

# Hospital and day surgery 2017



**Tervise Arengu Instituut**  
National Institute for Health Development

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## Definitions

<b>Adult</b>	15-years-old and older
<b>Child</b>	up to 15 years
<b>Day care</b>	health care service in which the patient needs to be monitored for a few hours due to treatment or examinations, but does not stay overnight in hospital
<b>Hospital care or inpatient care</b>	health care service that requires a 24-hour hospital stay. This does not include day or outpatient treatment in hospitals
<b>Main or principal diagnosis</b>	the condition that led to the patient being examined or treated. If there were several such conditions, then the condition that required the greatest use of resources
<b>Operation</b>	when a patient has undergone procedures with several NCSPs (or a group of NCSPs, depending on how detailed the analysis is), the surgery patient will be counted under several operations. They are also counted repeatedly when the same procedure is performed on different days
<b>Surgery patient</b>	a patient who has undergone a procedure specified with NCSP codes A to Q, Y and only counted once per discharge by main procedure in inpatient or day care. If more than one procedure is performed during a stay, then more resource intensive and important procedure is considered by the surgeon

## Abbreviations

<b>EHIF</b>	Estonian Health Insurance Fund
<b>EU</b>	European Union
<b>Eurostat</b>	Statistical office of the European Union
<b>HCP</b>	health care provider
<b>HMP</b>	Hospital Master Plan
<b>HS</b>	health statistics
<b>ICD-10</b>	International Statistical Classification of Diseases and Related Health Problems 10 <sup>th</sup> Revision (2008)
<b>NCSP</b>	NOMESCO Classification of Surgical Procedures (in 2017 version of 2016 was used)
<b>OECD</b>	Organisation for Economic Co-operation and Development

## Summary

- In 2017, 40% of inpatient (except nursing care) and 69% of day care patients were operated.
- The trend of the last ten years is characterized by an increase in day surgery and a decrease in inpatient surgery.
- 87% of inpatient and two-thirds of day surgery patients were operated in regional and central hospitals in 2017. Over the past decade, the proportion of people operated in higher-level hospitals has increased.
- 1.8 women were operated per one man due to frequent operation in obstetrics and gynaecology, and women also had significantly more eye surgeries.
- In hospital and day care together, the musculoskeletal surgeries were the largest number of operations among adults – nearly 18,800 patients.
- Among children, the largest proportion of both hospital and day care were mouth and throat (mainly adenoids/tonsils) operations. In 2017, the total number of such children was 5,000.
- The share of day care was highest (90%) in eye surgery.
- Compared to other countries, cataract operations are performed in Estonia more than the EU average and the share of day care is the highest (99%) among the EU countries. The number of hip and knee endoprosthesis is lower in Estonia than the EU average.

## Introduction

Surgery is a costly part of a treatment that can often not be delayed. Surgical procedures are performed during the hospital, day and outpatient care. Hospital care is for surgery patients that require overnight monitoring. Day surgery is a predominantly elective activity provided to patients who need short-term medical care and will be discharged on the same day. Outpatient procedures are performed when patients do not need post-surgery care in a health care institution.

As in health care in general, the most difficult part of surgery is finding balance between the existing resources and patient needs. On the one hand, treatment must be cost-effective, which is supported by the preference of outpatient and day surgery to inpatient care. At the same time, treatment should be sufficiently accessible, and performed with good quality. To ensure health care quality and sustainability, more infrequent or complex procedures are directed to larger centres (1). To ensure sustainability, longer maximum waiting times have been established for cataract, adult throat, nose and ear surgeries, hip and knee endoprostheses and bariatric surgeries (2). At the same time, distance between service and the patient may increase and the motivation of the professionals outside the large centres to work may decrease.

Different data and data sources are used to evaluate surgical results and plan the services. The waiting lists and treatment quality are monitored by the Estonian Health Insurance Fund (EHIF) (3, 4). The Department of Health Statistics of the National Institute for Health Development collects, analyses and publishes data mainly on resources and workload, and compiles and submits data from different sources to international organisations for comparisons between countries.

The purpose of the analysis is to describe performance of surgeries in hospital and day care. Outpatient surgeries are not addressed in this analysis. Waiting lists and service quality are also not considered.

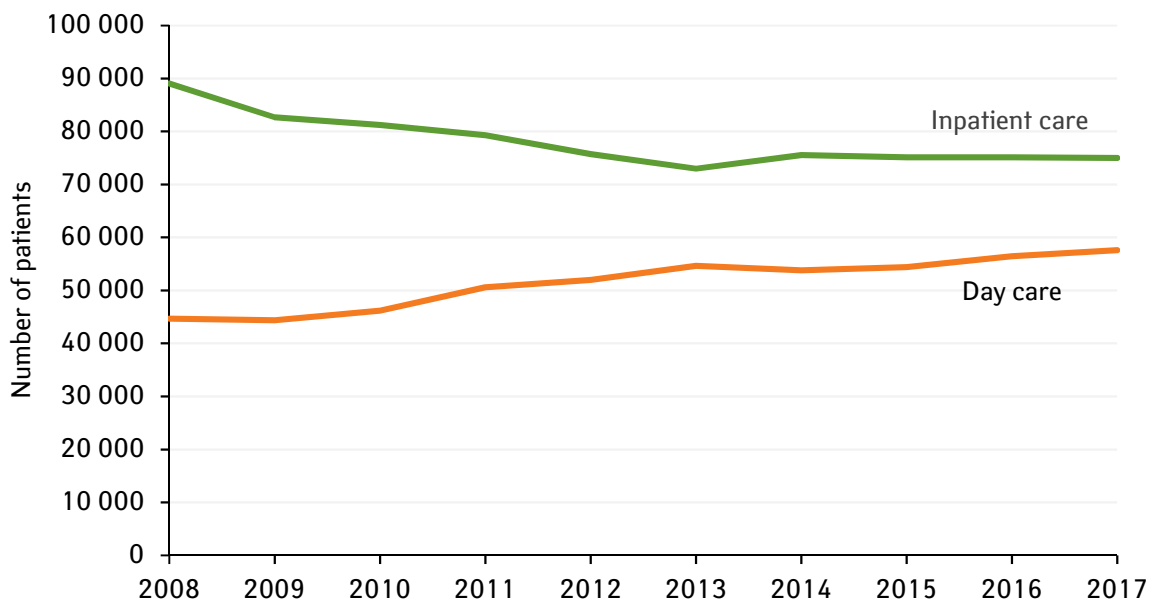
The main source of data is health care providers' reports. For international comparison, health care statistics supplemented by EHIF data is presented. Data from EHIF has been used for analysing the patient's residence and diagnosis group. The coverage of health statistics and EHIF data is different, thus there is a comparison of data sources in the second chapter of the analysis.

# 1 Results

In 2017, 75,000 patients were operated in inpatient care and 57,600 in day surgery. 40% of the inpatient (excl nursing care) and 69% of day care were surgery patients.

## 1.1 Trend in surgery patients

The number of surgical inpatients is higher than the number of patients operated in day surgery. The trend of the last ten years is characterized by an increase in day surgery and a decrease in inpatient surgery (Figure 1). In 2008, the proportion of patients of day surgery<sup>1</sup> was 33% of all inpatient and day care surgery patients, and by 2017 the share of day surgery had increased to 43%.



**Figure 1.** Number of surgery patients in inpatient and day care, 2008–2017<sup>2</sup>

Similarly, with the rest of health care, more complicated and specific treatment is being directed to central and regional or special hospitals (1, 5). Therefore, changes in the number of surgery patients and the proportion of day surgery have not been unidirectional by hospitals.

The state has created Hospital Master Plan to ensure uniform availability of health care services. Hospitals belonging to the masterplan are responsible for responding to the health needs of residents in their area and access to treatment in accordance with the requirements, working together with the local primary health care, social system and other hospitals in the masterplan (6).

