



8. VACCINATION AGAINST INFLUENZA FOR THE ELDERLY (P-4)

8.1. Documentation sheet

Description	Proportion of the population aged 65 years and over that were vaccinated against influenza
Calculation	<p>Numerator: number of individuals aged 65 years and over who received a dose of influenza vaccine during the past calendar year.⁹</p> <p>Denominator: number of individuals aged 65 years and over</p> <p>Because results are based on sickness funds data, most calculations are based on elderly patients who are not residing in an institution (see section limitation for details). However a sensitivity analysis including data from nursing homes in Wallonia and Brussels has also been performed (see section limitation for details).</p>
Rationale	<p>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, among others, all persons aged 65 years and over and for all persons living in institutions (among other groups).¹</p> <p>The WHO recommends as target a 75% vaccination rate for the elderly.²</p>
Primary data source	<p>There are two sources of results for this indicator:</p> <ul style="list-style-type: none"> • Results presented in this report are based on billing data (IMA-AIM data) of influenza vaccines which have been reimbursed. • Results presented in international databases (OECD, Eurostat, ECDC, WHO) are based on Belgium health interview survey (HIS) (self-reported vaccination status).^{3,4}
Technical definitions	<p>In IMA-AIM data: all vaccines belonging to the ATC 4 class J07BB (anti-influenza vaccines).</p> <p>A distinction is made between chronic versus non-chronic patients. Chronic condition definition: IMA-AIM: Individuals entitled to the RIZIV-INAMI status chronic illness. Entitlement is derived from data from the InterMutualistic Agency (IMA-AIM), variables pp3015, pp3016 or pp3017. If the value for one of these 3 variables is equal to 1 or 2, the individual has an chronic illness entitlement and is assumed to suffer from a chronic illness.</p>
Limitation	<p>In IMA-AIM data, only vaccines which have been reimbursed by the RIZIV-INAMI are taken into account.</p> <p>In Flanders, 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, for Wallonia and Brussels.</p> <p>In the HIS (OECD indicator), data are self-reported.</p>
International comparability	OECD data are based on Health interviews survey (self-reported data).

⁹ This definition differs from epidemiological studies, where rates are generally calculated on one influenza season, which usually overlaps two calendar years.



DimensionAccessibility of preventive care

8.2. Results

8.2.1. Belgium

Population aged 65 years and over

Based on reimbursement data, vaccination rates against influenza for patients aged 65 years old staid stable since 2013 (from 56.4% in 2013 to 55.1% in 2019, data excluding nursing homes). In 2019, there was a higher coverage rate in Flanders (60.8%) than in Wallonia (46.1%) and Brussels (44.7%), and large differences between patient provinces (see Table 13). Indeed, Liège shows a higher vaccination rate than the other Walloon provinces (79.4%), and on the Flemish side, Limburg (64.0%) shows a lower vaccination rate than other provinces in Flanders (Table 13; Figure 18).

The results exclude the elderly 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 elderly residing in institutions and limiting the analysis to Wallonia and Brussels. By including the elderly living in institution, the vaccination coverage, globally reaches 48.2% (with a rate of 82.1% in institutions). By excluding the elderly residing in institutions the rate decreases to 45.9% (see Table 13).

There are also large differences in coverage rates by patient age: while the rate only reaches 40.8% for the 64-69 years old, it improves to 71.4% for the 90+ (Table 13). The same data also show that there is no accessibility problem for people having preferential reimbursement entitlement.

