

Key Data in Healthcare

General Hospitals

Health
Food Chain Safety
Environment

.be

Colophon

Subject:

This report provides a concise overview of how general hospitals function, based on a number of key figures. By means of four chapters on the subject of 'Organisation', 'Activity', 'Financing', and 'Collaboration: a driver for quality and innovation', it highlights various trends with regard to the way that this sector of the healthcare system operates.

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FOREWORD

It is with great pleasure that I present to you this new edition of "Key Data in Healthcare," in which we provide a detailed overview of how general hospitals operate in Belgium. This edition highlights the crucial role of collaboration between hospitals and healthcare actors to ensure quality healthcare for every citizen.

In recent years, steps have been taken to promote cooperation between hospitals. Locoregional hospital networks were established with the aim of encouraging greater collaboration, distributing activities more efficiently, coordinating care, and maximizing value for society and patients. The principle we apply is: '**Care should be provided in the vicinity where possible and specialised care where needed.**' After all, everyone should have access to a neighbouring hospital that provides basic care. However, specialised care should be centralised in reference centres so that expertise can be clustered there.

This principle has already been applied in several areas of healthcare, such as cardiology, transplant surgery and neonatal healthcare. By applying that principle, we aim to promote the efficiency and quality of care through collaboration and help create a more integrated and patient-centred approach.

In this publication, we will present different forms of partnerships and provide details on their context and organisation. We are convinced that shared responsibility and a common commitment to excellence in healthcare form the cornerstones of a sustainable healthcare system. It is our hope that the data and insights shared in this publication will contribute towards a better understanding of the current state of affairs and will serve as inspiration for further collaboration and innovation within the sector.

We also hope that reading this publication will be both enriching and inspiring.

Yours sincerely,

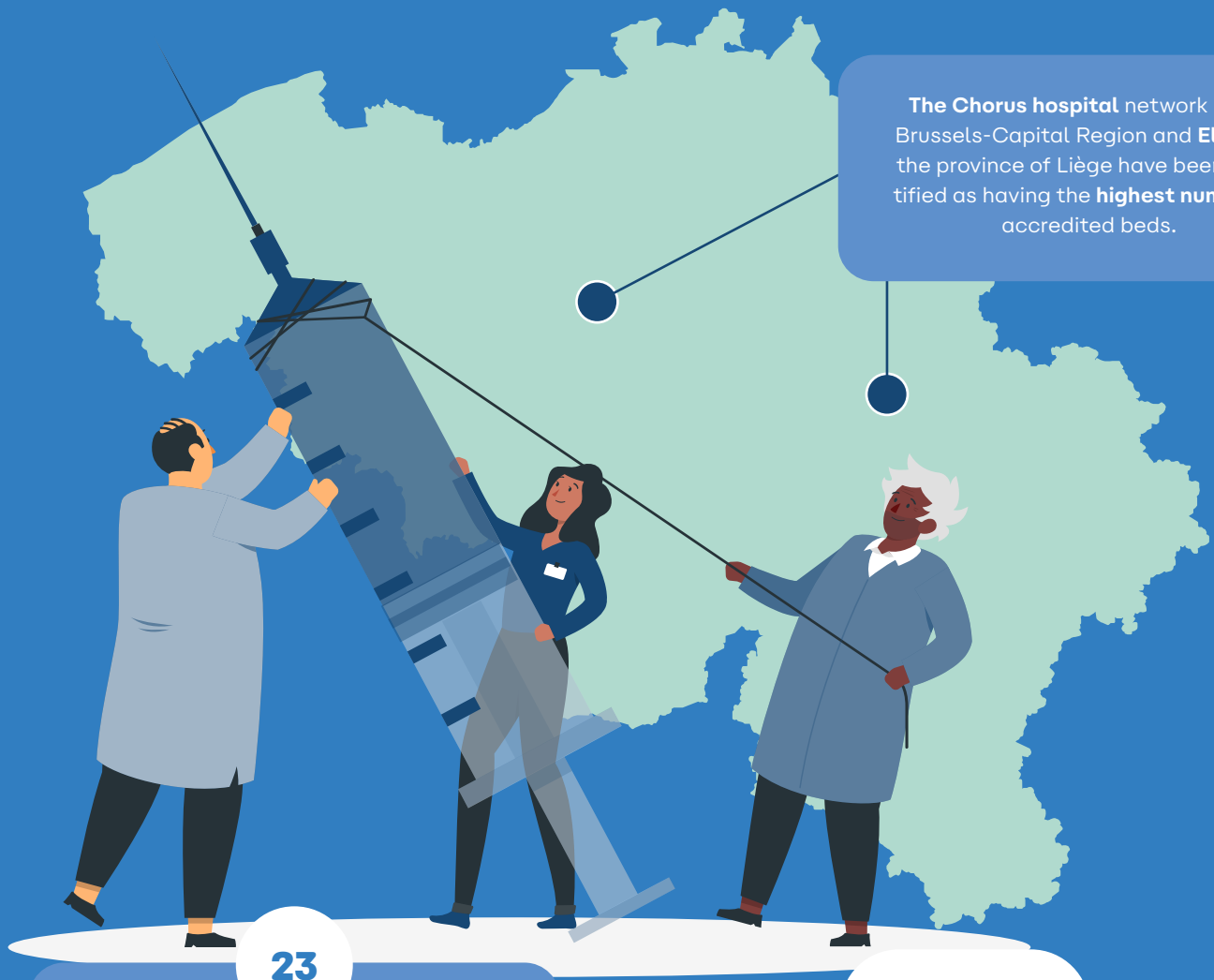
Sabine Stordeur
Director-General at DG Healthcare

1 ORGANISATION

103

On 1 January 2025, there were **103 general hospitals** in Belgium.

The Chorus hospital network in the Brussels-Capital Region and **Elipse** in the province of Liège have been identified as having the **highest number** of accredited beds.



23

In 2025, there are **23 locoregional hospital networks** in Belgium.

52,317

On 1 January 2025, there were **52,317 accredited beds in total.** In this regard, the last 30 years have seen a decrease in the number of acute care beds and an increase in the number of accredited beds for the care for geriatric patients and for patients with psychiatric and chronic problems.

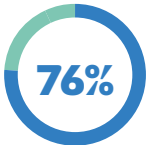
ORGANISATION



1.1 Hospitals

On 1 January 2025, there were 103 hospitals in Belgium, including 78 conventional general hospitals, 7 university hospitals and 18 hospitals with a university character. One hospital may consist of several campuses. In Belgium, on 1 January 2025, there were 189 campuses.

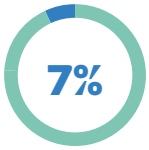
General hospitals can be subdivided into three different types:[1]



‘Conventional’ general hospitals (76%)

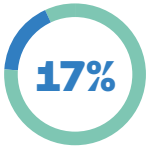
These hospitals receive patients day and night to provide specialist medical care. To fulfill the notion of general hospital[2], a hospital must have at least 150 accredited beds and must include a service for surgical activities and internal medicine in addition to at least one other discipline such as geriatrics, maternity, paediatrics, neuropsychiatry or rehabilitation. Furthermore, they must include the functions of anaesthesiology, radiology, basic clinical biology activities, a rehabilitation department, basic hospital pharmacy activities and a palliative care role. Finally, a physician must always be present.

Some atypical hospitals are also included in this category. Under the sixth state reform, it was decided to transfer jurisdiction over specialized hospitals (which exclusively offer geriatric and/or rehabilitation services) to the federated entities, except for the Foyer Horizon hospital (which only has beds for specialist palliative care (S4), for which jurisdiction remained with the federal government). At the time, some specialist hospitals chose to merge with a ‘conventional’ general hospital. Others preferred to expand their activities, mostly by adding psychiatric services. From a legal standpoint, these hospitals nowadays form part of the general hospitals, though they do not have a surgical or internal medicine department.



University hospitals (7%)

University hospitals offer at least the same services as conventional general hospitals, but they additionally accommodate patients requiring highly specialised treatment. A university hospital also has a mission to train healthcare providers, engage in scientific research, and develop new technologies. They are connected to a university with a medical school that provides a full programme of study.



