ROLE OF THE ANESTHETIST IN ORGANIZING AMBULATORY SURGERY

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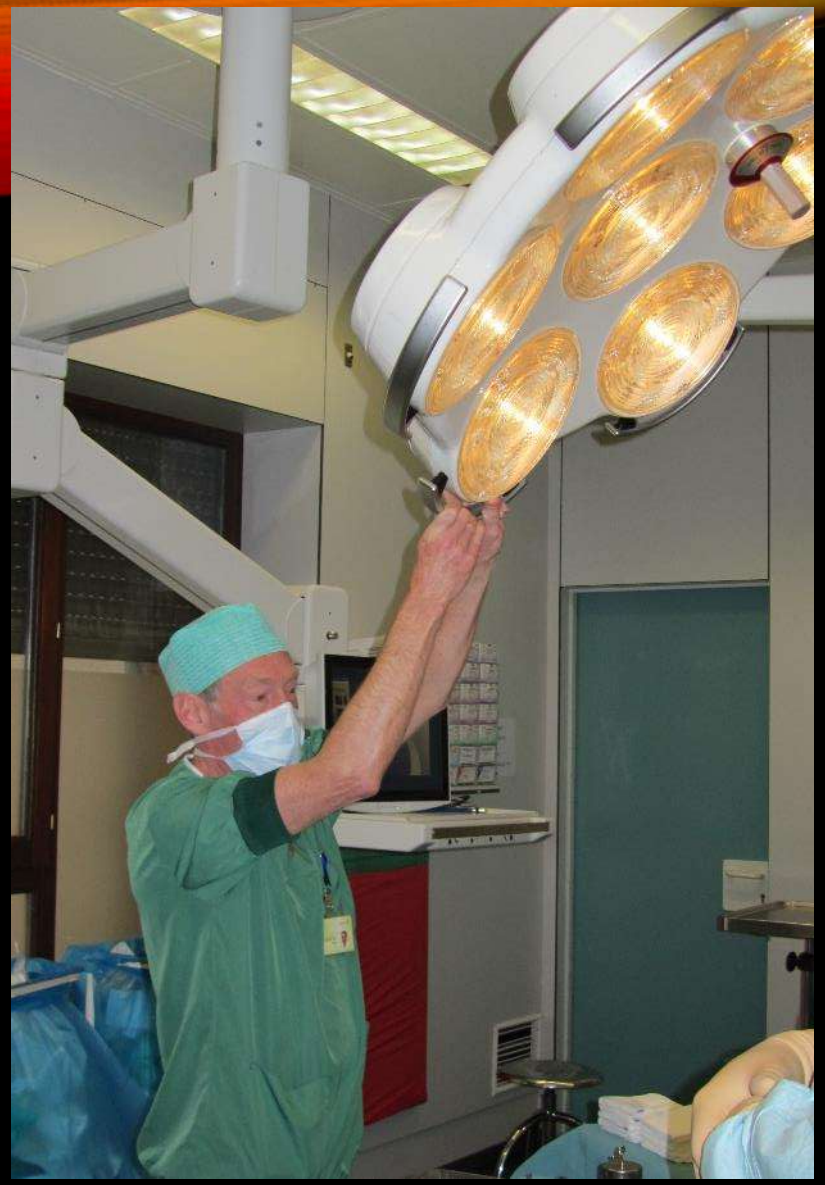
DISCLOSURES

- Conflicts of interest ?

I am an anesthesiologist . . .

TRADITIONAL ROLE OF THE ANESTHESIOLOGIST



EVOLVING FUNCTION OF THE ANESTHESIOLOGIST

- FROM:
  silent supporter of the surgeon in the operating room

- TO:
  patient guardian in the perioperative period

  "The internal medicine specialist of the surgical event"

Euroanaesthesia Geneva June 3-5: keynote address Prof Monty Mythen : Perioperative Medicine – do we have the training to cope with increasing demands?

FUNCTIONS OUTSIDE THE OR

- Sedation for diagnostic and therapeutic internal medicine procedures
- Idem for radiological procedures
- Labor and delivery
- Pain treatment
- Emergency medicine
- Critical care medicine
- Palliative care

NOT PROCEDURE-RELATED

- Administrative functions
  - In the own department
  - Operating Room (OR) management
  - Member of the medical council
  - Member of many steering groups in the hospital
    - Patient safety
    - Infection prevention
    - OR committee
    - …
- Hospital medical director

- Day surgery facility management

ROLE OF THE ANESTHESIOLOGIST IN THE ASU

- Traditional anesthetic services

- Preoperative assessment – patient optimization

- Organizational aspects
  - Anesthetic protocols
  - Patient selection criteria
  - Procedure selection
  - Discharge criteria

PATIENT SELECTION

Crucial element for safe ambulatory surgery !

- Local vs. Locoregional vs. General anaesthesia
- ASA class I and II, also III (and IV ?)
- Age: lower / upper limit
- Body weight
- Psycho-social context: motivation, patient escort, home situation, distance to emergency station, access to telephone
- Concomitant diseases: diabetes, COPD, sleep apnoea, …

