



# Spa care in the Slovak Republic from statistical perspective

# Declaration of the author's conflict of interest

- I do not have a conflict of interest
- I declare the following conflict of interest

Form of financial linkage	Company
Participation in clinical studies / company grant	
Non-monetary performance (in accordance with the law)	
Lecturer	
Shareholder	
Consultant / expert advisor	
Other income (specify)	

In accordance with UEMS (adjusted according to Slovak legislation)

## Processing, publishing and provision of information

The goal of the NHIC in the field of health statistics is mainly to expand the forms of publication and provision of statistical information to the professional and lay public **as widely as possible** and in the earliest possible horizon from the occurrence of events **using available technologies**.

Publication and provision of statistical information as a result of data processing **from statistical surveys and from the NHIC database** represents open and transparent access to data and at the same time makes it more accessible through the website [www.nczisk.sk](http://www.nczisk.sk), part [Štatistické výstupy](#)

The data are published and provided in accordance with Act no. 153/2013 Coll., Act No. 540/2001 Coll. and other related legislative standards ensuring the protection of personal and confidential data.

**The Ministry of Health is the recipient** of all processed data for the purposes of managing the department's health policies at the level of health care providers in accordance with the contract concluded between the NHIC and the Ministry of Health of the Slovak Republic.

Processed outputs at the SR level are a source for **international databases**.

# Processing, publishing and provision of information

Statistical outputs are mainly presented in

## ■ Regular form

- Summary publications ([Zdravotnícka ročenka](#)),
- analytical publications
- topical statistical outputs in form of publication spreadsheet outputs, datasets and infographics
- **Separate topic: Spa care** ([Kúpeľná starostlivosť](#)) in accordance with Publishing program of statistical outputs

## ■ Irregular form

- presentations, news, press releases, articles and information on the website [www.npz.sk](http://www.npz.sk)
- specific outputs on request (main experts and professional societies, scientific institutions, students, etc.) through [info@nczisk.sk](mailto:info@nczisk.sk)



## Collecting and processing of statistical data

The processing of health statistical information is necessary for **the purposes of implementing health policy**, for the creation of **comparable statistical resources** at the regional, national and international levels and is one of the long-term supporting tasks of NHIC.

The source of the currently presented data is the data of statistical surveys of the database of **the national health information system**:

- *Report of **ending spa treatment ZS** (MZ SR) 3-12,*
- ***Natural health spa and medical institution annual report P** (MZ SR) 3-01,*
- ***Number and structure of health professionals annual report M** (MZ SR) 1-01,*
- *National Registry of Health Workers,*
- *National Registry of Health Care Providers,*
- *Output on the **network of health care providers**,*
- *Report on **admission of inpatient care Z** (MZ SR) 1-12,*
- *National **Arthroplasty Registry**.*

# Spa care

ZS (MZ SR) 3-12, Output on the network of Health  
Care Providers

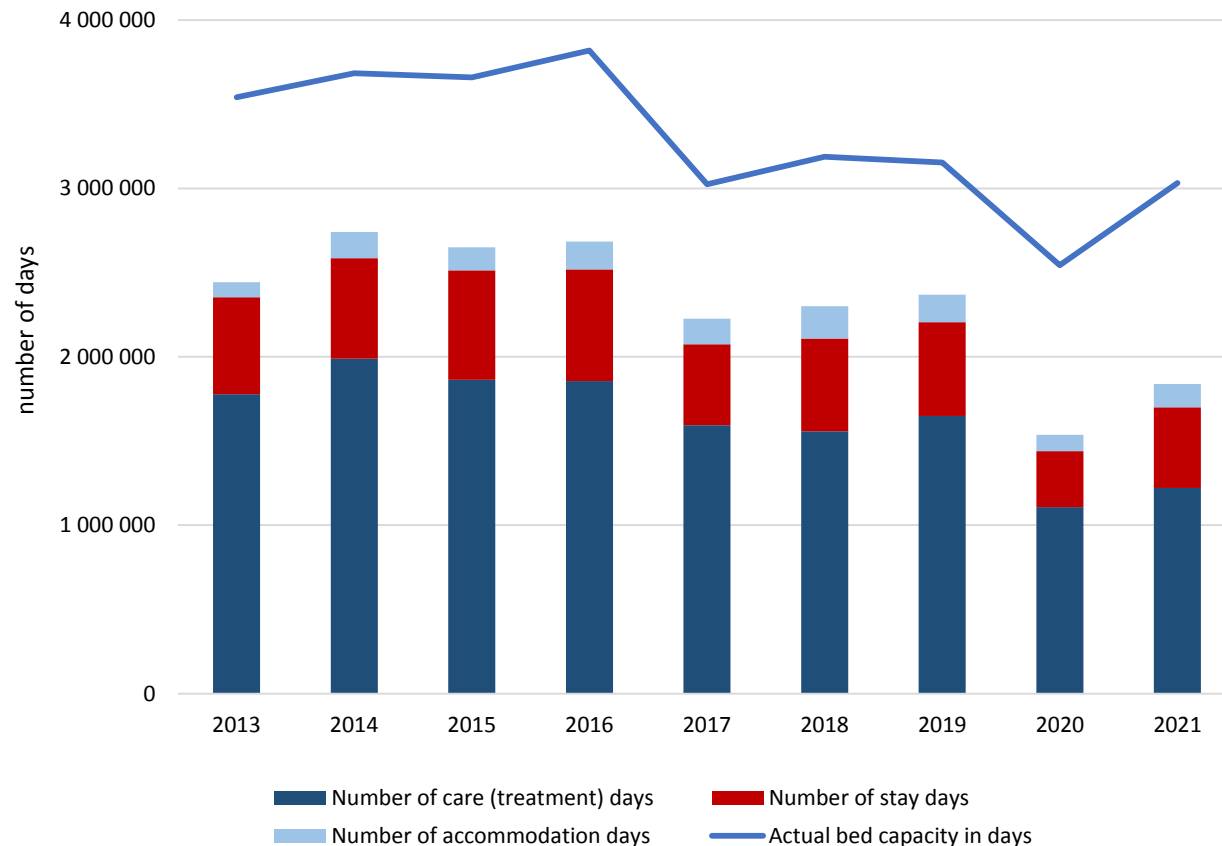
## Network of health care providers, year 2009 and 2020

Kind of healthcare facility	Number of healthcare providers (ID number)	Number of healthcare facilities	Number of units	Number of healthcare workers FTEs <sup>1)</sup>	of which						Number of visits in out-patient clinics		Number of beds
					Physicians	Nurses	Physiotherapists	Masseurs	Sanitary workers	Others	Total	of which children	
<b>As of Dec. 31. 2009</b>													
<b>Total</b>	<b>29</b>	<b>30</b>	<b>67</b>	<b>1 020,78</b>	<b>121,12</b>	<b>312,62</b>	<b>148,90</b>	<b>208,11</b>	<b>137,63</b>	<b>92,40</b>	<b>220 644</b>	<b>3 931</b>	<b>11 358</b>
Natural spa	20	21	42	811,93	93,27	243,12	106,90	176,61	112,63	79,40	192 179	3 930	10 132
Spa treatment center	9	9	25	208,85	27,85	69,50	42,00	31,50	25,00	13,00	28 465	1	1 226
<b>As of Dec. 31. 2020</b>													
<b>Total</b>	<b>26</b>	<b>28</b>	<b>59</b>	<b>1 024,10</b>	<b>128,97</b>	<b>223,98</b>	<b>199,51</b>	<b>205,35</b>	<b>215,49</b>	<b>50,80</b>	<b>126 385</b>	<b>5 710</b>	<b>9 425</b>
Natural spa	19	20	41	843,10	113,07	176,88	156,51	179,85	182,49	34,30	116 708	5 710	8 191
Spa treatment center	7	8	18	181,00	15,90	47,10	43,00	25,50	33,00	16,50	9 677	–	1 234
<b>Change 2020/2009 in %</b>													
<b>Total</b>	<b>-10,3</b>	<b>-6,7</b>	<b>-11,9</b>	<b>0,3</b>	<b>6,5</b>	<b>-28,4</b>	<b>34,0</b>	<b>-1,3</b>	<b>56,6</b>	<b>-45,0</b>	<b>-42,7</b>	<b>45,3</b>	<b>-17,0</b>

1) on the basis of reported activity through implemented statistical surveys

2) the registered number of workers **in both working and non-working relationships**, calculated as full-time workers in the professions of healthcare workers