General hospitals with a university character (17%)

These are general hospitals that have been allocated a number of university beds.

1 This report will focus on the general hospitals under federal jurisdiction and will leave out psychiatric hospitals (which provide care exclusively to people with mental disorders) and exclusively specialized hospitals (with the exception of Foyer Horizon).

2 An exception is made in the case of those hospitals that consist exclusively of specialised services for treatment and rehabilitation whether or not in conjunction with ordinary hospitalisation or neuropsychiatry departments for the treatment of adult patients.

1.2 Hospital activities

The activities of hospitals are organised into services, hospital functions and care programmes.

Services group together activities that are linked to a specific location within the hospital. A distinction is made between hospitalisation services, where patients reside during their stay in hospital, and medical or medico-technical services, which provide specific services requiring special expertise or equipment. Medical services include transplant centres or centres for burn victims. Medical-technical services include medical imaging services, human genetics centres, radiotherapy services and kidney dialysis centres.

Hospital functions are hospital activities made available to all hospital departments. Several functions are subject to specific standards and controls imposed and carried out by the competent community or region. Accredited functions include the hospital pharmacy, palliative care, intensive care and the emergency department, the hospital's blood bank, mediation, pain management and the clinical biology lab, amongst others.

Care programmes can be defined as an organisational framework for implementing 'care pathways' for a specific target group. They are the result of an arrangement between the hospitalisation services, medical or medico-technical services and functions that are necessary in order to provide quality care.

There are currently various care programmes:

- The care programme for 'cardiac pathology'
- The care programme for 'reproductive medicine'
- The oncology care programme, including the specialised care programme for breast cancer and paediatric haemato-oncology
- The care programme for children
- The care programme for geriatric patients
- The care programme for 'stroke care'.

To find out more about the location of the various hospitals and the services offered, please visit:
https://www.health.belgium.be/nl/gezondheid/organisatie-van-de-gezondheidszorg/delen-van-gezondheidsgegevens/gezondheidszorginstellingen

Types of hospital services

Each service within the hospital must be accredited and meet specific standards, including minimum bed capacity, the required level of activities, technical facilities equipment and the number of providers of medical, paramedical and care services.

Each service is allocated an identification letter signifying the subgroup of patients concerned. In order to provide a better overview, we will group the different types of services according to the nature of the conditions generally treated there.

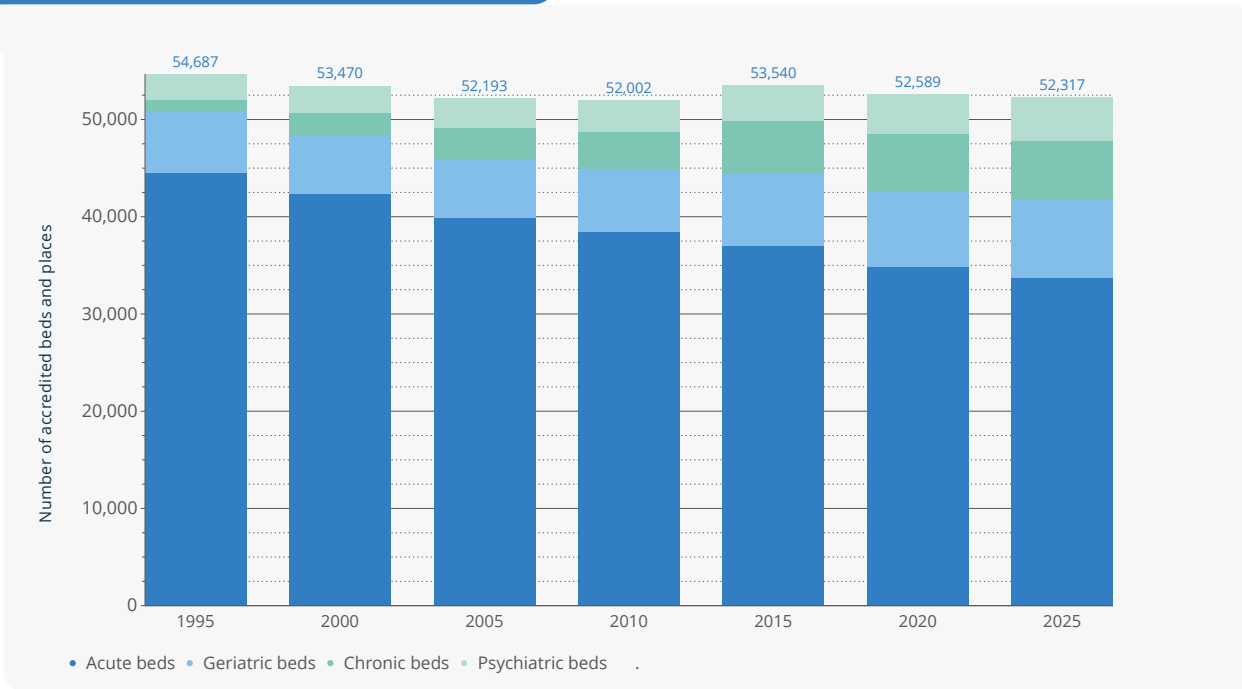
- **Acute beds:** are beds intended for admissions of relatively short duration: e.g. beds for surgery (identification letter C), internal medicine (identification letter D), paediatrics (identification letter E), intensive neonatology (identification letter NIC), maternity (identification letter M), treatment of infectious diseases (identification letter L) and of tuberculosis (identification letter B).
- **Geriatric beds:** are beds for the care of geriatric patients (identification letter G).
- **Chronic beds:** are beds designated for longer-term hospitalisations or for patients requiring chronic treatment**:** such as rehabilitation (identification letter S1 for cardiopulmonary pathologies, S2 for locomotor pathologies, S3 for neurological pathologies, S5 for chronic polypathologies and S6 for psychogeriatric pathologies) and beds for palliative care (identification letter S4).
- **Psychiatric beds and places:** are beds intended for the care of patients with mental disorders, possibly only during the day or at night: such as beds or places for the observation and neuropsychiatric treatment of adults (identification letters A, a1, a2, T and t1) or of children (identification letter K, k1 and k2).

Evolution in the number of accredited hospital beds

On 1 January 2025, there were 52,317 accredited beds in Belgium. The ageing population and advances in medical care are reflected in the evolution of the number of accredited hospital beds. In the past 30 years, the number of accredited beds in Belgium's hospitals has decreased by 2,370 or 4% overall.[3]

"In the past 30 years, the number of accredited beds in Belgium's hospitals has decreased by 4% overall."

Evolution of the number of accredited hospital beds



3 Source: FPS Public Health (1 January 2025). *Hospital Infrastructure Repository (HIR)*. [Dataset]; psychiatric beds decommissioned under the so-called 107 article were included in these figures.

Since 1995, we have observed a 24% decrease in the number of accredited acute care beds, which is due to the shorter length of stay of patients for certain conditions and treatments. Contrary to this trend within general hospitals, the number of geriatric beds has increased by 30%, while the number of chronic care beds has risen by a significant 371%, and the number of psychiatric beds by 71%. This increase can be partly explained by the mergers of general with specialized hospitals as a result of the sixth state reform in 2014. The number of accredited psychiatric beds and places is also shown. This number is higher than the actual number of available places because some of these beds were taken out of use to finance alternative forms of care e.g. for mobile teams to provide specialised care in the home environment or for the intensification of residential care.[4] In addition, it is possible that in the case of other types of beds, the number of accredited beds is higher than the actual number of available beds due to factors such as staff shortages.

1.3 Collaborative links between hospitals



At a time when healthcare is facing increasingly complex challenges, collaborations between hospitals are becoming increasingly crucial. These partnerships, which range from knowledge sharing to joint care initiatives, provide a unique opportunity to increase the quality of patient care and improve efficiency within the sector. This chapter discusses various forms of collaborations between hospitals.

