



1.1. Projection of the number of practising GPs (Supply), evolution in % (S-19)

1.1.1. Documentation sheet

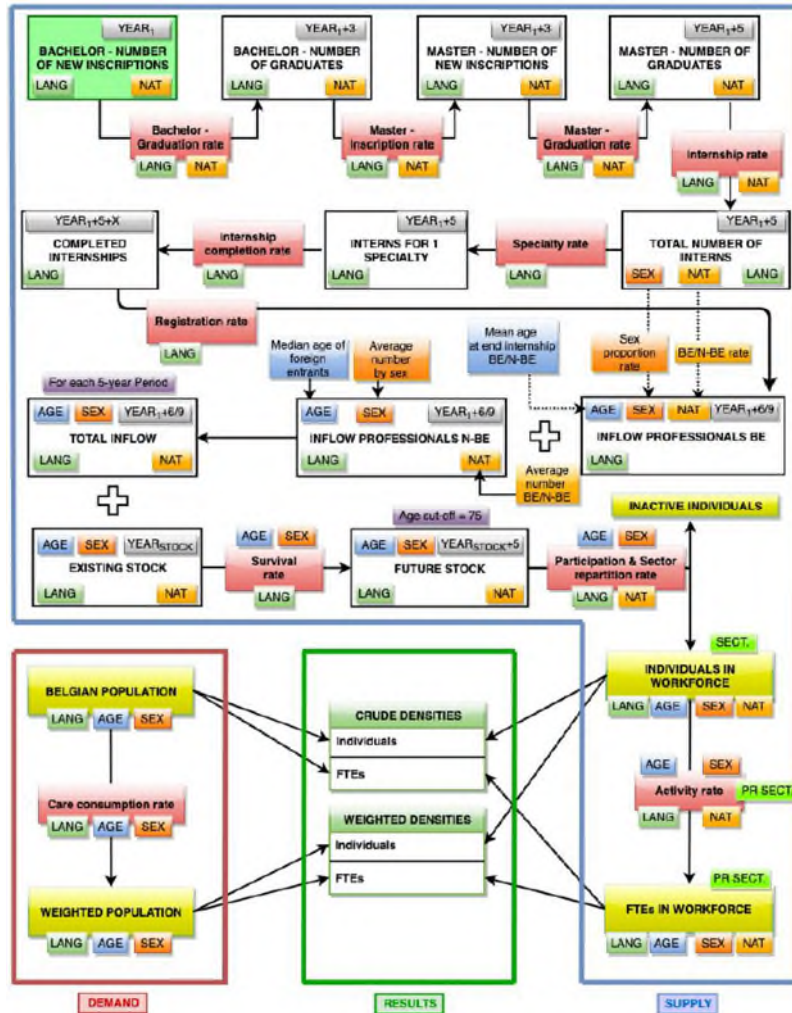
Description	<p>Primary indicator Projections of supply of GPs in individuals and FTEs in 2026, 2031, 2036 and 2041.</p> <p>Secondary indicator Projections of supply of all physicians in individuals and FTEs in 2026, 2031, 2036 and 2041.</p>
Calculation	<p>Supply projections to quantify the evolution of the workforce of healthcare professionals are carried out by the Planning Commission of medical supply supported by the Planning Unit for the Supply of the Healthcare Professions, depending on the FPS Public Health, Food Chain Safety and Environment (hereinafter called the Planning Commission and the Planning Unit).</p> <p>The Planning Unit uses a stock-and-flow model to quantify the evolution of healthcare professionals' workforce. The model for physicians is illustrated by Figure 1 where parameters are defined in Table 1. More details can be found in the reports from the Planning Unit (2020, 2022, 2023).¹⁻³ The number of bachelor graduates is obtained by multiplying the number of bachelor new inscriptions (parameter #1) by the bachelor graduation rate (parameter #2). Applying the master inscription rate (parameter #3) gives the number of master new inscriptions. Then applying the master graduation rate (parameter #4) gives the number of master graduates. From that, the number of persons starting a training (number of interns) is obtained by applying the internship rate (parameter #5). These calculations are made separately by linguistic community and nationality (Belgian vs non-Belgian) and are common to all medical specialists including GPs.</p> <p>From there, specific calculations are made for each medical specialty. The number of persons starting each specialty training is obtained by applying the specialty rate (parameter #6) to the number of interns. The internship completion rate (parameter #7) allows to calculate the number of completed internships in each specialty. All these persons are supposed to be automatically registered (<i>cadastre – kadaster</i>) as the registration rate (parameter #8) is set equal to 1. This inflow of newly registered physicians is separated by sex and nationality (Belgian vs non-Belgian) using parameter #9. To this inflow of physicians trained in Belgium an additional inflow of physicians trained abroad is added (parameter #10). The sum of these inflows is the total inflow of physicians who are licensed to practice. It is calculated by age, sex, nationality and linguistic community.</p> <p>The total inflow is added to the existing stock of physicians. A survival rate (parameter #11) is applied to take into account losses due to mortality. At this step, all persons aged 75 or above are also removed in order to limit the supply forecast to those in age of working. From this future stock, only active physicians are kept, using the participation rate (parameter #12). These are divided into four sectors (three inside the healthcare sector, one outside) using the sector repartition rate (parameter #13). This provides us with the projected number of practising physicians (the number of individual physicians active in the healthcare sector) that are presented below. Applying the activity rate (parameter #14) allows to calculate the number of FTEs active in the healthcare sector that are also presented below.</p> <p>One must note that the model also allows to calculate crude and weighted densities according to the evolution of the population and the application of a care consumption rate (parameter #15). These results are not presented here but can be found in the report from the Planning Unit (2020).¹</p> <p>The model allows to calculate the number of individuals and FTEs in the workforce for each medical specialty separately. However, in what follows, all physicians are aggregated together to ensure comparability with indicator S-18, for which no result per specialty was available. Projections for GPs are presented separately.</p>



