the patient to General Practitioner/GP
- d) Send out paramedics
- e) Send out an emergency-nurse from the community
- f) Activate fire brigade, police, emergency force
- g) Distribute casualties along with the other AMKs
- h) Access to a variety of community-services
- i) --- and even more possibilities





Emergency Service

GPs on duty in out of hours –case mix at the ED

- 
1. 810 GP´s in the region of Southern Denmark
 2. Covering 400 clinics
 3. Community services (out-of-hours)
 1. 65 doctors on duty/day
 4. 750.000 calls/year
 5. 220.000 out-patient visits/year

(from 2021: One national number in DK: 113)



Getting into the hospital

1. **Every citizen know to what hospital she/he belongs in urgent situations.**
 1. **Predefined by the address.**
2. **Two ways to get into the hospital**
 1. **By reference**
 2. **112**
 3. **If you just show up, you are (most times 😊) asked to call the Emergency Service to get a reference**





Upon arrival

1. **Leadership**
2. Specialist in front of the team 24/7.
3. First contact to a doctor within 30 minuter
4. Time from door to diagnose 4 hours
5. Bed-management of the whole hospital

FLOWMASTER

1. Senior consultant 24/7
2. In charge of emergency-visitation
3. In charge of bed-capacity in the whole hospital
4. No hands on patient
5. Manager of flow and logistics

➤ 80 % of hours in a year are "out-of-hours" 😊

You cannot run an ED without leadership in 80 % of the time



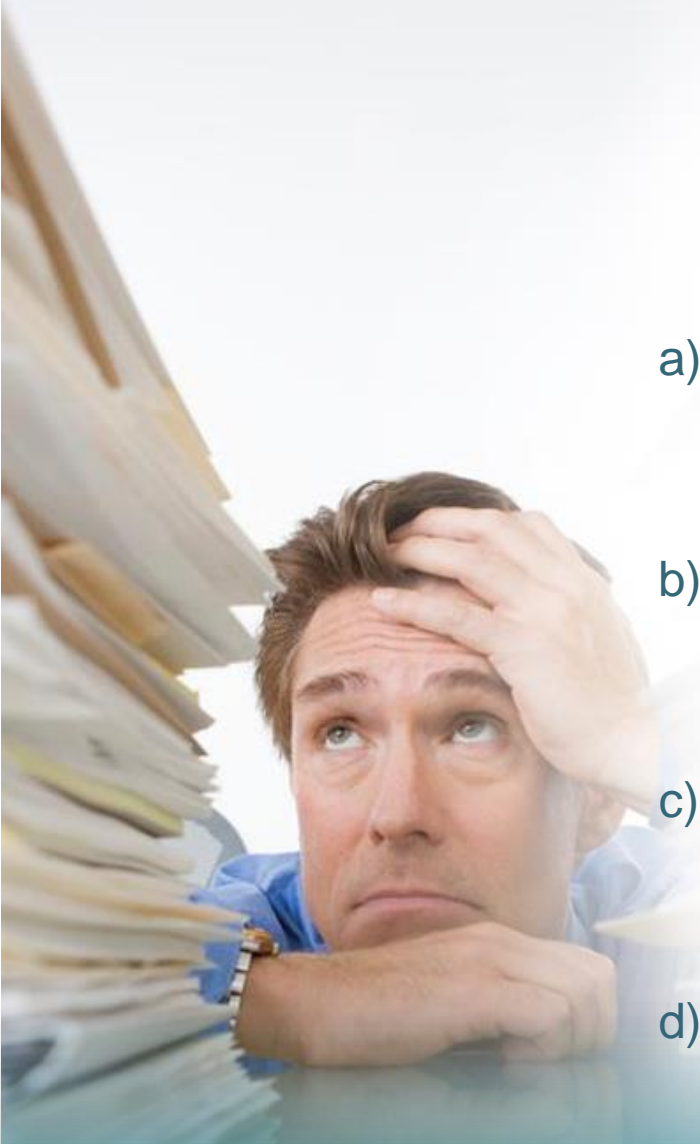


Advantages of visitation

1. **Right specialty at the door**
2. **Capacity-planning**
3. **Be prepared to the arrival of the patient**
 1. **Prepare for blood samples, ECG etc.**
 2. **Alertness of the Department of Radiology**
4. **The mortality-rates are just as good or even better than before visitation**
 1. **STEMI**
 2. **Apoplexia**
 3. **Et all..**



Some data

- 
- a) Average length of life: DK 81 years and D 81 years
 - b) Average number of hospital beds/1.000 citizens: DK 2,6, D 8
 - c) Emergency Departments/100.000 citizens: DK 0,39 and D 1,54
 - d) Number of visits at the ED/1.000 citizens: DK 156 and D 205.