# Use of the bed fund, development 2013 – 2021



## Bed fund:

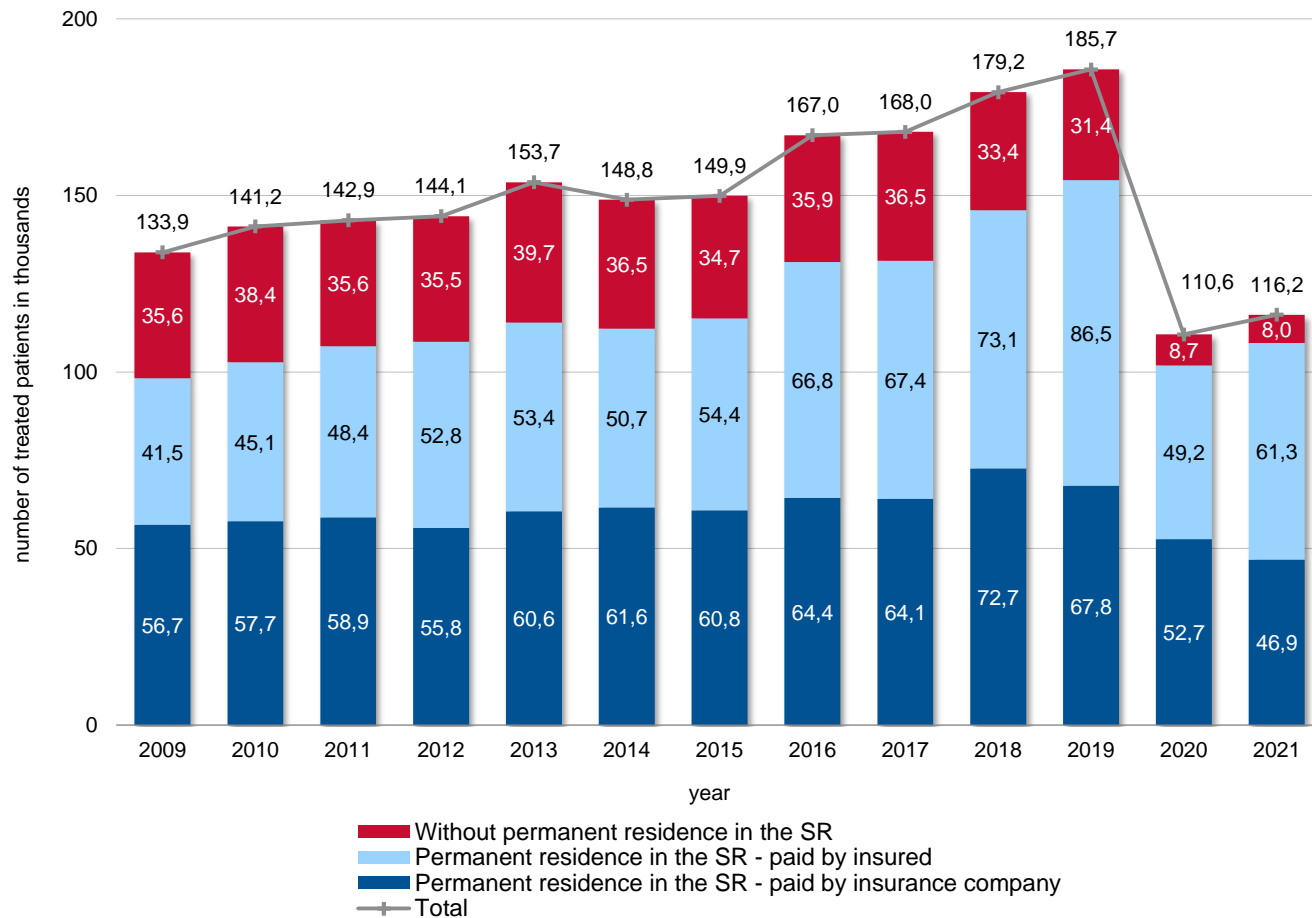
- number of available beds for treatment purposes for all days of the monitored year
- **care (treatment) day** – covered by public health insurance based on the indication list (A, B)
- **stay day** – self-paying treatment stays and rehabilitation stays
- **accommodation day** – self-paying stays without treatment and meals

## Bed occupancy - available bed capacity

- relatively steady course until 2016, followed by a slight decline and continued steady course interrupted by the pandemic
- on average at **70 %**
- the highest proportion of use in the form of treatment (treatment days) – 70 % on average



## Treated patients in spa care, development 2009 – 2021



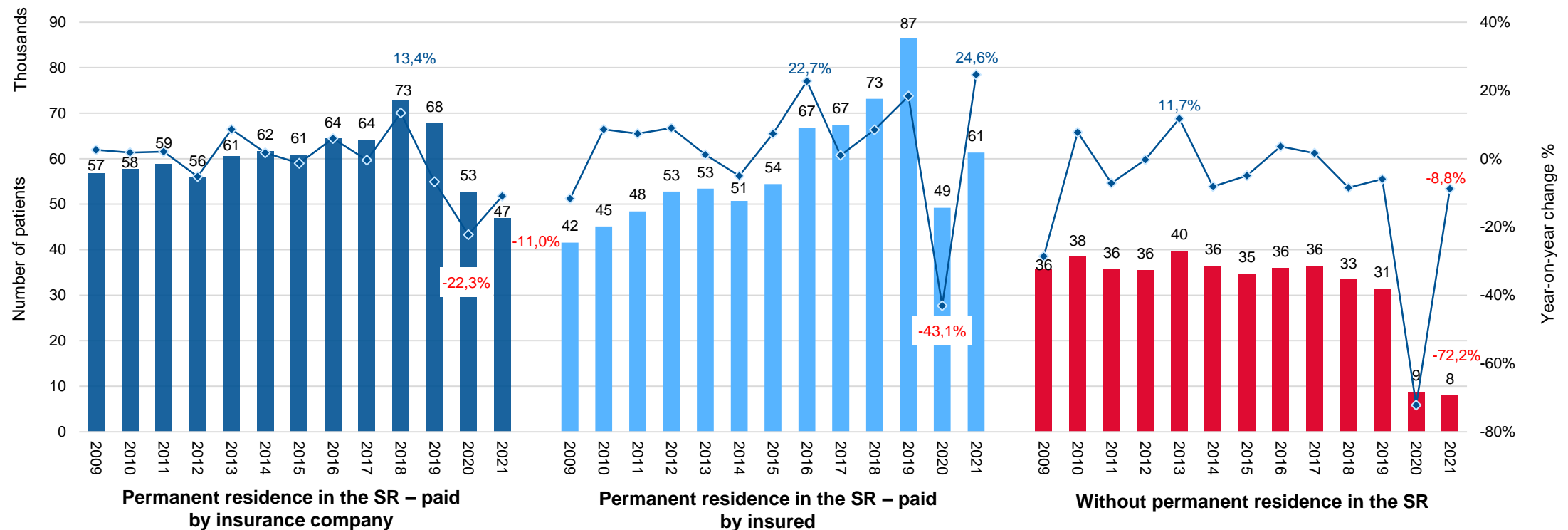
Presented outputs include:

- patients with completed treatment (**treatment stays**) in natural spas/spa treatment centers
- inpatient and outpatient** spa care
- payment from public health insurance (A, B) and payment by the insured (**self-payer**)
- reconditioning stays are not include**

**The rising long-term trend of the number of people treated in spas until 2020 was interrupted by the pandemic**

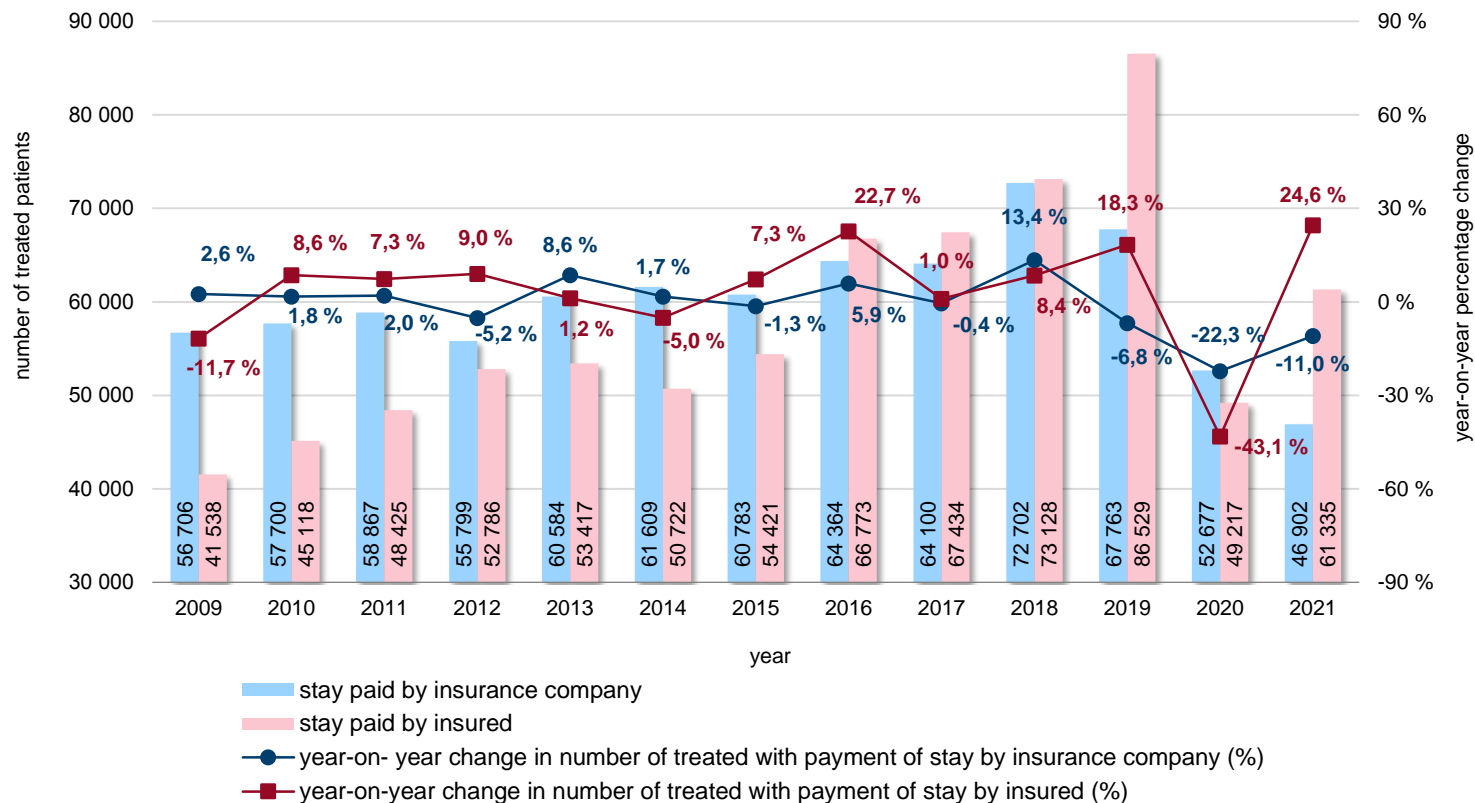
- year 2019 – the maximum number of treated persons is 185 675
- year 2020 – minimum number of 110 613 persons cured, year-on-year decrease of 75 062 persons (-40.4 %) compared to 2019
- year 2021 – lower number of patients remains (116 188), a slight year-on-year increase of 5 575 persons (+5.0 %) compared to 2020