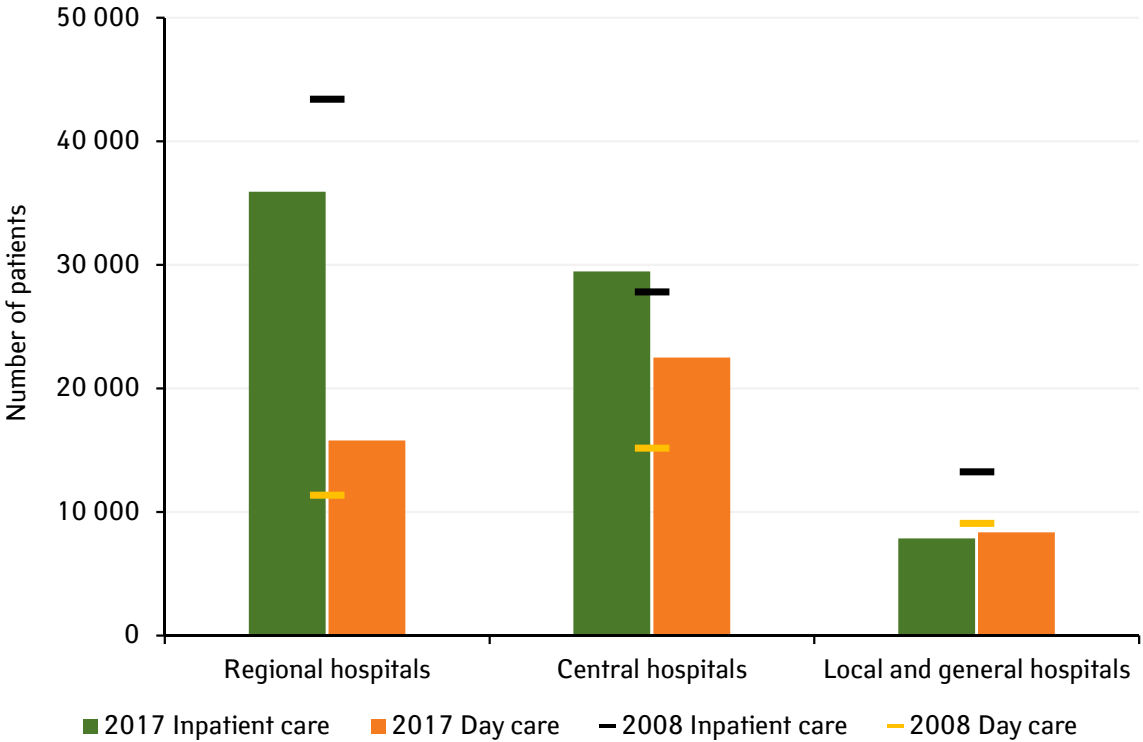
The comparison of Hospital Master Plan (HMP) hospitals shows that over the last ten years, the volume of both inpatient and day surgery has decreased both in local and general hospitals. In

<sup>1</sup> A surgery patient is determined based on the patient's principal operation in the treatment, if a surgical procedure has been performed according to chapters A to Q, Y of the NCSP.

<sup>2</sup> Here and hereinafter: if a data source has not been stated under a figure, it is health statistics reports.



central hospitals, both, especially day surgery, has increased. Inpatient surgery in regional hospitals has decreased, day surgery is on the rise (Figure 2).



**Figure 2.** Number of surgery patients in hospital and day care at HMP hospitals by hospital type, 2008 and 2017

In 2017, 87% of all inpatient surgery patients were operated at regional and central hospitals (80% in 2008). In total, 98% of the inpatient surgery was carried out at HMP hospitals. 81% of day surgery took place at HMP hospitals, and two thirds of day surgery patients were operated at regional and central hospitals.

The number of both operated patients (82–18,789) and the share of day surgery (24–75%) vary significantly among HMP hospitals, as well as changes in time (7). On average, general hospitals had a larger number of day surgery patients than the ones operated as an inpatient care in 2017, and the share of day surgery was the lowest in regional hospitals, accounting for 30% of those operated in hospital or day care.

## 1.2 Surgery patients by sex, age and organ system

The total number of surgery patients and the proportion of inpatient or day surgery depends on the age and sex distribution of the patients and on the operated pathology.

In 2017, adults had the most musculoskeletal, female genitalia and eye surgeries in hospital and day care. The share of day surgery was the highest in eye surgery (Figure 3).

1.8 females were operated per one male. The large difference is mainly due to female genitalia, obstetrics and eye surgeries. Eye surgeries were carried out in women mostly in day surgery.

In hospital and day surgery, the total number of **musculoskeletal** surgery patients was the highest – nearly 18,800 patients. Two thirds of them were operated at inpatient and one third in day care. The number of female patients was 5% higher than male patients, with a higher proportion of women in hospital care, while there were more men than women in day care. In hospital care, the largest group was patients with fractures, making up one third of all patients. Endoprosthesis accounted for a quarter and arthroscopic surgeries nearly 10%. The majority of day surgery patients were operated arthroscopically, forming half of the musculoskeletal day surgery. On half of arthroscopic surgery patients, a knee meniscus operation was performed (7).

**Digestive organs** were operated as the main procedure in 2017 in over 14,500 patients. The share of day surgery remained under 20%. The number of female patients was 7% higher due to more frequent inpatient surgeries of women. In relatively similar proportions, there were surgeries of gallbladder (17%) (nearly 95% laparoscopically), hernia (14%), appendicitis (15%) and small and large intestine (14%). Among day surgeries of the gastrointestinal tract half of the patients were operated with hernia. In day surgery, two thirds were inguinal hernia patients, while in hospital care they formed more than half of the hernia patients. Other most common surgeries in day care included rectum (22% of the patients) and laparoscopic gallbladder procedures (10%).

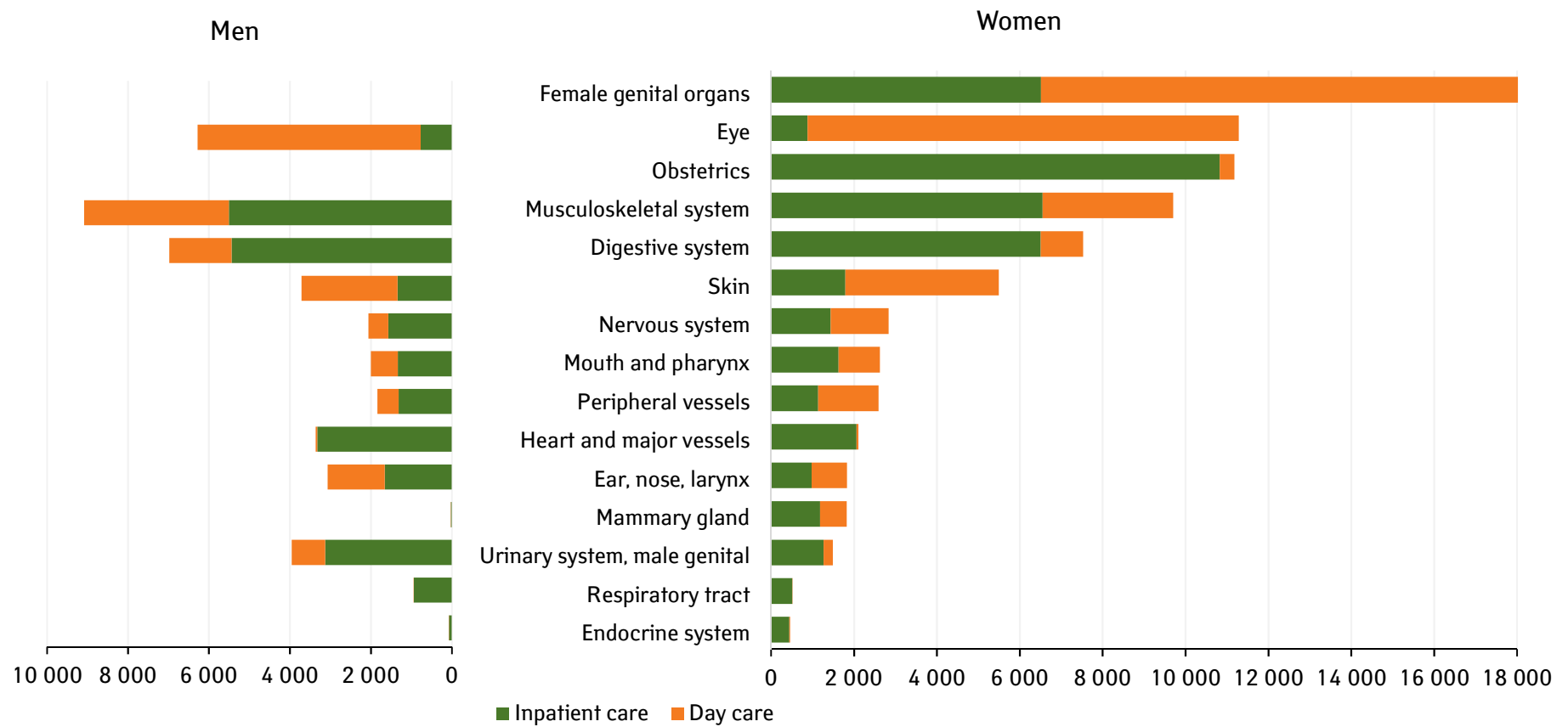
The most common type of surgery for women both in hospital and day care were **female genitalia** surgeries with almost 18,000 patients (Figure 3). In day care, uterus was operated in three quarters of cases, half of these being abortion surgeries and quarter curettage of body of uterus (7). In more than 10% of women operated in day care were having a cervical surgery. In total, less than one tenth of patients had ovary, fallopian tube and vagina surgeries. In hospital care, the surgery patients distributed more evenly – half of the patients had a uterus surgery, half of them undergoing a hysterectomy. It was followed by ovary (18%), vagina (11%), fallopian tube (10%) and cervix (4%) surgeries.

