

Health Professionals Report : Capacity, Accessibility and Production

Specialty of Interest : General Surgeon

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Introduction

Introduction

This report provides a comprehensive overview per healthcare specialty working within the Belgian health insurance system, within hospital and ambulatory settings.

Professional perspective :

• Aspects covered are: capacity, production (numbers and financials), subspecialties, replacement rates. Those aspects are described by gender, age, geography, type of activity, workplace, evolution.

Patient perspective :

• Accessibility and frequentation are described by gender, age, social status, geographical distribution, evolution.

Data Sources & Transformations

This report draws insights from the "Doc P" database, encompassing patients who sought care in Belgium and claimed insurance reimbursement. The database spans from accounting years :

- 2013 to 2023 for health professionals
- 2018 to 2023 for health professionals subspecialties
- 2018 to 2022 for insured coverage and patient frequentation

Each studied year N is coupled with socio-demographic data on providers as of December 31 N.

To address GDPR (General Data Protection Regulation) compliance for small cell data, numbers from fewer than 5 registered providers are hidden.

Contact

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Additional information

For official information regarding the number of healthcare providers :

- NIHDI : please click <u>FR | NL</u>
- MOH : please click <u>FR | NL</u>

Key Variables & Metrics

Healthcare professional perspective (specialty is determined by grouping <u>NIHDI competency codes</u>) :

- <u>Demographic characteristics</u> are age (groups by 10Y), sex (M/F), working address (or contact address if not available), communication language (Dutch/French), convention status (full, partly), activity status (>1 intervention/year), type of prestation (see <u>NIHDI</u> <u>nomenclature</u>).
- <u>Numeric characteristics</u> are number of professionals (all providers registered within INAMI-RIZIV), number and cost of (reimbursed) prestations. Evolution is available since 2012 for professionals figures and since 2018 for the study of their activity.
- <u>FTE (full-time equivalent)</u> is calculated to determine the workload of a healthcare provider (= total reimbursements by provider in a given year divided by the median amount of reimbursements for providers aged 45 to 54 in the same specialty, see Annex 1). FTE values are capped at 1. The FTE for employed doctors in medical homes (lump sum financing) was estimated at 0.82 per doctor because the actual FTE cannot be evaluated given the absence of activity registration. Medical homes with lumpsum are not included in the productivity calculation. General practitioners with "Fee for Service" in the title specifies that doctors and patients in medical homes with lumpsum are excluded from the analysis. Weighted conventioned FTE refers to the adjusted calculation where FTEs for partially conventioned providers are multiplied by 0,5.
- Working place : distinction is made between private, polyclinic, day hospitals, or hospital stays, depending on the place of prestation.
- <u>Subspecialty Clusters</u> : Healthcare providers within a specialty can be clustered based on ([sub] group of similar) nomenclature codes reimbursed or working place.
- Indicators of Density : FTE/10.000 insured, total activity/FTE, reimbursement/FTE, number of patients/FTE.

Patient perspective :

- <u>Demographic characteristics</u> are age, sex (M/F), address of residence (not treatment place !) (by region, province, etc.), social status (normal and preferential regime [BIM])), type of specialty contacted during the year.
- <u>Patients Indicators</u> : insured coverage (% at least 1 contact) (N.B. Specialists in training included), insured frequentation (number of contacts/insured), patient frequentation (number contacts/patient).
- A KPI (Key Performance Indicator) color system is used in this report. It is shown as
- Grey for contextual information
- Green for positive performance compared to starting year
- Red for negative performance compared to starting year

Limitations & Assumptions

- Professional density : metrics in this report were not standardized to a consistent population size, which means comparisons between regions or provinces may not be entirely fair or accurate.
- Patient analysis uses actual care years, not accounting years, unlike other analyses. If the analysis year is N, the last available year for patient analysis is N-1 in order to present relevant data.
- The calculation of FTEs may be impacted by modifications of competency codes over the years. A change within a specialty affects the median of reimbursements and thus generates breaks in the evolution of FTEs (see the recognition of nephrologists since 2022 for internal medicine). The median value changes depending on the year (see Annex 1).



Speciality Metrics and Comparison (2023) : General Surgeon

This sheet compares the specialty of interest (left) with comparison group (right).

			General Surgeon	Surgical Pathology	_ Surgical Patholo
Competency Code	General Surgeon Description	# N SubSpecialities	1	10	Profession Acute Medicine and
0140 0145	Surgery Specialists Surgery and Dermatology-Venereology Specialist	# N Total	1,958	11,481	Emergency Medicine Anesthesiologist ENT Specialist
0149	Surgery Specialists with a special professional title in Emergency Medicine	# N Active	1,359	8,758	General Surgeon Neurosurgeon Ophthalmologic
		# Full-Time Equivalent (FTE)	885	6,090	Surgeon Orthopedic Surgeon Plastic Surgeon
		€ Expenses per FTE	343,101	357,861	Stomatologist Urologist
		65+	% Active % FTE 14% 6%	% Active % FTE 11% 5%	
		Convention	% Active % FTE 79% 76%	% Active % FTE 71% 69%	
		Weighted Convention Accreditation	76%73%68%80%	67% 65% 77% 86%	