## Number of treated persons according to permanent residence/ payment of stay, development 2009 – 2021



- during the pandemic, Slovak spas experienced the most significant percentage decrease in the number of **foreign clients**
- year 2020 – decrease by a record -72.2 %
- year 2021 – the decline continued by another -8.8 %, the lowest number of clients without permanent residence in the Slovak Republic (7 951)
- clients without permanent residence in the Slovak Republic: 98 to 99 % by reimbursement to the insured in the entire of stays with the monitored period

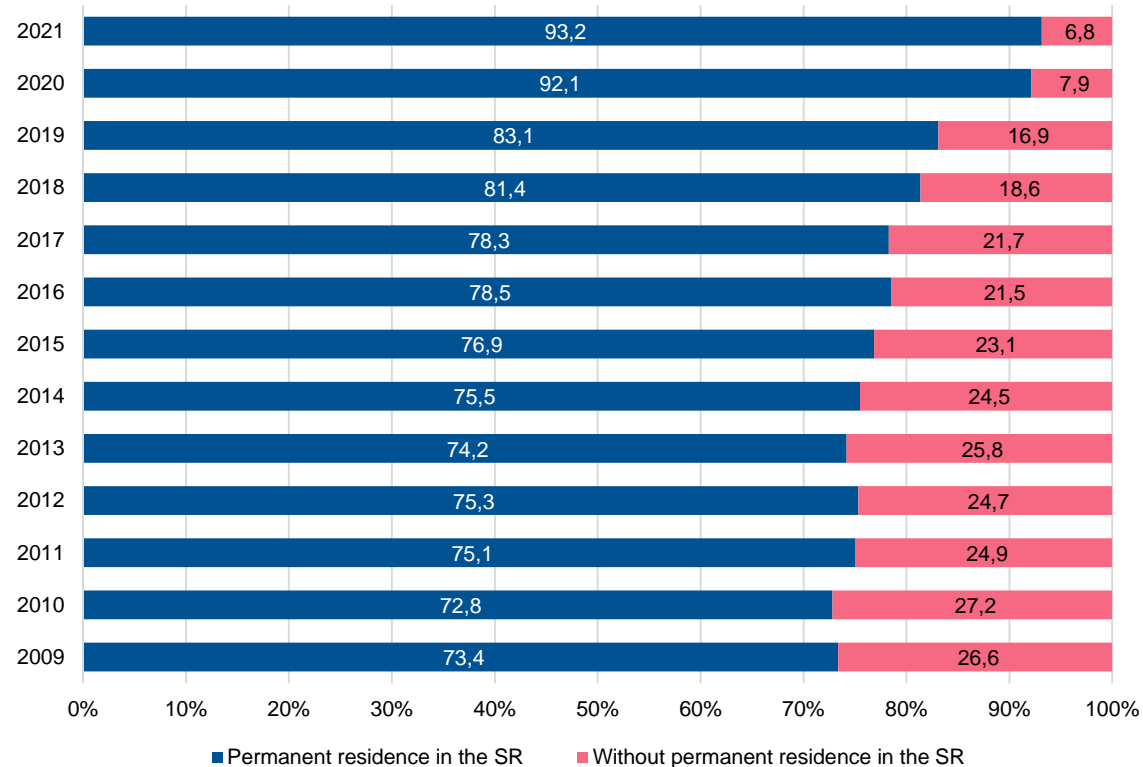
## Patients with permanent residence in the SR according to payment of stay, development 2009 – 2021



Note: year-on-year change – change in the number of patients treated between two consecutive years

- in the years 2009 – 2015, stays covered by the health insurance company prevailed (share: max. 57.7 % in 2009, min. 51.4 % in 2012)
- year 2016 – significant year-on-year increase in stays paid by the insured by 22.7 %
- year 2016, a slight predominance of stays with payment by the insured
- year 2019 - significant increase in stays by self-payers (by 18.3 %), share 56.1 %
- year 2020 – the decrease of patients in spa treatment was more pronounced in the group paid by the insured (- 43.1 %) than in the group paid by the insurance company (-22.3 %)
- year 2021 – year-on-year increase in clients with TP in the Slovak Republic paid by the insured (+ 24.6 %), persistent decrease in stays paid by the insurance company (-11.0 %)

## Share of treated patients according to the territory of permanent residence, development 2009 – 2021



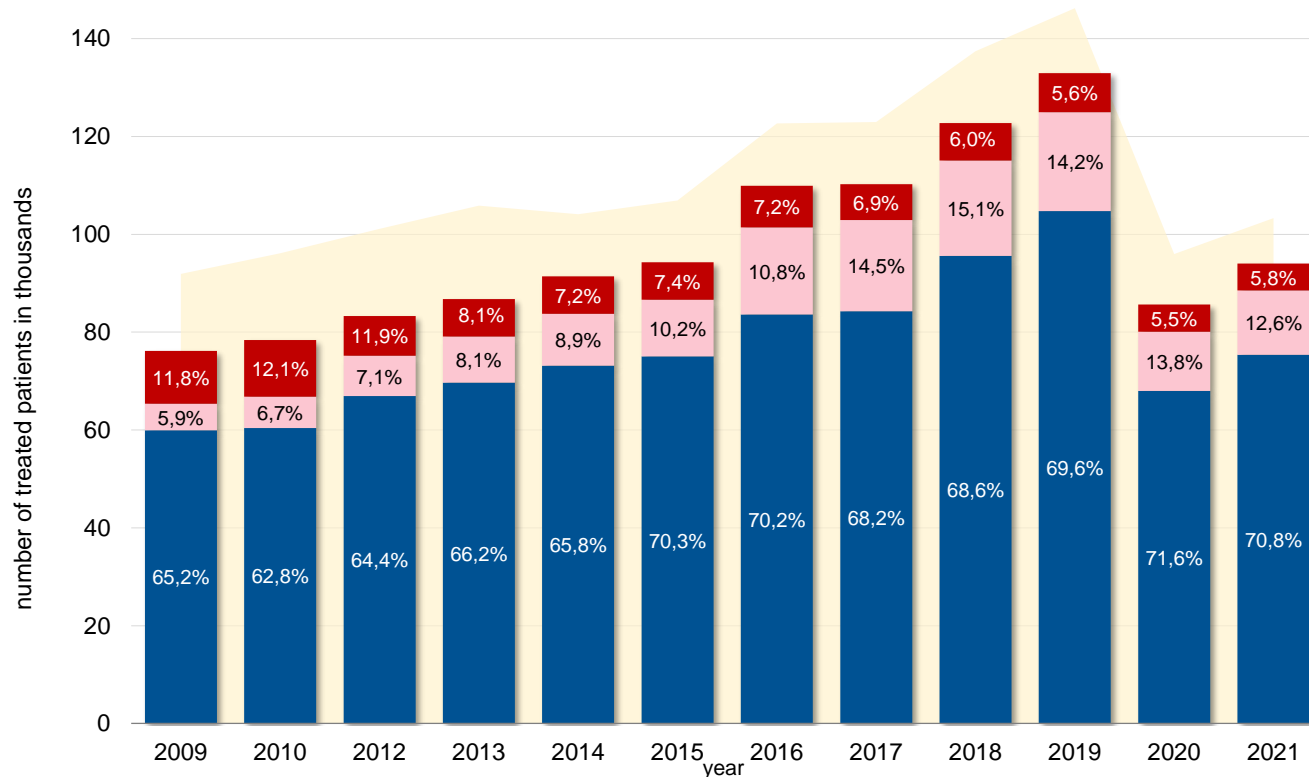
### Patients with permanent residence in the SR

- formed about  $\frac{3}{4}$  of patients for a long time
- formed around  $\frac{3}{4}$  of the patients for a long time in recent years, a gradual slight increase in the proportion of resident patients to 83.1 % in 2019
- in 2020 and 2021 the share is up to 92 – 93 %

### Patients without permanent residence in the SR

- made the largest share 27.2 % in the year **2010**
- in the following years, a gradual decline up to 16.9 % in 2019 %
- in the year **2020 and 2021 rapid decline** up to 6.8 %

## Treated adults with permanent residence in the SR – the most frequent indicative groups, development 2009 - 2021



■ Number of treated adults - permanent residence in the SR ■ II. Diseases of the circulatory system