Hospital association

A hospital association is a legally formalised partnership between two or more hospitals. Within that type of association, the hospitals join forces to jointly manage one or more healthcare programmes, hospital services, functions, departments, medical services, medical-technical services or technical services. The association agreement describes in detail what activities will be performed within the association and in which area of care it will take place. The purpose of an association is to make the best use of available resources and avoid duplication of care. This ensures the quality of care while simultaneously optimising the operations and infrastructure of the participating hospitals.

- Example: AZ Klina in Brasschaat forms an association with AZ Voorkempen in Malle to operate a kidney dialysis centre.

- Example: Clinique CHC and Hôpital de La Citadelle located in Liège obtained accreditation for an association in which they jointly operate a service in which a PET scanner has been set up.

Learn more?
Royal Decree further defining the association of hospitals and the particular standards it must meet

4 For more information on this, please consult the publication 'Key Data in Healthcare – Mental Healthcare'.

Hospital grouping

A hospital grouping is a recognised long-term partnership between hospitals situated no more than 25 kilometres apart. Within such a grouping, hospitals agree on the division of labour and complementarity in terms of service offerings, disciplines or equipment. The aim of this is to meet the needs of the population more effectively and improve the quality of healthcare.

- Example: The Sint-Jozefskliniek in Izegem and the AZ Groeninge in Kortrijk have been accredited as a hospital group since 12 February 2024.

- Example: The following hospitals obtained hospital group accreditation on 21 March 2024: CHU Helora - Site Jolimont-Lobbes, CHU Helora - Site Constantinople Mons - Warquignies, CHU Helora - Site Nivelles-Tubize, CHU Helora - Hôpital De Mons.

Learn more?
Royal Decree establishing additional standards for the accreditation of hospitals and hospital services and further defining hospital groupings and the special standards they must meet.

Merger

A hospital merger involves the merging of two or more previously separately accredited hospitals situated no more than 35 kilometres apart under a single administrative entity with a single recognition. The regulations ensure a balanced distribution of services and functions amongst the various locations of the merged hospitals.

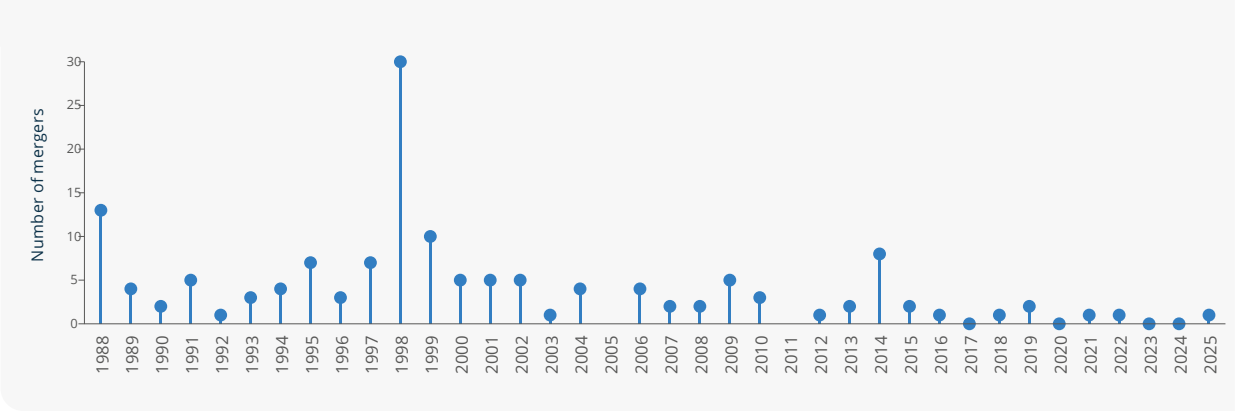
Over time, various waves of hospital mergers have taken place in Belgium. These were spurred on in part by amendments to legislation. In 1998, hospitals were encouraged to enter into a voluntary merger as a result of:

- The abolition of the mandatory surrender of 5% of the overall bed count;
- An increase of the permissible distance between the hospitals entering into the merger from 10 km to 35 km.

In 2014, a number of hospitals merged following the sixth state reform.

Other motivations for mergers include simplifying collaborations, cost savings, increasing efficiency, and improving the quality of care.

Evolution of mergers of general hospitals in Belgium



For more information, see
Royal Decree further defining the merger between hospitals and the particular standards it must meet

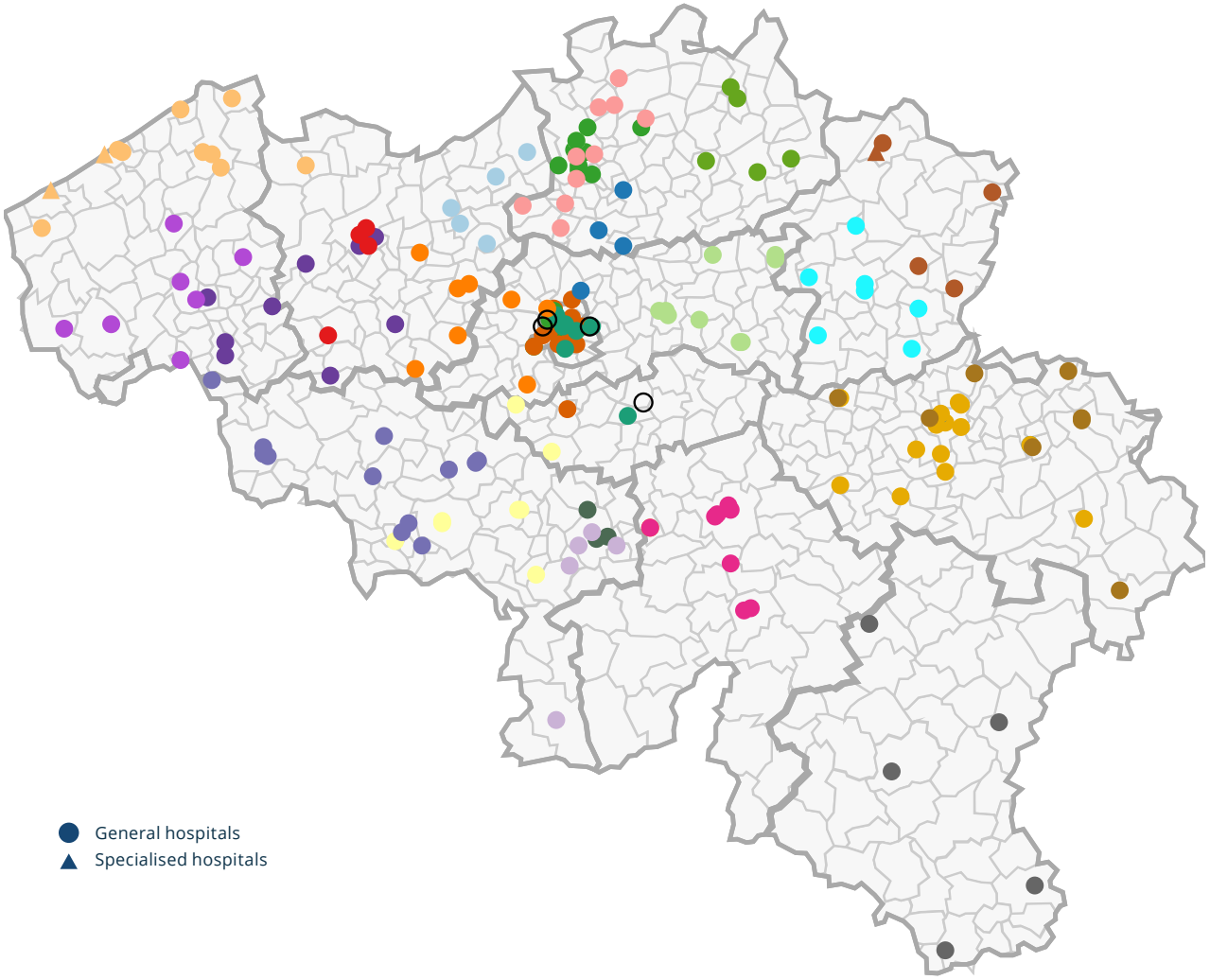
Hospital networks

The creation of locoregional hospital networks aims to encourage hospitals to use resources more efficiently, share investments and promote a division of labour based on expertise.

