



## 6. PROPORTION OF PEOPLE REPORTING A CHRONIC DISEASE (CHR-2)

### 6.1. Documentation sheet

<b>Description</b>	Percentage of the population aged 15 years and over with at least one self-reported chronic disease
<b>Calculation</b>	This is the number of persons reporting to have at least one chronic disease or condition (numerator), divided by the total amount of respondents (denominator) in the Belgian Health Survey.
<b>Rationale</b>	Non-communicable diseases (NCDs) constitute a problem of public health since they are responsible for 71% of deaths worldwide. They have a high impact on the quality of life and are also an important cause of premature death. Most of the NCDs can be preventable by adopting health policies to help to reduce the risk factors (e.g. smoking, drinking alcohol or lacking of physical activities) associated to the most important NCDs (cardiovascular diseases, cancer, respiratory diseases, and diabetes). The term “chronic disease” is often used as a synonym for NCDs, since they tend to be a long duration. However, NCDs are defined by their non-infectious cause, even though some chronic diseases can have an infectious cause (e.g. HIV). Self-reported chronic disease is used in the European Community Health Indicators (ECHI) projects. It is a widely used indicator to measure the population health and to provide estimates of health care needs. <sup>1</sup>
<b>Primary data source</b>	<b>National Health Interview Survey (HIS)</b> , module: Chronic conditions, Sciensano Belgium, 2001, 2004, 2008, 2013, 2018. This survey is set up every 3 to 5 years. <b>The InterMutualistic Agency/InterMutualistisch Agentschap/Agence InterMutualiste - (IMA-AIM)</b> , update 2020 <sup>b</sup> In the <i>HISLink</i> <sup>c</sup> project, Sciensano performed a linkage between HIS data (2013 and 2018), and IMA-AIM data. The aim was notably to support RIZIV-INAMI to overcome the shortcomings of the data (e.g. lack of information on non-reimbursed health care use, lack of link between health care use and health needs, or scarcity of information on socio-demographic background characteristics). Data extracted from the HIS for the HISLink project covers the following topics: socio-demographic characteristics, health status, lifestyle and health care use. The linkage is not 100% because some individuals included in HIS could not be identified in the IMA-AIM database. In the HIS-2013, linkage was possible for 88% of HIS participants, while in the HIS-2018 linkage, this was the case for ~94%.
<b>Technical definitions</b>	<b>National Health Interview Survey (HIS)</b> The numerator is the number of persons reporting to suffer from a chronic disease by answering “yes” to the following question of the HIS;(MA_SH02): “Do you suffer from (have) any chronic (long-standing) illness or condition (health problem) ?”. The denominator is the number of respondents to the same question of the HIS (MA_SH02). Results are weighted to account for the survey design. Age-adjustment was made using a direct standardization method, using the age distribution of the Belgium 2018 as weights for age groups. <sup>1</sup> <b>IMA-AIM</b> Individuals entitled to the status chronic illness. Entitlement is observed through 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 entitlement and is assumed to suffer from a chronic condition. To be entitled to the RIZIV-INAMI chronic illness status, health expenditure based on official tariffs i.e. RIZIV-INAMI expenditures and patients’ official co-payments (tickets modérateurs / remgelden) but excluding extra-billings exceed €300

<sup>b</sup> Available from <https://atlas.ima-aim.be/databanken/?rw=1&lang=nl>

<sup>c</sup> HISLink project, <https://www.sciensano.be/en/projects/linkage-health-interview-survey-data-health-insurance-data> (last access 6 October 2021)