■ V. Non-tuberculous respiratory diseases

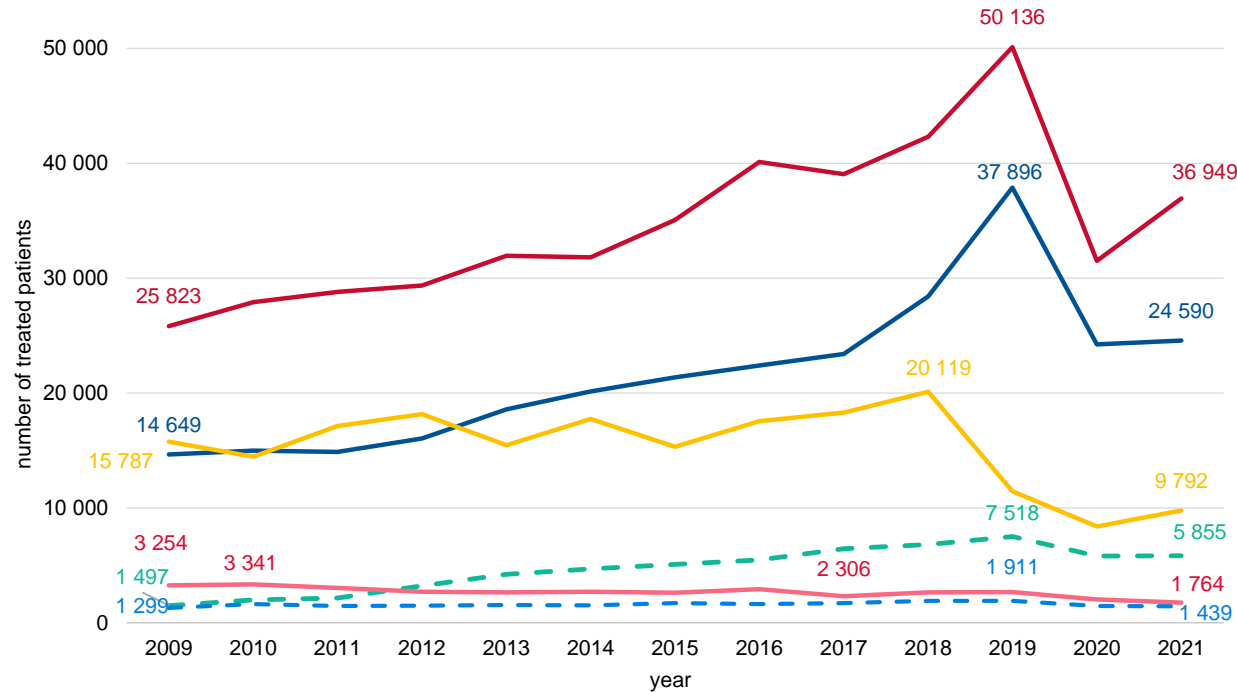
■ VII. Diseases of locomotive organs

In the monitored period, 82 % - 91 % of adults with permanent residence in the Slovak Republic were treated for indication groups :

- **VII. Diseases of locomotive organs**  
from min. 62,8 % (2010) to max. 73,0 % (2021)
- **V. Non-tuberculous respiratory diseases**  
from min. 5,9 % (2009) to max. 15,1 % (2017)
- **II. Diseases of the circulatory system**  
from min. 5,3 % (2021) to max. 12,1 % (2010)

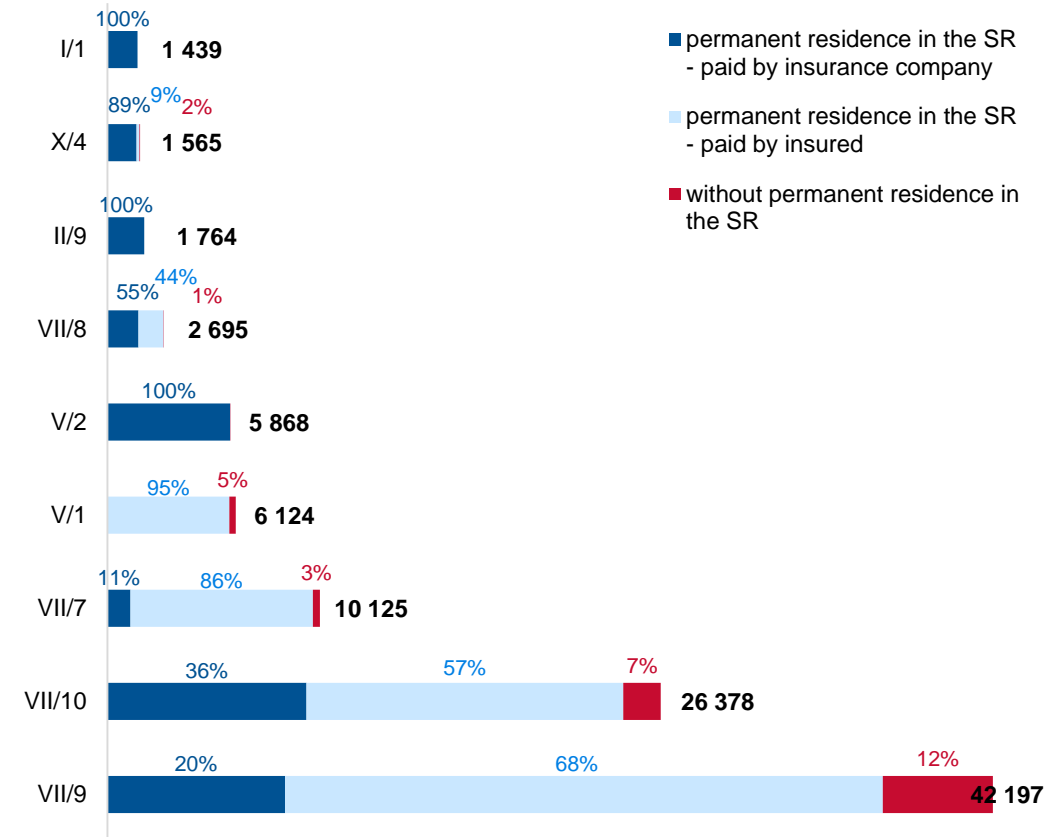
# Treated patients with permanent residence in the SR, 4-digit indication groups

Selected indication groups, development 2009 - 2021



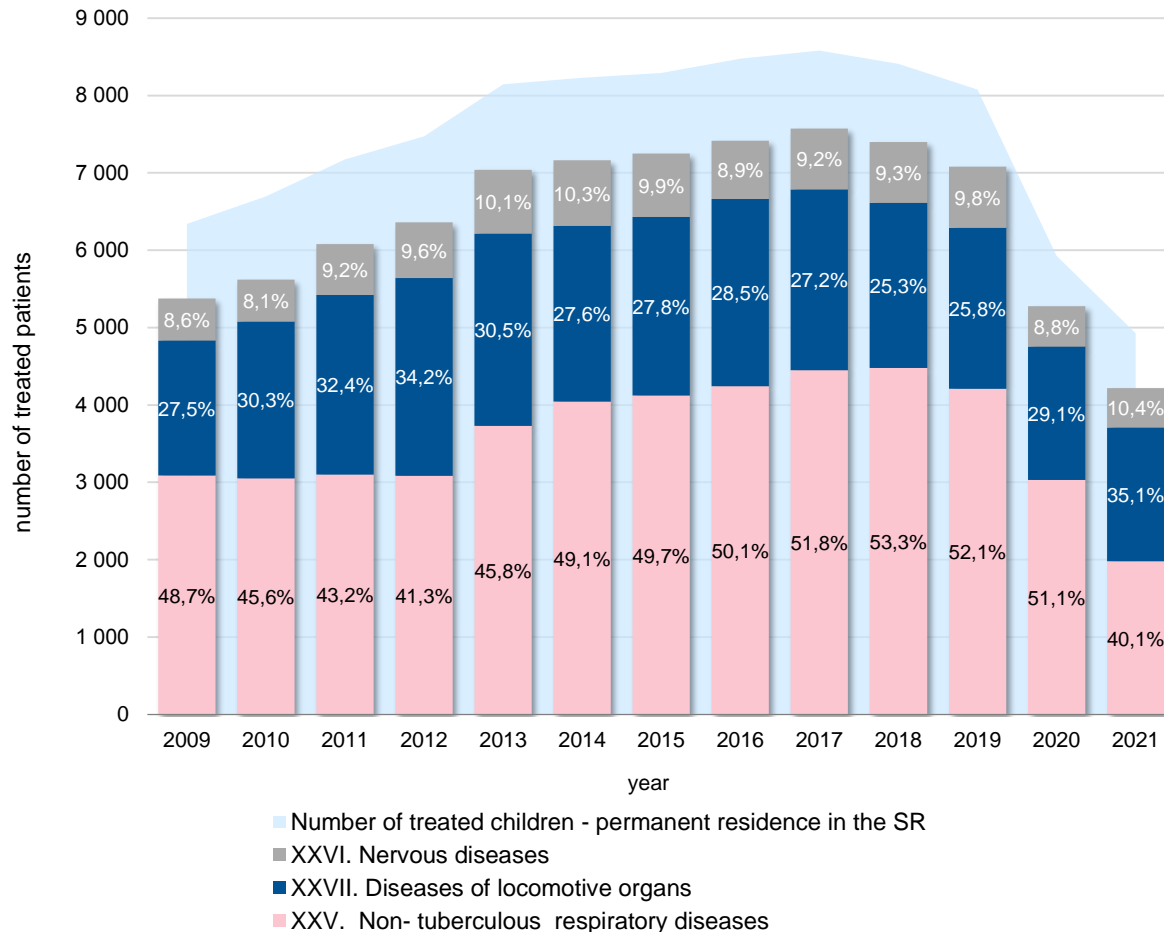
- VII/9 Vertebrogenic syndrome with transient painful spinal disorders, continuously treated
- VII/10 Conditions after injuries or operations of the locomotor system ... within 12 months of the injury or operation
- VII/7 Coxarthrosis from II. stage with functional disability, continuously treated
- - - V/2 Other chronic obstructive pulmonary disease. Bronchial asthma, consistently professionally treated
- II/9 Conditions after heart defect operations ... no later than 6 months after the operation or injury
- - - I/1 Oncological diseases within 24 months from the end of treatment, without signs of recurrence of the disease

