

1.1. Proportion of adults living with diabetes (under insulin) within a pass/pre-care trajectory, a care trajectory or a convention (QC-4) & proportion of adults living with diabetes (receiving glucose-lowering drugs other than insulin) within a pass/pre-care trajectory, a care trajectory or a convention (QC-5)

1.1.1. Documentation sheet

Description	QC-4 Proportion of adults living with diabetes (under insulin) registered in a pass/pre-care trajectory, a care trajectory or a convention ^a QC-5 Proportion of adults living with diabetes and older (receiving glucose-lowering drugs other than insulin and almost no insulin, (hereafter abbreviated as “receiving glucose-lowering drugs other than insulin”) registered in a pass/pre-care trajectory, a care trajectory or a convention
Calculation	<p>QC-4 Proportion of adults living with diabetes (under insulin) registered in a pass/pre-care trajectory, a care trajectory or a convention</p> <ul style="list-style-type: none"> • Numerator: number of adults (≥ 18 years) under insulin living with any type (type 1 and 2) diabetes registered in a pass/pre-care trajectory, a care trajectory or a convention. • Denominator: number of adults (≥ 18 years) under insulin living with any type (type 1 and 2) diabetes identified through their drugs prescription. <p>QC-5 Proportion of adults living with diabetes (receiving glucose-lowering drugs other than insulin) registered in a pass/pre-care trajectory, a care trajectory or a convention</p> <ul style="list-style-type: none"> • Numerator: number of adults (≥ 18 years) receiving glucose-lowering drugs other than insulin with any type (type 1 and 2) diabetes registered in a pass/pre-care trajectory, a care trajectory or a convention. <p>Denominator: number of adults (≥ 18 years) receiving glucose-lowering drugs other than insulin with any type (type 1 and 2) diabetes identified through their drugs prescription.</p>
Rationale	<p>To optimize care provided to people living with diabetes, several measures have been implemented in Belgium by the RIZIV – INAMI.</p> <ul style="list-style-type: none"> • Diabetes pass/pre-care trajectory (<i>passport diabète / modèle (ou protocole) de soins pour le suivi de patients diabétique de type 2, connu sous le vocable de « prétraject diabète » - diabetespas / zorgmodel (of zorgprotocol) voor de opvolging van een patiënt met diabetes mellitus type 2, bekend als « voortraject diabetes »</i>): <ul style="list-style-type: none"> ○ Diabetes pass set up in Belgium in 2003. Removed and replaced by the pre-care trajectory for people living with type 2 diabetes since the 1st February 2016. ○ Inclusion criteria: people living with diabetes type 2 under diet or oral antidiabetics; people should have a global medical record followed by their general practitioner. ○ Aims: to improve the education of patients and those around them (information on treatment, management of complications...), to stimulate the patients involvement through information on periodic examinations and to support the communication between the patient and various care providers.

^a From a legal point of view, the correct translation should be “agreement”. Nevertheless, to facilitate the identification of what it means by a Belgian expert, we decided to choose the term “convention”, which is more commonly used.