PATIENT SELECTION

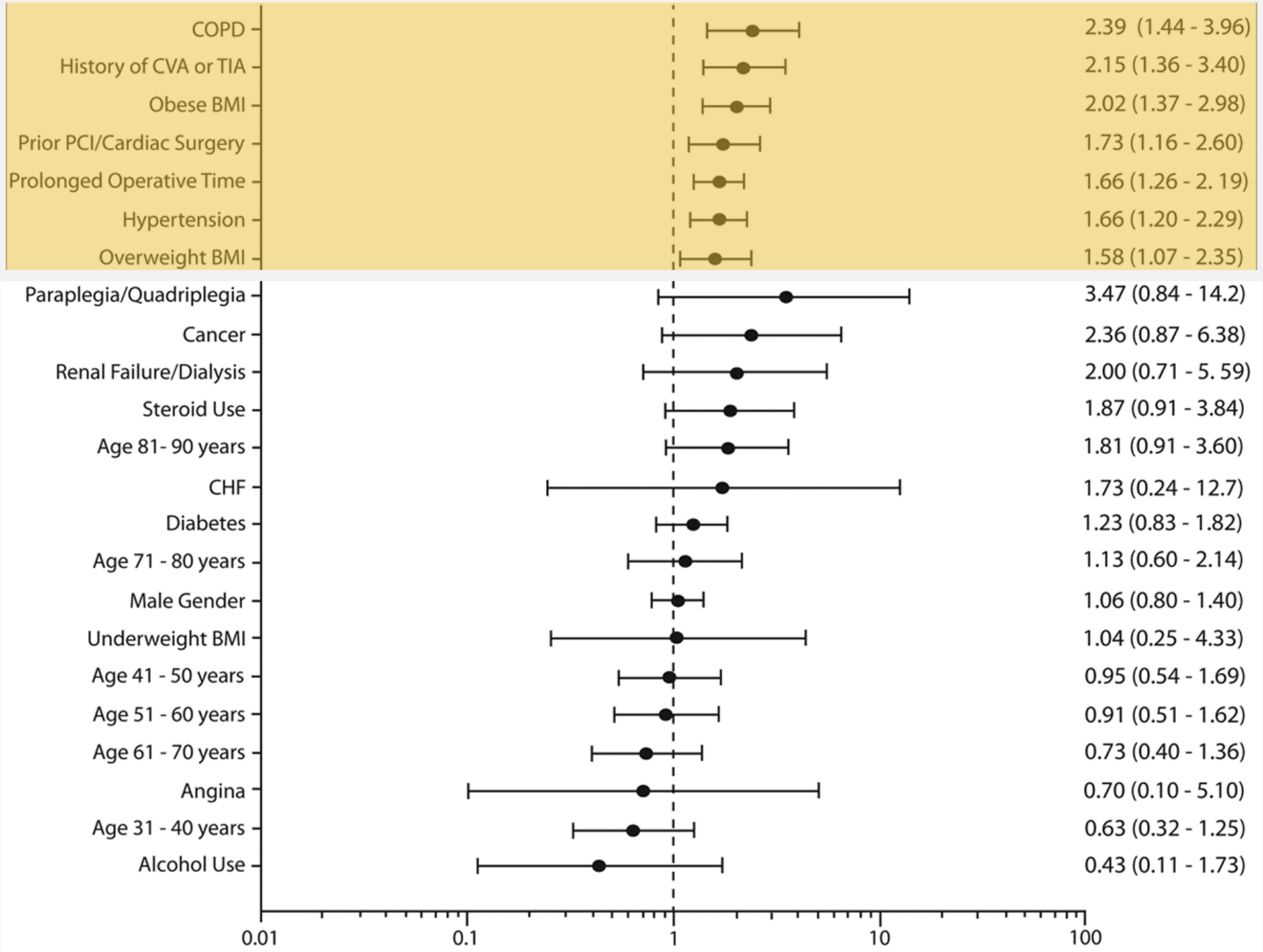
- Significant predictors of morbidity or mortality

  after same-day surgery - 250,000 patients

  American College of Surgeons National Surgical Quality Improvement Program

  - Chronic obstructive pulmonary disease (COPD)
  - History of cerebrovascular accident (CVA) or transient ischemic attack (TIA)
  - Obese body mass index (BMI > 30, 92 kg for 1.75 m)
  - Previous percutaneous coronary intervention (PCI)/cardiac surgery
  - Prolonged operative time
  - Hypertension
  - Overweight BMI (25 – 30, 76 kg for 1.75 m)

Patient Selection for Day Case-eligible Surgery: Identifying Those at High Risk for Major Complications. Michael R. Mathis et al. **Anesthesiology** 2013;119(6):1310-1321


COPD
History of CVA or TIA
Obese BMI
Prior PCI/Cardiac Surgery
Prolonged Operative Time
Hypertension
Overweight BMI
Paraplegia/Quadriplegia
Cancer
Renal Failure/Dialysis
Steroid Use
Age 81- 90 years
CHF
Diabetes
Age 71 - 80 years
Male Gender
Underweight BMI
Age 41 - 50 years
Age 51 - 60 years
Age 61 - 70 years
Angina
Age 31 - 40 years
Alcohol Use
2.39 (1.44 - 3.96)
2.15 (1.36 - 3.40)
2.02 (1.37 - 2.98)
1.73 (1.16 - 2.60)
1.66 (1.26 - 2. 19)
1.66 (1.20 - 2.29)
1.58 (1.07 - 2.35)
3.47 (0.84 - 14.2)
2.36 (0.87 - 6.38)
2.00 (0.71 - 5. 59)
1.87 (0.91 - 3.84)
1.81 (0.91 - 3.60)
1.73 (0.24 - 12.7)
1.23 (0.83 - 1.82)
1.13 (0.60 - 2.14)
1.06 (0.80 - 1.40)
1.04 (0.25 - 4.33)
0.95 (0.54 - 1.69)
0.91 (0.51 - 1.62)
0.73 (0.40 - 1.36)
0.70 (0.10 - 5.10)
0.63 (0.32 - 1.25)
0.43 (0.11 - 1.73)
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Morbidity Type	Specific Morbidity	Frequency by Postoperative Day			
		POD 0	POD 1	POD 2	Total
Intraoperative morbidities	Intraoperative occurrence—cardiac arrest requiring CPR	0	0	0	0
	Intraoperative occurrence—myocardial infarction	0	0	0	0
Postoperative occurrences—surgical	Deep surgical site infection	0	0	1	1
	Organ-space surgical site infection	0	2	0	2
	Wound disruption	7	13	5	25
Postoperative occurrences—anesthetic	Unplanned intubation	30	5	2	37
	On ventilator >48 h	1	0	1	2
Postoperative occurrences—medical	Pneumonia	1	16	29	46
	Pulmonary embolism	0	3	4	7
	Progressive renal insufficiency	0	1	5	6
	Acute renal failure	1	0	3	4
	Stroke/CVA with neurologic deficit	3	6	6	15
	Cardiac arrest requiring CPR	6	1	1	8
	Myocardial infarction	7	3	5	15
	Bleeding requiring transfusion	8	7	6	21
	Graft/prosthesis/flap failure	1	2	2	6
	DVT/thrombophlebitis	3	1	6	10
	Sepsis	2	3	14	19
	Septic shock	2	3	5	10
Mortality	Postoperative death within 72 h	9	7	5	21

CPR = cardiopulmonary resuscitation; CVA = cerebrovascular accident; DVT = deep venous thrombosis; NSQIP = National Surgical Quality Improvement Program; POD = postoperative day.

PROCEDURE SELECTION

- Minimal physiologic derangements
- Minimal blood loss - low complication rate
- Duration of the surgery (Recovery-time, complication rate)
- Minimal or readily controllable postoperative pain
- Simple postoperative care

- Taking into account
  - The experience of the surgeon
  - The infrastructure of the ASU

- **No specific list of procedures !**

MEDICAL MANAGEMENT OF THE ASU

- In Belgium: ASU-director must be an anesthetist or a surgeon
- Responsible for all organizational aspects of the ASU
- In close cooperation with the head nurse: **management team**

THE ANESTHETIST AS MEDICAL DIRECTOR OF THE ASU

- Anesthesia plays crucial role in successful ambulatory surgery
- Anesthetists are long-time leaders in patient safety
- Trained in standardization of practice

- Extensive cross-disciplinary knowledge
- Long tradition of cooperation with other departments in the hospital
- High ability to bridge competing interests

- Fulltime presence in the unit

THE ANESTHETIST AS MEDICAL DIRECTOR OF THE ASU

- Consult with surgeons
- Consult with anesthesia director (or external anesthesia provider)
- Consult with nursing team
- Contacts with hospital direction or administrative manager

COOPERATION WITH SURGICAL DEPARTMENT

- Discuss procedure selection

- Reconcile the diverging needs of the different surgeons
  - Neutral position of the anesthetist !