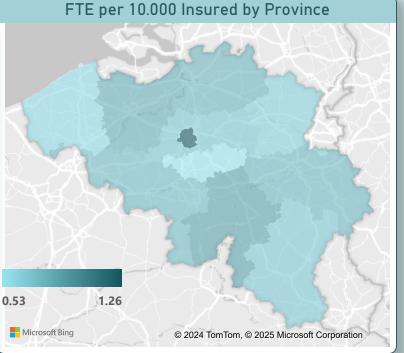


Geographical Accessibility (2023) : General Surgeon

Geographical accessibility is measured by density, calculated as the number of FTE (Full Time Equivalent) per 10.000 insured and comparing the results between provinces and regions. Metrics in this report were not standardized to a consistent population size.

Indicators :

- Geographical distribution which enables to check for homogeneity.
- Evolution over 10 years and growth rate within that period.
- Comparison of number of FTE and number of insured to detect correlation.



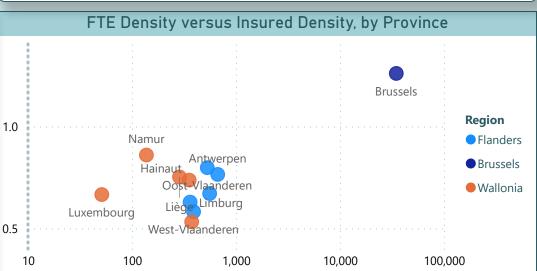
FTE per 10.000 Insured, by Region (2013 vs 2023)]	
1.26 Year 2013 0.99 2023		
0.71 0.71 0.74 0.73		1.0
0.5 •••••		
0.0		0.5

Brussels

Wallonia

Flanders

	Demo	graphic Informati	on by Provii	nce
Province	#FTE	Density (FTE per 10.000 Insured)	%65+ (FTE)	%Women (FTE)
West-Vlaanderen	71.53	0.58	7%	16%
Oost-Vlaanderen	126.04	0.80	2%	29%
Antwerpen	146.26	0.76	6%	24%
Limburg	55.15	0.63	6%	29%
Vlaams-Brabant	78.87	0.67	3%	23%
Brussels	144.62	1.26	6%	28%
Brabant Wallon	21.76	0.53	7%	21%
Hainaut	99.04	0.74	8%	26%
Namur	43.40	0.86	4%	24%
Liège	83.17	0.75	13%	28%
Luxembourg	15.15	0.67	5%	31%
Total	884.99	0.77	6%	26%







Financial accessibility is measured by the number of weighted conventioned FTE (Full time equivalent) by 10.000 insured. Weighted conventioned FTE refers to the adjusted calculation where FTEs for partially conventioned providers are multiplied by 0,5.

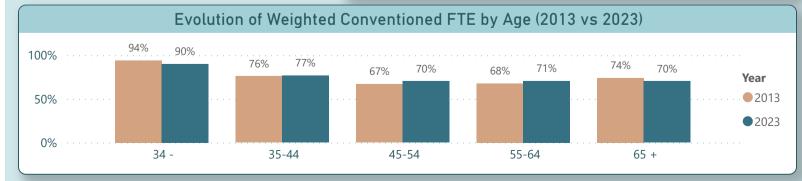
Convention means that the professional is committed to respect prices determined in the NIHDI convention. This agreement can occur partly (at specific hours during the week) or totally (all the working hours). The conventioned FTE for partially conventioned providers is calculated as half of their total FTE.

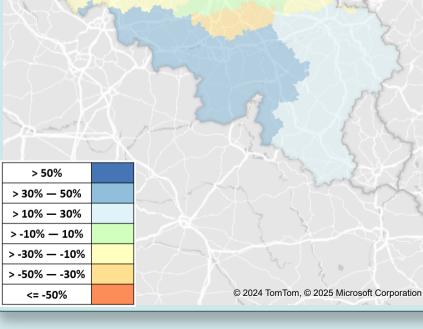
Indicators :

- \bullet % FTE meeting the criteria / total FTE
- Financial accessibility is gauged by weighted conventioned FTE (Full Time Equivalent) per 10.000 insured.

(2023)		7 39 ^{71% (}	0 ~ +2.899	%)	
% Conven	itione		-	anguage a	nd
% Conven	itione Part	d FTE Regir Full	-	anguage a Weighted	nd
		Regir	ne		nd
Language	Part	Regin Full	ne Total	Weighted	nd

Dem	ographic	Information by Provi	nce
Province	Density (FTE per 10.000 Insured)	Density (Weighted Conventioned FTE per 10.000 Insured)	% Weighted Conventioned FTE
West-Vlaanderen	0.58	0.32	55%
Oost-Vlaanderen	0.80	0.46	58%
Antwerpen	0.76	0.57	74%
Limburg	0.63	0.34	55%
Vlaams-Brabant	0.67	0.53	79%
Brussels	1.26	0.92	73%
Brabant Wallon	0.53	0.22	41%
Hainaut	0.74	0.71	96%
Namur	0.86	0.85	99%
Liège	0.75	0.62	82%
Luxembourg	0.67	0.56	84%
Total	0.77	0.56	73%





% Differences Weighted Conventioned FTE by Province



CPD (continuous professional development) is measured by accreditation criteria. Accreditation means that the professional meets several CPD (continuous professional development) criteria (which indicates the will for quality of care).

