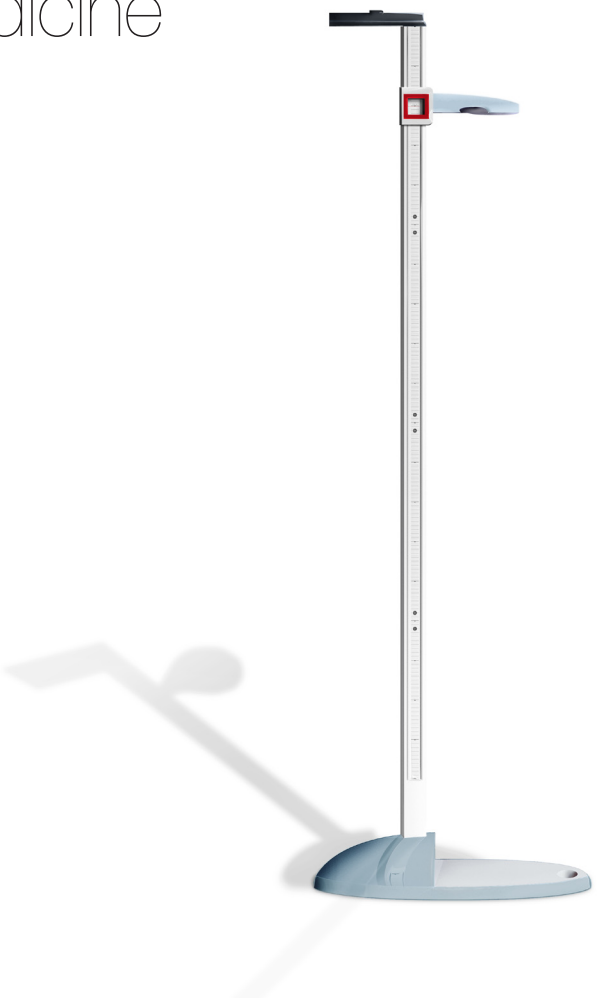
NIHDI

Performance of general medicine in Belgium

A check-up



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Introduction

This brochure attempts to highlight the current performance of general medicine in Belgium.

In order to measure performance, the NIHDI (INAMI-RIZIV) (Belgian National Institute for Health and Disease Insurance) has drawn up a balanced scorecard (a measurement and management instrument) with three key focuses (see Conceptual Framework, p. 4).

By using this tool, the NIHDI wishes to translate General practitioner (GP) practice into readable indicators and to provide accurate and relevant information. The aim is to encourage GPs to reflect on their performance, both as part of a peer review group (GLEM-LOK, circle, etc.) and individually.

The methodology adopted for defining performance is the same as that of the KCE (Belgian Health Care Knowledge Center) report “A first step towards measuring the performance of the Belgian health care system”.[1]

The NIHDI used a number of databases in order to carry out this study:

- the production data banks detailing the actions carried out and prescribed (volume and amounts) by health care providers, or by recipients in the context of health care insurance (e.g.: number of patients or of contacts etc.)
- descriptive data characterising the health care providers (e.g. geographical location, accreditation data, etc.)
- outside sources of information (e.g. health survey by interview)

The experts of the Belgian National Quality Promotion Council and its General Medicine working group, together with many volunteer experts working in general medicine, collaborated intensively in the conduct of this study (conceptual phase and validation).

1 See bibliography, p. 67.

I. Conceptual framework

The criteria used to define performance in general medecine are based on several sources and incorporate the following concepts:

- accessibility
- acceptability
- practice by physicians who are:
  - qualified
  - open to advances in modern medicine
  - aware of multidisciplinarity and the computerised management of information
  - concerned about the viability and sustainability of the system.

The balance between these concepts is set out schematically in the form of a balanced scorecard with three focuses emphasising **three key** requirements:

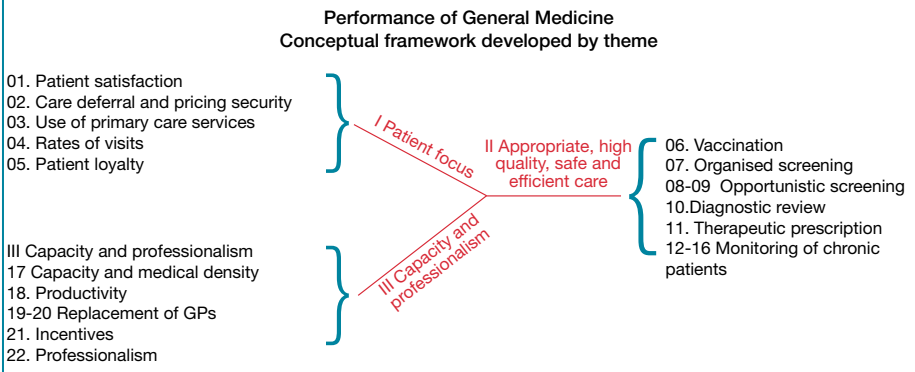
- patient focus: a sustained response to the health and local needs of the population
- care that is appropriate, of high quality, safe and efficient
- sufficient capacity and professionalism.

The values of the system underlie each of these focuses:

- “patient focus”: geographical and financial accessibility, patient empowerment, satisfaction, continuity and integration of health care
- “appropriate care” focus: treatment that is appropriate, efficient, of high quality and safe
- “capacity and professionalism” focus: an appropriate number of skilled and motivated physicians.

See figure 1, p.5.

Figure 1 – Conceptual framework for the performance of general medicine: three focuses divided into 22 themes



Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

Each of the three focuses is divided into themes that GPs have identified as important or of high priority. A limited number of indicators are used to evaluate each of the 22 themes. These indicators were selected on the basis of indicators identified in KCE reports and the NIVEL report[2].

2. See bibliography, p. 67.

II. Does general medicine meet the health and local needs of the population?

The population seems satisfied with its GPs (95% of the population is satisfied).

The fact that the population makes a direct **financial contribution** to health care costs does not appear to be a barrier to accessing health care. No difference in GP care consumption is observed according to category of insurees (self-employed, employed, beneficiary or not of the increased reimbursement system (BIM), whereas this was the case prior to the extension of "minor risks" coverage to the self-employed. Nevertheless, pricing security must be ensured in areas where the density of physicians who subscribes to the tariff agreements is lower and the reasons for deferral of declared care should be analysed.

The public prefers **the contact with their GP**. In fact, 95% of patients who had out-patient contact with a physician consulted a GP (consultation or home visit). Very few patients consult only a specialist, regardless of the category of the recipients, their gender, age, region or province.

abc Out-patient contact means each contact (consultation or home visit) with a GP or a specialist.

The centralised medical record (CMR - 'Dossier Médical Global') seems to be a positive factor in structuring primary care and the use of specialised care services.

The CMR coverage rate:

- was 46% in 2009
- is greater among the elderly (78% among over-75s)
- is increasing in all three regions of the country for all categories of recipient.
- However, with a rate half that of Flanders, Wallonia and Brussels are lagging behind significantly and this must be remedied, possibly by targeted awareness raising among the populations concerned.

However, several signs point towards a **potential problem in Brussels:**

- the rate of declared deferral of care for financial reasons is 26% in Brussels, while this rate is 14% at national level
- the physician visit rate, calculated on the basis of out-patient contacts (consultation or home visit) is lower: 6.07 in Brussels while it is 7.11 at national level
- the percentage of the population who do not visit a physician for ambulatory care (consultation or home visit), including the GP, is higher; the figure is 17% in Brussels but 12% at national level. This requires particular analysis: is primary care meeting the needs of the population in Brussels?

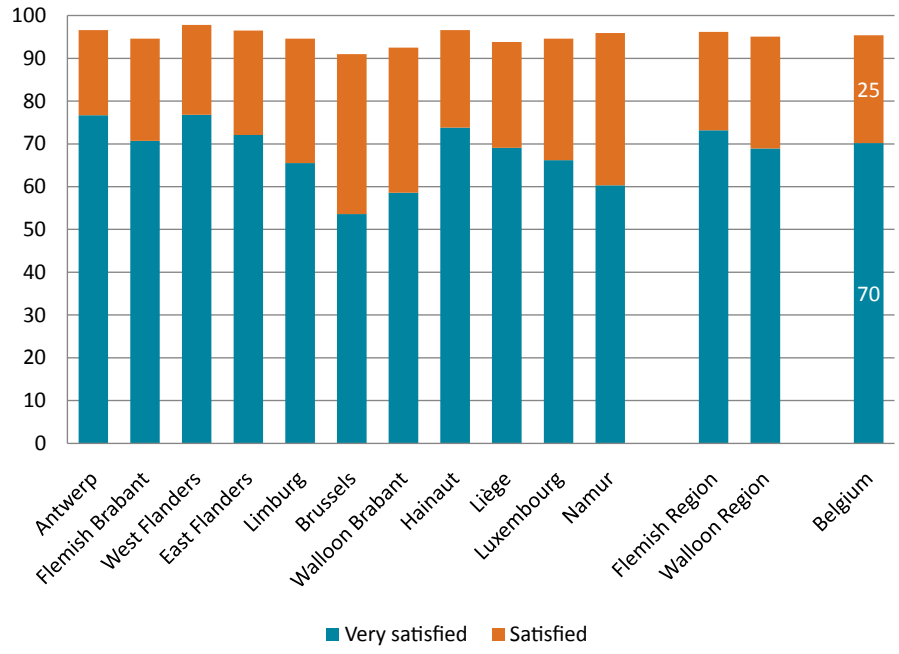
Themes evaluated

- patient satisfaction rates towards GPs
- care deferral, financial accessibility and pricing security
- use of primary care services
- rates of visits and types of contact with the GP
- patient loyalty to a GP

1. Patient satisfaction rates towards general practitioners (GPs)

According to the health interview survey (HIS)[3], the satisfaction rate declared by the public vis-à-vis GPs is high (95% of the public is satisfied). However, the percentage of the population that is very satisfied is highly variable from one province to another: It stands at 70% overall, but barely reaches 54% in Brussels and 59% in Walloon Brabant. See figure 2.

Figure 2 - Percentage of the public that is satisfied or very satisfied (by province and by region) – year 2008



Source: Health survey, Belgium 2008

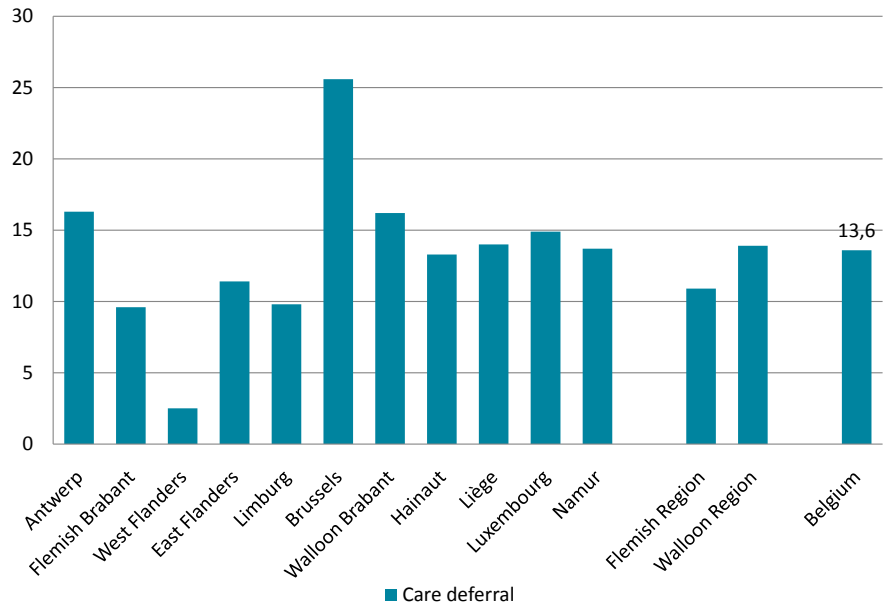
3 See bibliography, p.67.