- Slot allocation: specialist groups / individual surgeons
  - Based on continuous recording of actual OR time-utilization
    - Mean OR occupation
    - Variability of OR occupation
    - Wasted time (timely start, turnaround time between operations)

COOPERATION WITH ANESTHESIA DEPARTMENT

- Patient selection criteria
- Preoperative clinic (what, when, where)
  - Proven effectiveness
  - Not a battery of medical tests !
- Anesthesia protocols
- Postoperative pain control
- Postoperative nausea and vomiting prevention
- Discharge criteria

- Adequate staffing: stable, fixed anesthesia personnel

Preoperative Evaluation Clinic Visit Is Associated with Decreased Risk of In-hospital Postoperative Mortality Jeanna D. Blitz et al. **Anesthesiology** 2016;125(8):280-294

ANESTHESIA FOR AMBULATORY SURGERY IS NOT SEXY ?

- Young anesthetists more attracted to

  - Cardio-thoracic or neurosurgical or … anesthesia
  - Critical care medicine
  - Emergency care

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- **But: anesthesia for outpatient surgery is no inferior anesthesia !**

SELECTING THE RIGHT ANESTHETIST

- Focused on patient safety – teamwork – efficiency – turnover
- Ready to adhere to strict protocols
- Good knowledge of local / regional anesthetic techniques
- Special attention to
  - Pain, PONV, …
  - Thinking about the discharge before the start of anesthesia
- Strongly patient-minded

- On the other hand
  - No weekends, no night calls
  - Collegial environment, close collaborative team

QUALITY ASSURANCE

Main indicators in a value-based reimbursement world:

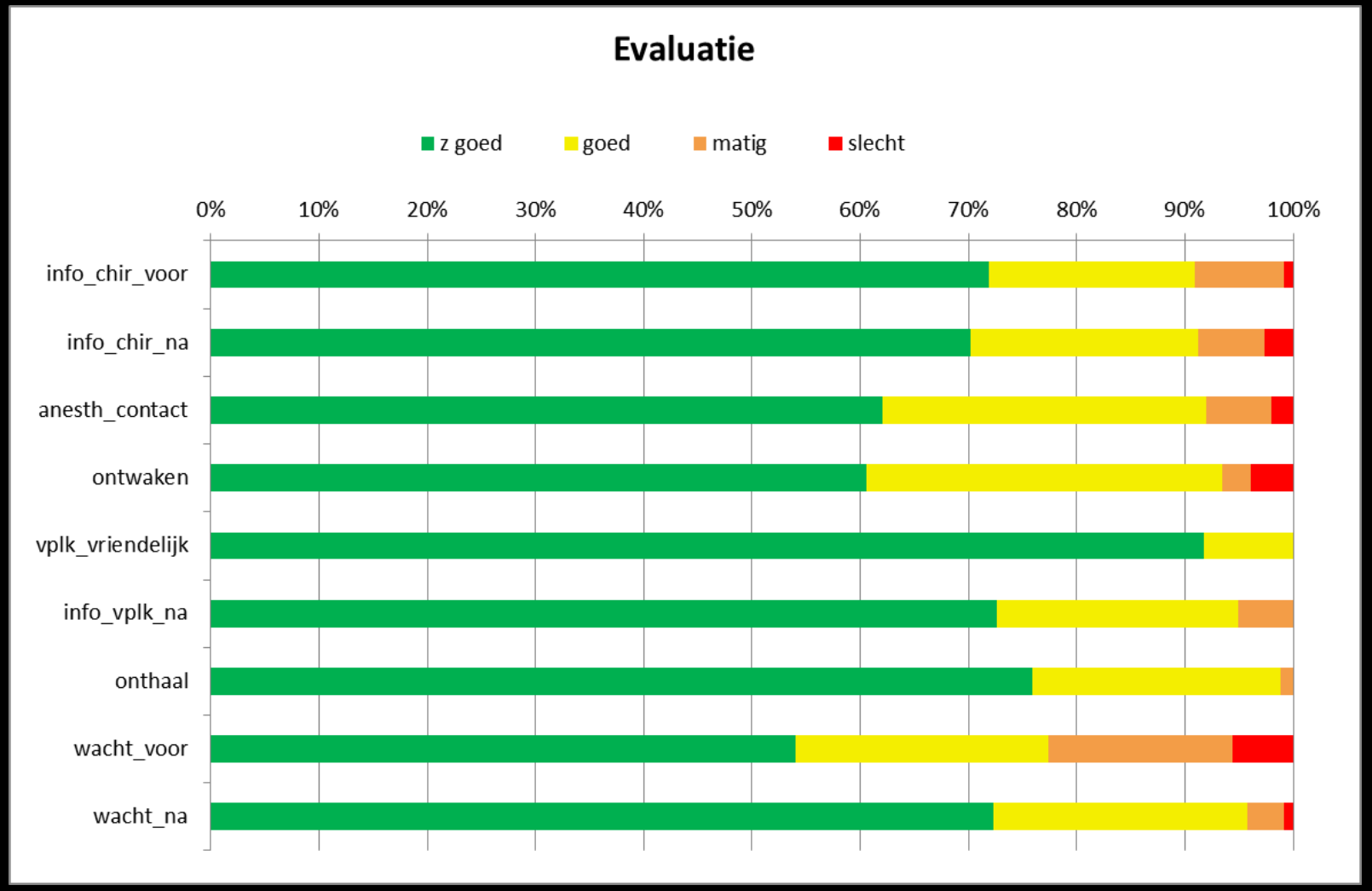
quality of care, patient safety, clinical outcome

