



Anesthesia doctors

- 18 specialists
 - Head chief, 6 department head chiefs, 11 specialists
- 6 assistants (trainees in anesthesia), usually 2 years
- 3-4 doctors in vacation every week
- 2 on duty every day
- At Work 18doctors / day

- Central operating department 14 op. theatres
- Ambulatory clinic 9 op.theatres
- ICU 8 beds
- Painclinic
- Preanesthesia policlinic
- Education and training

- Eyeclinic 3 op. theatres

- Inside hospital (Emergency, labour 60% epid/spin, CCU, observation unit, ward departments, RTG, ...)
- Transportation to University hospitals

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Nursing personel in the department of anesetia, operation and intensive care

- Head chief anesthesiologist is in charge of all subunits
- Central operating unit ; Jour 24 hours 7 days a week
 - 5 Nurse managers, 105 nurses
- Daysurgery / Ambulatory unit
 - 3 Nurse managers, 42 nurses
- Critical care unit
 - 2 Nurse managers, 33 nurses
- Pain policlinic
 - 2 nurses

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Daysurgery
Started 2005
2800m²

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A prototypical ambulatory surgical unit can have four basic designs

1. *Hospital integrated:* Ambulatory surgical patients are managed in the same surgery facility as inpatients. Outpatients may have separate preoperative preparation and second-stage recovery areas.
2. *Hospital based:* A separate ambulatory surgical facility within a hospital handles only outpatients.
3. *Freestanding:* These surgical and diagnostic facilities may be associated with hospitals but are housed in separate buildings that share no space or patient care functions. Preoperative evaluation, surgical care, and recovery occur within this unit.
4. *Office based:* These operating or diagnostic suites (or both) are managed in conjunction with physicians' offices for the convenience of patients and health care providers.

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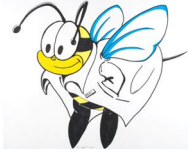
Ambulatory (DS) clinic

- Preoperative preparation and examination rooms
- 9 operating theatres
 - 3 orthopedics (children)
 - 3 surgery (gastro, urology, vascular, plastic)
 - 1 gynecologic
 - 1 ENT ear nose throat
 - 1 dentistry
- 2 recovery rooms á 10 patients
- 2nd phase recovery room
- Childrens line: waiting room, recovery and 2nd phase recovery rooms

Buzz the Surgeon Bee

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Operative doctors in DS about 35-40 / week



- 5 anesthesiologists daily
 - 3 seniors (consultants)
 - 2 trainees (specializing)
 - Anesthesia nurses all time available in OR's and 1st phase recovery
 - 2 (-3) OR:s per anesthesiologist when adults
 - 1 OR:s per anesthesiologist when children
- Orthopedists, GI-surgeons, vascular surgeons, urologists, childrens surgeon, plasticsurgeon, Trainee-surgeons
- ENT- surgeons
- Gynecologists
- Dentists

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Way to give anesthesia in DS

- Germany and Spain: doctor give and maintain;
 - 1 doctor per op. room
- Sweden : doctor orders, nurse gives and maintains anesthesia if ASA 1-2;
 - 1 doctor per 4-5 op. rooms
- Finland: doctor starts and ends, nurse maintains;
 - doctor per 2-3 op. rooms when adults
 - doctor always present at op. room when children

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Nursing personnel

- Planned for 8 operative theatres
- Pre- and postoperative nurses
- Anesthesia nurses
- Instrumentational nurses
 - subspecialised groups
- Some nurses are multidimensional

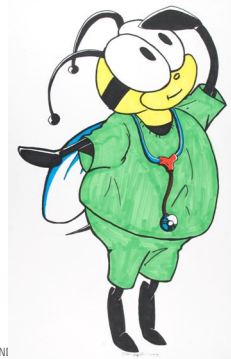


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Nursing personnel

- 1 head nurse
- 2 departmental nurses
- 36-40 nurses
- 1 medical nurse-technician
- From support services
 - 1 physiotherapist,
 - 2 secretaries,
 - 3 typewriters,
 - 1-2 instrument cleaners,
 - 5 cleaners



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Operation theatre plan

- plastic surgery
- gastro surgery
- vein surgery
- general surgery
- urology
- orthopedics
- childrens surgery
- ear nose throat ENT surgery
- gynecologic surgery
- dental surgery

Op room	Monday	Tuesday	Wednesday	Thursday	Friday
21					
22					
23					
24					
25					
26					
27					
28					
29					

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Week timetable

Viikko 23					
	ma 7.6.	ti 8.6.	ke 9.6.	to 10.6.	pe 11.6.
21	20P	20P	reumalapsel		
22	20G	20G	20G	20G	20G
23	20V	20Y	20U	20U	20V
24	20O	20O	20O	20O	20O
25	20O	20O	20O	20O	20O
26	20O	20O	20O	20L	20O
27	KNK	KNK	KNK	KNK	KNK
28	30	30	30	30	
29		SS	SS		

A 8 week period timetable is made 9-7 weeks before, when we know of personel and surgeons in work.