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- Advantages for patients: 2 consultations partially reimbursed with a dietician each year and 2 consultations partially reimbursed with a podiatrist each year (only if the patient is at high risk of foot wound).
 - Diabetes pass has been replaced by the pre-care trajectory for people living with type 2 diabetes in order to better manage people living with type 2 diabetes not registered in a care trajectory for chronic care or in a convention. Advantages for patients are almost the same: 2 consultations reimbursed with a dietician and 2 with a podiatrist each year. Some people^b in the pre-care trajectory are eligible for reimbursement of consultations with a diabetes educator (since 1st May 2018) or with other health professionals (pharmacist, nurses, physiotherapists...). A maximum of 4 consultations per patient per year is reimbursed.
 - Care trajectory for people living with type 2 diabetes (*trajet de soins diabète type 2 - Zorgtrajecten diabetes type 2*):
 - Set up in Belgium in September 2009 (modified in 2018).
 - Inclusion criteria: people living with diabetes type 2 under insulin or incretinomimetics or diabetes type 2 insufficiently controlled by oral antidiabetics; people not be registered in a convention; people should have a global medical record followed by their general practitioner and should consult their general practitioner at least twice a year and their endocrinologist at least one by year.
 - Aims: to improve follow-up and collaboration between patients, general practitioner and medical specialist.
 - Advantages for patients: all consultations totally reimbursed with general practitioner and endocrinologist; free access to consultations with a diabetes educator (that can be a nurse, a dietician, a physiotherapist or a podiatrist) specialised in diabetes education (information on lifestyle, treatments, follow-up); free self-control material only for those on injectable therapy (150 dipsticks/6 months, glucometer), 2 consultations partially reimbursed with a dietician each year and 2 consultations partially reimbursed with a podiatrist each year (only if the patient is at high risk of foot wound).
 - Since the 1st May 2018, the reimbursement rules for people living with type 2 diabetes in care trajectory has been modified. It affects consultations in diabetes for education, reimbursement of self-control material and reimbursement of consultations with specialists. People registered in a care trajectory for type 2 diabetes under insulin or under incretinomimetics are fully reimbursed for their self-control material. Each person can benefit from 5 consultations in diabetes for education per year and once 5 supplementary consultations. At least one of them should be delivered at home. Sickness funds do not pay lump sum fee for endocrinologists anymore when people are also registered in a diabetes convention.
 - Convention with specialised centres for diabetes self-management and other specific support programmes such as for people living with diabetes (*conventions INAMI – RIZIV overeenkomsten*):
 - Set up in Belgium in 1986 (modified in 2008 and 2016).
 - Inclusion criteria: people living with type 1 or type 2 diabetes under at least 2 insulin injections by day and with a serious medical condition or people living with type 2 diabetes under at least 3 insulin injections by day; people with gestational diabetes; people aged more than 16 years old; ambulatory or hospitalised; people with a global medical record followed by their general practitioner. People living with type 2 diabetes registered in a care model often opt for a care trajectory and thus are followed by both GPs and medical specialists.
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^b Inclusion criteria: people living with type 2 diabetes registered in the pre-care trajectory; people with age 15-69 years and a cardiovascular risk defined as BMI>30 and/or having high blood pressure; GP's prescription for consultation for diabetes education.

- Aims: to organise a multidisciplinary management of people living with diabetes in specialised hospital centres in order to support the education of patients and those around them, the patient's involvement in their periodic examinations and the communication between the patient and various care providers.
- Advantages for patients: integration in a full revalidation process including free self-control material and multidisciplinary consultations. Since the application of the new convention the 1st July 2016, in addition to the usual standard equipment a new measuring equipment (sensor for self-monitoring of glucose) is reimbursed for people living with type 1 diabetes.

Because the registration in a diabetes pass/pre-care trajectory, care trajectory or convention is volunteer, the percentage of people registered in at least one of the three systems of registration is an indicator of the person's participation in this public investment.

Data source	IMA – AIM
Technical definitions	<p>Two distinct groups of people living with diabetes are considered (selection on Pharmanet: class ATC A10 drugs prescription)</p> <ul style="list-style-type: none"> • Adults living with diabetes under insulin (ATC=A10A): people aged ≥ 18 years and A10A outpatient prescription >37.5 DDDs (N.B.: for insulin: 1 DDD = 40 IU^c). • Adults living with diabetes receiving glucose-lowering drugs other than insulin (ATC=A10B) and almost no insulin (ATC=A10A): people aged 18 years and older and A10B outpatient prescription ≥ 270 DDDs per year and $0 \leq$ A10A outpatient prescription < 37.5 DDDs per year. This group includes all oral antidiabetics but also incretin mimetics (GLP1-agoniste, code A10BJ) which are non-insulin injectable solutions. • For these 2 groups of people living with diabetes (under insulin or receiving other glucose-lowering drugs), we identified people registered in at least one of the three systems of registration. Adults living with diabetes (under insulin or receiving other glucose-lowering drugs) registered in a care trajectory, a convention, or a diabetes pass/pre-care trajectory are identified through the following nomenclature code: • Diabetes pass/pre-care trajectory: 102852, 109594. On February 1, 2016, the description of the code 102852 «Use of a diabetes pass by the GP » was replaced by «Follow-up of a patient with type 2 diabetes according to the pre-care trajectory / care protocol established by the Insurance Committee ». The code 109594 was introduced in 2016 for the follow-up, in medical house (<i>maisons médicales - medische huizen</i>) of a person living with type 2 diabetes according to the pre-care trajectory / care protocol established by the Insurance Committee. • Diabetes care trajectory: 107015, 107030, 107052, 107074. These codes concern the fixed fees for GPs and other medical specialists, respectively, for year 1 and for the following years (from year 2), respectively. • Diabetes convention: 770033, 770055, 770070, 771573, 771595, 772450, 772461, 773113, 773231, 773253, 773275, 773393, 773496, 773592, 774115, 774130, 774152, 775456, 775471, 788756, 788771, 788793, 788815, 788830, 788852, 788874, 788896, 788911, 788933, 788955, 785573, 785595, 785610, 785632, 785654, 785676, 785691, 785713, 785735, 785750, 785772, 785794, 785816, 785831, 785853, 785875, 785890, 785912, 785934, 785956, 789751, 789773, 789795, 789810, 789832, 789854, 789876, 789891, 789913, 789935
International comparability	Not applicable

^c https://www.whocc.no/atc_ddd_index/?code=A10AD01 N.B.: Because some patients have a much lower daily dose than 40 UI, those who started taking insulin at the end of a year might be excluded.