2. Care deferral, financial accessibility and pricing security

a. Care deferral

According to the health interview survey (HIS), **care deferral for financial reasons is significant**: 14% of the Belgian population declares having deferred care for financial reasons. This rate is even 26% in Brussels.
See figure 3.

Figure 3 - Percentage of the population having declared a deferral of care (by province and by region) –year 2008



Source: Health interview survey (HIS), Belgium 2008

b. Financial accessibility

Is the co-payment (amount remaining at the patient's expense after reimbursement) an obstacle to accessing primary care? In Belgium, patients who do not receive increased reimbursement (BIM) pay on average 12% of health care expenses (insofar as these expenses are borne by health insurance). The various protection schemes reduce the co-payment to 4% for patients who benefit from preferential reimbursement system (bénéficiaires de l'intervention majorée, known by the acronym BIM) or reduce it when the accumulated co-payment is excessively high (the 'Maximum à facturer'/maximum billing scheme, known by the acronym MAF). See table 1, p.11.

However, the total amount of patients' expenses is proportional to the care consumption. The total financial contribution for chronic patients can be high and can represent a large proportion of their income, in particular in rest and care homes for the elderly.

Thus, patients accommodated in rest and care homes for the elderly have an average co-payment of 4% which represents an average of 657 EUR per year (without MAF), while non-chronic patients have a co-payment of 12% which represents 185 EUR on average.

However, there are very few people aged 60 and over who do not visit a generalist every year (figure 4, p.16), which is an indirect indication that the co-payment is not an obstacle to accessing care.

Table 1 - Health care expenses and co-payment (in EUR) by patient and annually (BIM, chronic, resident in rest and care homes) – year 2008

	Total	Chronic diseases		BIM		Rest/ care homes
Indicator		**No**	**Yes**	**No**	**Yes**	
Average cost/patient	1,628	1,084	9,564	1,306	3,774	14,686
including co-payment/patient	143	124	414	148	110	404
% co-payment	8%	10%	4%	10%	3%	3%
Average cost drugs	359	297	1,263	305	720	1,365
including co-payment	67	60	169	63	98	254
% co-payment	16%	17%	12%	17%	12%	16%
Total average cost/patient	**1,987**	**1,381**	**10,827**	**1,611**	**4,494**	**16,051**
including co-payment	**210**	**185**	**583**	**211**	**208**	**657**
% co-payment	**10%**	**12%**	**5%**	**12%**	**4%**	**4%**

Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

c. Pricing security

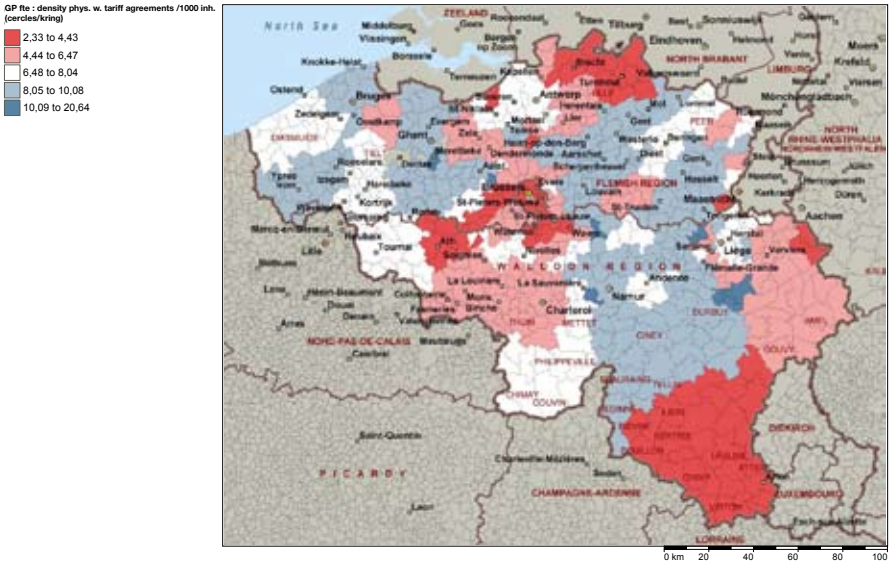
Is **pricing security** guaranteed, however? Physicians who accede to the agreement undertake to apply the pricing agreement. Patients consulting a physician who accedes to the agreement know that they will only pay the co-payment. The density of active physicians under contract per 10,000 inhabitants makes it possible to identify the areas where patients benefit the least from this pricing security.

The average density of active physicians who accede to the agreement is 7.94.

A GP is deemed to be 'active' when he or she has over 1,250 contacts per year.

The density of physicians who accede to the agreement is not evenly spread across the country. Density differences of between 1 and 10 exist between circles of GPs. See map 1, p.12

Map 1 - Density of GPs who accede to the agreement (Full time equivalent - FTE) per 10,000 inhabitants (per circle) – year 2009



Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

3. Use of primary care services

a. GP contacts

PROGRESSION 2006-2008

Over a three-year period (between 2006 and 2008), 95% of patients had an out-patient contact with a physician (consultation or home visit) and 91% consulted a GP. Therefore, only 5% of the population had no ambulatory contact with a physician.

See table 2, p.13

95% of the patients who had an out-patient contact with a physician (over a three-year period) had a contact with a GP.

Table 2 - Percentage of the population with no out-patient contact with a physician (consultation or home visit) and percentage of the population with contact with a GP - change 2006-2008

Out-patient contacts				
Indicators	**2006**	**2007**	**2008**	**06 tot 08**
% insurees without contact	19%	19%	12%	5%
% insurees with GP contact	73%	74%	79%	91%
% patients (=insurees with contacts) with GP contact	91%	91%	**90%**	**95%**
Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)				

2008

In 2008, 88% of patients had an out-patient contact with a physician and 79% consulted a GP. This represents a significant increase compared with 2007, when the percentage was 74%. The reason for the higher contact rate is linked to the extension of health coverage ("minor risks") to all self-employed people. See table 3, p.14.

Therefore, 12% of the population had no out-patient contact with a physician.

90% of patients who had an out-patient contact with a physician (consultation or home visit) had a contact with a GP during the year, regardless of the category of recipient, their age, gender, region or province. Nevertheless, this figure is lower among children (81%) and in Brussels (81%).

Table 3 - Percentage of the population with no out-patient contact with a physician (consultation or home visit) and percentage of the population with contact with a GP (by gender, age bracket and region) - year 2008

Out-patient contacts								
		Gender		Age Bracket		Region		
Indicators	Totaal	V	M	0-14	75+	Brussels	Flem.	Wall.
% insurees without contact	12%	8%	17%	15%	5%	17%	11%	12%
% insurees with GP contact	79%	83%	75%	69%	93%	68%	82%	79%
% patients (=insurees with contact) with GP contact	90%	91%	90%	81%	97%	81%	92%	89%

Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

b. Contacts with other care providers

The number of contacts to other health care providers is much lower. Thus, in 2008, 60% of the population saw at least one specialist and 49% a dentist. See table 4, p.15.

Consultations for other specialists break down as follows:

- 18% consult an ophthalmologist at least once a year
- 28% of women consult a gynaecologist
- 12% consult a dermatologist
- 25% of children from 0-14 years consult a paediatrician.

Going straight to the emergency only is exceptional (1 %).

The type of consultation is no different in Brussels regarding specialists. However, the percentage of the population that only consults a specialist is higher there than in the rest of the country (14% compared to 8%).

Table 4 - Percentage of patients who have an annual out-patient contact (consultation or home visit) with a physician by patient type (women, children and Brussels) - change 2006-2008

					Gender	Age bracket	Region
Indicators	**2006**	**2007**	**2008**	**06 > 08**	**F**	**0-14**	**Brussels**
% insurees with GP contacts	73%	74%	79%	91%	83%	69%	68%
average number of GP contacts	5.77	5.94	5.85		6.42	3.40	5.62
% insurees with SP contacts	56%	56%	60%	80%	67%	55%	61%
average number of SP contacts	4.01	4.04	4.00		4.26	2.95	4.62
% insurees with pediatrician contacts	6%	5%	4%	8%	4%	25%	7%
average number of pediatrician contacts	3.24	3.05	2.53		2.51	2.60	2.54
% insurees with gynaecologist contacts	13%	14%	14%	22%	28%	1%	17%
average number of gynaecologist contacts	2.43	2.40	2.40		2.41	1.27	2.79
% insurees with ophthalmologist contacts	16%	17%	18%	35%	21%	14%	18%
average number of ophthalmologist contacts	2.27	2.32	2.33		2.32	0.74	2.95
% insurees with dermatologist contacts	10%	10%	12%	23%	14%	11%	15%
average number of dermatologist contacts	1.94	1.90	1.90		1.93	1.76	1.97
% insurees with other SP contacts	38%	38%	40%	63%	41%	27%	41%
average number of SP contacts	3.38	3.46	3.50		3.57	2.13	3.91
% insurees with dentist contacts	48%	48%	49%	67%	51%	54%	48%
average number of dentist contacts	1.33	1.34	1.33		1.44	1.35	1.51
% insurees without contact	19%	19%	12%	5%	8%	15%	17%
% insurees with emergency contacts only			1%		0%	1%	2%
% insurees with SP contacts only	8%	7%	8%		8%	15%	14%
% insurees with SP+ GP contacts	49%	49%	52%		59%	40%	47%
% insurees with GP contacts only	24%	25%	27%		24%	29%	21%

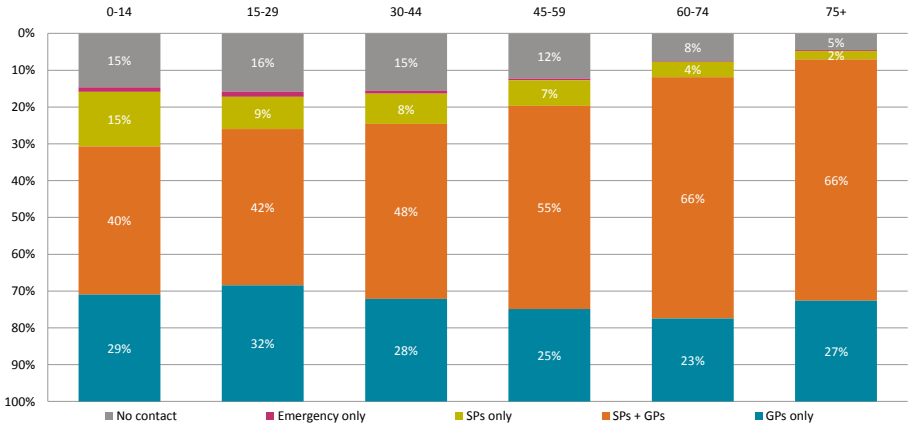
Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

c. Type of ambulatory contacts

For 2008, there are several observations concerning out-patient contacts:

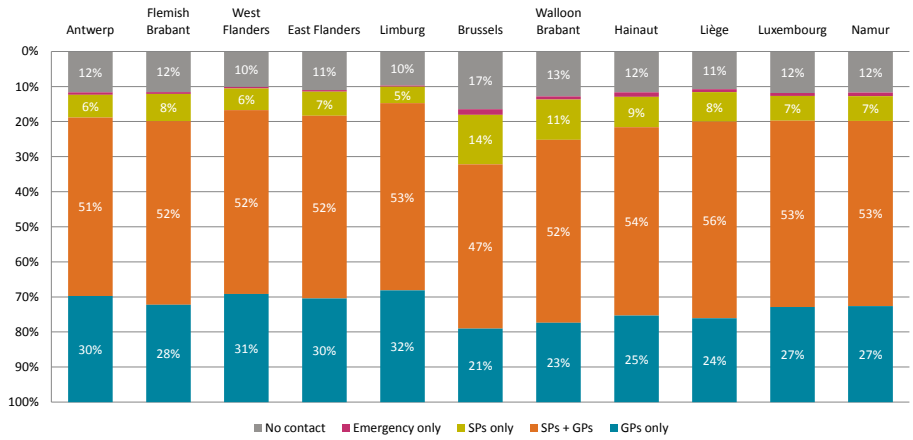
- All patient categories prefer to consult a GP (addition of blue and orange bars in figure 4).
- The percentage of patients that only consult a specialist (in green in figure 4) is very low (8%) particularly among the elderly (2%).
- Combining consultation with a GP and another specialist is very widespread, particularly in the 60-74 age bracket (66%).
- There is no difference between provinces in the structure of the type of contact (see figure 5, p.17). Brussels stands out markedly, however, for the percentage of the population that does not consult any physician (17%) and for the lower percentage of the population that visits a GP (68%).

Figure 4 - Percentage of out-patient contacts during the year (consultation or home visit) with a physician (by age bracket) and breakdown by contact type (no contact, GPs specialists-(SPs), GPs + SPs) - year 2008



Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

Figure 5 - Percentage of out-patient contacts (consultation or home visit) with a physician (by province) and breakdown by contact type (no contact, GPs, specialists (SPs), GPs + SPs) - year 2008



Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

d. Number of contacts

GPs are also the health care providers with whom contacts are most frequent (on average 5.85 over the year 2008). In comparison, contacts for all specialists combined amount to 4.00 on average and contacts with dentists amount to 1.33.

See table 4, p. 15.

e. Do chronic patients consult GPs more often than other patients ?

Chronic patients are identified by their consumption of medicines (>80 DDD/year).

Thus, the following types of patients can be distinguished:

- diabetics (insulin- and non-insulin-dependent)
- with cardiac decompensation (CHF)
- consumers of gastric acid inhibitors (antacids)
- sufferers of chronic obstructive bronchitis (COPD) or asthma, identified as of 20 DDD
- residents of restand care homes for the elderly.

Because of their conditions, 95% to 100% of chronic patients see a GP every year. The average number of contacts is high. On average, there are over 10 contacts, and 19 in rest and care homes for the elderly, regardless of disease.
See table 5, p.19.

Table 5 - Percentage of out-patient contacts (consultation or home visit) with physicians for the year 2008 by type of patient with a chronic disease: residents of rest and care homes, COPD/asthma, cardiac decompensation, antacids and diabetes (by gender, age bracket)

Patients with chronic diseases									
		Gender		Age bracket					
Indicator: rest and care homes		**V**	**M**	**0-14**	**15-29**	**30-44**	**45-59**	**60-74**	**75+**
% of patients	1.0%	1.5%	0.4%			0.0%	0.0%	0.5%	4.1%
% of patients with GP contact	100%	100%	100%					100%	100%
% with chronic diseases	59%	58%	61%					71%	57%
average number of contacts	18.87	19.00	18.42					18.54	18.91
Indicator: COPD		**V**	**M**	**0-14**	**15-29**	**30-44**	**45-59**	**60-74**	**75+**
% of patients	9.8%	9.9%	9.7%	10.4%	5.8%	7.2%	9.5%	13.7%	16.3%
% of patients with GP contact	94%	95%	92%	85%	91%	93%	95%	97%	98%
average number of contacts	8.90	9.63	8.10	4.66	5.41	6.41	8.08	10.43	15.67
Indicator: CHF		**V**	**M**	**0-14**	**15-29**	**30-44**	**45-59**	**60-74**	**75+**
% of patients	2.2%	2.9%	1.5%	0.0%	0.2%	1.5%	3.4%	7.5%	22.4%
% of patients with GP contact	98%	98%	97%			96%	98%	99%	96%
average number of contacts	14.51	14.99	13.57			10.55	12.47	17.05	14.51
Indicator: antacids		**V**	**M**	**0-14**	**15-29**	**30-44**	**45-59**	**60-74**	**75+**
% of patients	6.8%	7.9%	5.5%	0.2%	1.1%	3.7%	8.2%	14.3%	18.3%
% of patients with GP contact	97%	97%	95%		95%	95%	96%	98%	98%
average number of contacts	10.83	11.65	9.59		6.46	7.41	8.88	10.24	15.31

Table 5 - Percentage of out-patient contacts (consultation or home visit) with physicians for the year 2008 by type of patient with a chronic disease: residents of rest/care homes, COPD/asthma, cardiac decompensation, antacids and diabetes (by gender, age bracket) - (cont)

Patients with chronic diseases									
		Gender		Age bracket					
Indicator: diabetes		**V**	**M**	**0-14**	**15-29**	**30-44**	**45-59**	**60-74**	**75+**
% of patients	4.2%	4.2%	4.2%	0.1%	0.4%	0.9%	4.5%	11.2%	12.6%
% of patients with GP contact	96%	97%	95%		82%	89%	94%	96%	98%
average number of contacts	10.66	11.95	9.29		5.71	6.77	8.34	9.77	14.38
indicator: diabetes ID		**V**	**M**	**0-14**	**15-29**	**30-44**	**45-59**	**60-74**	**75+**
% of patients	1.2%	1.2%	1.2%	0.1%	0.2%	0.4%	1.2%	2.9%	3.5%
% of patients with GP contact	95%	96%	94%			87%	94%	97%	99%
average number of contacts	11.62	13.22	9.85			5.84	9.13	10.80	14.38
indicator: diabetes NID		**V**	**M**	**0-14**	**15-29**	**30-44**	**45-59**	**60-74**	**75+**
% of patients	2.7%	2.7%	2.7%	0.0%	0.1%	0.5%	3.1%	7.5%	8.1%
% of patients with GP contact	96%	97%	95%			90%	94%	96%	98%
average number of contacts	10.30	11.49	9.04			7.52	8.15	9.44	13.62

Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

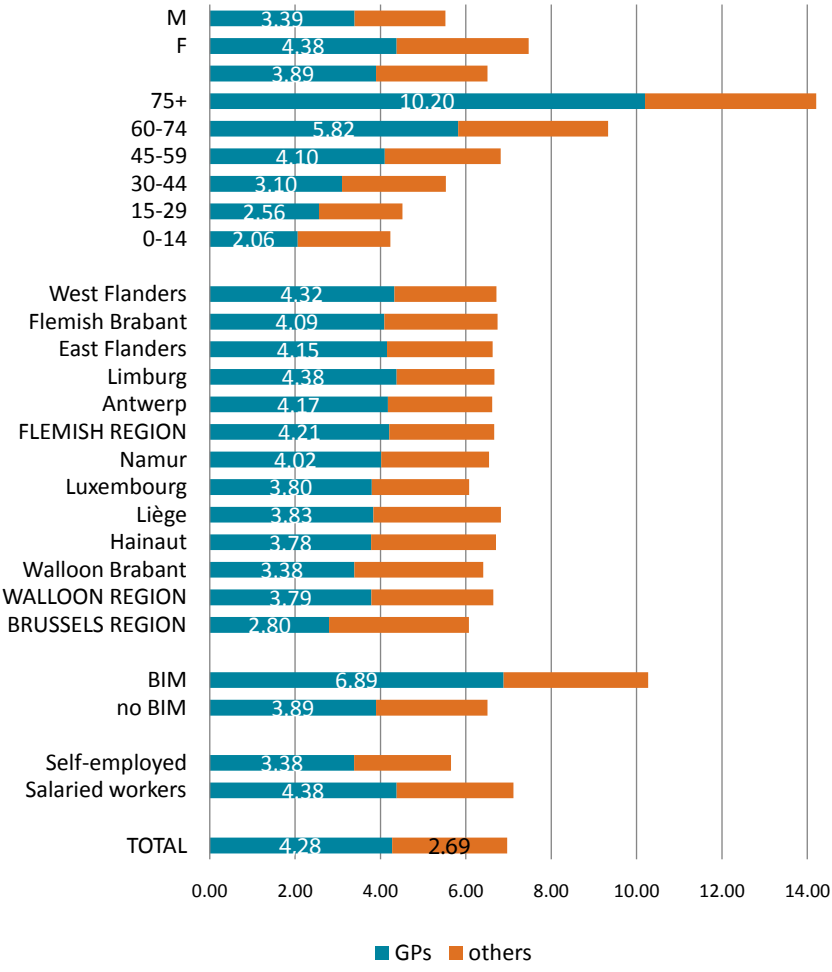
4. Rate of consultation and types of contact with a GP

a. Rate of consultation with a GP

A patient sees a GP 4.28 times a year; this figure is only 2.69 for other specialists (out-patient contacts).
See figure 6, p. 22.

This contact rate is much higher among the elderly and among patients who benefit from preferential reimbursement system (BIM). The rate of consultation with a GP is very much the same in all regions and provinces, except in Brussels where it is much lower (2.80). The rate of total out-patient contacts (consultations and home visits) is also lower there than elsewhere.