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The patients path

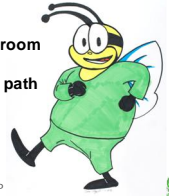
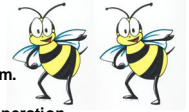


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The patients path

- Patients come between 7.00 - 11.00 a.m.
- Two patients for each op. room come at 7.00 a.m.
- Every one meets the op. physician before the operation (time from first surgeon audit may be up to 6 months and usually not the same surgeon)
- Preop. nurse makes the preparations and guides the patient to the op. room - patients walk
- The bed is warmed up and waiting outside the op. room
- Gynecologic patients and children have their own path
- PACU time – Fast track individually
- Light meal and discharge when appropriate



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Scedulling the day



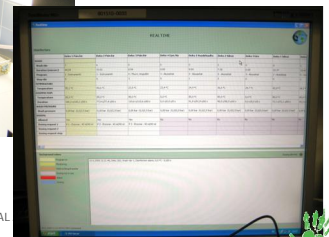
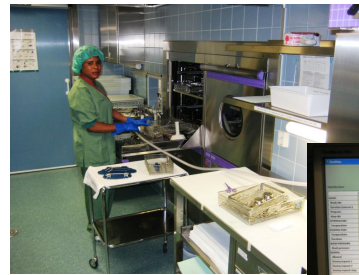
Integrating nurse running the show – personnel - extra instrumentation - team breaks – can fill up

Time	Surgeon	Operative	Specialist	Room
08:00	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
08:30	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
09:00	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
09:30	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
10:00	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
10:30	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
11:00	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
11:30	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
12:00	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
12:30	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
13:00	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
13:30	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
14:00	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
14:30	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
15:00	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
15:30	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
16:00	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
16:30	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
17:00	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
17:30	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
18:00	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
18:30	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
19:00	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
19:30	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
20:00	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
20:30	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
21:00	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
21:30	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
22:00	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
22:30	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
23:00	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
23:30	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1
24:00	Dr. J. Järvelin	Dr. M. Järvelin	Dr. J. Järvelin	Op. 1

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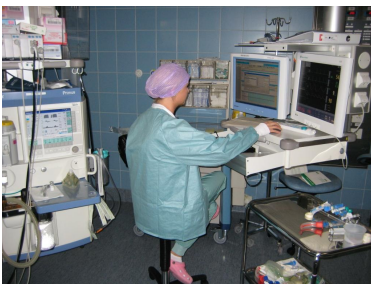
Instrumentation



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Anesthesia



Sedation/analgesia	101
Local infiltration anesthes	641
Plexus	67
Spinal	1312
Spin. + epid.	24
General anesthesia	2815
GA+ epid	6



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Operation



8 Operative room teams:
Each 3 nurses: 1 anesthesia + 2 operative

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Data management -records



Wake up



Transfer to PACU

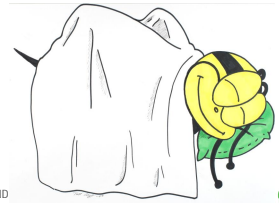


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Post anesthesia care unit (PACU)

- 20 bed adult 1-stage PACU
 - 4,5 nurses
 - Preop plexus anesthesia
- 8 bed childrens 1-stage PACU
 - Open 3 days/week
 - 2 nurses



PALJÄT-HÄME SOCIAL AND



PACU

PALJÄT-HÄME SOCIAL AND HEALTH CARE GROUP



PACU until 18 (-19) hours



PALJÄT-HÄME SOCIAL AND



Discharge

- Adult 2-stage recovery area + discharge
 - 2 postoperative nurses
 - 11- 19 hours