What are locoregional networks?

Since 1 January 2020, every general hospital has been obliged to form part of one, and only one, locoregional hospital network.[5] A maximum of 13 networks may be formed in Flanders, 8 in Wallonia and 4 in Brussels. The locoregional hospital network is tasked with organizing the locoregional healthcare services within their network.

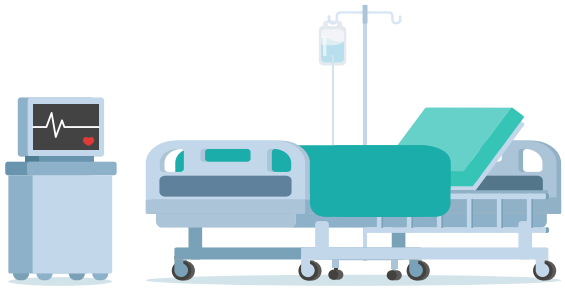
In 2025, there are 23 locoregional hospital networks in Belgium.



5 An exception applies in the case of psychiatric hospitals and general hospitals that only have psychiatric hospital services (identification letter A, T or K) together with specialised treatment and rehabilitation services (identification letter SP) or a geriatric service (identification letter G). The last of those exceptions applies to two hospitals under federal jurisdiction, that do not form part of a locoregional hospital network. These are Silva Médical and Valisana.

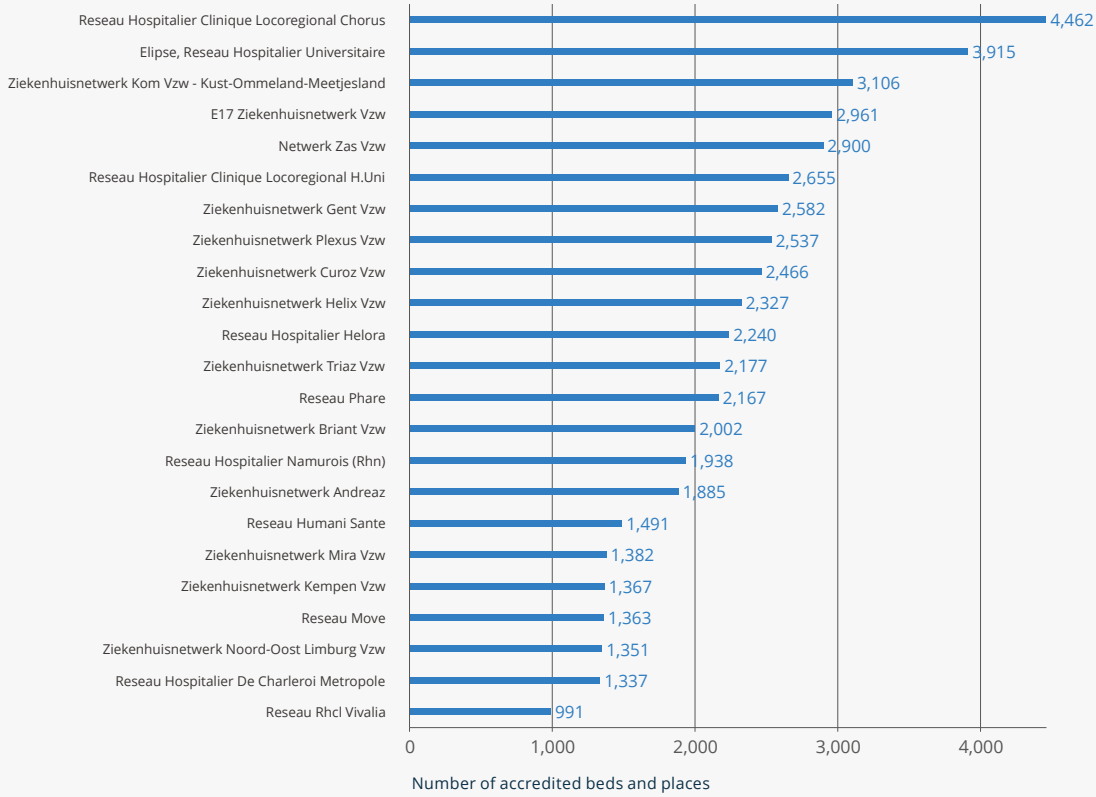
The goal underlying working with locoregional hospital networks is to create an appropriate framework that encourages collaboration within the sector. The aim is for hospitals to continue to offer care that is needed for their care area and to do so in collaboration with hospitals within their network. Hospitals within a network may choose to bring together various services and care packages in the form of shared services, thereby ensuring that resources can be used more efficiently by, for example, making group purchases or operating heavy equipment or infrastructure together.

The aim of the measures is to enable locoregional hospital networks to become more attractive to professionals and patients by improving quality and specialisation. Cooperation with reference centres offering supra-regional care will allow patients who have undergone complex forms of treatment to continue receiving additional follow-up in a locoregional hospital near their place of residence.



The chart below illustrates the size of each network based on the number of accredited beds. On 1 January 2025, the Chorus and Elipse networks had the highest number of accredited beds, with 4,462 and 3,915 beds, respectively.[6]

Number of accredited beds per locoregional hospital network (01/01/2025)



Learn more?
The coordinated Act of 10 July 2008 on hospitals and other care facilities, regarding clinical networking between hospitals

6 The number shown in the graph represents the number of accredited beds in the hospital network in relation to the total number of accredited beds in all Belgian general hospitals under federal jurisdiction that are part of a locoregional hospital network. Ziekenhuisnetwerk KOM and Ziekenhuisnetwerk Noord-Oost Limburg actually have more beds, as specialized hospitals (which do not fall under federal jurisdiction) are also part of the hospital network.

Working together to perform care assignments

"Care should be provided in the vicinity where possible and specialised care where needed"



The basis of the reform introducing locoregional hospital networks is twofold: **"Care should be provided in the vicinity where possible and specialised care where needed"**. In other words, the government wants to ensure that, whenever possible, care is provided as close to home as possible, but also that, from a quality perspective, highly specialised care is more likely to be concentrated in certain locations. A subdivision of care was drawn up that divides healthcare into locoregional care assignments and supra-regional care tasks.

1. Locoregional care assignments

These are the care assignments that should be offered in each locoregional hospital network. On the one hand, this is understood to refer to general care assignments in the case of conventional operations and conditions, such as an emergency department, a geriatric or paediatrics service, etc., which may be offered in any hospital. On the other hand, locoregional care includes care assignments that require patients to come to the hospital regularly for a certain period of time. These include kidney dialysis, the oncology care programme and the stroke care programme. These types of care must be offered in every hospital network, but not in every hospital.

