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10.2. Vaccination against influenza for the elderly (P-4)

10.2.1. Documentation sheet

Description	Proportion of the population aged 65 years and over that were vaccinated against influenza
Calculation	Numerator: number of individuals aged 65 years and over who received a dose of influenza vaccine during the past calendar year. ^{ddd} Denominator: number of individuals aged 65 years and over Because results are based on sickness funds data, all calculations are based on elderly patients who are not residing in an institution (see section limitation for details).
Rationale	Influenza vaccines are considered as the most effective preventive tool to reduce disease burden and severe disease due to influenza in individuals. In Belgium, seasonal influenza vaccination is currently recommended for the prevention of influenza for all persons aged 65 years and over and for all persons living in institutions (among other groups). ¹ The WHO recommends a target a 75% vaccination rate for the elderly. ²
Primary data source	There are two sources of results for this indicator: <ul style="list-style-type: none"> • Results presented in this report are based on billing data (IMA data) of influenza vaccines which have been reimbursed. • Results presented in international databases (OECD, Eurostat) are based on Belgium health interview survey (HIS) (self-reported vaccination status).^{3,4}
Technical definitions	In IMA data: all vaccines belonging to the ATC 4 class J07BB (anti-influenza vaccines).
Limitation	In IMA data, only vaccines which have been reimbursed are taken into account.

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



	<p>In <u>Flanders</u>, since 2010, vaccines are free of charges for elderly 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 database (source: Agentschap voor Zorg and Gezondheid). Hence all calculations for this indicator exclude (from numerator and denominator) elderly 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 the elderly residing in elderly or nursing homes, but for Wallonia and Brussels only.</p> <p>In the Health Interview survey, results are based on self-reported vaccination status.</p>
International comparability	<p>ECHIM, OECD and Eurostat data are based on Health interviews.</p> <p>International comparisons are also regularly published by the ECDC, but Belgium did not participate to last publication of the groups. ⁵</p>
Dimension	<p>Accessibility of preventive care</p>

10.2.2. Results

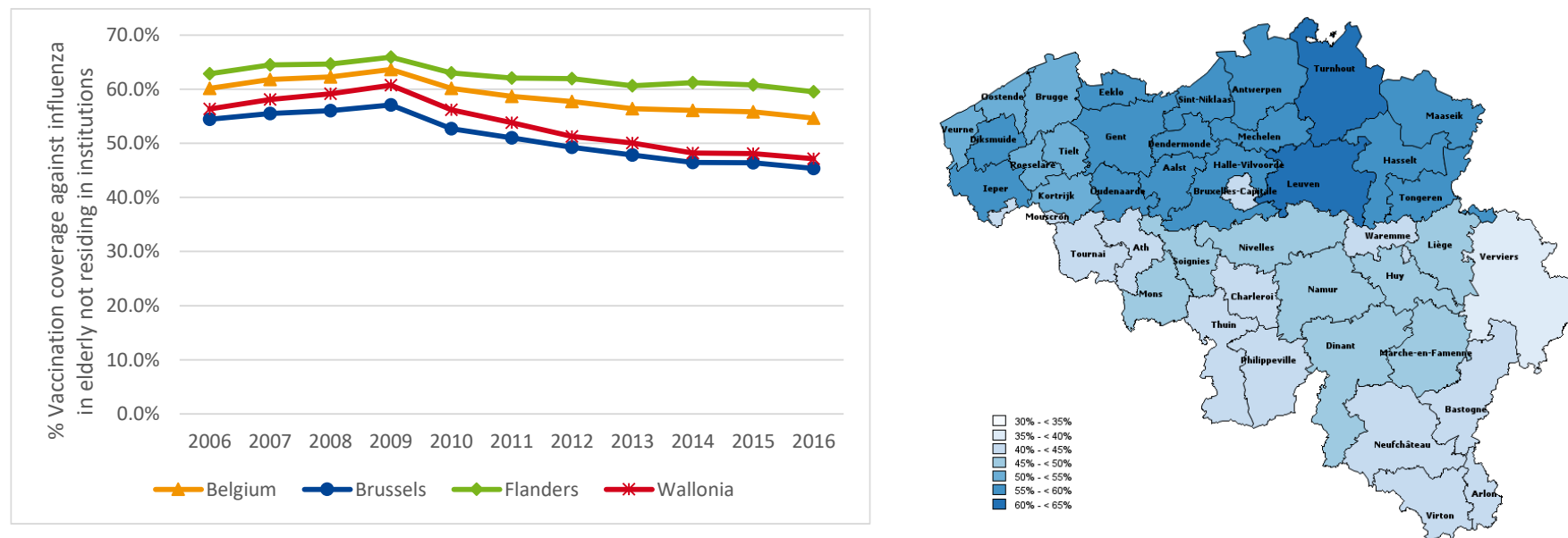
10.2.2.1. Belgium

Based on reimbursement data, vaccination rates against influenza for patients aged 65 years old have increased from 60% in 2006 to 63.6% in 2009, then decreased to 54.7% in 2016 (Figure 145 this decrease has been partly explained by disbelief in flu vaccine after the A/H1N1 epidemics ⁶). There is a higher coverage rate in Flanders (59.5%) than in Wallonia (47.1%) and Brussels (45.4%), and larger differences between patient districts (see Table 101 and Figure 145 on the right). All the previous results exclude elderly residing in institution (which account for 8.5% of the

