

Analysis of failed discharge after ambulatory surgery: unanticipated admission

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Advantages of day surgery*

- ✓ Advantages for patients
- ✓ Advantages for hospitals
- ✓ Advantages for healthcare funders



Clinical indicators for Ambulatory Surgery

Clinical Indicators for Ambulatory Surgery	
1. Cancellation of booked procedures	1.1. Failure to arrive at DSU 1.2. Cancellation after arrival at 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 < 28days
5. Unplanned readmission of the patient to a DSU/ Hospital	5.1. < 24 hours 5.2. > 24 hours and < 28days
6. Patient Satisfaction	

Figuur 3.5: Clinical indicators voor dagchirurgie (Lemos & Regalado, 2006)

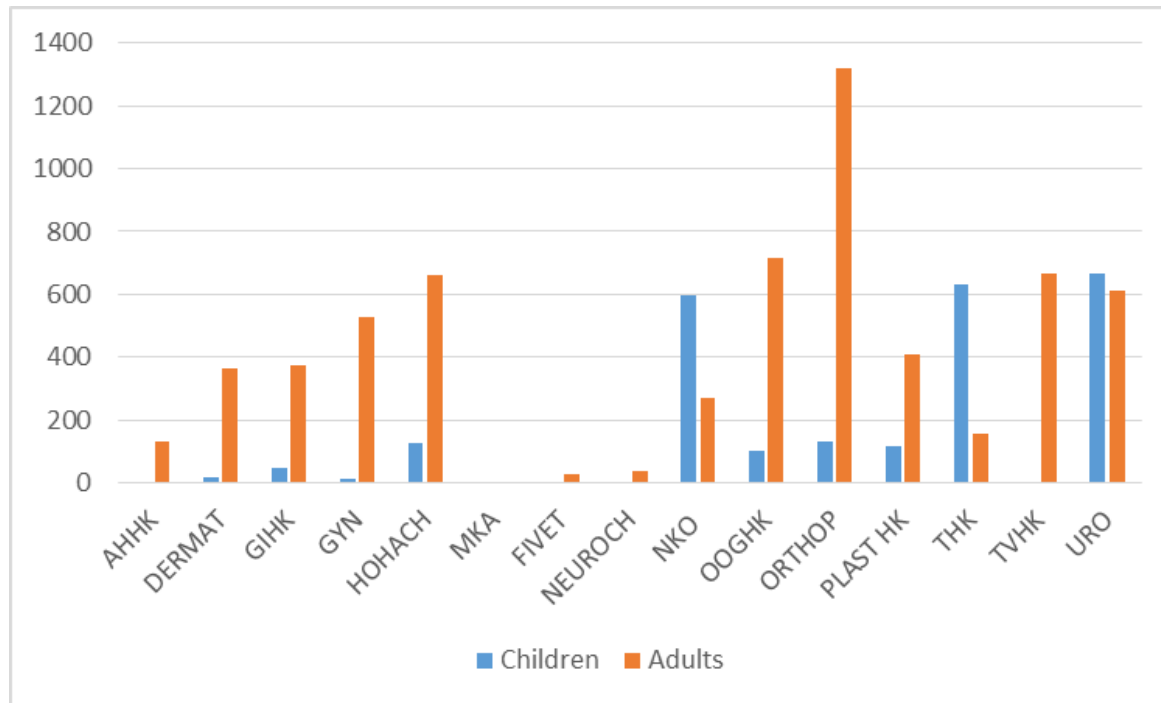
Organization structure of the UZ Ghent

- ▶ BAS dagziekenhuis (Gastro- enterologie)
- ▶ Centrum voor dialyse en aferese
- ▶ Chirurgisch dagziekenhuis
- ▶ Endocrinologie
- ▶ Geriatrie
- ▶ Kindergeneeskunde
- ▶ MCA dagziekenhuis
- ▶ Medische oncologie
- ▶ Pijnkliniek
- ▶ Reumatologie
- ▶ Vrouwenkliniek