Rationale	Projections of the number of physicians, both in number of individuals as well as in FTEs, are used to quantify the future workforce supply. Although the Planning Unit model allows to take into account care consumption and to calculate crude and weighted workforce densities, these projections are not used here because they mix both supply and demand components. Demand for healthcare workforce is projected separately (see indicator S-18).
Data source	Planning Commission of medical supply supported by the Planning Unit for the Supply of the Healthcare Professions, depending on the FPS Public Health, Food Chain Safety and Environment
Technical definitions	The following physicians are excluded from the projection model: specialists in clinical genetics, occupational medicine, health data management, forensic medicine, insurance medicine and medical expertise, physicians without specialism or accreditation and physicians in training.
Limitations	<p>In 2021, 80.9% of the physicians were exclusively self-employed and 6.8% combined salaried and self-employed status.⁴ For physicians who are active as self-employed the calculation of FTEs is based on the amounts reimbursed by the sickness funds for provided care. The reference value is determined by specialty, using the observed median of the total amount paid for care provided by the reference group. For GPs for instance one FTE corresponds to a total reimbursement amount equal to € 160 237 in 2021. For surgeons, the amount is € 233 886.⁴ This presents an important limitation, especially for medical specialists, as the amount associated with the acts is not necessarily proportional to the time taken to perform them.⁵</p> <p>In addition, it is assumed that future activity rates will be reduced (see #14 Activity rate in Table 1). This hypothesis is based on previous research from the Planning Commission of medical supply.⁶ The projected number of FTEs therefore depends on the chosen reduced rate.</p> <p>Another important limitation comes from the aggregation of all physicians together. This aggregation may hide important differences between specialties. We refer the interested reader to the report of the Planning Unit (2023) for more details per specialty.³</p>
Dimension	Sustainability
Related indicators	S-18 – Projection of the number of contacts with GPs (Demand), evolution in % A-10 – Practising physicians (/1000 population)
Reviewers	Christelle Durand (SPF Santé Publique – FOD Volksgezondheid)



