



1.1. Curative care bed-days (number per capita) (S-11)

1.1.1. Documentation sheet

Description	Number of days spent in curative (acute care) beds in acute care hospitals (number per capita)
Calculation	Numerator: total number of days of inpatient stays spent in curative care (acute care) beds Denominator: total Belgian population
Rationale	In Belgium, since 1982, the number of licensed beds for all general hospitals is freeze. The creation of a new bed should therefore necessarily be accompanied by the closure of another. A monitoring of the hospital activity is therefore needed because an increase in the activity would lead to pressure. To monitor the hospital activity, the number of acute care bed days per capita (S-11) was selected. The number of curative care bed-days per capita can also be seen as a proxy to give an idea about the population's need for acute care beds (whether this need is met = sustainability), and thus about the needed infrastructure (see nevertheless the limitations). This indicator combines results from two other indicators: number of hospital admission per capita, and average length of hospitalisation.
Data source	RHM-MZG (FPS Health, Food Chain Safety and Environment)
Technical definitions	Data cover bed-days in general hospitals (hereafter mentioned as acute care bed days because only stays shorter than 90 days are included in the calculations). Data from psychiatric or specialised hospitals are excluded. Day hospitalizations, stays of newborn or stays of 90 days and more are not counted. OECD definition: bed indices included in the data are: <ul style="list-style-type: none"> (B) treatment department "TBC" (does not exist in Belgium anymore since 2018), (C) diagnosis and surgical treatment department, (D) diagnosis and medical treatment department, (E) paediatrics, (CD) mixed hospitalisation, (L) contagious diseases, (M) maternity, (NIC) intensive neonatal care, (G) geriatrics in acute hospitals; Data also include psychiatric care beds in general hospital: (A) neuropsychiatry for observation and treatment, (A2) night care in neuropsychiatry, (K) infant neuropsychiatry, (K2) night care in infant neuropsychiatry, (TG) day and night care for geriatric patients needing neuropsychiatry treatment, (IB) intensive treatment of psychiatric patients, (T) neuropsychiatry for treatment, (T2) night care in neuropsychiatry for treatment Data per region: Concerning the data per region, the repartition is done according to region of the hospital for the numerator and the region of the population for the denominator. It should also be noted that for Belgian data per region, data presented here are based on the actual length of stays while in OECD data (for the international comparison), data are based on invoiced length of stay. To make the distinction between both sources they are hereafter mentioned as acute care bed-days (RHM-MZG) and curative care bed-days (OECD) respectively.
Limitations	The link between this indicator and the needed infrastructure to meet the population needs is not straightforward. Even if we need enough beds to meet population needs, there is a risk of supply driven demand if there are too many beds. Also medical practice,



	<p>technology influence the number of bed days as they allow to decrease length of stay. Moreover, incentives are given in Belgium to reduce the length of stay.</p> <p>Nevertheless, this indicator is monitored as an increase in the number of curative care bed-days could threaten the sustainability of the system. It should also be noted that a decline could be an indicator of better efficiency (e.g. if due to the reduction in the length of stays).</p>
International comparability	<p>The OECD definition is adopted (curative care bed-days). Several countries included in the OECD comparison use different methodologies to calculate the number of curative care bed-days (e.g. including or not geriatric beds, specialised hospitals...). Comparison is therefore potentially biased.¹</p>
Dimensions	<p>Sustainability (also link with efficiency)</p>
Related indicators	<p>Average length-of-stay after normal delivery; Surgical Day Case Rates; Hospitals with occupancy rate for COVID 19 patients in ICU licensed beds above 60%)</p>
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1.1.2. Results

Belgium

In 2021, there were 10.6 million days spent in acute care hospitals (excluding day hospitalizations, see Table 1). Per capita, this represents 0.92 acute care bed-days (see Table 1). An average decrease of 9.3% per year is observed during the 2010-2019 period while an important decrease is observed between 2019 and 2020, i.e. -14.9%.

Regional comparison

Flanders and Wallonia have the lowest numbers of acute care bed-days per capita (0.87 and 0.88 acute care bed-days per capita, respectively), while Brussels counts 1.30 acute care bed-days per capita (see Table 1 and Figure 1). The higher number in Brussels remained during the entire studied period (2010-2021) and can be explained by the fact that a lot of people living in the provinces around Brussels are hospitalised in Brussels (also explaining the lower numbers in the Walloon Brabant and the Flemish Brabant). By grouping these two provinces with Brussels, the number of acute care bed-days per capita is similar to other provinces (0.85).

A lower number of bed-days per capita is also observed in the province of Luxembourg, which could also be explained by the fact that some people in this province are hospitalised in its border country (Luxembourg). Without cross-border cooperation, the infrastructure in this province could be insufficient (See Table 2 and Figure 2).


