

**PATIENTS
WITHOUT BORDERS
CROSS-BORDER PATIENT
FLOWS IN THE BENELUX**



COLOPHON

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Contents

PREFACE.....	5
LIST OF ABBREVIATIONS.....	6
POLICY SUMMARY	7
1. Introduction.....	13
1.1. General	13
1.2. Scope: what is cross-border patient mobility?	14
1.3. Structure of the study	15
1.4. Cross-border patient flows in the future	16
2. Data collection.....	17
2.1. Description of the sources.....	17
2.2. Remarks on completeness and comparability	19
3. Belgium.....	20
3.1. Introduction	20
3.2. Outgoing patient flows.....	21
3.2.1. Destination and evolution.....	21
3.2.2. Data according to region	22
3.2.3. Demography.....	22
3.2.4. Characteristics of care	22
3.2.5. Additional information.....	22
3.3. Incoming patient flows.....	24
3.3.1. Origin and evolution.....	26
3.3.2. Data according to region (destination).....	28
3.3.3. Demography.....	30
3.3.4. Characteristics of care	32
3.3.5. Additional information.....	34
4. The Netherlands	35
4.1. Introduction	35
4.2. Outgoing patient flows.....	36
4.2.1. Destination and evolution.....	38
4.2.2. Data according to region (origin).....	42
4.2.3. Demography.....	49
4.2.4. Characteristics of care	52
4.2.5. Additional information.....	56

4.3.	Incoming patient flows.....	57
5.	Luxembourg.....	58
5.1.	Introduction	58
5.2.	Outgoing patient flows.....	59
5.2.1.	Destination and evolution.....	59
5.2.2.	Data according to region	61
5.2.3.	Demography.....	63
5.2.4.	Characteristics of care	64
5.2.5.	Additional information.....	65
5.3.	Incoming patient flows.....	66
6.	Overview	67
7.	The 'why' of cross-border patient mobility	72
7.1.	Cross-border mobility.....	73
7.2.	Drivers and barriers for cross-border patient mobility	75
8.	Findings and trends	80
9.	Recommendations.....	86
	REFERENCES	88
	APPENDIX 1	89
	APPENDIX 2	91
	APPENDIX 3	92
	APPENDIX 4	96

PREFACE

Dear Reader,

With the increasing movement of persons in the Benelux and the European Union, the theme of cross-border healthcare is also receiving more attention. Besides the developments in an EU context, many bilateral and multilateral projects concerning cross-border collaboration in the health sector support cross-border patient traffic.

In the Benelux, too, organisations have been actively working together on the issue of cross-border healthcare for many years. A concrete result from that collaboration are the Benelux decisions on cross-border ambulance traffic at the Belgian-Dutch and Belgian-Luxembourg borders.

One of the focal points of the 2013-2016 'Growth, Innovation and Safety' Joint Work Programme of the Benelux is the cooperation with respect to cross-border coordination of medical services and the development of various instruments for facilitating cross-border care.

The Benelux dialogue has shown that in order to improve the cross-border operability between eHealth services, we need more insight in the cross-border patient flows.

To date the international databases (e.g. Eurostat) have no comparable or complete data on cross-border patient flows between the Benelux countries or between other European countries.

In view of the impediment caused by the limited completeness and comparability of data in the Benelux countries, the General Secretariat of the Benelux Union has made a significant effort to provide a comprehensive and unique picture of the cross-border patient flows within the Benelux and to and from neighbouring countries France and Germany.

The consulted experts considered the result to be a first of its kind. According to them it reveals that a significant group of patients is in need of cross-border care in both planned and unplanned situations. The results of the study show a 'business case' in support of future policy investments, which may improve the accessibility and quality of cross-border healthcare.

This report of the General Secretariat of the Benelux Union will be sent to the ministries of the Benelux countries involved in view of the dialogue about further Benelux cooperation in the area of cross-border healthcare.

We wish to express our thanks to everyone who has contributed to creating this report in their capacity as experts, data suppliers or researchers.



LIST OF ABBREVIATIONS

CHU	Centre Hospitalier Universitaire (University Hospital)
CNS	Caisse Nationale Santé (National Health Fund)
CZ	Centraal Ziekenfonds (Central Health Insurance Fund)
DIS	DBC Information System
EHCI	European Health Consumer Index
EHIC	European Health Insurance Card
EZVK	Europese Ziekteverzekeringskaart (EHIC)
IBO	Interministerial Policy Review
ISHMT	International Shortlist for Hospital Morbidity Tabulation
IZOM	Integratie Zorg Op Maat (Integration of Tailored Care)
LMR	Landelijke Medische Registratie (National Medical Register)
MUMC+ Centre)	Maastricht Universitair Medisch Centrum (Maastricht University Medical Centre)
MZG	Minimale Ziekenhuisgegevens (minimum hospital data)
NCP	National Contact Point
RIZIV Sickness and Invalidation Insurance)	Rijksinstituut voor Ziekte- en Invaliditeitsverzekering (National Institute for Sickness and Invalidation Insurance)
PICU	Paediatric Intensive Care Unit
UZ	Universitair Ziekenhuis (University Hospital)
ZOAST	Zones Organisées d'Accès aux Soins Transfrontaliers
ZOL	Ziekenhuis Oost-Limburg (Hospital East Limburg)
Zvw	Zorgverzekeringswet (Healthcare Insurance Act)

POLICY SUMMARY

Why cross-border care?

With the increasing movement of persons in the Benelux and the European Union, the theme of cross-border healthcare is also receiving more attention.

There are many benefits to cross-border cooperation in healthcare. It may help optimise the available offer of medical care, extend the offer of specialised care and in the border regions it can result in better access to care. The option of getting healthcare abroad could reduce or even prevent waiting lists. It could also prove a solution for overcapacity or undercapacity in relation to certain treatments. Taking into account the increasing financial pressure on care systems, cross-border healthcare could help towards a better distribution of investments in expensive infrastructure. Cross-border patient mobility can benefit patients, care providers, insurers and public authorities alike.

It should be noted that in the new forms of cross-border care, it is not always the patient who crosses the border to receive care. More and more patients are being treated in their home country with care providers providing treatment remotely (for example telemedicine), or care providers crossing the border to administer treatment (mobility of care providers). Furthermore, treatment can also be outsourced to foreign countries, for example in the context of highly specific medical testing.

This study, however, focuses specifically on cross-border patient flows.

Why do people cross the border to receive healthcare?

A patient's decision to cross the border to receive medical care can be stimulated or slowed down. The decision will be influenced by (i) the quality of care on either side of the border (effective quality or the perception the care), (ii) the availability of care (for example whether a treatment is available and accessible in the home country), (iii) the proximity of the care provider (the geographical accessibility, the 'cultural' proximity, the language, familiarity with the host country and the local health system) and (iv) financial aspects (unfamiliarity with and uncertainty about the financial aspects of treatment abroad can be an inhibiting factor).

Why this study?

The Benelux dialogue on eHealth (2014) has shown that there is insufficient insight into cross-border patient flows in the Benelux to account for improvements of the cross-border interoperability between eHealth services, as recommended in the Patient Directive (2011/24/EU) for instance.

Work method

To date no comparable or complete data on cross-border patient flows between the Benelux countries or between other European countries is available at international data sources (e.g. Eurostat).

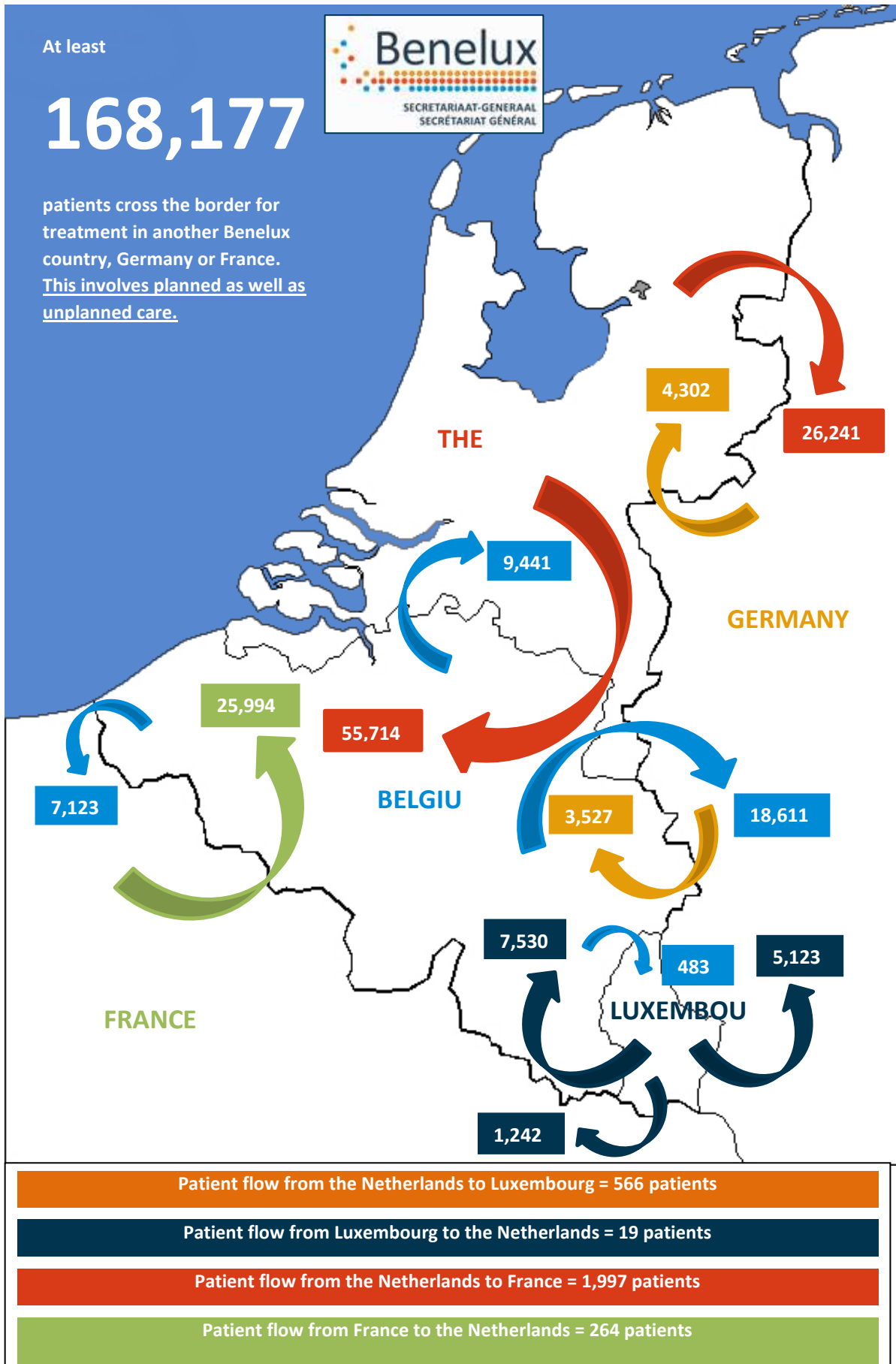
Therefore the General Secretariat of the Benelux Union decided to collect all the relevant data of the Benelux countries and combine it into the present report.

Despite the impediment of limited completeness and comparability of data in the Benelux countries, the General Secretariat of the Benelux Union has made a significant effort to provide a comprehensive and unique picture of the cross-border patient flows within the Benelux and to and from neighbouring countries France and Germany. The result was considered a first by the experts involved in a Benelux workshop, as such a coherent image was not available until now. At the same time, however, it is essential to interpret the data carefully.

Bringing the data together for this research required a disproportionate effort. Therefore it is of crucial importance for future policy development that in the countries and at European level, if appropriate, transparent, harmonized and quality data on cross-border patient flows and their characteristics becomes available.

How many patients cross the border?

Based on these studies, the following overview can be given for the Benelux.



The map on the previous page provides an approximate joint overview of cross-border patient flows between the Benelux countries, France and Germany. This involves planned as well as unplanned care.

For the calculation method of the flows on this map we refer to the report (Chapter 6 'Overview'). For further substantive interpretation we refer to the relevant chapters.

For a more detailed description of the origin and destination, the demographic characteristics and the care provided abroad we refer to the relevant chapters in the report.

The Benelux workshop 'Patients without borders? Cross-border patient flows in the Benelux' held on 8 September 2015 showed that most experts from the Benelux countries recognise the image of the cross-border patient flows. Until then, only fragments of the total volume of cross-border patient flows were known. It is the first time that different sources from several countries were successfully brought together in one comprehensive overview.

At the same time several experts argued that the actual number of patients crossing the border to receive treatment in another Benelux country, France or Germany is likely to be higher than the numbers given here, as the available data is not complete.

Expectations for the future

Most experts expect an increase in the total number of cross-border patients between the Benelux countries, France and Germany in the future. The implementation of the European Directive on cross-border healthcare (2011/24/EU) will possibly enhance this effect. In general, an increase is expected for Belgium and Luxembourg. In the Netherlands the situation could stabilise as a result of the health insurers' policies, which have a strong effect on the patient flow.

In relation to specialised treatments an increase of the number of cross-border patients is expected. Well-informed and emancipated patients will probably check the best price-quality ratio and the availability of treatment, also on the other side of the border.

With respect to the border regions it is stated that patients already take cross-border care for granted due to the proximity and the existence of several cross-border projects in this field. It is difficult to predict whether this cross-border patient flow will grow or stabilise.

Experience has shown that it can take two to three years before new administrative procedures become fully known and commonplace. As soon as all is clear to all the parties involved, cross-border mobility increases considerably. If new cooperation projects are established in the border regions, a further increase in the patient flows becomes likely.

Policy recommendations

The Benelux workshop revealed that the cooperation in cross-border care must aim at increasing the general accessibility and quality of the healthcare offer. Lifting the barriers that form an obstruction to cross-border care increases freedom of choice for patients as well as the accessibility of good quality care, if necessary on the other side of the border.

The participants in the workshop found that a significant group of patients is in need of cross-border care, in both planned and unplanned situations. The results of the study show a 'business case' in support of future policy investments, which can help improve the accessibility and quality of cross-border healthcare.

Interoperability of eHealth-platforms between the Benelux countries, which would allow for sharing medical data across borders - subject to privacy protection - was deemed desirable by most experts.

Smooth and correct exchange of medical information of a patient has crucial consequences for the quality of both planned and unplanned cross-border care. In cases of an emergency, access to correct medical information can be of vital importance. Sharing medical data can also have cost-saving benefits.

Furthermore, there is a substantial need of high-quality information among almost all stakeholders, including patients, care providers and insurance companies. Lack of information and knowledge with respect to aspects such as the quality of care abroad, the availability of care or financial aspects could result in the patient not receiving optimal care, even though it is available.

Building on this research and the results from the Benelux workshop, the General Secretariat of the Benelux Union makes recommendations for the purpose of securing the quality and accessibility of cross-border care within the Benelux, as a result of which the general accessibility and quality of the healthcare offer is optimised by lifting obstructions for cross-border care.

As regards the healthcare offer

1. The development of good cross-border cooperation in the field of healthcare between the Benelux countries positively influencing the accessibility, quality and costs of care provision.
2. The harmonisation of the healthcare offer for specialised treatments between the Benelux countries in view of the expected increase of cross-border patients looking for specialised care abroad and of the financial pressure on healthcare systems in the individual countries.
3. The expansion of existing and new collaborations in border regions, in view of the significant share of cross-border patient flows due to geographical proximity and cultural affinity. In addition, a mapping of successful cross-border health collaborations and agreements which provide an insight into the future cooperation potential.

As regards patients' rights

4. An expansion of the information provision to patients about their rights (and obligations) in relation to cross-border care. The Benelux countries can become leaders in the field of cross-border care within Europe by lifting several barriers for cross-border care which are often caused by a lack of knowledge.

As regards patient data

5. Commitment to increasing safe cross-border sharing of patient data. eHealth platforms communicating with each other across borders will benefit the quality and continuity of care. In this context it is essential that proper data protection is in place to guarantee patient privacy.

As regards fraud prevention

6. A commitment to sharing real-time insurance information will protect both care providers and care givers against fraudulent practices. It is essential that the exchange of financial and insurance information happens at the same pace as the cross-border patient flows.

As regards policy support

7. Stimulating transparent, high-quality and comprehensive data collection which is accessible and comparable for the purpose of substantiating future policy interventions and in-depth scientific research.

1. Introduction



1.1. General

With the increasing movement of persons in the Benelux and the European Union, the theme of cross-border healthcare is also receiving more attention. Besides the developments in an EU context, there are many bilateral and multilateral projects concerning cross-border collaboration in the health sector that support cross-border patient traffic.

In the Benelux, too, organisations have been actively working together on the issue of cross-border healthcare for many years. A concrete result from that collaboration are the Benelux decisions on cross-border ambulance traffic at the Belgian-Dutch and the Belgian-Luxembourg borders¹. Cross-border healthcare forms part of the 2013-2016 Joint Work Programme called 'Growth, Innovation and Safety', which was adopted by the Benelux Committee of Ministers. In this context the General Secretariat of the Benelux Union has conducted this survey into the cross-border patient flows in the Benelux.

A clear picture of these patient flows forms an important building block for supporting possible measures to improve cross-border healthcare within the Benelux. One concrete reason for this is the interoperability between eHealth platforms in the Benelux. Better insight into the extent of the cross-border patient flows and the motives and barriers for cross-border healthcare are required in order to justify the necessary investments.

Fostering cross-border cooperation in healthcare may have many advantages. It could help optimise the available offer of medical care, which in turn would help extend the provision of specialised treatments. Cross-border cooperation also may lead to better accessible care in the border regions. The option to seek care abroad could shorten or even prevent waiting lists. It could also prove a solution for overcapacity or undercapacity in relation to certain treatments. Taking into account the increasing financial pressure on care systems, cross-border cooperation would make it possible to better distribute investments in expensive infrastructure.

¹ Decision M (2012) 5 of 20 July 2012 and Decision M (2009) 8 of 8 December 2009 (as amended by Decision M (2014) 1 of 11 February 2014).

1.2. Scope: what is cross-border patient mobility?

Cross-border healthcare is a very broad concept. The European Directive describes cross-border healthcare as healthcare provided or prescribed in a Member State other than the Member State of affiliation². There are many reasons why people seek access to health care outside their own country³. It is important to distinguish two types of patients in need of cross-border healthcare (Glinos & Baeten, 2006):

- Unplanned cross-border healthcare: this involves patients who receive cross-border healthcare because they were already abroad when their need of healthcare arose. It relates to urgent care provided during a temporary stay in another country. Examples include tourists, professionals during a business trip, ...
- Planned cross-border healthcare: this involves patients who actively search for healthcare abroad. This may be because they live in a border region and therefore accept cross-border care as the most logical form of care, or because a relative failure in the healthcare system in their own country forces them to go abroad (long waiting lists; no treatment available; treatment too expensive, ..), or because they live in another country than where they are covered for healthcare.

Cross-border patient mobility is the general term used for the movement of patients from one country to another to get access to healthcare (Glinos & Baeten, 2006). The total number of patients going from one country to another in order to get medical care constitutes a cross-border patient flow.

According to the above definition, cross-border patient mobility involves planned care only. However, this does not change the fact that good cross-border cooperation is important to all patients, hence also those who need unplanned care. For this reason this report uses a broader definition of the concept cross-border patient mobility, taking into account both planned and unplanned cross-border care and with attention for their specific characteristics. Where possible, the report distinguishes between planned and unplanned care.

² Article 3(e) of the European Directive 2011/24/EU.

³ More detailed information on this subject can be found in chapter 7. 'The why of patient mobility'.

1.3. Structure of the study

The purpose of this study is to obtain insight in the cross-border patient flows between the Benelux countries and the bordering regions in France and Germany. Most existing studies do not provide a full picture, among other things because reliable, complete and comparable data are lacking (van Ginneken & Busse, 2011).

A recent Eurobarometer study asserts that on average 5% of the European population received medical treatment abroad in the past year (Special Eurobarometer 425, 2015). To identify the extent of the cross-border patient flow in the Benelux, we collected data from different sources of healthcare authorities and organisations in the Benelux. This report integrates this data into an overview of the cross-border patient flows in the Benelux and bordering countries.

In addition and insofar as possible, it describes the various characteristics of cross-border patient flows. In this context it tries to answer the following questions :

- Who is the patient using cross-border healthcare?
- How many patients use cross-border healthcare?
- What type of cross-border healthcare is provided?
- Where is the cross-border healthcare provided?
- Why did the patient opt for cross-border healthcare?

We have looked at the number of incoming and outgoing patients, with special attention for characteristics such as the country of origin and the demographic background. In addition we have researched to which regions patients go and have made an attempt at identifying a few characteristics of the provided care. And finally, we have provided an overview of the drivers and barriers for patient mobility and looked at what the future might bring.

1.4. Cross-border patient flows in the future

The preliminary results from the research were tested against the experiences and visions for the future of a panel of experts from three countries in a Benelux workshop 'Patients without borders? Cross-border patient flows in the Benelux', held on 8 September 2015. This Benelux workshop offered a qualitative test for the available data the interpretations and any shortcomings were complemented with views and findings from experts.

The workshop also showed that optimising the access and quality of the available care offer - without the borders forming an obstacle - must constitute the main ingredient of a solid cross-border healthcare policy. Finally it appeared that a large number of experts attending the workshop was of the opinion that cross-border patient flows may increase in the future as a result of the internationalisation and further specialisation of the care landscape.

Every citizen in the Benelux is a potential patient who may need timely, specific and high-quality care, also across the border. Good cross-border cooperation may help to contribute to better organisation of care services, anticipating the current and future challenges of the health sector in the Benelux countries. This report offers information that may form the basis for further policy choices for cross-border cooperation in the healthcare sector.

2. Data collection



2.1. Description of the sources

There is currently no complete and harmonised information available about the cross-border patient flows between the countries of the Benelux, nor is there any data about the patient flows between other European countries. For this reason, this survey had to be based on the available information from the Benelux countries. Data was obtained from several data sources in the individual countries. The data sources were named systematically in the report, including a brief reference to their function so as to provide for a good basis of interpretation of the supplied data.

The overview below shows the most important sources which allowed us give an idea of the cross-border patient flows between the Benelux countries, France and Germany. Given the diversity of the data sources we have also included the basic characteristics of each source, such as the unit in which the data is shown, the period and the type of care it refers to.

Table 1 Description of the data sources used

Source	Type of organisation	Period	Measured unit	Type of care	Shown patient flow
BELGIAN SOURCES					
Rijksinstituut voor Ziekte- en Invaliditeitsverzekering (RIZIV)	Public institution for social security	2014	Number of requests for reimbursement	Planned & unplanned care	Belgium → foreign country (outgoing) Foreign country → Belgium (incoming)
Minimale Ziekenhuisgegevens (MZG)	Federal Public Service Health	2008 through 2012	Number of stays in Belgian hospitals	Planned & unplanned care	Foreign country → Belgium (incoming)
DUTCH SOURCES					
Achmea	Care insurance agency	2006 through 2013	Number of insured	Planned & unplanned care	Netherlands → foreign country (outgoing)
Centraal Ziekenfonds (CZ)	Care insurance agency	2012 through 2014	Number of unique insured	Planned & unplanned care	Netherlands → foreign country (outgoing)
Menzis	Care insurance agency	2012 through 2015	Number of unique insured	Planned & unplanned care	Netherlands → foreign country (outgoing)
LUXEMBOURG SOURCES					
Caisse Nationale Santé (CNS)	Public institution for social security	2011 through 2015	Number of authorised applications for treatment abroad	Planned care	Luxembourg → foreign country (outgoing)

Besides these primary data sources, we also used data from European studies.

- The Eurobarometer study ‘Special Eurobarometer 425 – Patients’ rights in cross-border healthcare in the European Union’ was used to acquire insight into the drivers and barriers for cross-border healthcare among a sample of citizens from the Benelux countries, France and Germany. For this we used the published report as well as the original data, published on the website of the European Commission⁴ (European Commission DG SANTE, 2015).
- Furthermore, the European Commission recently (on 4 September 2015) published the evaluation report concerning Directive 2011/24/EU on the application of patients’ rights in cross-border healthcare. This report evaluates the implementation of the above-mentioned Directive in the individual Member States. For the purpose of the report, the European Commission also collected some general data on the number of people who go abroad for healthcare in the scope of this Directive.