→ physician leadership is becoming increasingly important

QUALITY ASSURANCE

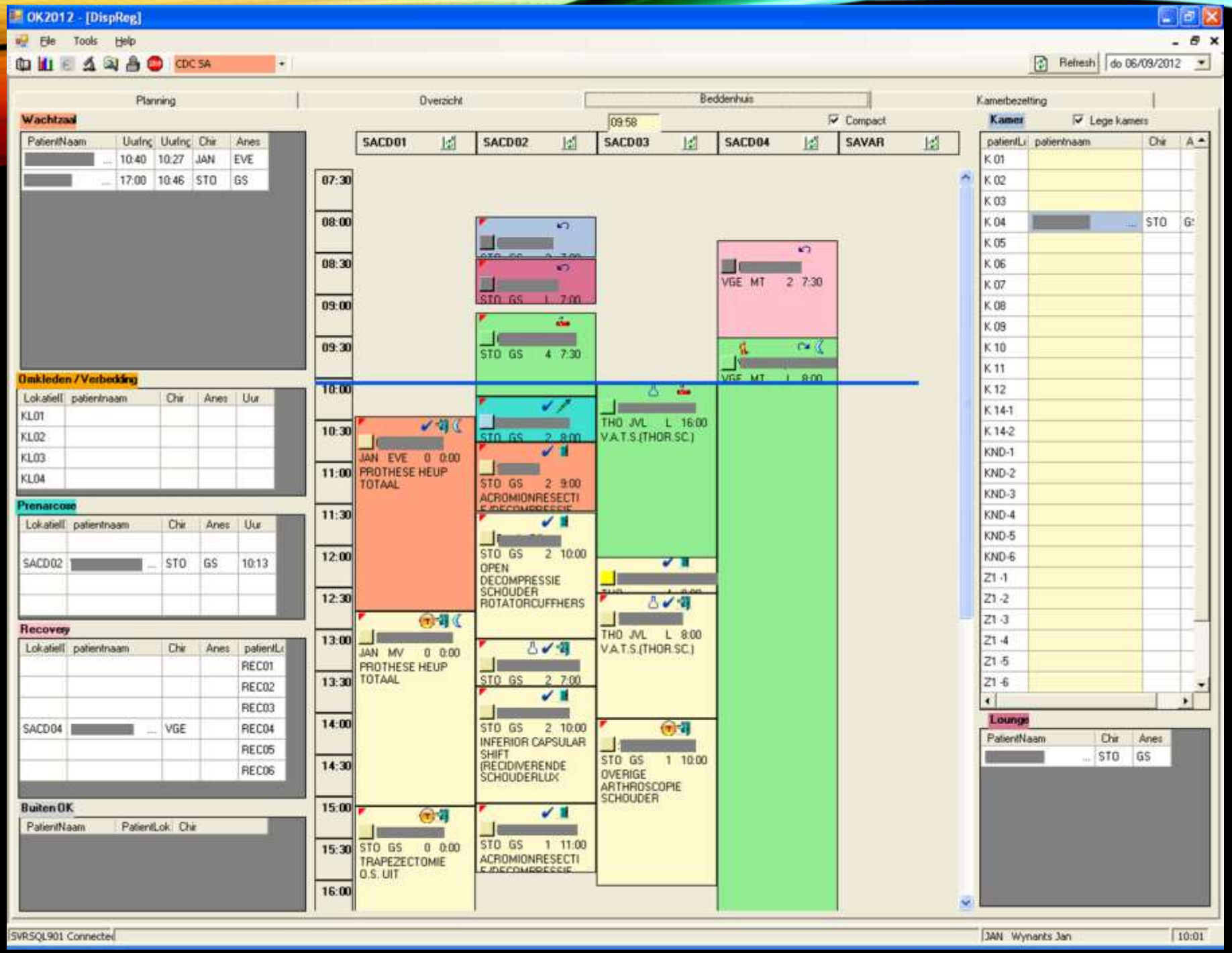
- Patient safety
- Evidence-based health care
- Clinical practice guidelines and clinical pathways
  - Anesthesia
  - Surgical procedures
  - Nursing
- Clinical performance indicators: definition and follow-up
  - Process indicators (anesthesia, surgery, day surgery unit)
  - Outcome indicators
- Supervision of accreditation process

PATIENT FEEDBACK



PERFORMANCE OPTIMIZATION

- IT-based OR planning
  - In real-time from the surgeon's office
  - Linked to the surgeon's OR slots
  - Linked to postop holding bed reservation
- Patient tracking
  - Manual
  - Automatic, e.g. WiFi-based
- OR-utilization follow-up
  - Real-time
  - Trimestral report to direction and individual surgeons
  - Basis for granting operating room slots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COLLECTED DATA

- Arrival in hospital
- Premedication
- Call to ward
- Arrival in preop-holding
- Arrival in OR
- Arrival in induction room
- Incision
- End of wound closure
- Leaving OR
- Leaving recovery room
- Leaving hospital

- Patient id
- Age
- Residence
- Procedure ICD10
- Surgeon
- Anesthetist
- Type of anesthesia
- OR n°

HUMAN RESOURCES MANAGEMENT

- Close cooperation between the medical and nursing director and the surgeons, anesthetists, nursing personnel
  - Reporting to the surgeons active in the unit
  - Regular discussion with head nurse / nursing reps

- Optimal performance if the day-surgery unit has its own administrative infrastructure to manage patient flows and scheduling

- Collaborate and lead as a team

NURSING

- Multiskilled approach (OR, recovery, ward)
  - Improves the efficiency of the day-surgery unit
  - Increased job satisfaction
    Interesting and varied job → low rate of staff turnover
  - Flexibility of the workforce to cover sickness and absence in a smaller group
  - Better patients and doctors satisfaction because staff are familiar with the entire patient experience

LEADERSHIP

- Defines the success of the ASU

- Needs an experienced manager
  - Day-to-day responsibility for providing efficient, high-quality day-surgery services
  - High level of communication

- Formal training required

EDUCATION

- Anesthesiologists
  - Little dedicated training in ASU-specific aspects of anesthesia
  - No preparation for leading administrative tasks
  - Postgraduate courses

    e.g. Master of Health Care Management and Policy – Louvain (Belgium)
  - As part of the curriculum