Figure 1 – Stock-and-flow model for the projection of healthcare workforce



Source: Planning Unit (2020).¹



Table 1 – Parameters used in the stock-and-flow projection model

Parameter	Definition	Projection
All calculations are made separately for the French and the Flemish Community		
General		
#1 Bachelor – number of new inscriptions	Number of students enrolled for the first time in a bachelor's programme in medicine (separated between Belgian and non-Belgian).	Number of candidates who can start medical training on the basis of the decree of each linguistic community: 1 391 in Flemish Community and 992 in French Community (separated between Belgian and non-Belgian).
#2 Bachelor – graduation rate	Number of bachelor diplomas obtained divided by the number of new enrolments 3 years earlier (separated between Belgian and non-Belgian).	Average graduation rate based on the 3 most recent academic years for which data are available (2020, 2021 and 2022) (separated between Belgian and non-Belgian). In the French Community, from 2023 onward, the rate is fixed at 80% for Belgian and 75% for non-Belgian students.
#3 Master – inscription rate	Number of students enrolled for the first time in a master programme in medicine divided by the number of bachelor diplomas of that year (separated between Belgian and non-Belgian).	Average inscription rate based on the 3 most recent academic years for which data are available (2020, 2021 and 2022) (separated between Belgian and non-Belgian).
#4 Master – graduation rate	Number of master diplomas obtained divided by the number of new enrolments 3 years earlier (separated between Belgian and non-Belgian).	A rate of 99% is used.
#5 Internship rate	Number of persons who started post-graduate training (internship) divided by the number of persons who graduate from the master programme the same year.	The following rates are used: - Flemish Community: 0.92 for Belgian graduates and 0.50 for non-Belgian graduates - French Community: 0.92 for Belgian graduates and 0.80 for non-Belgian graduates
For each specialty		
#6 Inflow with basis diploma obtained abroad	Number of persons with a non-Belgian medical basis-diploma starting a specialty in Belgium.	Average number of persons based on the 5 most recent academic years for which data are available, all combined specialties.
#6 Specialty rate	The number of persons who started the practical training for this specialty divided by the number of persons who started a practical training.	Specialty rate for GPs is fixed at 0.43 in the French Community and 0.40 in the Flemish Community. For other specialists, the average specialty rate (based on the 3 most recent academic years for which data are available) is proportionally reduced or increased accordingly. In an alternative scenario simulating quotas from 2029, the number of persons starting the practical training for general medicine from 2029 onwards does not result from the projection. Instead the



		number set by the Planning Commission (quota + persons trained abroad) is injected i.e. 484 for the French Community and 515 for the Flemish Community (corresponding to quotas of 473 and 507 respectively).
#7 Internship completion rate	The number of persons who successfully completed their practical training in a given specialty (= internship) divided by the number of persons newly enrolled in this training x years before, where x is the average length of the training.	Stage completion rate is fixed at 0.95.
#8 Registration rate	The number of persons registered (<i>cadastre – kadaster</i>) and authorised to practice as specialists (licensed-to-practice) divided by the number of persons who have completed their post-graduate training (= internship).	Registration rate is fixed at 1 (automatic registration).
#9 BE/non-BE rate	Repartition by nationality (Belgian vs non-Belgian) of the number of persons registered (<i>cadastre – kadaster</i>) and authorised to practice.	Average distributions (based on the 5 most recent years for which data are available) in four groups (Belgian male, non-Belgian male, Belgian female, non-Belgian female) at the start of the training x year before, where x is the average length of training.
#9 Sex proportion rate	Percentage of females in the persons registered (<i>cadastre – kadaster</i>) and authorised to practice (calculated separately for Belgian and non-Belgian).	
#10 Inflow professionals N-BE	Inflow of professionals who have obtained their professional training abroad (separated by nationality and sex).	Average number of professionals who have obtained their diploma abroad in four groups (Belgian male, non-Belgian male, Belgian female, non-Belgian female) based on the 3 most recent years for which data are available.
#11 Survival rate	Survival rate based on mortality tables by age and sex. In addition, all persons aged 75 or above are removed.	Survival rates of 2015-2017.
#12 Participation rate	Repartition between professionals who are (1) active in Belgium, (2) not active in Belgium but living in Belgium, and (3) not active and living abroad (calculated by age, sex and nationality).	Mean participation rates of 2019-2020-2021.
#13 Sector repartition rate	Repartition of active professionals between (1) active in the healthcare sector as self-employed (minimum activity threshold of 5% of the median income of the group of physicians aged 45–54 years old, defined per specialty), (2) active in the healthcare sector with a mixed status (self-employed and salaried), (3) active in the healthcare sector as salaried worker (at least 0.1 FTE), and (4) active outside the healthcare sector (calculated by age, sex and nationality). The first three groups are called practising physicians.	Mean sector repartition rates of 2019-2020-2021.
#14 Activity rate	Activity rate calculated by age, gender, nationality and sector (only for the first three sectors, i.e. only for practising physicians). For salaried workers, the rate of activity takes into account activities for all employers of the healthcare sector. For self-employed physicians, the activity rate is calculated using the amounts paid by the sickness funds for performed acts. A reference full time equivalent is	For GPs, mean activity rates observed in 2019-2020-2021 are reduced so that the number of FTEs is reduced by 15% in 2026 and by 20% from 2031 (with the exception of the current GPs aged 60 and over, who will retain the average currently observed activity rates when they change age group).