Finally, for providing insight into the incoming patient flows in the Netherlands, we used a study report prepared by order of the Dutch working group ‘Interdepartementaal Beleidsonderzoek (IBO) Grensoverschrijdende Zorg’ (Interministerial Policy Study on Cross-border Healthcare). The study report contains a few figures indicating the number of foreign patients in Dutch hospitals (Vandermeulen, Beldman & Pieter, 2013).

⁴ Data can be found on the Open Data portal of the European Union. Website for the Special Eurobarometer 425: https://open-data.europa.eu/nl/data/dataset/S2034_82_2_425_ENG

2.2. Remarks on completeness and comparability

This study uses information sources from the Benelux countries only. It did not use any sources from Germany or France. Consequently, the data on the incoming and outgoing patient flows from and to Germany and France was not checked against sources from these countries. The numbers provided must therefore be treated with some caution. It also means that figures about the patient flows between Germany and France are not available.

Given the use of data from different sources in the three countries and given the fact that there is no harmonisation between this data, the presented information is not always completely comparable. In addition, completeness of the available data cannot be guaranteed in all cases. The report makes clear mention of these preconditions.

Despite these differences and shortcomings in the available data, we have opted for showing the collected data in a combined format, because it provides a good approximate common image of the cross-border patient flows. The figures may be considered substantiated estimates. At the same time, we ask that the data is interpreted with caution, particularly when comparing information from different sources.

Various contacts with experts in the field, for instance in the context of the 8 September 2015 Benelux workshop with the panel of experts, proved that this approach – even though it does not provide a perfect quantitative picture – is considered highly interesting and relevant in the current circumstances. Simply put: this approach is what is feasible at present and still offers sufficient insight in the matter to form a basis for policy recommendations.

This does not alter the fact that all the persons involved recognise and underline the importance of having more complete and transparent and better comparable data in the future (see also finding no. 8 in Chapter 8: Findings and trends).

3. Belgium



3.1. Introduction

Belgium has a central position within Europe, not only because of its geographical position, but also for the many European and international institutions established here. In 2014 Belgium counted 1,264,427 residents who did not have the Belgian nationality. That is about 11.3% of the population (Eurostat, 2014). It is interesting to see how much this international dynamics is reflected in Belgian healthcare.

In the area of cross-border healthcare Belgium has different structural cooperation partnerships with its four neighbouring countries. The three languages of the country and relatively long borders not only provide geographical proximity, but also cultural affiliation in the border regions. There are several cross-border projects enabling foreigners to get treatment in Belgium, and for Belgians to receive healthcare abroad. A few examples:

- ‘LuxLorSan’ is a cross-border cooperation partnership network between Belgium, Luxembourg and France in the area of health. The ZOAST agreements (Zones Organisées d’Accès aux Soins Transfrontaliers) form part of it⁵. These agreements cover cooperation between France and Belgium allowing patients from certain regions on the French-Belgian border to get access to ambulatory care and be hospitalised on the other side of the border⁶.
- The ‘IZOM’ project is a similar type of cooperation partnership between Belgium, the Netherlands and Germany, which allows patients from certain communities in Belgian Limburg to get medical care in the partner areas across the border and vice-versa⁷.
- In the context of cooperation which started many years ago between Zeeland Flanders (Zeeuws-Vlaanderen) and Flemish hospitals in the regions around Ghent, Bruges and Knokke, Dutch patients can come to Belgium for secondary care. Furthermore, Dutch care insurers initiate care agreements with Belgian hospitals that allow Dutch people covered under such insurance to get treatment in Belgium.
- The ‘PICU’ agreement (Paediatric Intensive Care Unit) between the Academic Hospital Vesalius Tongeren and the Maastricht University Medical Centre+ (MUMC+) allows the referral of paediatric patients from Tongeren to the specialised paediatric intensive care unit in Maastricht. As from 1 July 2015 a PICU agreement also exists between the East Limburg Hospital (ZOL) and the MUMC+.

⁵ For more information about the Belgian-French cooperation, see also: <http://www.ofbs.eu>

⁶ La Mission Opérationnelle Transfrontalière (MOT) is a cooperation partnership founded by the French government in 1997 for the purpose of improving cross-border cooperation in the border regions. The website contains an extensive overview of the different forms of cooperation in the field of healthcare in the border regions between France-Luxembourg-Germany-Belgium. <http://www.espaces-transfrontaliers.org/ressources/projets/>

⁷ Additional information about the IZOM project can be found in Chapter 4: ‘The Netherlands - 4.1 Introduction’.

3.2. Outgoing patient flows

To obtain insight into the number of patients that go from Belgium to foreign countries, we used the data provided by the Rijksinstituut voor Ziekte- en Invaliditeitsverzekering RIZIV (National Institute for Sickness and Invalidity Insurance). One of RIZIV's main tasks involves the management and financial policy-making in relation to healthcare insurance in Belgium. Given the central position of the RIZIV in Belgian healthcare it was possible to obtain information about patient flows to other countries for both planned and unplanned care. This is because of the structured data exchange between RIZIV and the insurance agencies.

3.2.1. Destination and evolution

Table 2 shows the number of applications for reimbursement from people covered under Belgian insurance for costs involving treatment in the Netherlands, Luxembourg, France or Germany. This concerns planned care authorised in advance by the Belgian insurance agency involved.⁸ 504 applications were denied in 2014.

Furthermore we avail of data concerning the number of submitted reimbursement forms for medical care provided on the basis of the European Health Insurance Card (EHIC)⁹. This involves unplanned care. These figures do not reflect the number of unique¹⁰ patients, because during one single year, several reimbursement forms may be submitted for one and the same person.

Table 2 Belgian insured treated in the Netherlands, France, Germany or Luxembourg.

Source: RIZIV (2014)

Country of destination	Planned care	Unplanned care	Total
The Netherlands	1,673	7,768	9,441
Luxembourg	482	1	483
Germany	16,734	1,877	18,611
France	347	6,776	7,123
Total	19,236	16,422	35,658
Planned care = number of authorised applications (S2 form)			
Unplanned care = number of claims based on EHIC (E125 form) ¹¹			

⁸ Concretely, it involves the number of reimbursements after issuance of an S2 form (former E112 form), i.e. planned care that has been authorised in advance. For the planned care that did not require prior authorisation, the so-called Kohll & Decker situations (article 294(1)(13°) of the Royal Decree) only financial data is available (see table 3, second row 'planned care without authorisation').

⁹ The European Health Insurance Card (EHIC) represents proof of insurance within the EU-28 countries, plus Iceland, Liechtenstein, Norway and Switzerland. The card provides cover for unplanned care abroad. For more information, we refer to appendix 1.

¹⁰ 'Unique' = patients who need medical care abroad on several occasions in one year are counted only once for the statistics.

¹¹ Often the insured will take the invoice back to Belgium and request the Belgian health insurance fund to reimburse them. In that case there is no E125 and these cases are not reflected in the current data. For this particular situation, too, we only availed of financial data (see table 3, row 4: 'Unplanned care without EHIC').

3.2.2. Data according to region

The RIZIV does not have this information.

3.2.3. Demography

The RIZIV does not have this information.

3.2.4. Characteristics of care

The RIZIV does not have this information.

3.2.5. Additional information

Table 3 gives an estimate of the macroeconomic extent of cross-border healthcare. The figures reflect the overall amount reimbursed by Belgian insurance agencies in 2014 for medical care abroad received by Belgian insured. The data concerning 'planned care with authorisation' cannot be shown due to data discrepancies.

Table 3 Reimbursements for care provided abroad.
Source: RIZIV (2014)

From Belgium to:	The Netherlands	Luxembourg	France	Germany	Total
Planned care with authorisation	Unknown	unknown	unknown	unknown	unknown
Planned care without authorisation	€618,518.03	€478,866.32	€281,003.83	€299,455.16	€1,677,843.34
Unplanned care with EHIC	€5,800,752.64	€130.37	€12,755,897.28	€1,465,140.47	€20,021,920.76
Unplanned care without EHIC	€4,657.74	€882.36	€28,690.20	€8,402.82	€42,633.12
Total	€6,423,928.41	€479,879.05	€13,065,591.31	€1,772,998.45	€21,742,397.22

Table 4 shows the legal basis of the authorised applications (planned care). For these authorisations we notice a frequency for certain legal bases (indicated in red). This gives some indication of the motives behind the planned cross-border care in the context of an S2 application.

- The cooperation agreements with respect to healthcare in the border areas such as 'IZOM' and ZOAST' have a considerable share in the cross-border patient flow from Belgium to foreign countries.
- The article on 'living in a border area' set forth in national legislation also features frequently. This confirms the importance of cross-border care in border areas.
- In addition, the article providing for 'more favourable medical conditions' plays an important role in the authorisation of applications (e.g. quicker treatment; highly specialised care; etc.). This authorisation is granted in consultation with the advising physician from the Belgian insurance agency with whom the insured is covered.

Table 4 Authorised applications for planned treatment abroad (S2-form) according to legal basis.
Source: RIZIV (2014)

Legal basis of authorised applications (S2 form)	Country of treatment			
	NL	LU	DE	FR
S2 - normal	48	3	150	66
S2 - 'more favourable medical conditions' abroad (article 294(1)(2°) Royal Decree)¹²	149		62	90
S2 - pregnant women	27	37	48	31
S2 - 'residing in a border region' (article 294(1)(7°) Royal Decree)⁹	22	440	308	11
S2 - revalidation in Germany			342	
IZOM agreement	1,420		15,807	2
Belgian-French border region (ZOAST, SMUR, ...)				111
Other (PICU, ambulance traffic BE-NL, etc.)		1	6	13
'More favourable medical conditions' abroad (Art. 294(1)(2°) Royal Decree) ⁹	2		5	10
Transposition of the Directive 2011/24/EU: hospitalisation (Art. 294(1)(14°) Royal Decree) ⁹	3		3	13
Transposition of the Directive 2011/24/EU: specialised medical equipment (art. 294(1)(14°) Royal Decree)	2		3	
Transposition of the Directive 2011/24/EU: exceptional risk to the patient (art. 294(1)(14°) Royal Decree)		1		
Total number of applications	1,673	482	16,734	347

¹² Royal Decree of 3 July 1996 implementing the Act on compulsory insurance for medical care and payments, coordinated on 14 July 1994.

3.3. Incoming patient flows

RIZIV FIGURES

A first indication of the number of foreign patients in the Belgian healthcare system can be found in the RIZIV data, based on the number of S2 forms from abroad. This involves planned treatment received in Belgium by foreign patients, for which authorisation was obtained from the insurer in their home country. This also includes a number of S2 forms issued in the context of the so-called ZOAST agreements with France. In addition, the number of applications for reimbursement of unplanned treatments obtained under presentation of the EHIC is also known.

Three important comments must be made to these figures:

1. One country did not provide figures concerning the number of received S2 forms.
2. Furthermore, a large group of patients who come to Belgium under an insurance contract other than the S2 form, is not included in the figures. For instance: Dutch patients who undergo treatment in a Belgian hospital in the context of a care contract, are not included in the figures.
3. These claims were submitted in 2014, but some refer to medical care provided in previous years (e.g. 2012 or 2013).

For these reasons, the figures in **table 5** only reflect part of all the patients who came to Belgium for care in 2014.

Table 5 Planned and unplanned treatment (S2 form and EHIC) undergone by foreigners in Belgium.

Source: RIZIV (2014)

Country of origin	Planned care Authorised applications (S2)	Unplanned care		
		Number of claims based on EHIC	Number of patients	Total claimed amount ¹³
The Netherlands	1,197	4,490	3,797	€5,691,495.46
Luxembourg	2,673	4,857	3,397	€6,208,901.66
Germany	84	2,670	2,240	€2,561,643.50
France	7,552	2,985	unknown	€4,316,120.99
Total	11,506	15,002	9,434	€18,778,161.61

¹³ In most cases the total claimed amount is not the actually reimbursed amount, as other countries may refuse the submitted claims for certain (substantiated) reasons.

MINIMALE ZIEKENHUISGEGEVENS (MZG)

For further study we use the ‘Minimale Ziekenhuisgegevens’ (Minimal Hospital Data) (MGZ), a type of hospital records collected for the purpose of supporting health policy. The supply of this data is regulated by the Royal Decree of 28 March 2013¹⁴, determining which type of hospital data must be submitted to the Federal Public Service (FPS) Public Health.

Table 6 Stays of non-residents according to country of domicile.
Source: MZG (2012)

Country of origin	Number of stays	Stays in percentage
The Netherlands	35,927	41.18%
France	25,994	29.80%
Luxembourg	3,688	4.23%
Germany	3,527	4.04%
Great Britain	2,359	2.70%
Spain	2,039	2.34%
Poland	1,835	2.10%
Italy	1,821	2.09%
Portugal	810	0.93%
United States	700	0.80%
Other countries	8,538	9.79%
Total top 10	78,700	90.21%
Benelux + FR + DE	69,136	79.25%
Total all countries	87,238	100.00%

These figures are used also in the annual reports of the ‘Observatorium voor Patiëntenmobiliteit’ (Observatory for Patient Mobility). The Observatory was established in 2007 by the FPS Public Health, Food Chain Safety and Environment and the RIZIV. Its purpose is to monitor the inflow of foreign patients into Belgian hospitals. Furthermore, it checks the impact, if any, of the inflow on the accessibility of hospitals for patients living in Belgium (Observatorium voor Patiëntenmobiliteit, 2013).

The most recent data (**table 6**) involves treatment in the year 2012. We define the cross-border patient flows for this data according to the place of domicile, not the patient’s nationality. Hence we distinguish between residents and non-residents.

We have opted for this scenario because regardless of nationality, the patient will still cross a border to receive treatment. For instance: patients with the Belgian nationality but living in the Netherlands were included in the patient flow from the Netherlands to Belgium¹⁵.

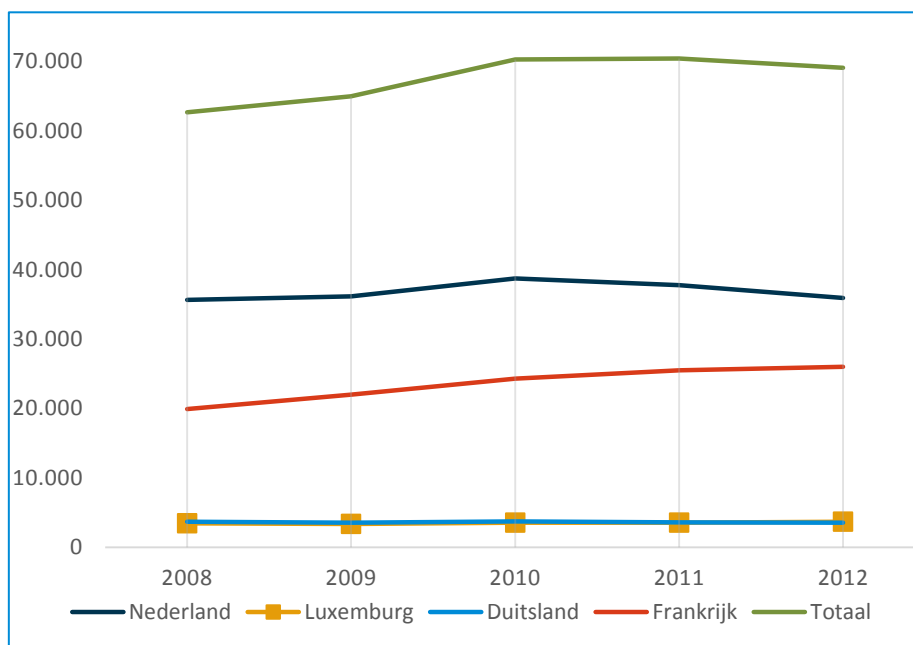
¹⁴ Royal Decree of 28 March 2013 amending the Royal Decree of 27 April 2007 establishing the rules according to which certain hospital data must be communicated to the Minister for Public Health.

¹⁵ An overview of the relation between nationality and domicile can be found in paragraph 3.3.5. ‘Additional information’.

3.3.1. Origin and evolution

Figure 1 shows the evolution of the number of stays of foreign patients from the Netherlands, Luxembourg, France and Germany in Belgian hospitals for the period 2008 to 2012. **Table 6** shows the ten countries that are home to the majority of foreign patients receiving treatment in Belgian hospitals. And finally, **table 7** shows the share of cross-border healthcare in the total healthcare provided in Belgian hospitals. All figures reflect both ambulant emergency cases and ordinary (same-day) hospitalisations.

Figure 1 Evolution of the number of stays of patients from neighbouring countries in Belgian hospitals.
Source: MZG (2008-2012)



Country of domicile	2008	2009	2010	2011	2012
The Netherlands	35,672	36,146	38,750	37,796	35,927
Luxembourg	3,434	3,349	3,545	3,533	3,688
Germany	3,655	3,530	3,705	3,587	3,527
France	19,916	21,995	24,304	25,516	25,994
Benelux	39,106	39,495	42,295	41,329	39,615
Benelux + DE + FR	62,677	65,020	70,304	70,432	69,136

- In 2012 69,136 patients originating from the neighbouring countries (Luxembourg, the Netherlands, Germany and France) stayed in Belgian hospitals.
- The majority – 35,972 – involves patients from the Netherlands. There was an upward trend which peaked in 2010, after which there was a slight decline in 2012.
- Patients from France form the second largest group with 25,994 patients in 2012. Their share rose by more than 6,000 patients in the past four years. This rising inflow can be explained from the ZOAST agreements.
- From Germany and Luxembourg about 3,500 people stayed in Belgian hospitals each year. The trend shows a slight rise from Luxembourg and a slight decline from Germany.
- Remarkably, ‘only’ 3,500 people from Germany come to Belgium for care. The flow of patients going from Belgium to Germany for treatment was more than five times higher, with 18,611 patients in 2014 (see **Figure 1**). This may be explained from the fact that there is a university hospital in Aachen. It creates an outflow of Belgian patients from the German community who in the context of IZOM agreements receive specialist care in Germany in their own language.
- The Netherlands, Luxembourg, France and Germany are the four main countries of origin of foreign patients staying in a Belgian hospital in 2012. Together the neighbouring countries represent some 80% of all the foreign patient stays in Belgian hospitals. Remarkably the other countries trail way behind the Netherlands and France. This could be explained from the care contracts with the former, and the ZOAST agreements with the latter.
- The cross-border patient flows from the Netherlands, Luxembourg, France and Germany to Belgian hospitals constitute 1.1% of all the care provided by Belgian hospitals. This share has remained relatively constant over the period 2008-2012.
- However, it is hard to estimate the total share of cross-border care since these figures only relate to care provided in hospitals. It tells us nothing about primary care or care provided in private hospitals.

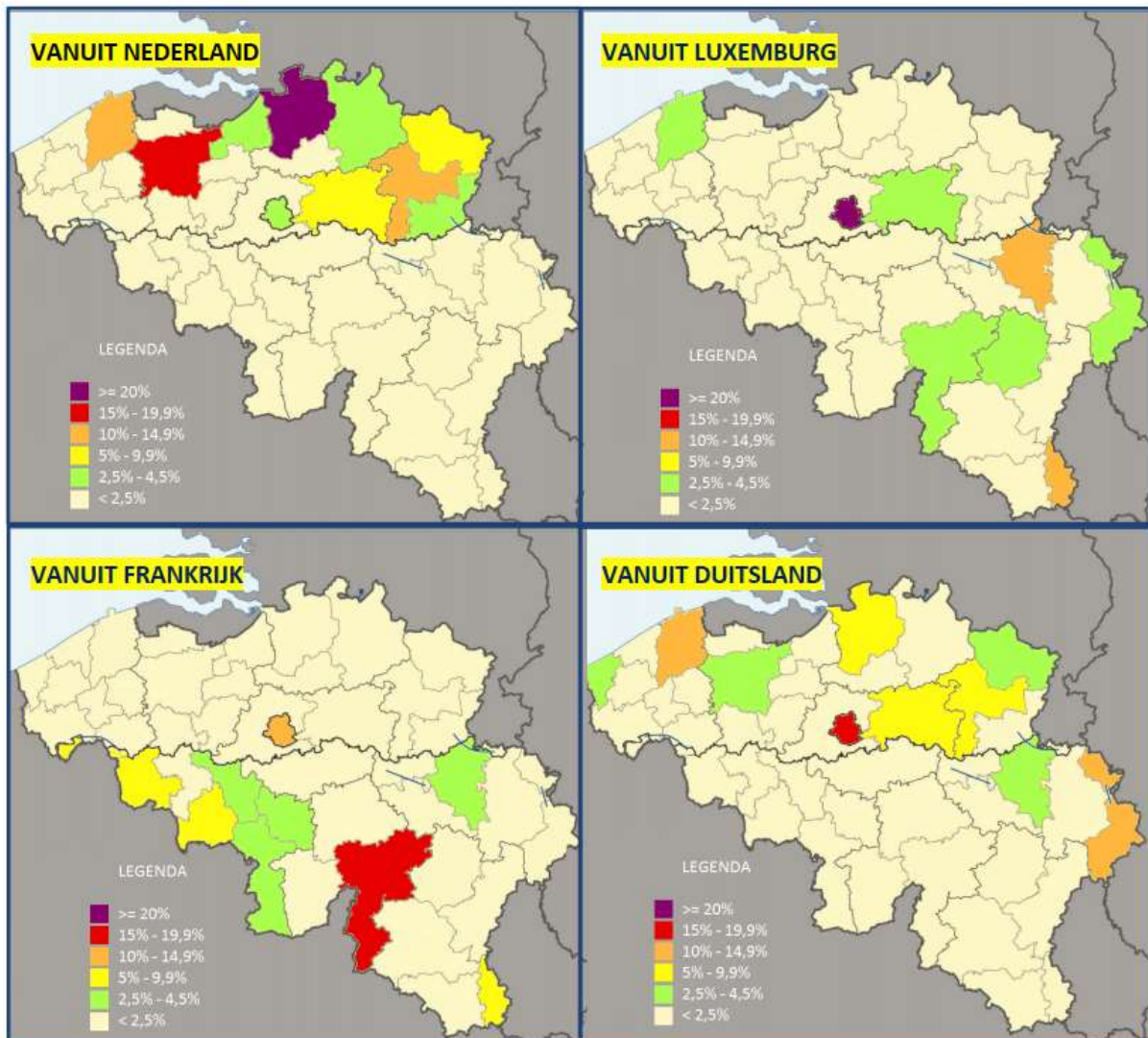
Table 7 Evolution of the share of stays of ‘Benelux + FR + DE residents’ and ‘non-residents’ (MZG, 2008-2012)

Year	Benelux + FR + DE		Non-resident		Resident		Total number of stays
	number of stays	%	number of stays	%	number of stays	%	
2008	62,677	1.15	85,484	1.56	5,382,551	98.44	5,468,035
2009	65,020	1.16	80,555	1.43	5,541,839	98.57	5,622,394
2010	70,304	1.19	87,000	1.48	5,798,522	98.52	5,885,522
2011	70,432	1.16	88,463	1.46	5,982,879	98.54	6,071,342
2012	69,136	1.12	87,238	1.41	6,078,971	98.59	6,166,209

3.3.2. Data according to region (destination)

Figure 2 shows the districts where the hospitals are located who received patients from abroad in 2012. This figure reflects the percentage of treatments in relation to the total number of treatments of non-residents from a certain country, shown per country of domicile. It allows us to determine, per country, which districts attract the largest numbers of patients. For privacy reasons we cannot show which specific hospitals they visit. However, we can still make a number of salient observations.