Limitations	Underestimated denominator (only people living with diabetes under medication as defined by the definition above); Process indicator (which provide no information on outcome); Risk of misclassification, notably risk that some people under insulin since a few days were considered as people receiving glucose-lowering drugs. Moreover, for people receiving glucose-lowering drugs other than insulin, it is possible that some of them take e.g. metformin to lose weight instead of stabilising a diabetes; Risk of misclassification or omission of certain RIZIV - INAMI codes that refer to a pass/pre-care trajectory, care trajectory or a convention.
Dimension	Continuity (Management/Coordination); Ambulatory care; Link specialist and GP; Chronic care
Related indicators	QA-1 & QA-2 (appropriate diabetes follow-up)
Reviewers	Christophe De Block (UZA), Chantal Mathieu (UZ Leuven), Astrid Lavens (Sciensano), Johan Van Overloop (IMA – AIM) and Kathleen Sierens (RIZIV – INAMI)

1.1.2. Results

Belgium

A total of 168 748 adults living with diabetes under insulin and a total of 252 005 adults living with diabetes receiving other glucose-lowering drugs than insulin were identified in 2021 through their drugs prescription (see Table 1 and Table 2). This number does not consider adults living with diabetes without medication (e.g. patients diagnosed with diabetes but only under diet or non-diagnosed patient). Globally, 86.0% of the identified **adults living with diabetes under insulin** had at least one registration in a diabetes care model (pass/pre-care trajectory, care trajectory or convention,

see Table 1) in 2021. Among adults living with diabetes under insulin, 63.2% of them had registered for a convention, while 27.5% and 2.1% had a care trajectory or a pass/pre-care trajectory respectively. The proportion of **patients receiving other glucose-lowering drugs than insulin** having at least one registration in a diabetes care model was only 26.6% (see Table 2). Most of them (16.4% of the patients receiving other glucose-lowering drugs than insulin) had registered for a care trajectory, followed by pass/pre-care trajectory registration (10.3%), and only a few had a convention (0.8%, see Table 2).

Table 1 – Proportion of adults living with diabetes under insulin within a pass/pre-care trajectory, a care trajectory or a convention, by patient characteristics (2021)

PATIENTS UNDER INSULIN (18 years or more)							
		Patients having a at least ONE OF THE THREE systems of registration			Patients having a PASS/PRE-CARE TRAJECTORY	Patients having a CARE TRAJECTORY	Patients having a CONVENTION
		Numerator	Denominator	Proportion	Proportion	Proportion	Proportion
Belgium		145 203	168 748	86.0%	2.1%	27.5%	63.2%
Region	Brussels	14 193	17 499	81.1%	2.4%	20.0%	64.2%
	Flanders	82 053	93 023	88.2%	2.2%	30.3%	63.4%
	Wallonia	48 390	57 474	84.2%	1.9%	25.3%	62.6%
Gender	Female	66 438	77 580	85.6%	2.1%	27.6%	62.7%
	Male	78 765	91 168	86.4%	2.2%	27.4%	63.7%
Age groups	18-24	3 339	3 519	94.9%	0.7%	0.7%	94.3%
	25-49	23 578	26 411	89.3%	1.6%	9.0%	82.3%
	50-74	77 531	88 837	87.3%	2.3%	29.0%	63.6%
	75-84	28 785	34 033	84.6%	2.2%	35.7%	54.4%
	85-89	8 214	10 488	78.3%	2.3%	39.0%	44.6%
	90+	3756	5460	68.8%	2.9%	36.3%	35.5%
Long term care (65 years or +)	Nursing care at home	17 069	20 694	82.5%	2.1%	35.1%	53.4%
	Institutions	7 611	10 827	70.3%	2.2%	29.4%	45.7%
	No LT care	120 523	137 227	87.8%	2.1%	26.2%	66.1%
Increased reimbursement (18 years or +)	No	92 760	106 791	86.9%	1.9%	26.9%	64.6%
	Yes	52 360	61 831	84.7%	2.6%	28.6%	60.9%

Source: IMA – AIM

Trend over time shows that the proportion of people living with diabetes with registration in a diabetes care model is decreasing from 2020 to 2021 for **adults living with diabetes under insulin** while it is stable since 2019 for

adults living with diabetes receiving other glucose-lowering drugs than insulin (Figure 1).