56.000 dagopnames
per jaar = 17% CDZ

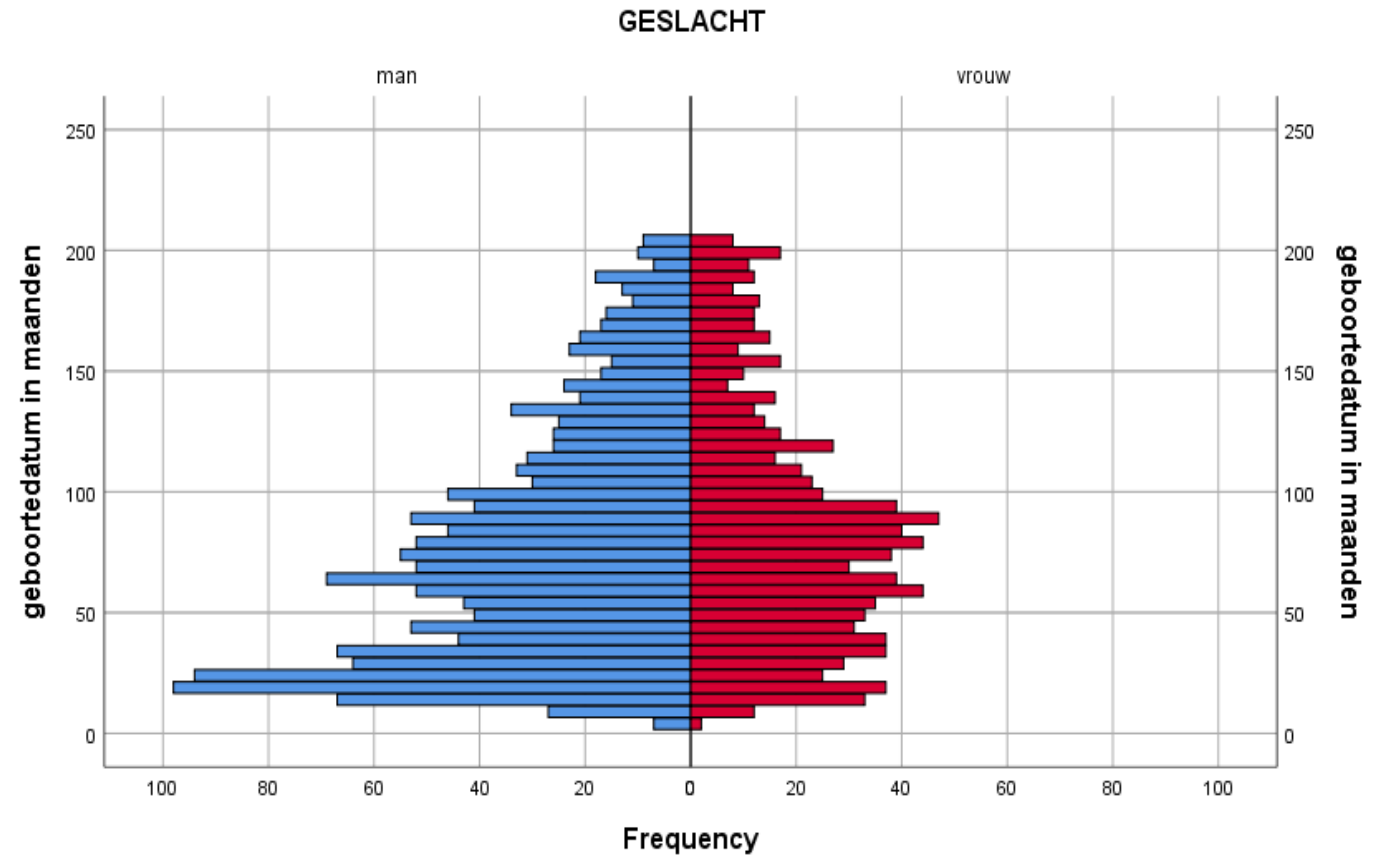
The Day Surgery unit



	Children	Adults
AHHK	1	134
DERMAT	20	362
GIHK	46	374
GYN	12	529
HOHACH	125	660
MKA	2	3
FIVET	0	26
NEUROCH	4	40
NKO	597	268
OOGHK	101	718
ORTHOP	133	1317
PLAST HK	116	407
THK	630	155
TVHK	1	668
URO	664	612
Totaal	2452	6273