Figure 2 Spread of stays in Belgian hospitals per district according to country of origin. Source: MZG (2012)



FROM THE NETHERLANDS

Patients from the Netherlands stay mainly in hospitals in Flanders and Brussels, particularly in the regions forming the northern border region. The coloured districts together received 91% of the patients from the Netherlands treated in Belgium. The largest numbers are found in Antwerp and Ghent. The second group involves the Hasselt and Bruges districts. Maaseik and Louvain form an important third group.

Probable explanations for these movements are the large university hospitals (UH) (UH Antwerp, UH Ghent, UH Louvain), the important regional hospitals, good accessibility and the fact that Dutch is the working language.

FROM LUXEMBOURG

From Luxembourg we see a remarkable movement to the Brussels district: 37.9% of all treatments take place here. It is possible that the presence of several university centres and the high number of expats both play a role here. Furthermore, Arlon and Liege are important districts in terms of treatment of patients from Luxembourg.

The Liege district is home to the university hospital 'CHU Liège', one of the best accessible university centres in the region. Furthermore, for many Luxembourg patients and frontier workers Arlon is an easily accessible and trusted environment to receive care.

FROM FRANCE

From France we observe a movement towards the southern border districts of Belgium. This can be explained from the ZOAST agreements with, e.g., Dinant, Moeskroen, Mons and Tournai. Dinant is a strong point of attraction: almost 20% of all treatments of patients from France in Belgium are carried out here. Brussels and Arlon are also important districts attracting many patients.

FROM GERMANY

From Germany the trend is less obvious. Brussels attracts most patients, followed by Bruges. The patient flow to Bruges may be explained from the fact that the coastal region is very popular among German tourists. We also see a movement towards the German-speaking community in Belgium located in the Verviers district. Together with certain parts of Limburg these regions fall under the IZOM agreements. As noted before, the patient flow from Germany to Belgium is much less than the other way around.

3.3.3. Demography

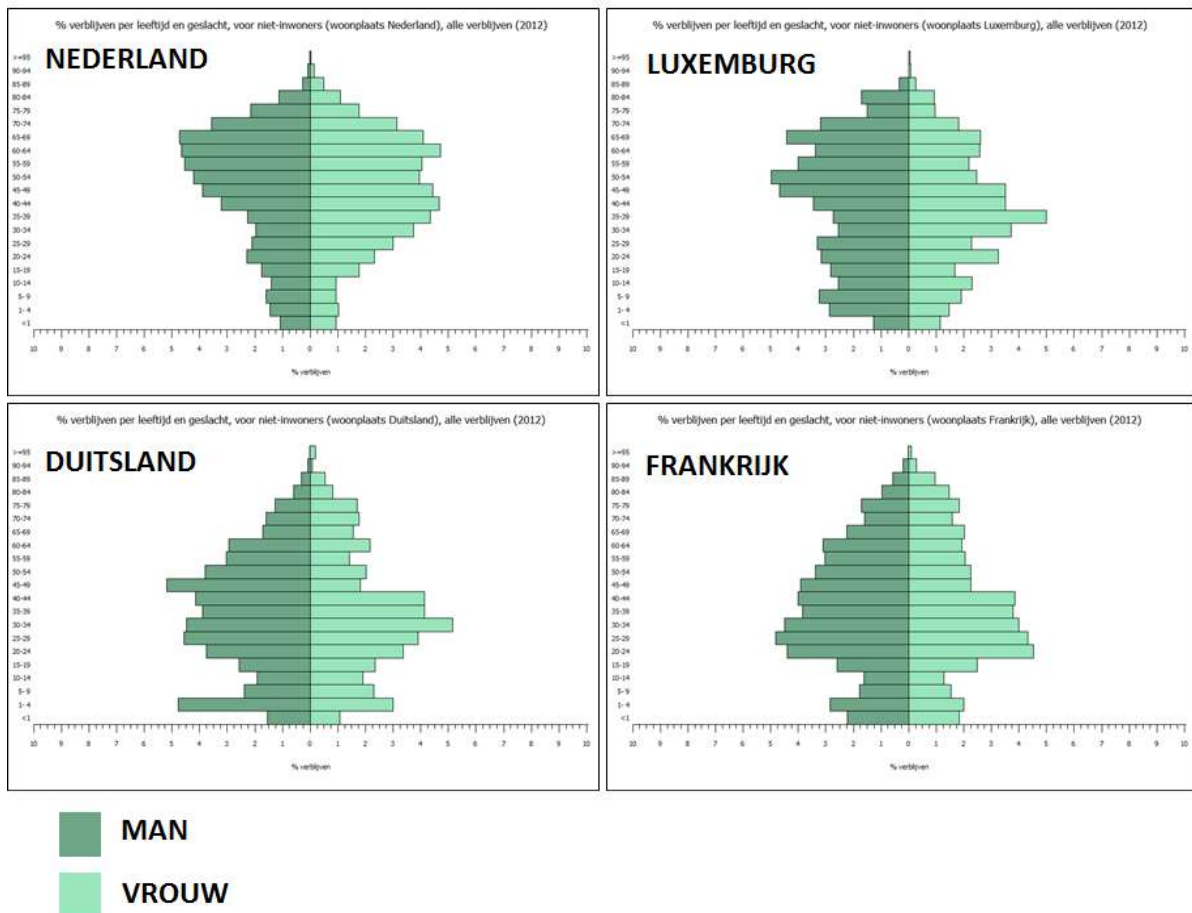
Figure 3 shows the relation between male and female patients per age group in an age pyramid¹⁶. Given the small numbers of patients they represent (about 3,500), the age pyramids for Luxembourg and Germany probably do not justify talking of trends. Nevertheless they allow for a few remarkable observations.

Country	Male		Female	
	Number	%	Number	%
Germany	1,925	54.6	1,602	45.4
France	13,876	53.5	12,056	46.5
Luxembourg	2,074	56.3	1,610	43.7
The Netherlands	17,408	48.5	18,502	51.5
Belgium	2,940,819	48.4	3,137,894	51.6

- The relation between the numbers of male and female patients who received treatment in 2012, is more or less the same for the Netherlands and Belgium. For the remaining countries the number of male patients is slightly higher than the number of female patients.
- We see that patients coming to Belgium for treatment from the Netherlands are mostly men between 40 and 74 years of age. Female patients are spread out somewhat more over different age groups with a slight peak in the categories 40-44 and 60-64.
- From France we observe a distinct peak in women from 20 to 44. This may be explained from the high number of women who come to Belgium to give birth. The Belgian hospital is often the one closest for people residing in northern France. Remarkably, the number of male patients from 44 to 69 visiting Belgium for treatment is far higher than the female patients in that age group. From 70 years onwards the numbers are even again.

¹⁶ Treatments for which the age or gender variables could not be identified were excluded from the age pyramid.

Figure 3 Age pyramid for non-residents, according to country.
Source: MZG (2012)

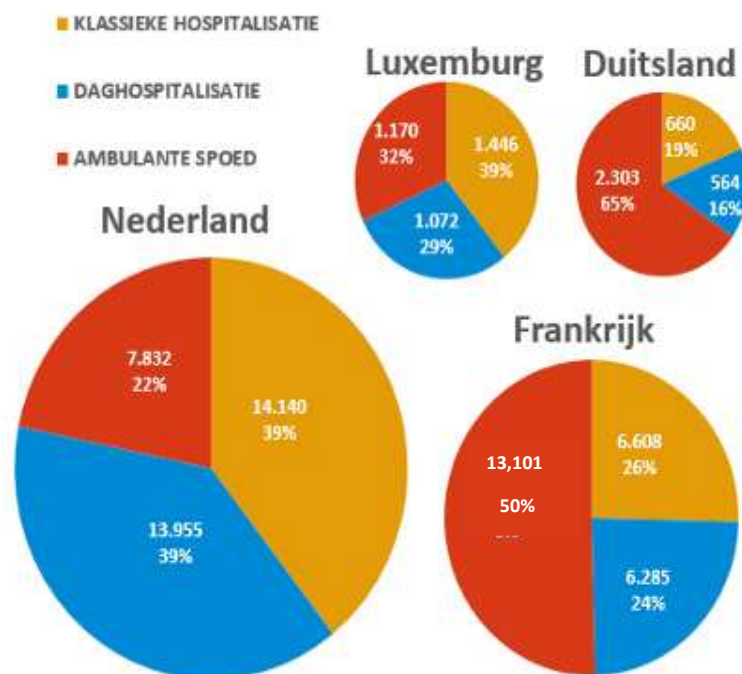


- From Luxembourg we see a higher percentage of men in almost all age categories, with the exception of 30-39, where women dominate.
- The age pyramid for patients from Germany shows a few remarkable peaks. For male patients the categories 1-4 and 45-49 years of age stand out. For girls the age group 1-4 also shows a relatively high percentage. We do not have an explanation readily available for this. In women there is again a peak in the 20-44 age group with a peak for 30-34 year olds.

3.3.4. Characteristics of care

For a correct interpretation of the data concerning diagnoses it is useful to first have look at the distribution of the type of stay of foreign patients in Belgian hospitals (**Figure 4**). From Germany and France we see a higher percentage of ambulant emergency cases than from Luxembourg and the Netherlands. For the two other Benelux countries, traditional hospitalisations and in the second place, same-day hospitalisations constitute the majority of stays in Belgian hospitals.

Figure 4 Distribution according to type of stay of patients from neighbouring countries in Belgian hospitals.
Source: MZG (2012)



For privacy reasons details concerning diagnosis and performed treatment are omitted. Appendix 2 contains an overview per country of the 'top ten' diagnoses that bring patients from abroad to Belgium for same-day hospitalisations and traditional hospitalisations.

Only data concerning the main diagnosis are available for the traditional hospitalisations and same-day hospitalisations. The reason is that it is not compulsory to record this information for ambulant emergency cases. The data is recorded as ISHMT codes (International Shortlist for Hospital Morbidity Tabulation). The most remarkable results are described below.

SAME-DAY HOSPITALISATIONS

- For the main diagnosis of patients from the Netherlands and Luxembourg we found code 2104 (Other medical care (including radiotherapy and chemotherapy sessions)). This code was recorded as the main diagnosis for 29.1% of same-day hospitalisations of patients from Luxembourg and for 20.8% of patients from the Netherlands. For Germany this diagnosis comes in the third place with 3.5%.
- ISHMT code 2105 'Other factors influencing health status and contact with health services' is in the first place (Germany 47.9% of same-day hospitalisations, France: 16.8%) or in second place (Luxemburg 17.7% of same-day hospitalisations, the Netherlands 14.4%).
- Equally remarkable is that for each country ISHMT code 701 'Cataract' can be found in the treatments top 10. ISHMT code 605 'Other diseases of the nervous system' can also be found in each top 10.

TRADITIONAL HOSPITALISATIONS

- It is less easy to define real trends for the traditional hospitalisations. The diagnoses show more differentiation and the diagnosis groups show less obvious percentage differences than is the case for same-day hospitalisations.
- For France, however, it is evident that births are an important reason for coming to Belgium. In 2012 ISHMT code 2103 'Liveborn infants according to place of birth (healthy newborn babies)' was used 449 times and ISHMT code 1503 'Complications of pregnancy predominantly in the antenatal period' was used 319 times. Together this constitutes 11.6% of the traditional hospitalisations of patients who reside in France.
- With respect to the main diagnosis of patients from the Netherlands, we see that ISHMT code 1307 'Intervertebral disc disorders' is used most frequently (1,023 times) in traditional hospitalisations (representing 7.2%). Together with ISHMT code 1301 'Coxarthrosis (arthrosis of hip)' they constitute 10.1% of all main diagnoses made in traditional hospitalisations. This can be explained from the fact that waiting lists for back and hip operations are shorter in Belgium than in the Netherlands.

3.3.5. Additional information

As discussed in the Introduction, this study defines patient flows according to domicile rather than nationality. **Table 8** shows the relation between place of domicile and nationality for the number of patients that received treatment in Belgian hospitals in 2012.

Table 8 Patients according to place of domicile and nationality
Source: MZG (2012)

Nationality	Country of domicile					Total
	The Netherlands	France	Germany	Luxembourg	Belgium	
The Netherlands	29,090	36	45	28	33,731	62,930
France	27	15,504	12	96	36,030	51,669
Germany	51	<10	2,175	21	5,726	7,973
Luxembourg	<5	36	5	1516	1,247	2,804
Belgium	4,761	8,628	652	1342	5,514,092	5,529,475
Other	approx. 1,983	approx. 1,782	638	685	488,145	493,311
Total domicile	35,927	25,994	3,527	3,688	6,078,971	6,148,162

- The blue figures represent patients of Belgian nationality who stayed at Belgian hospitals in 2012 but lived in the Netherlands, France, Germany or Luxembourg. This means that a considerable number of Belgians living abroad, return to Belgium for treatment in a Belgian hospital.
- The red figures indicate the patient flow as we defined it, based on the characteristic 'non-resident'.
- The yellow figures represent the number of stays in Belgian hospitals for patients who have the Dutch, Luxembourgish, German or French nationality, but who live in Belgium. The latter group was not included in the cross-border patient flows. After all: it is impossible for us to find out the duration and purpose of their stay in Belgium. Still, given their numbers this group should not be neglected in the formation of further policies. This group might be important for the interoperability of eHealth platforms, for instance.

The MGZs also contain information on the type of insurance contract under which patients living abroad received treatment in a Belgian hospital. Appendix 2 contains a detailed overview.

- The most remarkable result is that 16,481 patients, residing in the Netherlands, sought treatment in a Belgian hospital in the context of a care contract in 2012. This number represents 45.9% of all stays in Belgian hospitals of patients living in the Netherlands. Since this involves direct contracts between Dutch care insurance agencies and Belgian hospitals, this important group of patients is not included in the aforementioned data of the RIZIV.
- A large part of the foreign residents staying in Belgian hospitals involve patients who are covered under Belgian health insurance. This may involve people living in the border area and frontier workers. This is the case for 66.5% of the patient flow from France, 65.7% of the patient flow from Luxembourg and 43.2% of the patient flow from Germany to Belgian hospitals. For the Netherlands this applies to 'only' 21.6% of the patient flow.

4. The Netherlands



4.1. Introduction

For several decades the Netherlands has been cooperating in the area of cross-border healthcare with various neighbouring countries. For instance, there is an agreement from 1976 between Zeeuws-Vlaanderen and a number of Belgian hospitals which enables Dutch patients to seek specialist treatment in Belgium (Glinos, Boffin & Baeten, 2005).

In the context of the Maas-Rijn Euregion, the IZOM project (Integration of Tailored Care) was started in 2000. The project allows people living in certain border areas to rely on medical specialists and any medication or other treatment prescribed by these specialists across the border.

2006 saw a comprehensive reorganisation of the Dutch healthcare system, including privatisation of the healthcare insurance market. Care insurers now conduct their own negotiations with care providers about the best terms and conditions for high-quality care, if necessary in a cross-border context. Prior to the reformation, the Dutch healthcare system struggled with limited capacity for certain treatments, leading to long waiting lists. As a result, the Dutch care insurance agencies enter into contracts with Belgian and German hospitals (Glinos et al., 2005).

However, one may expect more than just an outflow of patients from the Netherlands to foreign countries. After all: the Netherlands have a reputation for high-quality care and extensive expertise in certain specialisations. In 2014 the Netherlands was again ranked top of the annual 'Euro Health Consumer Index' (EHCI), a ranking which compares European health systems according to different quality criteria (Euro Health Consumer Index, 2014).

COUNTRY	The Euregion Maas-Rijn encompasses...
BELGIUM	the province of Liege (postal numbers 4000 → 4990) the province of Limburg (postal numbers 3500 → 3990)
THE NETHERLANDS	the province of North Brabant the province of Dutch Limburg
GERMANY	Aachen the Bitburg district the Daun district The Prüm district

4.2. Outgoing patient flows

In order to create insight into the patient flow from the Netherlands to foreign countries, the General Secretariat of the Benelux Union requested the information from each care insurance agency. Three large care insurers (Achmea, Centraal Ziekenfonds (CZ) and Menzis) provided data. Together they represented 64.3% of all insured people in the Netherlands in 2015. The fourth large corporation, VGZ, chose not to submit any data. In 2015 they were the second-largest care insurer in the Netherlands, with a market share of 25.7% (Vektis, 2015). For practical reasons a few small regional care insurers (DSW-SH, ONVZ, Eno, ASR, Zorg en Zekerheid) were not included in this study. Together they represent a market share of 11.2% (Vektis, 2015).

Given the different data registration systems of the individual health insurers, an explanation of the selected data used in this report for each health insurers follows below. These explanations are based on the supplied data and additional information with respect to the selection criteria obtained from the health care insurers involved. In view of the comparability of the data it is important to make these comments.

DATA SELECTION FOR ACHMEA

The declarations supplied for this study involve two flows. The first flow includes invoices from Belgium, Luxembourg and Germany that have been paid directly by Achmea-Zilveren Kruis to the foreign care provider, or that have been reimbursed to our insured. This involves invoices relating to basic insurance as well as supplemental coverage. The second flow involves E-form invoices, distinguished for EHIC, E106, 112 and 123. Here, too, the invoices have been limited to those from Belgium, Luxembourg and Germany.

It should be noted that E-form invoices were not registered in the data warehouse until 2012. Prior to 2012 they were processed from another system and consequently, they do not form part of the current selection for previous years. In the context of the Achmea-Agis merger, Agis declarations have been processed in the system from 2013 onward only. For the previous years they do not form part of the current selection (mail message of Achmea, 21/10/2015).

DATA SELECTION FOR CZ

The data involves people insured under the Zvw, the Healthcare Insurance Act, in other words, the compulsory insured. Customers who live in the Netherlands and work abroad and are insured under a so-called Verdragspolis ('treaty policy') have been excluded from the selection. Also excluded from the selection are any costs declared via a European Health Insurance Card, a Form 111 or S2/E112. Only the costs directly declared by insured or care providers are included in the selection. These are paid according to our insurance terms and conditions.

The selection includes the costs of both contracted and non-contracted care providers. Via the Internationale Zorgpas (international care pass), a cooperation partnership with AOK Rheinland, costs of care providers contracted by AOK are also included in the selection. The costs involve urgent care as well as planned care and are divided into compensation from the Basic insurance (statutory insurance) and supplementary insurance (CZ email message of 21-10-2015).

DATA SELECTION FOR MENZIS

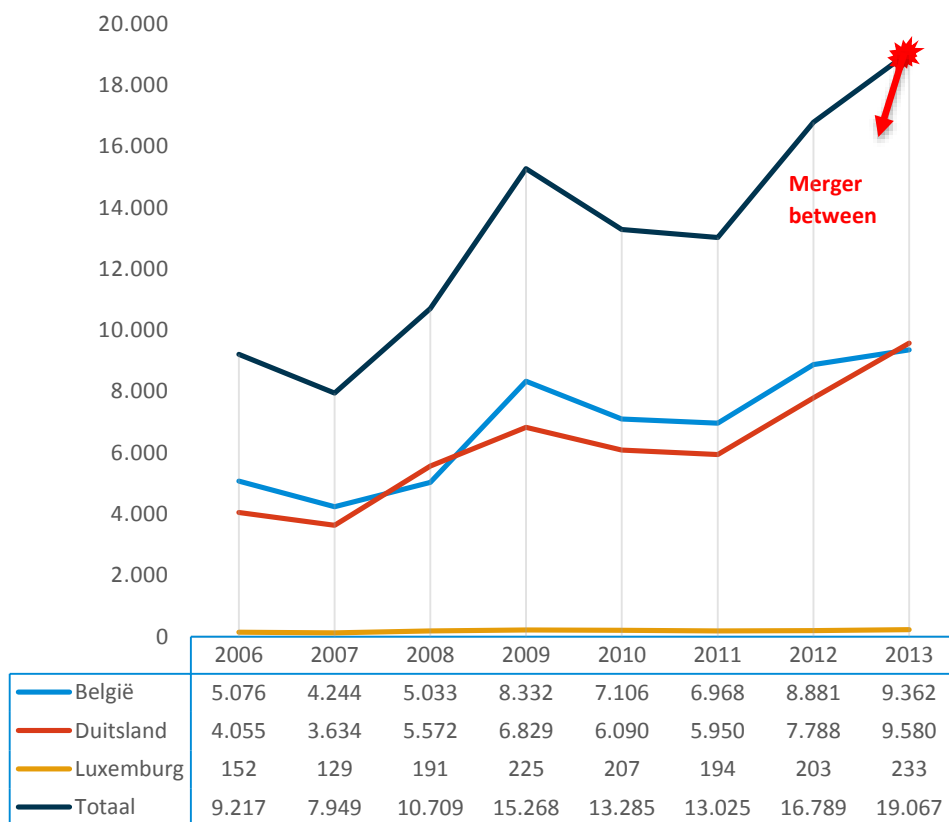
The Menzis data encompasses all the costs claimed by either the insured or the care provider, paid from the Healthcare Insurance Act and/or a supplementary product. Declarations via E-forms, including those under the European Health Insurance Card, a 111 form or S2/E112, are not available as individual data and hence are not included in the selection. The data for the year 2015 is not yet complete and runs until 13 October 2015. The selection covering 2014 will be almost complete, although obviously there is always a possibility that invoices are submitted very late (email message from Menzis, 10-11-2015).

4.2.1. Destination and evolution

ACHMEA

In 2013, the Achmea concern represented 4.4 million insured, which accounted for a market share of 26%. **Figure 5** shows the evolution of the number of insured receiving treatment in Belgium, Germany or Luxembourg in the period 2006-2013. This allows for the following conclusions:

Figure 5 Evolution of the number of insured treated abroad per country.
Source: Achmea (2006-2013)

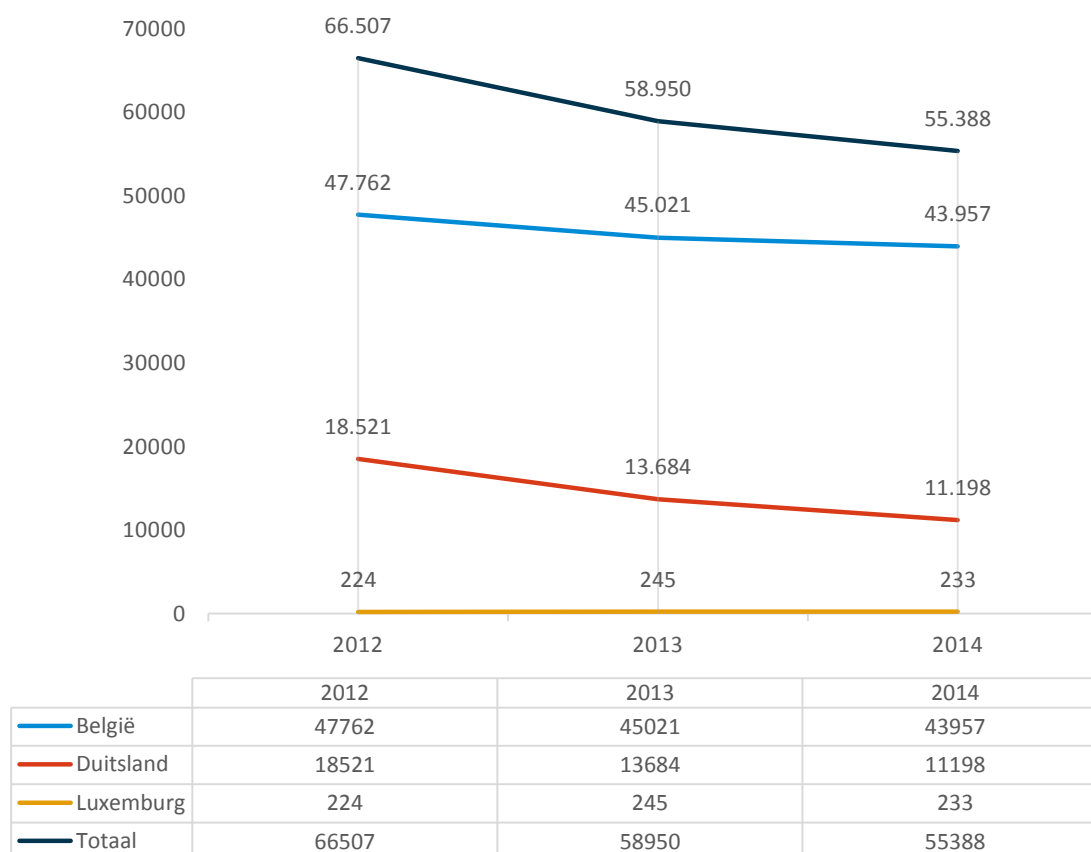


- In 2013, 19,067 insured received treatment in Belgium, Luxembourg or Germany. The data based on age and gender provide the best estimate of the unique number of insured who have received treatment abroad.
- Although with some caution, we may speak of a rising trend, with the number of patients peaking in 2009. A first important remark is that data from healthcare insurer Agis was added as from 2013 due to a merger with Achmea-Zilveren Kruis. Consequently, the data from 2006 through 2012 involves 1.1 million insured persons less.