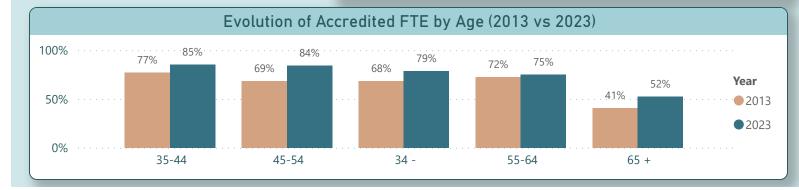
Indicator :

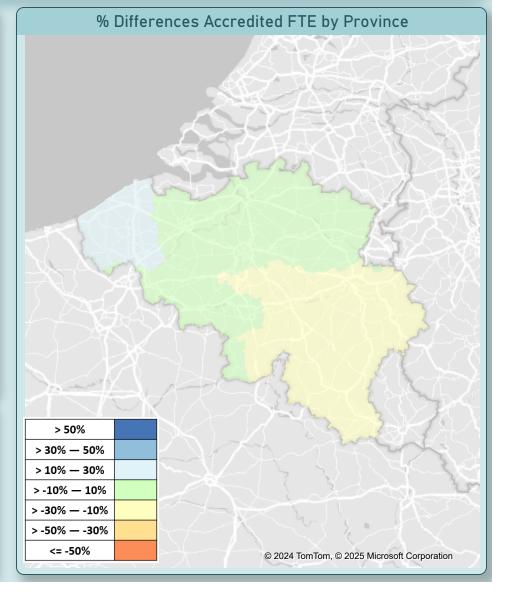
• % FTE meeting the criteria / total FTE

% Accredited FTE (2023)
80%~
2013: 71% (+11.86%)

	% Accre		FTE b Gend	*	guage
	Language	F	М	Total	
	FR	66%	73%	71%	
	NL	87%	85%	86%	
	Total	79 %	80%	80%	
L					

Demogra	aphic Info	rmation by Pro	vince	
Province	Density (FTE per 10.000 Insured)	Density (Accredited FTE per 10.000 Insured)	% Accredited FTE	
West-Vlaanderen	0.58	0.53	92%	
Oost-Vlaanderen	0.80	0.70	87%	
Antwerpen	0.76	0.66	86%	
Limburg	0.63	0.49	77%	
Vlaams-Brabant	0.67	0.55	82%	
Brussels	1.26	1.03	82%	
Brabant Wallon	0.53	0.34	63%	
Hainaut	0.74	0.58	79%	
Namur	0.86	0.61	71%	
Liège	0.75	0.44	58%	
Luxembourg	0.67	0.38	57%	
Total	0.77	0.61	80%	





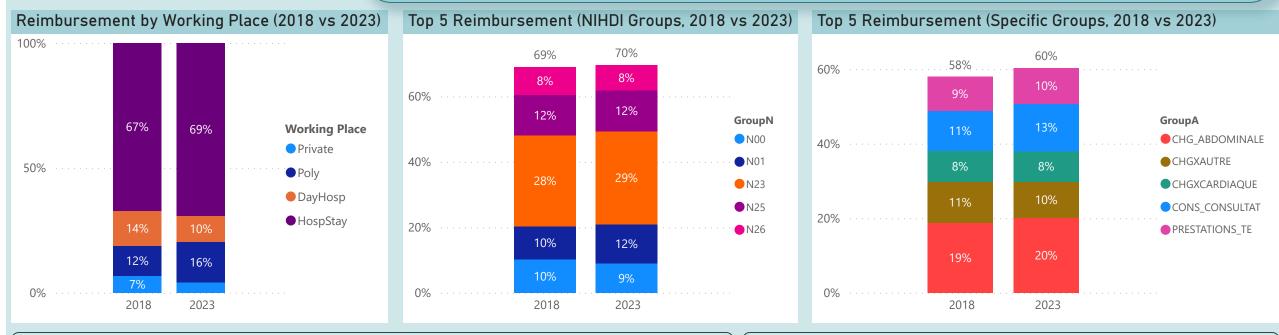


Reimbursement by FTE (2023)	
343,888	
2018: 309,804 (+11%)	

The level of activity is measured by the total reimbursement amount of the specialty. The distribution of the reimbursement by specialty allows to distinguish different types of activity which are grouped to study what kind of procedures are done and where. The type of activity is described by 2 criteria: the place of work and the nature of the activity:

- The place of work is the place where the activity takes place (private, polyclinic, day hospital, hospital stay).
- The nature of the activity is described according to 2 logics of grouping. The traditional distribution of reimbursements within NIHDI (N01 contacts, N20 surgery, etc.) and a specific, more detailed breakdown to identify sub-specialties within the specialty (i.e. cardiac surgery within surgery). Indicators :
- Reimbursement (in Euros) / FTE
- % Reimbursement (in Euros) by category / total reimbursement (in Euros)

The evolution provides information on the stability of the patterns of the activity comparing year N with N-5.