	determined by specialty, using the observed median of the total amount reimbursed for care provided by the reference group.	For other physicians, mean activity rates observed in 2019-2020-2021 are reduced from 2026 onwards so that the number of FTEs is reduced by 13% if the current average FTE is between 0.7 and 1.5 and is reduced by 0.2 FTE if the current average FTE is above 1.5 (with the exception of the current physicians aged 50 and over, who will retain the average currently observed activity rates when they change age group).
#15 Care consumption rate	Consumption rate based on reimbursed fees for physician care observed over three years (2018, 2019 and 2020) in the context of the compulsory health insurance (calculated by age and sex of the patient).	Demographic forecasts from the Federal Planning Bureau multiplied by the observed consumption rate in 2018, 2019 and 2020 by age and sex of the patient. By default, the consumption rate is supposed constant in each segment of the population, only the composition of the population changes. For GPs, an linear increase is applied up to 2041 for each combination age and sex of the population : 0-14 years old : max +3%, 15-74 years old : max +9% and 75 years old and more : max +16%. For specialisms that are considered as sensitive because of existing imbalances, adaptations are made to the care consumption rate.

Source: Planning Unit (2020, 2022, 2023).¹⁻³

1.1.2. Results

General practitioners

In 2021, there were 12 554 practising general practitioners (i.e. active in the healthcare sector) in Belgium (5 310 in the French Community and 7 244 in the Flemish Community). This number is expected to increase to 13 089 in 2026, 13 606 in 2031, 14 716 in 2036 and 16 268 in 2041, which corresponds to five-year increases of respectively 4.3%, 3.9%, 8.2% and 10.5%. On Figure 2, the (projected) number of practising GPs in Belgium is depicted by a line for Belgium (left panel) and both linguistic communities (right panel). On the same figure, the bars indicate the number of FTEs. In 2021, the equivalent of 11 781 FTEs were active as GPs in the healthcare sector in Belgium (4 327 in the French Community and 7 454 in the Flemish

Community). These numbers are expected to decrease in 2026 before increasing in 2031, 2036 and 2041.

Overall, in the French Community, the model predicts that the GP workforce will increase by 987 individuals between 2021 and 2041 (from 5 310 to 6 297). This increase in the number of practising GPs (+18.6%) does not translate into a similar increase in the number of FTEs for which an increase of 3.2% is expected between 2021 and 2041.

In the Flemish Community, the expected increase of the number of practising GPs is higher: from 7 244 to 9 971 between 2021 and 2041, which is an increase of 2 727 individuals. This important increase (+37.6%) partially translates into an increase in the number of FTEs (+22.0%).