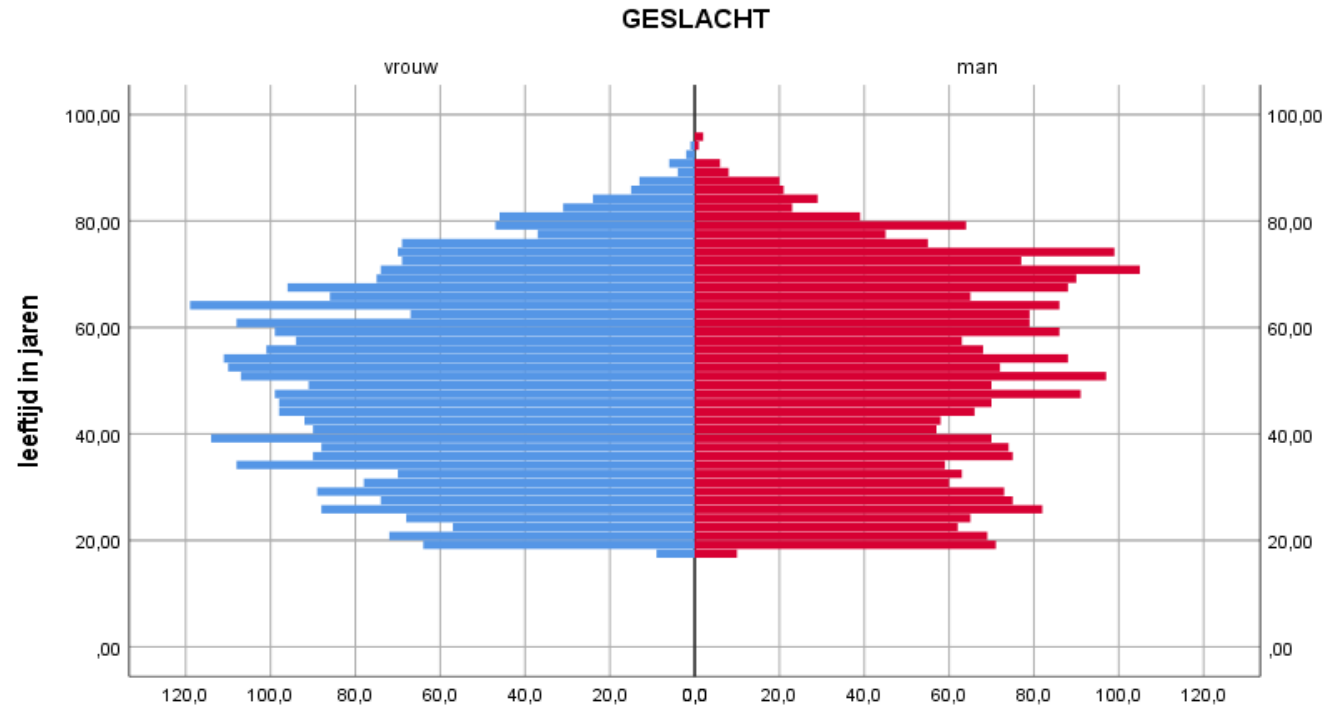
The Day Surgery unit

Leeftijdscategorie	Aantal	Procent
< 2 jaar	326	4
2- 10 jaar	1588	18
11-17 jaar	538	6
Totaal	2452	28



The Day Surgery unit

Leeftijdscategorie	Aantal	Procent
18-40 jaar	2057	23,6
41-60 jaar	2076	23,8
61-80 jaar	1849	21,2
>80 jaar	291	3,3
Totaal	6273	71,9



Unplanned overnight admission

Inclusion and exclusion criteria

- ▶ Inclusion

- ▶ Adults (> 18 Years)