In the inpatient care, the largest number of female patients had surgery related to **obstetrics** (Figure 3). Caesarean sections accounted for a quarter (7) of the surgeries in labour. The most frequent surgery was correction of birth-related ruptures, which formed half of all the surgeries performed at childbirth<sup>3</sup>.

There were almost 17,500 eye surgery patients in 2017. The share of day care in eye surgery was 91%, mainly due to cataract surgeries. The majority of cataract patients were women, which can be explained by the higher proportion of elderly women in the population. In hospital care, the proportion of cataract surgery patients was minimal, with one third of patients having a glaucoma surgery.

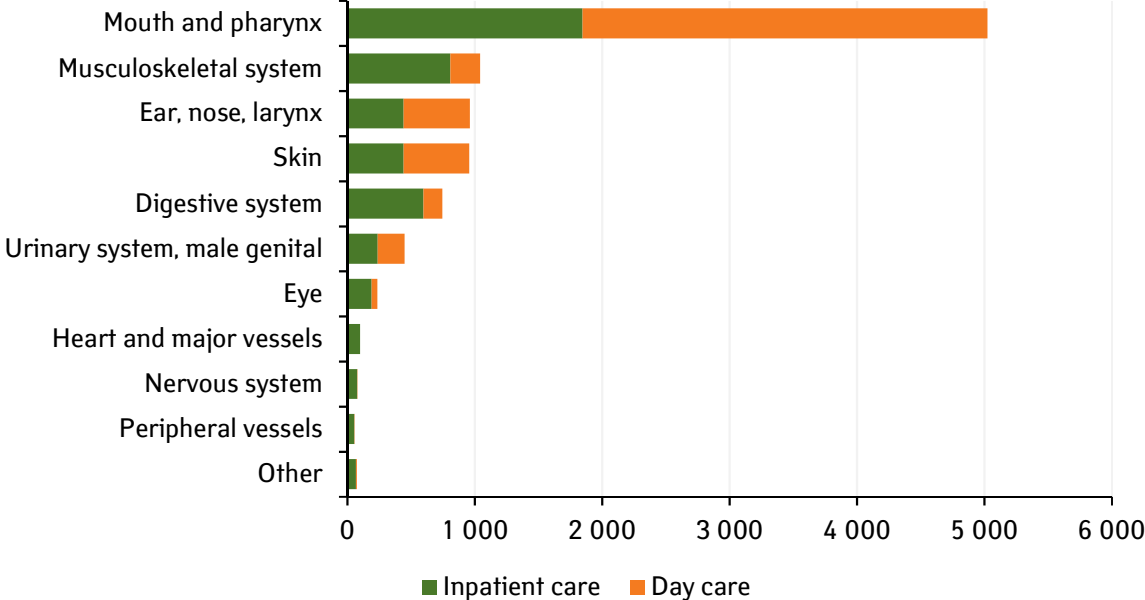
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<sup>3</sup> According to EHIF



**Figure 3.** Number of adults operated in hospital and day care by sex, 2017

Children are operated considerably less than adults. An exception is mouth and pharynx surgery. From all operated children adeno/tonsillectomy patients formed 96% in day care and 78% in hospital care. The number of children undergoing an operation exceeded the number of adults on account of day care (Figure 3, Figure 4).



**Figure 4.** Number of children receiving surgery in hospital and day care, 2017

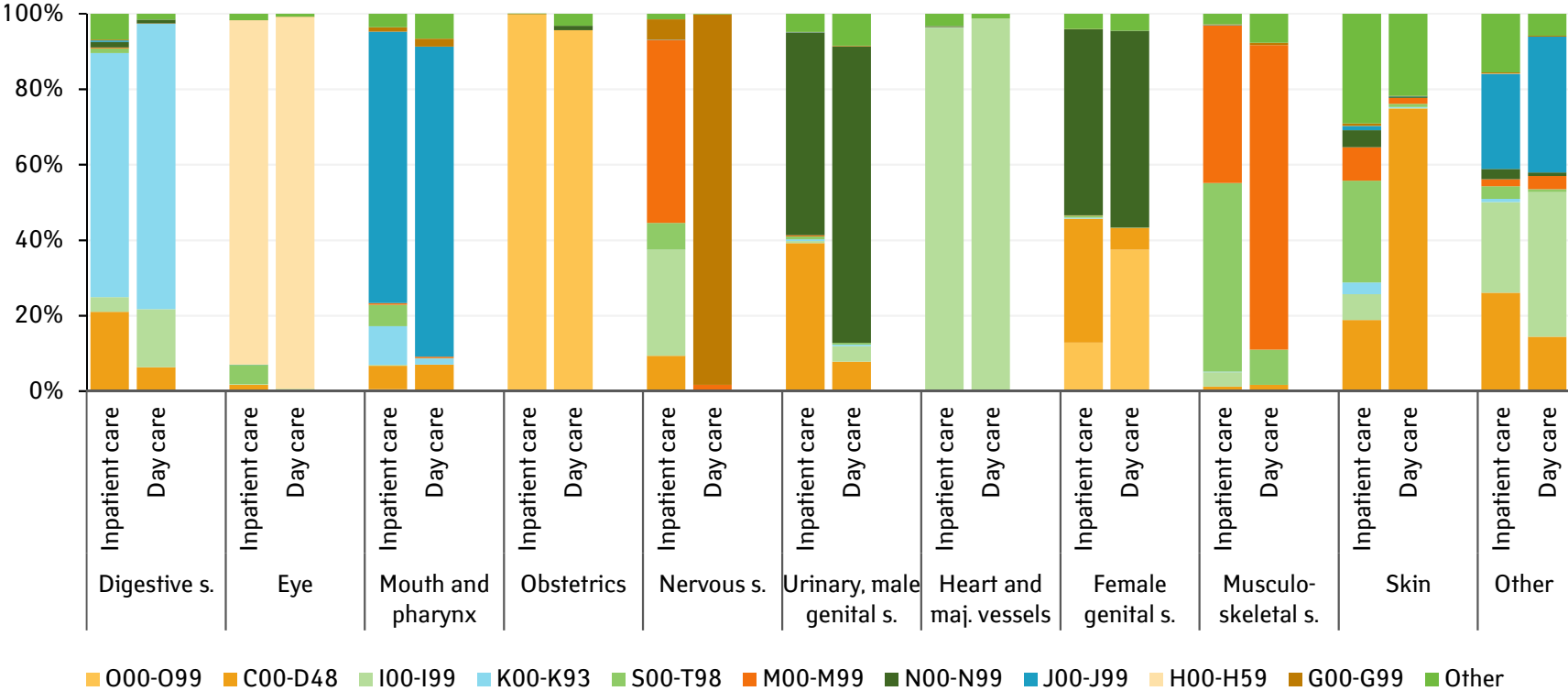
Although two thirds of all children were operated in day care with mouth and pharynx surgeries, their share has declined over the past ten years because of increasing number of surgeries on skin, musculoskeletal system and urinary and male genitalia in recent years (7).