To take into account the recent decision to increase physicians quotas from 2029, a simulation based on the alternative projection scenario was built,



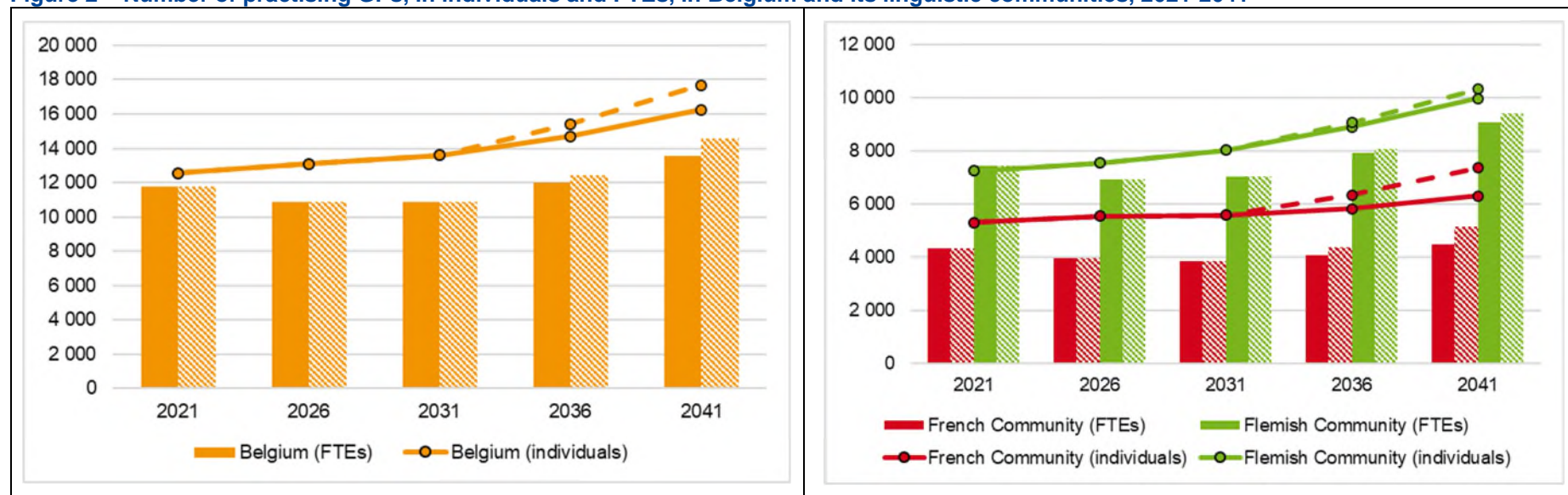
where the number of persons starting the practical training for general medicine is set, from 2029 onwards, to the optimal level determined by the Planning Commission.^{7, 8} Including physicians trained abroad, the number of persons starting the practical training for general medicine is therefore set to 484 for the French Community and 515 for the Flemish Community, instead of the projected values.

On Figure 2, this simulation is showed by the dashed lines and bars. At the national level, the number of practising GPs is expected to increase to 17 690 in 2041, representing a 40.9% increase compared to 2021. The

number of FTEs is expected to increase to 14 547 in 2041 (+23.5% with respect to 2021).

The impact of the increased quota is the strongest in the French Community, where the number of practising GPs is expected to increase in 2041 to 7 367 (+38.7% with respect to 2021, compared to 18.6% in the other scenario) and the number of FTEs to 5 147 (+19.0% compared to +3.2%). In the Flemish Community, the projected number of practising GPs in 2041 is 10 323 (+42.5%, compared to +37.6%) and the projected number of FTEs is 9 400 (+26.1% compared to +22.0%).

Figure 2 – Number of practising GPs, in individuals and FTEs, in Belgium and its linguistic communities, 2021-2041



Note: dashed lines and bars show the simulation where the number of persons starting the practical training for general medicine is set, from 2029 onwards, to the optimal level determined by the Planning Commission. Source: Planning Unit.

Figure 3 depicts five-year growth rates for the number of practising GPs and their full time equivalents (see also Table 2). The number of individuals in the GP workforce is expected to increase in Belgium during the entire period

2021-2041. Between 2021 and 2026, the number of practising GPs is expected to increase by 4.3% at the national level, with similar increases in both linguistic communities (+4.3% in the French Community and +4.2% in