2. Supra-regional care assignments

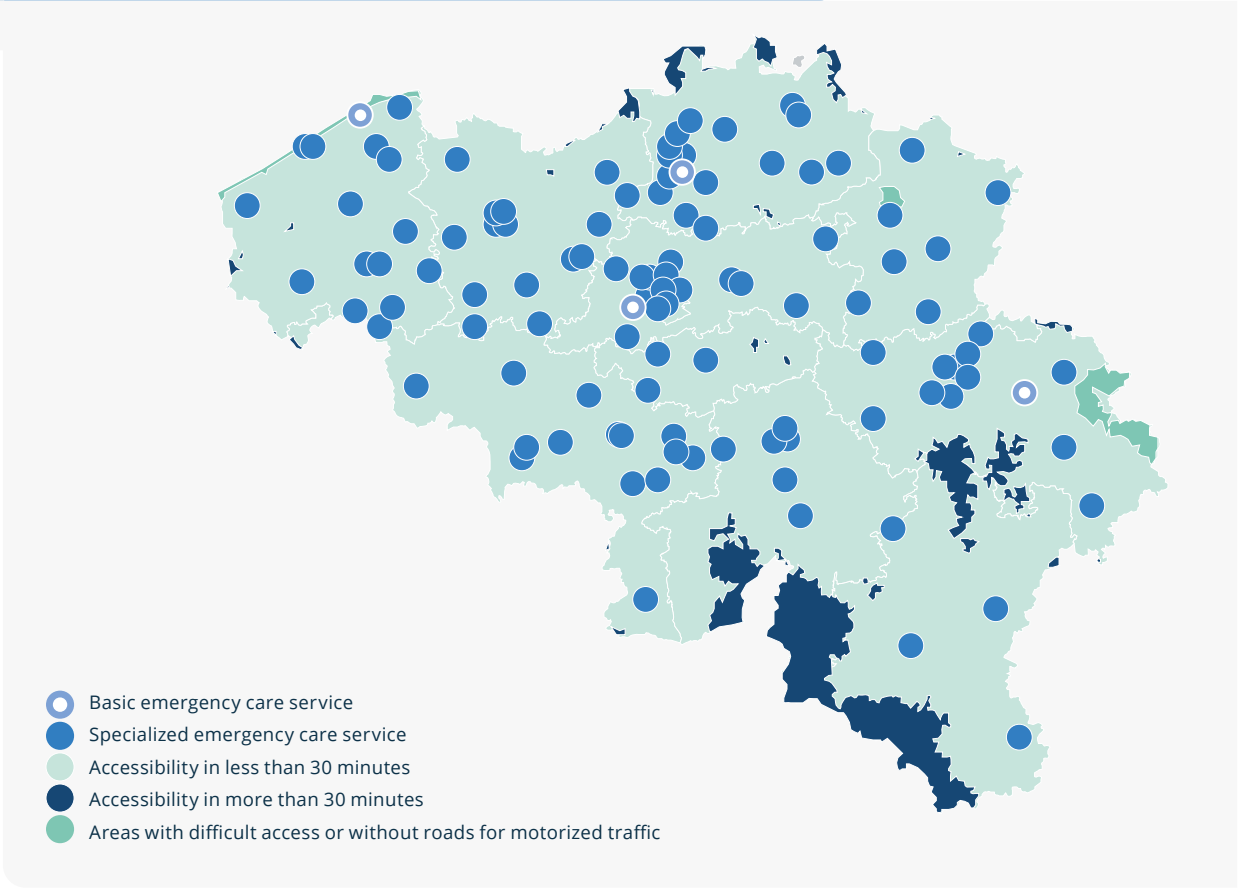
These involve care assignments for a small group of people that require considerable expertise and/or investment. These types of care should not be offered in all hospital networks but must be concentrated in supra-regional reference centres. These include specialised stroke care, burn centres, paediatric oncology centres, and so on.

In 2022, the Royal Decree was published that lists the locoregional and supra-regional care missions for hospital networks. That Royal Decree regarding the qualification of healthcare missions additionally establishes an organic, federal accreditation standard. This standard states that it must be possible for locoregional care missions to be offered within a 30-minute drive of 90% of inhabitants, within the operating area of the hospital network.

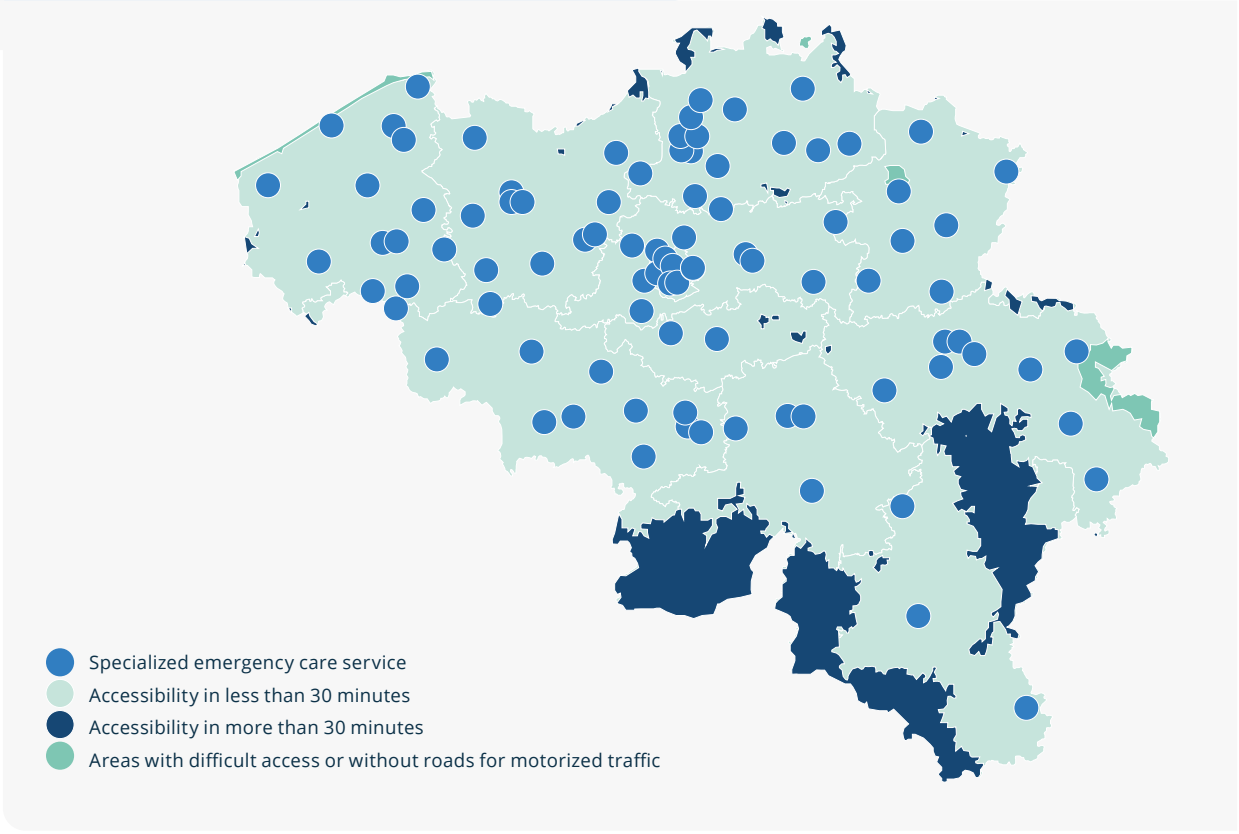


The two maps below illustrate the accessibility of locoregional care missions involving maternity and emergency care. One can observe that especially in the border areas as well as in some areas in the south of the country, it is not possible to guarantee that these services can be accessed within a 30-minute drive.

Accessibility of an emergency department within 30 minutes (12/02/2025)



Accessibility of a maternity unit within 30 minutes (12/02/2025)