### 1.3 Operated according to the principal diagnosis

The principal diagnosis of surgery patients is largely the ICD-10 equivalent of the operated organ system. In 2017, more than 90% of adults had a principal diagnosis of an eye disease in case of eye surgery, pregnancy or childbirth issue in case of obstetrics surgery, and cardiovascular disease in case of heart and thoracic vessels surgery (Figure 5). On 80% of day care and 70% inpatients, performed the oral and pharyngeal operation, the cause of treatment was respiratory disease. Three fourths of day care patients and two thirds in inpatient care who underwent a surgery on digestive organ were operated for digestive system disease.

The proportion of tumours as the principal diagnosis was higher among the day care patients undergoing skin and subcutaneous tissue (75%) surgeries and inpatients who had surgeries on male (39%) and female (33%) genitalia. In inpatient care, neoplasms were operated as the principal diagnosis in approximately 9,100 adults, quarter of which were benign.

Approximately 5,600 adults with the principal diagnosis of neoplasm were operated in day care, including due to benignant neoplasms in two thirds of the cases.



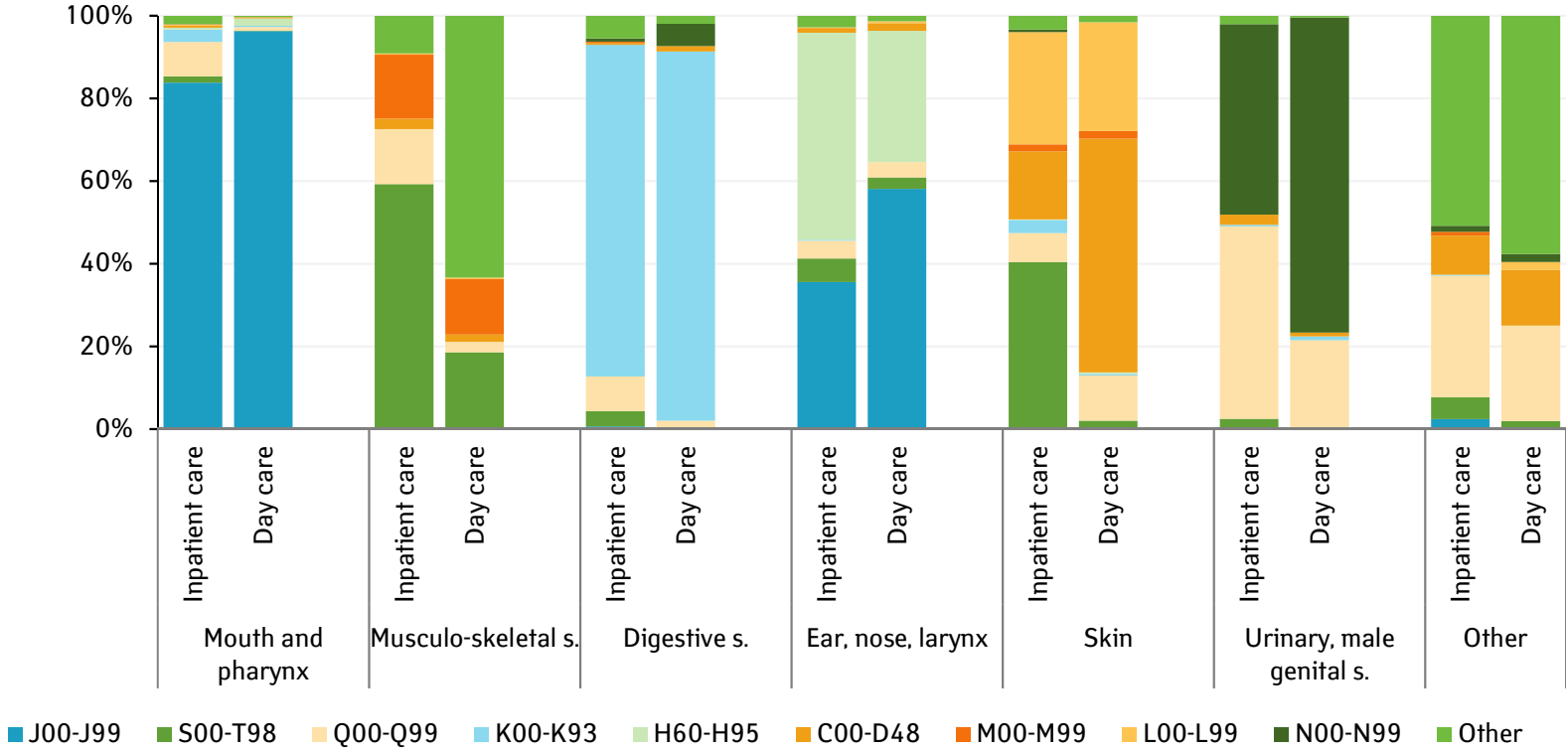
**Figure 5.** Distribution of surgery patients by organ system and principal diagnosis, adults, 2017

Source: EHIF

Diagnosis groups: O00–O99 Complications of pregnancy, childbirth; C00–D48 Neoplasms; I00–I99 Diseases of the circulatory system; K00–K93 Diseases of the digestive system; S00–T98 Injuries, poisonings; M00–M99 Diseases of the musculoskeletal system and connective tissue; N00–N99 Diseases of the genitourinary system; J00–J99 Diseases of the respiratory system; H00–H59 Diseases of eye and adnexa; G00–G99 Diseases of the nervous system

In 2017, the majority of the children who underwent oral and pharyngeal surgeries (84% in day care and 96% in inpatient care) were diagnosed with respiratory disease and of the children who underwent gastrointestinal (80% in inpatient care, 89% in day care) surgeries were diagnosed with

gastrointestinal diseases (Figure 6). The proportion of neoplasms is lower than in adults, except for skin and subcutaneous tissue surgery patients who form half of the cases in day care. 98% of these were benignant. One of the diagnostic groups characteristic to children is congenital malformations. The highest proportion of children with congenital malformations were operated in the group of male genitourinary system patients – 46% in inpatient and one fifth in day care.