Table 1– Acute care bed-days per capita, Belgium and hospital region, evolution 2010-2021

Year	Belgium			Flanders			Wallonia			Brussels		
	Acute care bed-days	Population (mid-year)	Acute care bed-days per capita	Acute care bed-days	Population (mid-year)	Acute care bed-days per capita	Acute care bed-days	Population (mid-year)	Acute care bed-days per capita	Acute care bed-days	Population (mid-year)	Acute care bed-days per capita
2010	12 470 704	10 895 586	1.14	6 964 787	6 279 311	1.11	3 781 350	3 511 962	1.08	1 724 567	1 104 313	1.56
2011	12 440 453	10 993 607	1.13	6 912 294	6 328 702	1.09	3 793 733	3 535 935	1.07	1 734 426	1 128 971	1.54
2012	12 399 874	11 067 751	1.12	6 902 706	6 366 312	1.08	3 777 409	3 554 695	1.06	1 719 759	1 146 745	1.50
2013	12 269 875	11 125 035	1.10	6 837 721	6 396 282	1.07	3 760 686	3 569 693	1.05	1 671 468	1 159 061	1.44
2014	12 466 977	11 179 780	1.12	6 773 216	6 427 416	1.05	3 866 292	3 583 035	1.08	1 827 469	1 169 330	1.56
2015	12 366 383	11 238 477	1.10	6 736 360	6 460 966	1.04	3 746 348	3 595 980	1.04	1 861 290	1 181 532	1.58
2016	12 343 998	11 294 999	1.09	6 731 840	6 496 908	1.04	3 784 523	3 608 345	1.05	1 850 020	1 189 747	1.55
2017	12 190 485	11 349 079	1.07	6 610 874	6 534 489	1.01	3 742 774	3 619 425	1.03	1 836 837	1 195 165	1.54
2018	12 184 394	11 403 738	1.07	6 591 471	6 571 018	1.00	3 749 800	3 629 086	1.03	1 843 123	1 203 634	1.53
2019	12 054 530	11 462 024	1.05	6 524 935	6 609 106	0.99	3 696 793	3 639 519	1.02	1 832 802	1 213 399	1.51
2020	10 300 121	11 506 940	0.90	5 650 998	6 641 103	0.85	3 108 324	3 646 725	0.85	1 540 799	1 219 113	1.26
2021	10 595 565	11 552 623	0.92	5 787 830	6 675 969	0.87	3 223 024	3 655 351	0.88	1 584 711	1 221 304	1.30

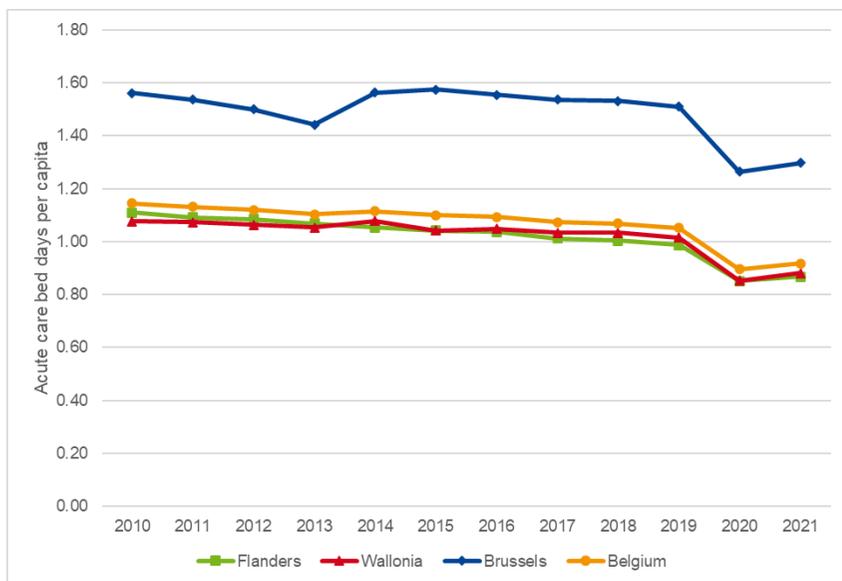
Source: RHM – MZG, based on the accurate length of stays

Table 2 – Acute care bed-days per capita, per hospital province, 2021 (source RHM-MZG, based on the accurate length of stays)