Payment, most frequent indication groups, year 2021



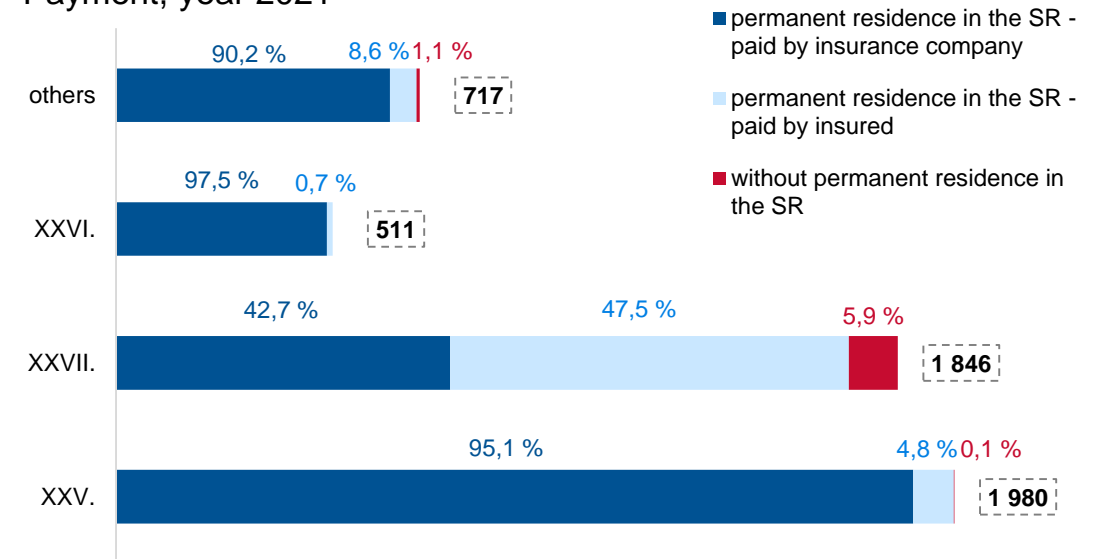
- V/1 Chronic bronchitis, consistently treated professionally
- VII/8 Arthrosis accompanied by a functional disorder, continuously treated, and arthropathy in metabolic disorders
- X/4 Generalized or arthropathic psoriasis

# Treated children with permanent residence in the SR- the most frequent indication groups, development 2009 - 2021



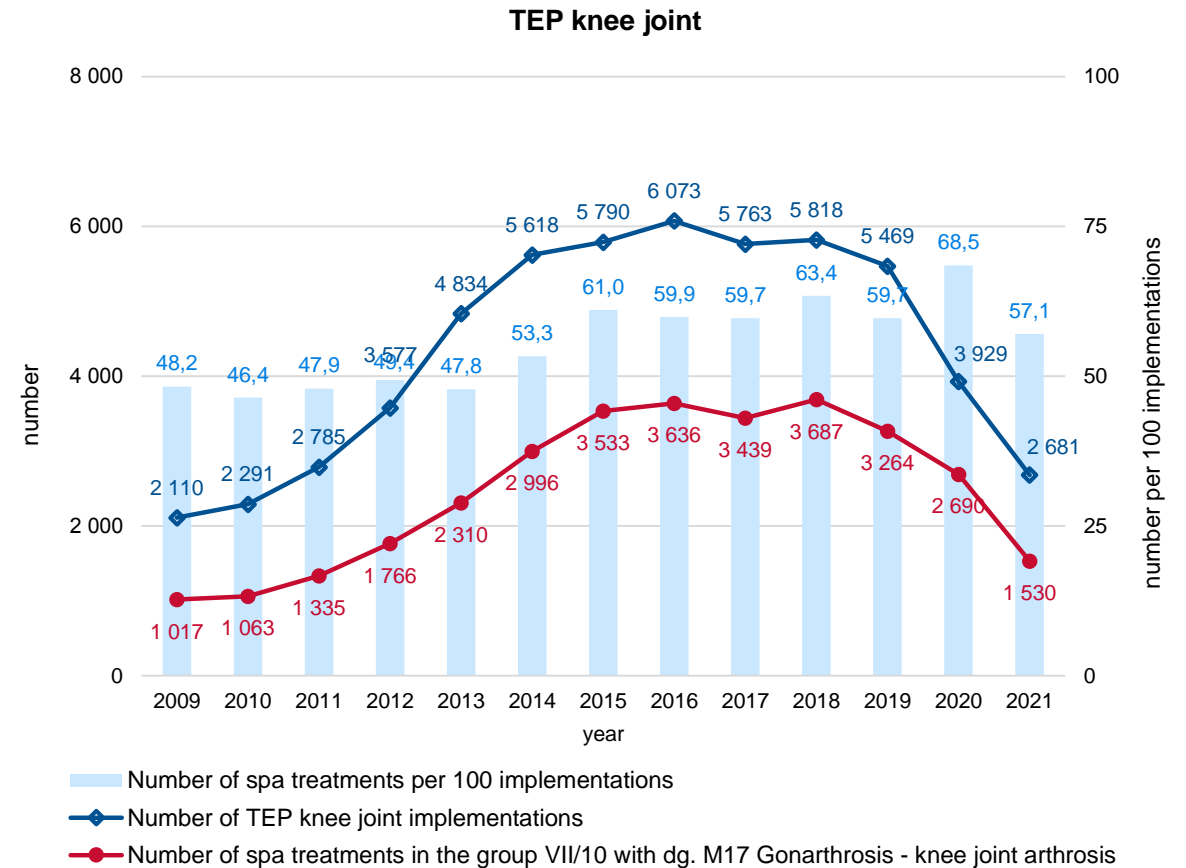
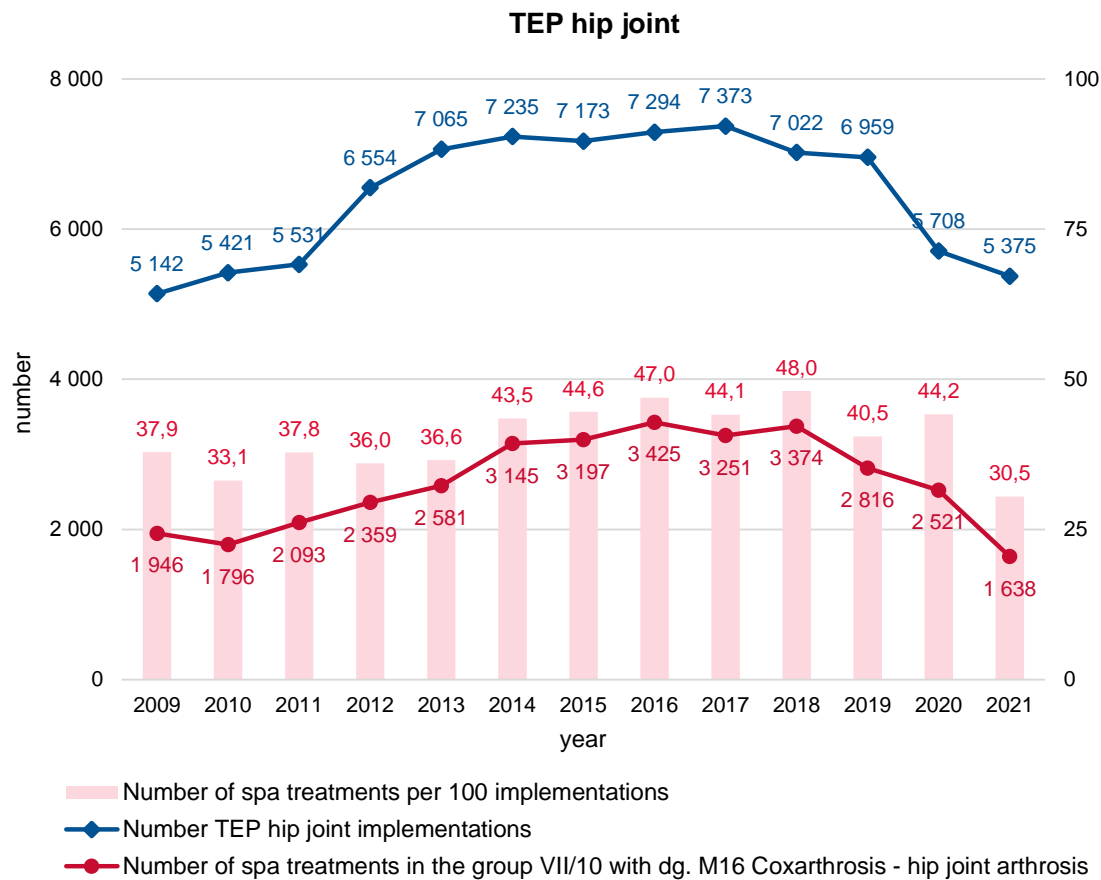
- In the monitored period, 84 %-88 % of children were treated in the indication groups:
  - XXV. Non-tuberculous diseases of the respiratory tract**  
40,1 % (2021) – 53,3 % (2018)
  - XXVII. Diseases of the locomotor system**  
25,3 % (2018) – 35,1 % (2021)
  - XXVI. Nervous diseases**  
8,6 % (2009) – 10,4 % (2021)