**Figure 6.** Distribution of surgery patients by organ system and principal diagnosis, children, 2017

Source: EHIF

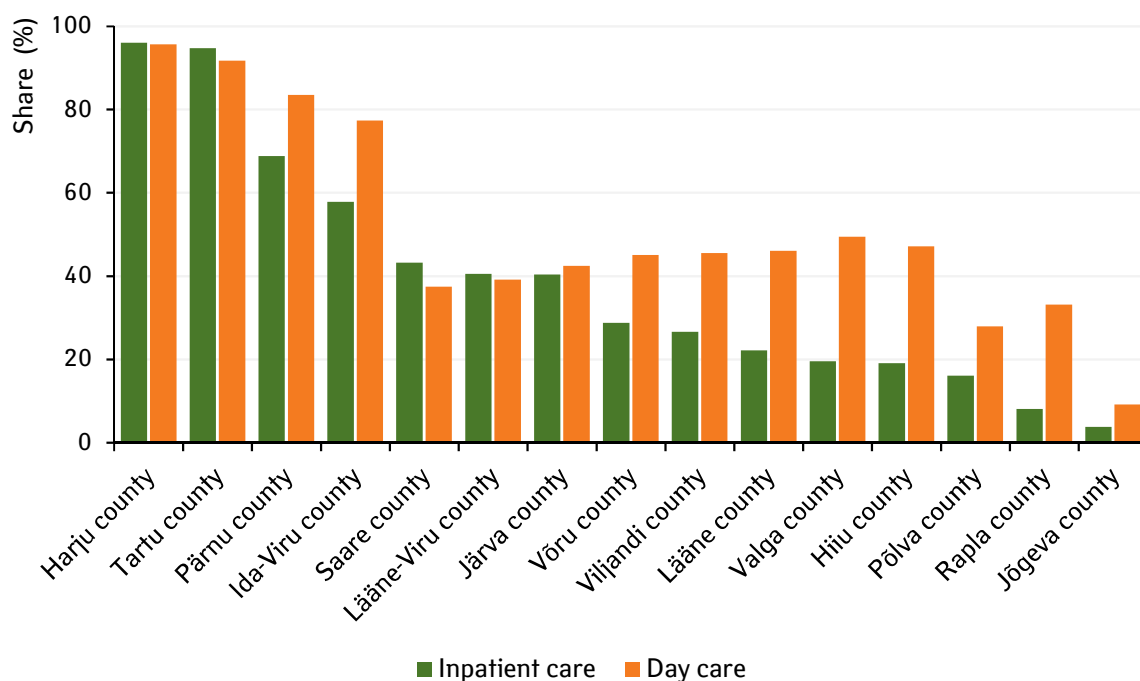
Diagnosis groups: J00-J99 Diseases of the respiratory system; S00-T98 Injuries, poisonings; Q00-Q99 Congenital malformations, deformations and chromosomal abnormalities; K00-K93 Diseases of the digestive system; H60-H95 Diseases of ear and mastoid; C00-D48 Neoplasms; M00-M99 Diseases of the musculoskeletal system and connective tissue; L00-L99 Diseases of the skin and subcutaneous tissue; N00-N99 Diseases of the genitourinary system

## 1.4 Surgery patients by county

On performing the inpatient surgeries in counties, the main determining factor is what type of hospital is in the county and what are the specialities of the services, including emergency services. Regional hospitals are in Harju and Tartu counties. In addition to Harju county, there are also central hospitals in Pärnu and Ida-Viru counties. In Jõgeva county, only the local hospital provides inpatient surgical services. In the remaining counties, general hospitals are responsible for hospital care.

As the majority of surgical workload is provided by central and regional hospitals, more than 90% of Harju and Tartu county people were operated in inpatient care in their own county in 2017. In Pärnu and Ida-Viru counties, the share of operations within the patient's residence place county was approximately 60–70%. The proportion was the lowest in Jõgeva county – less than 4%. The rest of the surgery patients received 8–40% of their treatment at home county (Figure 7).

In counties where inpatient surgery is provided only by a general or local hospital, in 2017 the most frequent was gastrointestinal surgery (7), ranging from 14 to 43% of surgery patients. Gastrointestinal surgery had the highest proportion, over 40%, in Võru and Valga counties. In addition to hernia operations performed in all counties, appendectomies and laparoscopic cholecystectomies were the most common gastrointestinal surgeries. Obstetrics, female genital surgeries and musculoskeletal system surgeries were also more frequent in inpatient care of general hospitals. The share of obstetrics in inpatient surgery was the highest in Põlva and Hiiu counties, reaching nearly 30% of inpatient surgery and together with gynaecology in Põlva county, more than 50%.



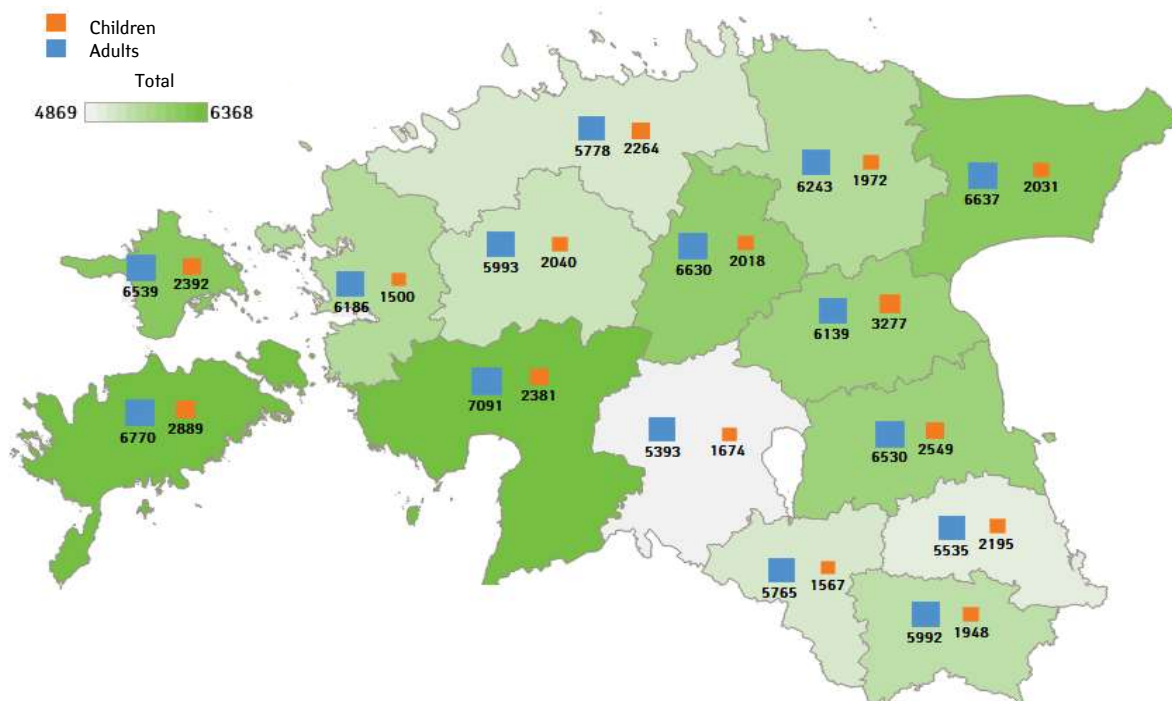
**Figure 7.** Share of the total number of people undergoing a surgery in the patient's county of residence, 2017

Source: EHIF

Compared to inpatient surgery, more day surgery services are provided in counties (Figure 7). More than 90% of the patients living in Harju and Tartu counties were operated in their own

county in day surgery. Pärnu and Ida-Viru county's health care providers (HCP) performed around 80% of those counties' patients day surgery. In other counties, the share of local HCPs was between 9–49%. Hospitals and specialist health care providers not belonging to the HMP perform one fifth of day surgery, but these HCPs are in large centres. In other counties, the only performer of day surgery is usually the general or local hospital. In the most counties with general or local hospitals, the largest share of surgeries was done on female genital organs, mainly the endometrial ablations and abortions. Skin and subcutaneous tissue, mouth and pharynx, and musculoskeletal system were also frequently operated in day care. At the same time, there was a large variance in the surgeries in counties. For example, the proportion of mouth and pharynx surgeries ranged from 2% in Hiiu County to 90% in Jõgeva County.

The number of inpatient surgery patients per 100,000 inhabitants by the **county of the patient's residence** is less different than by the county of the HCP. Although not all specialities are covered in all counties in inpatient care, it cannot be claimed that fewer patients were operated in counties that lack higher-level treatment options (Figure 8).