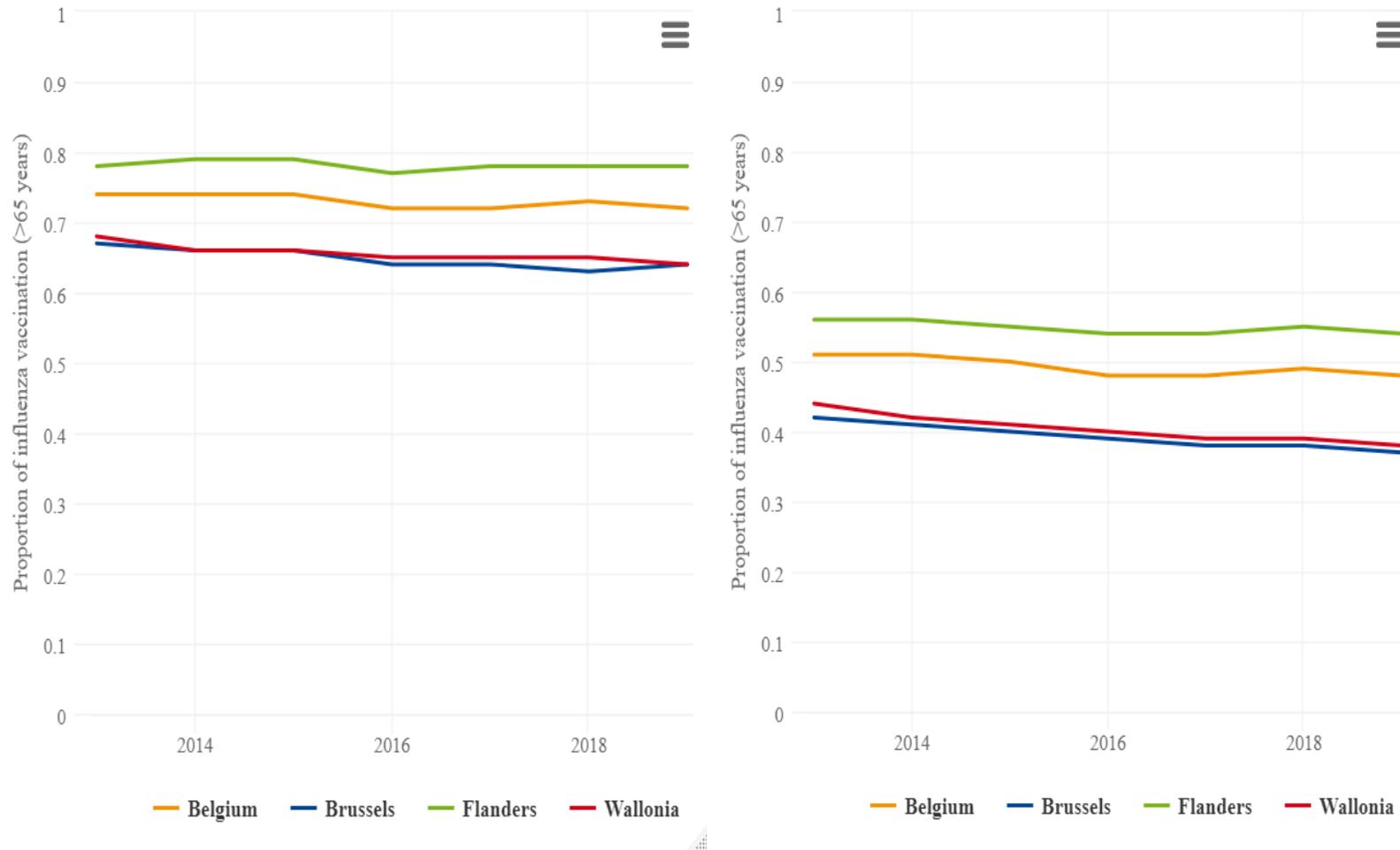
Population aged 65 years over entitled to the INAMI-RIZIV status chronic illness vs not entitled to the status chronic illness

The vaccination rate is 24.2% higher in patients entitled to the status chronic illness than in patients not entitled to the status (2019: chronic 72.3% vs not chronic 48.1%) and the difference in vaccination coverage increased since 2013 (22.5%). Whatever the socio-economic characteristics of the patients, those entitled to the chronic status are always more frequently vaccinated than those without chronic status. Patients with chronic status living in Flanders are more frequently vaccinated (77.7%) than those living in Brussels (63.6%) or Wallonia (64.3%). However, Liège has the highest vaccination rates among chronic patients (79.4%), followed by Anvers (78.5%) and Vlaams Brabant (78.3%). The average vaccination rate in Wallonia is drawn down by the low vaccination rate in Hainaut (63.0%) (Table 13; Figure 18).

Chronic patients living in nursing homes (65+ in Wallonia and Brussels) are also more frequently vaccinated (84.2%) than patients not entitled to chronic status living in nursing homes (73.9%).



Figure 17 – Coverage of vaccination against influenza in people aged 65 years and over, by region (2013-2019) and by chronic status (Chronic = left side; Not chronic = right side)



Source: IMA data, KCE calculation.