## Payment, year 2021





# Implementation of total hip and knee endoprosthesis and following spa treatment, development 2009 – 2021

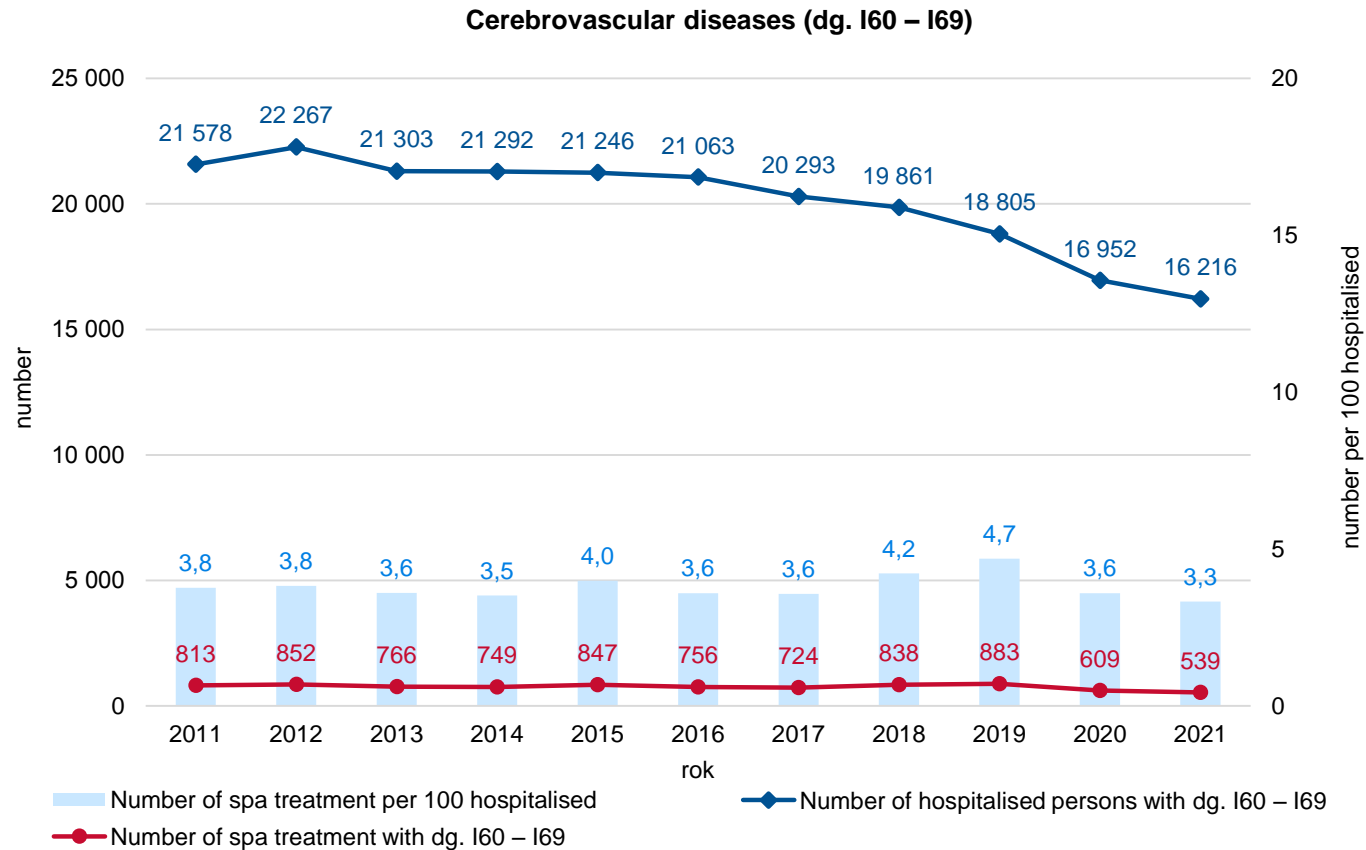


**VII/10** Conditions after injuries or operations of the locomotor system, including operations of the intervertebral disc and operations with the use of a joint replacement, which are accompanied by a weakening of muscle strength or limited mobility of the joints, or paralysis **at most within 12 months of the injury or operation**. Sporadic treatments of pediatric patients in the same group **XXVII/3** are also included.

Implementation number source: National Arthroplasty Registry, NHIC

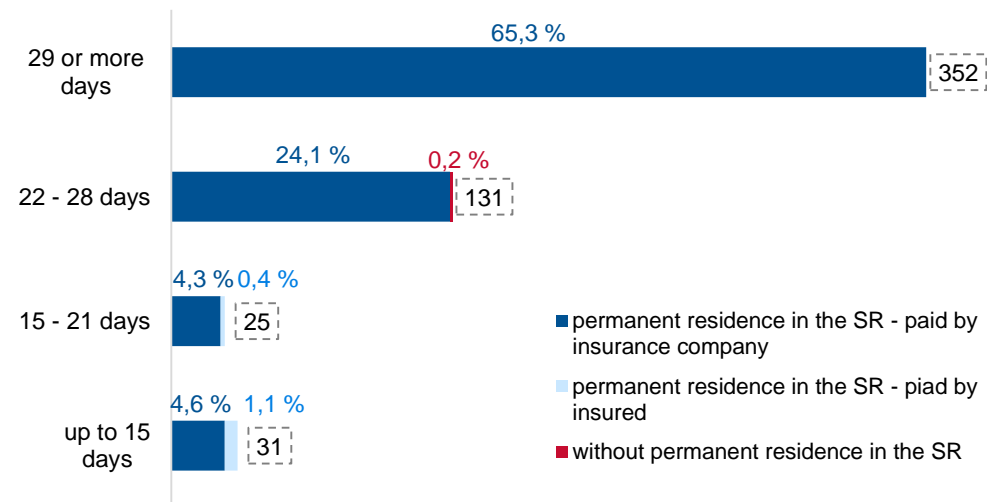


# Hospitalised for cerebrovascular diseases and following spa treatment, development 2011 – 2021

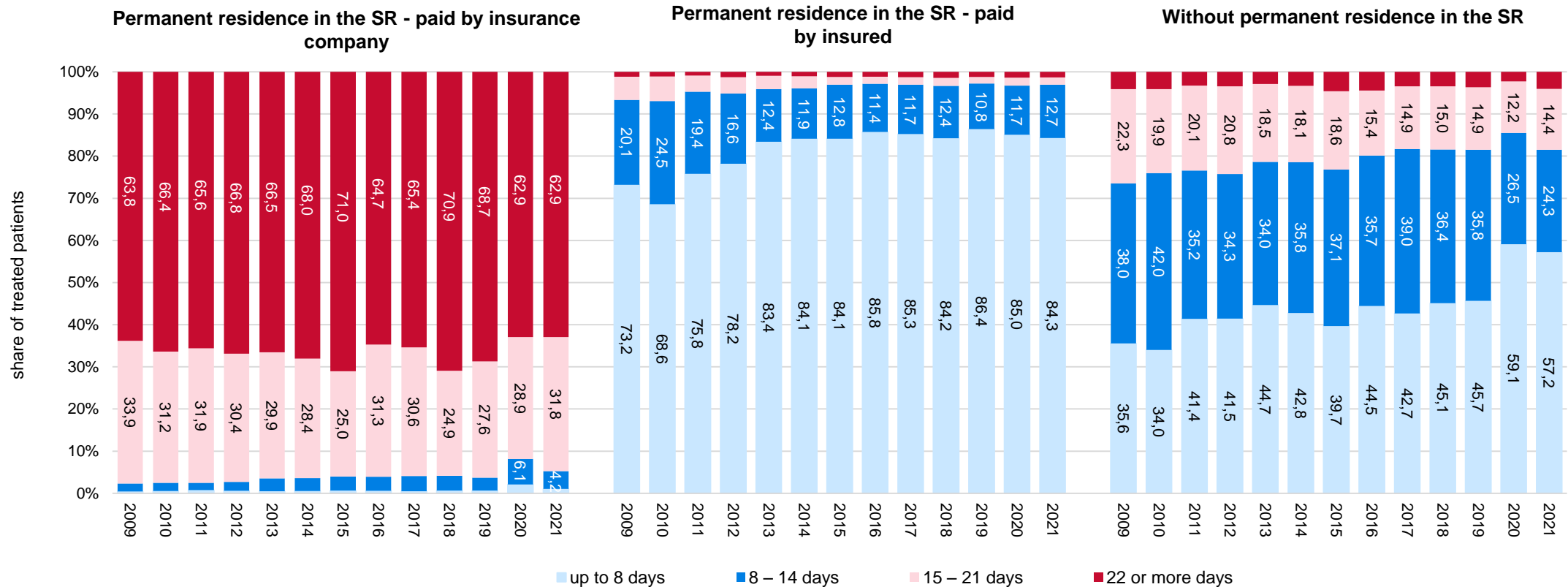


- Years 2011 – 2019  
share of the number of spa treatments with dg. I60 – I69 from the number of hospitalised persons for the indicated dg group: from **3.5 %** (2014) to **4.7 %** (2019)
- Years 2020 a 2021  
decrease in share to **3.3 %**

## Length of stay and payment, year 2021



## Treated patients according to length of stay, 2009 – 2021



### Long-term stays are predominant

- 22 or more days (accounted for around 65 - 71% of stays, in 2020 and 2021 a drop to 63%)
- 15 - 21 days (the share varies between 25 – 31%)
- 8 - 14 days (small share, in 2020 and 2021 a slight increase to 4 – 6%)