Figure 6 - Out-patient attendance rate by patient (by gender, age bracket, province, category of recipient) - year 2010



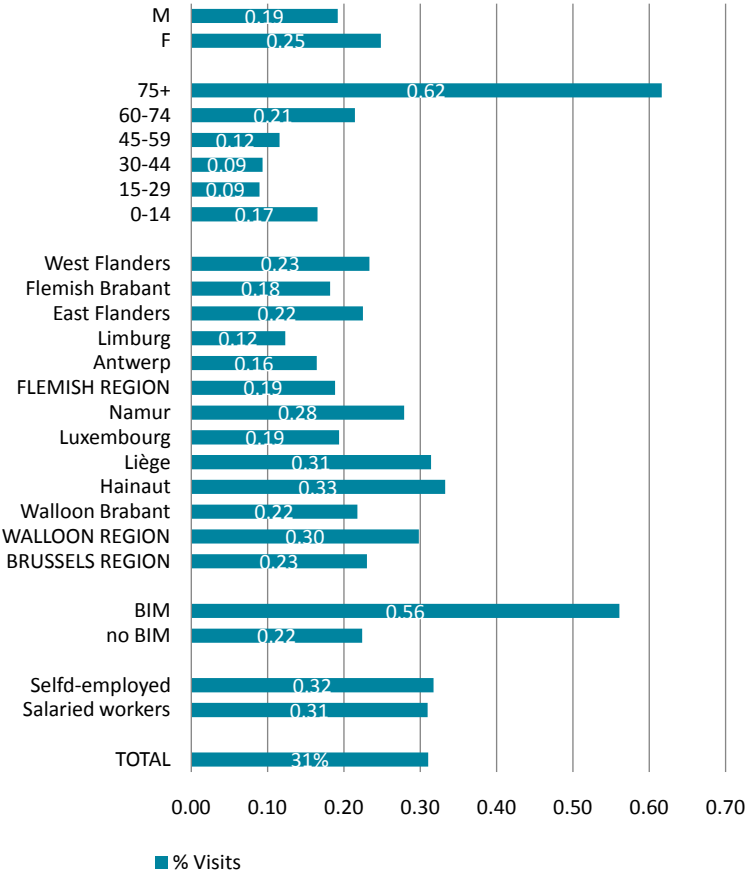
Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

b. Types of contact with the GP (consultations compared with home visits)

GPs meet their patients mainly in their consulting rooms and less frequently at the patient's home (68% of contacts occur in consultations). However, for patients aged over 75 and for patients who benefit from preferential reimbursement system (BIM), home visits are the preferred format (62% and 56% of contacts, respectively, occur at home).
See figure 7, p.24.

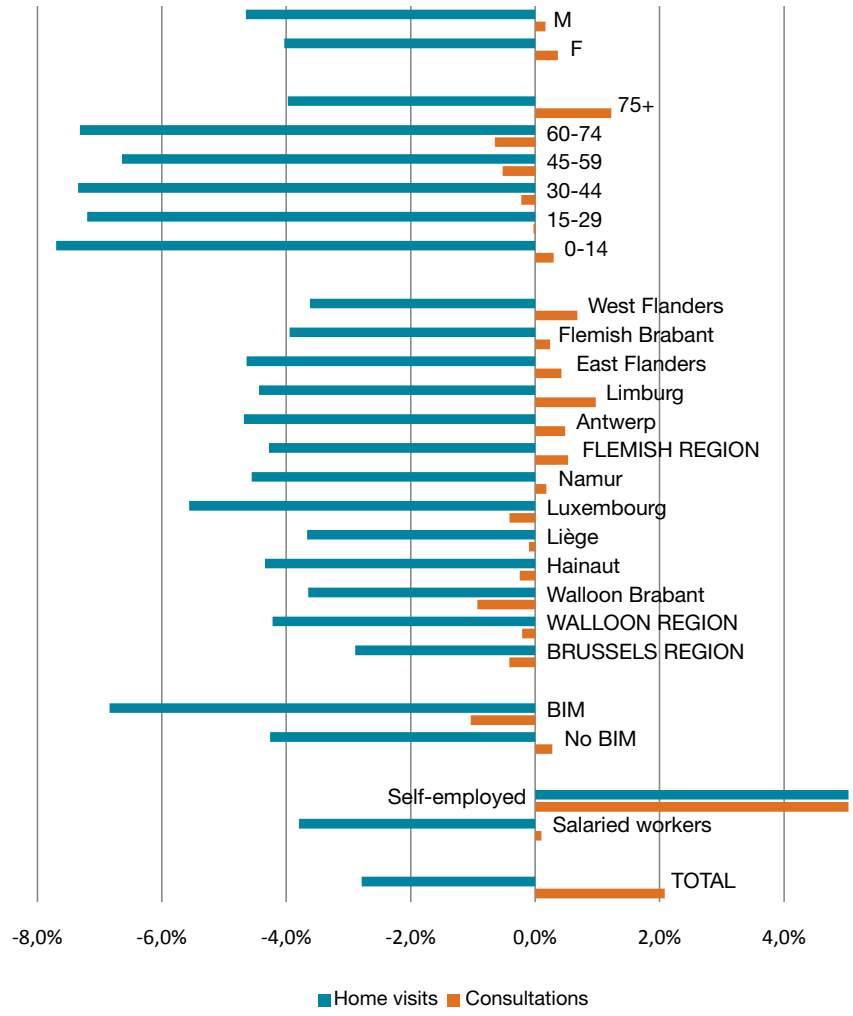
The frequency of home visits has rapidly decreased since 2006 (-2.8%/year) in all categories of recipient. An increase in consultations (+2.1%/year) seems to be compensating for the reduction in home visits. However, closer scrutiny reveals that the compensation is essentially linked to the extension of health coverage ("minor risks") to all self-employed people and therefore to higher consultation rates among the self-employed. Among salaried workers, the reduction in home visits (-3.8%) is not at all compensated for by the very slight rise in consultations (+0.1%/year). See figure 8, p.25.

Figure 7 - Percentage of home visits compared to the number of contacts with GPs (by gender, age bracket, province and category of recipient) - year 2010



Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

Figure 8 - Changes in contacts with GPs (home visits and consultations) (by gender, age bracket, province and category of recipient) – between 2006 and 2010



Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

5. Patient loyalty to a GP

Patient loyalty to a GP, in terms of the existence of a Centralised Medical Record (CMR-'Dossier Médical Global') was 46% in 2009. Coverage is larger among the elderly (78% among over-75s) and among women (50%). See table 6 and figure 9.

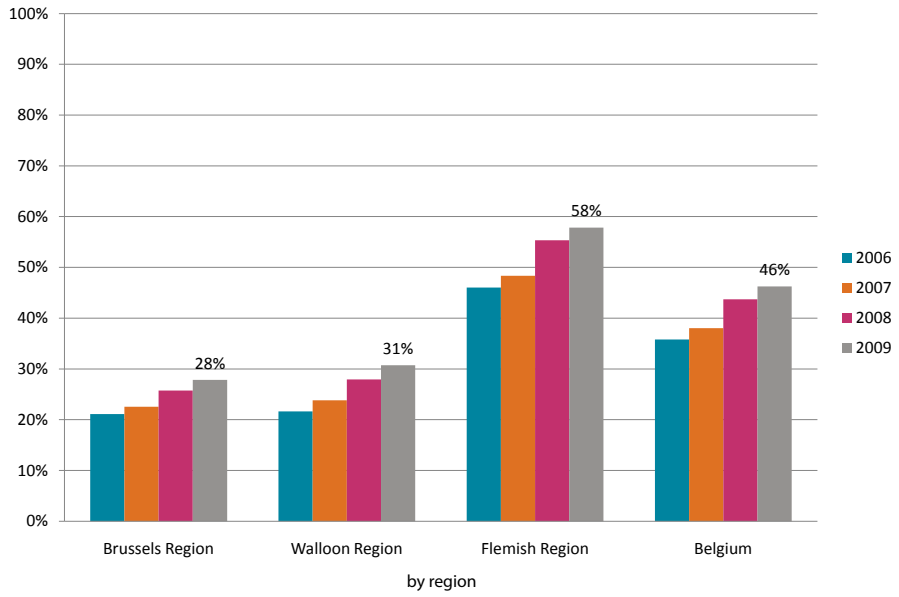
Table 6 - Percentage of patients with a CMR by patient type (by gender, age bracket and category of recipient) - from 2006 to 2009

CMR / insuree	2006	2007	2008	2009
By gender				
F	39%	42%	47%	50%
M	32%	34%	40%	42%
By age bracket				
0-14	21%	23%	27%	30%
15-29	24%	27%	32%	35%
30-44	27%	29%	35%	38%
45-59	37%	39%	46%	49%
60-74	56%	58%	63%	65%
75+	69%	71%	76%	78%
By category of recipient				
No BIM	**34%**	**36%**	**42%**	**44%**
Active (no BIM)	28%	30%	36%	39%
Salaried workers (active, no BIM)	31%	34%	37%	40%
Self-employed (active, no BIM)	0%	0%	30%	31%
VIPO - widowed, invalid, pensioned or orphaned (non BIM)	59%	60%	63%	66%
Salaried workers (VIPO, no BIM)	61%	63%	65%	67%
Self-employed (VIPO, no BIM)	20%	23%	40%	61%
BIM	**48%**	**50%**	**53%**	**54%**
Active (BIM)	33%	35%	39%	40%
Salaried workers (active,BIM)	33%	35%	39%	40%
Self-employed (active,BIM)	5%	4%	34%	30%
VIPO (BIM)	55%	58%	63%	65%
Salaried workers (VIPO, BIM)	57%	60%	62%	64%
Self-employed (VIPO, BIM)	40%	45%	68%	71%
Total	**36%**	**38%**	**43%**	**46%**

Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

The coverage rate is rising for all types of patients and regions.

Figure 9 - Percentage of patients with a CMR (by region) - progression 2006-2009



Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

Having a CMR, and therefore a designated attending physician, for patients who have at least one contact per year with a physician (as a consultation or home visit), regardless of patient type or category of recipient…

- increases
  - the total number of contacts (in 2008, 10.47 compared with 6.76)
  - the number of contacts with the GP (in 2008, 7.42 compared with 4.66)
  - the percentage of patients who have one contact with a specialist (67% compared with 54%)
- but reduces
  - the frequency of contacts with a specialist (in 2008, 4.29 compared with 4.86)
  - visits to the emergency services (in 2008, 0.18 compared with 0.22)

See table 7, p. 28.

Table 7 - Out-patient attendance according to whether or not the insured person has a CMR (by gender, age bracket) - progression 2006-2008 and year 2008

