



1.1 Influenza vaccination (% pop aged ≥65 years) (P-4)

1.1.1 Documentation sheet

Description	Proportion of the population aged 65 years and over that were vaccinated against influenza
Calculation	<p><u>Numerator</u>: number of individuals aged 65 years and over who received a dose of influenza vaccine during the past calendar year.^a</p> <p><u>Denominator</u>: number of individuals aged 65 years and over</p> <p>Because results are based on sickness funds data, most calculations are based on older patients who are not residing in an institution. However a sensitivity analysis including data from nursing homes in Wallonia and Brussels has also been performed (see Limitation section for details).</p>
Rationale	<p>Influenza vaccines are considered as the most effective preventive tool to reduce disease burden and severe disease caused by influenza in individuals. In Belgium, seasonal influenza vaccination is currently recommended for the prevention of influenza for, among others, all individuals aged 65 years and over and for all individuals living in institutions (among other groups).¹</p> <p>The WHO recommends as target a 75% vaccination rate for older people.²</p> <p>During the COVID-19 pandemic, increasing the rate of influenza vaccination among older people became even more important as countries sought to avoid a flu epidemic on top of the COVID-19 pandemic and the additional pressure that this would put on hospitals and other parts of health care systems.³ In addition, influenza vaccination may be beneficial for the prevention of COVID-19, as it was reported that influenza vaccination was associated with a small/moderate lower risk of COVID-19 infection and adverse outcomes.⁴</p>
Data source	IMA – AIM data of influenza vaccines which have been reimbursed.
Technical definitions	In IMA – AIM data: all vaccines belonging to the ATC 4 class J07BB (anti-influenza vaccines).
Limitation	<p>In IMA – AIM data, only vaccines which have been reimbursed by the RIZIV – INAMI are taken into account.</p> <p>In <u>Flanders</u>, since 2010, vaccines are free of charge for older people residing in elderly and nursing homes: vaccines are bought as a group by the Flemish community, and hence are not reimbursed by sickness funds, and do not appear in the IMA – AIM database (source: Agentschap voor Zorg and Gezondheid). Hence all calculations for this indicator exclude (from</p>

^a This definition differs from epidemiological studies, where rates are generally calculated on one influenza season, which usually overlaps two calendar years.



the numerator and denominator) older people residing in elderly or nursing homes, which may result in an underestimation of the true coverage rate. As a sensitivity analysis, this indicator is computed including older people residing in institutions or nursing homes, for Wallonia and Brussels. However, the coverage rate of vaccination against influenza in institutions in Brussels and Wallonia is likely to be underestimated as some nursing homes in Brussels use a bulk ordering system for influenza vaccines, which results in data not being recorded in the IMA – AIM data.

International comparability

The OECD data provides data on immunisation against influenza among people aged 65 years and over during the last 12 months. The last 12 months cover the last influenza season or calendar year. In some countries the definition used deviates from the OECD definition, such as in Belgium, Germany and Croatia. In Belgium, only vaccines which have been reimbursed are taken into account and older people residing in elderly or nursing homes are excluded. In Germany, only the data of the statutory health insured persons are taken into account, vaccinations carried out with private insured persons are not recorded. In addition, the definition includes the utilisation of influenza vaccination in the previous winter season of people aged 60 years and more. In Croatia, data about immunisation against influenza is available for immunisation seasons each of which includes two years, therefore percentage for certain year is actually percentage for that season. Thus, caution needs to be applied when comparing results for Belgium with those for other EU countries.

Dimension

Accessibility of preventive care

Related indicators

Reviewer

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1.1.2 Results

Belgium

Based on reimbursement data, vaccination rates against influenza for individuals aged 65 years old and over decreased between 2010 and 2019 in Belgium, from 57.7% to 52.9% (data excluding nursing homes).

Impact of the COVID-19 pandemic

The vaccination rate increased sharply from 52.9% in 2019 to 62.1% in 2020 and then decreased to 57.3% in 2021.

Analysis by demographic characteristics and socio-economic status

There are also large differences in coverage rates by patient age: while the rate only reaches 47.5% for individuals aged 65-69 years, it improves to 66.1% for individuals aged 85-89 years (see

Table 1). The vaccination rate was slightly higher in women than men (58.3% vs 56.2%). The same data also show that there might be accessibility problems for people having preferential reimbursement entitlement, as their influenza vaccination rate is lower than for people without preferential reimbursement entitlement (55.2% vs 58.1%).