- ▶ Planned for AS

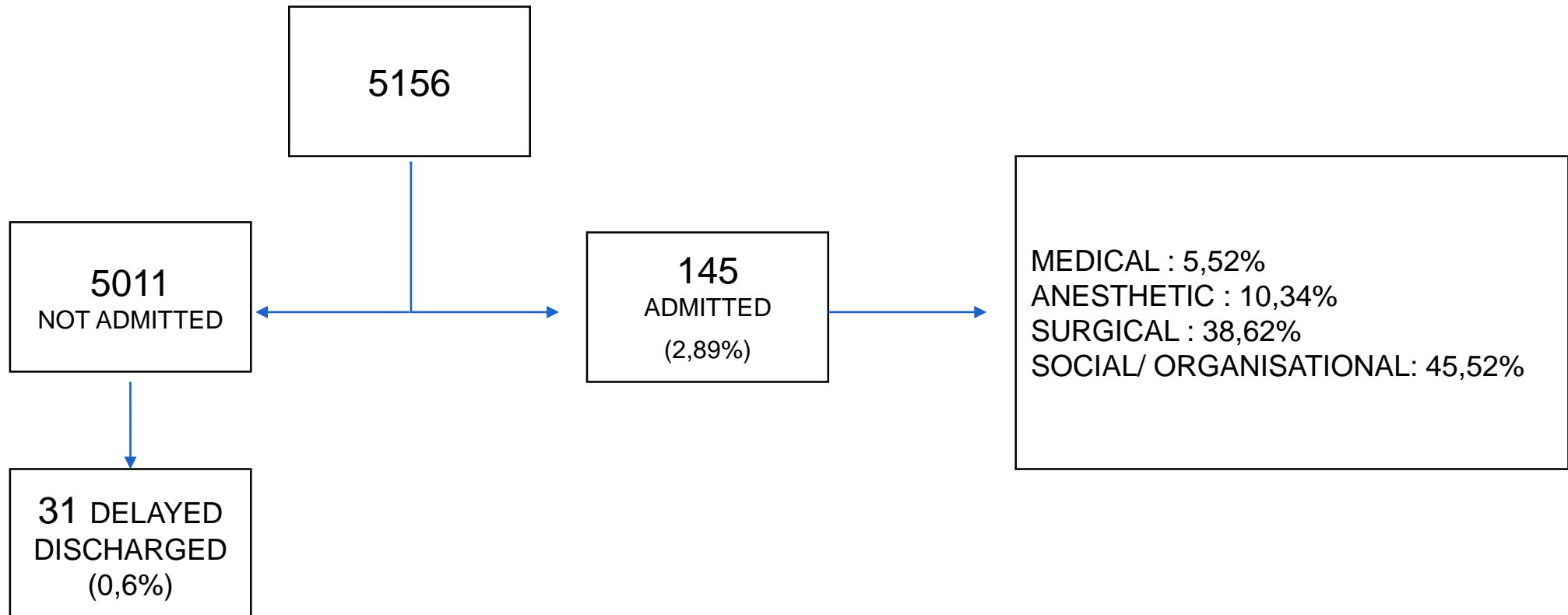
- ▶ Exclusion

- ▶ *Pediatric patients*

- ▶ *Ambulatory procedures performed outside the operating theatre (gastroscopy, colonoscopy, ...)*