    e.g. Stanford Anesthesia Innovation Lab, with Innovator Training track

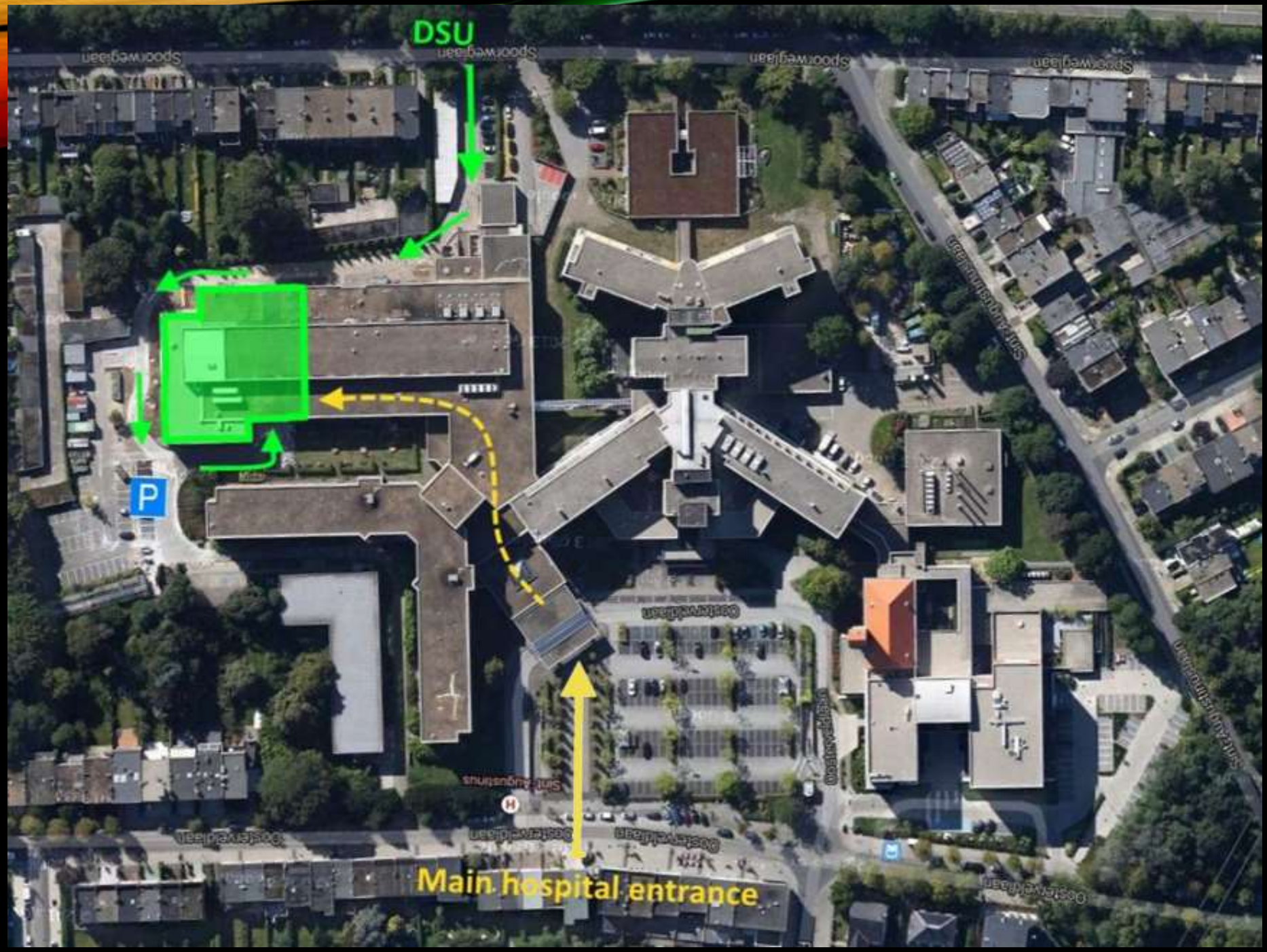
    (Medical devices research track throughout residency)
  - ~ Non-OR anesthesia
    - Starting 2017: Accreditation Council for Graduate Medical Education requires out-of-OR rotation for residents
    - Am. Soc. of Anesthesiology and Am. Board of Anesthesiology recommend exposure to perioperative leadership and management skills
      - *The growing importance of Nonoperating Room Anesthesia Care in the United States* Amy C. Lu et al. Editorial in **Anesthesia & Analgesia** 2017;124 (4): 1044-1045

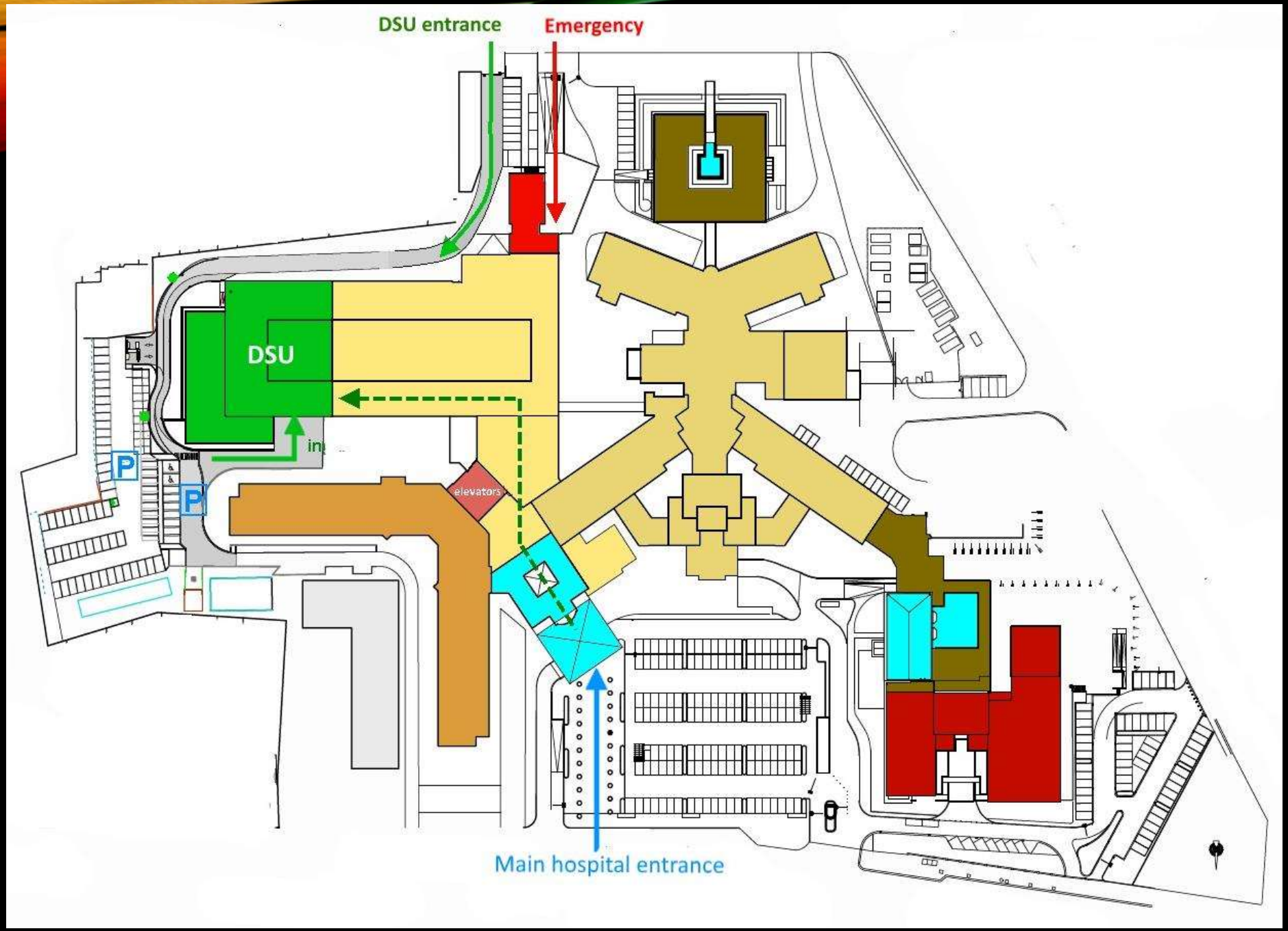
EDUCATION

- Surgeons
  - Minimally invasive procedures
- Nurses
  - Postgraduate training courses available
- Administrative personnel
  - Particularly patient-friendly