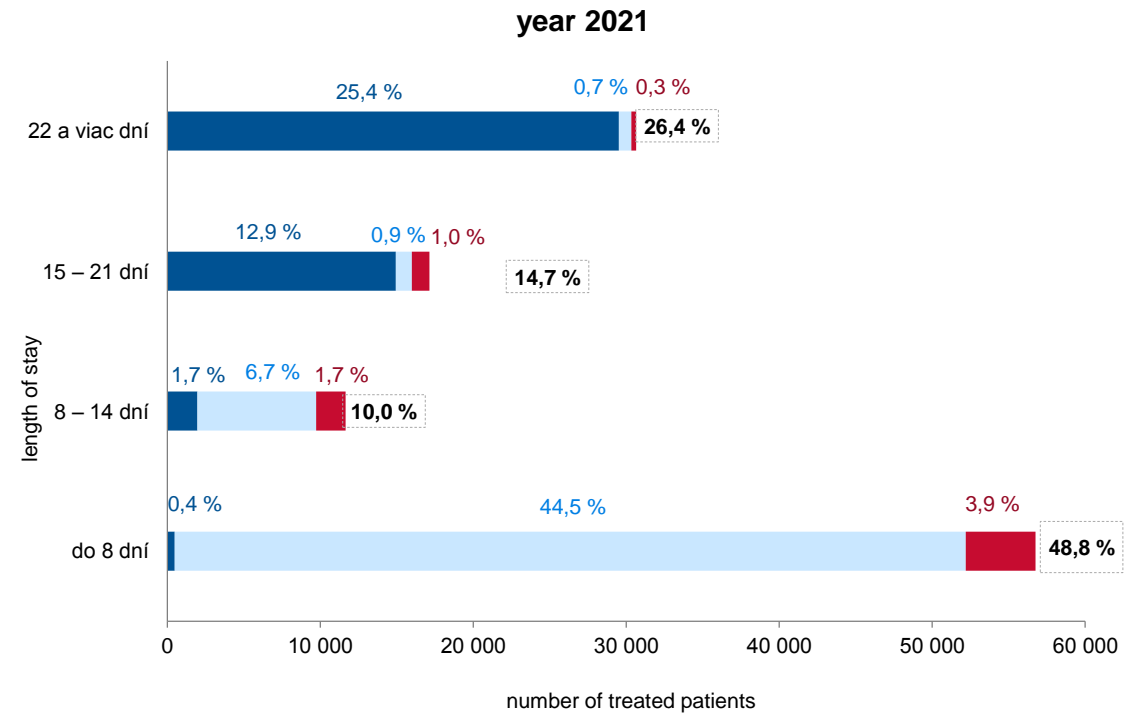
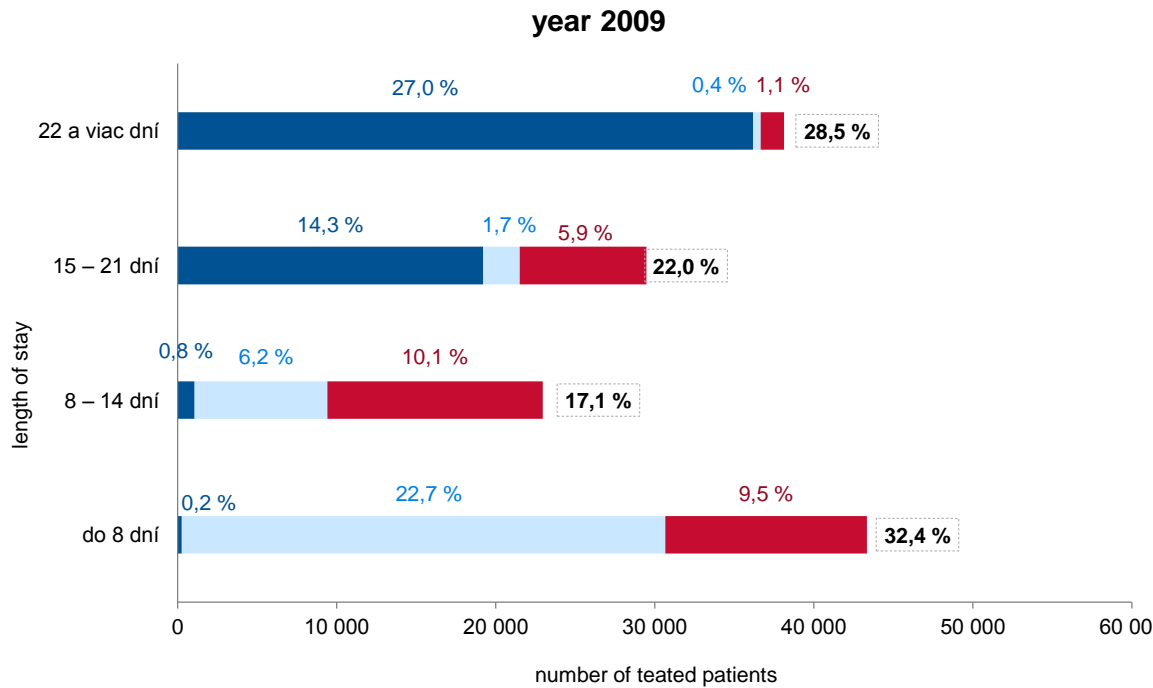
### Short-term stays are predominant

- within 8 days (initially increasing share in development, then stabilized at around 85%)
- 8 – 14 days (in development, first decreasing share, then stabilized at around 11 – 12%)

### Short-term and medium-term stays are predominant

- within 8 days (in development, increasing share to 45% before the pandemic, in 2020 and 2021 an increase to 57 – 59%)
- 8 - 14 days (fluctuates around 35% before the pandemic, then drops to 24 – 26%)
- 15 - 21 days (decreasing share to around 15%)

# Treated patients according to length of stay and payment



■ permanent residence in the SR - paid by insurance company  
 ■ permanent residence in the SR - paid by insured  
 ■ without permanent residence in the SR

■ permanent residence in the SR - paid by insurance company  
 ■ permanent residence in the SR - paid by insured  
 ■ without permanent residence in the SR

## In 2009 and 2021:

- the largest share: stays of up to 8 days, most self-payers with permanent residence in Slovakia
- the second most common: stays of 22 days or more, the majority of patients with permanent residence in the SR paid by the insurance company
- the third most common: stays of 15 - 21 days, most patients with permanent residence in the Slovak Republic paid by the insurance company

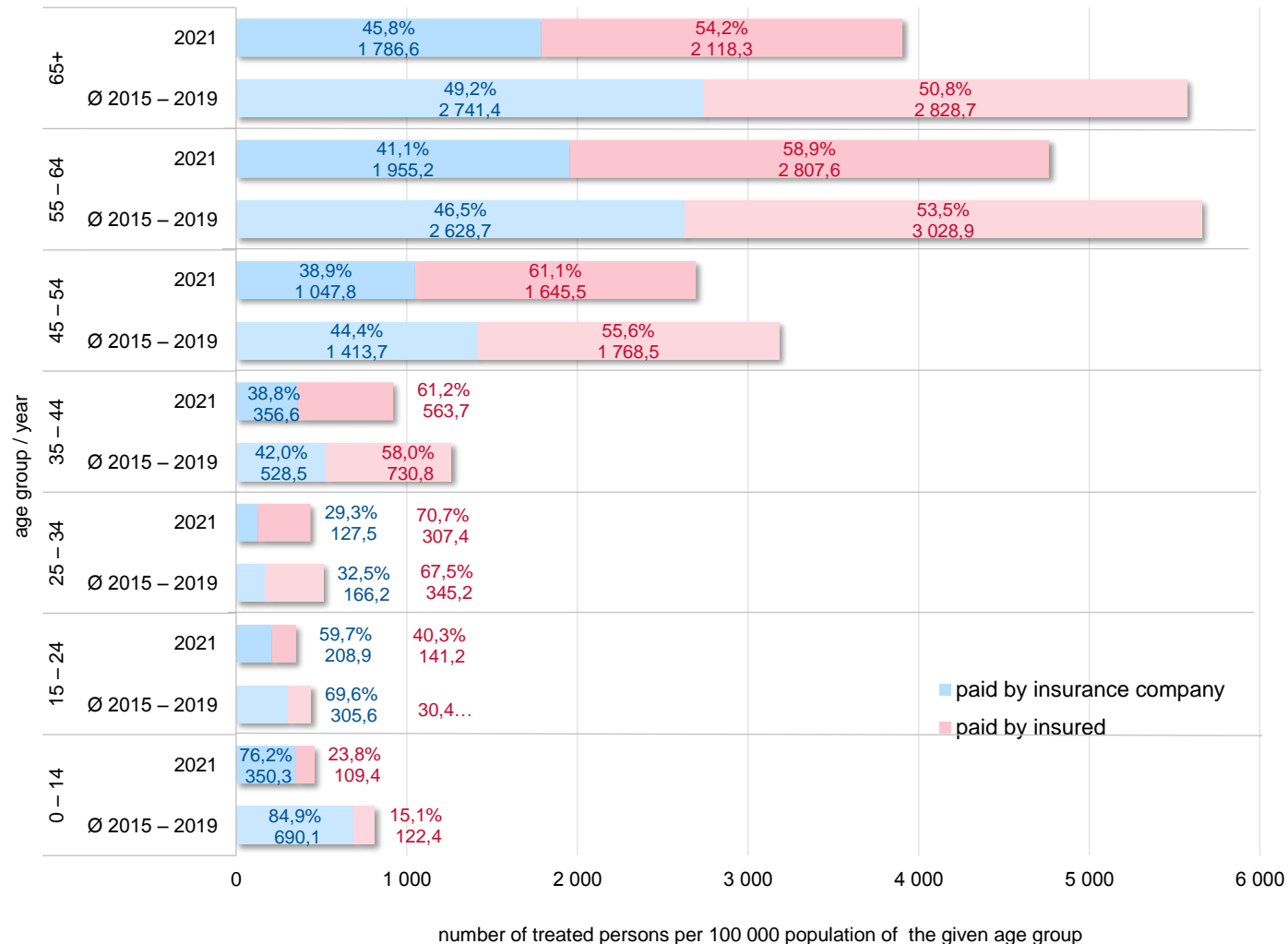
↓ Decrease in length of stay

- 15 – 21 days (- 7,3 p. p.)
- 8 – 14 days (- 7,1 p. p.)
- 22 or more days (- 2,1 p. p.)

↑ Increase of stays with length

- within 8 days (+ 16,5 p. p.)