Based on the HISlink 2018, a recent study reported no significant association between socioeconomic status (income and education) of individuals aged 65 years old and over and influenza vaccination.⁵ Individuals with an insufficient/limited level of health literacy were more likely to be vaccinated than those with a sufficient level of health literacy (60.7% vs 53.0%). This association could partly be explained by the fact that individuals with a lower health literacy may belong to a risk group and may as a result be more likely to have contact with physicians and be offered an influenza vaccination. There was no significant mediating contribution of health literacy in the pathway by which socioeconomic status affected influenza vaccination, indicating a possible influence of the universal health coverage in place in Belgium.



Regional comparison

In 2021, there was a higher coverage rate in Flanders (64.7%) than in Wallonia (49.1%) and Brussels (46.3%), and large differences between patient provinces (see

Table 1). Indeed, the Walloon Brabant (53.3%) showed a higher vaccination rate than the other Walloon provinces, and on the Flemish side, West Flanders (61.4%) showed a lower vaccination rate than other provinces in Flanders (see



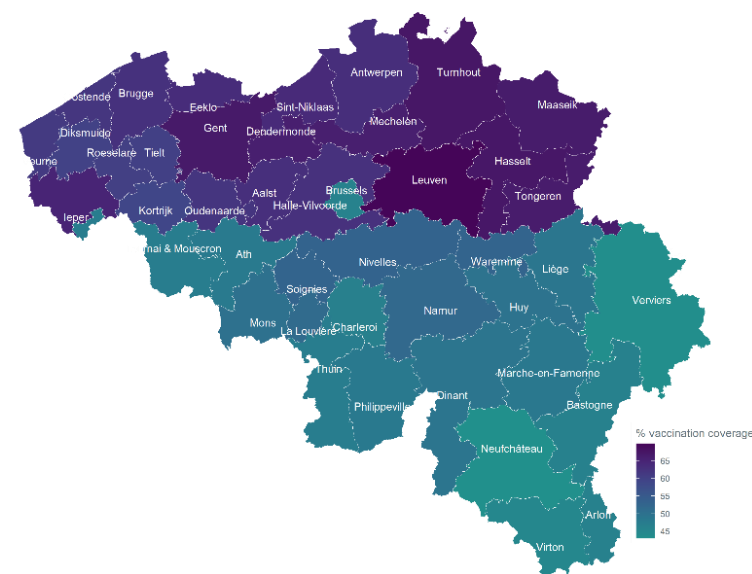
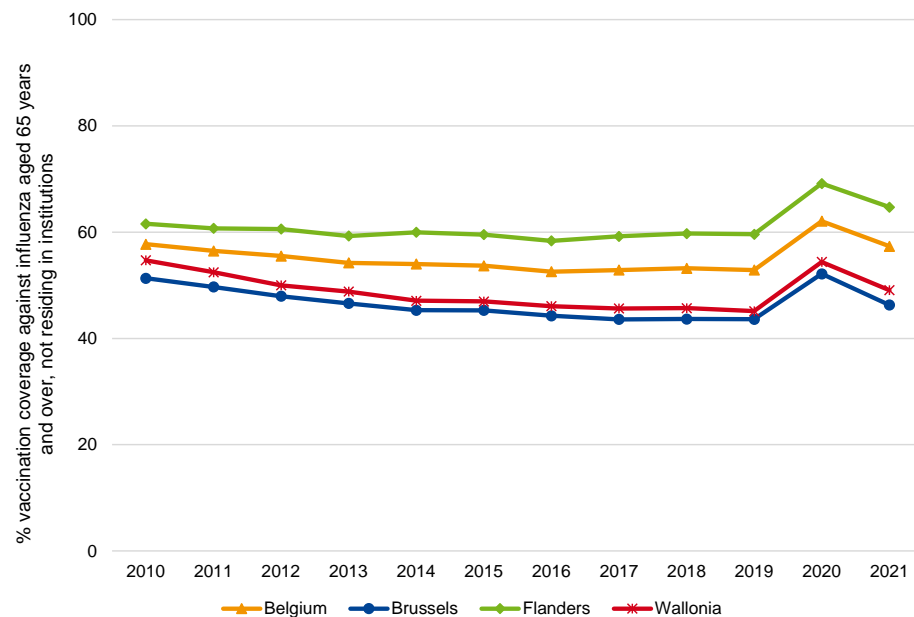
Table 1;

Figure 1).