AND MAYBE …

Design and build
your own unit …


DSU
Main hospital entrance


DSU entrance
Emergency
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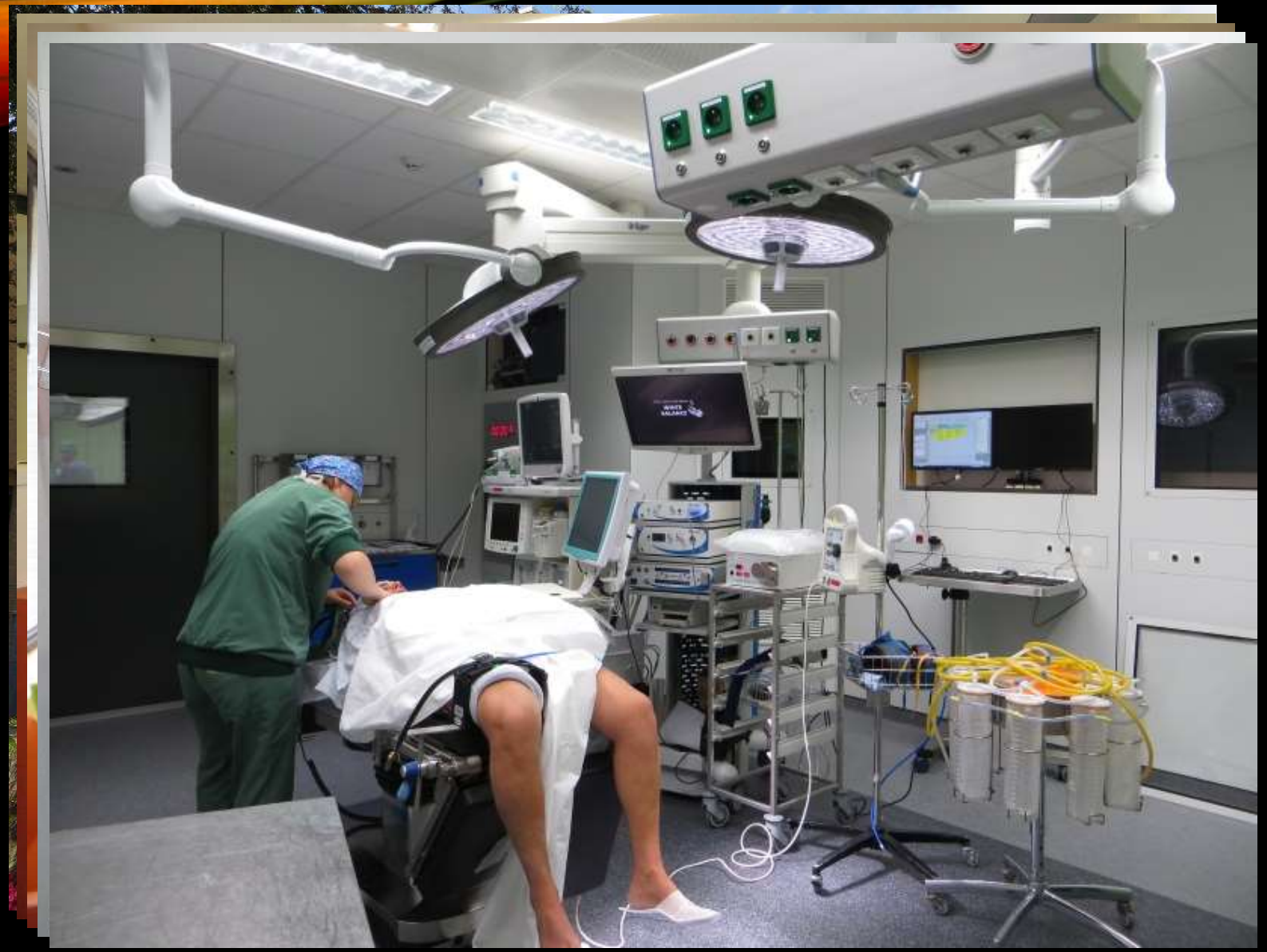
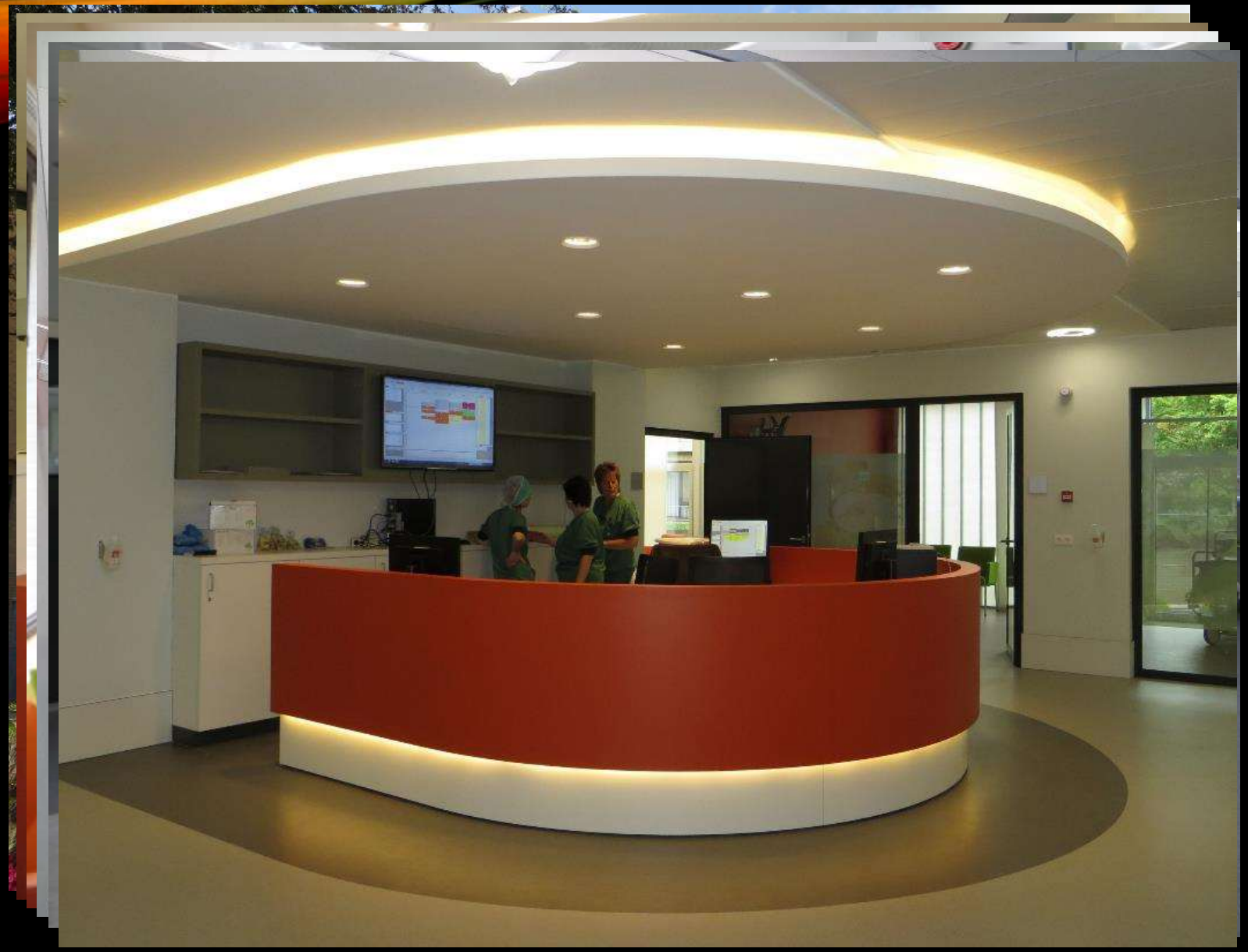
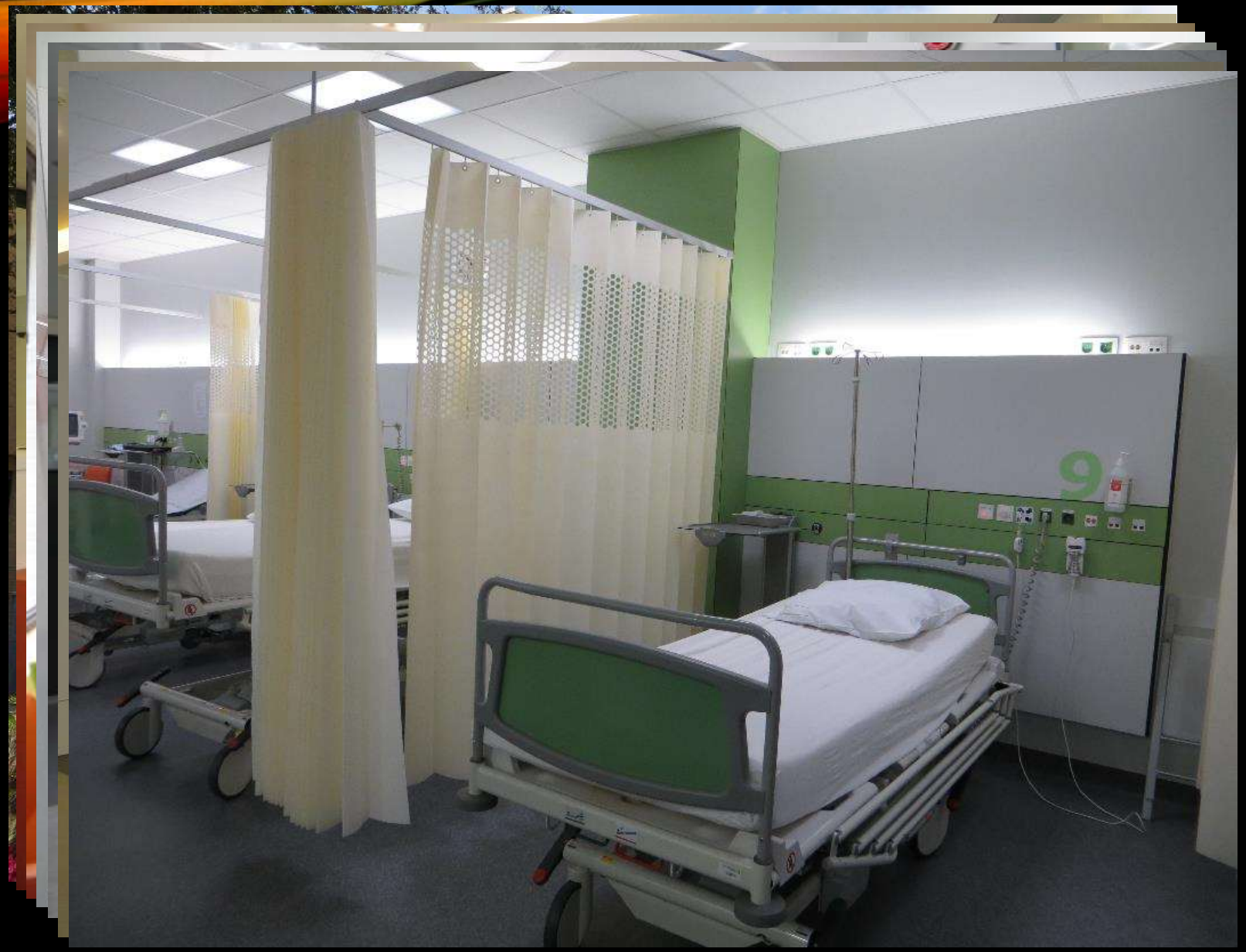
elevators
Main hospital entrance