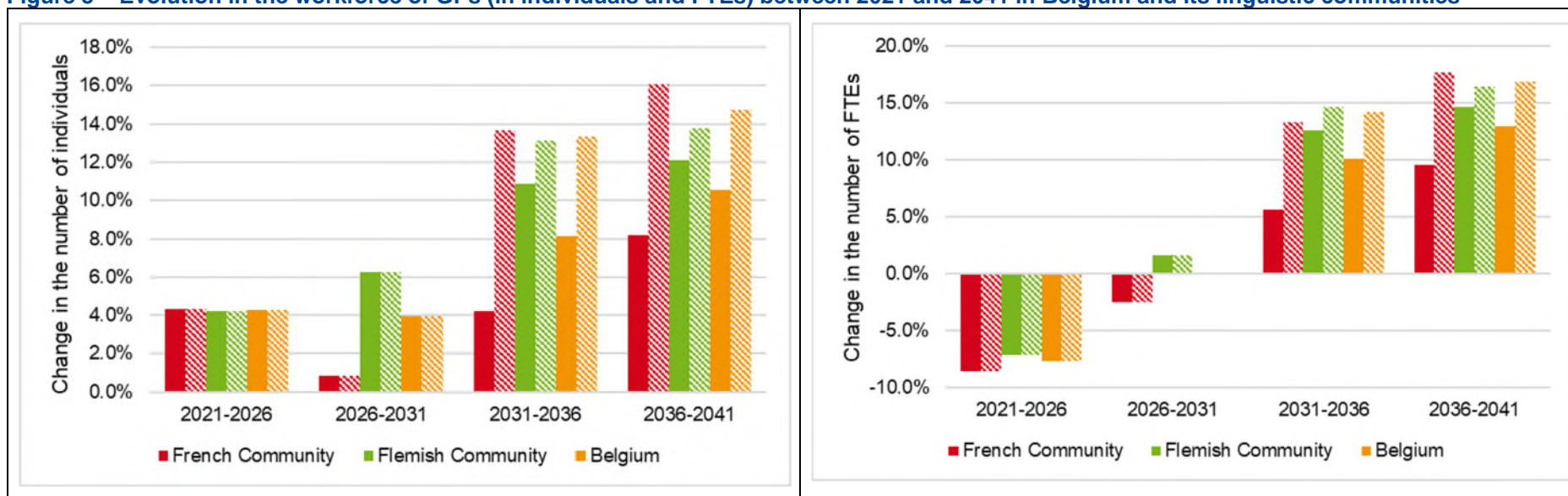


the Flemish Community). In the following periods however, the increase in the Flemish Community is expected to be larger than the one in the French Community (+6.2%, +10.9% and +12.1% compared to +0.8%, +4.2% and +8.2%).

Regarding FTEs, a drop is expected in both linguistic communities between 2021 and 2026. Then, the number of FTEs is expected to increase by 1.7%

in the Flemish Community and decrease by 2.5% in the French Community between 2026 and 2031. From 2031 onwards, increases are expected in both communities (because GPs will be, on average, younger), although larger in the Flemish Community. When taking into account the increased quotas from 2029 onwards, the projected increases, both in headcounts and FTEs, are larger, in particular in the French Community.

Figure 3 – Evolution in the workforce of GPs (in individuals and FTEs) between 2021 and 2041 in Belgium and its linguistic communities



Note: dashed bars show the simulation where the number of persons starting the practical training for general medicine is set, from 2029 onwards, to the optimal level determined by the Planning Commission. Source: Planning Unit.

All physicians

In 2021, there were 33 838 practising physicians in Belgium (15 427 in the French Community and 18 411 in the Flemish Community), corresponding to 33 906 FTEs in Belgium (13 615 in the French Community and 20 291 in the Flemish Community) (see Figure 4). The number of physicians is

expected to increase to 36 946 in 2026, 39 119 in 2031, 41 969 in 2036 and 45 507 in 2041, which corresponds to five-year increases of respectively 9.2%, 5.9%, 7.3% and 8.4%.