**Figure 8.** Number of surgery patients in inpatient care per 100,000 inhabitants by county of residence, children and adults, 2017

Source: EHIF

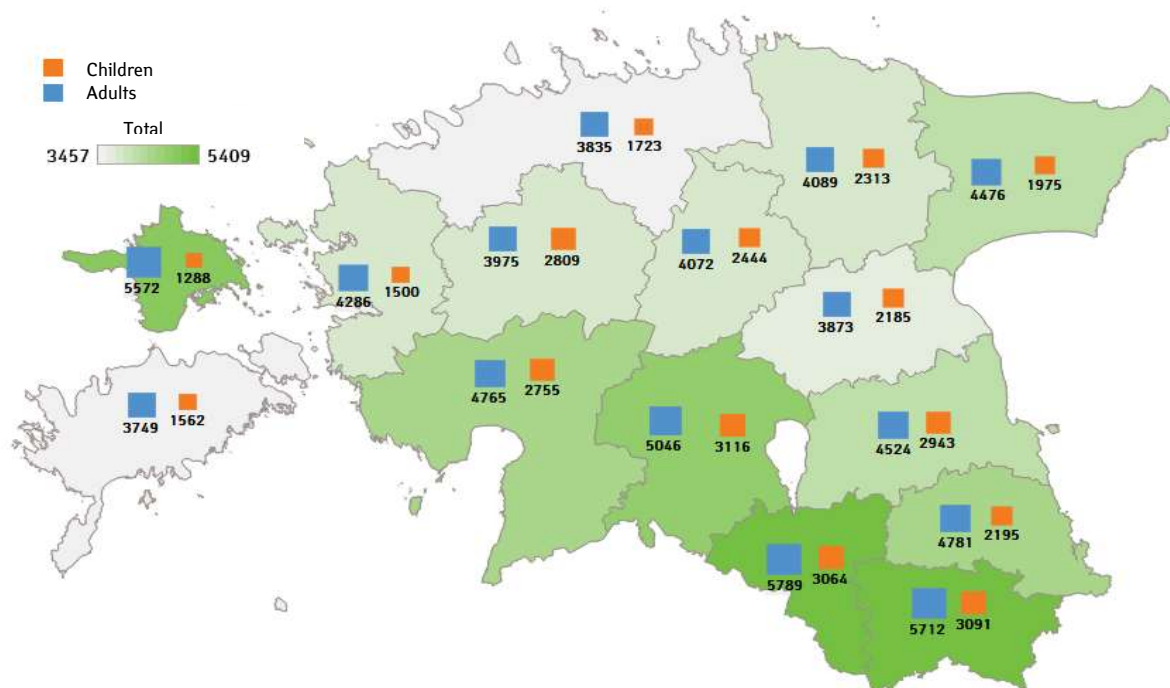
Counties differ in surgery patients' procedure groups. Comparing the more frequent procedure groups in 2017, there was a smaller difference in hospital care regarding surgery patients of **digestive organs** and heart and thoracic vessels. The number of digestive system surgery patients at Ida-Viru County per 100,000 inhabitants was 1,207, exceeding the average by one fifth. At Põlva County, there were 849 surgery patients per 100,000 inhabitants, which is 15% less than the average.

The frequency of **obstetrics'** patients per 100,000 females was the highest in Harju and Tartu counties that also have more childbirths per population. At the same time, Viljandi County with the lowest rate, 40% less than the average, is not among the counties with lowest birth rates.



There were on average 60% more **female genital** surgery patients at Hiiu County, both in day care and hospital care. 80% of the Hiiu County women' female genital day surgeries and one third of inpatient surgeries were performed at Hiiu County.

Large difference exists in **skin and subcutaneous tissue** surgery patients. In Pärnu County were 574 inpatient and 1,210 day surgery patients per 100,000 inhabitants, which was almost twice as high as the average in both hospital and day care.



**Figure 9.** Number of surgery patients in day care per 100,000 inhabitants by county of residence, children and adults, 2017

Source: EHIF

In day surgery, (figure 9) there were 1,645 **eye** surgery patients per 100,000 inhabitants in Võru County, which exceeded the average by a third. The number of day care surgery patients in Harju County was one fourth lower than the average.

## 1.5 Surgeries by countries

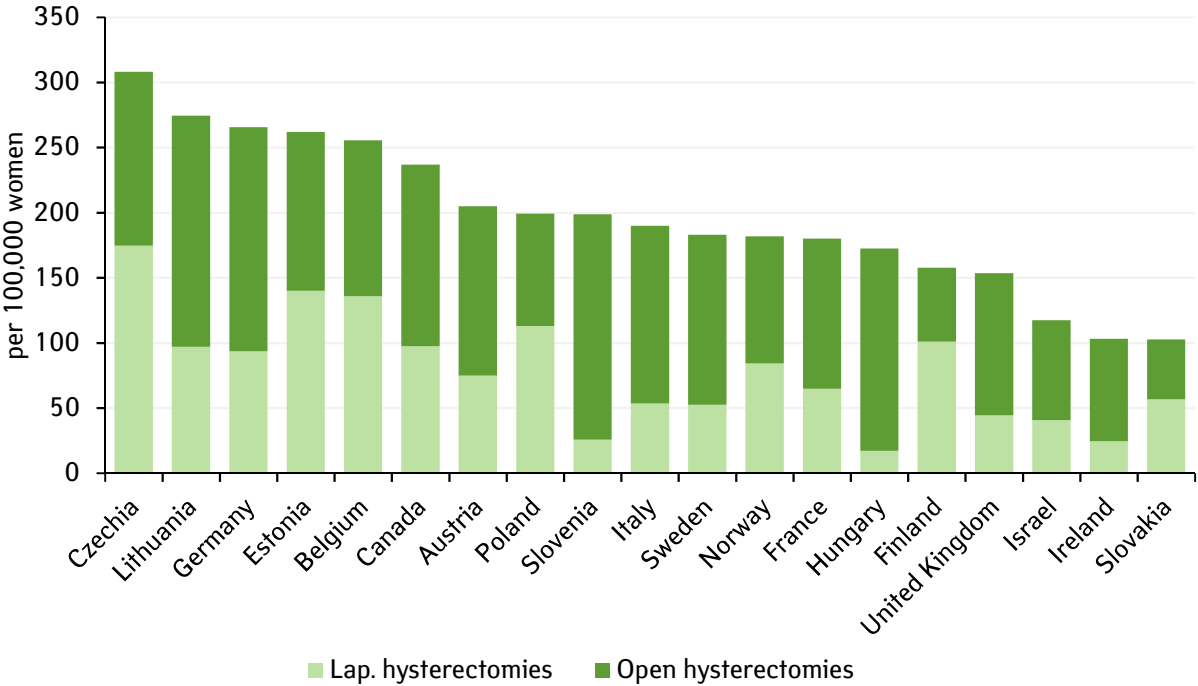
Internationally, surgical statistics has been collected for years<sup>4</sup>. It has been found that although the variability of the results is partly due to data compatibility problems, in most cases the problem lies in different treatment need, clinical practice and resource availability (8).

Next, the more frequent procedure groups in Estonia are compared to other countries. The data is submitted per population, bringing out day surgery and less-invasive surgery (laparoscopic and percutaneous surgeries).

<sup>4</sup> The list of procedures in Estonian health statistics does not coincide with the international one; there are also discrepancies in the definition of an operation, for this reason the data has been supplemented with the data from EHIF.

In international comparison on **obstetrics**, Estonia belonged among the countries in which caesarean sections are performed less frequently – there were 200 caesarean births per 1000 live births in 2016 (9).

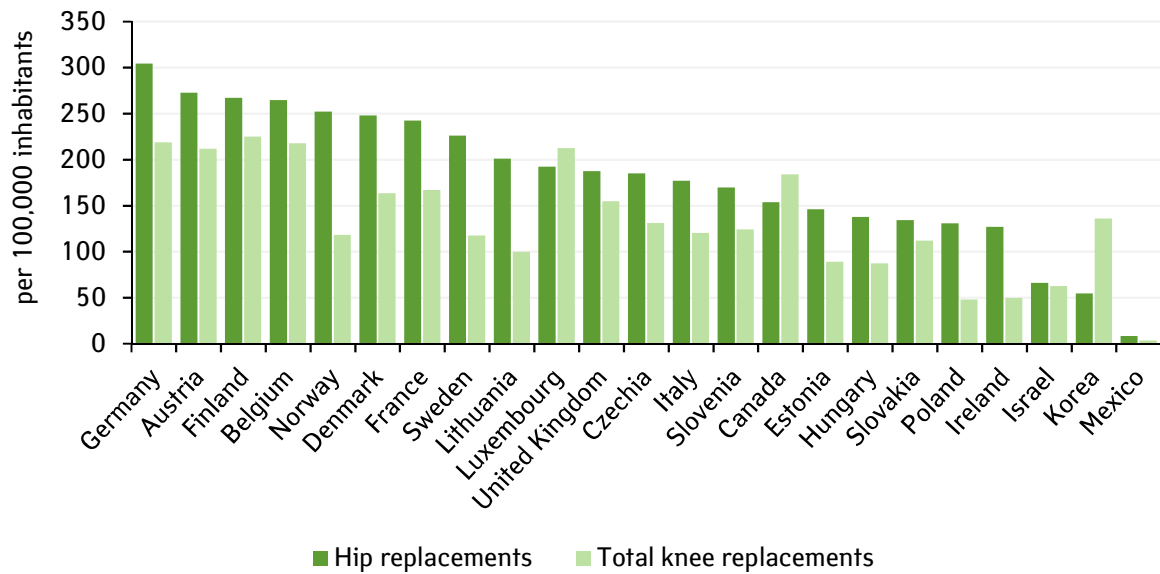
From **female genital operations**, the data on hysterectomies is presented. In most countries, hysterectomies are not done in day care or are performed in less than 5% of cases; in Estonia, the number was 2.6%. (9). The exception is Denmark, where half of the hysterectomies were done in day care in 2016. In Estonia, hysterectomies were performed more than on average per 100,000 women, and the share of laparoscopic surgeries was also higher than average, amounting to more than half of the cases (Figure 10). The decline in the number of hysterectomies has been described over the years, including the increase in the share of laparoscopic hysterectomies in almost all the European countries (10).