Table 2 – Proportion of adults living with diabetes received glucose-lowering drugs other than insulin within a pass/pre-care trajectory, a care trajectory or a convention, by patient characteristics (2021)

PATIENTS RECEIVING OTHER GLUCOSE-LOWERING DRUGS THAN INSULIN (18 years or more)							
	Patients having a at least ONE OF THE THREE systems of registration			Patients having a PASS/PRE-CARE TRAJECTORY	Patients having a CARE TRAJECTORY	Patients having a CONVENTION	
	Numerator	Denominator	Proportion	Proportion	Proportion	Proportion	
Belgium	66 957	252 005	26.6%	10.3%	16.4%	0.8%	
Region	Brussels	4 970	20 680	24.0%	7.6%	16.4%	1.0%
	Flanders	45 725	139 558	32.8%	13.8%	19.2%	0.9%
	Wallonia	16 063	90 818	17.7%	5.4%	12.3%	0.6%
Gender	Female	27 740	106 572	26.0%	10.3%	15.9%	0.7%
	Male	39 217	145 433	27.0%	10.3%	16.8%	0.9%
Age groups	18-24	37	303	12.2%	2.0%	6.6%	1.7%
	25-49	4957	16991	29.2%	9.6%	19.4%	1.6%
	50-74	45 490	161 144	28.2%	10.4%	18.0%	0.8%
	75-84	13 106	55 037	23.8%	10.3%	13.5%	0.6%
	85-89	2 551	13 090	19.5%	9.9%	9.5%	0.7%
	90+	816	5440	15.0%	8.5%	6.3%	40.0%
Long term care (65 years or +)	Nursing care at home	4 746	18 391	25.8%	9.5%	16.0%	1.6%
	Institutions	1044	7 167	14.6%	6.3%	7.7%	1.1%
	No LT care	61 167	226 447	27.0%	10.5%	16.7%	0.7%
Increased reimbursement (18 years or +)	No	46 130	177 481	26.0%	10.0%	16.1%	0.7%
	Yes	20 819	74 477	28.0%	10.9%	17.2%	1.0%

Source: IMA - AIM

Analysis by demographic characteristics and socio-economic status

The proportion of **adults living with diabetes under insulin** with at least one registration in a diabetes care model is quite similar for men (86.4%) and women (85.6%, see Table 1). The same observation can be done among **adults living with diabetes receiving other glucose-lowering**

drugs than insulin with at least one registration in a diabetes care model (27.0% for men and 26.0% for women, see Table 2).

The proportion of **adults living with diabetes under insulin** with at least one registration in a diabetes care model is the highest in the 18-24 years (94.5%) and remains superior to 80% until 84 years old. Afterwards, the

proportion decrease to 78.3% in the 85-89 age group and 68.8% in the 90+ age group (Table 1). The proportion of **adults living with diabetes receiving other glucose-lowering drugs than insulin** who have at least one registration in a diabetes care model decreases regularly from 29.2% in the 25-49 age group to reach 15.0% in the 90+ age group, but the 18-24 age group has the lowest proportion with 12.2% (Table 2).

Among the 65 years old and over, the proportion of persons living with diabetes with at least one registration in a diabetes care model is lower for patients in institutions (e.g. in nursing homes) compared to patients receiving home care and patients without long-term care (defined as not in institution and without receiving home care), **both for persons under insulin and receiving other glucose-lowering drugs than insulin** (see and Table 2).

Adult living with diabetes **under insulin** with entitlement to increased reimbursement have slightly less often a registration than patients without this financial support (84.7% vs 86.9%, see Table 1). Conversely, the proportion of **diabetic patients receiving other glucose-lowering drugs than insulin** with at least one registration in a diabetes care model is higher

with entitlement to increased reimbursement (28.0%) than without increased reimbursement (26.0%, see Table 2).