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Quality

1. Specialist at the door
2. Same mortality weekends, nights and ordinary daytime
3. Same doctors staffing 24/7
4. Leadership 24/7
5. We are a university hospital with our own department employing 2 professors, several applied professors and ph.d.-students.

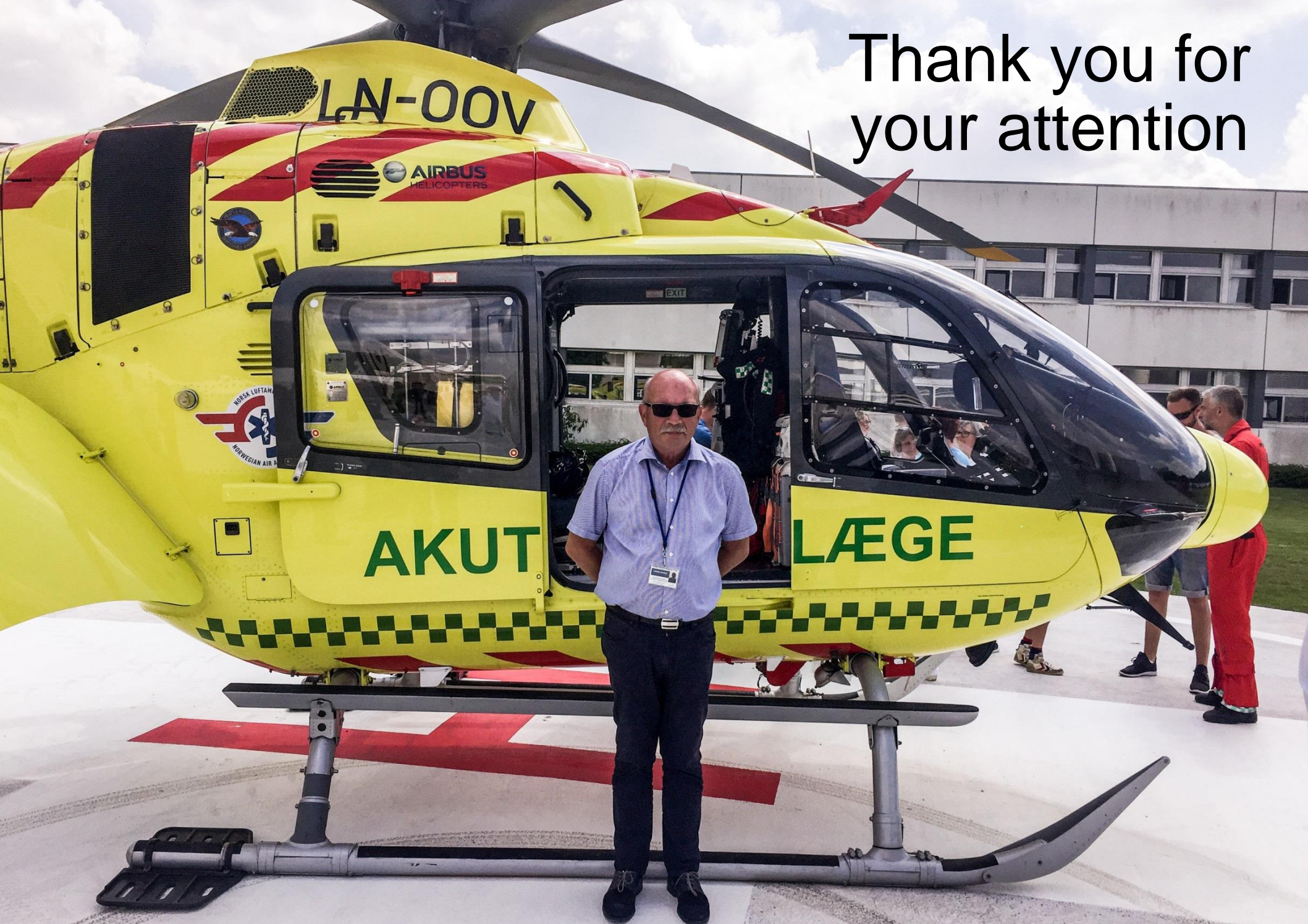
Pipeline

1. From door to diagnose down to 3 hours
2. Algoritme of plans for escalating and descalating (big data)
3. From 21 to 16 ED in DK?
4. ?????



.. On the way

Thank you for
your attention



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