					Gender		Age bracket					
Indicators	**06=>08**	**2006**	**2007**	**2008**	**F**	**M**	**0-14**	**15-29**	**30-44**	**45-59**	**60-74**	**75+**
Number of insurees	251,432	251,432	251,432	251,432	128,484	122,948	36,785	45,406	52,054	54,026	38,244	24,917
Patients with contacts	238,596	202,421	203,058	220,145	117,654	102,491	31,405	38,216	43,987	47,400	35,350	23,787
Patients with CMR	CMR+	84,823	83,409	85,909	47,247	38,662	8,282	11,709	15,080	19,544	18,179	13,115
Patients without CMR	CMR-	117,591	119,641	134,236	70,407	63,829	23,123	26,507	28,907	27,856	17,171	10,672
% with CMR		42%	41%	39%	40%	38%	26%	31%	34%	41%	51%	55%
Average number contacts total	CMR+	10.45	10.56	10.47	11.38	9.37	6.56	7.52	8.55	9.78	11.94	16.78
	CMR-	6.26	6.58	6.76	7.65	5.77	4.30	5.02	5.82	6.94	9.62	13.85
Ratio	CMR+/ CMR-	1.67	1.60	1.55	1.49	1.62	1.52	1.50	1.47	1.41	1.24	1.21
% with GP contact	CMR+	100%	100%	100%	100%	100%	99%	100%	100%	100%	100%	100%
	CMR-	84%	85%	84%	85%	83%	75%	83%	84%	86%	91%	94%
Ratio	CMR+/ CMR-	1.19	1.17	1.19	1.18	1.20	1.33	1.20	1.19	1.16	1.10	1.06
Average number contacts GP	CMR+	7.51	7.61	7.42	8.00	6.71	4.78	5.28	5.77	6.62	8.10	13.12
	CMR-	4.27	4.57	4.66	5.18	4.08	2.74	3.24	3.66	4.59	6.46	10.89
Ratio	CMR+/ CMR-	1.76	1.66	1.59	1.55	1.64	1.75	1.63	1.58	1.44	1.25	1.20
% with SP contact	CMR+	68%	68%	67%	72%	62%	56%	57%	64%	70%	76%	72%
	CMR-	54%	55%	54%	60%	47%	44%	47%	52%	58%	66%	65%
Ratio	CMR+/ CMR-	1.26	1.25	1.25	1.20	1.31	1.26	1.21	1.23	1.20	1.15	1.11
Average number contacts SP	CMR+	4.31	4.33	4.29	4.49	4.01	2.88	3.55	4.11	4.34	4.89	4.75
	CMR-	4.93	4.88	4.86	5.11	4.51	4.56	4.36	4.89	4.90	5.47	5.08
Ratio	CMR+/ CMR-	0.88	0.89	0.88	0.88	0.89	0.63	0.81	0.84	0.89	0.89	0.94
Average number of emergency contact	CMR+			0.18	0.17	0.19	0.20	0.23	0.18	0.14	0.14	0.25
	CMR-			0.22	0.20	0.25	0.24	0.27	0.21	0.16	0.17	0.30
ratio	CMR+/ CMR-			0.83	0.88	0.79	0.85	0.85	0.84	0.89	0.83	0.83
% referred emergencies	CMR+			0.40	0.41	0.39	0.18	0.21	0.28	0.37	0.51	0.69
	CMR-			0.29	0.31	0.27	0.12	0.18	0.22	0.33	0.47	0.69
Ratio	CMR+/ CMR-			1.40	1.34	1.45	1.45	1.21	1.28	1.12	1.08	1.00

Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

III. How is quality of care in GP practice?

Prevention
Prevention of influenza is properly applied.

Screening
Screening procedures could be more effective, and in particular more efficient as regards screening for breast cancer and cervical cancer. In both cases, the role of the GP is essential, both through awareness-raising among patients and through improved collaboration with gynaecologists.

Diagnostic procedure
Both in medical imaging and clinical laboratory testing, the prescription level is much higher than what we expect from guidelines. The public should be made more aware of the side effects of pointless and sometimes iatrogenic treatment programmes (radiation).

Antibiotic resistance
Awareness of the issue of antibiotic resistance appears to be tailing off, although some improvements are observed in the prescription of antibiotics for children.

Monitoring of chronic patients
Although some situations seem more reassuring (diabetes), application of the guidelines lacks rigour as evidenced by the dosing of creatinine in the month following the start of ACE treatment (35%) or of diuretics for elderly patients (34%) or the regularity of monthly monitoring of patients taking anticoagulants (35%).

Quality indicators are measured among people in the permanent healthcare sample[5] who consulted a GP during the year.

Elderly patients

Elderly patients require particular attention: the recommendations seem to be followed much more haphazardly. This is particularly the case for chronic patients or rest/care home residents (insofar as the recommendations apply to those patients who present a complex clinical situation). There is nevertheless no reason why living in a rest/care home should preclude the benefit of an ophthalmological consultation (35% had contact with an ophthalmologist over the year).

Centralised medical record

Abiding by the recommendations for clinical practice is no different for patients with a centralised medical record (CMR-'Dossier Médical Global'). Some elements even suggest the possibility of excessive follow-up, although it is not possible to quantify this as patient clinical data is not available.

Themes evaluated

- prevention
- screening
- diagnostic review
- therapeutic prescription
- monitoring of chronic patients

4. Permanent sample – anonymous sample representative of the population (EPS –Echantillon Permanent(e) steekproef) 2006, 2007 and 2008 – version 5

1. Prevention: influenza vaccination

"Preventive procedures" are evaluated on the basis of the influenza vaccination among the elderly.

Guidelines recommend that at-risk patients and **patients aged 65 and over** should be vaccinated against influenza **every year**.

The recommendation is correctly applied among the elderly. Coverage is better among patients who consult a GP than among the general population (70% compared with 66% in 2008). The coverage of at-risk patients is also satisfactory. For example, coverage in rest/care homes is very high (96%), which is very reassuring. See table 8.

Table 8 - Vaccination coverage against influenza for the patients aged 65 and over who consult a GP during the year, by patient type (chronic, rest/care home residents and according to the type of prescription) - between 2006 and 2008

% vaccinated flu > 65 years	2006	2007	2008
Insurees	68%	67%	66%
Insurees with GP contact	73%	72%	70%
Chronic	83%	81%	80%
Rest/care homes	100%	97%	96%
Antacids	84%	83%	82%
CHF	87%	87%	87%
COPD/asthma	83%	83%	83%
Diabetes	84%	83%	83%

Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

2. Screening

a. Recommended and organised screening: breast cancer

Recommended and organised screening is evaluated on the basis of the results of breast cancer screening among women. Each region puts in place a specific programme in connection with this (organised screening).

Guidelines recommend that **every asymptomatic woman aged between 50 and 69** should be screened every **two years**. Ideally, the number of examinations should be just above 0.5/year. Screening is not recommended for younger women. The GP should encourage women to take up screening in accordance with the official programme.

Among the women aged between 50 and 69 who visit a GP, 65% are screened (see the "% screening" column), compared to 62% of the general population of women aged between 50 en 69. Fewer than 50% are screened by way of the official screening programme (see the "% Prog/tot" column). In other words, not only is screening inadequate but women aged 50 to 69 are not sufficiently encouraged to follow the official programmes (that achieve the best results, particularly because of the double reading). Coverage and programme take-up rates are nevertheless better in the North of the country. Finally, the average annual number of examinations is too high (0.82/year).

It is also noted that 36% of women between the ages of 40 and 49 consult their physician for screening, which seems excessive and results in pointless exposure to ionising radiation (0.6 examinations/year).
See table 9, p. 33.

Table 9 - Coverage of breast cancer screening among patients who consult a GP during the year - target population (50-59 years) or otherwise (40-49) - between 2007 and 2008					
Breast cancer screening 2008 (target population 1x every 2 years)					
	Women from 50 to 69 years			**Women from 40 to 49 years**	
	% screening	**% Prog/tot**	**average number ex**	**% screening**	**average number ex**
Insurees	**62%**	**48%**	0,82	**36%**	0.61
Insurees with GP contact	**65%**	**48%**	0,82	**38%**	0.62
Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)					

b. Recommended and non-organised screening: cervical cancer

Recommended and non-organised screening is evaluated on the basis of cervical cancer. In contrast to breast cancer, no systematic screening is organised.

Guidelines recommend that **every asymptomatic woman aged over 25** should be screened **once every three years**. Ideally, the number of examinations should be just above 0.3/year. GPs should encourage women to take up screening.

Among the women aged between 25 and 64 who visit a GP, 61% are screened (see "% screening" column). This percentage is slightly better than in the general population of the women aged between 25 en 64 (59%). Coverage is much higher among women under 45 years of age (70%). Coverage is slightly better in the South of the country and in Brussels (64%) than in the North (57%).
See table 10, p. 34.

The average number of annual examinations is 0.62 (average no. of smears/year). Women who consult for screening do so with a greater than required frequency: a cervical smear is repeated every 19 months on average whereas one smear every 36 months would suffice.

Table 10 - Coverage of cervical cancer screening among patients aged between 25-64 who visit a GP during the year - between 2006 and 2008

Cervical cancer screening 2008 (1x every 3 years from 25)		
Women from 25 to 64 years	**% screening**	**Average number smears/ year**
Insurees	**59%**	**0.61**
Insurees with GP contact	**61%**	**0.62**

Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

c. Non-recommended screening: thyroid laboratory tests among patients not on thyroid medication

Non-recommended screening is evaluated on the basis of the prescription of thyroid tests for patients who are not receiving thyroid treatment.

> Screening for thyroid disorders is not recommended for asymptomatic patients, of whatever age or gender.

Among patients who are not prescribed any thyroid medication, a regular increase (in frequency and volume) in examinations conducted is observed, however, regardless of age or gender. In 2008, 46.3% of patients who visited a GP received no examination. And where an examination was conducted, the average number was 4.39 over the year (including at least one of dose of TSH). The average number of examinations requested increased from 4.12 to 4.39 between 2006 and 2008.

See table 11, p. 35.

Over a three-year observation period (2006-2008), barely 23% of patients had no thyroid examination, while the indications for review are limited (symptoms of chronic fatigue etc.).

Table 11 - Percentage of patients visiting a GP with no annual thyroid test and average number of thyroid tests among those with a thyroid clinical analysis - progression 2006-2008

No thyroid screening rate				
	2006	**2007**	**2008**	**06 tot 08**
% of insurees without control	**49%**	**48%**	**46%**	**23%**
Insurees with control:				
Average number of thyroid control	4.12	4.24	4.39	
Average number TSH	0.90	0.93	0.96	
Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)				

3. Diagnostic review: medical imaging and medically prescribed ionising radiation

Diagnostic review is evaluated on the basis of prescription of medical imaging.

Medically prescribed ionising radiation is particularly prevalent in Belgium, in particular through the use of the scanner and prescriptions for medical imaging examinations in general. The irradiation level is measured in millisieverts (mSv).

An accumulated dose of 100 mSv over three years constitutes a risk.

GPs are partly responsible since they prescribe almost 25% of total irradiation and 33% of irradiation among ambulatory patients.

In spite of the recommendations on medical imaging (published in 2002), which should reduce medically prescribed irradiation:

- the percentage of patients undergoing a medical imaging examination has increased (from 49% to 51% since 2006)
- the theoretical irradiation level per patient undergoing examination has increased (from 4.6 mSv to 5.23 mSv/patient examined)
- the percentage of patients receiving a dose in excess of 30 mSv has also increased from 5.4% to 6.4%.

However, the percentage of patients receiving an accumulated dose in excess of 100 mSv after three years remains low, at 0.6%.
See table 12.

Table 12 - Number of patients visiting a GP who have a medical imaging prescription (regardless of the prescribing doctor), annual accumulated dose and percentage of patients exceeding the threshold of 30 mSv in one year (or 100 mSv) – 2006-2008

Exposure to radiations of medical origin				
Indicators	**2006**	**2007**	**2008**	**2006-08**
Average number of patients with GP contact	183,389	185,310	198,596	198,598
% chronic	7%	7%	7%	7%
% patients with X-ray	49%	50%	51%	78%
Cumulated average dosis (patient X-ray+)	4.60	5.01	5.23	9.11
% risk patients (annulated dosis>30)	5.4%	6.0%	6.4%	**0.6%**

Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

4. Therapeutic prescription: prescription of antibiotics

Therapeutic prescription is evaluated on the basis of the prescription of antibiotics.

Since the early 2000s, the authorities have been raising awareness among the public and physicians concerning the issue of antibiotic resistance.

Antibiotics should be prescribed only where they are really necessary and the choice should preferably tend towards **first-line antibiotics**. Where amoxicillin is prescribed, clavulanic acid forms should be avoided.

43% of patients who consult a GP receive at least one prescription for antibiotics during the year. This - high - figure has been stable since 2006.

