Day Surgery in Denmark

Chirurgie Ambulatoire en Danemark
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Factors in health care development

*Political control*

*Private enterprise*

Professional activity
Danemark

Public Health Insurance
- covers all citizens

Five Regions
- run all public hospitals
- Some freedom of hospital choice
- Relatively uniform standards

State refunding of expenses
Private Hospitals in Denmark

1. Private health insurance
2. Transfer of funds from public insurance if waiting lists are too long
3. Private payment
4. Cosmetic surgery

Private Hospital budget:
< 1 % of total budget
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**Under indlæggelse**

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**I ambulant¹ regi**

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Kilde: Landspatientregisteret, Sundhedsdatastyrelsen

¹ For perioden 2009-2013 omfatter operationer i ambulant regi også operationer på skader/s. Fra 2014 indgår operationer udført på de fælles akutmodtagelser i ambulant regi.

Anmærkninger:
- Tabellen omfatter operationer foretaget på offentlige sygehuse samt operationer foretaget på private sygehuse som er betalt af det offentlige.
- Antallet af operationer opgøres som antallet af samtlige registrerede "egentlige" operationer, som defineret i den fællesnordiske klassifikation for operationer, NOMESCO (hovedkapitlerne A-Q).
Chirurgie Ambulatoire en Danemark

2009: 50.6%

2016: 58.1%
France 1995 - 2004
**IAAS 2004 Survey**

**Table 9  France**

44.9 % of the procedures in the basket done as day surgery.

**Table 6  Denmark**

55.3 % of all surgery done as day surgery. 61 % of planned surgery.

79.3 % of the procedures in the basket done as day surgery

**Eye surgery:** 65% (squint), 98% (cataract)

**ENT:** 30% (tonsillectomy), 67% (broncho/mediastinoscopy), 81 (myringotomy)

**Gynaecology:** 3.1% (LAVH), 7.3% (cystocele), 90% (sterilisation), 97% (abortion)

**Orthopaedics:** 1.6% (disc operation), 72% (foot operations), 91% (meniscus), 78% (carpal tunnel)

**Surgery:** 6.1% (reflux), 18.8% (lap.chol.), 73% (hernia), 91% (pilonidal cyst), 82% (haemorrhoids)

**Urology:** 1.3% (TURP), 92.9% (circumcision), 99.8% (sterilisation)

**Plastic surgery:** 5.4% (breast reduction), 6.3% (abdominoplasty)

**Vascular surgery:** 89.3% (varicose veins)

**Organisation:** Almost all surgery done in public hospitals, but the private sector is growing. Some hospitals have separate day surgery units, others have day surgery incorporated in central OR’s.

**Reimbursement:** Public according to a DRG system. Inducement by the growing number of procedures where the rate is the same for inpatients and day cases. Waiting time guarantee meaning that the payment goes to a private clinic if the waiting time in the public system is more than 2 months.
Why are things so different

Scandinavian hospitals are run by the political system

"lowest effective level of care principle" provides an opportunity for day surgery
General Physician → referral → Outpatient clinic

Day Surgery

Inpatient Surgery

home

Community Nurse
Why is day surgery so difficult?
It is always the money
Larger department budgets for inpatient surgery
It is always the money

1. Inpatients:
   Larger department budget = flexibility
   Resources may be moved between theatres and ward

2. Reimbursement may follow beds instead of operations (Germany)
It is always the money

3. Health insurance companies may impose demands (USA)

4. Different reimbursement rates favorising admission (Denmark)
Who’s in charge?

• In Denmark, day surgical departments are often led by anaesthesiologists

• Surgeons may experience loss of control

• Anaesthesiologists may not want the control but may be neutral negotiators
Who’s in charge?

- A surgeon?
- An anaesthesiologist?
- A Nurse?

It does not matter

As long as the leader’s office is in the department!
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<tr>
<td>• Larger freedom in patient selection (backup)</td>
<td>• Control of operation theatres</td>
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<tr>
<td>• Experts available</td>
<td>• Doctors always available</td>
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<tr>
<td>• Recruiting</td>
<td>• ASA 3-4 patients may risk admittance to hospital</td>
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Almost a horror story
Why is day surgery so difficult?
Propaganda:

Politicians

Professionals
Recruiting for day surgery

No matter who’s in charge

– Establish a robust collaboration between professions
– Set a high standard and attract skilled professionals
– Publish results locally and internationally
Control of operation theatres

Theatres used for *day surgery only*: *staff gets immediate reward*

”We managed this patient and sent her home!”