**Figure 10.** Number of hysterectomies per 100,000 women by selected OECD member countries, 2016

Source: OECD countries that submitted data on both surgeries on 2016

**Hip and knee prosthesis** ensure a significant improvement in the condition of the patient as a treatment for changes in the joints caused by the aging of the population as well as in case of a trauma. A strong correlation has been found between endoprosthesis and gross domestic product and health expenditure; at the same time, the number of surgeries in the countries with the lowest numbers of surgeries has increased (11). Estonia stands out with a less than average number of endoprostheses (Figure 11) and with its long waiting lists (12, 13).

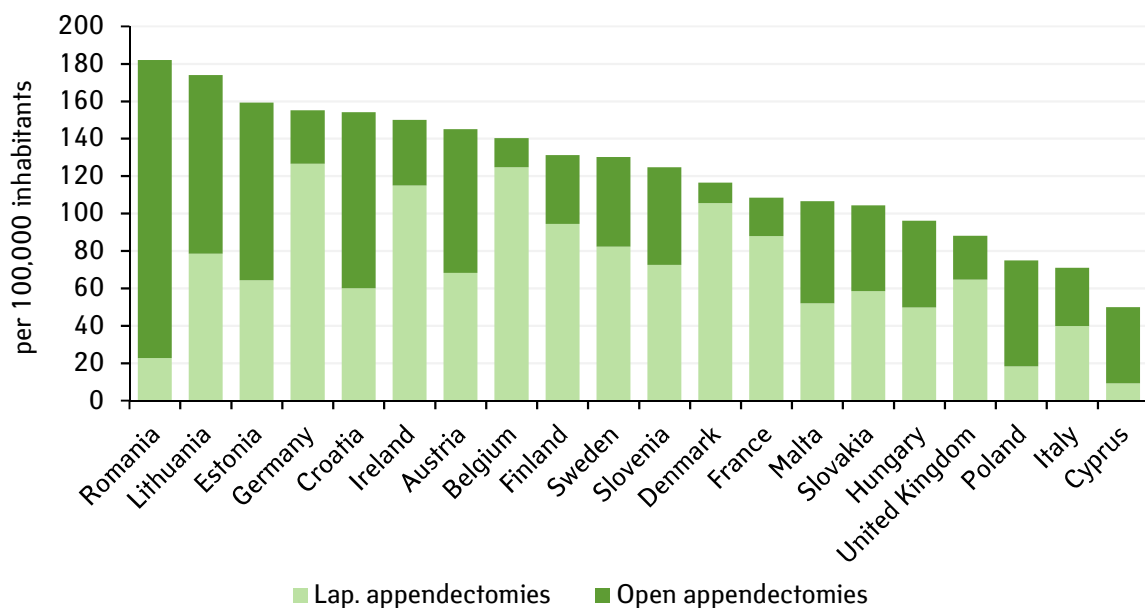


**Figure 11.** Hip and total knee replacements per 100,000 inhabitants by selected OECD countries, 2016

Source: OECD countries that submitted data on both surgeries on 2016

Several gastrointestinal surgeries are among the ones most frequently performed in the EU. In all countries, laparoscopic **cholecystectomies** are mainly performed, ranging to 73–93% of all cholecystectomies (10, 14).

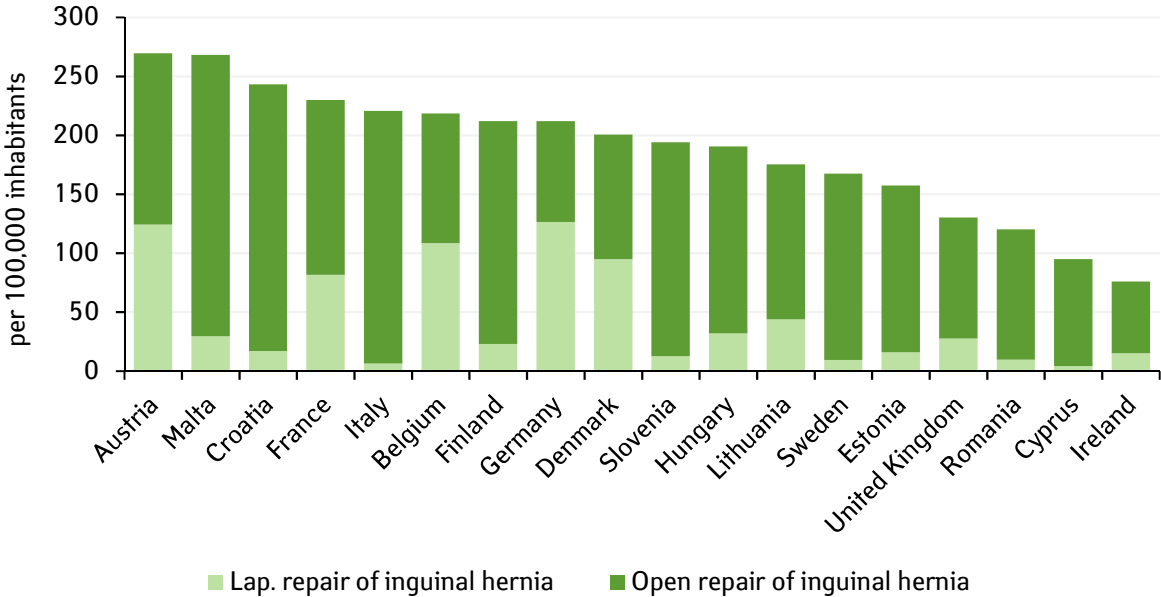
The number of **appendectomies** varies less, but the variability is greater in the share of laparoscopic surgeries, ranging from 12% in Romania to 90% in Denmark (Figure 12). Over the years, the number of appendectomies has decreased due to improved diagnostics and pharmacological treatment (8, 14). Appendectomies are performed relatively lot in Estonia, with the share of laparoscopy reaching 40%.