Supervision of hospitalized beneficiaries
Consultations visits and medical advices
Surgery on the abdomen
Thoracic surgery
/ascular surgery
Co Su Fh

GroupA	Description
CHG_ABDOMINALE	Abdominal Surg.
CHGXAUTRE	Other Surg.
CHGXCARDIAQUE	Cardiac Surg.
CONS_CONSULTAT	Consultation
PRESTATIONS_TE	Technic prest.

Subspecialties Activity and Working Place (2023) : General Surgeon

Subspecialties are identified by the working place and/or type of activity (see previous page): the assignment of a health care provider to a sub-specialty prioritizes the type of activity exercised. In general, the type of activity with the most reimbursements, if the amount exceeds 10% of reimbursements in all types of activity, determines the specialty of the health care provider. If no particular activity was identified for the specialty, the assignment was done on the criterium of the workplace: hospital, polyclinic, private. If there is no clear distinction between the different locations, then the cluster is named "Mixed". Clusters less than 5 FTE or less than 0,5% of total FTE are left out. Comparison of clusters helps to understand differences in nature of work. Indicators :

• % FTE by type of cluster

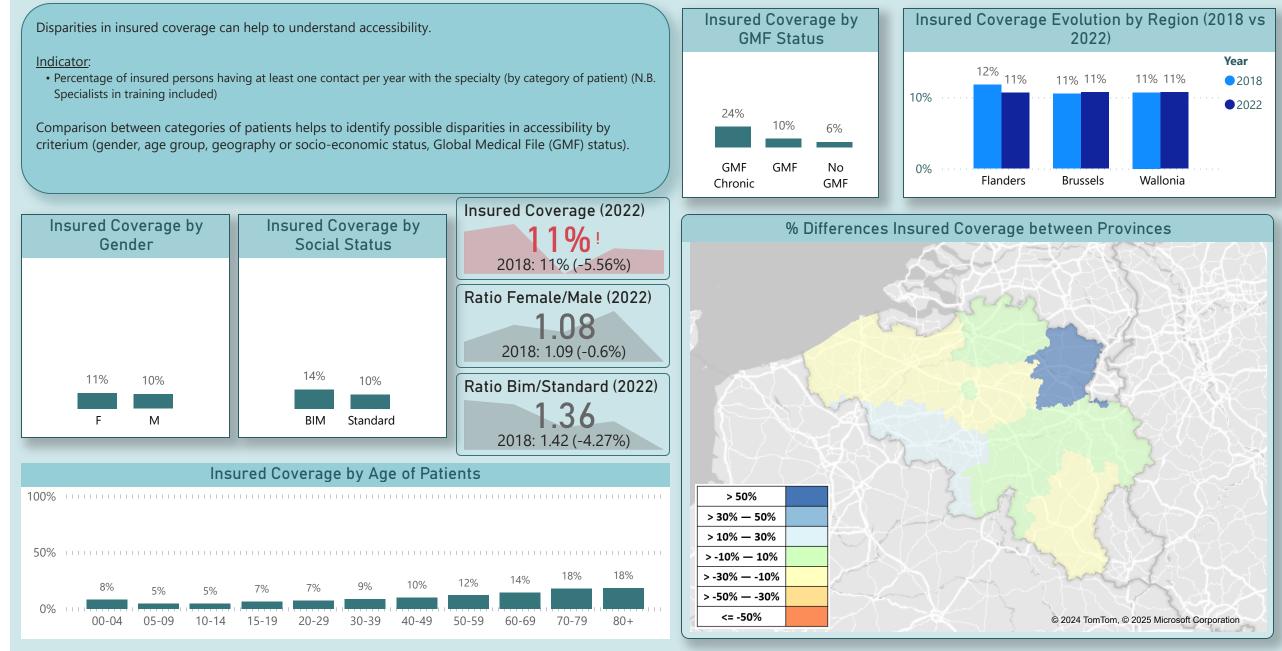
• % type of activity (in Euro) / total reimbursement (in euro) by cluster

FTE and median Reimbursement by Subspecialty					F
Subspecialty	FTE	Reimb per Provider			
Cardiac	94	404,019			
Thoracic	29	251,554		16%	10%
Obese	23	270,362			
Abdominal	328	237,499			
Vascular - P	31	169,779			
Vascular - A	134	299,407			
General	124	206,691		Rein	nburs
Emergency	33	466,636			
Hospi	6	192,868		Cardiac	
Mixed	77	254,111		curulac	
				Thoracic	11%