The results exclude older people residing in nursing homes because in Flanders influenza vaccines for this population are bought directly by the regional health authority. A sensitivity analysis was performed including and excluding older people residing in institutions and limiting the analysis to Wallonia and Brussels. By including older people living in institutions, the vaccination coverage rate reached 50.1% (71.8% in institutions) and is improved both in Wallonia (from 49.1% to 50.7%) and in Brussels (from 46.3% to 47.4%). By excluding older people residing in institutions the vaccination coverage rate in Brussels and Wallonia decreased to 48.6% (see

Table 1).

Figure 1 – Coverage of vaccination against influenza in people aged 65 years and over, by region (2010-2021) and by district (2021)





Source: IMA – AIM data, KCE calculation. **Note: People residing in institution are excluded from the analysis** (see section limitation in technical fiche for details).



Table 1 – Coverage of vaccination against influenza in people aged 65 years and over, by patient characteristics (2021)

Variable	Category	BELGIUM CALCULATION, INSTITUTIONS EXCLUDED			WALLONIA+BRUSSELS CALCULATION, INSTITUTIONS INCL.		
		Numerator	Denominator	Influenza vaccination coverage (%)	Numerator	Denominator	Influenza vaccination coverage (%)
Total		1 271 018	2 217 047	57.3	444 002	886 074	50.1
Age (years)	65-69	308 676	650 204	47.5	96 092	252 412	38.1
	70-74	319 205	562 958	56.7	108 614	223 881	48.5
	75-79	263 244	420 747	62.6	86 495	157 051	55.1
	80-84	193 811	294 897	65.7	67 491	113 511	59.5
	85-89	127 146	192 394	66.1	50 595	82 033	61.7
	≥90	58 936	95 847	61.5	34 715	57 186	60.7
Gender	Female	700 140	1 201 617	58.3	258 488	505 765	51.1
	Male	570 878	1 015 430	56.2	185 514	380 309	48.8
Entitlement to increased reimbursement	No	976 094	1 680 408	58.1	326 043	640 534	50.9
	Yes	294 831	533 806	55.2	117 901	244 709	48.2
Long term care	Home care	153 105	244 831	62.5	44 223	82 245	53.8
	Institutions*	-	-	-	42 042	58 594	71.8
	No long term care	1 117 913	1 972 216	56.7	357 737	745 235	48.0
Region	Brussels	69 691	150 575	46.3	75 624	159 445	47.4
	Flanders	867 225	1 340 413	64.7	-	-	-
	Wallonia	332 269	676 905	49.1	368 378	726 629	50.7
	Brussels + Wallonia (sensitivity analysis)	401 960	827 480	48.6	444 002	886 074	50.1
	Province						
Province	Antwerp	233 825	359 765	65.0	-	-	-
	Walloon Brabant	41 623	78 158	53.3	45 497	83 311	54.6
	Brussels-Capitale	69 691	150 575	46.3	75 624	159 445	47.4
	Hainaut	121 871	250 185	48.7	135 658	269 325	50.4
	Limburg	120 810	180 471	66.9	-	-	-
	Liège	99 144	206 872	47.9	110 053	221 865	49.6
	Luxembourg	21 873	47 727	45.8	24 605	51 537	47.7



Namur	47 758	93 963	50.8	52 565	100 591	52.3
East Flanders	195 326	300 667	65.0	-	-	-
Flemish Brabant	146 175	220 971	66.2	-	-	-
West Flanders	171 089	278 539	61.4	-	-	-

Note: People residing in institution are excluded from the analysis at Belgian level - see Wallonia and Brussels columns for sensitivity analyses (on the right of the table; see Limitation section in documentation sheet for details); Source: IMA-AIM data, KCE calculation.*Institutions providing long term care include homes for older people ("ROB" -"MRPA" facilities) and nursing homes ("RVT"- "MRS" facilities).