Region - Provinces	Acute care bed-days	Population (mid-year)	Acute care bed-days per capita
Antwerp	1 615 957	1 881 067	0.86
Flemish Brabant	660 088	1 167 762	0.57
West Flanders	1 368 948	1 206 162	1.13
East Flanders	1 486 750	1 537 805	0.97
Limburg	656 087	883 174	0.74
Walloon Brabant	139 661	408 590	0.34
Hainaut	1 338 953	1 348 537	0.99
Liège	1 113 581	1 110 028	1.00
Luxembourg	188 837	289 933	0.65
Namur	441 992	498 264	0.89
Brussels	1 584 711	1 221 304	1.30



Figure 1 – Acute care bed-days per capita, Belgium and per hospital region (2010-2021)

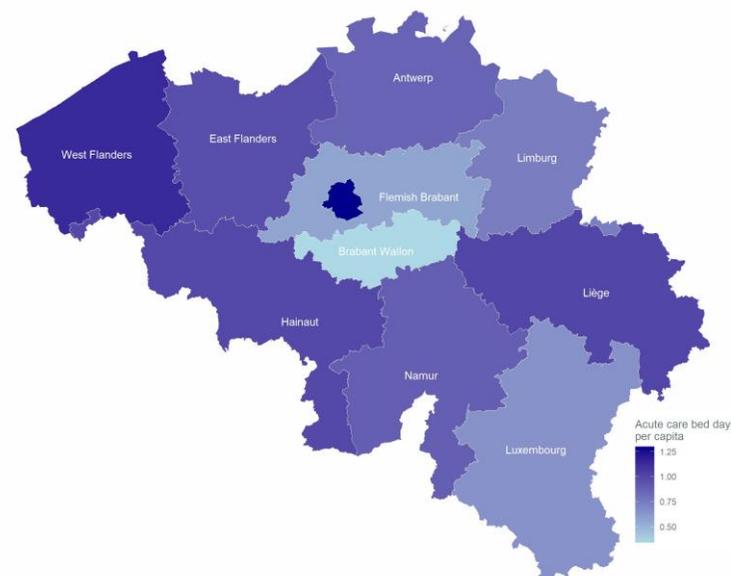


Source: RHM – MZG, based on the accurate length of stays

International comparison

Based on the invoiced length of stays, the number of curative care bed-days in Belgium decreased by 8.3% between 2011 and 2012, was then stable up to 2019, then decreased again by 18.2% between 2019 and 2020. Compared to other European countries, Belgian was slightly above the EU-averages (both EU-14 and EU-27) between 2010 and 2019 but reached similar levels in 2021 (0.90 vs 0.88 and 0.87 respectively). The number per capita in Belgium is nevertheless twice as high as in the Netherlands. Curative care bed-days per capita in 2021 ranged from 0.8 in the Netherlands to 1.5 in Germany (see Figure 3).

Figure 2 – Acute care bed-days per capita, per hospital province (2021)