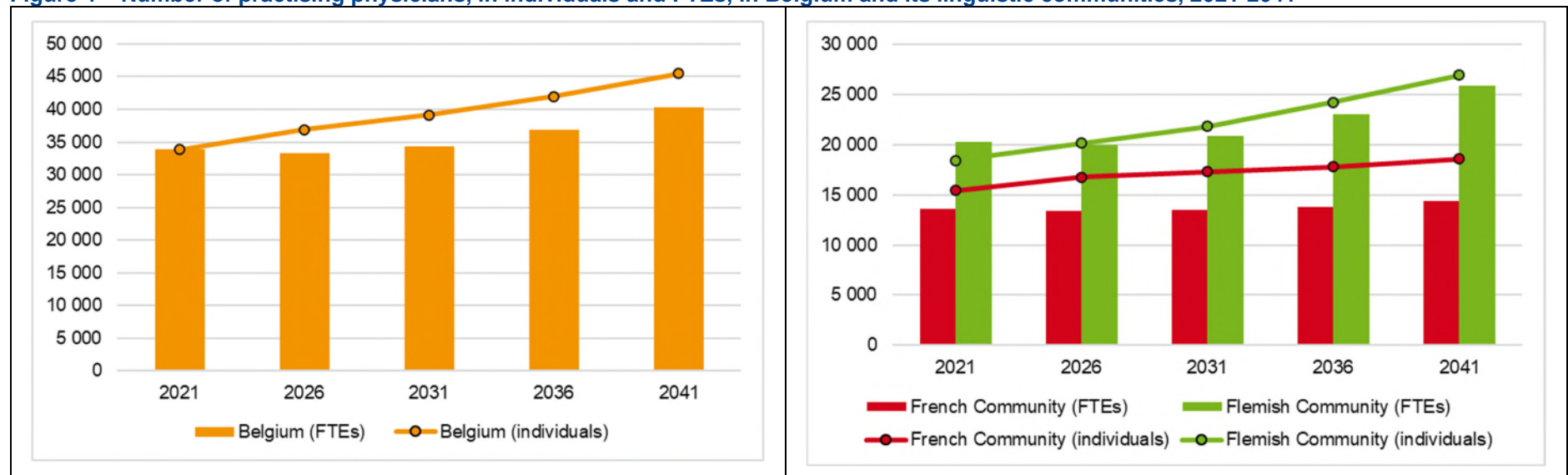
In the French Community the number of practising physicians is expected to increase by 20.4% between 2021 and 2041 (from 15 427 to 18 581) while



the number of FTEs will stay more stable (from 13 615 to 14 395 i.e. an increase of 5.7%). In the Flemish Community, the number of physicians is projected to strongly increase between 2021 and 2041 (from 18 411 to 26 926, i.e. an increase of 8 515 individuals or +46.2%). This increase in the number of active individuals (partially) translates into an increase in the number of FTEs (+27.5%).

One must keep in mind that these numbers hide an important variability between specialities. Detailed results by specialty can be found in the report from the Planning Unit (2023).³

Figure 4 – Number of practising physicians, in individuals and FTEs, in Belgium and its linguistic communities, 2021-2041



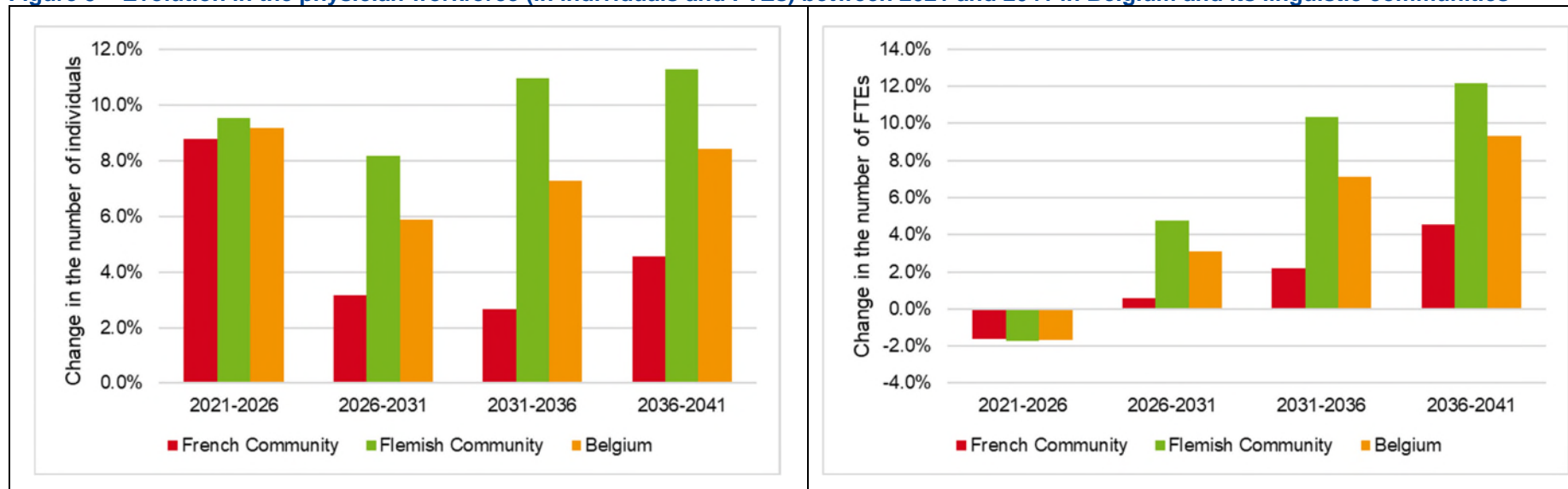
Source: Planning Unit.