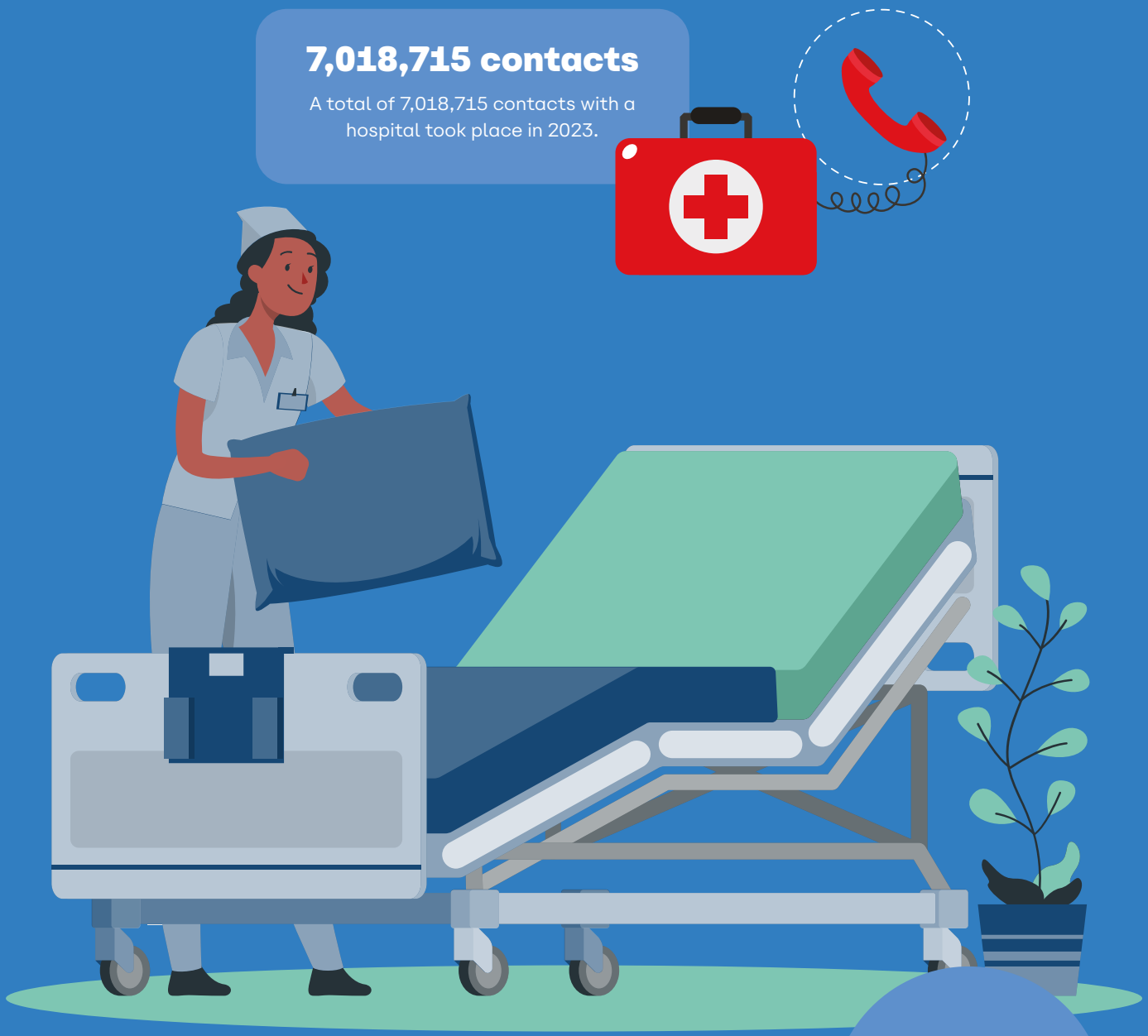
Learn more?

Royal Decree qualifying the supra-regional care assignments and the locoregional care assignments of the locoregional clinical hospital networks and determining the geographical range of locoregional care assignments of the locoregional clinical hospital networks

2 ACTIVITY

7,018,715 contacts

A total of 7,018,715 contacts with a hospital took place in 2023.



In 2023, there were **1,749,272 classic hospitalisations, 2,509,933 day hospitalisations, and 2,759,510 outpatient contacts** with the emergency department.

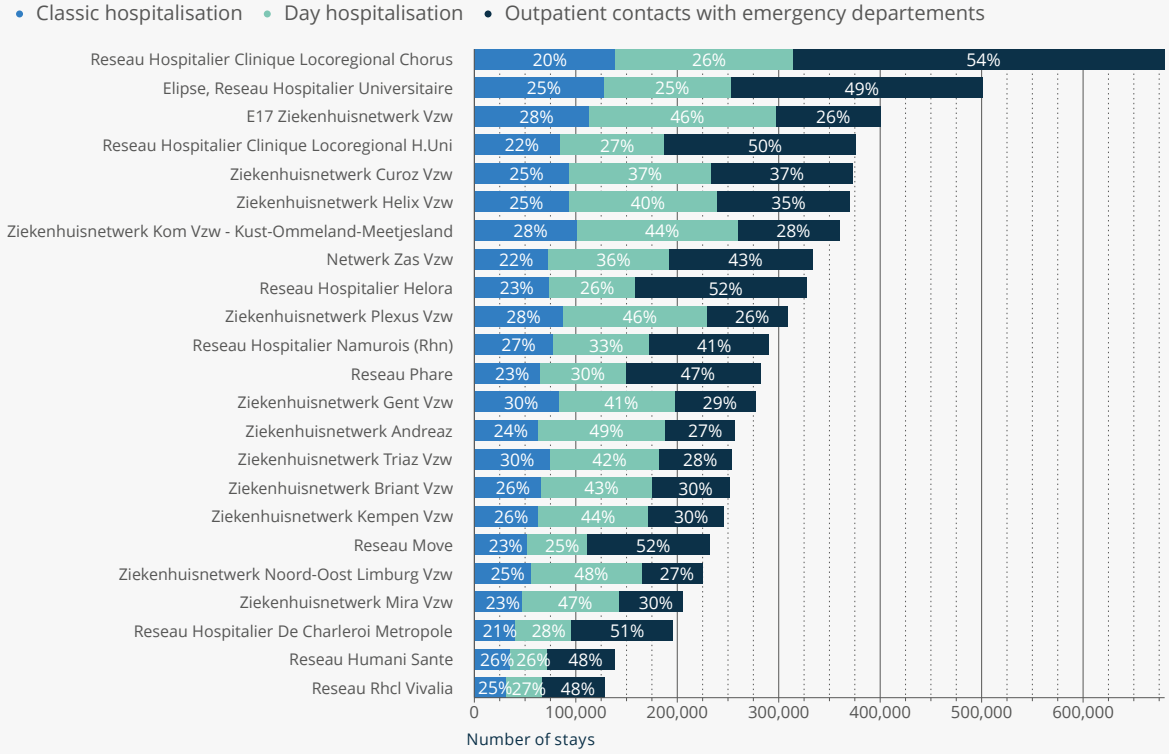
The level of activity within **the Chorus and Elipse hospital** networks was the highest.

Approximately half of the hospital activity in these two networks consists of outpatient contacts with the emergency department.

ACTIVITY

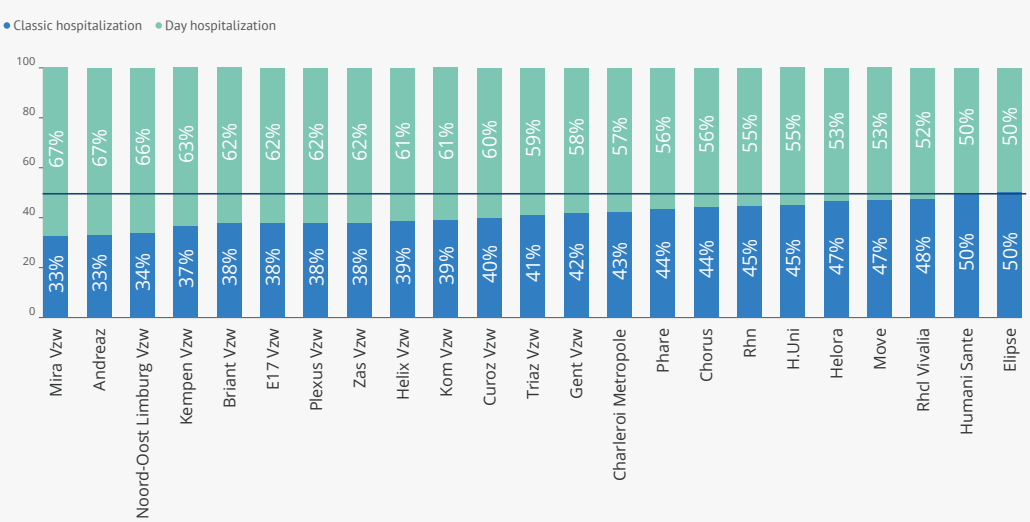
In 2023, there were 1,749,272 classic hospitalisations, 2,509,933 day hospitalisations, and 2,759,510 outpatient contacts with the emergency department.[7] The Chorus and Elipse network recorded the largest number of patient contacts. These are also the hospital networks with the highest number of accredited beds. Half of the hospital activity of these two networks is made up of outpatient contacts with the emergency department.

Number of stays per type of hospitalisation per hospital network (2023)



When comparing the share of classic and day hospitalisations, we found that the proportion of day hospitalisations recorded by the hospital networks ranged between 50% and 67% in 2023.