Accessibility, Insured Coverage (2022) : General Surgeon



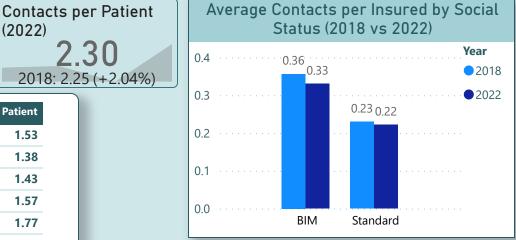


Accessibility, Contacts per Insured (2022) : General Surgeon

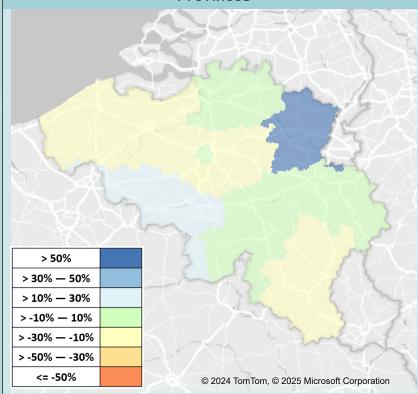
Insured Coverage

Number of contacts per insured is a (2022)(2022)(2022)complementary measure to understand 1%! 0.25 accessibility. 2018: 0.25 (-3.03%) 2018: 2.25 (+2.04%) 2018: 11% (-4.97%) Indicator : number of contacts (by category of insured) is respectively calculated **Contacts per Patient** Age Patient Contacts per Insured Insured Coverage - per insured 0.12 0.2 00-04 8% 1.53 - per patient (insured who at least has one 5% 1.38 05-09 0.06 contact with health provider) 10-14 0.07 5% 1.43 Categories of insured are defined by several 15-19 0.10 7% 1.57 criteria : gender, social status, age group, 0.0 20-29 0.13 7% 1.77 residence geography. 30-39 9% 1.97 0.17 40-49 0.22 10% 2.20 50-59 0.29 12% 2.41 14% 60-69 0.39 2.69 70-79 0.51 18% 2.81 80 +0.45 18% 2.43 Average Contacts per Insured (2018 vs 2022) Year Province Contacts per Insured Insured Coverage **Contacts per Patient** 0.26 0.25 0.25 2018 0.24 0.23 0.24 West-Vlaanderen 0.20 8% 2.47 2022 0.22 **9%** Oost-Vlaanderen 2.30 0.23 11% 2.18 0.2 Antwerpen Limburg 0.39 18% 2.14 Vlaams-Brabant 0.22 9% 2.32 Brussels 0.23 11% 2.17 > 50% > 30% - 50% 0.1 • • • Brabant Wallon 0.20 8% 2.55 > 10% - 30% Hainaut 0.30 13% 2.32 > -10% - 10% 0.23 10% 2.33 Namur > -30% - -10% Liège 0.24 10% 2.39 > -50% — -30% 0.0 Luxembourg 0.21 **9%** 2.40 Wallonia Flanders **Brussels**