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



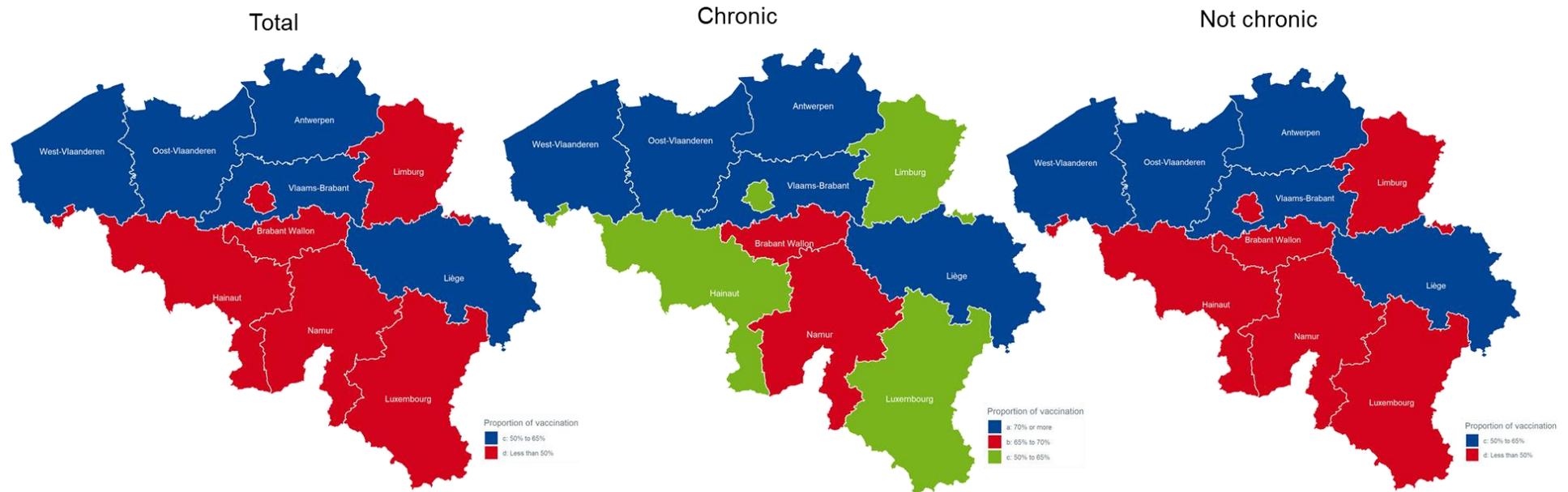
Table 13 – Coverage of vaccination against influenza in people aged 65 years and over, by patient characteristics (2019)

Variable	Category	Chronic			Not chronic			Belgium		
		<u>BELGIUM CALCULATION, INSTITUTIONS EXCLUDED</u>	<u>WALLONIA+BRUSSELS CALCULATION, INSTITUTIONS INCL.</u>	<u>WALLONIA+BRUSSELS CALCULATION, INSTITUTIONS EXCL.</u>	<u>BELGIUM CALCULATION, INSTITUTIONS EXCLUDED</u>	<u>WALLONIA+BRUSSELS CALCULATION, INSTITUTIONS INCL.</u>	<u>WALLONIA+BRUSSELS CALCULATION, INSTITUTIONS EXCL.</u>	<u>BELGIUM CALCULATION, INSTITUTIONS EXCLUDED</u>	<u>WALLONIA+BRUSSELS CALCULATION, INSTITUTIONS INCL.</u>	<u>WALLONIA+BRUSSELS CALCULATION, INSTITUTIONS EXCL.</u>
		Influenza vaccination coverage			Influenza vaccination coverage			Influenza vaccination coverage		
Data 2019 by categories										
Total		72.3%	67.2%	64.1%	48.1%	38.5%	37.8%	55.1%	48.2%	45.9%
Age (years)	65-69	61.1%	53.7%	52.5%	35.7%	26.3%	26.2%	40.8%	32.6%	32.0%
	70-74	69.5%	62.6%	61.4%	46.8%	36.7%	36.6%	52.5%	44.1%	43.3%
	75-79	75.0%	68.3%	67.0%	55.4%	45.3%	45.0%	61.5%	53.4%	52.3%
	80-84	78.1%	73.2%	71.1%	62.0%	52.2%	51.5%	68.0%	61.1%	59.1%
	85-89	79.3%	76.3%	72.7%	64.9%	57.1%	55.5%	71.2%	66.9%	63.1%
	>90	78.9%	79.4%	73.7%	63.8%	59.3%	55.5%	71.4%	71.7%	64.5%
Gender	Female	71.6%	67.0%	63.4%	48.7%	39.0%	38.1%	55.6%	49.3%	46.2%
	Male	73.2%	67.4%	65.3%	47.4%	38.0%	37.5%	54.4%	46.9%	45.5%
Entitlement to increased reimbursement	No	72.8%	67.1%	64.7%	48.3%	38.9%	38.3%	54.4%	47.3%	45.5%
	Yes	71.3%	67.6%	63.1%	47.3%	37.3%	36.1%	57.0%	50.8%	46.8%
Long term care	Home care	74.6%	65.9%	65.9%	61.7%	51.4%	51.4%	71.3%	62.3%	62.3%
	Institutions	NA	84.2%	NA	NA	73.9%	NA	NA	82.1%	NA
	No long term care	71.9%	63.9%	63.9%	47.8%	37.6%	37.6%	54.2%	45.1%	45.1%
Region	Brussels	63.6%	65.8%	63.6%	37.0%	37.6%	37.0%	44.7%	46.6%	44.7%