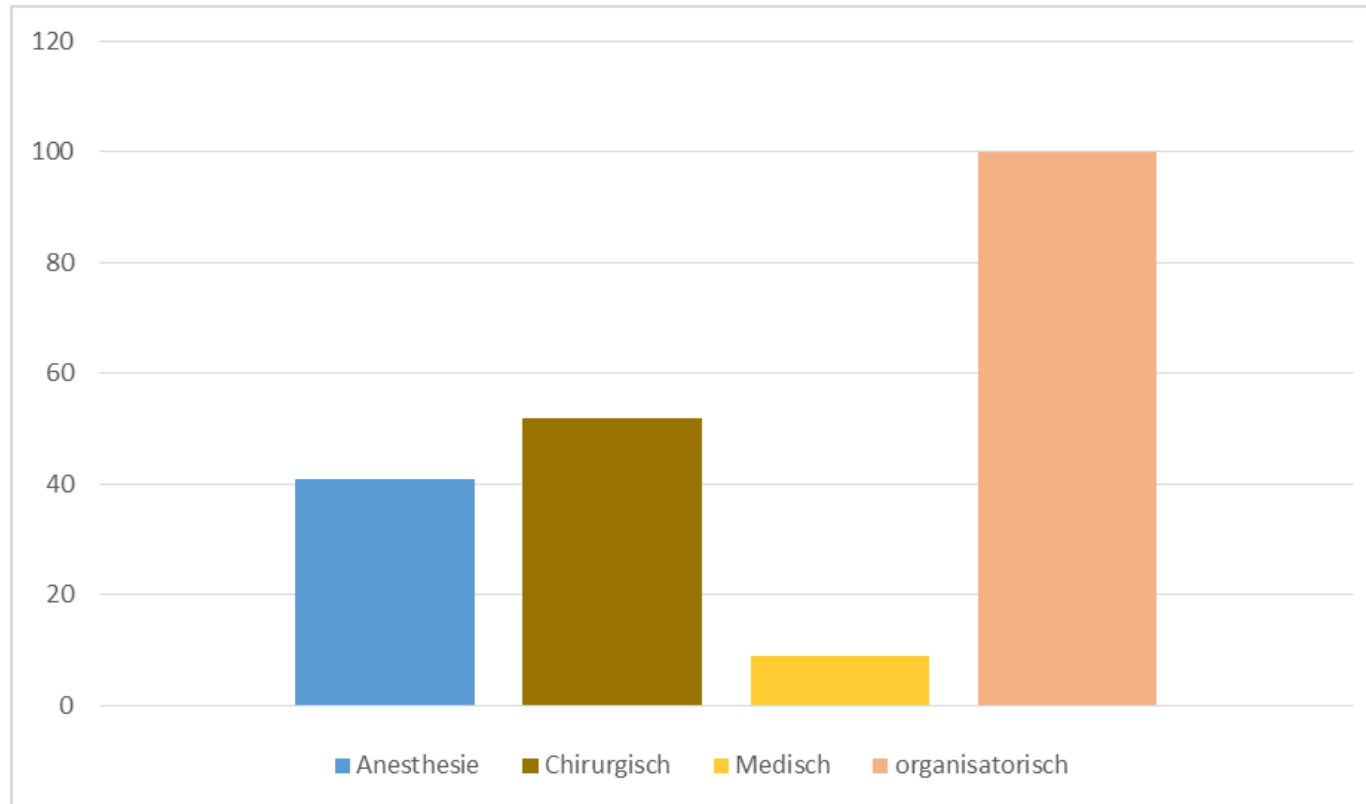
Unplanned overnight admission

Results



Unplanned overnight admission

Results

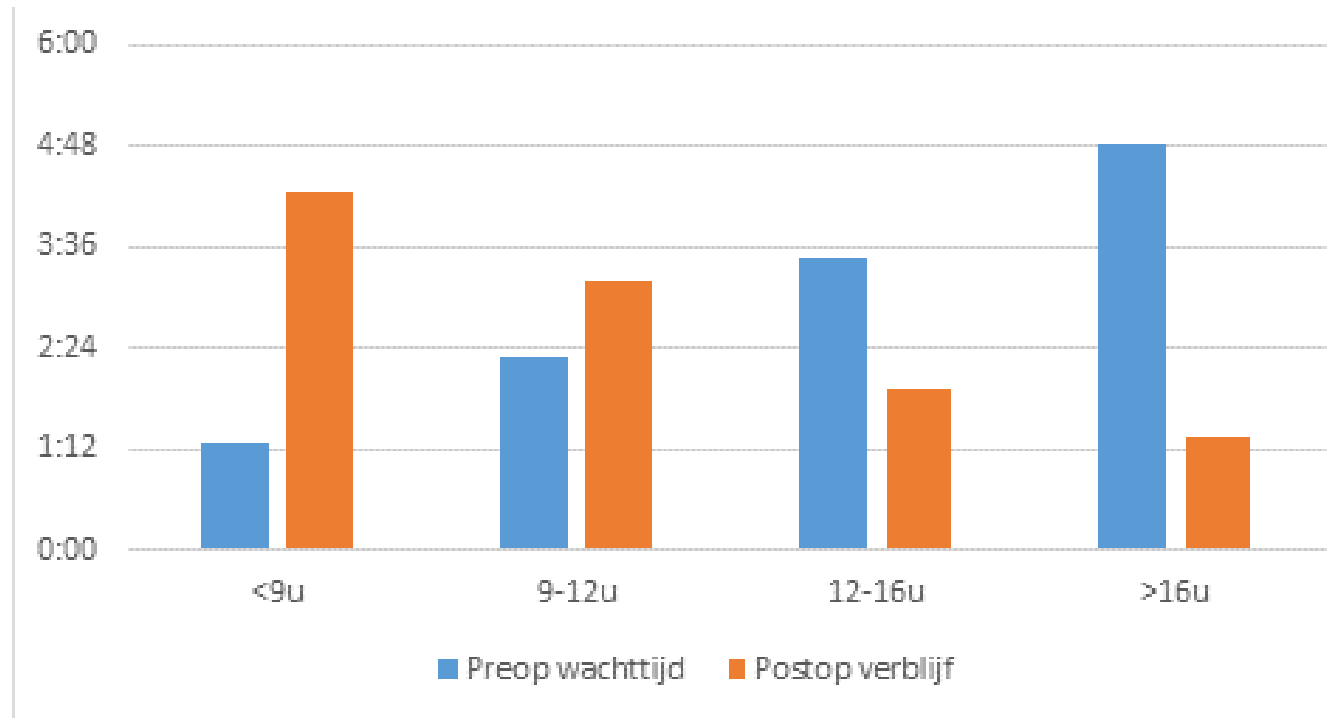