Contacts per Insured

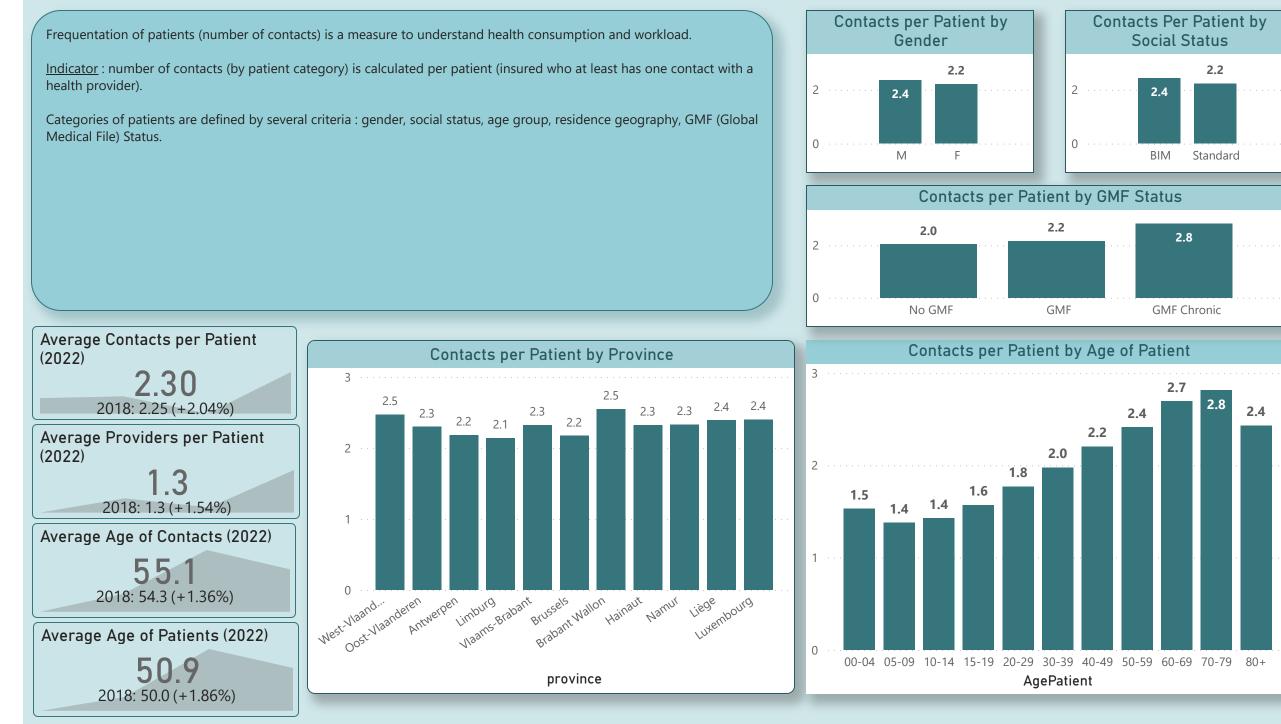


% Differences Contacts per Insured between Provinces



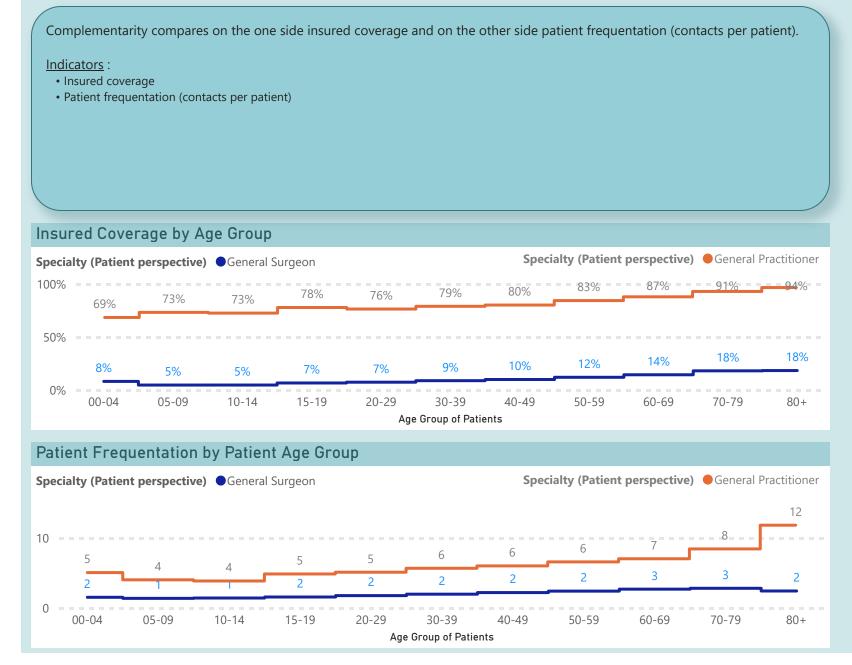


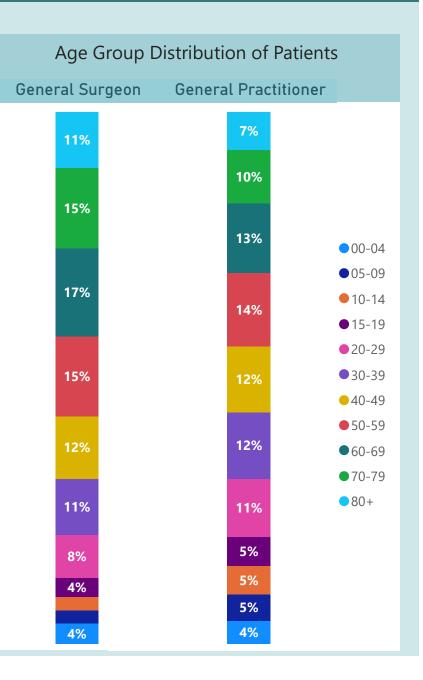
Patient Frequentation (2022) : General Surgeon





Complementarity with comparison group (2022) : General Surgeon







Workload (2022) : General Surgeon

Workload by specialty provides insight into the work volume per year of the specialty by FTE and the patient base population (Individual patients are allocated to one single professional per specialty per year to build the patient base population for each single professional/ provider) (N.B. Specialists in training are excluded). The classification criteria are linked to the healthcare professional (age, language, gender, work address, convention status, accreditation)

Indicators:

- Workload : contacts / FTE
- Patient base population: Patients / FTE
- Contacts per patient per provider

Limitation : working address of health professionals can be different than the location of patients. This can explain differences in workload results (contact/FTE, patients/FTE) and lead to misinterpretation for geographical criteria (province) especially for small numbers of working professionals. Also if the number of FTE by cell is inferior to 5, contacts per FTE and patients per FTE are hidden.