	Flanders	77.7%	NA	NA	54.2%	NA	NA	60.8%	NA	NA
	Wallonia	64.3%	67.6%	64.3%	38.0%	38.8%	38.0%	46.1%	48.6%	46.1%
	Brussels + Wallonia (sensitivity analysis)	64.2%	67.3%	64.2%	37.8%	38.5%	37.8%	45.9%	48.2%	45.9%
Province	Antwerpen	78.5%	NA	NA	55.4%	NA	NA	61.4%	NA	NA
	Brabant Wallon	68.4%	71.5%	68.4%	41.9%	42.6%	41.9%	48.9%	51.1%	48.9%
	Bruxelles-Capitale	63.6%	65.8%	63.6%	37.0%	37.6%	37.0%	44.7%	46.6%	44.7%
	Hainaut	63.0%	66.6%	63.0%	37.2%	37.9%	37.2%	45.8%	48.5%	45.8%
	Limburg	64.0%	NA	NA	36.8%	NA	NA	45.3%	NA	NA
	Liège	79.4%	66.9%	64.0%	54.8%	37.6%	36.8%	62.4%	47.6%	45.3%
	Luxembourg	63.4%	67.6%	63.4%	37.0%	37.9%	37.0%	44.2%	47.1%	44.2%
	Namur	66.1%	69.1%	66.1%	40.0%	40.6%	40.0%	47.7%	50.0%	47.7%
	Oost-Vlaanderen	78.1%	NA	NA	54.5%	NA	NA	61.0%	NA	NA
	Vlaams Brabant	78.3%	NA	NA	55.3%	NA	NA	61.6%	NA	NA
	West-Vlaanderen	75.0%	NA	NA	50.9%	NA	NA	57.9%	NA	NA

Note: **People residing in institution are excluded from the analysis at Belgian level - see Wallonia and Brussels columns for sensitivity analyses** (see section limitation in technical fiche for details); NA= not applicable; Source: IMA data, KCE calculation