Unplanned overnight admission

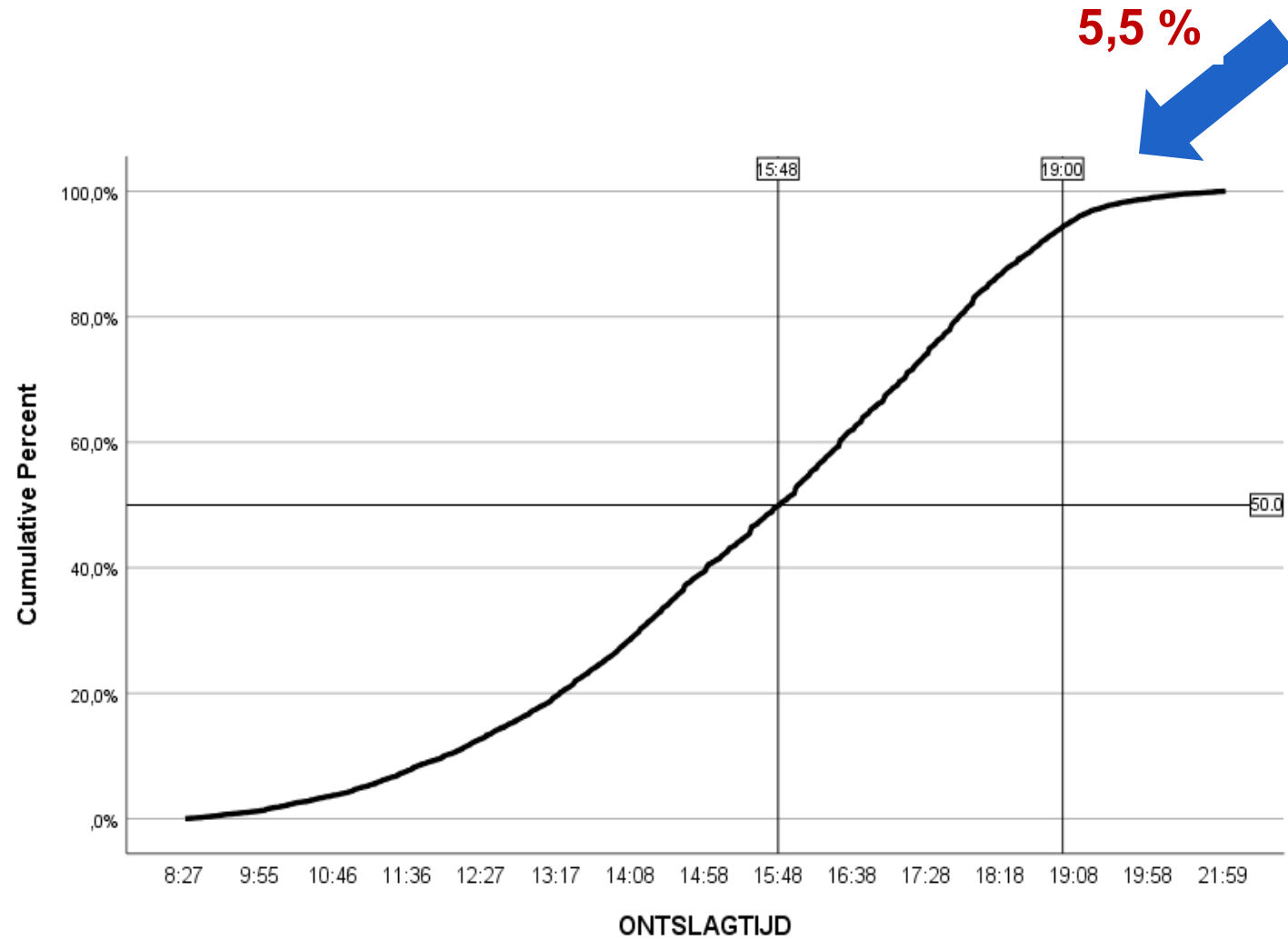
Table 1. Reasons for unanticipated admissions and delayed discharged.