- A second important reason for this rise is a change in the data entry system, which involved the digitalisation as from 2012 of part of the costs – based on the E125 form – which until then, had been processed on paper invoices in bulk entries. However, the figures of the previous years are not included in the system and cannot be traced back to individual persons, and therefore do not form part of the current selection. As a result it is impossible to make a correct estimate of the increase in cross-border healthcare between 2012 and 2013.
- Belgium and Germany receive the majority of the cross-border patients from the Netherlands. The cross-border patient flow from the Netherlands to Luxembourg is limited.

CZ

Figure 6 Number of unique insured who received treatment in Belgium, Luxembourg or Germany.
Source: CZ (2012-2014)



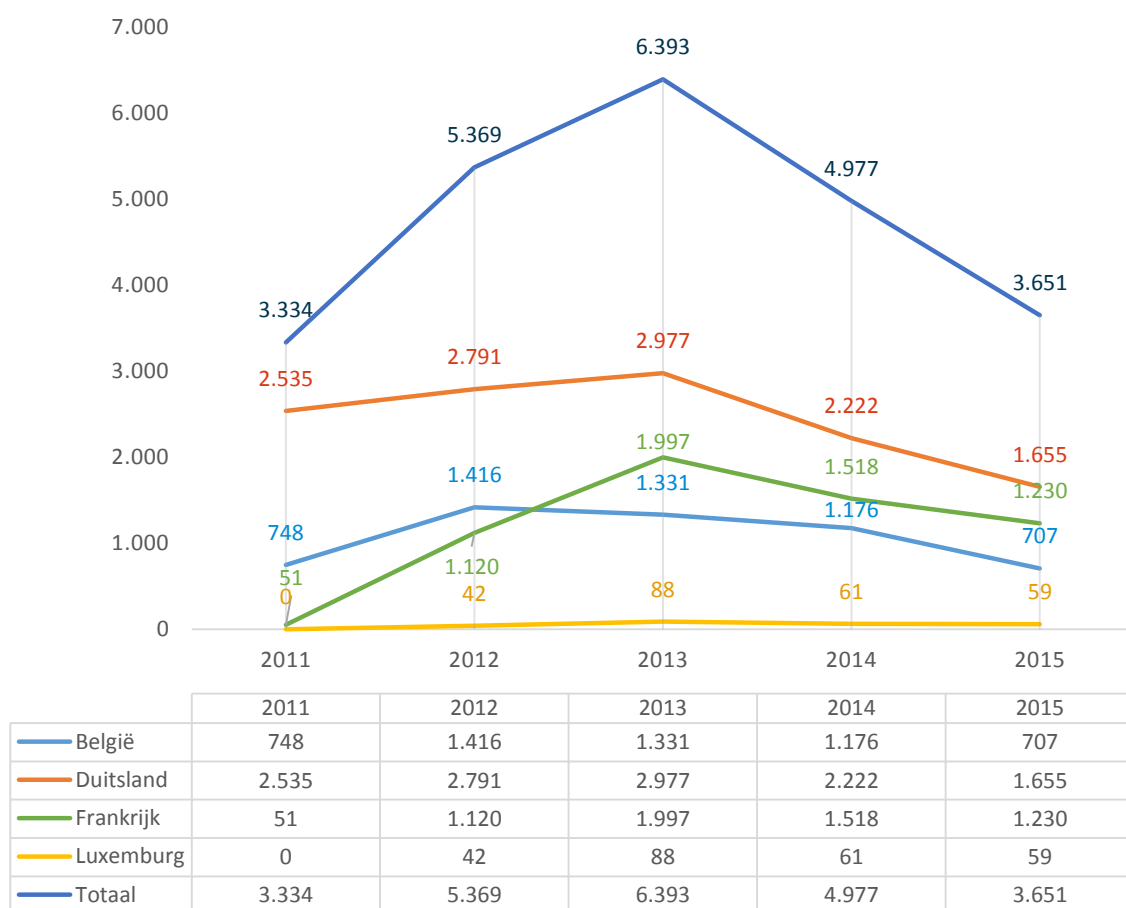
In 2014 CZ (Centraal Ziekenfonds: Central Health Insurance Fund) had a market share of 20.2% in the Dutch healthcare insurance market. This makes CZ the third-largest insurance company in the Netherlands (Vektis 2015).

Figure 6 shows the evolution of the number of unique insured with CZ who received treatment in Belgium, Luxembourg or Germany in the past three years (2012 to 2014).

It shows a decrease in the number of insured who received medical care abroad of about 11,000 persons in the past three years. The decrease involves approx. 7,000 insured persons in Germany and 4,000 in Belgium. The patient flow to Luxembourg is very limited.

MENZIS

Figure 7 Number of insured who received treatment in Belgium, Luxembourg, France or Germany. Source: Menzis (2011-2015)



In 2014 the company Menzis had a market share of 12.6% in the Dutch healthcare insurance market. This makes Menzis the fourth-largest insurance company in the Netherlands (Vektis 2015). **Figure 7** shows the evolution of the number of unique insured with Menzis who received treatment in Belgium, Luxembourg, France or Germany in the past five years (2011 to 2015). The data for the year 2015 is not yet complete and runs until 13 October 2015. This explains the large difference compared to the data for 2014.

Still, we see a decrease in the number of unique insured who received medical care abroad of about 1,400 persons in 2014 compared to 2013. There is a strong patient flow to Germany and Belgium. A large number of insured in France also received treatment abroad. However, we cannot compare this figure to that of other healthcare insurers, because we do not have that data. The patient flow to Luxembourg is very limited.

CONCLUSION

- A comparison of the figures for 2013 – the most recent year for which we received complete data – for the three largest healthcare insurers, we see that 82,413 people who are insured with Achmea, CZ or Menzis received medical care in Belgium, Luxembourg or Germany¹⁷.
- The figures for CZ and Menzis show a slight decrease in the number of persons who received treatment abroad, whereas Achmea reported a slight increase.
- The largest patient flow under insurance with Achmea, CZ and Menzis from the Netherlands goes to Belgium, with an estimated 55,714 unique insured receiving medical care in Belgium in 2013. The flow to Germany involves 26,241 insured persons receiving medical care in Germany. For healthcare insurer Menzis this represents the most important patient flow.

¹⁷ In this data comparison the Menzis data with respect to the patient flows to France have been excluded. This involves another 1,997 patients who received treatment in France in the year 2013.

4.2.2. Data according to region (origin)

ACHMEA

Based on the data provided by Achmea, we can link the insured's place of residence to the country of treatment. **Table 9** shows that relation. Information about the healthcare provider was not available. For this reason we can only show the country of treatment, not the place of treatment.

**Table 9 Number of insured according to 'country of residence' and 'country of treatment'.
Source: Achmea (2013)**

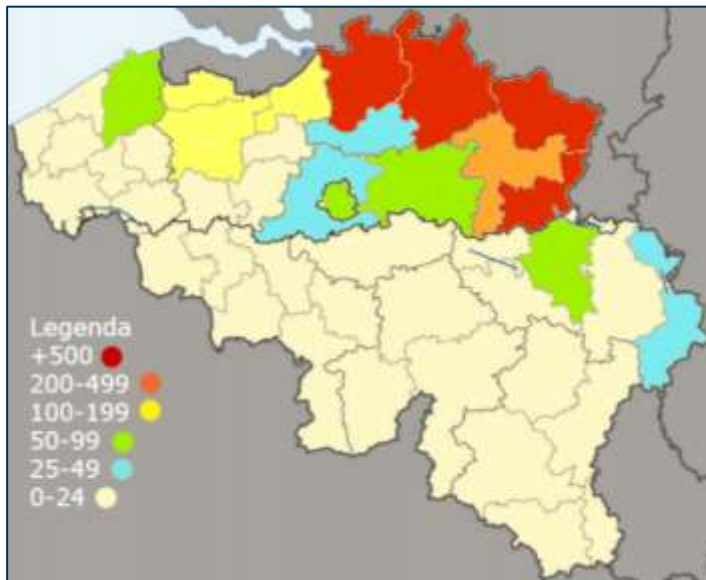
Country of residence	Treatment in Belgium	Treatment in Germany	Treatment in Luxembourg	Treatments total
Belgium	3,497	11	0	3,500
Germany	11	2,905	0	2,910
Luxembourg	0	0	9	9
The Netherlands	5,949	6,763	224	12,842
Total insured	9,457	9,679	233	19,261

The total number of insured who received treatment abroad is somewhat higher than the total mentioned earlier (19,261 v. 19,067). This can be explained from the fact that some insured may have moved or have double residence¹⁸.

¹⁸ Achmea adds the following comment to the data: if the address of the insured is unknown, they filled in the address of an Achmea office. This may slightly distort the data.

37% of the treatments that took place in Belgium involved insured persons residing in Belgium. **Figure 8** shows the districts where these insured reside.

Figure 8 Persons covered by Achmea, residing in Belgium, per district.
Source: Achmea (2013)



The Maaseik, Antwerp, Turnhout, Tongeren and Hasselt districts account for more than 75% of the Achmea insured residing in Belgium who have received treatment in Belgium.

The importance of border regions also shows from the figures for Germany. 30% of the treatments that took place in Germany involved insured residing in Germany. The majority thereof also lives in the border area.

66% of the insured who underwent treatment in Belgium, Luxembourg or Germany do reside in the Netherlands.

Figure 9 shows these insured in a grouped post code map. This shows that cross-border healthcare is not just linked to border regions, even though they have a considerable share in it. Particularly the northern communities in the Netherlands represent a low number of insured who go abroad for treatment.

Zeeland – and especially the region around Terneuzen and Oostburg – outdoes the rest of the Netherlands by far. 2,552 insured underwent treatment abroad, most of them in Belgium. This may be the result of the cooperation between the Netherlands and Belgium in the field of healthcare. The large cities Amsterdam and Rotterdam also account for considerably more people going abroad for medical treatment. This may be explained from the high concentration of insured living in these cities, especially in comparison to other less populated areas.

The figures per place of residence also show that a slightly higher percentage of insured go to Germany for treatment than to Belgium: about 60% head to Germany and 40% to Belgium. As noted earlier, the patient flow to Luxembourg is very limited (about 1.5%). However, there are a few important exceptions. In the southern part of the Netherlands, in the border area with Belgium, a considerably larger number of people go to Belgium for medical treatment. In the east of the Netherlands, in the border area with Germany, a larger number of insured go to Germany for treatment.

Figure 9 Persons covered by Achmea who received treatment abroad, per post code.
Source: Achmea (2013)

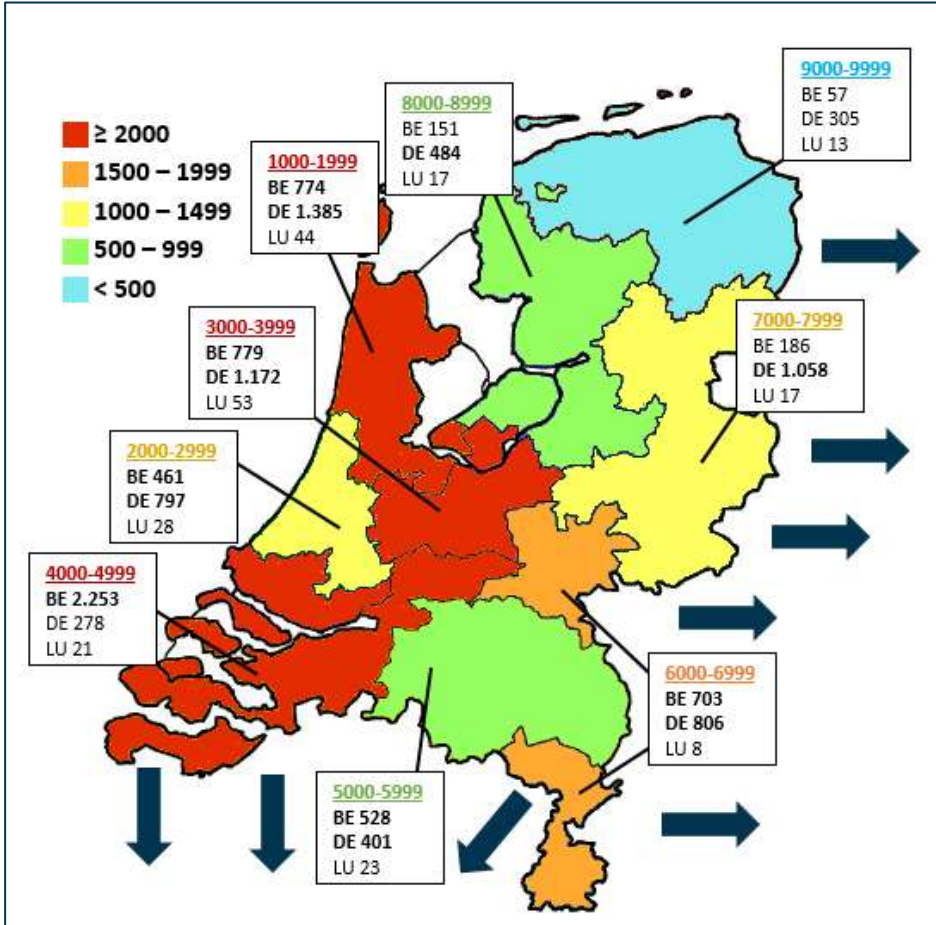


Figure 10 shows the 2014 patient flow to Belgium, Germany and Luxembourg for people insured with CZ and residing in the Netherlands. These figures were aggregated at a provincial level. A few remarkable results:

- The largest number of patients going abroad originate from the southern provinces in the Netherlands (Zeeland, Noord-Brabant, Zuid-Holland, Limburg). It should be noted, however, that this coincides with the provinces where CZ has a strong share of the insurance market.
- From Zeeland, Noord-Brabant and Limburg we see an important outflow of patients to Belgium. About 88% of the patient flow into Belgium originates from the provinces bordering Belgium.
- From Limburg and Noord-Brabant we observe a strong movement of patients to (bordering) Germany. 58% of the cross-border patient flow originates from these two provinces. An outspoken flow towards Germany is also found for the other provinces bordering Germany, such as Gelderland and Overijssel. But the numbers here are considerably lower than for the southern provinces.
- From Noord-Holland and Zuid-Holland we can see an important patient flow towards both countries, both Belgium and Germany. The flow to Belgium is somewhat stronger from Zuid-Holland.
- As expected the patient flow to Luxembourg is very limited.

Figure 10 Number of unique insured according to place of residence (province) and country of treatment. Source: CZ (2014)

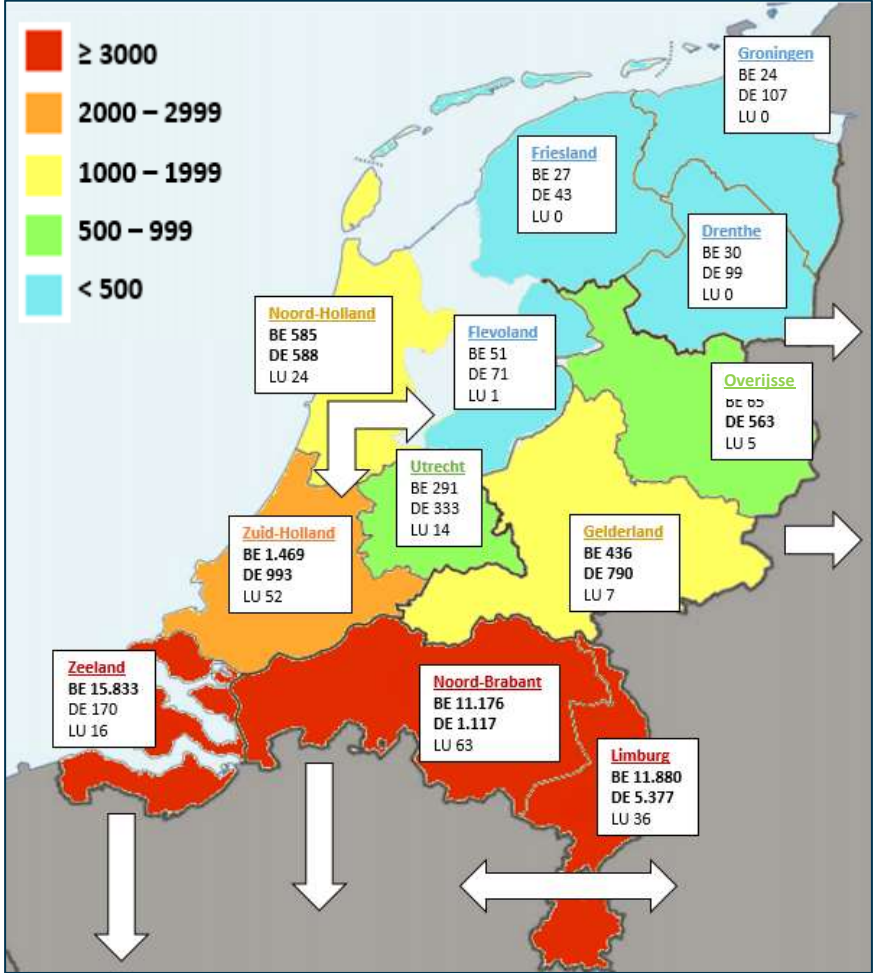


Table 10 Number of unique insured according to ‘country of residence’ and ‘country of treatment’.

Source: CZ (2014)

Year	Country of treatment	Country of residence					Total
		The Netherlands	Belgium	Luxembourg	Germany	Other countries	
2014	Belgium	41,867	1,900	2	109	79	43,957
	Luxembourg	218	2	10	n/a	3	233
	Germany	10,251	46	2	841	58	11,198
	Total	52,336	1,948	14	950	140	55,388

Table 10 shows the ratio between the country of residence and the country of treatment for persons covered by CZ who received treatment in Belgium, Germany or Luxembourg. A small group of people covered by CZ lives in Belgium or Germany. However, 52,336 insured persons reside in the Netherlands, and as a result 95% of the patient flow into Belgium, Germany or Luxembourg under CZ insurance originates from the Netherlands. The remaining 5% of the patient flows to Belgium, Germany and Luxembourg mainly involve people covered by CZ and who reside in Belgium or Germany. This 5% usually take treatment in their country of residence.

Figure 11 Number of unique insured according to place of residence (province) and country of treatment.
Source: Menzis (2014)

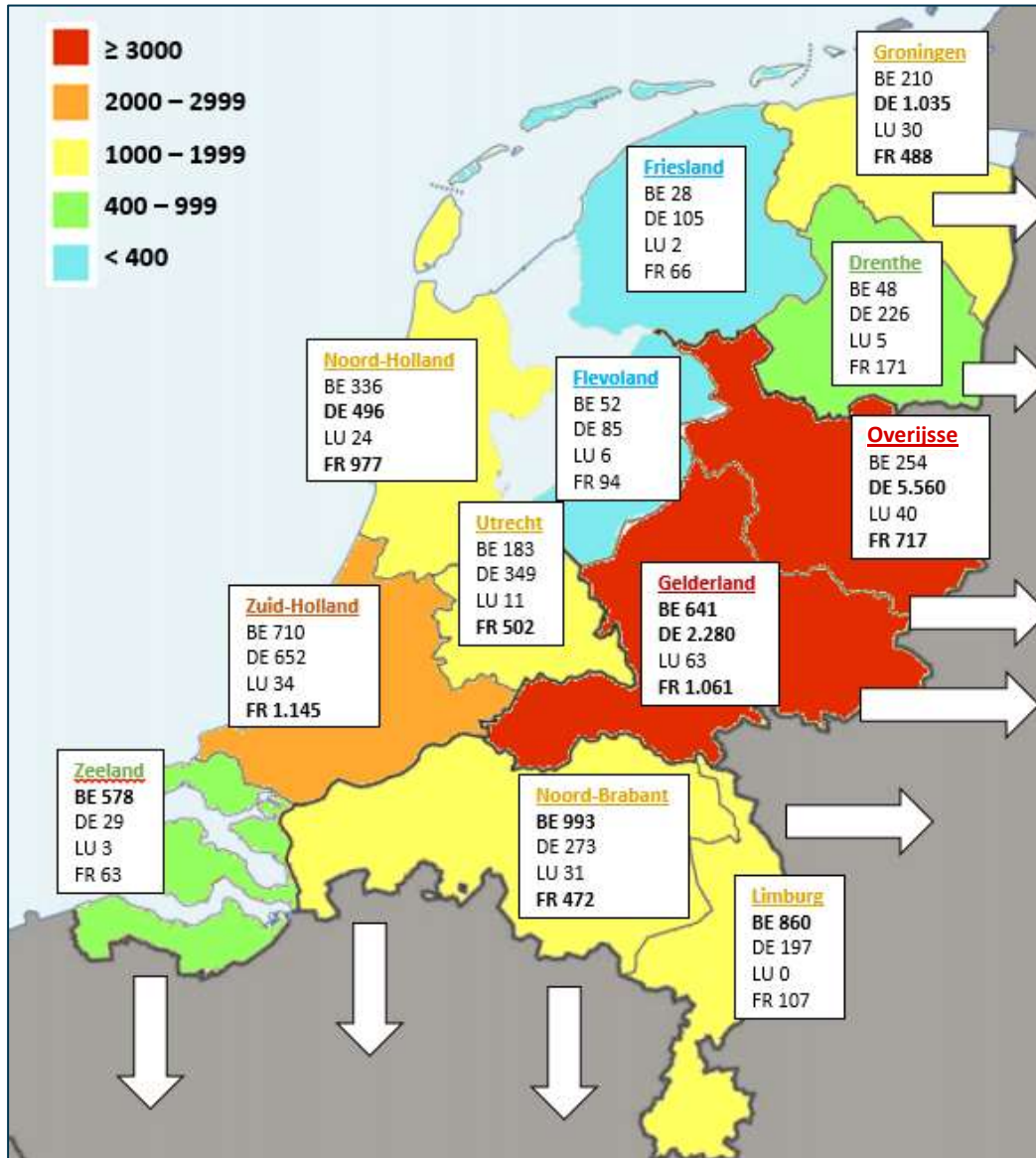


Figure 11 contains an overview of the number of unique insured who in 2014 received treatment in Belgium, France, Germany or Luxembourg, per place of residence and aggregated at a provincial level. Here, too, we see that from Gelderland and Overijssel a considerably larger number of patients go abroad for treatment. This can be explained partly from Menzis' traditionally large market share in these provinces. However, what stands out is that the largest patient flow goes to Germany.

Just like for other healthcare insurers, we see a similar trend whereby the cross-border patient flow from the north-eastern and eastern provinces focuses on Germany, and that from the southern provinces on Belgium. At the centre of the country the patient flows appear to be divided evenly.

The Menzis data also provide limited insight in the patient flow towards France. Although this data is not representative for all of the Netherlands, it does show a small patient flow in that direction. Further down in the report we will discuss whether this care is mostly planned or unplanned.