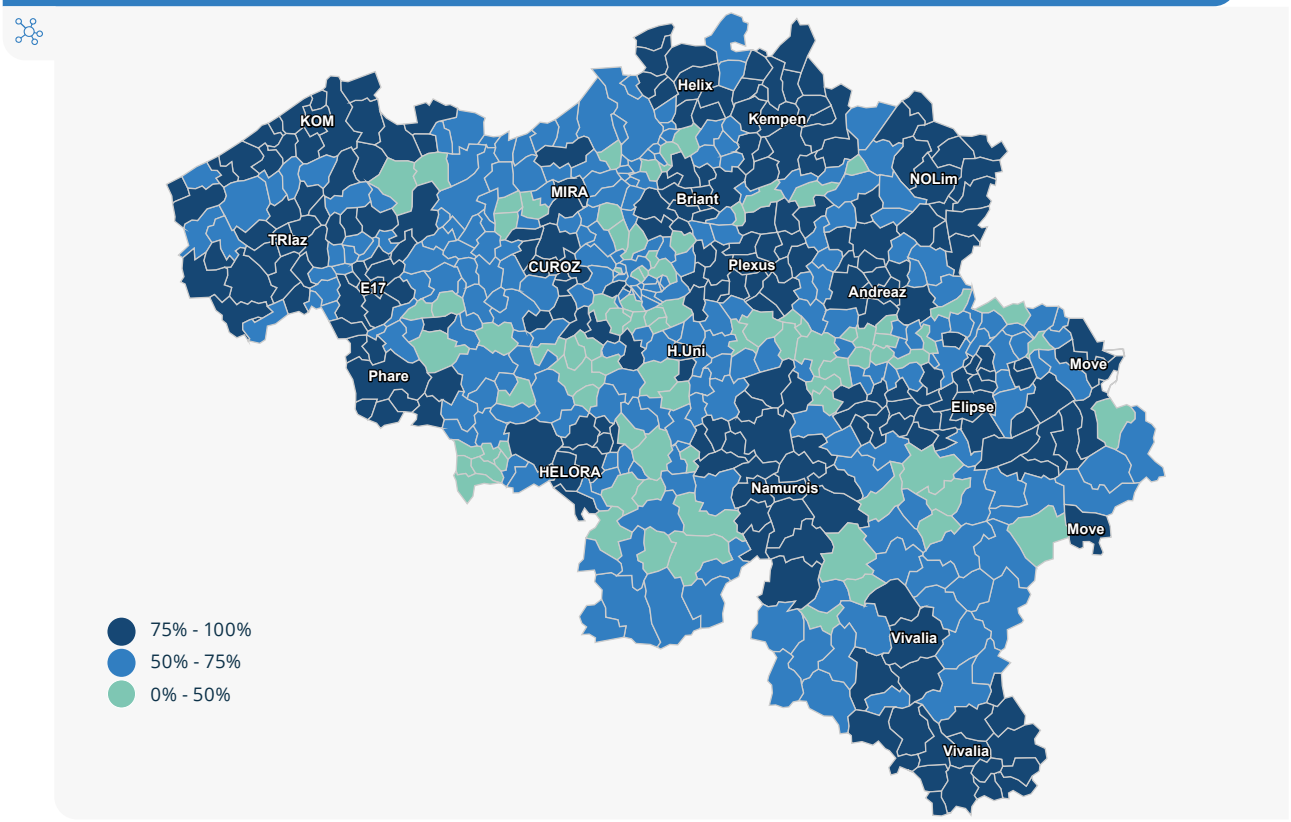
Share of inpatient hospitalization compared to day hospitalization per hospital network



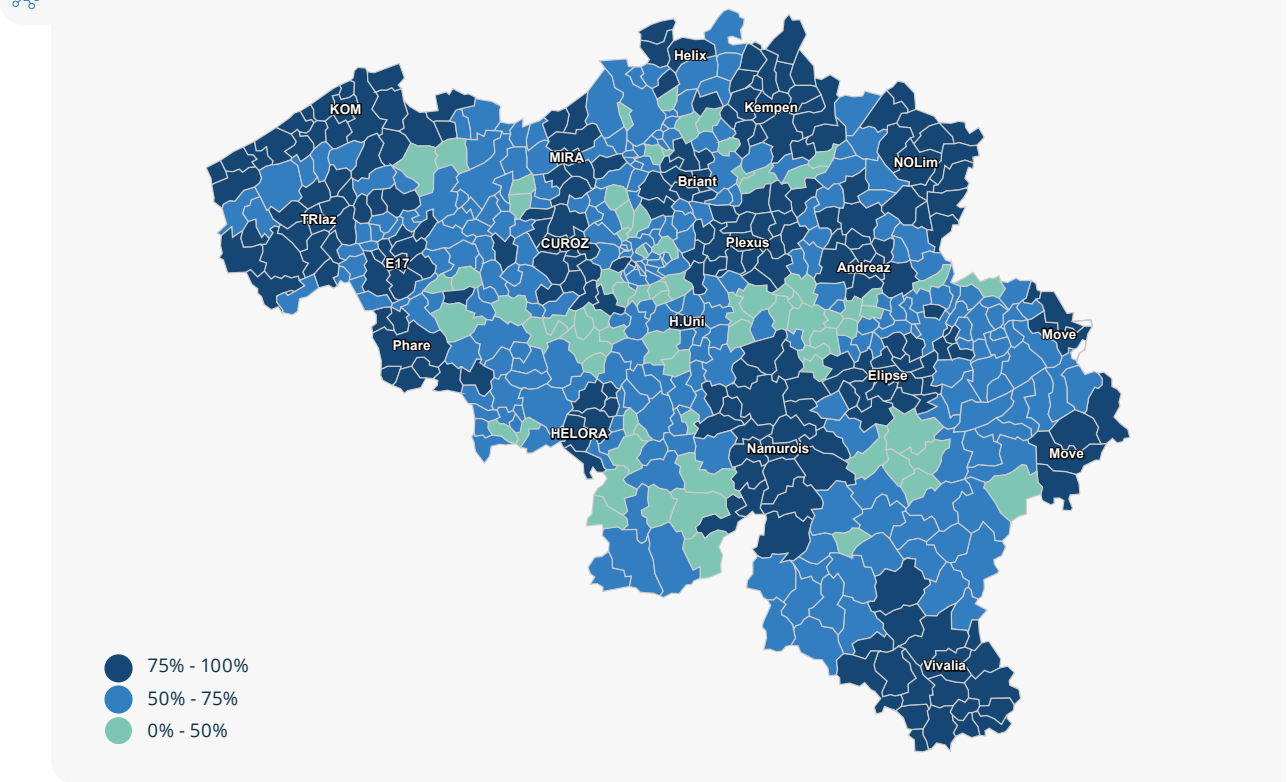
7 Source: FPS Public Health (undated). *Minimale Ziekenhuisgegevens (Minimum Hospital Data – MZG)*. [Dataset]. The following types of stays were not included: non-terminated stays (except the initial period of a lengthy hospital stay), full psychiatric stays, stays of newborns which were not invoiced, stays for which the gender of the patient cannot be determined, stays in day hospitalisation for which a mini-fee or no fixed fee was charged.

It can be observed that in certain regions, the majority of patients consult the same locoregional hospital network. In the dark blue zones on the map below, 75% to 100% of residents go to the same hospital network. In the light blue and green zones, the choice of network is more diverse. This is possibly because hospitals belonging to different networks are located in the same region.