The number of days of treatment is increasing (23.9 in 2008 compared with 21.2 in 2006). Furthermore, the antibiotics prescribed are not always first-line.

> For example, a combination of amoxicillin + clavulanic acid is very often prescribed even though a prescription for amoxicillin alone would suffice (the 45% ratio has been stable since 2006).

However, a slight improvement is observed in the prescription of antibiotics for children, both in the frequency of prescription, which fell from 51% to 47% between 2006 and 2008, and in a positive change in the amoxicillin versus amoxicillin + clavulanic acid ratio, which has increased from 63% to 68%.

In addition, a much higher rate of prescriptions to patients over the age of 75 in rest/care homes is observed in comparison with the over-75s in general.
See table 13, p. 38.

Finally, prescriptions for antibiotics issued by GP working in medical centres (maisons médicales) are more conform to guide lines.

In summary, at the risk of increasing antibiotic resistance, antibiotics continue to be prescribed very frequently. They are also prescribed imprudently, in spite of the information campaigns aimed at the public and at prescribers.

Table 13 - Percentage of patients visiting GPs who are prescribed antibiotics annually, average annual number of daily doses, amoxicillin/amoxicillin + clavulanic acid ratio, breakdown of types of antibiotic by patient – 2006-2008

	Insurees			0-14 years					2008
Indicators	**2006**	**2007**	**2008**	**2006**	**2007**	**2008**	**Insurees**	**Rest/ care home**	**Med. centre**
Number patients with GP contact	183,389	185,310	198,596	28,634	26,538	25,487	20,435	1,083	4,477
Number patients with AB	78,708	80,512	84,635	14,616	13,181	11,973	9,183	737	1,212
% patients with AB	43%	43%	43%	51%	50%	47%	45%	**68%**	27%
Number DDD by patient AB	21.18	23.00	23.90	11.00	11.30	12.00	33.00	44.6	19.7
% tetracyclines (DDD)			5%			1%	4%	4%	7%
% chloramphenicol			0%			0%	0%	0%	0%
% betalactams			65%			79%	52%	51%	68%
% cotrimoxazole			1%			2%	2%	2%	1%
% macrolides			10%			12%	6%	5%	8%
% aminoglycosides			0%			0%	0%	0%	0%
% quinolones			9%			0%	12%	12%	6%
% others			10%			5%	23%	27%	11%
% amoxi/ amoxi+amoxiclav	44%	44%	45%	63%	65%	68%	35%	33%	64%
% syrup amoxi/ amoxi+amoxiclav (0-14 years)				54%	57%	62%			

Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

5. Monitoring of chronic patients

a. Overall management of diabetic patients

Several situations permit evaluation of the quality of the monitoring of chronic patients, in particular the integrated and multi-disciplinary management of diabetic patients.

For diabetic patients, guide lines recommend that **glycated haemoglobin, albumin and creatinine** be monitored at least once a year, and never less often than **every 15 months**. It is also recommended that an **ophthalmologist** perform a dilated fundus examination **every year** in order to prevent ocular complications.

Over a 15-month period, 95% of insulin-dependent patients received a blood sugar check, 93% a creatinine check and 56% an albumin check. In the last 12 months 57% had undergone a check and, over a period of three years, 20% of patients had no ophthalmological consultation. The recommendations are therefore relatively well observed as regards glycated haemoglobin.

The situation is generally less satisfactory among diabetic patients who are not treated with insulin.

The ophthalmological consultation appears to be an issue for one third of diabetics.
See table 14, p. 40.

Table 14 - Percentage of diabetic patients (insulin-dependent and/or non-insulin-dependent) visiting a GP who receive a glycated haemoglobin check, an albumin test and a creatinine test every 15 months, and an ophthalmological consultation every year, over a three-year period, for the year 2008

Diabetes: monitoring			
Indicators	**Insuline Dependent (ID)**	**Non insulin-dependent (NID)**	**all diabetic patients**
Number of diabetic patients ID +IND	2,896	8,856	11,752
% diabetic patients with GP contact	90%	94%	93%
% Hb glycated 15 month	**95%**	**86%**	**88%**
Average number of glycated Hb tests	2.94	2.05	2.26
% albumin test 15 month	**56%**	**23%**	**31%**
Average number albumin tests	0.73	0.27	0.38
% creatinine test 15 month	**93%**	**90%**	**91%**
Average number creatinine tests	2.88	2.07	2.27
% patients with ophtalmologist around 3 years	**80%**	**61%**	**65%**
% with ophtalmologist within the year	**57%**	**39%**	**44%**

Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

b. Prevention among patients with angina pectoris

Are secondary prevention procedures integrated into chronic patient monitoring? We analysed this particular aspect in relation to angina pectoris patients.

For angina pectoris patients, **the prescription of anti-platelet** drugs is recommended (in the absence of contraindications) as well as hypolipidaemic drugs. Annual lipid monitoring is advisable.

Prevention by anti-platelet drugs among patients with angina pectoris is satisfactory (69%), given the fact that a proportion of them present contraindications. See table 15.

Table 15: Percentage of patients visiting a GP who are monitored for angina with a prescription for anti-platelet drugs - year 2008	
Patients with angina pectoris	
Indicators	**2008**
Number angina pectoris patients	3,816
% anti-platelet drugs	69%
% hypolipidaemic drugs	55%
% yearly lipid dosis	69%
Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)	

c. Precautions upon initiating treatment, in particular among the elderly

Are all precautions and verifications taken when the treatment of chronic patients is initiated? This particular aspect was analysed among patients on antihypertensive drugs and in particular among patients receiving conversion enzyme inhibitors (CEIs) and among elderly patients aged over 75 on antidiuretics.

People on CEIs and elderly patients on diuretics should preferably have a **creatinine blood test in the month following the start of treatment.**

35% of patients receive the recommended creatinine test both after starting CEIs and among elderly patients on diuretics. Monitoring could therefore be more rigorous.
See table 16 p. 42.

Table 16 - Percentage of patients visiting a GP who have a creatinine test in the month following the start of treatment, among patients taking an conversion enzyme inhibitor and among patients aged 75 and over on diuretics in 2008	
Creatinine screening	
Indicators	**2008**
Number new patients on CEIs for 3 years	21,840
% creatinine test after begining	35%
nb new patients > 75 on diuretics for 3 years	9,460
% creatinine test after beginning	34%
Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)	

d. Monitoring of anticoagulant treatment

Are monitoring procedures integrated into chronic patient monitoring? This particular aspect was analysed among patients taking anti-coagulants.

For patients taking anticoagulants, **a coagulation analysis** is recommended **every month**. The average annual number of examinations should be higher than 12 because more frequent checking is recommended at the start of treatment.

The percentage of patients taking anticoagulants with a strict monthly check is 35%, what is insufficient.
See table 17.

Table 17 - Percentage of patients taking anticoagulants and visiting a GP who have a monthly coagulation check - year 2008	
Coagulation screening	
Indicators	**2008**
Number of patients	2,748
% of patients with 1 montly screening	35%
Average number of yearly screenings	15.8
Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)	

e. Mental health: monitoring of treatment with lithium

For patients on lithium, guidelines recommend that the **lithium level test** be reviewed **annually**.

80% of patients receive the test annually (see table 18). The recommendation is applied better among young people. It is particularly poorly applied in the South of the country.

Table 18 - Percentage of patients taking lithium and visiting a GP who have a lithium level check - year 2008

Screening patients on lithium	
Indicator	**2008**
Number of patients	153
% with yearly screening	80%
Average number of screenings	4.0

Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

IV. What is the situation of general medicine as regards capacity and professionalism?

The currently sufficient capacity in terms of human resources is reaching **a critical threshold**:

- Capacity is set to fall rapidly, with no possibility of immediate replacement, which will probably change practice in general medicine in a fundamental way and possibly present access problems. In fact, will GPs continue to accept new patients as readily as at present?
- Significant incentives have helped to revive the profession. Among French-speaking generalists there is a time lag in the use of these new resources.

A new generation of physicians is emerging: they are more inclined to engage in new initiatives (accreditation, computerisation, group medicine etc.), but their numbers are not yet sufficient to replace the ageing generation. It is necessary to persuade new graduates to follow this career path, rapidly.

Themes evaluated:

- medical capacity
- productivity
- replacement of personnel
- physicians in training
- incentives
- professionalism

1. Medical capacity: density

Medical capacity is evaluated on the basis of density (active GPs / 10,000 inhabitants).

Medical capacity in terms of GP numbers has long been overestimated. In fact, a large number of approved GPs do not work, or work very seldom, as GPs. (<1,250 contacts per year). The application of realistic criteria (full time equivalents (FTE) or 1,250 contacts per year) brings the density to 9.5 per 10,000 inhabitants whereas it was estimated just a short time ago at 21.1.

Table 19 - Number of GPs according to the activity criterion, by category of generalist (2000-2009, administrative language, gender)

General medicine					Administrative language		Physician's gender	
Indicators	**2000**	**2004**	**2008**	**2009**	**FR**	**NL**	**F**	**M**
Number GP (> 1 contact)	13,270	13,984	14,241	14,285	6,666	7,619	4,624	9,660
Number GP (> 500 contacts)	10,855	10,822	10,567	10,536	4,721	5,815	3,092	7,444
Number GP (> 1,250 contacts)	9,976	9,816	9,693	9,676	4,143	5,533	2,757	6,919
Number GP (smoothed FTE)	8,515	8,472	8,336	8,642	3,554	5,088	2,367	6,275
% number GP > 500/number GP		77%	74%	74%	71%	76%	67%	77%
% number GP > 1250/number GP		70%	68%	68%	62%	73%	60%	72%
% number GP smoothed FTE/ number GP		61%	59%	60%	53%	67%	51%	65%
% total capacity 2009 (> 1)		98%	100%	100%	47%	53%	32%	68%
% total capacity 2009 (> 500)		103%	100%	100%	45%	55%	29%	71%
% total capacity 2009 (> 1250)		101%	100%	100%	43%	57%	28%	72%
% total capacity 2009 (FTE)		98%	96%	100%	41%	59%	27%	73%

Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

There is one GP per 1,100 inhabitants in Belgium. This density remained unchanged from 2000 to 2010. In 2010 it was evenly spread across the territory.

2. Productivity in general medicine

Productivity is evaluated by the number of patients and number and type of contacts for a full-time physician.

Practice is changing significantly:

- the number of patients is growing (from 802 in 2000 to 1,003 in 2009)
- the number of contacts is increasing (5,532 to 5,686)
- the frequency of contacts is falling (6.89 to 5.67)
- the structure of activity is shifting away from home visits towards consultation (falling from 40% home visits in 2000 to 29% in 2009)
- increasing numbers of physicians are practising medicine in groups (1/4 of FTEs)

In other words, overall productivity, which has been growing constantly since 2000, is marked by an increase in patient numbers, a reduction in contacts per patient, a relative reduction in home visits and a total increase in contacts.

Significant variations in productivity according to the category of physician are observed:

- older physicians are more inclined to see their patients frequently and to visit them at home more frequently as well
- younger physicians and female physicians are less likely to see their patients again and favour contacts at the consultation.

Of course, these results should be viewed in conjunction with the age of the patients (changing in parallel with the age of the physician).