Average Contacts per FTE (2022)	Province	Contacts per FTE	Patients Per FTE	Contacts per Patient and Provider	Gender	Contacts per FTE	Patients Per FTE	Contacts per Patient and Provider
	West-Vlaanderen	3,214	1,326	1.9	F	3,392	1,575	1.7
3,163	Oost-Vlaanderen	3,220	1,392	1.7	М	3,091	1,325	1.7
2018: 3253 (-2.77%)	Antwerpen	3,049	1,409	1.7		-		
	Limburg	5,653	2,663	1.5				
	Vlaams-Brabant	2,546	1,009	1.8	Language	Contacts per FTE	Patients Per FTE	Contacts per Patient
Average Patients per FTE (2022)	Brussels	3,043	1,393	1.6	^			and Provider
	Brabant Wallon	2,933	1,125	2.2	FR	2,995	1,311	1.8
1,385	Hainaut	3,178	1,344	1.8	NL	3,282	1,437	1.7
2018: 1444 (-4.12%)	Namur	2,550	1,112	1.8	_			
	Liège	3,006	1,262	1.8	Convention	Contacts per FTE	Patiants Par ETE	Contacts per Patient
	Luxembourg	2,421	1,063	1.9				and Provider
verage Contacts per Patient and					Full	3,130	1,430	1.6
Provider (2022)					No	3,181	1,246	2.0
1.7 2018: 1.7 (+0.73%)	Age Class	Contacts per FTE	Patients Per FTE	Contacts per Patient and Provider	Partial	3,452	1,383	1.9
2010. 1.7 (10.7370)	34 -	1,809	636	1.9				

901

1,298

1,836

2,401

1.9

1.8

1.7

1.5

2,365

3,031

3,982

4,505

35-44

45-54

55-64

65 +

Accredited	Contacts per FTE	Patients Per FTE	Contacts per Patient and Provider
No	3,184	1,411	1.8
Yes	3,157	1,378	1.7

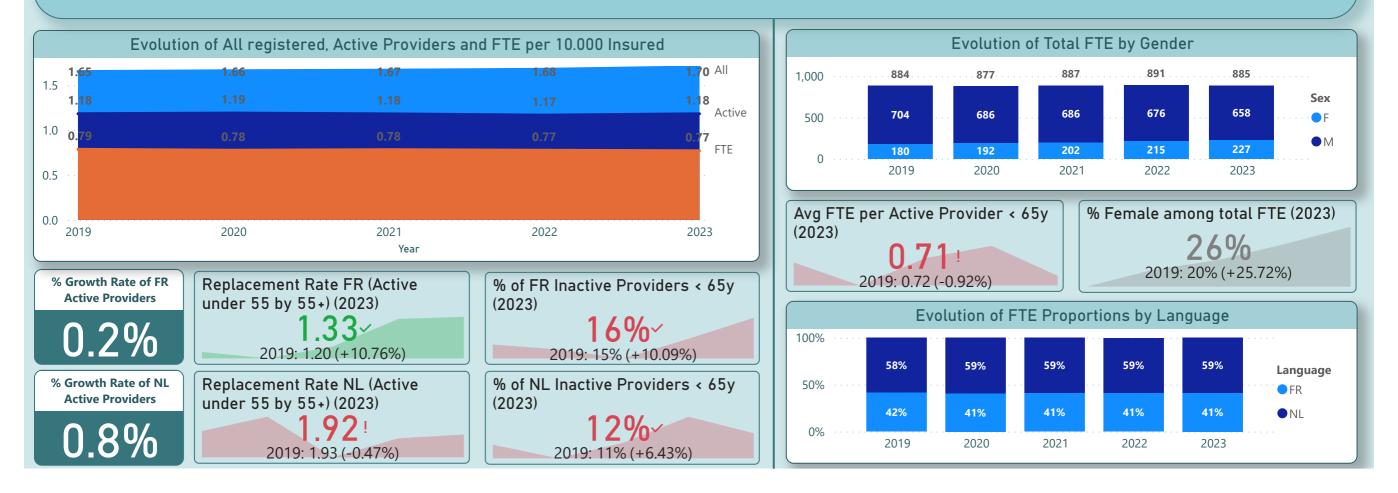


Healthcare workforce demographics present active professionals having more than one activity per year on the <u>left side</u> of the page, while Full-Time Equivalents (FTE) are displayed on the <u>right side</u>. The analysis spans the past decade and is segmented by professional characteristics such as age class, gender, and language. Active indicators (Left):

- Number of Actives (>1 prestation /accounting year) and its % growth rate over the past 5 years.
- Replacement Rate: Active professionals above 55 years compared to those below 55 years.
- Inactivity: % of inactive professionals in relation to the total.

FTE indicators (Right):

- Equal proportion of gender: Indicates the percentage of female FTE in relation to the total FTE.
- Average FTE: Indicates the level of activity by dividing the FTE below 65 years with the total active workforce.