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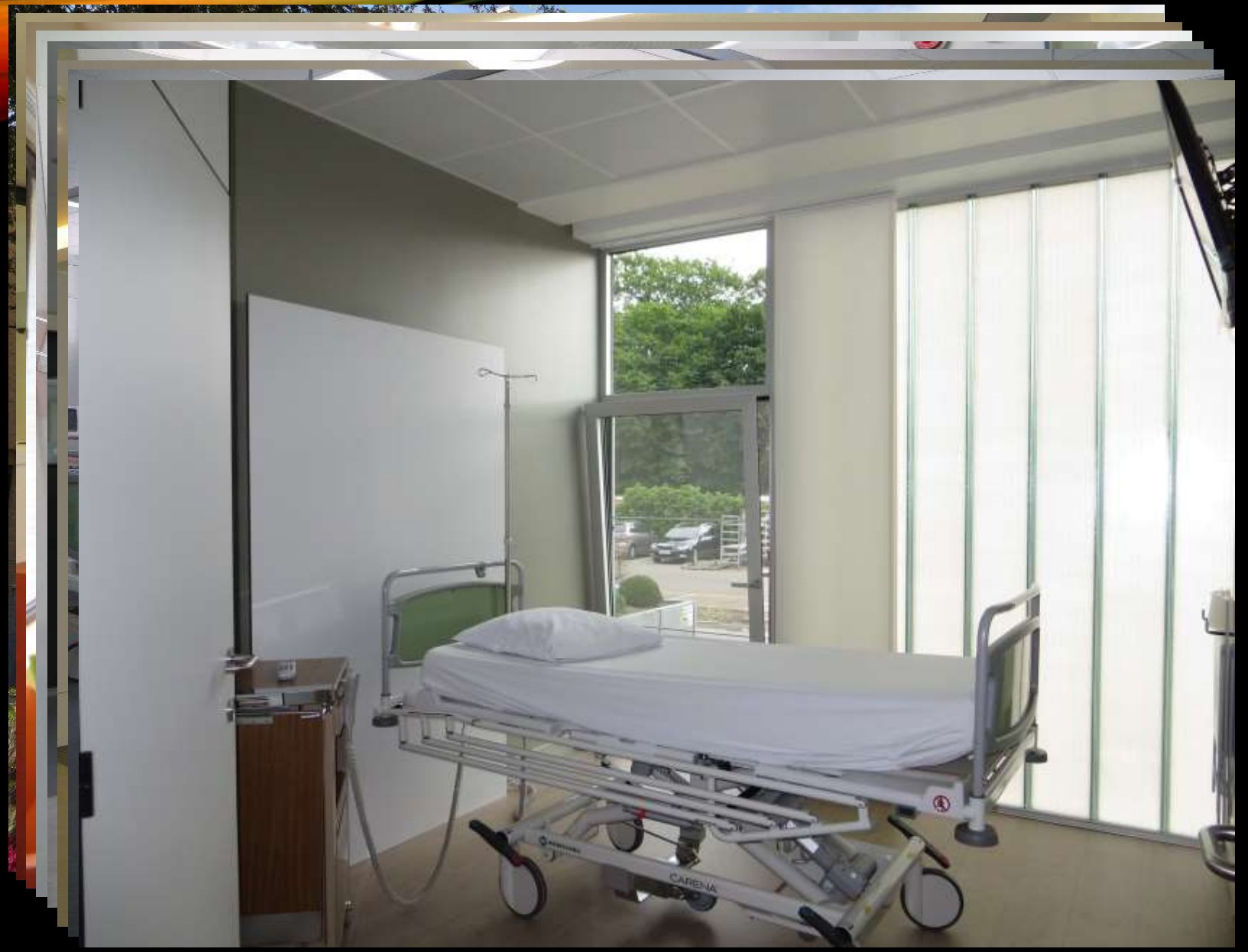
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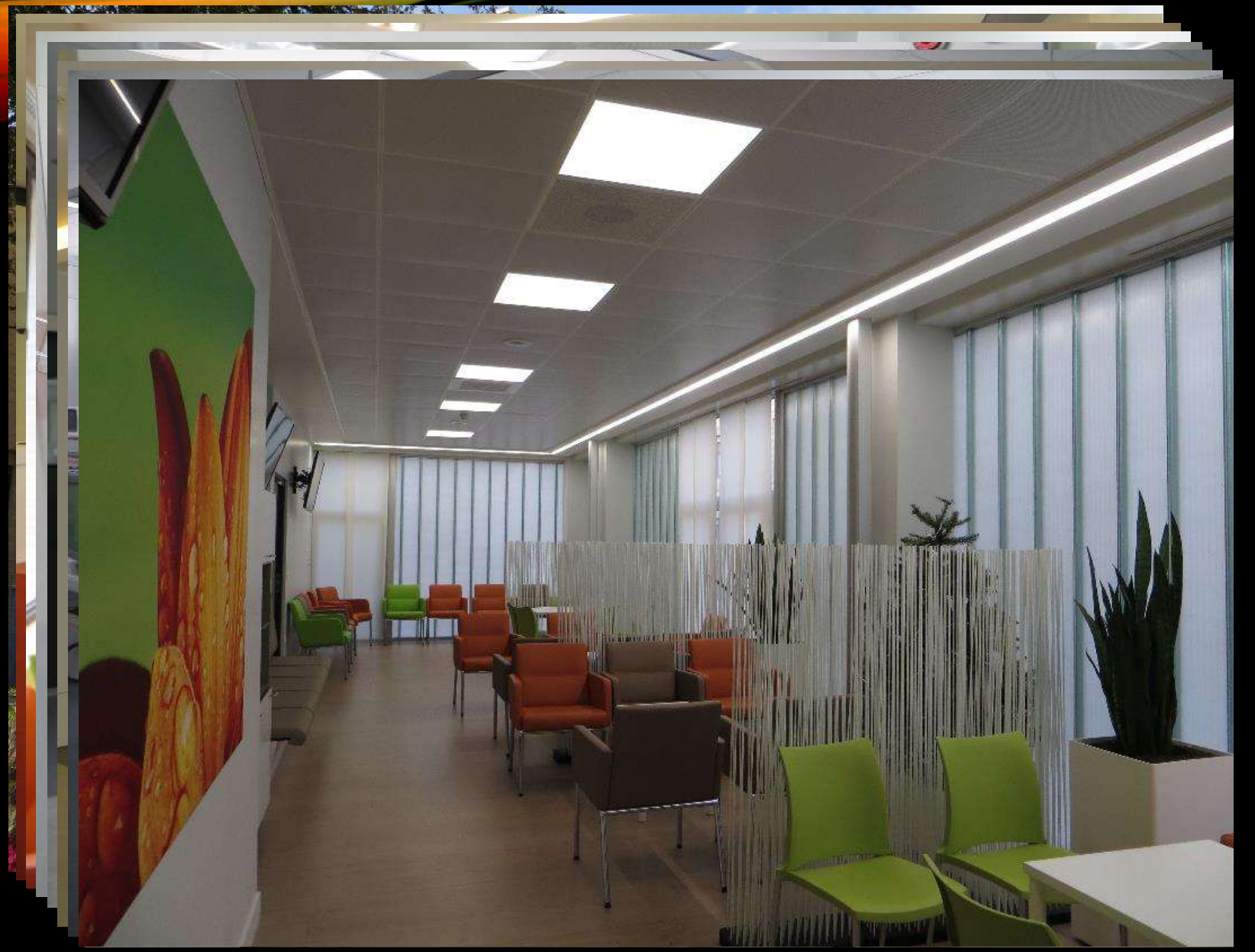

感谢您的关注

(thank you for your attention !)