	(2013 tariff, indexed to €325.35 in 2019) per quarter for eight consecutive quarters or if they benefit for the fixed payments for chronically ill people or if they suffer from a rare or orphan disease and if their health expenditure based on official tariffs per quarter for eight consecutive quarters.
<b>Limitations</b>	<p>HIS data must be interpreted with caution since they are self-reported and thus reflect individual perceptions of health that may differ from actual health: it is not excluded that some people report an illness incorrectly by lack of knowledge or because the disease is perceived as not socially acceptable.<sup>1</sup></p> <p>Belgian citizens younger than 15 years are excluded.</p> <p>A similar but different question was available in the HIS editions until 2013 (MB01) : “Do you suffer from one or several longstanding illnesses, chronic conditions or handicaps?”</p>
<b>International comparability</b>	<p>c. Availability:</p> <ul style="list-style-type: none"> <li>• ‘Self-reported chronic disease’ is an indicator available in Eurostat EU-SILC, performed annually. One question assesses the presence of long-standing health problems: “Do you have any longstanding illness or health problem?” Yes / No. The question was developed for the EUROHIS project “Developing common instruments for health surveys”. The main characteristics of a chronic disease are that it is permanent and may be expected to require a long period of supervision, observation or care. Longstanding illnesses or health problems should have lasted (or recurred) or are expected to last (recur) for 6 months or more; therefore temporary problems are not of interest.<sup>2</sup></li> <li>• Self-reported chronic disease is also part of the European Health Interview Survey (EHIS).</li> </ul> <p>d. Comparability</p> <ul style="list-style-type: none"> <li>• the self-reported prevalence of chronic disease indicator of the HIS can be compared with the self-reported chronic disease of the EU-SILC, although there is a difference in the formulation of the question since only the diseases or affections that have lasted for at least 6 months are considered. In the conceptual description it is indicated that in principle it concerns diseases that last at least 6 months (or of which this is expected), but the question does not refer to this period. Moreover, in the EU-SILC, the age group threshold is set up to 16-64 years and 65+ years.<sup>3</sup></li> <li>• Comparability is possible for 15 self-reported chronic morbidity available in the EHIS, although the HIS contains data for 38 chronic diseases or affections. EHIS data<sup>d</sup> are not age-standardized, which can hamper the comparability of self-reported chronic morbidity since the prevalence of chronic diseases increases strongly with age.</li> </ul>
<b>Performance dimension</b>	Contextual indicator
<b>Related indicators</b>	CHR-1, CHR-3

<sup>d</sup> EHIS microdata are available via Eurostat (<https://ec.europa.eu/eurostat/web/microdata/european-health-interview-survey>) which allows comparing age-standardized results for this indicator between EU countries



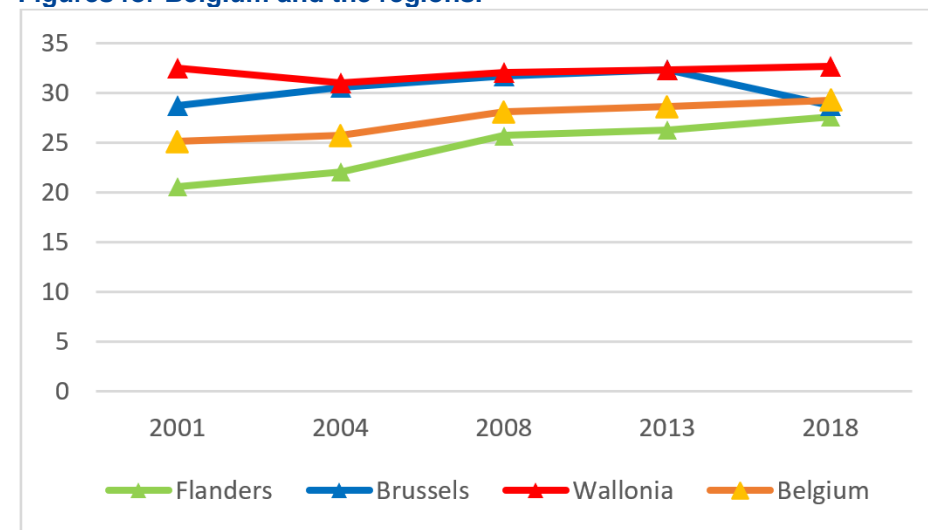
## 6.2. Results

### 6.2.1. Self-reported chronic diseases in population

The proportion of people in Belgium reporting a chronic disease grew from 2001 (25.1%) to 2018 (29.3%). Rates are the highest in Wallonia (32.7%), followed by Brussels (28.7%) and Flanders (27.6%) (Figure 1). As expected, the proportion of people with chronic diseases increases with age from 14.1% (age group 15-24) to 44.1% (age group 75+) (data of 2018) (Table 8).

A European study (EU-SILC) allows to compare data between European countries and shows that the proportion of people with chronic diseases is low compared to the mean of 15 European countries. (Table 9)

**Figure 15 – Percentage of the population aged 15 years and over with at least one chronic disease (years 2001, 2004, 2008, 2013, 2018). Figures for Belgium and the regions.**



Source: National Health Interview Survey (HIS)

**Table 8 – Percentage of the population (per age group) with at least one chronic disease (years 2001, 2004, 2008, 2013, 2018)**