population of elderly patients in 2016) because in Flanders influenza vaccines for this population are bought directly by the regional health authority. A sensitivity analysis was performed including elderly residing in institutions, limiting the analysis to Wallonia and Brussels. The vaccination coverage, then globally reaches 49.5% (coming from 46.8%), is improved both in Wallonia (from 47.1% to 49.8%) and in Brussels (from 45.4% to 48.5%) due to the high rate (82.1%) measured in institutions (81.1% in Brussels and 82.3% in Wallonia). There are also large differences in coverage rates by patient age: while the rate only reaches 40.1% for the 64-69 years old, it improves to 68.8% for the 80+ (Table 101). The same data also show that there is no accessibility problem for people having preferential reimbursement entitlement.



Figure 145 – Coverage of vaccination against influenza in people aged 65 years and over, by region (2006-2016) and by district (2016)



Source: IMA data, KCE calculation.

Note: **People residing in institution are excluded from the analysis** (see section limitation in technical fiche for details).


Table 101 – Coverage of vaccination against influenza in people aged 65 years and over, by patient characteristics (2016)

		<u>BELGIUM CALCULATION, INSTITUTIONS EXCLUDED.</u>			<u>WALLONIA+BRUSSELS CALCULATION, INSTITUTIONS INCL.</u>		
Variable	Category	Numerator	Denominator	Influenza vaccination coverage	Numerator	Denominator	Influenza vaccination coverage
Data 2016 by categories							
Age (years)	65-69	237 814	592 504	40.1%	81 794	243 300	33.6%
	70-74	241 590	462 768	52.2%	79 948	176 731	45.2%
	75-79	221 945	358 772	61.9%	76 108	137 266	55.4%
	80-84	191 401	283 404	67.5%	71 252	114 486	62.2%
	85-89	113 571	161 303	70.4%	53 067	78 540	67.6%
	90-94	36 786	51 819	71.0%	24 463	34 155	71.6%
	95-99	5250	7626	68.8%	5319	7323	72.6%
	>=100	370	607	61.0%	548	793	69.1%
Gender	Female	582 868	1 056 154	55.2%	233 237	460 541	50.6%
	Male	465 859	862 649	54.0%	159 262	332 053	48.0%
Entitlement to increased reimbursement	No	758 146	1 414 012	53.6%	272 318	564 527	48.2%
	Yes	290 581	504 791	57.6%	120 181	228 067	52.7%
Long term care	Home care	67 316	95 184	70.7%	19 513	31 096	62.8%
	Institutions	-	-	-	50 207	61 161	82.1%
	No long term care	981 411	1 823 619	53.8%	322 779	700 337	46.1%
Region	Brussels	62 331	137 379	45.4%	72 943	150 457	48.5%
	Flanders	706 435	1 187 370	59.5%	-	-	-
	Wallonia	279 961	594 054	47.1%	319 556	642 137	49.8%
	Brussels + Wallonia (sensitivity analysis)	342 292	731 433	46.8%	392 499	792 594	49.5%



Variable	Category	BELGIUM CALCULATION, INSTITUTIONS EXCLUDED.			WALLONIA+BRUSSELS CALCULATION, INSTITUTIONS INCL.		
		Numerator	Denominator	Influenza vaccination coverage	Numerator	Denominator	Influenza vaccination coverage
Province	Antwerpen	192 078	318 808	60.3%	-	-	-
	Brabant Wallon	33 261	67 141	49.5%	37 238	71 798	51.9%
	Bruxelles-Capitale	62 331	137 379	45.4%	72 943	150 457	48.5%
	Hainaut	103 926	220 979	49.9%	119 276	239 344	49.8%
	Limburg	94 380	153 660	61.4%	-	-	-
	Liège	84 291	182 965	46.1%	96 661	198 377	48.7%
	Luxembourg	18 872	41 743	45.2%	21 654	45 036	48.1%
	Namur	39 611	81 226	48.8%	44 727	87 582	51.1%
	Oost-Vlaanderen	159 533	268 298	59.5%	-	-	-
	Vlaams Brabant	120 370	197 169	61.0%	-	-	-
	West-Vlaanderen	140 074	249 536	56.1%	-	-	-