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Recovery area



Light meal



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Discharge - Instructions



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Pain killing tablets to take home until next morning:

ibuprofen
acetaminophen (=paracetamol)
acetaminophen +codeine
(tramadol)

oxycodone

”Pain pump”



IAAS indicators

IAAS: International Association of Ambulatory Surgery

Table 2 Clinical Indicators for Ambulatory Surgery

1. Cancellation of booked procedures	1.1. Failure to arrive at the DSU 1.2. Cancellation after arrival at the DSU
2. Unplanned return to the operating room on the same day of surgery	
3. Unplanned overnight admission	
4. Unplanned return of the patient to a DSU / Hospital	4.1. < 24 hours 4.2. > 24 hours and < 28 days
5. Unplanned readmission of the patient to a DSU / Hospital	5.1. < 24 hours 5.2. > 24 hours and < 28 days
6. Patient Satisfaction	

DSU = Day Surgery Unit

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Quality: What the patients want

The Institute of
Healthcare
Improvement
www.ihi.org
DR Donald Berwick

1. Don't kill me
2. Don't hurt me
 - a. Don't do things that cannot help me
 - b. Reliably do things that can help me
 - c. Relieve my pain
 - i. Physical pain
 - ii. Emotional pain
3. Don't make me feel helpless
 - a. Share information
 - b. Give me choices
 - c. Follow my orders
 - d. Remember me
4. Don't make me wait
 - a. Manage access
 - b. Manage flow
 - c. Keep track of things
5. Don't waste money

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DS by numbers

Vuosi	2005	2006	2007	2008	2009
Patients	4766	4850	5119	5126	4866
Patients per month	312 - 561	318 - 533	359 - 609	333 - 564	335 - 526
Same day cancellations	258 = 5,2%	351 = 6,9%	354 = 6,6%	335 = 6,2%	236 = 4,6%
Same day cancellations per month	12 - 14	23 - 53	20 - 61	9 - 41	16 - 29
To ward	259 = 5,5%	217 = 4,7%	223 = 4,5%	147 = 3,0% *	102 = 2,2%*
To ward per month	13 - 35	8 - 34	14 - 27	7 - 24	4 - 15

*Renewal of statistic system, emphasizing social patients in advance

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Same Day Cancelled patients

	2005	2006	2007	2008	2009
No good for anesthesia	4	6	25	17	23
Lack of time	4	0	2	2	3
No nurse	14	18	3	10	10
No fit for operation	45	57	65	59	38
No need	57	86	57	80	64
Blood clotting problems (warfarin)	0	1	0	3	0
Surgeon has no time	0	0	2	2	1
No surgeon (sick)	6	12	17	17	6
Change in op plan	28	24	27	20	18
Need of extra investigations	4	14	12	12	21
Patient didn't come	24	27	25	33	21
Patient cancelled	22	22	20	20	5
Patient sick	48	82	98	57	26
Lack of instrumentation	1	1	1	2	0
Antibodies in blood	1	1	0	1	0
Total	258	351	354	335	236

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Reason for transfer to ward

	2005	2006	2007	2008	2009
01 Pain	48	32	48	25	15
02 Ponv	32	22	5	6	3
03 Bleeding	26	23	18	17	13
04 Change in operation	8	13	18	21	16
05 Operat. Late	23	15	9	6	1
06 Weakness	50	32	27	10	9
07 Social	21	26	44	21	6
08 Other	51	54	54	41	39
total	259	217	223	147	102
%	5,5	4,7	4,6	3	2,2

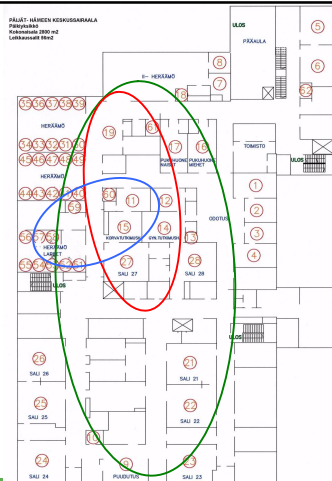
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Postoperative follow up

- Patients can call up to 3 days after operation
- No systematic calls next morning or a week later – no personnel
- When new patient groups involved or a change in treatment – periodic calls
- Every patient can give a internet or paper feedback
- If transfer to ward - form to get feedback
- If patient contacts at night Emergency outpatient unit (ER) - form to get feedback
- Follow up of patient satisfaction 2005 (225 pat)
- 2007 National DS follow-up survey (190 pat)

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