Table 11 Number of insured according to ‘country of residence’ and ‘country of treatment’.
Source: Menzis (2014)

Country of residence	Country of treatment				Total
	Belgium	Germany	France	Luxembourg	
The Netherlands	1,055	2,082	1,510	61	4,708
Belgium	15	2	0	0	17
Germany	1	50	1	0	52
France	0	0	1	0	1
Other	105	88	6	0	199
Total	1,176	2,222	1,518	61	4,977

Based on the Menzis data we can link the insured’s place of residence to the country of treatment. **Table 11** shows that relation. Only a small number of insured who received treatment abroad, actually resided there. That is a difference compared to the CZ-figures. This can be explained partly from Menzis’ smaller market share in, for instance, the southern provinces on the Belgian border.

CONCLUSION

- The patient flow to Belgium is caused mainly by insured who live in the southern part of the Netherlands. The flow to Belgium is largest from Zeeland.
- Patients from north-eastern and eastern regions mainly go to Germany. However, their numbers are smaller.
- From the province Limburg in the Netherlands, patient flows are large to both Belgium and Germany.
- In the west and centre of the Netherlands the flows to Belgium and Germany are of almost equal proportions.
- A small – but significant – group of insured who received treatment in Belgium or Germany, actually reside there. This involves 5,719 Dutch insured living in Belgium, and 3,935 Dutch insured living in Germany.
- The differences between healthcare insurers are significant, not only in numbers but also in terms of destination or place of residence. In addition, certain healthcare insurers are more active in certain regions of the Netherlands in view of their historic connection with these regions. Achmea has a large market share in Friesland, Drenthe, Flevoland and Utrecht. Menzis has an important part of the market in Gelderland, Overijssel and Groningen and CZ has strong representation in Brabant, Limburg and Zeeland (Stichting Farmaceutische Kengetallen, 2011).

4.2.3. Demography

ACHMEA

Figure 12 displays an age pyramid showing the distribution between men and women per age category for the year 2013. Based thereon we can draw the following conclusions:

- 10,224 men received treatment as opposed to 8,783 women.
- For 60 treated persons the gender is unknown. They were not included in the age pyramid.
- Women appear to have a higher share in the categories between 20 and 44 years of age, whereas the number of men peaks in the 45-64 age group. Nevertheless it would be premature to speak of a real trend.

Figure 12 Number of patients per age and gender
Source: Achmea (2013)

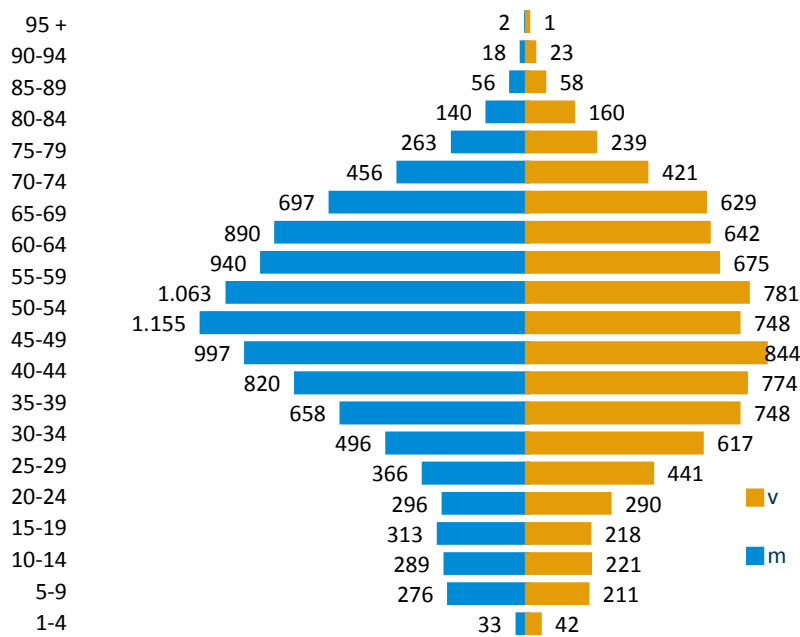


Figure 13 shows the distribution between men and women. Men account for about 45%, women for 55%. This has not changed much over the years. In 2014, 29,998 women and 25,390 men received treatment in Belgium, Luxembourg or Germany.

The 40-69 age group represents the highest number of treatments. 35% of the insured was under the age of 40 when receiving medical care in 2014. 15% was older than 69 years when they received treatment in 2014.

Figure 13 Number of unique insured who received treatment in Belgium, Luxembourg or Germany: distribution according to age.
Source: CZ (2014)

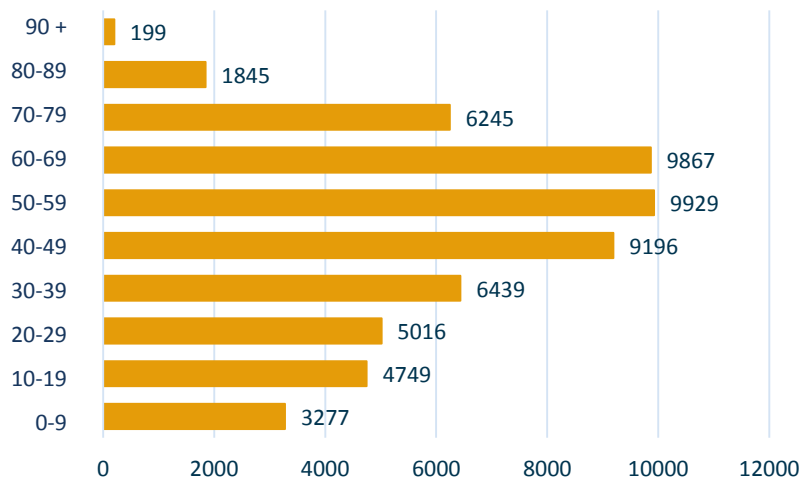
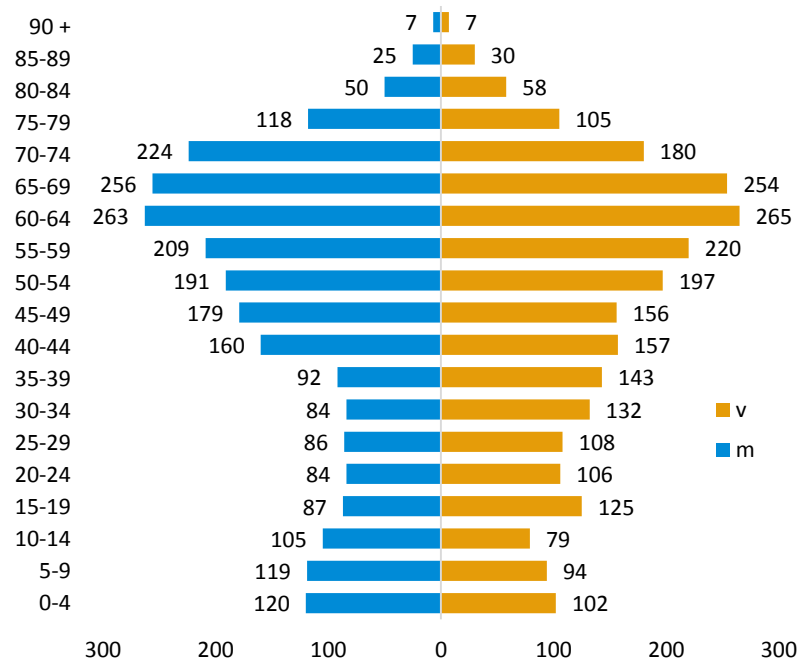


Figure 14 Number of unique insured who received treatment in Belgium, Luxembourg, Germany or France according to age and gender.
Source: Menzis (2014)



In 2014 2,459 men and 2,518 women with Menzis cover underwent treatment in Belgium, Luxembourg, Germany or France. The number of treatments was highest in the age group between 55 and 74, for both men and women. People in their twenties and elderly people least went abroad for treatment.

CONCLUSION

Given the differences in the supplied data, it is impossible to compare the CZ, Menzis and Achmea data for gender. Nevertheless, one important point is that most patients are between 30 and 70 years of age. Children en elderly people clearly have a smaller share in the cross-border patient flow.

4.2.4. Characteristics of care

ACHMEA

Exact figures about the diagnosis or treatment of the insured were not available. However, Achmea's internal financial accountability codes do provide insight in a few developments (**Table 12**).

- 9,173 patients received reimbursement for planned treatment (elective care). 2,188 people got reimbursed based on the EHIC (unplanned care). For the other categories it is hard to tell whether they involve planned care or unplanned care.
- Particularly striking is the high number of reimbursements for GP visits. This implies that the cross-border patient flow not only involves specialised healthcare, but also primary healthcare. The large number of insured in the border areas may be a factor here.
- Belgium treats more elective care (planned treatments) than Germany. Germany accounts for a larger number of reimbursements based on the EHIC (unplanned care). The fact that Germany is a popular holiday destination could be an explanation for this.
- The number of insured in this table is considerably higher than the number of insured based on age: 27,699 compared to 19,067. The reason is that it involves the number of insured who were reimbursed in 2013. Because one person may receive several reimbursements for different treatments in the same year, the figure does not reflect the number of unique insured.

Table 12 Invoice data per country of treatment.

Source: Achmea (2013)

INVOICE DATA	COUNTRY	NUMBER OF TREATMENTS	NUMBER OF INSURED	TOTAL AMOUNT
unplanned care (EHIC)	BE	519	450	€825,617.15
	DE	2,484	1,692	€2,543,225.00
	LU	52	46	€134,274.42
	TOTAL	3,055	2,188	€3,503,116.57
elective care (planned care)	BE	10,559	5,486	€4,638,929.46
	DE	9,414	3,677	€4,534,432.75
	LU	14	10	€6,795.62
	TOTAL	19,987	9,173	€9,180,157.83
primary care (GP)	BE	5,263	2,216	€150,487.50
	DE	2,385	1,878	€88,958.60
	LU	123	102	€5,242.88
	TOTAL	7,771	4,196	€244,688.98
basic insurance cover	BE	1,991	1,290	€458,036.61
	DE	2,600	1,957	€1,044,995.10
	LU	226	111	€29,509.46
	TOTAL	4,817	3,358	€1,532,541.17
medication & vaccination & lab	BE	5,991	2,344	€241,962.65
	DE	2,971	2,015	€146,541.33
	LU	153	102	€5,594.17
	TOTAL	9,115	4,461	€394,098.15
transport costs	BE	380	346	€89,815.78
	DE	996	840	€499,972.54
	LU	42	39	€6,495.63
	TOTAL	1,418	1,225	€596,283.95
psychological & psychiatric care	BE	981	121	€87,583.79
	DE	496	42	€57,331.79
	LU	0	0	€0.00
	TOTAL	1,477	163	€144,915.58
dentistry	BE	1,801	1,468	€146,404.34
	DE	1,627	1,218	€184,087.30
	LU	15	14	€1,171.48
	TOTAL	3,443	2,700	€331,663.12
pregnancy & childbirth	BE	19	13	€4,200.29
	DE	34	9	€8,096.58
	LU	9	2	€289.08
	TOTAL	62	24	€12,585.95
Miscellaneous	BE	204	102	€13,913.26
	DE	131	103	€12,685.75
	LU	13	6	€806.87
	TOTAL	348	211	€27,405.88
TOTAL BE		27,708	13,836	€6,656,950.83
TOTAL DE		23,138	13,431	€9,120,326.74
TOTAL LU		647	432	€190,179.61
TOTAL ALL		51,493	27,699	€15,967,457.18

Figure 15 together with the associated table shows the ratio between urgent care costs, non-urgent care costs and costs incurred by other care providers. It demonstrates for which type of care insured go abroad.

Figure 15 Ratio between urgent care costs, non-urgent care costs and other care costs.
Source: CZ (2014)

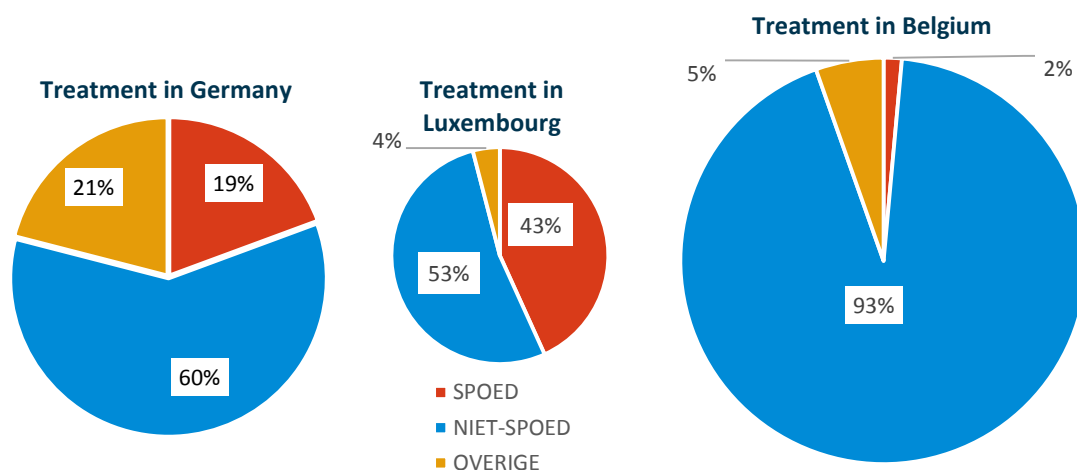


Table 13 Ratio between urgent care costs, non-urgent care costs and other care costs according to country of treatment and country of residence.

Source: CZ (2014)

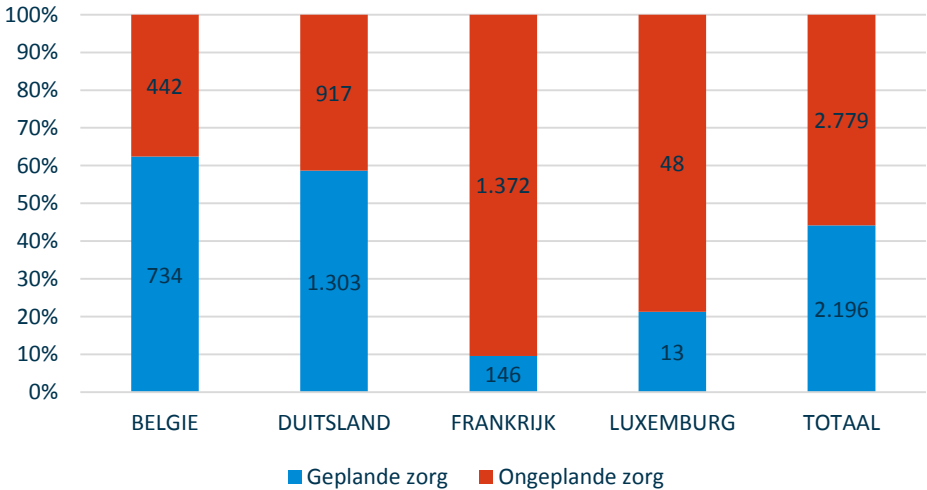
Country of treatment	Country of residence	URGENT	NON-URGENT	OTHER	Total
Belgium	The Netherlands	€595,341	€48,563,559	€2,747,641	€51,906,541
	Belgium	€151,760	€916,437	€134,156	€1,202,353
	Germany	€3,489	€125,439	€1,057	€129,985
	Luxembourg	€0	€294	€0	€294
	Other countries	€22,203	€107,419	€2,046	€131,668
	Total	€772,793	€49,713,148	€2,884,900	€53,370,841
Germany	The Netherlands	€1,105,162	€5,213,211	€1,829,312	€8,147,685
	Belgium	€357	€7,866	€8,257	€16,480
	Germany	€655,392	€249,331	€89,145	€993,868
	Luxembourg	€1,046	€6,754	€409	€8,209
	Other countries	€17,336	€843	€705	€18,884
	Total	€1,779,293	€5,478,005	€1,927,828	€9,185,126
Luxembourg	The Netherlands	€35,311	€21,017	€2,443	€58,771
	Belgium	€305	€0	€100	€405
	Germany	n/a	n/a	n/a	n/a
	Luxembourg	€5,814	€2,689	€789	€9,292
	Other countries	€80	€26,939	€536	€27,555
	Total	€41,510	€50,645	€3,868	€96,023
Total all countries		€2,593,596	€55,241,798	€4,816,596	€62,651,990

Table 13 clearly shows that non-urgent care costs involve the biggest portion of all costs for all countries. Non-urgent costs may involve reimbursements for primary healthcare, same-day hospitalisations, traditional hospitalisations or specialist consultations. The care provided in Belgium to Dutch insured is not urgent in 93% of the cases. 60% of the care costs incurred in Germany accounts for non-urgent care; that figure is only 53% for Luxembourg. For Luxembourg, 43% of the total reimbursed care costs involve urgent care.

MENZIS

Figure 16 shows the ratio between the number of unique insured reimbursed for planned treatment abroad and unplanned treatment abroad (2014). To determine whether the care was planned or unplanned, Menzis relied on the description of the treatment. All 'urgent' care is considered unplanned care. The patient flow to Belgium and Germany shows that the majority of the insured received planned treatment. The patient flow to Luxembourg involved mainly unplanned care. The same goes for the patient flow to France, for which we received data only from Menzis.

Figure 16 Number of patients according to type of care (planned/unplanned).
Source: Menzis (2014)



CONCLUSION

In view of the differences between the submitted data (financial data, absolute numbers, etc.) it is impossible to provide a correct image of the characteristics of the care based on the CZ, Menzis and Achmea data. Nevertheless we chose to publish the data that was available to us.

4.2.5. Additional information

ACHMEA

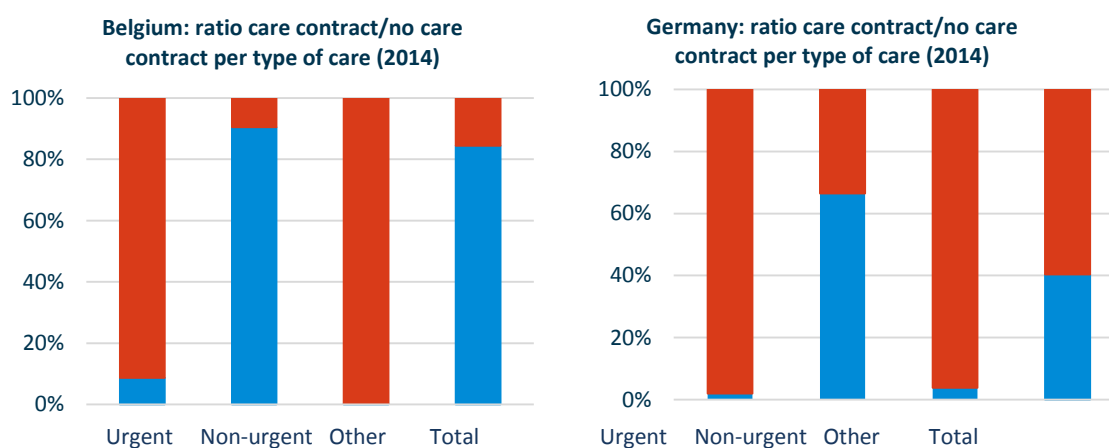
No additional information available.

CZ

Figure 17 together with the associated table provides the ratio between care provided based on a care contract and care provided without a care contract. The largest part of the non-urgent care in Belgium and Germany is provided via a care contract. Care contracts play less of a role for other types of care. This is completely in line with the expectation that Dutch care insurers also purchase care abroad.

Figure 17 Ratio care contract/no care contract per type of care.

Source: CZ (2014)



Country of treatment Belgium			
Type of contract	Contracted care provider	Non-contracted care provider	Total
Urgent	€67,071	€705,722	€772,793
Non-urgent	€44,976,226	€4,736,922	€49,713,148
Other	€5,818	€2,879,082	€2,884,900
Total	€45,049,115	€8,321,726	€53,370,841
Country of treatment Germany			
Type of contract	Contracted care provider	Non-contracted care provider	Total
Urgent	€34,431	€1,744,862	€1,779,293
Non-urgent	€3,638,907	€1,839,098	€5,478,005
Other	€73,794	€1,854,034	€1,927,828
Total	€3,673,338	€5,437,994	€9,185,126

MENZIS

No additional information available.

4.3. Incoming patient flows

For this element no complete or recent data was available for the incoming patient flows in the Netherlands. In 2013, by order of the working group on cross-border healthcare of the 'Interministerial Policy Study' (IBO), the Dutch knowledge centre 'Kiwa Carity' conducted a study into the number of foreigners in Dutch hospitals. It used data from the Landelijke Medische Registratie (LMR) (National Medical Records), a long-existing database containing information about anyone admitted to a Dutch hospital.

This study remarks that since 2004 the quality of the records has decreased with the setup of a new registration system of medical data: the DBC Information System (DIS)¹⁹. As a result the data on diagnosis and other characteristics of the care system is not complete. The data on the origin of the patients, however, is complete (Vandermeulen et al., 2013). This allows us to create an approximate image of the incoming patient flows into Dutch hospitals.

Table 14 Non-residents in Dutch hospitals per country of origin. (LMR, 1998-2012) cited in Vandermeulen et al., 2013)

Country of origin	1998	2003	2008	2012	% in 2012
Belgium + Luxembourg	2,107	2,467	3,237	3,560	26.5%
Germany	1,814	2,481	3,712	4,302	32.0%
France	156	144	272	264	2.0%
Other	1,557	1,498	2,096	2,680	19.9%
Unknown	1,492	1,581	2,245	2,650	19.7%
Total	7,126	8,171	11,562	13,456	100.0%

As regards the stays of foreign patients in Dutch hospitals in 2012 it is crystal clear that the Benelux countries, France and Germany have an important share therein. Almost 60% of the stays of patients residing abroad originate from these countries. Germany tops the list with 4,302 stays in Dutch hospitals, followed by 3,560 stays of patients from Belgium and Luxembourg. Remarkably, the German share has caught up considerably since 1998.

For 20% of the stays the country of origin is unknown. This can be explained from the fact that certain hospitals do not record the country of origin if it is not the Netherlands. For this reason it can be assumed that in reality the share of the Benelux countries, France and Germany is higher.

We also see a clear rising trend in the number of stays of foreign patients in Dutch hospitals. Since 1998 the number of stays has almost doubled from 7,126 to 13,456 in 2012.

¹⁹ The DIS data is not complete at the moment. Three hospitals are not included in the data and it will take a few years before the system can produce reliable data. Although this data is included in the IBO report, it was not incorporated into the Benelux study since its quality could not be guaranteed without making additional estimates.

5. Luxembourg



5.1. Introduction

The Great Duchy of Luxembourg has an exceptionally high number of residents with a foreign nationality. On January 1st, 2015, 46% of the Luxembourgish population was of foreign origin (STATEC, 2015). In addition there are approximately 143,000 frontier workers in Luxembourg (General Secretariat of the Benelux Union, 2014). This cross-border dynamics obviously reflects on the Luxembourgish healthcare.

In view of its relatively limited population, Luxembourg faces other challenges as regards healthcare than its neighbouring countries. Sound cross-border cooperation is particularly important in the area of highly specialist care, investments in expensive medical equipment and knowledge acquisition about rare diseases. For this reason, Luxembourg has a long tradition of collaboration with the bordering regions. For instance, it is a partner in the 'LuxLorSan' partnership, a cross-border cooperation partnership network between Belgium, Luxembourg and France in the area of healthcare.

5.2. Outgoing patient flows

To acquire an insight in the outflow of patients from Luxembourg to Belgium, Germany and France, we have used the data of the 'Caisse Nationale Santé' (CNS). The CNS is the centralised institution for both sickness insurance and care insurance. As such, it possesses data about reimbursed care to Luxembourgish insured people for treatment abroad. The CNS avails of data concerning the number of authorisations for treatment abroad. However, the data only concerns planned care for which authorisation is sought.

No data is available in relation to unplanned care and care that does not require authorisation. It must be noted that in view of its central position, Luxembourg conducts a very 'liberal' policy as regards cross-border healthcare. In concrete terms this means that authorisation is not required in many cases, and consequently, this is a facilitating factor with respect to cross-border healthcare.

The Eurobarometer study confirms this assumption. In this study conducted among a sample of Luxembourg citizens, 20% of the respondents indicated that they had received treatment abroad in the past year (European Commission DG SANTE, 2015). The evaluation report of the European Commission concerning the implementation of Directive 2011/24/EU on patients' rights in cross-border healthcare, confirms these figures. In a survey in the Member States about the number of reimbursements for treatments abroad that do not require authorisation, Luxembourg reported 117,962 reimbursements for the year 2014.