Reason	Delayed discharge, <i>n</i> (%)	Admission, <i>n</i> (%)
Anesthetic reason	3 (9.7)	15 (10.34)
PONV	2 (6.5)	3 (2)
Delayed awakening		6 (4)
Urinary retention	1 (3.2)	5 (3.3)
Aspiration		1 (0.7)
Medical reason	1 (3.2)	8 (5.52)
Syncope		1 (0.7)
Cardio respiratory monitoring	1 (3.2)	3 (2)
Epileptic insult		2 (1.4)
Pulmonary embolism		1 (0.7)
Infection		1 (0.7)
Surgical reason	4 (12.9)	56 (38.62)
More extensive surgery needed	1 (3.2)	21 (14.48)
Surgical complication		1 (0.7)
Intractable pain	2 (6.5)	17 (11.72)
Re-operation		2 (1.4)
Bleeding	1 (3.2)	15 (10.34)
Social/organisational reason	23 (74.19)	66 (45.52)
Surgeon request		9 (6.2)
Late start OR	21 (67.74)	35 (24.14)
No home support		13 (9)
Patient request		8 (5.5)
Medication error		1 (0.7)
Waiting for results from examination	2 (6.45)	

Unplanned overnight admission



Unplanned overnight admission



Unplanned overnight admission

Table 3. Summary of results from multiple logistic regression.

Independent variables	Level	Missing data excluded from analysis	
		OR and 95% CI	<i>p</i> Value
ASA class	I	Reference	
	II	1.61 (1.06–2.44)	.024
	III	2.19 (1.10–4.34)	.026
	IV	12.87 (2.20–75.24)	.005
Time of completion surgery	Morning (8 am to 12 pm)	Reference	
	Afternoon (12 pm–3 pm)	1.73 (1.05–2.86)	.032
	Late afternoon (>3 pm)	6.52 (4.11–10.34)	<.001
Hospital site	UZ1	Reference	
	UZ2	1.35 (0.75–2.41)	.316
Length of surgery (h)	1	Reference	
	1–3	2.05 (1.27–3.29)	.003
	>3	8.31 (3.56–19.40)	<.001
Grade of severity	Minor	Reference	
	Moderate	1.72 (1.03–2.88)	.039
	Major	7.85 (2.31–26.62)	.001
Type of surgery	General	Reference	
	Gynecologic	0.98 (0.47–2.02)	.995
	Head and neck	0.60 (0.27–1.36)	.223
	ENT	0.58 (0.23–1.49)	.260
	Ophthalmologic	0.82 (0.27–2.45)	.722
	Orthopedic	0.63 (0.32–1.26)	.194
	Plastic	0.77 (0.35–1.68)	.510
	Dental	0.21 (0.06–0.70)	.011
	Urologic	0.79 (0.39–1.59)	.504

OR: odds ratio; CI: confidence interval.

1927 out of 5156 subjects are excluded from the analysis due to missing data.

The Hosmer–Lemeshow Goodness-of-fit test: *p* value = .777

Conclusion

- ▶ Highest rate of UA for social/ organisational reasons (45,52%)
- ▶ DSU = integrated ambulatory unit
- ▶ Preoperative waiting times
- ▶ Delays or long discharge times
- ▶ Preoperative anesthetic assessment
- ▶ The need to prioritize ambulatory patients in planning of mixed operation lists
- ▶ Completion of surgery after 3pm => significantly increased risk of hospital admission
- ▶ Severity of illness increases unanticipated admission

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