Age Group	2001	2004	2008	2013	2018
15-24	10.3% [8.1%-12.4%]	11.1% [8.3%-13.9%]	7.4% [5.2%-9.6%]	7.4% [4.9%-10.0%]	14.1% [10.4%-17.8%]
25-34	12.6% [10.5%-14.7%]	15.6% [12.6%-18.5%]	17.5% [14.5%-20.6%]	15.8% [12.0%-19.6%]	17.4% [14.2%-20.7%]
35-44	21.1% [18.4%-23.8%]	20.5% [17.8%-23.3%]	21.5% [18.5%-24.5%]	25.6% [21.8%-29.5%]	25.0% [21.7%-28.3%]
45-54	25.7% [22.9%-28.6%]	28.0% [24.9%-31.1%]	30.0% [26.6%-33.5%]	29.1% [25.6%-32.7%]	30.0% [26.7%-33.3%]
55-64	33.3% [29.9%-36.7%]	33.3% [29.8%-36.7%]	37.8% [34.1%-41.5%]	38.5% [34.4%-42.6%]	36.7% [32.9%-40.4%]
65-74	38.6% [34.7%-42.5%]	39.3% [35.7%-42.9%]	44.0% [39.1%-48.9%]	38.4% [33.9%-42.9%]	39.7% [36.0%-43.4%]
75+	53.7% [48.2%-59.2%]	46.7% [42.0%-51.4%]	48.3% [43.9%-52.6%]	46.3% [41.2%-51.4%]	44.1% [39.8%-48.3%]

Source: National Health Interview Survey (HIS)



**Table 9 – Percentage of persons reporting a chronic disease per country in Europe**

2020	% people reporting a chronic illness
<b>EU-15 (mean for 12 countries)</b>	34.1
<b>UK</b>	NA
<b>Italy</b>	NA
<b>Germany</b>	NA
<b>Finland</b>	50.3
<b>Portugal</b>	43.2
<b>Sweden</b>	37.4
<b>France</b>	37.4
<b>Spain</b>	37.3
<b>Austria</b>	35.4
<b>Denmark</b>	34.6
<b>Netherlands</b>	32.5
<b>Ireland</b>	27.2
<b>Belgium</b>	24.8
<b>Luxembourg</b>	24.6
<b>Greece</b>	23.9

Source: EU-SILC, NA= Not available

### 6.2.2. Reporting of chronic disease in people with the chronic illness status

Thanks to the HISLink project (see documentation sheet), additional results on the indicator ‘people with chronic disease (CHR2)’ can be obtained in the subgroup of people with the chronic illness status (indicator CHR1 used as an stratification variable here). The population sample of the HISLink is a large proportion of the HIS cohort: For 2018 the Valid Ns are 7488 vs 7945 (94.2%). For 2013 the figures were lower 5933 vs 6299 but the percentage is the same (94.2%). The results on the self-reported chronic disease between the HIS cohort and the HISLink sample, for 2018 are coherent: 29.3% vs 29.5% and congruent with 2013 data. (Table 10)

As shown in the Figure 15, there is a slight increase in the proportion of people with a self-reported chronic disease between 2013 and 2018: 28.6% vs 29.3% (increase of 0.7 point of percentage in 5 years). There is also an increase in the proportion of people with RIZIV-INAMI chronic illness status between 2013 and 2018: 10.5% vs 12.9% (increase of 2.4 point of percentage in 5 years) (see fiche of the CHR1 indicator, for details).

The difference between the proportion of people with a self-reported chronic disease and of people with the chronic illness status is important in 2013: 28.6% vs 10.5% (diff = 18.1%). For 2018 this difference is in the same order of size, i.e. 29.5% vs 12.9% (diff= 16.6%).

- A first explanation is that the chronic illness status is mainly based on healthcare expenses and not on having a chronic disease. People having a chronic disease, but whose healthcare cost is lower than 300€/quarter (not indexed), not benefiting of the lump sums for chronically ill persons, are not entitled to the chronic illness status.
- Another explanation is that people need to have a healthcare cost of 300€/quarter for 8 consecutive quarters to enter in the status. This implies that people who do not have a ‘continuous’ high cost, or who only have a deterioration of a chronic disease for a few months, leading to increased but short-term expenses, will not get the RIZIV-INAMI chronic illness status.
- Thirdly, the spending for reimbursed health care is more important in case of multimorbidity than in the situation of chronic disease: in 2018, 39.2% of multimorbid people benefit from the RIZIV-INAMI chronic illness status while 31.5 % of the self-reported chronic disease patients benefit from it.”

The RIZIV-INAMI status reflects the people with high spending in care but is not a good proxy to identify all persons with chronic diseases.

The people identified by the RIZIV-INAMI chronic illness status (in 2018 12.9% of the HISLink sample) can be categorised in two: the ones who report to have a chronic disease (72%) and those who do not report a chronic disease (27%). It might be that these people who do not report a chronic disease in the HIS either (1) lack health literacy/HIS questions



comprehension, or (2) use a lot of reimbursed care without diagnosis of any known chronic disease.