Procedures *will be adapted* to day surgery
Complications?
Results: The overall rate of return hospital visits was 1.21% [95% confidence interval (CI): 1.12–1.30%] caused by a wide range of diagnoses. No deaths were definitely related to day surgery. The return hospital visits were due to haemorrhage/haematoma 0.50% (95% CI: 0.44–0.56%), infection 0.44% (95% CI: 0.38–0.49%) and thromboembolic events 0.03%. Major morbidity was rare. The surgical procedures with the highest rate of complication were tonsillectomies 11.4%, surgically induced abortions 3.13% and inguinal hernia repairs 1.23%.

Conclusion: This large-scale Danish national study confirmed that day surgery is associated with a very low rate of return hospital visits. Despite the rapid expansion of day surgery, safety has been maintained, major morbidity being very rare, and no deaths being definitely related to day surgery.
Time from day surgery to first hospital contact among patients with complications that were definitely or likely related to the procedure. Engbæk J et al. Acta Anaesthesiol Scand 2006; 50: 911–919 [1]
ASA 3-4 patients
In day surgery
Laparoscopic inguinal lymph node excision

α₁-antitrypsin deficiency

FEV₁ = 1.35 l  PaO₂ = 6.4 kPa

Rocuronium + sugammadex

Invasive monitoring

Operation 10.10 - 11.53

Discharge 14.20
**Bladder stone**
Aortic stenosis, gradient 75 mmHg
Valvular area 0.8cm²

Propofol-remifentanil, laryngeal mask
Invasive monitoring
Noradrenaline 0.05-0.2 µg/kg/min in cubital vein

Fentanyl 25µg + ketorolac 15mg

Operation 120 min
Postop. observation 135 min

Telephone 1st postop. Day:
Well-being
Hysteroscopic polyp resection

135 kg, 160 cm
BMI = 53
Sleep apnea
CPAP user

Operation
80 minutes
Recovery
80 minutes
Department of Day Surgery, Aarhus University Hospital

An independent unit since January 1\textsuperscript{st}, 2015.

Highly specialised surgical procedures and minor surgery
Infants, elderly, patients with severe co-morbidity.

Close collaboration with 10 surgical specialities

8 Consultant anaesthesiologists
20 Nurse Anaesthetists
16 fully equipped Operation theatres
14,000 patients a year

Research and focus areas:
- PONV prophylaxis
- Ultrasound-guided nerve blocks
- Peripheral nerve block school for trainee anaesthetists
- Advanced airway management
- Clinical anaesthetic pharmacology

Patient hotel facility offers low-level care and observation for overnight patients: Thyroid gland and breast cancer surgery
A possible future

• Regard every operation as day surgery

• Day surgery has their own operation theatres

• Consider extending "day surgery" to "23 hours stay"
Spread the gospel

• If a hospital bed is needed, use principles from day surgery:
  – Minimally invasive surgery
  – Rapidly eliminated anaesthetics
  – Local anaesthesia wherever possible
  – Multimodal pain prophylaxis
  – Aggressive anti-emetic prophylaxis
  – Early mobilisation
C’est toujours de l’argent!

- Economical incentives
  - Reimbursement
  - Hospital ressources (bed reductions)

- Make Day Surgery attractive
  - Advanced techniques
  - Staff recruiting
  - Publishing of results

- Full-time medical and nursing management
  - Staff associated to the day surgical department only
  - Ownership and team spirit
Merci pour votre attention!
Surgical specialities in Department of Day Surgery, Aarhus University Hospital

• Orthopaedic Surgery:
  arthroscopies, hand, shoulder, knee, foot and tumour surgery
• Urology:
  urinary tract cancer, prostate surgery, ureteric and bladder stone removal
• Abdominal surgery: cholecystectomies, anal procedures
• Plastic surgery: breast cancer, reconstructive surgery
• Gynaecology:
  hysterectomy and other laparoscopic procedures, hysteroscopies.
• Neurosurgery: cervical and lumbar disc herniation surgery
• ENT surgery: thyroid gland, nose and throat procedures
• Odontology: minor jaw surgery, dental extraction
• Dermatology:
  laser treatment of haemangiomas, botox treatment of hyperhidrosis
• Ophthalmology: Paediatric and adult surgery
Now 90% of acts are ambulatory, does Denmark want to exceed this rate? If so what would be the aimed rate and the planning?