! The most productive physicians are males aged between 45 and 54, and tend to be Dutch speaking.

See table 20, p. 47 and map 2, p. 48.

Table 20 - Productivity indicators in general medicine by category of GP (FTE) - 2000 - 2009											
Indicators	**2000**	**2004**	**2008**	**2009**	**Gender**		**Physicians' age bracket**				
					F	**65+**	**35-**	**35-44**	**45-54**	**55-64**	**65-74**
Number of GP smoothed FTE (except medical centers)	8,515	8,472	8,336	8,283	2,161	663	500	1,479	2,813	2,829	545
% activity				**100%**	**22%**	**7%**	**5%**	**17%**	**36%**	**35%**	**6%**
Total Patients	802	815	981	1.003	973	768	839	1.015	1.098	986	795
Average CMR	108	353	518	543	461	379	397	530	601	557	399
% CMR/Pat	13%	43%	53%	54%	47%	49%	47%	52%	55%	56%	50%
Average number contacts	5,532	5,271	5,512	5,686	5,019	5,072	4,707	5,431	5,996	5,827	5,133
Number contacts/ patient	6.89	6.47	5.62	5.67	5.16	6.60	5.61	5.35	5.46	5.91	6.46
% visits (except emergency)	40%	36%	31%	29%	22%	38%	24%	25%	27%	33%	37%
Total Income (in EUR)	74,600	95,980	125,071	135,479	115,468	119,085	111,014	128,805	143,286	139,376	121,026
Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)											

Analysis by administrative district illustrates the fact that practice is not consistent across the country: the level of GP income between administrative districts can vary by a factor of one to two (50%), relating to the differences of a factor of one to two the number of patients (53%) or the average number of contacts (43%). The weight of home visits, which can vary by a ratio of one to three (34%), is also a factor. These differences, combined with a highly variable application of the Centralised Medical Record (CMR), results in differences with a ration of one to three in terms of average income (35%).

! In other words, although the density of active physicians is even across the whole territory, productivity is generally higher in the North of the country and lower in the South, in particular in the province of Luxembourg: here, a GP has less patients and the average number of contacts is lower. The significant differences in income observed between the North and the South of the country might appear surprising. They are explained essentially by a lower volume of activity and the fact that the South has hitherto been less inclined to use the Centralised Medical Record (CMR).

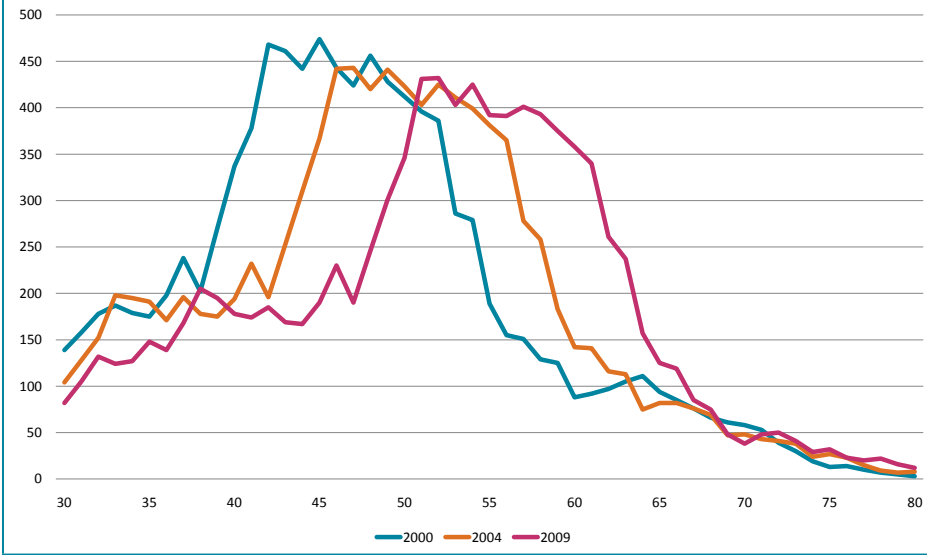
Map 2 - Average annual income (health insurance) per GP (>1,250 contacts/year) - By administrative districts (2009)

Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

3. Replacement of GPs

The cohort of active GPs is changing: it is very fast approaching retirement age, as shown by the lines superimposed for the years 2000, 2004 and 2009 of physicians with over 1,250 contacts.
See figure 10, table 21, p. 50.

Figure 10 - Distribution by year of age of GPs (>1,250 contacts/year) - comparison 2000-2004-2009



Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

Another way of measuring this change is to calculate the average age of GPs currently practising. The average age of FTEs is currently 51.4 years. This average age has risen very rapidly since 2000, when it was 47.3 years.

! A rising average age means that the cohort of new arrivals is insufficient to replace retiring physicians.

Two other significant phenomena can be observed:

- The number of GPs aged 65 and over who are still active is not negligible. Many physicians extend their working life beyond 65 and represent 7.7% of FTEs.This category is the same size as the category of GPs under the age of 35.

- The difference in average age between men and women.
  Most of the older GPs who are active are male and are being replaced by a mixed cohort, largely female, as shown by the reduction in the proportion of men in the younger age brackets. In other words, feminisation, which is a reality, is related in particular to the disappearance of male physicians who are not replaced, as shown in the graph below (see figure 11, p. 51). This feminisation, which is becoming more pronounced (28% of full-time active physicians), will alter practice: women physicians have less patients and make far fewer home visits.

Table 21 - Average age of GPs (FTE), percentage of GPs aged 65 and over, percentage of men - 2000-2009

Indicators	2000	2004	2008	2009	Gender		Physicians' age bracket				
					F	65+	35-	35-44	45-54	55-64	65-74
Number GP smoothed FTE (except medical centers)	8,515	8,472	8,336	8,283	2,161	663	500	1,479	2,813	2,829	545
Mean age	47.3	49.2	51.3	51.4	44.6						
% 65+	6%	6%	8%	8%	1%						
% Male	81%	77%	74%	73%		98%	40%	48%	72%	88%	98%

Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

Figure 11 - Breakdown of GPs by age, by gender (>1,250 contacts/year)

Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

4. Physicians in training

The recruitment of GPs is problematic. The non-replacement of older GPs is directly related to the numbers of new physicians entering the medical profession and, of these, the percentage entering general medicine.

The percentage of newly-graduated generalists is calculated by comparing the number of graduates entering general medicine to all graduates entering a specialist area in the two years following graduation (upon completion of the seven-year study cycle). This percentage currently stands at 30%. It was 39% in 1996.
See table 22 and figure 12, p. 54.

Table 22 - Progression between 1996 and 2008 of graduates in medicine in the two years following graduation according to type of specialisation

Graduated < 2 ans	1996	1998	2000	2002	2004	2006	2008
Number of physicians (after 7 years)	2,253	2,311	2,198	2,190	1,988	1,541	1,803
Unspecialised physicians	850	855	873	800	750	277	367
% unspecialised	38%	37%	40%	37%	38%	18%	20%
Specialising praticians (GP+SP)	**1,403**	**1,456**	**1,325**	**1,390**	**1,238**	**1,264**	**1,436**
Specialists physicians	856	898	829	905	763	869	1,004
General physicians	547	558	496	485	475	395	432
% GP/GP + SP	**39%**	**38%**	**37%**	**35%**	**38%**	**31%**	**30%**

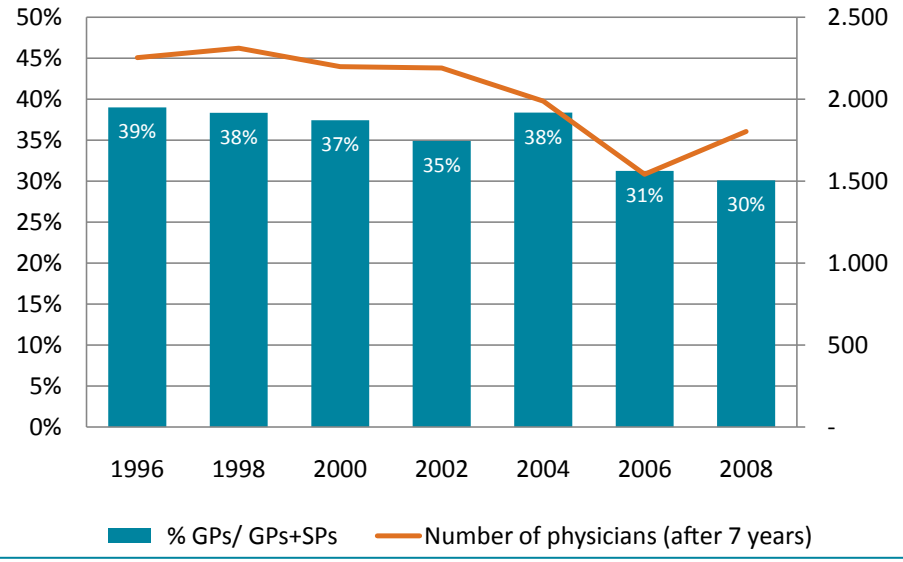
Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

Over the period 1996 - 2008, one observes that the number of graduate physicians (after seven years of study) decreased constantly up to 2006. This phenomenon was compensated for by a relatively constant number of physicians who specialised. However, the number of specialists in training increased constantly (as of 2004) and particularly between 2006 and 2008. Finally, the number of GPs in training constantly fell prior to the start of a recovery in 2008.

! The reduction in GPs in training is related not to the limitation of the number of graduates (which mainly contributed to reducing the percentage of non-active newly-graduated physicians), but rather to the particular attraction of specialist medicine to the detriment of general medicine. The percentage of newly-graduated physicians who enter general medicine has fallen constantly since 2000 to the benefit of specialists.

In summary, the replacement of GPs in practice represents a problem. The population of GP is ageing: 34% of the current active workforce is aged between 54 and 64 and is reaching retirement age.
They will not be replaced quickly (the under-45s represent barely 25% of current activity) as a simultaneous fall in physician recruitment and a feminisation of the profession are observed.

Figure 12 - Progression between 1996 and 2008 of the proportion of medicine graduates entering the general practice sector compared with all physicians entering a specialisation (general or other specialisation)



Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

5. Incentives and encouragement to enter general medicine

The income of physicians has been significantly enhanced in comparison with other health professions (8%/year since 2000). This has helped to bring them to the same income level as other non-surgical medical specialist areas.

See table 23, p. 55.

Table 23 - comparison and evolution (2000-2009) of the median income of physicians aged 45 to 54, by specialty (EUR)										
Profesional categories	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
General Physicians	**56,274**	**58,324**	**60,040**	**66,009**	**71,206**	**74,728**	**79,305**	**83,288**	**92,084**	**99,559**
Pediatricians	68,271	69,192	64,947	71,428	79,378	85,111	86,088	93,085	99,132	107,134
Gynaecologists	123,084	131,395	127,295	134,849	136,956	139,254	148,756	150,298	160,405	177,904
Psychiatrists	77,607	81,643	84,570	86,038	91,905	89,916	89,016	89,856	95,204	100,025
Internists	137,647	145,690	142,440	143,334	158,359	157,832	164,269	176,293	182,992	161,084
General Surgeons	147,717	141,655	145,376	159,121	172,255	175,655	181,373	188,413	201,977	207,339
Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)										

This enhancement is based on new activities (mainly financed by capitation grants (CMR), which represents 11% of income). A certain degree of fixed pricing also appears but accounts for only a very small share of total income (2%).