It is also remarkable that in 2018 (congruent to 2013) 23.8% of the HISLink respondents have either the self-reported chronic disease or the RIZIV-INAMI chronic illness status (but not both). This implies that there is not a strong link between the chronic illness status and having a chronic disease.

In the HIS cohort, there are slight inter-regional differences in the prevalence of (self-reported) chronic diseases in 2013/2018 (Flanders: 26.3/27.6%; Brussels region: 32.3/28.7%; Wallonia: 32.3/32.7%). And in the HISLink cohort, there are slight inter-regional differences in the proportion of people with the chronic illness status in 2013/2018 (Flanders: 10.4/12.7%; Brussels region: 10.3/12.9%; Wallonia: 10.7/13.1%). The trend for the three Belgian regions for the above-mentioned is the same.

**Table 10 – Reporting of chronic disease in patients with the Chronic illness Status**

	2013						2018					
	Self-reported chronic disease (HIS sample)		Self-reported chronic disease (HISLink sample)		Chronic illness status (HISLink sample)		Self-reported chronic disease (HIS sample)		Self-reported chronic disease (HISLink sample)		Chronic Illness status (HISLink sample)	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
<b>Belgium</b>	28.6	27.0 - 30.2	28.5	26.9 - 30.1	10.5	9.4 - 11.5	29.3	27.9 - 30.8	29.5	28.1 – 31.0	12.9	11.8 – 13.9
<b>Brussels</b>	32.3	29.0 – 35.5	32.6	29.2 – 36.1	10.3	7.8 – 12.9	28.7	26.2 – 31.1	29.4	26.8 – 31.9	12.9	11.2 – 14.7
<b>Flanders</b>	26.3	24.1 - 28.5	26.1	23.9 - 28.3	10.4	8.9 - 11.8	27.6	25.6 - 29.5	27.7	25.7 – 29.6	12.7	11.3 – 14.2
<b>Wallonia</b>	32.3	29.6 – 35.0	32.5	29.7 – 35.2	10.7	9.0 – 12.4	32.7	30.0 – 35.4	33.1	30.4 – 35.6	13.1	11.3 – 14.9

	2013						2018					
	Self-reported chronic disease AND chronic illness status		Self-reported chronic disease but NO chronic illness status		NO Self-reported chronic disease but chronic illness status		Self-reported chronic disease AND chronic illness status		Self-reported chronic disease but NO chronic illness status		NO Self-reported chronic disease but chronic illness status	
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
<b>Belgium</b>	8.1	7.1 – 9.0	20.4	19.0 – 21.9	2.4	1.9 – 2.9	9.3	8.4 – 10.2	20.2	19.0 – 21.5	3.5	3.0 – 4.1
<b>Brussels</b>	8.0	5.7 – 10.3	24.6	21.7 – 27.6	2.3	1.3 – 3.4	9.1	7.6 – 10.6	20.2	18.1 – 22.4	3.8	2.8 – 4.8
<b>Flanders</b>	8.1	6.8 – 9.5	18.0	16.0 – 19.9	2.2	1.6 – 2.9	9.1	7.9 – 10.3	18.6	17.0 – 20.2	3.7	2.9 – 4.4
<b>Wallonia</b>	8.0	6.5 – 9.4	24.5	21.9 – 27.1	2.7	1.9 – 3.5	9.8	8.2 – 11.4	23.3	20.9 – 25.7	3.3	2.4 – 4.1

Source: HISlink data



### Key points

- The proportion of people in Belgium reporting a chronic disease grew from 2001 (25.1%) to 2018 (29.3%). Rates are the highest in Wallonia (32.7%), followed by Brussels (28.7%) and Flanders (27.6%)
- The proportion people with chronic diseases increases with age from 14.1% (age group 15-24) to 44.1% (age group 75+).
- The European study (EU-SILC) shows that the proportion of people with chronic diseases is low compared to the mean of 15 European countries.
- The difference between the proportion of people with a self-reported chronic disease and of people with the chronic illness status is important in 2013: 28.6% vs 10.5% (diff = 18.1%). For 2018 this difference is in the same order of size, i.e. 29.5% vs 12.9% (diff= 16.6%). The most important reason is that the chronic illness status is mainly based on healthcare expenses (financial protection system) and not on having a chronic disease.

- It is also remarkable that in 2018 (congruent to 2013) 23.8% of the HISLink respondents have either the self-reported chronic disease or the RIZIV-INAMI chronic illness status (but not both). This implies that there is not a systematic link between the chronic illness status and self-reporting a chronic disease.

### References

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