Five-year growth rates for the number of individuals and FTEs in the physician workforce are shown on Figure 5 and Table 2. The number of practising physicians is expected to increase in Belgium during the entire period 2021-2041, mainly driven by a large increase in the Flemish Community. The increase in the French Community is expected to be

smaller, especially from 2026 onwards. Regarding FTEs, a drop is expected in both linguistic communities during the period 2021-2026. From 2026 onwards, the number of FTEs is expected to increase in both communities but more importantly in Flanders.



Figure 5 – Evolution in the physician workforce (in individuals and FTEs) between 2021 and 2041 in Belgium and its linguistic communities



Source: Planning Unit.

Table 2 – Projected five year evolution of physician workforce

	GPs		GPs (increased quotas)*		Physicians	
	Individuals	FTEs	Individuals	FTEs	Individuals	FTEs
2021-2026	4.3%	-7.6%	4.3%	-7.6%	9.2%	-1.7%
2026-2031	3.9%	0.1%	3.9%	0.1%	5.9%	3.1%
2031-2036	8.2%	10.2%	13.3%	14.2%	7.3%	7.1%
2036-2041	10.5%	13.0%	14.7%	16.9%	8.4%	9.3%

* simulation where the number of persons starting the practical training for general medicine is set, from 2029 onwards, to the optimal level determined by the Planning Commission. Source: Planning Unit.



Key points

- The number of practising GPs (i.e. active in the healthcare sector) in Belgium is expected to increase from 12 554 in 2021 to 13 089 in 2026, that is an increase of 4.3%.
- This number is expected to further increase to 13 606 in 2031, 14 716 in 2036 and 16 268 in 2041, which corresponds to five-year increases of respectively 3.9%, 8.2% and 10.5%.
- In a simulation where the number of persons starting the practical training for general medicine is set, from 2029 onwards, to the optimal level determined by the Planning Commission, the increase in the number of practising GPs is expected to be larger (+13.3% between 2031 and 2036 and +14.7% between 2036 and 2041).
- In the French Community, the model predicts that the number of practising GPs will increase by 4.3% between 2021 and 2026. This increase in the number of practising GPs does not translate into an increase in the number of FTEs for which a drop of 8.6% is expected.
- In the French Community, between 2021 and 2041, the number of practising GPs is expected to increase by 18.6% (from 5 310 to 6 297 i.e. an increase of 987 individuals) while the number of FTEs is expected to increase by 3.2%. In the simulation with optimal number of persons starting the practical training, the number of GPs is expected to increase by 38.7% and the number of FTEs by 19.0%.
- In the Flemish Community, the model predicts that the number of practising GPs will increase by 4.2% between 2021 and 2026. This increase in the number of practising GPs does not translate into an increase in the number of FTEs for which a drop of 7.1% is expected.
- In the Flemish Community, between 2021 and 2041, the number of practising GPs is expected to increase by 37.6% (from 7 244 to 9

971 i.e. an increase of 2 727 individuals) while the number of FTEs is expected to increase by 22.0%. In the simulation with optimal number of persons starting the practical training, the number of GP is expected to increase by 42.5% and the number of FTEs by 26.1%.

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