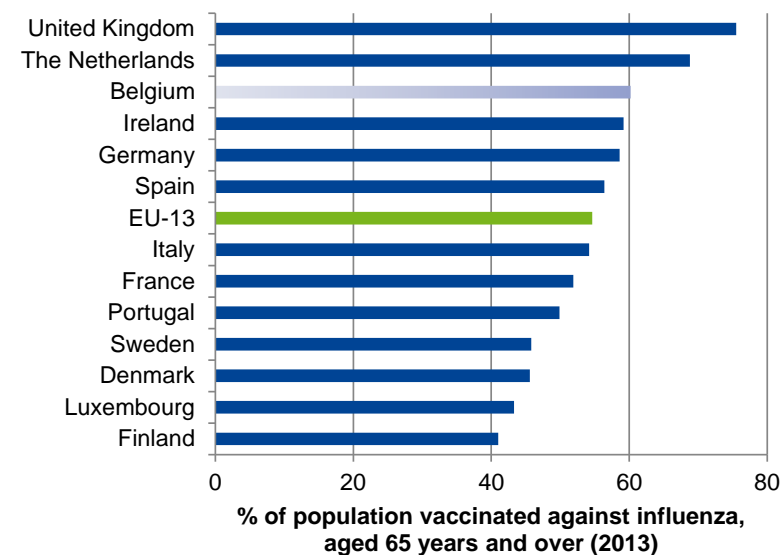
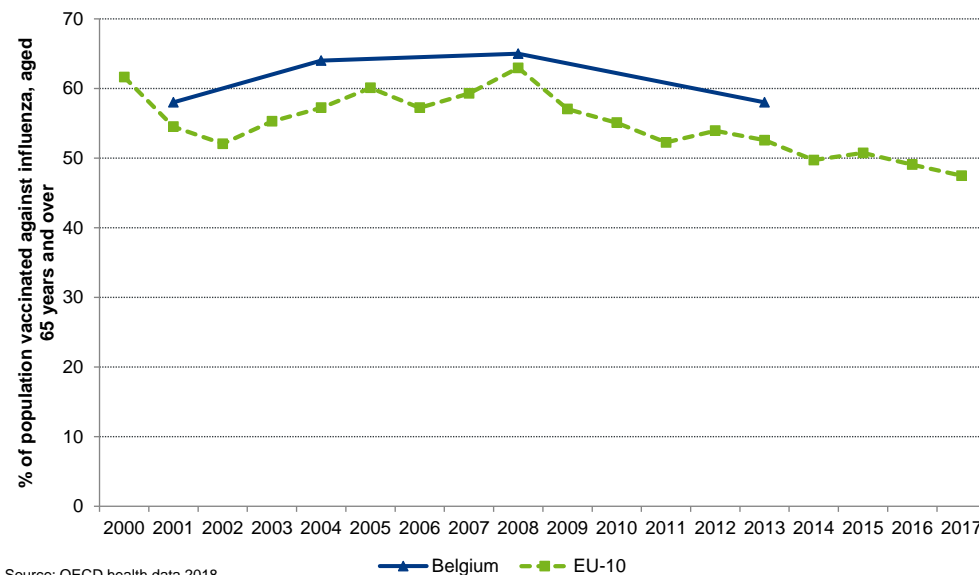
Note: People residing in institution are excluded from the analysis on Belgium (on the left of the table) but included on the analysis on Wallonia and Brussels (on the right of the table) (see section limitation in technical fiche for details). Source: IMA data, KCE calculation



10.2.2.2. International comparison

International comparisons are based on results from HIS survey or reimbursement data. Based on the last results from the Health interview survey, coverage of influenza vaccination in Belgium for 2013 was 60.2% in this age group (this is only slightly superior to the results obtained by the billing IMA data, 56.4%). Compared to other European countries, this is above the EU-15 average (55%).

Figure 146 – Coverage of vaccination against influenza for elderly: international comparison (2013, trend 2000-2017)



Source: Data from Belgium are based on the Health Interview Survey.

Note: fluctuation of the EU-15 is an artefact of the availability of the coverage data of the different countries.



Key points

- **In 2016, the vaccination coverage against influenza of people aged 65 years and over (and not residing in an institution) was 54.7%, below the WHO target of 75%. It decreased since 2009 (63.6%), as it did in the majority of EU-15 countries.**
- **In 2013, Belgium has a higher influenza vaccination coverage than EU-15 countries.**
- **Vaccination rates for 65+ years old (in 2016) are higher in Flanders (60.6%) than in Wallonia (50.1%) and Brussels (47.8%), and globally also higher for people aged 80+**
- **There is no accessibility problem to influenza vaccine for people entitled to preferential reimbursement.**

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