# Treated patients with permanent residence in the SR according to age groups and payment of stay, average for years 2015 – 2019 and 2021



## Year 2021

### Most patients in spas in age groups

(after conversion per 100 000 inhabitants of the given age group):

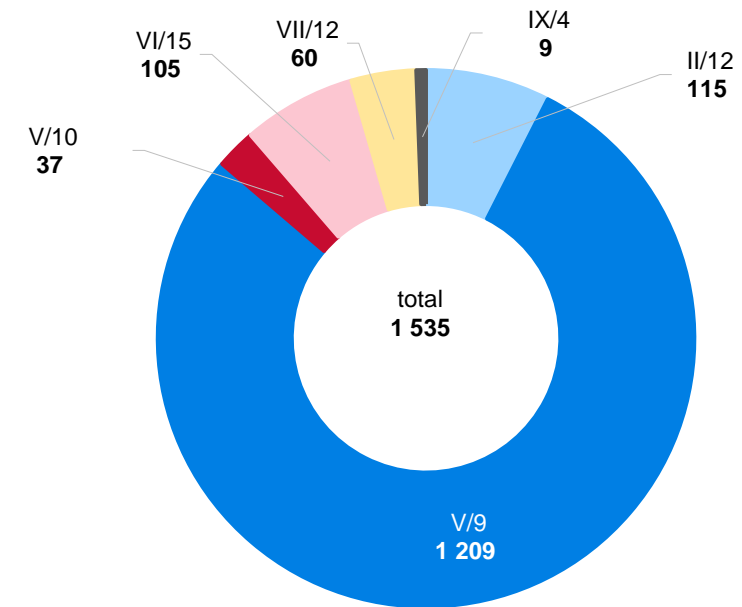
- 55 – 64 years (4 762,8 persons per 100 000 population), payment by insured 58,9 %
- 65 and over (3 904,9 per 100 000 population), payment by insured 54,2 %
- payment by insured prevails for age groups over 25 years old

## Year 2021 compared to Ø 2015 – 2019

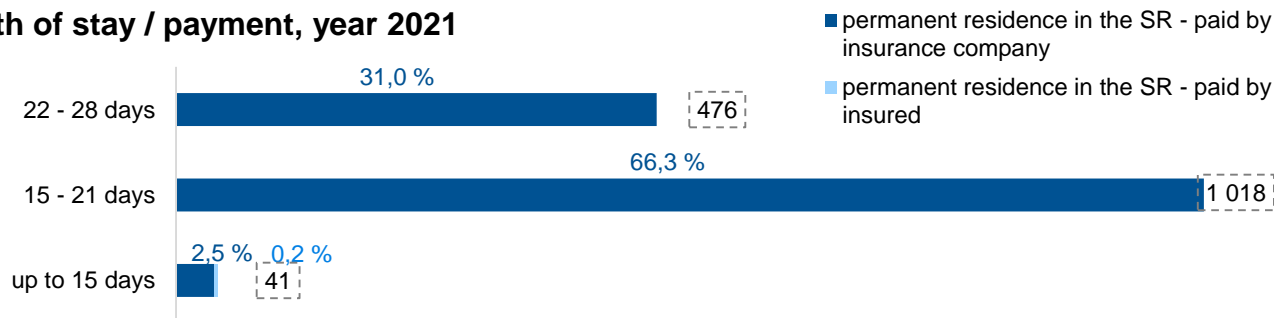
- The decrease of patients in all age groups, the most significant:
  - 0 – 14 years (- 43,4 %)
  - 65 and over (- 29,9 %)
  - 35 – 44 years (- 26,9 %)
  - in all age groups, the decrease was more significant for stays paid by the insurance company

# Treated adults with permanent residence in the SR – Conditions after COVID-19 recovery

- II/12 The condition after recovery COVID-19 with the persistence of cardiovascular problems that limit daily activities or organ damage to the heart or blood vessels within 12 months from the end of the treatment of the infection
- V/9 The condition after recovery COVID-19 with persistent respiratory difficulties that limit daily activities within 6 months after the end of treatment of the infection with a severe course in the hospital
- V/10 The condition after recovery COVID-19 with persistence of respiratory difficulties within 12 months after completion of treatment of severe infection in hospital
- VI/15 The condition after recovery COVID-19 with the persistence of neurological or neuromuscular problems that significantly limit normal daily activities within 12 months from the end of the treatment of the infection
- VII/12 The condition after recovery COVID-19 with the persistence of the disability of the locomotor system which significantly limits normal daily activities within 12 months after the end of the treatment of the infection
- IX/4 The condition after recovery COVID-19, the persistence of severe fatigue, cognitive disorders or anxiety and depression states that limit daily activities within 12 months after the end of treatment for the infection

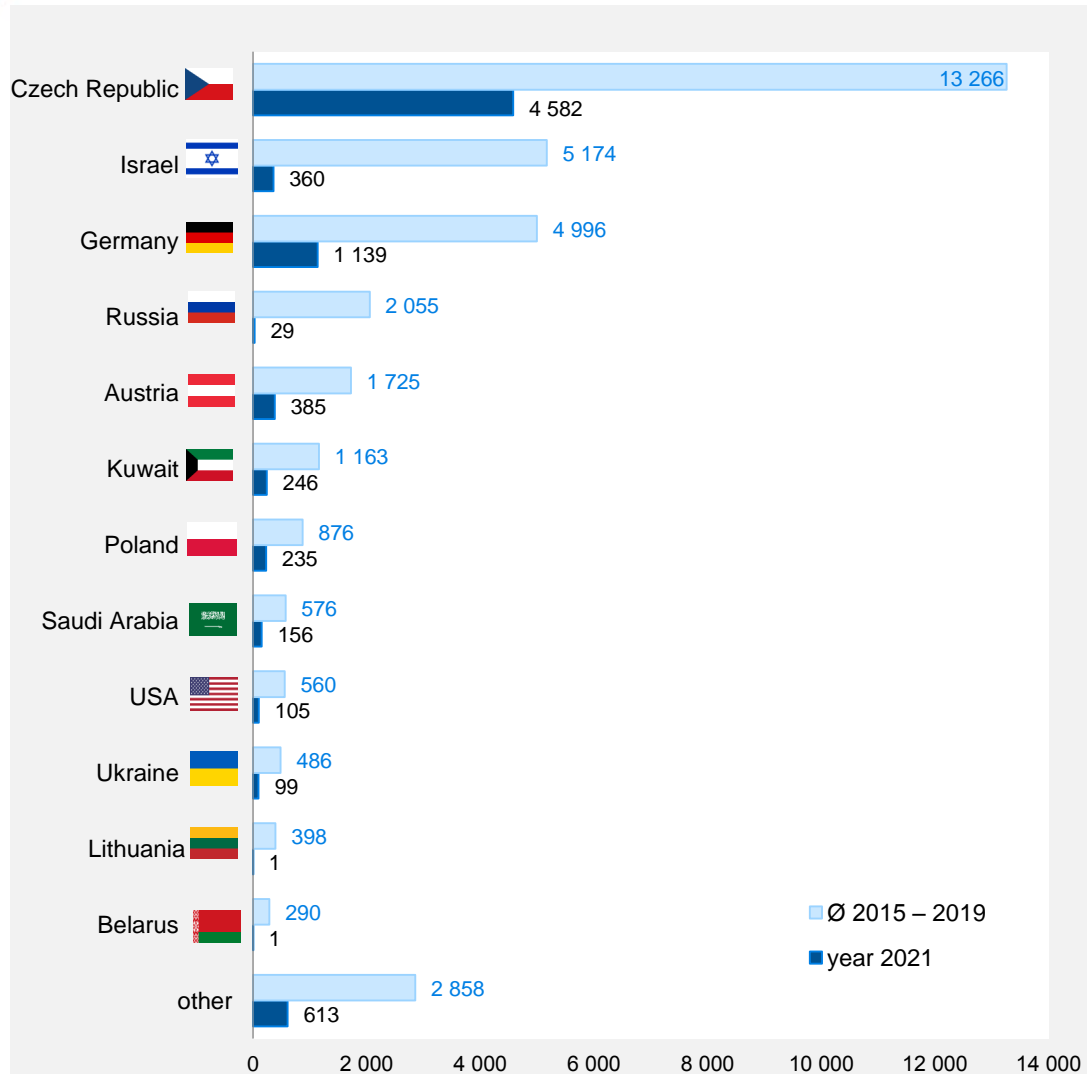


## Length of stay / payment, year 2021



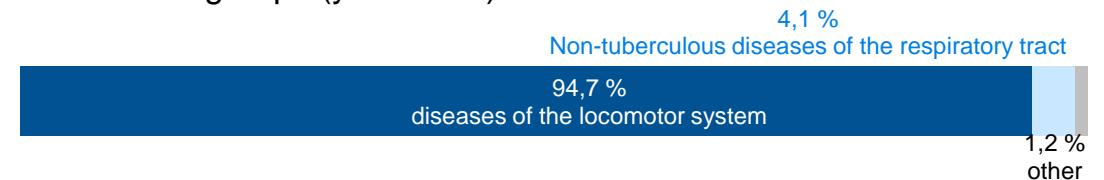
**Note:** With the diagnoses U07 (Confirmed Covid-19 infection), U09 (Condition after COVID-19) and U10 (Multisystem inflammatory syndrome in temporal relation to COVID-19), regardless of the indication group, **2 084 patients** were treated in the spa. The inclusion of patients in indication groups other than those indicated in the graph could be related to the legislative change of the extension of the indication list in the course of 2021.

## Treated clients without permanent residence in the SR, average for the years 2015 – 2019 and 2021



Ranking of the most represented countries (according to the average of the years 2015 - 2019)

- **Ø 2015 – 2019**
  - most clients from the Czech Republic (38.5 %), Israel (15.0 %), Germany (14.5 %), Russia (6.0 %), Austria (5.0 %), Kuwait (3.4 %)
- **year 2021**
  - most clients from the Czech Republic (57.6 %), Germany (14.3 %), Austria (4.8 %), Israel (4.5 %), Kuwait (3.1%)
  - clients from Russia, Lithuania, Belarus were almost absent
  - decrease compared to Ø 2015 – 2019 from 66% (Czech Republic) to 99% (Russia)
- Indication groups (year 2021)



- Age structure (year 2021)



# Thank you for your attention!

[info@nczisk.sk](mailto:info@nczisk.sk)  
[reporting@nczisk.sk](mailto:reporting@nczisk.sk)

[Topical statistical outputs \(nczisk.sk\)](http://nczisk.sk)  
[www.nczisk.sk](http://www.nczisk.sk)