An important note to this figure is that it involves the number of reimbursements for treatments, not the number of unique persons crossing the border for treatment. Unfortunately, there are no extensive records for these reimbursements. Such records only exist for planned treatments that require prior authorisation. These figures are further discussed below.

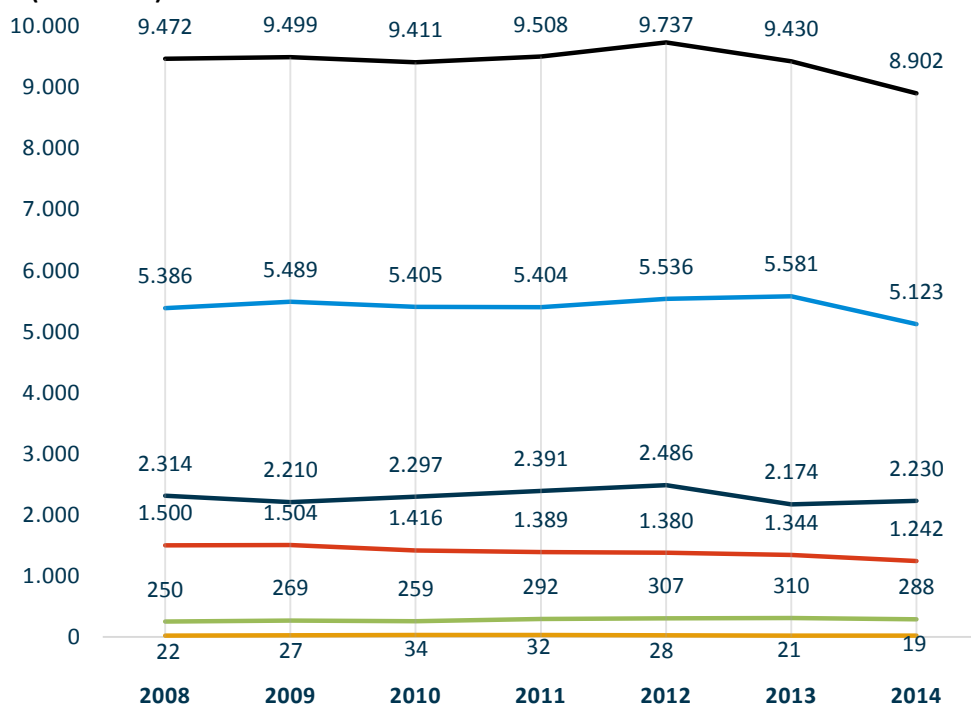
5.2.1. Destination and evolution

Figure 18 shows the evolution in the number of authorisations granted by the 'Caisse Nationale Santé' (CNS) for treatment abroad. This involves the number of authorisations granted in a certain year – the treatment may have taken place at a later date.

The number of authorisations granted has remained relatively constant throughout the years. As from 2013 a decrease has set in. This could be explained from the implementation of Directive 2011/24/EU on the application of patients' rights in cross-border healthcare. The Directive makes it easier to go abroad for certain treatments, as prior authorisation for care without hospitalisation is no longer required.

Figure 18 Evolution of the number of granted authorisations per country of destination.

Source: CNS (2008-2014)



Country of destination	2008	2009	2010	2011	2012	2013	2014
Belgium	2,314	2,210	2,297	2,391	2,486	2,174	2,230
Germany	5,386	5,489	5,405	5,404	5,536	5,581	5,123
France	1,500	1,504	1,416	1,389	1,380	1,344	1,242
The Netherlands	22	27	34	32	28	21	19
Other countries	250	269	259	292	307	310	288
Total	9,472	9,499	9,411	9,508	9,737	9,430	8,902

- With 5,123 patients in 2014, the patient flow to Germany stands out the most. 58% of all patients who went abroad for treatment that year went to Germany.
- At 2,230 the patient flow to Belgium is somewhat more limited. 25% of all patients who went abroad for treatment went to Belgium.
- The patient flow to France is the third-largest with about 14%. In 2014, 1,242 insured obtained authorisation for undergoing treatment in France.
- As expected the patient flow to the Netherlands is very limited. The flow to other countries is also relatively small. Hence Belgium, Germany and France are the most important destinations for patients from Luxembourg.

Table 15 Number of authorisations for treatment in Belgium, per district.
Source: CNS (2014)

5.2.2. Data according to region

Table 15 shows how many authorisations were granted in 2014 for treatment in Belgium. The data is shown per district where the treatment will take place. It concerns the top 15 districts. No data per region is shown for the patient flow to the Netherlands as the numbers are too small.

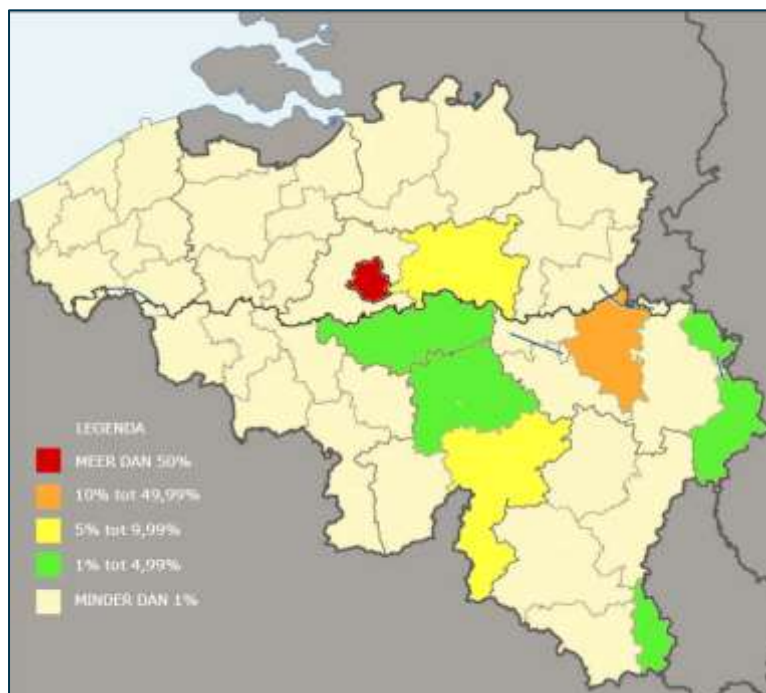
District	Number of authorisations	%
Brussels	1,624	56.86%
Liege	551	19.29%
Louvain	188	6.58%
Dinant	158	5.53%
Arlon	74	2.59%
Namur	41	1.44%
Nivelles	39	1.37%
Verviers	31	1.09%
Hasselt	24	0.84%
Marche-en-Famenne	24	0.84%
Ghent	22	0.77%
Bastogne	22	0.77%
Antwerp	20	0.70%
Neufchâteau	13	0.46%
Charleroi	10	0.35%
Other	15	0.53%
Grand Total	2,856	100%

Figure 19 shows the percentage breakdown per district of Luxembourgish insured who have received authorisation for treatment in Belgium in 2014. Remarkably the majority of the requests – almost 57% – involves treatment in Brussels. This can be explained from the high number of expats in Brussels and the number of large hospitals in the Brussels district.

The Liege district is second on the list with almost 20% of the authorisations for treatment. The reason is the ‘Centre Hospitalier Universitaire CHU Liège’, located in Liege. For many residents of Luxembourg this is the closest university hospital. Louvain is another important district for cross-border patient flows from Luxembourg with 6.5% of the authorisations.

And finally, Dinant and Arles are also two popular districts for Luxembourgish patients. Arles speaks for itself given its geographical proximity. Dinant – as became apparent earlier in this study – is important for patients from France.

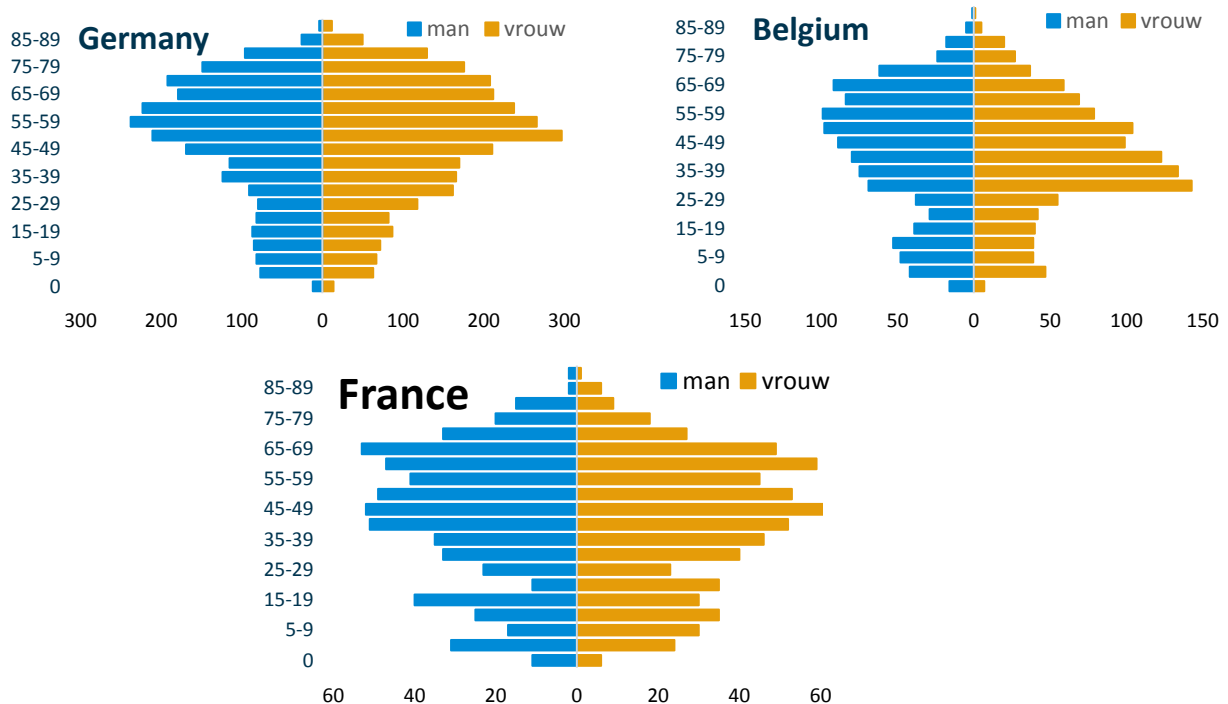
Figure 19 Luxembourgish insured in Belgium: percentage breakdown per district.
Source: CNS (2014)



5.2.3. Demography

In 2014, 4,673 women and 4,040 men obtained authorisation for undergoing treatment abroad. Below are the age pyramids (figure 16) for the cross-border patient flows to Belgium, Germany and France. Given the limited amount of data it is impossible to create an age pyramid for the patient flows to the Netherlands.

Figure 20 Authorisations for treatment in Germany, Belgium or France broken down for age and gender.
Source: CNS (2014)



The graph shows a large number of women between 30 and 54, which is declining slowly for Belgium. As regards men the numbers increase markedly from the age category 30-34. After that, the number of men remains reasonably constant until the age category 70-74.

For Germany we see a different largest group of women asking for authorisation, namely the age group 50-54 years old. The older age categories also show more applications. The increase also starts somewhat later for men (45-49 years of age). This justifies the cautious conclusion that a proportionately larger group of somewhat older patients travel to Germany for treatment.

For France the pyramid is somewhat more irregular. Considerably less men between 20 and 29 years of age have been granted authorisation for treatment in France. A small decline can also be noted for women from 25 to 29 years.

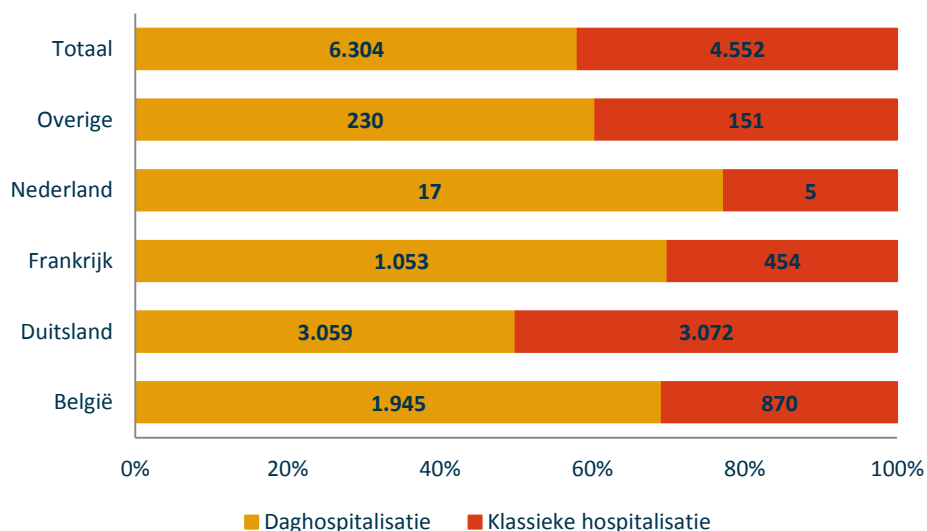
5.2.4. Characteristics of care

For the time being the data concerning diagnosis cannot be processed for the year 2014. In that year the diagnosis data coding system switched to ICD-10 coding. For this reason it is impossible to show uniform results. As from 2015 detailed data will be available based on the ICD-10 codes.

However, the currently available data does allow for establishing whether the authorisation involved same-day hospitalisation of traditional hospitalisation. **Figure 21** shows the percentage ratio and the absolute numbers. In general the number of same-day hospitalisations is slightly higher than the number of traditional hospitalisations. Only for Germany the ratio is about even. One important remark is that according to information, the total number of granted authorisations is somewhat higher. This could be explained from the fact that in some case the authorisation concerns both types of hospitalisation.

Figure 21 Number of granted authorisations broken down for same-day hospitalisation/traditional hospitalisation.

Source: CNS (2014)



5.2.5. Additional information

Table 16 Number of authorisations and refusals per type of treatment.

Source: CNS (2008-2014)

Authorisation	Type of treatment	2008	2009	2010	2011	2012	2013	2014
Authorisation	Same-day hospitalisation	6,155	6,076	6,317	6,482	6,674	6,593	6,170
	Traditional hospitalisation	5,027	5,089	4,890	4,866	5,035	4,819	4,511
	Total	9,233	9,259	9,185	9,262	9,493	9,221	8,713
	% authorisation (total)	97%	96%	94%	95%	95%	90%	92%
Refusal	Same-day hospitalisation	175	201	320	269	336	361	528
	Traditional hospitalisation	129	180	273	247	233	231	258
	Total	303	378	577	500	546	570	745
	% refusal (total)	3%	4%	6%	5%	5%	10%	8%
Total number of applications	Total	9,536	9,637	9,762	9,762	10,039	9,791	9,458

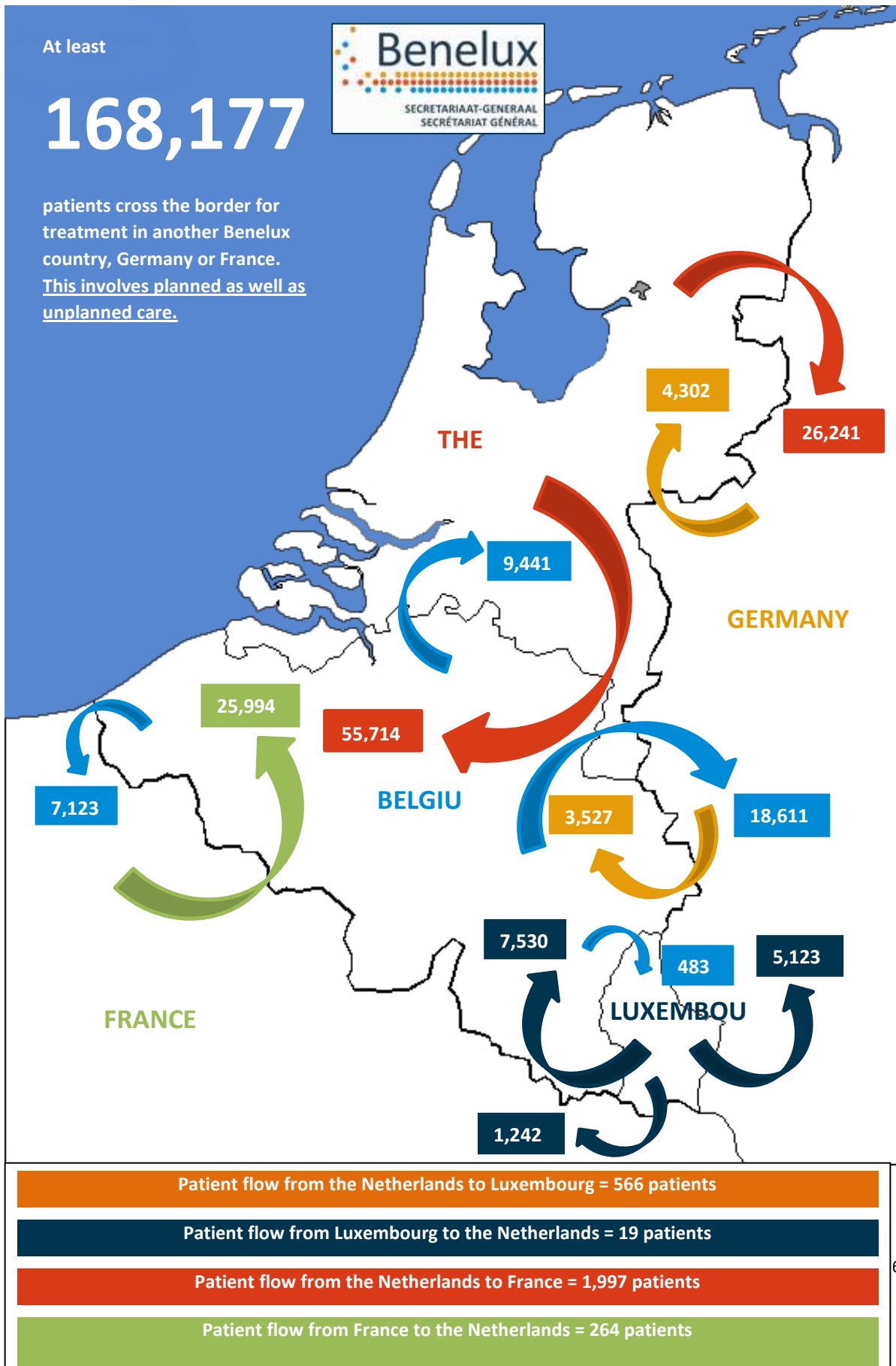
Table 16 shows the ratio between the number of applications for treatment abroad that were authorised and those that were refused, for each type of treatment. Remarkably, the number of refusals is higher as from 2013. However, this does not explain the fall in the number of patients as from 2013, since the total number of applications (including refusals) also decreases.

5.3. Incoming patient flows

No data is available about the number of people coming to Luxembourgish hospitals from abroad. For the incoming patient flows a few figures can be found at the RIZIV in Belgium and the Dutch care insurers.

- According to the RIZIV, 281 patients went to Luxembourg in 2014 for planned treatment that had been authorised in advance by the health insurance fund. Only one person underwent unplanned treatment based on the European Health Insurance Card (EHIC).
- From the Netherlands, 961 insured covered by Achmea or CZ underwent treatment in Luxembourg in 2013. Due to differences in the data it is impossible to make a reliable estimate of the ratio between planned and unplanned care. Nevertheless it can be assumed that compared to Belgium, unplanned care accounts for a bigger share.

6. Overview



The map (on the previous page) visualises the cross-border patient flows between the Benelux countries, France and Germany. **The data reflected here involves both planned and unplanned care.** The correct calculation of the displayed patient flows and the sources of the data used are illustrated in the overviews below. These overviews contain the most important core figures per country. For further substantive interpretation, we refer to the relevant previous chapters. Where possible the below overviews distinguish between planned care and unplanned care. This was not possible for all of the data, because some information was either unknown or merely available in financial data. While with caution, a few assertions can be made based on the available sources. No assertions were made for unavailable or not unambiguous data.

- Patient flow from the Netherlands to Belgium: planned care exceeds unplanned care (MZG, 2012).
- Patient flow from the Netherlands to France: unplanned care exceeds planned care (Menzis, 2014). Please note: this involves only 12.6% of the Dutch insured.
- Patient flow from Belgium to the Netherlands: unplanned care exceeds planned care (RIZIV, 2014).
- Patient flow from Belgium to Luxembourg: planned care exceeds unplanned care (RIZIV, 2014).
- Patient flow from Belgium to Germany: planned care exceeds unplanned care (RIZIV, 2014).
- Patient flow from Belgium to France: unplanned care exceeds planned care (RIZIV, 2014).

An important methodological note here is that for the sake of simplicity, the study refers to ‘numbers of patients’. However, the overviews below also contain the exact units of measurement. Since the data we received is not complete, the displayed figures may be lower than the actual number of insured, reimbursements or stays. A few gaps in the data:

- The data from the Netherlands involve 64.3% of the Dutch insurance market.
- The RIZIV data do not reflect the number of reimbursements for planned care that do not require authorisation (as determined by Directive 2011/24/EU).
- For Luxembourg only the number of granted authorisations is provided. Since Luxembourg conducts a very ‘liberal’ policy as regards cross-border healthcare, which often means that no authorisation is required, this could be a considerable undervaluation. The evaluation report of the European Commission on the implementation of Directive 2011/24/EU already indicated that Luxembourg reported 117,932 reimbursements for care that does not require authorisation. However, it was impossible to find out which type of cross-border healthcare was reimbursed, for instance whether it involved medical treatment or medication purchased abroad. For this reason this figure was not included in the patient flows.