See table 24, p. 56.

Table 24 - General medicine financing structure					
Structure of GPs remunerations					
Composition	**2006**	**2007**	**2008**	**2009**	**2010**
Per act remuneration	**92%**	**91%**	**89%**	**89%**	**88%**
including co-payment	**18%**	**17%**	**16%**	**16%**	**15%**
including payment by health insurance	**74%**	**74%**	**73%**	**73%**	**73%**
consultations	41%	42%	42%	43%	43%
visits	23%	22%	21%	20%	19%
visits with supplements	10%	10%	10%	9%	9%
duty experience	0%	0%	0%	0%	0%
emergency supplements (consultations)	0%	0%	0%	0%	0%
emergency supplements (visits)	0%	0%	0%	0%	0%
transportation	0%	0%	0%	0%	0%
opinions	0%	0%	0%	0%	0%
Per person remuneration	**7%**	**8%**	**9%**	**10%**	**11%**
Care path	0%	0%	0%	0%	0%
diabete passports	0%	0%	0%	0%	0%
care path diabetes	0%	0%	0%	0%	0%
care path renal insufficiency	0%	0%	0%	0%	0%
CMR	7%	8%	9%	9%	10%
opening	5%	5%	7%	7%	7%
administrative extension	2%	2%	2%	2%	3%
Inclusive remuneration	**2%**	**2%**	**2%**	**2%**	**2%**

Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

6. Professionalism: accreditation and computerisation

Professionalism indicators provide a means of assessing to what extent physicians:

- question their practices
- are open to evaluation, innovation and continuing training
- are involved in promoting the profession
- participate in the collective organisation.

GPs benefit from encouragement measures in order to meet the challenges of continuing training, computerisation and shared practice. Many of these initiatives are recent and cannot yet be properly studied.

In the absence of more satisfactory measurements, the selected indicators are the percentage of accredited physicians and the degree of computerisation.

The accreditation system is largely followed (91%). A programme of computerisation (75% of physicians receive an IT bonus) supplements this, as does the issuing of recommendations for good practice by scientific societies.

These programmes are taken up more readily by younger physicians (97% are accredited and 89% receive the IT bonus).

In general, it should also be noted that Brussels and the South of the country are benefiting less from these incentives: 84% of physicians are accredited, 60% apply for the IT bonus, 34% of patients have a CMR, etc.
See table 25 p. 58.

Table 25 - Professionalism indicators among generalists by GP FTEs (2000-2009)

Indicators	2000	2004	2008	2009	Gender		Physician's age bracket				
					F	65+	35-	35-44	45-54	55-64	65-74
Number of GP smoothed FTE (except medical centers)	8,515	8,472	8,336	8,283	2,161	663	500	1,479	2,813	2,829	545
% who accede to agreement	84%	78%	83%	84%	87%	79%	93%	87%	82%	82%	80%
% accredited	89%	90%	92%	91%	93%	86%	97%	90%	92%	92%	89%
% social premium	77%	73%	79%	80%	83%	63%	92%	85%	79%	78%	67%
% who subscribed to duty call		78%	85%	84%	87%	38%	94%	91%	89%	84%	43%
% computer premium		61%	72%	75%	79%	44%	89%	84%	79%	70%	49%
% stage Supervisor	6%	11%	10%	11%	10%	4%	1%	9%	13%	13%	5%
% group practices				27%	41%	11%	64%	41%	22%	19%	11%

Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

V. What needs to be done to maintain and improve GP performance?

Three focuses for reflection are identified.

1. The practice of general medicine is essential to provide local health care. It is recognised as such by the population. Brussels, however, is showing a 20% shortfall in take-up of primary care. An in-depth analysis of this lack of visits to physicians by a section of the population therefore seems called for. Some administrative districts have few physicians who accede to the agreement. It is necessary to check whether insured persons in these administrative districts are benefiting from acceptable pricing security. Having a designated GP (Centralised Medical Record) seems to be a positive structuring factor in primary care. Although the use of CMR is increasing in all categories of insured parties, Wallonia and Brussels are nevertheless seeing a significant time lag which needs to be improved, possibly by targeted awareness raising among the populations concerned.

2. General medicine is a complex practice covering prevention, awareness of screening, the treatment of acute conditions and the review and monitoring of chronic diseases. This practice could be more rigorous in order to be more effective and, in particular, more efficient. At local-regional level, the situation could be improved by the broad dissemination of recommendations tailored for GP practice and accepted by GPs. Widely followed "continuing training" programmes could contribute to this, as could building on the existing high levels of computerisation and also intervision which could be promoted by peer review, group practices and supported by circles and general medicine scientific societies.

In isolated cases of frequent and complex conditions, structured programmes for chronic diseases (trajets de soins), similar to those in place for diabetes could encourage adherence to the recommendations.

3. In terms of sustainability, general medicine will very shortly have to deal with the predicted reduction in activity of the generation of 55 to 64 year-olds who currently account for one third of general medicine activity. However, the more recent generations will be insufficient in number to make up for this loss of activity, which could significantly alter the way in which primary general medicine is practised. Incentive measures to promote retention in the profession are a first ongoing step. Strong incentives should follow, to encourage physicians who are currently in training to enter general medicine, as they have done in the past.

Annexes

Summaries of the balanced scorecard 2012

Figure 13: Summary of the results of the focus "patient focus"

Symbol codes	☼ +++	☼ ++	☁ +	☁ -	☂ --	☂ ---

	Result observed	Rating	Geographical homogeneity	Inequalities	Trend	CONCLUSION	Proposed actions
1. PATIENT FOCUS ACCESSIBILITY CONTINUITY ACCEPTABILITY		☼		☼	☼	☼	**Priorities: Brussels, CMR, rest/care homes**
1. Index of satisfaction & care deferral	70-90% 14%	☼	☼	☼		☼	Check the reasons for care deferral
2. Financial accessibility and pricing security (e.g. level of the co-payment)	143€/pat.	☼	☼	☁	☼	☼	Does the Maximum Billing (MAF) provide sufficient compensation?
(e.g. density of physicians who accede to agreement)	7.9/10,000 inh.	☼	☁	☁		☁	Check whether financial accessibility is assured in areas with a low density of physicians who accede to agreement
3. Use of primary care services (% with no contact % with no GP contact)	12% 21%	☼	☁	☁	☼	☼	Study the reasons for the deficit of contacts with GP in Brussels
4. Rates of visits	4.28	☼	☼	☁	☁	☁	Check whether home visits are made to people with reduced mobility. Improve access to specialists and dentists in rest/care homes
5. Registration with a designated GP (CMR)	**46%**	☁	☂	☁	☼	☁	Awareness raising among the population regarding the benefits of the CMR

Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

Figure 14: Summary of the results of the focus " appropriate & quality care "

	Result observed	Rating	Geographical homogeneity	Inequalities	Trend	CONCLUSION	Proposed actions
2. QUALITY RELEVANCE SAFETY EFFICIENCY							**Priorities: dissemination of guidelines, feedback, awareness raising (safety and efficiency)**
6. Prevention (e.g. influenza vaccination)	**73%**						Monitor
7. Recommended and organised screening (e.g. breast) coverage rate: participation in organised screening	**62% 48%**						Awareness among prescribers of the organised programme Raise awareness among older women Improve gynaecologist/GP communication
8. Recommended and non-organised screening (e.g. cervical) coverage rate: number of months between examinations	**62% 19 months**						Improve gynaecologist/generalist communication Raise awareness among older women
9. Diagnostic prescription (e.g. imaging) % of patients with imaging average dose % of people overexposed/year	**51% 5.23 6.4%**						Awareness raising among prescribers and the public Dissemination of guidelines
10. Inadequate screening (e.g. thyroid) % of insurees undergoing a test in three years	**75%**						Awareness raising among prescribers regarding pointless examinations Dissemination of guidelines

Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

Figure 14: Summary of the results of the focus "appropriate & quality care" (cont)

	Result observed	Rating	Geographical homogeneity	Inequalities	Trend	CONCLUSION	Proposed actions
2. QUALITY RELEVANCE SAFETY EFFICIENCY							**Priorities: dissemination of guidelines, feedback, awareness raising (safety and efficiency)**
11. Therapeutic prescription (e.g. AB) % of patients with a prescription annual dose (in days) amoxi/amoxi + clav ratio	**43% 23.9 45%**						Awareness raising among prescribers and the public regarding antibiotic resistance Dissemination of guidelines
12. Monitoring of chronic patients: overall monitoring (e.g. diabetes) glycated haemoglobin every 15 months albumin every 15 months creatinine every 15 months % with no ophthalmological examination in three years	**88% 31% 91% 35%**						Improve access to specialists in rest/care homes
13. Monitoring of chronic patients: prevention (e.g. anti-platelet drugs in angina)	**69%**						Dissemination of guidelines
14. Monitoring of chronic patients: precaution (e.g. creatinine at the start of treatment)	**35%**						Dissemination of guidelines
15. Monitoring (e.g. anticoagulants and monthly checks	**35%**						Dissemination of guidelines
16. Monitoring of chronic patients, mental health (e.g. lithium)	**80%**						Dissemination of guidelines

Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

Figure 15: Summary of the results of the focus "capacity & professionalism"

	Result observed	Rating	Geographical homogeneity	Inequalities	Trend	CONCLUSION	Proposed actions
3. DOES THE OFFER MEET THE NEEDS? WORKFORCE PRODUCTIVITY FINANCING GOVERNANCE							**Priorities : replacement of GP, North-South difference**
17. Medical density	**9.5**						Check whether the maintenance of activity among doctors aged over 65 is meeting a need and why the setting up in practice of women is not evenly spread
18. Productivity (Size of patient list volume of work, no. of contacts)	**998 5664**						Check whether the improvement in productivity is matching needs.
19- 20 Replacement of personnel (average age)	**51.3**						Task force ?
21. Incentives (progression of median income)	**99,559 €**						Awareness raising among the physicians concerned
22. Professionalism (e.g. accreditation computerisation)	**91% 64%**						Awareness raising among the physicians concerned

Source: NIHDI (INAMI-RIZIV) – Health care department – Research, Development and Quality Promotion (RDQ)

List of abbreviations

AB	Antibiotics
BIM	Bénéficiaire de l'intervention majorée – Beneficiary from preferential reimbursement system
COPD	Chronic obstructive pulmonary disease
CHF	Congestive Heart failure – Cardiac decompensation
DDD	Defined Daily Dose: the assumed average maintenance dose per day for a drug used for its main indication in adults.
CMR	Dossier médical global – Centralised Medical Record
FTE	Full-time equivalent
GLEM	Groupe local d'évaluation médicale - Local medical assessment group
GP	General practitioner
MAF	Maximum à facturer - maximum billing
NIHDI	(INAMI-RIZIV) National Institute for Health and Disease Insurance
INH	Inhabitants
IP	Institute of Public Health
KCE	Belgian Health Care Knowledge Center
SP	Specialist

Key to the tables

In this brochure's tables:

- **Red denotes a bad or inferior result**
- **Green denotes a good or superior result**
- **Orange and yellow denote an average result.**

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