**Figure 12.** Number of appendectomies per 100,000 inhabitants by selected EU countries, 2016

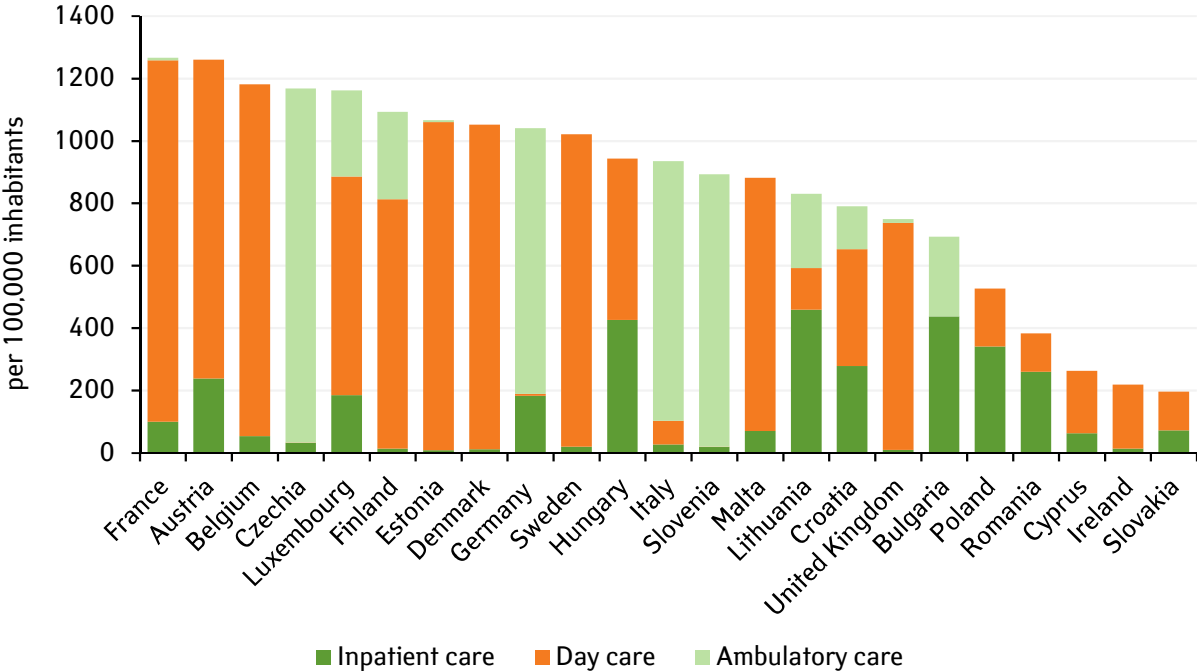
Source: Eurostat. EU countries that submitted data on both surgeries on 2016

In **inguinal hernia** surgeries, the use of a laparoscopic method has increased year by year (10), reaching 60% in Germany in 2016 (Figure 13). In Estonia, the respective value was 10%. Day surgery was the most popular in Denmark – 85% of all procedures. In Estonia, inguinal hernia was operated in day surgery in almost half of the cases.



**Figure 13.** Number of inguinal hernia surgeries per 100,000 inhabitants by selected EU countries, 2016  
 Source: Eurostat. EU countries that submitted data on both surgeries on 2016

Due to aging of the population, **cataract** has become one of the most frequently operated pathologies.



**Figure 14.** Number of cataract surgeries per 100,000 inhabitants by selected EU countries, 2016  
 Source: Eurostat. EU countries that submitted data on 2016

Despite the long waiting lists (13), there are more cataract surgeries in Estonia than on average in the EU. Characterised by high share of day/outpatient surgery. In 2016, less than tenth of cataract surgeries were performed in inpatient care in thirteen EU countries (Figure 14) and the lowest share of inpatient care was in Estonia, accounting for 1% of the total treatment (10).

## 2 Data sources

In health statistics (HS), reports collected from the service providers are mainly used for surgery statistics, which is the source for this comparison on the trend and sex, age and organ systems of surgery patients in this analysis (chapters 1.1 and 1.2).

For international comparison, a combination of service providers' reports and EHIF medical invoices is presented. Comparison of surgeries by country (chapter 1.5) is provided on operations.

Outcome for the principal diagnosis and the county of residence of the patient (chapters 1.3 and 1.4) is based on EHIF data.

Due to the use of different data sources, the following should be taken into consideration when reading the analysis:

- EHIF data contains the procedures financed by the EHIF, and HS reports also include the ones for which the patients paid themselves;
- foreigners and patients with missing age are excluded from EHIF's county data by age groups, HS also includes foreigners;
- in most cases, the comparisons are made based on the surgery patients, that means based on principal procedure. When multiple procedures are performed on the same day, one procedure will be considered as the principal by surgeon;
- surgery patients include everyone who has undergone a surgery based on the NCSP chapters A–Q, Y. This means that there are also procedures that are not performed in the operating theatre, e.g. endoscopic surgeries;
- in case of international comparisons, surgeries have been compared. When several surgeries have been performed on a patient, he/she is added to the statistics in all these surgery types;
- the selection of the principal procedure differs in some specialities in the EHIF and HS databases.

Comparing the data, the Estonian Health Insurance Fund had 4% less surgery patients compared to the HS in inpatient care and 10% less in day care in 2017 (table 1, table 2).

**Table 1.** Comparison of surgery patients by the county of the HCP, based on the data of the health statistics and the Health Insurance Fund, 2017

HCP county	Operated in hospital care			Operated in day care		
	HS	EHIF	EHIF/HS (%)	HS	EHIF	EHIF/HS (%)
Harju County	40 666	38 689	95.1	27 848	24 133	86.7
Hiiu County	123	122	99.2	226	228	100.9
Ida-Viru County	5 119	5 282	103.2	4 855	4 826	99.4
Jõgeva County	82	82	100.0	175	168	96.0
Järva County	916	929	101.4	678	665	98.1
Lääne County	364	362	99.5	526	519	98.7
Lääne-Viru County	1 547	1 565	101.2	1 060	1 039	98.0
Põlva County	381	365	95.8	562	559	99.5
Pärnu County	4 155	4 358	104.9	4 069	3391	83.3

**Table 1.** Continued

HCP county	Operated in hospital care			Operated in day care		
	HS	EHIF	EHIF/HS (%)	HS	EHIF	EHIF/HS (%)
<b>Rapla County</b>	166	164	98.8	497	489	98.4
<b>Saare County</b>	893	970	108.6	443	447	100.9
<b>Tartu County</b>	18 888	18 555	98.2	13 494	12 024	89.1
<b>Valga County</b>	360	339	94.2	942	923	98.0
<b>Viljandi County</b>	769	699	90.9	1199	1 153	96.2
<b>Võru County</b>	578	645	111.6	1035	1 121	108.3

**Table 2.** Comparison of surgery patients by the organ system, based on the data of the health statistics and the Health Insurance Fund, 2017

NCSP chapter	Operated in hospital care			Operated in day care		
	HS	EHIF	EHIF/HS (%)	HS	EHIF	EHIF/HS (%)
<b>Nervous system</b>	3 084	3 205	103.9	1 892	1 927	101.8
<b>Endocrine system</b>	513	495	96.5	23	22	95.7
<b>Eye</b>	1 841	1 726	93.8	15 961	14 024	87.9
<b>Ear, nose and throat</b>	3 079	3 136	101.9	2 779	2 838	102.1
<b>Mouth and pharynx</b>	4 811	4 434	92.2	4 837	4 019	83.1
<b>Heart and large blood vessels</b>	5 481	5 340	97.4	88	77	87.5
<b>Respiratory system</b>	1 494	1 570	105.1	13	7	53.8
<b>Mammary gland</b>	1 204	822	68.3	651	149	22.9
<b>Digestive organs and spleen</b>	12 538	12 603	100.5	2 719	2 672	98.3
<b>Male genitourinary organs</b>	4 634	4 248	91.7	1 260	1 177	93.4
<b>Female genitals</b>	6 536	5 833	89.2	11 507	10 202	88.7
<b>Obstetrical care</b>	10 830	11 442	105.7	350	349	99.7
<b>Musculoskeletal system</b>	12 872	12 001	93.2	6 955	6 615	95.1
<b>Peripheral blood vessels</b>	2 504	2 809	112.2	1 983	1 487	75.0
<b>Skin and subcutaneous tissue</b>	3 579	3 402	95.1	6 591	6 116	92.8

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## Health and health care statistics:

- **Health statistics and health research database**  
<http://www.tai.ee/tstua>
- **Website of Health Statistics Department of National Institute for Health Development**  
<http://www.tai.ee/en/r-and-d/health-statistics/activities>
- **Dataquery to National Institute for Health Development**  
[tai@tai.ee](mailto:tai@tai.ee)
- **Database of Statistics Estonia**  
<http://www.stat.ee/en>
- **Statistics of European Union**  
<http://ec.europa.eu/eurostat>
- **European health for all database (HFA-DB)**  
<http://data.euro.who.int/hfadb/>
- **OECD's statistical databases (OECD.Stat)**  
[http://stats.oecd.org/index.aspx?DataSetCode=HEALTH\\_STAT](http://stats.oecd.org/index.aspx?DataSetCode=HEALTH_STAT)