CORE FIGURES FOR BELGIUM						
Originating from	Total	Of which planned	Of which unplanned	Source + year	Measured unit	Comments
THE NETHERLANDS	5,687	1,197	4,490	RIZIV (2014)	Number of requests for reimbursement	Only planned care for which authorisation was requested and care based on EHIC.
	35,927	28,095	7,832	MZG (2012)	Number of stays in Belgian hospitals	
	9,362	unknown	unknown	ACHMEA (2013)	Number of insured	
	45,021	unknown	unknown	CZ (2013)	Number of unique insured	
	1,331	830	501	MENZIS (2013)	Number of unique insured	
Patient flow from the Netherlands to Belgium = 55,714 patients <i>based on the total of the insured covered by the Dutch healthcare insurers Achmea, CZ and Menzis in 2013</i>						
LUXEMBOURG	7,530	2,673	4,857	RIZIV (2014)	Number of requests for reimbursement	Only planned care for which authorisation was requested and care based on EHIC.
	3,688	2,518	1,170	MZG (2012)	Number of stays in Belgian hospitals	
	2,230	2,230	n/a	CNS (2014)	Number of authorised requests for treatment abroad	
Patient flow from Luxembourg to Belgium = 7,530 patients <i>based on the number of claims for reimbursement from the RIZIV in 2014</i>						
GERMANY	2,754	84	2,670	RIZIV (2014)	Number of requests for reimbursement	Only planned care for which authorisation was requested and care based on EHIC.
	3,527	1,224	2,303	MZG (2012)	Number of stays in Belgian hospitals	
Patient flow from Germany to Belgium = 3,527 patients <i>based on the number of stays in Belgian hospitals in 2012</i>						
FRANCE	10,537	7,552	2,985	RIZIV (2014)	Number of requests for reimbursement	Only planned care for which authorisation was requested and care based on EHIC.
	25,994	12,893	13,101	MZG (2012)	Number of stays in Belgian hospitals	
Patient flow from France to Belgium = 25,994 patients <i>based on the number of claims for reimbursement from the RIZIV in 2014</i>						

CORE FIGURES FOR THE NETHERLANDS						
Originating from	Total	Of which planned	Of which unplanned	Source + year	Measured unit	Comments
LUXEMBOURG	19	19	n/a	CNS (2014)	Number of authorised requests for treatment abroad	Only care for which authorisation was requested.
Patient flow from Luxembourg to the Netherlands = 19 patients <i>based on the number of authorised requests for planned care from CNS in 2015</i>						
BELGIUM	9,441	1,573	7,768	RIZIV (2014)	Number of requests for reimbursement	Only planned care for which authorisation was requested and care based on EHIC.
	3,560	unknown	unknown	LMR (2012)	Stays in Dutch hospitals	Total of the number of stays for patients from both Belgium and Luxembourg ²⁰ .
Patient flow from Belgium to the Netherlands = 9,441 patients <i>based on the number of claims for reimbursement from the RIZIV in 2014</i>						
GERMANY	4,302	unknown	unknown	LMR (2012)	Stays in Dutch hospitals	More than 2,560 stays for which the place of residence was not determined. Underestimate!
Patient flow from Germany to the Netherlands = 4,302 patients <i>based on the number of stays in Dutch hospitals in 2012</i>						
FRANCE	264	unknown	unknown	LMR (2012)	Stays in Dutch hospitals	More than 2,560 stays for which the place of residence was not determined. Underestimate!
Patient flow from France to the Netherlands = 264 patients <i>based on the number of stays in Dutch hospitals in 2012</i>						

CORE FIGURES FOR LUXEMBOURG						
Originating from	Total	Of which planned	Of which unplanned	Source + year	Measured unit	Comments
BELGIUM	483	482	1	RIZIV (2014)	Number of requests for reimbursement	Only planned care for which authorisation was requested and care based on EHIC.
Patient flow from Belgium to Luxembourg = 483 patients <i>based on the number of claims for reimbursement from the RIZIV in 2014</i>						
THE NETHERLANDS	233	unknown	unknown	ACHMEA (2013)	Number of insured	
	245	unknown	unknown	CZ (2013)	Number of unique insured	
	88	12	76	MENZIS (2013)	Number of unique insured	
Patient flow from the Netherlands to Luxembourg = 566 patients <i>based on the total of the insured covered by the Dutch healthcare insurers Achmea, CZ and Menzis in 2013</i>						
GERMANY					unknown	
<i>Patient flow unknown</i>						
FRANCE					unknown	
<i>Patient flow unknown</i>						

²⁰ For more information we refer to Chapter 4: The Netherlands, point 4.3 'incoming patient flows'.

CORE FIGURES FOR GERMANY						
Originating from	Total	Of which planned	Of which unplanned	Source + year	Measured unit	Comments
THE NETHERLANDS	9,580	unknown	unknown	ACHMEA (2013)	Number of insured	
	13,684	unknown	unknown	CZ (2013)	Number of unique insured	
	2,977	1,677	1,299	MENZIS (2013)	Number of unique insured	
Patient flow from the Netherlands to Germany = 26,241 patients <i>based on the total of the insured covered by the Dutch healthcare insurers Achmea, CZ and Menzis in 2013</i>						
BELGIUM	18,611	16,734	1,877	RIZIV (2014)	Number of requests for reimbursement	Only planned care for which authorisation was requested and care based on EHIC.
Patient flow from Belgium to Germany = 18,611 patients <i>based on the number of claims for reimbursement from the RIZIV in 2014</i>						
LUXEMBOURG	5,123	5,123	n/a	CNS (2014)	Number of authorised requests for treatment abroad	Only care for which authorisation was requested.
Patient flow from Luxembourg to Germany = 5,123 patients <i>based on the number of authorised requests for planned care from CNS in 2015</i>						
FRANCE					unknown	
<i>Patient flow unknown</i>						

CORE FIGURES FOR FRANCE						
Originating from	Total	Of which planned	Of which unplanned	Source + year	Measured unit	Comments
LUXEMBOURG	1,242	1,242	n/a	CNS (2014)	Number of authorised requests for treatment abroad	Only care for which authorisation was requested.
Patient flow from Luxembourg to France = 1,242 patients <i>based on the number of authorised requests for planned care from CNS in 2015</i>						
BELGIUM	7,123	347	6,776	RIZIV (2014)	Number of requests for reimbursement	Only planned care for which authorisation was requested and care based on EHIC.
Patient flow from Belgium to France = 7,123 patients <i>based on the number of claims for reimbursement from the RIZIV in 2014</i>						
THE NETHERLANDS	1,997	205	1,791	MENZIS (2013)	Number of unique insured	Please note: this figure involves only 12.7% of the Dutch insured.
Patient flow from the Netherlands to France = 1,997 patients <i>based on the total of the insured covered by the Dutch healthcare insurer Menzis in 2013.</i>						
GERMANY					unknown	
<i>Patient flow unknown</i>						

7. The 'why' of cross-border patient mobility



In order to provide an image of future expectations it is important to acquire insight in the motives, players and structures influencing cross-border mobility. To that end below are a few elements that may promote or dissuade cross-border patient mobility. Where possible these elements are substantiated by figures.

This description of the motives for cross-border healthcare, together with the obtained figures, was submitted to the panel of experts (8 September 2015). Based hereon we will formulate future expectations, possible policy interventions and opportunities for further cross-border cooperation.

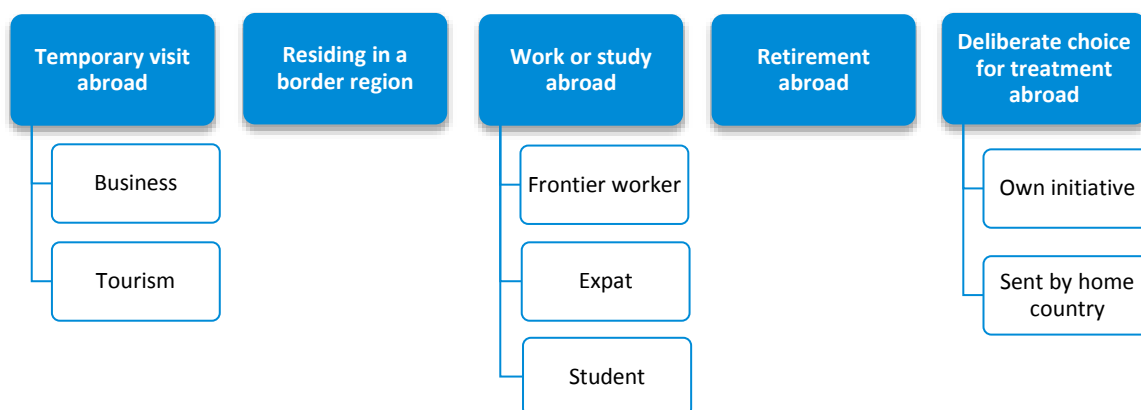
7.1. Cross-border mobility

Insight into people's motives to rely on cross-border healthcare requires distinguishing between the various types of cross-border mobility. A patient's need of care may change depending on the reason for the stay abroad. This results in a wide spectrum of healthcare needs, ranging from ambulant care and specialised treatment to long-term care or primary care.

Figure 22 provides an overview of the different situations in which citizens may rely on medical care abroad. The graph distinguishes five situations, which may be specified further in certain cases.

Figure 22 Cross-border mobility

Source: This overview is an adaptation by the author based on information from the report "Policy Summary 14, Cross-border health care in Europe" (WHO, 2014, pp. 2-5).



1. Temporary visit abroad

This may be related to work or leisure. For temporary visits abroad, cross-border healthcare is facilitated through a reimbursement policy via the European Health Insurance Card (EHIC), which covers any unexpected need of medical help.

2. Residing in a border region

The accessibility of the care provider appears to be an important factor for patients (Glinos & Baeten, 2006). In border regions the closest care centre is sometimes on the other side of the border. That is why there is a long tradition of cooperation between the Benelux countries or border regions in the area of cross-border healthcare, such as the ZOAST agreements (BE-FR), the IZOM project (DE-NL-BE), cooperation between Flanders and Zeeuws-Vlaanderen (BE-NL) and several Interreg projects such as LuxLorSan (LU-FR-BE). The Benelux agreements on cross-border ambulance traffic are yet another example.

3. Working or studying in another country than the home country

Within the EU-28, 1.16 million people work in an EU country that is not their country of residence. About 70% of them work in a neighbouring country. 37% of all border activities in the EU take place in the wider Benelux region. In 2012 the number of frontier workers in the Benelux Countries, France and Germany was estimated at 310,000.

In addition the Benelux countries received 18,983 incoming students during the 2011-2012 school year and 16,851 students went abroad in the context of the Erasmus exchange programme. These figures showed a steady increase over the past few years (General Secretariat of the Benelux Union, 2014).

4. Retirement abroad

Some citizens, many of them frontier workers, retire in another country than where they performed the largest part of their professional activities. For these cases, social security and medical cover are secured via European transit forms (such as the S1 and S3 form).

5. Deliberate choice for medical treatment abroad

Patients sometimes opt for treatment abroad or for having the care provider or insurer in their home country send them abroad for certain treatment. Possible reasons include the need of highly specialist care or rare diseases. These cases always involve planned care.

7.2. Drivers and barriers for cross-border patient mobility

Cross-border patient mobility can benefit several parties involved. For patients, treatment abroad may be less expensive, quicker or of better quality. But care providers, insurers and public authorities may also gain from cross-border healthcare by developing structural facilities (Rosenmüller et al., 2006).

Figure 23 shows the different motives that play a role in the choice for treatment abroad. This graph summarises the results of several studies into one overview of motives and obstacles. To the left are the factors that make treatment abroad attractive for a patient. To the right are the factors that may dissuade patients from going abroad for treatment.

Figure 23 Encouraging and dissuading factors in cross-border healthcare.

Source: This overview is an adaption of the author based on information from several sources.



A few factors are ambiguous and as such may be both encouraging and dissuading. This often depends on the patient's specific situation. For example: someone from the German-speaking community in Belgium will not experience a language barrier when treated in Belgium, whereas the opposite may be true for a patient from Belgian Limburg.

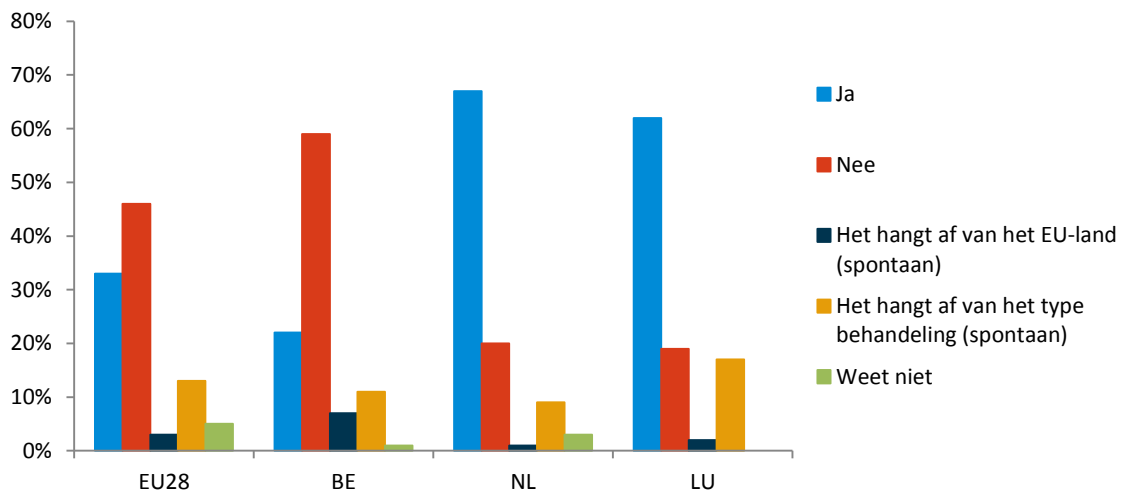
The balance between encouraging and dissuading factors is important for the development of future policies. Cross-border patient mobility may be encouraged by eliminating the dissuading factors and enhancing the encouraging factors. For this reason we reduce the above motives to a few workable key themes that may be taken into account:

- **The quality of the care**
This is not just about the effective quality of the care abroad, but also about the patient's perception of the quality.
- **Availability of the care**
This involves the possibility of getting treatment quicker, or getting treatment that is not available in the patient's own country, for instance because of specific legislation or a high degree of specialisation.
- **Nearness of the care provider**
This involves both geographical accessibility and 'cultural' proximity of the care provider and the care system. The latter includes language, familiarity with the host country and with the local healthcare system. Particularly in border regions this may constitute added value for the patient.
- **Financial aspects**
It is important to know that treatment abroad at one's own initiative is not always reimbursed (in full). Lack of knowledge and insecurity about the financial aspects of treatment abroad may be an important dissuading factor. Legal aspects may form a barrier, too. For instance, in cases in which treatment abroad is refused, there will be no reimbursement either. Appendix 1 contains some background information on the patient's rights in this respect.

A recent Eurobarometer study on patients' rights to cross-border healthcare within the European Union allows us to quantify some of the motives (Special Eurobarometer 425, 2015). We present a few elements from this study which explain the motives behind the patient flows in the Benelux.

WILLINGNESS TO TRAVEL TO ANOTHER EU COUNTRY FOR MEDICAL TREATMENT

There is a remarkable difference between Belgium and the other two Benelux countries in this respect. In Luxembourg and the Netherlands 62% (LU) and 67% (NL) of the respondents are prepared to go abroad for treatment. With only 22% the Belgian preparedness to go abroad for treatment is significantly lower, even below the European average.

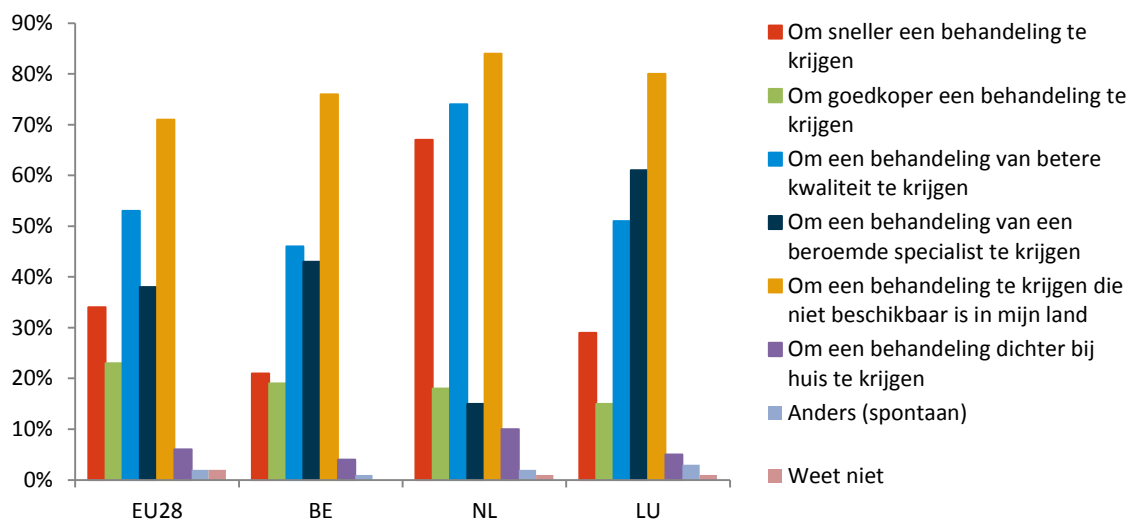


DRIVERS FOR TREATMENT ABROAD

The most important reason for Benelux residents to go abroad for medical treatment is that the treatment involved is not available in their own country. The second most important reason is the ability to get higher quality treatment.

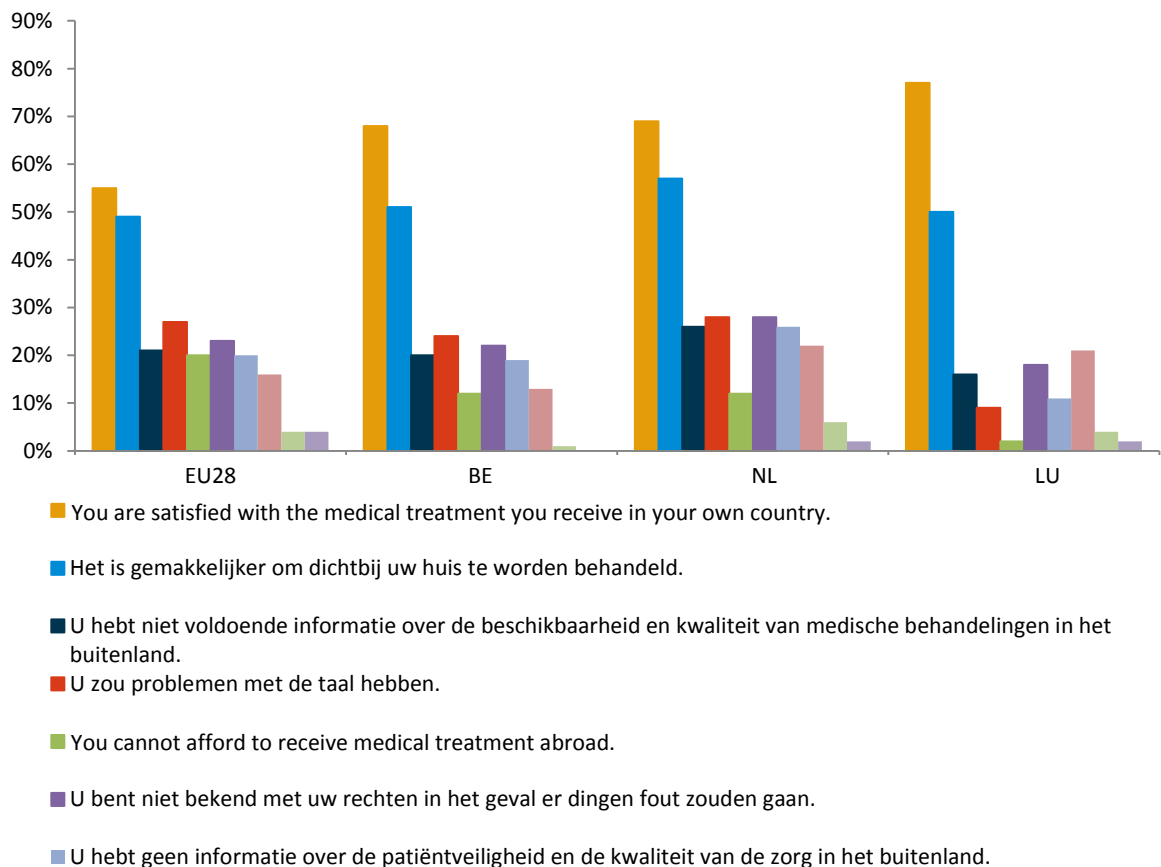
A third reason to go abroad is to receive treatment from a renowned specialist. This is remarkably lower on the priority list of Dutch citizens. By contrast, Dutch patients attach high importance to getting treatment quicker, a factor lower on the priority lists in Luxembourg and Belgium. This can be explained from the long waiting lists people sometimes face in the Netherlands. These same waiting lists have incited Dutch healthcare insurers to enter into care agreements with Belgian and German hospitals as a solution for the undercapacity.

Quite remarkably, respondents attach relatively little importance to crossing the border in order to receive treatment closer to home. This can be explained from the fact that the respondents are located throughout the country, not only in the border regions.



BARRIERS FOR TREATMENT ABROAD

An important reason for staying at home for treatment is the satisfaction with the national healthcare system. For all of the Benelux countries this is above the European average. Furthermore, respondents attach high importance to treatment close to home. As regards the other reasons for not undergoing treatment abroad, the Benelux countries share the same views. Luxembourg, however, shows different results for two elements: a language barrier and a financial barrier are considered less of an issue in this country.



8. Findings and trends



In the context of the study into cross-border patient flows in the Benelux, France and Germany, on 8 September 2015 the General Secretariat of the Benelux Union organised a panel interview with several experts from the countries involved. The purpose was to subject the collected data to a qualitative test, which added validation to the study results. Furthermore the future expectations and different options for better cross-border cooperation in healthcare were put to the fore.

The panel of experts consisted of several representatives from the health sector. The list of participants in this workshop can be found in Appendix 4.

- **Belgium:** Federal Public service Public Health; National Institute for Sickness and Invalidity Insurance (RIZIV); national federations of different insurers (Onafhankelijke Ziekenfondsen (Independent Health Insurance Funds) (MLOZ), Christelijke Mutualiteiten (Christian Insurance Funds (LCM)), Neutrale Ziekenfondsen (Neutral sickness funds (LNZ))
- **The Netherlands:** Ministry for Public Health; healthcare insurers (CZ; Achmea)
- **Luxembourg:** Ministère de la Santé, Agence eSanté
- **Europe:** European Commission (Director-General SANTE); European Social Observatory (OSE)

Based on the results of the panel of experts of 8 September 2015, the following findings can be reported in relation to the study into the cross-border patient flows in the Benelux. Furthermore, the future expectations of the attending experts are presented in a few trends.

FINDINGS IN RELATION TO THE BENELUX STUDY ON CROSS-BORDER PATIENT FLOWS

Finding 1: The study provides a unique insight into the cross-border patient flows between the Benelux countries, France and Germany.

The study paints a unique image of the cross-border patient flows between the Benelux countries, France and Germany. It is the first time that different sources from several countries were successfully brought together in one complete overview. Until now only fragments of the total volume of cross-border patient flows were known.

The image of the cross-border patient flows painted in the report is recognisable for several experts from the Benelux countries. Nevertheless, insight into the total picture of the cross-border patient mobility in the Benelux was surprising.

Finding 2: The real number of patients crossing the border to receive treatment in another Benelux country, France or Germany is likely to be higher than the numbers reflected in the study.

The study indicates that the reflected data may be lower compared to the real number of patients crossing the borders because the data is not complete. Limitations in data sources constitute an obstacle for developing a full overview of the cross-border patient flows. The lack of accessible, comparable and transparent data therefore forms a bottleneck for in-depth research.

Finding 3: The results constitute a business case in support of future policy investments.

The results constitute a 'business case' in support of future policy investments, which may improve the accessibility and quality of cross-border healthcare. The study reveals that a significant group of patients is in need of cross-border care, in both planned and unplanned situations. For further policy development it will be interesting to supplement this quantitative data about the patient flows with findings from qualitative research. This will allow for providing more detailed information on specific concerns and bottlenecks of cross-border healthcare to the individual stakeholders in the sector, such as care providers, patients and insurers.

Finding 4: Cross-border healthcare is an umbrella concept.

Cross-border healthcare is an umbrella concept covering several views on how it should be implemented and defined.

From a research standpoint, cross-border patient flows is a term that in principle cannot be used in unplanned care abroad since in that case the patient already is abroad. However, the starting point here is that everyone benefits from good cross-border cooperation in healthcare, not only in relation to planned care, but also to unplanned care. From a policy point of view it is therefore important to look at both planned and unplanned cross-border healthcare, with attention for their specific characteristics.

Finding 5: Studies into cross-border healthcare often leave certain specific cases of cross-border patient mobility underexposed.

Studies into cross-border healthcare often leave certain specific cases of cross-border patient mobility underexposed. For instance, there is a patient flow of people living and working abroad but who still return to their home country for treatment.

Furthermore it would be interesting to check whether so-called hospital hoppers seek different care providers for their second, third or fourth opinion. These specific patient flows were not taken into consideration in the present study. Nevertheless more insight into the extent and motives of this group of patients is required.

Finding 6: The offer of cross-border healthcare faces several obstacles, often caused by a lack of knowledge.

The decision to go abroad for treatment is the result of a combination of several factors. Lack of information and knowledge concerning aspects such as the quality of care abroad, the availability of care or the financial aspect may dissuade the patient. Therefore all the stakeholders, i.e. de patients, care providers and insurance companies, are in need of high quality information.

In this respect it is important to recognise the context differences between countries so as to be able to synchronise the provision of information with the different needs. In the Netherlands the initiative for seeking care across the borders often lies with the healthcare insurers, whereas in Belgium and Luxembourg the initiative originates from the patients who seek care abroad themselves.

Finding 7: There is a real necessity for sharing real-time insurance information.