There is no co-ordinated plans. What we observe in some hospitals, including my own, is that admission surgery adopt day surgical treatment plans and logistics and send patients home earlier. In other words, the borders between day surgery and admission surgery become more fluid.

What are the success key factors to reach such a high rate?

It is a combination of several factors: 1. Medical interest from anaesthesiologists and surgeons, 2. Economic incentives and pressure from the hospital directions and 3. A general pressure from the Ministry of Health to lower expenses.

Do you think that any pathology can be taken care of in ambulatory?

I think each hospital should evaluate their actual and future resources in surgical technique, anaesthesiological expertise, nurse skills and physical facilities and make a choice on these premises. Laparoscopic nephrectomies may be safely performed, for example: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3056421/ - but it is important to realize that frail and fragile patients may need a level of home care that may not be met in practice, and where admission will be the best choice for patient and staff.
Maybe the prohibition of free-standing units in France could be circumvented by adopting the usual Danish model where Day Surgical Units operate independently, but affiliated to hospital departments?

I wanted to exchange with you, before your coming in France in January, about the conclusions of our recent seminar, regarding the way to improve ambulatory surgery in France from 54% in 2016 to 70% in 2020.

1- To consider the whole patient care (his pathway) and not only his care during hospital stay (currently in France, ambulatory surgery is act related financed)
2- To separate the flux of ambulatory surgical patients from the flux of hospitalized surgical patients:
   a. to recommend operative theatres dedicated to ambulatory surgery (only 10% in France)
   b. to recommend free standing centers dedicated to ambulatory surgery (prohibited in France)
3- to have architectural layout of ambulatory surgery unit to allow the flux of the patients without any barrier
4- To instigate a large academic formation of all actors of ambulatory surgery

Do you agree with these conclusions? Could you show ways to improve rate of ambulatory surgery in France?
Danemark has launched ambulatory 20 year ago. Are you able to describe what are the main stages that have to be achieved? Is there any thresholds to pass or it was a linear progression?

I think it has been a progression, initially slow, but with markedly added momentum after the turn of the century. It was at that time that the abovementioned success key factors gained acceptance.

- How does hospital work with the others health professionals?

General Physicians and hospitals have formalised collaboration, with appointed hospital doctors managing contact with primary care doctors. Also, community nurses work with hospital departments to ease the recovery after admission surgery and day surgery, but this point can clearly be improved!

- How patients follow-up is organised after surgery?

Many day surgical departments have formalized postoperative telephone interviews. Due to budget cuts in my own department, we have had to restrict our telephone interviews to select groups of patients.
With 90 % of ambulatory, how is organized the hospital? Do you have independent or integrated units?

Most units are integrated, but private free-standing private units may bid for operations and get refusion.

- What are the latest issues that could be improved?

Uniform adaptation of guidelines might help with uniform standards.

- What are the main differences between Danemark and France?

Oh! This is a topic for a 7-day meeting. The main differences might be historical differences in organization, with a Scandinavian focus on public funding.
What advice would you deliver to a state which would like to deploy or raise ambulatory practices?

1. Make day surgery interesting for surgeons, so that they will refer patients to day surgery and so they will like to operate in day surgery.
2. Establish a good relationship between surgeons, anaesthesiologists and nurses in Day Surgery.
3. Convince hospital administrators that Day Surgery is an efficient alternative to admission surgery

- Can you described a patient's journey?

General physician consultation -> referral to surgical outpatient clinic -> referral to day surgery -> preoperative anaesthesia evaluation -> day surgical operation -> home (+ referral to community nurse for frail or elderly patients) -> possible postoperative outpatient clinic control.

- How do you prepare a patient (informations, accompanying person, ...)

When referred to day surgery, the outpatient clinic nurse informs the patient and hands out written info. Most Day Surgical clinics arrange preoperative consultations for all patients. In our department, we only see the difficult cases before the day of surgery.

- Does the large spread of ambulatory had had a significant impact on nosocomial infection rates?