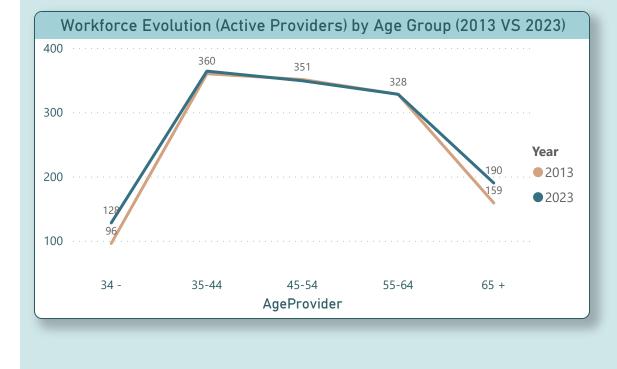


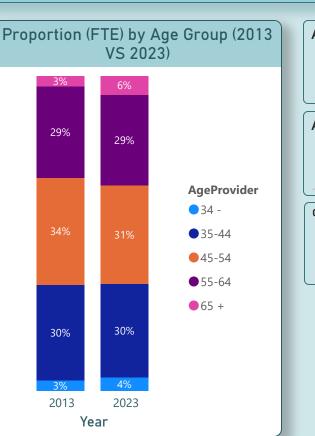
Demographic Evolution by Age Group (2023) : General Surgeon

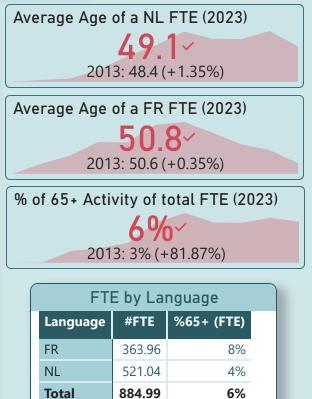
Demographic evolution by age group and activity of professionals above 65 years (provides information on the demographic stability).

Indicators :

- Trend in age group distribution (active/FTE),
- Age FTE : average of a professional's age weighted by its corresponding Full-Time Equivalent (FTE) value, by language of the provider.
- Contribution of older practitioners to the overall activity: % 65+ FTE/ Total FTE







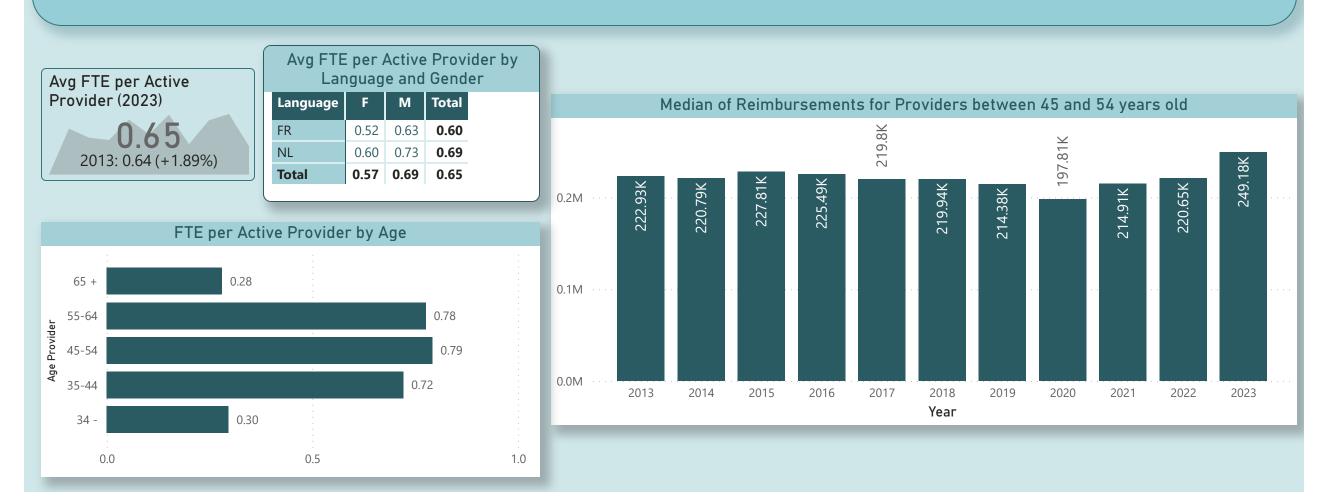


<u>FTE (full-time equivalent)</u> is calculated to determine the workload of a healthcare provider (= total reimbursements by provider in a given year divided by the median of reimbursements for providers aged 45 to 54 in the same specialty).

The median amount of reimbursement for providers aged 45 to 54 is calculated each year. Evolution is not adjusted for inflation.

FTE values are capped at 1. See the comparison per active provider by sex, language and age group.

N.B. The FTE for employed doctors in medical homes (lump sum financing) was estimated at 0,82 per doctor because the actual FTE cannot be evaluated given the absence of activity registration.





Annex 2: Type of Practice (2023) : General Surgeon

Type of practice (FTE) by age group and region. Evolution and trends

- 5 types of practices are represented:
- Nursing home: represents care facilities for the elderly or individuals requiring psychiatric care.
- Group: represents collective practices or facilities where professionals work together (ex: medical house with lumpsum, mental health center, day care center, public pharmacies, medical laboratories, bandagist/orthopedist workshops, physiotherapy office).
- Hospital: represents hospitals or medical establishments (ex: general hospitals, psychiatric hospitals, hospital pharmacies)
- Solo: represents individual practitioners or private addresses.
- Other: represents facilities or organizations not falling into the above categories (ex: tariff office, organizations with a registered business number)

N.B. Not Available (NA) values are decreasing over time as the database becomes increasingly complete.