Often a lack of knowledge about how the foreign health system works will cause a problem. It creates administrative problems and problems relating to reimbursements for care. Insecurity about a patient's insurance contract may form a barrier for cross-border healthcare provision. Sharing real-time insurance information may help to offer both care providers and insurance companies security about reimbursement and prevent any abuse. Existing projects (such as e-Confirmation) should be considered in this respect.

Finding 8: Policy-makers are in need of transparent and high-quality data about cross-border patient flows and their characteristics.

Bringing data of the different sources together for this study report required disproportionate effort. Therefore it is of great importance for the development of future policy interventions that there is transparent, harmonised and high-quality data about the cross-border patient flows and their characteristics, and that it is easily available.

Trend 1: Technological developments and increased patient mobility in healthcare lead to 'new forms' of cross-border healthcare.

In these new forms of cross-border care the patient not always needs to cross the border to receive care. Thanks to new emerging technology and increased patient mobility, patients can also be treated in their home country with care providers carrying out treatment remotely (for example telemedicine) or crossing the border (instead of the patient) to administer treatment (mobility of care providers).

Furthermore, treatment can also be outsourced to foreign countries, for example in the context of highly specific medical testing. These developments merit careful consideration in further research. Although they form part of the cross-border healthcare theme, they don't necessarily lead to cross-border patient mobility. Directive 2011/24/EU contains the initial legal basis in this respect.

Trend 2: Future policy in cross-border healthcare should focus on increasing the general accessibility and quality of healthcare.

Several experts attending the workshop about cross-border patient flows have emphasised that future policies on cross-border healthcare should focus on enhancing the general accessibility and quality of healthcare. This cross-border healthcare may guarantee access to medical care if the own country is burdened by long waiting lists or lacks the required treatment facilities. Lifting the barriers to access cross-border care increases freedom of choice for patients and increases the accessibility of good quality care, possibly also on the other side of the border.

Trend 3: The general expectation is that the total number of patients crossing borders between the Benelux countries, France and Germany will increase, but there are significant national differences.

Most experts expect a general increase in the number of patients crossing borders. This increase may occur in the field of specialised care and possibly also with respect to medical care provided in the border regions. There is no consensus as to which countries or specific regions will be seeing strongest growth in cross-border healthcare. Most experts assume that Belgium and Luxembourg will show further growth, while expecting cross-border healthcare to stabilise in the Netherlands.

Trend 4: A strong increase is expected in the number of patients specifically seeking specialised treatment abroad.

A strong increase is expected in the number of patients who will go abroad for specialised treatment. Possible reasons include higher quality treatment, cheaper treatment or treatment that is not available (or not available on time) in the home country. The recent implementation of the new European Directive on cross-border healthcare (2011/24/EU) will possibly enhance this effect. As a result, well-informed and emancipated patients will in the future look for the best price-quality ratio for treatment, also on the other side of the border.

Trend 5: Good cross-border cooperation in the border regions facilitates a further increase of the patient flows in border areas.

Patients residing in border regions often consider cross-border healthcare as the most logical option. In view of the existing projects and agreements it is hard to foresee whether these regions will see growth or stabilisation in terms of cross-border patient flows.

Experience shows that it can take two to three years before new administrative procedures become fully known and commonplace. As soon as all is clear to all the parties involved, cross-border mobility increases considerably. If new cooperation projects are established in the border regions, a further increase in the patient flows becomes likely. Therefore it is useful that policy-makers create an overview of successful cross-border cooperation projects, indicating which projects are already running in which areas and how successful they are. This would also make visible any untapped potential in this respect.

Trend 6: Future policies should focus on scaling up healthcare across borders to enable better management of resources.

In view of financial limitations, care innovations and the redrawing of the hospital landscape, in future the nearest healthcare centre offering certain treatment may just as well be located on the other side of the border. For this reason it is interesting to create a framework for cross-border cooperation whereby large investments in specialist equipment and infrastructure are cross-checked for cross-border use. This may result in better cover in the border regions.

Such framework may also prevent the situation where one country is *investing* while the other is *disinvesting*. Outsourcing must not lead to any country preferring to send its patients abroad rather than investing in its own medical offer. A framework for cross-border cooperation may help stabilise the equilibrium and create a win-win situation.

Trend 7: In the future National Contact Points for cross-border healthcare will have a leading role in improving the organisation of cross-border healthcare by providing good quality information to patients and other stakeholders.

The European Directive 2011/24/EU contains the obligation of establishing National Contact Points for cross-border healthcare (NCPs). These contact points provide information to both incoming and outgoing patients in relation to the cross-border healthcare in that country. The European countries show large differences with respect to accessibility, communication channels used and the quality of the information supplied to patients by the NCP²¹.

Given the importance of the Benelux as a region with multiple and mutual cross-border patient flows, better access to good quality information across borders is recommended. Increased visibility may result in NCPs playing a central and proactive role in improving the organisation of cross-border healthcare.

Better information facilities are a very powerful tool in giving patients better information about their rights with respect to cross-border healthcare. On a critical note, one must ask the question whether patients are really helped with all this information and if it would not lead to information overkill. After all: patients very often still rely on their GP's advice.

Trend 8: Interoperability of eHealth platforms may enhance the quality of the care provided and also have a cost-cutting effect.

Access to certain information concerning a patient's medical background has crucial consequences for the quality of both planned and unplanned cross-border care. A lack of medical information can have huge impact on the quality of the treatment provided and the follow-up or aftercare in the home country. In cases of an emergency, access to correct medical information can be of vital importance.

Sharing medical data can also have cost-saving benefits. For instance, sharing medical data and test results could help avoid duplicate examinations and medical tests. For this reason interoperability of eHealth platforms between the Benelux countries, which would facilitate the sharing of medical data across borders – subject to the necessary attention for privacy protection – was considered welcome by several experts.

Trend 9: The further development of European reference networks between care providers and centres of expertise will become a testing ground for cross-border cooperation in specialised healthcare.

The European reference networks between care providers and centres of expertise can be a testing ground for cross-border cooperation in specialised healthcare. The further expansion of these reference networks will be very important in the development of expertise and new treatment techniques for rare diseases and scientific research.

²¹ An evaluation of the National Contact Points can be found in the report of the Commission on the implementation of Directive 2011/24/EU on the application of patients' rights in cross-border healthcare (Com (2015) 421 final).

9. Recommendations



Based on the results of the Benelux study into the cross-border patient flows between the Benelux countries, France and Germany and the additional input from the panel of experts on the future expectations, the General Secretariat of the Benelux Union has formulated recommendations for the purpose of securing the quality and accessibility of cross-border healthcare within the Benelux. These recommendations can be grouped under the following key themes: healthcare offer; patients' rights; patient data; prevention of fraud and policy support. The starting point in this respect is that future policies on cross-border healthcare must focus on optimising the general accessibility and quality of the healthcare offer by eliminating the current barriers obstructing cross-border healthcare.

HEALTHCARE OFFER

1. The development of good cross-border cooperation in the field of healthcare between the Benelux countries positively influencing the accessibility, quality and costs of care provision.
2. The harmonisation of the healthcare offer for specialised treatments between the Benelux countries in view of the expected increase of cross-border patients looking for specialised care abroad and of the financial pressure on healthcare systems in the individual countries.
3. The expansion of existing and new collaborations in border regions, in view of the significant share of cross-border patient flows due to geographical proximity and cultural affinity. In addition, a mapping of successful cross-border health collaborations and agreements to provide an insight into the future cooperation potential.

PATIENTS' RIGHTS

4. An expansion of the information provision to patients about their rights (and obligations) in relation to cross-border care. The Benelux countries can become leaders in the field of cross-border care within Europe by lifting several barriers for cross-border care which are often caused by a lack of knowledge.

PATIENT DATA

5. Commitment to increasing safe cross-border sharing of patient data. eHealth platforms communicating with each other across borders will benefit the quality and continuity of care. In this context it is essential that proper data protection is in place to guarantee patient privacy.

PREVENTION OF FRAUD

6. A commitment to sharing real-time insurance information will protect both care providers and care givers against fraudulent practices. It is essential that the exchange of financial and insurance information happens at the same pace as the cross-border patient flows.

POLICY SUPPORT

7. Stimulating transparent, high-quality and comprehensive data collection which is accessible and comparable for the purpose of substantiating future policy interventions and in-depth scientific research.

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APPENDIX 1

Rules and regulations with respect to cross-border healthcare and reimbursement thereof in the EU-28 countries, Iceland, Liechtenstein, Switzerland and Norway.

Extensive European regulations exist in relation to the reimbursement of treatments abroad, determining which cross-border healthcare is covered by social security of the Member State to which the patient involved belongs.

The current European regulations are based on two legal arguments. First of all Regulation (EC) no. 883/2004 of 29 April 2004 on the coordination of the social security systems and its Implementing Regulation (EC) 987/2009 of 16 September 2009. Secondly, Directive 2011/24/EU of 9 March 2011 on the application of patients' rights in cross-border healthcare, whose transmission data recently expired (25 October 2013). The Directive specifically serves to clarify issues regarding reimbursement of cross-border healthcare and eHealth.

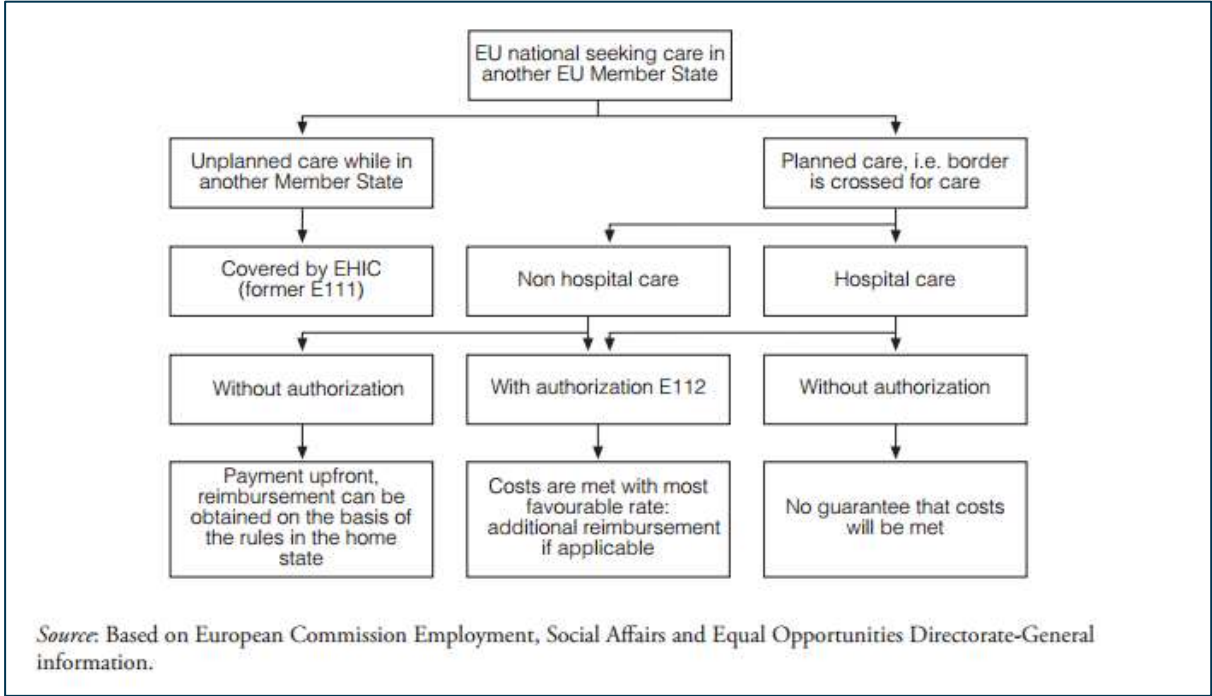
Regulation (EC) no. 883/2004 also created the European Health Insurance Card, which covers unplanned care during temporary stays abroad. The European Health Insurance Card (EHIC) replaces several forms, including the E111-form. The blue card provides proof of insurance in the EU-28 countries, including Iceland, Liechtenstein, Norway and Switzerland. Per country the list may be supplemented with other countries, for instance Australia for Belgians. Some countries accept only the E-111 form. This is the case in Algeria, Bosnia and Herzegovina, Kosovo, Morocco, Montenegro, Serbia, Tunisia and Turkey. Some overseas areas of the EU-28 are excluded from EHIC cover. In those areas patients require travel insurance.



The general principle is that EU citizens are entitled to reimbursed care abroad in the EU-28 countries, Iceland, Liechtenstein, Switzerland and Norway as long as, under normal circumstances, the treatment and costs would also have been reimbursed in the home country (Baeten & Palm, 2012). In practice this means that under normal circumstances, treatment across the border without hospitalisation will be reimbursed without any problems. In the case of hospitalisation, the authorities involved in the home country may in certain situations impose a system of prior authorisation. This usually applies when cross-border mobility poses a risk to the functioning of a country's own public health system (Footman et al., 2014), for instance in the case of very expensive treatments which require a Member State to invest in highly specialist equipment.

Figure 23 shows a flowchart of the different legal options for reimbursing a patient for treatment abroad (Wismar et al., 2011). The distinction between planned and unplanned care is crucial in this respect.

Figure 23 Summarizing flowchart of the reimbursement mechanisms in cross-border healthcare (Wismar et al., 2011).



European legislation attempts to maintain the delicate balance between the right to free movement of services and the challenges in relation to planning public healthcare. Case law of the Court of Justice of the European Union contains several rulings that helped shape the legislative framework, such as the case Kohll & Decker, the Geraets-Smits case, the Peerbooms case and many others. One of the important additions thus created is that in certain situations Member States have an obligation to allow treatment abroad. If adequate treatment in the home country is not feasible within a reasonable term, the patient is entitled to treatment abroad.

APPENDIX 2

Number of stays in Belgian hospitals according to insurance type and country of residence.

Source: MZG (2012)

Insurance contract	Country of residence									
	DE		FR		LU		NL		BE	
	Number of stays	%	Number of stays	%	Number of stays	%	Number of stays	%	Number of stays	%
Insured with a Belgian health insurance agency	1,525	43.2	17,299	66.5	2,423	65.7	7,749	21.6	5,644,800	92.9
National Institute for War Disabled	<5	<0.2	<5	<0.2	<5	<0.2	<5	<0.2	74	0
Relief and Provident Fund for Seafarers	<5	<0.2	<5	<0.2	<5	<0.2	<5	<0.2	957	0
Service for Overseas Social Security	<5	<0.2	6	0	21	0.6	<5	<0.2	2,189	0
Public centre for social welfare	<5	<0.2	21	0.1	<5	0.1	54	0.2	19,808	0.3
Care contracts with foreign care players located in a member state of the EU or EEA or in Switzerland, and without healthcare cover in Belgium	42	1.2	67	0.3	3	0.1	16,481	45.9	3,487	0.1
Private initiative of people who have healthcare insurance in another member state of the EU or EEA or in Switzerland, and without healthcare cover in Belgium	655	18.6	1,206	4.6	286	7.8	3,690	10.3	29,998	0.5
People who have healthcare insurance with an organisation under international or European law, and who do not have healthcare cover in Belgium	68	1.9	37	0.1	86	2.3	152	0.4	8,273	0.1
Patients who have healthcare insurance in a country not belonging to the EU/EEA or Switzerland and who do not resort under an international agreement, and who do not have healthcare cover in Belgium	222	6.3	1,138	4.4	224	6.1	677	1.9	30,577	0.5
Non-insured patients	565	16	3,407	13.1	374	10.1	2,400	6.7	95,272	1.6
Others	448	12.7	2,813	10.8	269	7.3	4,671	13	243,530	4
Non-insured patients (incl. PCSW)	<5	<0.2	<5	<0.2	<5	<0.2	<5	0	<5	<0.2
International agreements	<5	<0.2	<5	<0.2	<5	<0.2	52	0.1	<5	<0.2
Total	3,527	100	25,994	100	3,688	100	35,927	100	6,078,971	100

APPENDIX 3

Top 10 ISHMT main diagnoses per type of hospitalisation and country of domicile
Source: MZG (2012)

SAME-DAY HOSPITALISATION Germany			
ISHMT code	ISHMT main diagnosis	N	%
2105	Other factors influencing health status and contact with health services	270	47.9
1906	Other injuries	38	6.7
2104	Other medical care (including radiotherapy and chemotherapy sessions)	20	3.5
701	Cataract	17	3.0
1902	Other injuries to the head	17	3.0
1101	Disorders of teeth and supporting structures	13	2.3
1410	Other disorders of the genitourinary system	13	2.3
209	Other malignant neoplasms	10	1.8
301	Anaemias	10	1.8
911	Other diseases of the circulatory system	9	1.6
Total diagnoses, above		417	73.9
Total all diagnoses		564	100.0

TRADITIONAL HOSPITALISATION Germany			
ISHMT code	ISHMT main diagnosis	N	%
1906	Other injuries	57	8.6
1901	Intracranial injury	30	4.5
2105	Other factors influencing health status and contact with health services	26	3.9
903	Acute myocardial infarction	23	3.5
908	Cerebrovascular diseases	23	3.5
402	Other endocrine, nutritional and metabolic diseases	20	3
1804	Other symptoms, signs and abnormal clinical and laboratory findings	20	3
2103	Liveborn infants according to place of birth ('healthy newborn babies')	20	3
209	Other malignant neoplasms	19	2.9
605	Other diseases of the nervous system	16	2.4
Total diagnoses, above		254	38.3
Total all diagnoses		660	100

SAME-DAY HOSPITALISATION			
France			
ISHMT code	ISHMT main diagnosis	N	%
2105	Other factors influencing health status and contact with health services	1055	16.8
2104	Other medical care (including radiotherapy and chemotherapy sessions)	980	15.6
701	Cataract	654	10.4
1403	Urolithiasis	288	4.6
1906	Other injuries	236	3.8
1101	Disorders of teeth and supporting structures	199	3.2
605	Other diseases of the nervous system	191	3.0
1410	Other disorders of the genitourinary system	190	3.0
213	Other benign neoplasms and neoplasms of uncertain or unknown behaviour	157	2.5
209	Other malignant neoplasms	156	2.5
Total diagnoses, above		4106	65.4
Total all diagnoses		6285	100.0

TRADITIONAL HOSPITALISATION			
France			
ISHMT code	ISHMT main diagnosis	N	%
2103	Liveborn infants according to place of birth ('healthy newborn babies')	449	6.8
1503	Complications of pregnancy predominantly in the antenatal period	319	4.8
1906	Other injuries	311	4.7
2105	Other factors influencing health status and contact with health services	223	3.4
1804	Other symptoms, signs and abnormal clinical and laboratory findings	218	3.3
402	Other endocrine, nutritional and metabolic diseases	217	3.3
605	Other diseases of the nervous system	206	3.1
1909	Complications of surgical and medical care, not elsewhere classified	154	2.3
209	Other malignant neoplasms	147	2.2
1403	Urolithiasis	121	1.8
Total diagnoses, above		2365	35.7
Total all diagnoses		6608	100

SAME-DAY HOSPITALISATION			
Luxembourg			
ISHMT code	ISHMT main diagnosis	N	%
2104	Other medical care (including radiotherapy and chemotherapy sessions)	312	29.1
2105	Other factors influencing health status and contact with health services	190	17.7
209	Other malignant neoplasms	54	5
605	Other diseases of the nervous system	39	3.6
702	Other diseases of the eye and adnexa	38	3.5
701	Cataract	31	2.9
1410	Other disorders of the genitourinary system	30	2.8
211	Benign neoplasm of colon, rectum and anus	18	1.7
213	Other benign neoplasms and neoplasms of uncertain or unknown behaviour	18	1.7
1906	Other injuries	18	1.7
Total diagnoses, above		748	69.7
Total all diagnoses		1072	100.0

TRADITIONAL HOSPITALISATION			
Luxembourg			
ISHMT code	ISHMT main diagnosis	N	%
209	Other malignant neoplasms	98	6.8
1909	Complications of surgical and medical care, not elsewhere classified	86	5.9
2105	Other factors influencing health status and contact with health services	75	5.2
906	Conduction disorders and cardiac arrhythmias	69	4.8
2104	Other medical care (including radiotherapy and chemotherapy sessions)	64	4.4
1700	Congenital malformations, deformations and chromosomal abnormalities	51	3.5
702	Other diseases of the eye and adnexa	48	3.3
605	Other diseases of the nervous system	47	3.3
911	Other diseases of the circulatory system	41	2.8
213	Other benign neoplasms and neoplasms of uncertain or unknown behaviour	38	2.6
Total diagnoses, above		617	42.6
Total all diagnoses		1446	100

SAME-DAY HOSPITALISATION			
The Netherlands			
ISHMT code	ISHMT main diagnosis	N	%
2104	Other medical care (including radiotherapy and chemotherapy sessions)	2905	20.8
2105	Other factors influencing health status and contact with health services	1986	14.2
605	Other diseases of the nervous system	1226	8.8
1303	Internal derangement of knee	487	3.5
701	Cataract	444	3.2
1307	Intervertebral disc disorders	413	3
1309	Soft tissue disorders	398	2.9
1101	Disorders of teeth and supporting structures	397	2.8
1308	Dorsalgia	340	2.4
1306	Deforming dorsopathies and spondylopathies	330	2.4
Total diagnoses, above		8926	64.0
Total all diagnoses		13955	100.0

TRADITIONAL HOSPITALISATION			
The Netherlands			
ISHMT code	ISHMT main diagnosis	N	%
1307	Intervertebral disc disorders	1023	7.2
1909	Complications of surgical and medical care, not elsewhere classified	692	4.9
605	Other diseases of the nervous system	575	4.1
2105	Other factors influencing health status and contact with health services	561	4
904	Other ischaemic heart disease	545	3.9
402	Other endocrine, nutritional and metabolic diseases	542	3.8
209	Other malignant neoplasms	470	3.3
1906	Other injuries	462	3.3
2104	Other medical care (including radiotherapy and chemotherapy sessions)	413	2.9
1301	Coxarthrosis [arthrosis of hip]	405	2.9
Total diagnoses, above		5688	40.3
Total all diagnoses		14140	100

APPENDIX 4

List of attendees to the workshop 'Patients without borders? Cross-border patient flows in the Benelux', held in Brussels on 8 September 2015.

NL	Mrs Tessy Nelissen	Directorate for Curative Care Ministry of Health, Welfare and Sport International Affairs Department (IZ)
NL	Mr Erwin Eisinger	Directorate for Curative Care Ministry of Health, Welfare and Sport International Affairs Department (IZ)
NL	Mr John Stevens	Strategy and Innovation Project Manager CZ
NL	Mrs Monique Broekhuis-Fleuren	CZ
NL	Mr Barry Egberts	Senior Manager Knowledge Centre Achmea Zilveren Kruis
NL	Mr Onno van der Galliën	Senior Research Consultant Knowledge Centre Achmea Zilveren Kruis
LU	Mr Hervé Barge	Directeur générale de l'Agence eSanté
LU	Mrs Anne Calteux	Senior Policy Advisor Ministère de la Santé, Agence eSanté
LU	Mrs Daisy Smet	Agence eSanté
LU	Mr Samuel Danhardt	Agence eSanté
BE	Mrs Eveline Depuijdt	Unit Head Database Management FPS Public Health, Food Chain Safety and Environment
BE	Mr Christian Horemans	International Affairs Expert at the Independent Health Insurance Funds
BE	Mr Luc Nicolas	Telematics Expert FPS Public Health, Food Chain Safety and Environment
BE	Mr Chris Segaert	International Agreements Expert at RIZIV-INAMI
BE	Mrs Nathalie Bernard	Head of International Agreements GZ Regulations and Tariffs National Association of Neutral Health Insurance Funds
BE	Mrs Myriam Wauters	National Association of Neutral Health Insurance Funds
BE	Mr Patrick Carnotensis	National Association of Christian Health Insurance Funds
BE	Mrs Fabienne van Sloten	National Association of Christian Health Insurance Funds
EU	Mrs Corina Vasilescu	European Commission - DG Sanco

EU Mr Aurelien Perez

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