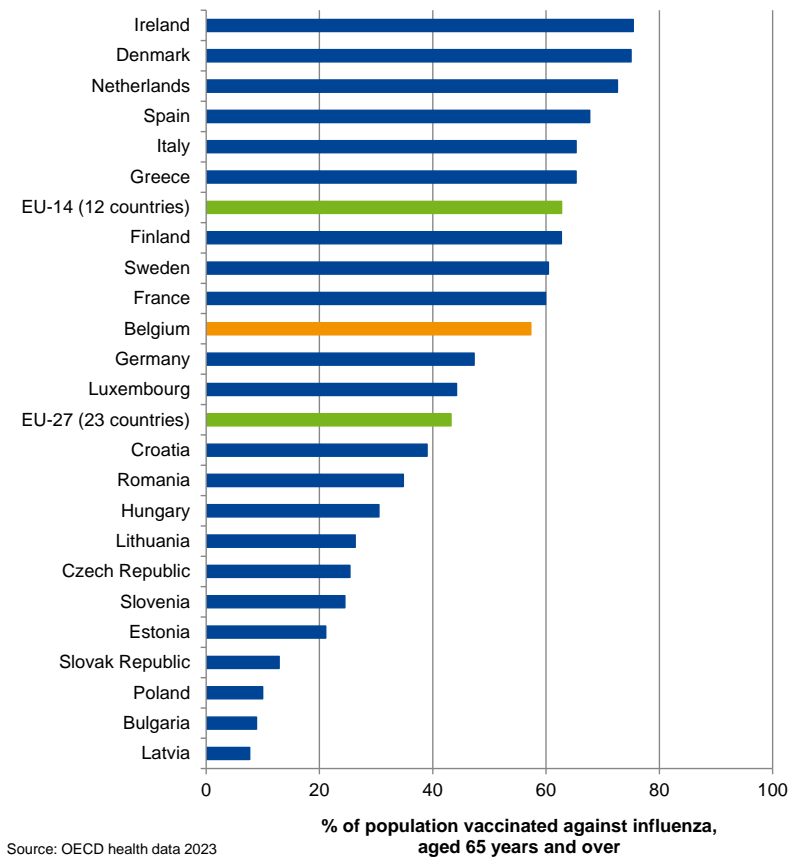
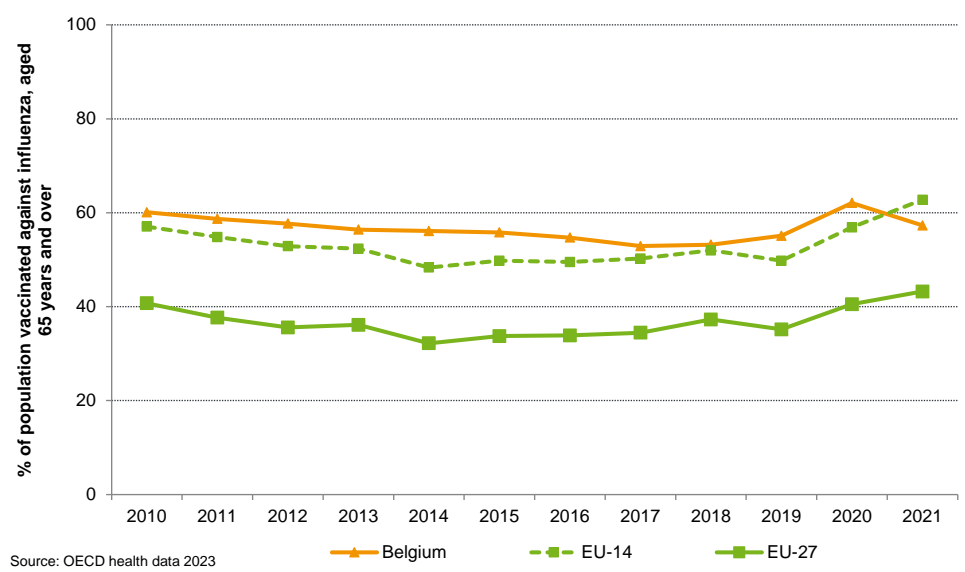
International comparison

In 2021, the coverage of influenza vaccination in Belgium (57.3%) was higher than the EU-27 average (43.2%) but lower than the EU-14 average (62.8%); see

Figure 2). However, between 2010 and 2020, the coverage of influenza vaccination in Belgium was higher than the EU-14 and EU-27 averages.



Figure 2 – Coverage of vaccination against influenza for people aged 65 years and over: international comparison (2021, trend 2010-2021)





Key points

- **In 2021, the vaccination coverage against influenza of people aged 65 years and over (and not residing in an institution) was 57.3%, far below the WHO target of 75%. During the COVID-19 pandemic, the vaccination coverage increased by 17% in 2020 compared to 2019.**
- **Vaccination rates for 65+ years old (in 2021) were higher in Flanders (64.7%) than in Wallonia (49.1%) and Brussels (46.3%) and also higher for people aged above 75 years.**
- **There might be some accessibility problems to influenza vaccine for people entitled to preferential reimbursement.**
- **Although in 2010-2020 Belgium had a higher influenza vaccination coverage than the EU averages, in 2021, Belgium's influenza vaccination coverage (57.3%) was between the EU-27 average (43.2%) and the EU-14 average (62.8%).**

References

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