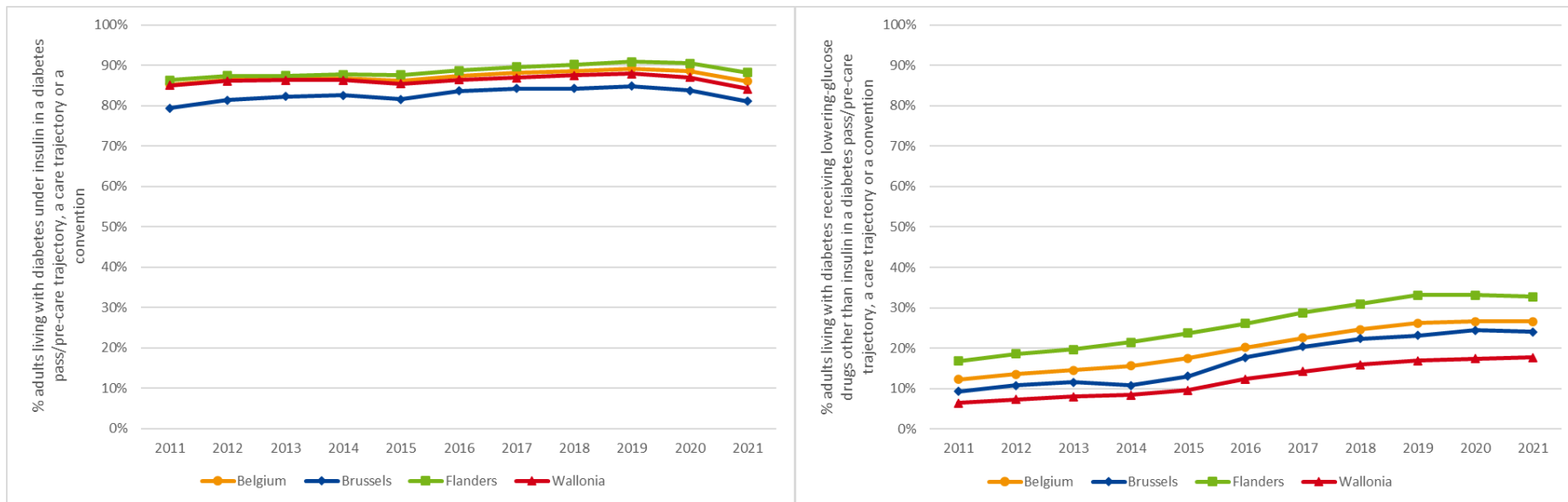
Regional comparison

A slight difference was noticed between the three regions and the type of diabetes care model concerning **adults living with diabetes under insulin** (Table 1). The use of care trajectory in 2021 is higher in Flanders (32.8%) compared to Brussels (24.0%) and Wallonia (17.7%); no large differences were noticed for pass/pre-care trajectory and convention.

The proportion of **adults living with diabetes receiving other glucose-lowering drugs than insulin** with at least one registration in a diabetes care model is higher in Flanders (32.9%) than in Brussels (23.0%) and Wallonia (16.9%) and this difference is found for the three types of registration except for convention registration where Brussels (1.0%) is slightly higher than Flanders (0.9%) (Table 2).

This is not a new trend as shown in Figure 1: Flanders has a higher proportion of adults living with diabetes (both with and without insulin) over the 2011-2021 period.

Figure 1 – Proportion of adults living with diabetes in a care trajectory, a convention or with a diabetes pass/pre-care trajectory, by patient region (2011-2021, left: patients treated with insulin, right: patients treated with other glucose-lowering drugs than insulin)



Source: IMA – AIM

Impact of COVID-19 pandemic

Unknown

Key points

- The proportion of adults living with diabetes with at least one registration in a diabetes care trajectory, a diabetes convention or a diabetes pass/pre-care trajectory is relatively high among patient under insulin (86.0%). A large majority of patients under insulin registered in a diabetes care model have a convention. In another way, a low proportion of patients receiving other glucose-lowering drugs than insulin has at least one registration in a diabetes care model (26.6%), a little more than half having a care trajectory.
- The proportion of adults living with diabetes with at least one registration in a diabetes care model decrease with age both for patients under insulin and adults receiving other glucose-lowering drugs than insulin but remain superior to 80% for patients under insulin from 25 years old to 84 years old.
- Among the 65 years old and over, the proportion of persons living with diabetes with at least one registration in a diabetes care model is lower in institutions (e.g. in nursing homes) compared to

home care and no long-term care, both for patients under insulin and receiving other glucose-lowering drugs than insulin.

- Patients under insulin with lower socio-economic level (measured by entitlement to increased reimbursement) have slightly less often a registration in a diabetes care model. Conversely, Patients receiving other glucose-lowering drugs than insulin with lower socio-economic level have slightly more often a registration.
- The proportion of patients with at least one registration in a diabetes care model in 2021 is higher in Flanders (88.2% and 32.8%) than in Wallonia (84.2% and 17.7%) and Brussels (81.1% and 24.0%), respectively for adults living with diabetes treated with insulin and treated with other glucose-lowering drugs than insulin.
- The proportion of patients under insulin with at least one registration in a diabetes care model has decreased from 2020 to 2021. After an increasing trend from 2011 to 2019, the registration rate has become rather stable over the last three years for patients receiving other glucose-lowering drugs than insulin.