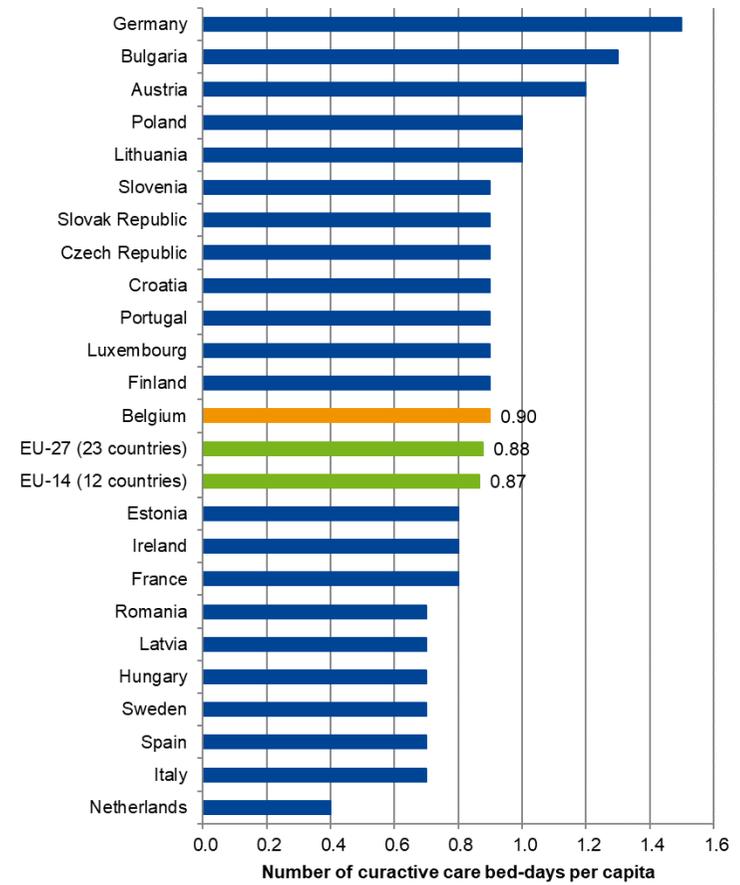
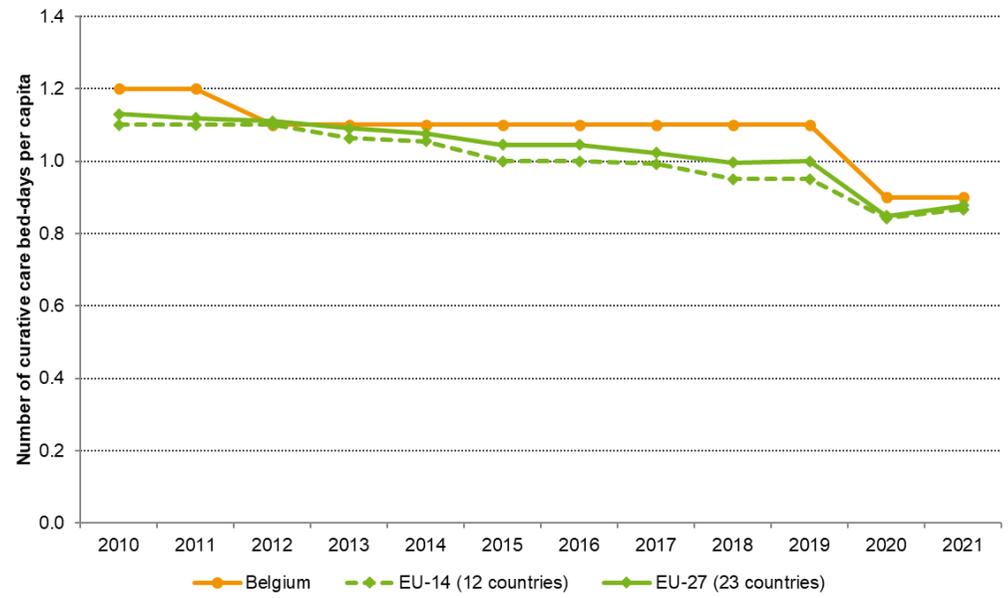
Source: RHM – MZG, based on the accurate length of stays

Impact of COVID-19 pandemic

The decrease between 2019 and 2020 was higher in Belgium (-18.2%) than the EU-14 (-11.4%) and EU-27 (-15.2%) averages. Such a decrease is explained by the fact that during the COVID-19 pandemic, the postponement of care had a considerable impact on hospital activity in 2020 in Belgium (the number of stays decreased by 16% in general hospitals in 2020 compared to 2019.² The overall hospital bed infrastructure capacity was therefore not threatened during the COVID-19 pandemic (see nevertheless R-6 for beds in intensive care units).



Figure 3 – Curative care bed-days per capita: international comparison (2010-2021)



Source: OECD Health statistics 2021.



Key points

- The number of curative care bed-days per capita is monitored as an increase could threaten the sustainability of the system.
- The number of days spent in acute care beds in Belgium decreased from 1.1 per capita in 2010 to 0.9 per capita in 2021.
- The number of bed-days per capita is lower in Flanders and Wallonia than in Brussels (with 0.87, 0.88, and 1.30 acute care bed days per capita, respectively in 2021), which is explained by the fact the people living in provinces around Brussels are hospitalised in Brussels. The same phenomena is observed in the province of Luxembourg and its neighbouring country. Without cross-border cooperation, the infrastructure in the province of Luxembourg could therefore become insufficient.
- In 2021, Belgium has a similar number of curative care bed-days per capita than the EU-14 and EU-27 averages (around 0.9 per capita) but is more than twice as high as in the Netherlands (0.4).
- A decrease was observed between 2019 and 2020 in Belgium (-18.2%) and this decrease was higher than the EU-14 (-11.4%) and EU-27 (-15.2%) averages. This was due to the diminution of the

hospital activity during the COVID-19 pandemic (postponement of care). The overall hospital bed infrastructure capacity was therefore not threatened during the COVID-19 pandemic (see nevertheless R-6 for beds in intensive care units).

Reference

1. OECD. Health at a Glance 2017: OECD Indicators. Paris: 2017. Available from: http://dx.doi.org/10.1787/health_glance-2017-en
2. FPS Public Health. For a healthy Belgium, Key data in healthcare, COVID 19, Care activity, Impact of the pandemic on hospital stays in general and psychiatric hospitals in 2020 [Web page]. Brussels: FPS Health, Food chain safety and Environment;2023. Available from: https://www.healthybelgium.be/en/key-data-in-healthcare/covid-19/care-activity/impact-of-the-pandemic-on-hospital-stays-in-general-and-psychiatric-hospitals-in-2020#_ftn1