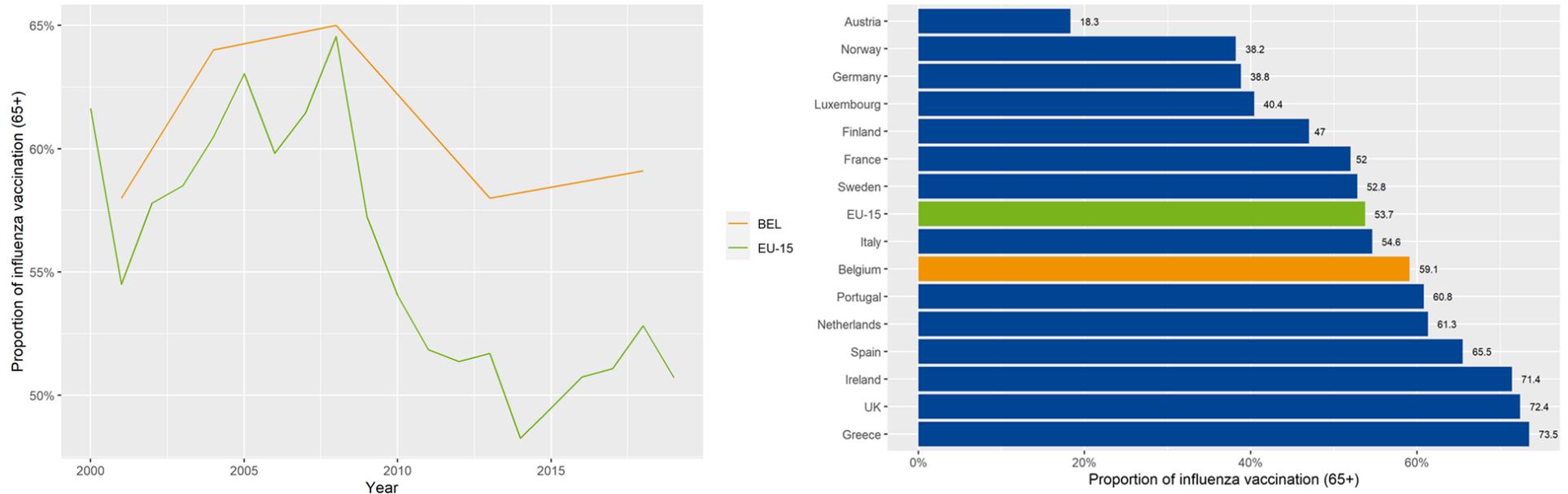
**Figure 18 – Influenza vaccination coverage by province, by chronic status (2019)**

8.2.2. International comparison

International comparisons are based on results from HIS survey. Based on the last results from the Health interview survey, coverage of influenza vaccination in Belgium for 2018 was 59.1% in this age group (this is only slightly superior to the results obtained by the billing IMA data, 55.3%). Compared to other European countries, this is above the EU-15 average (53.7%) (Figure 19).



Figure 19 – Coverage of vaccination against influenza for elderly: international comparison (2018, trend 2000-2020)



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 2019, the vaccination coverage against influenza of people aged 65 years and over (and not residing in an institution) was 55.1%, far below the WHO target of 75% and staid stable since 2013 (56.4%).
- Vaccination rates for 65+ years old (in 2019) are higher in Flanders (60.8%) than in Wallonia (46.1%) and Brussels (44.7%) and globally also higher for people aged 85+.
- The vaccination rate is higher in patients entitled to the status chronic illness than in patients not entitled to the status (2019: chronic 72.3% vs not chronic 48.1%) and the difference in vaccination coverage increased since 2013 (22.5%). Whatever the socio-economic characteristics of the patients, those entitled to the chronic status are always more frequently vaccinated than those without chronic status.
- The elderly entitled to chronic status living in nursing homes (in Wallonia-Brussels) are more frequently vaccinated than the elderly not entitled to chronic status living in nursing homes.
- In 2018, Belgium has a higher influenza vaccination coverage (59.1%) than average EU-15 countries (53.7%).

References

1. Superior Health Council. Vaccination contre la grippe saisonnière Saison hivernale 2017-2018. Brussels: CSS-HGR; 2017. nr. 9418 Available from: https://www.health.belgium.be/sites/default/files/uploads/fields/fpshealth_t heme_file/css_9418_grippe_saisonniere_2017-2018.pdf
2. WHO. Prevention and Control of Influenza Pandemics and Annual Epidemics,. World Health Organization; 2003. Resolution of the Fifty-Sixth World Health Assembly (WHA56.19) Available from: http://apps.who.int/gb/archive/pdf_files/WHA56/ea56r19.pdf
3. OECD. Health at a Glance 2019: OECD Indicators. Paris: Organisation for Economic Co-operation and Development; 2019. Available from: <https://doi.org/10.1787/4dd50c09-en>
4. Sciensano. Belgian Health Interview Survey – Interactive Analysis. Module: Health and Social Services [Web page].Brussels: Sciensano;2021 [cited December 2021]. Available from: <https://hisia.wiv-isp.be/SitePages/Home.aspx>