Percentage of patients within 1 municipality attending the same hospital network for classic hospitalisation

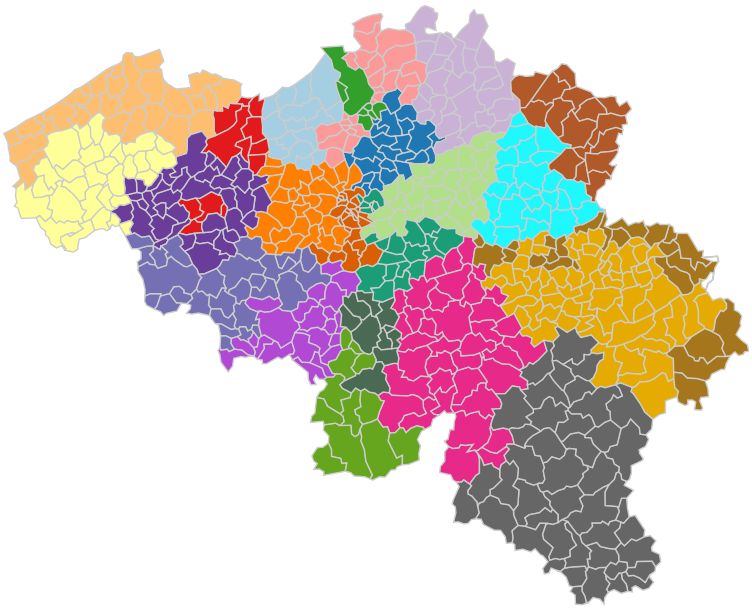


Percentage of patients within 1 municipality attending the same hospital network for day hospitalisation



The map below shows which hospital network most patients turn to by municipality.

Geographical representation showing the locoregional hospital network with the largest market share for classic hospitalisation



- Ziekenhuisnetwerk Mira Vzw
- Ziekenhuisnetwerk Briant Vzw
- Ziekenhuisnetwerk Plexus Vzw
- Netwerk Zas Vzw
- Ziekenhuisnetwerk Helix Vzw
- Ziekenhuisnetwerk Gent Vzw
- Ziekenhuisnetwerk Kom Vzw - Kust-Ommeland-Meetjesland
- Ziekenhuisnetwerk Curoz Vzw
- Ziekenhuisnetwerk Kempen Vzw
- E17 Ziekenhuisnetwerk Vzw
- Ziekenhuisnetwerk Triaz Vzw
- Ziekenhuisnetwerk Noord-Oost Limburg Vzw
- Ziekenhuisnetwerk Andreaz
- Reseau Hospitalier Clinique Locoregional H.Uni
- Reseau Hospitalier Clinique Locoregional Chorus
- Reseau Phare
- Reseau Hospitalier Namurois (Rhn)
- Reseau Humani Sante
- Elipse, Reseau Hospitalier Universitaire
- Reseau Move
- Reseau Rhcl Vivalia
- Reseau Hospitalier De Charleroi Metropole
- Reseau Hospitalier Helora

Geographical representation showing the locoregional hospital network with the largest market share for day hospitalisation



- Ziekenhuisnetwerk Mira Vzw
- Ziekenhuisnetwerk Briant Vzw
- Ziekenhuisnetwerk Plexus Vzw
- Netwerk Zas Vzw
- Ziekenhuisnetwerk Helix Vzw
- Ziekenhuisnetwerk Gent Vzw
- Ziekenhuisnetwerk Kom Vzw - Kust-Ommeland-Meetjesland
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- Ziekenhuisnetwerk Kempen Vzw
- E17 Ziekenhuisnetwerk Vzw
- Ziekenhuisnetwerk Triaz Vzw
- Ziekenhuisnetwerk Noord-Oost Limburg Vzw
- Ziekenhuisnetwerk Andreaz
- Reseau Hospitalier Clinique Locoregional H.Uni
- Reseau Hospitalier Clinique Locoregional Chorus
- Reseau Phare
- Reseau Hospitalier Namurois (Rhn)
- Reseau Humani Sante
- Elipse, Reseau Hospitalier Universitaire
- Reseau Move
- Reseau Rhcl Vivalia
- Reseau Hospitalier De Charleroi Metropole
- Reseau Hospitalier Helora

Learn more?
https://www.healthybelgium.be/en/key-data-in-healthcare/general-hospitals/activity

3 FUNDING

25 billion

The turnover of the general hospitals amounted to **€25 billion** in 2023.



The Financial Resources Budget (FRB) and physicians' fees each accounted for more than **one-third** of total turnover in 2023.

The FRB consists of three main components: **The infrastructure and equipment** (part A), **an operating costs budget** (Part B) and a **budget for the retrospective regularisation** of funding of the various parts of the FRB (Part C).

9.62 billion

In January 2025, an FRB of **€9.62 billion** was provided for general hospitals.



FUNDING

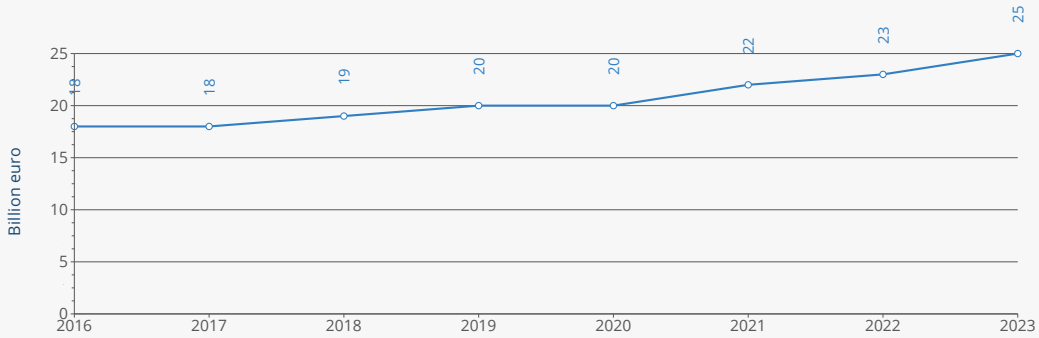
3.1 Funding sources

The general hospital sector recorded a total turn-over of €25 billion in 2023.[8] This represents an increase of 23.5% since 2016.

"The general hospital sector recorded a total turnover of €25 billion in 2023."

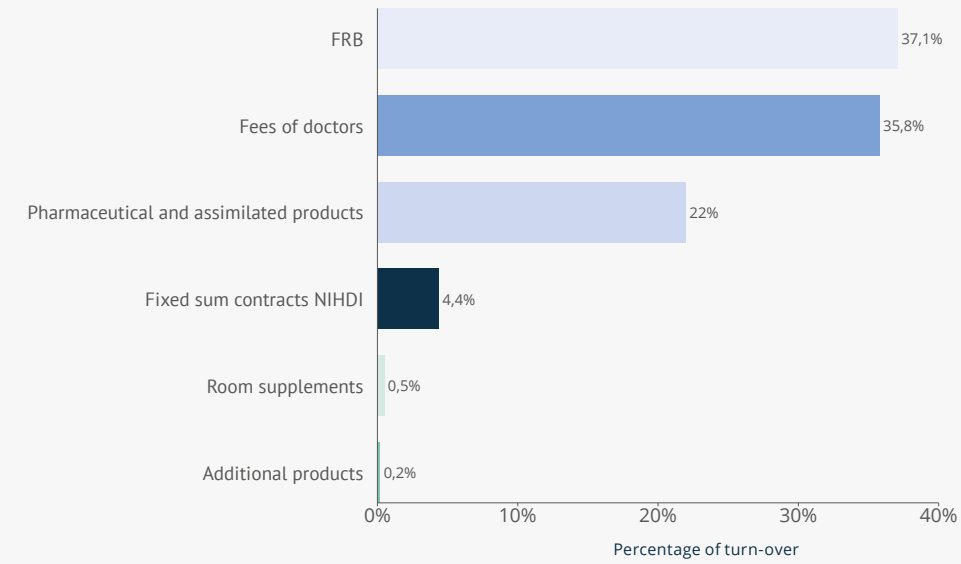


Evolution of general hospital turnover



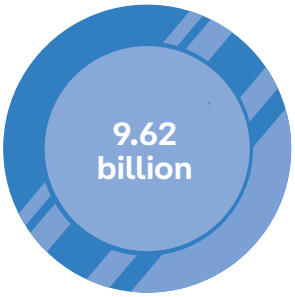
The main sources of financing for hospitals are the Financial Resources Budget (FRB) (37.1%), the deductions from the fees of doctors, dentists and certain categories of medical and paramedical staff (35.8%), pharmaceutical and similar products (21.5%), the fixed charges of NIHDI (4.4%), room supplements (0.5%) and additional products (0.2%).

Breakdown of turn-over (2023)



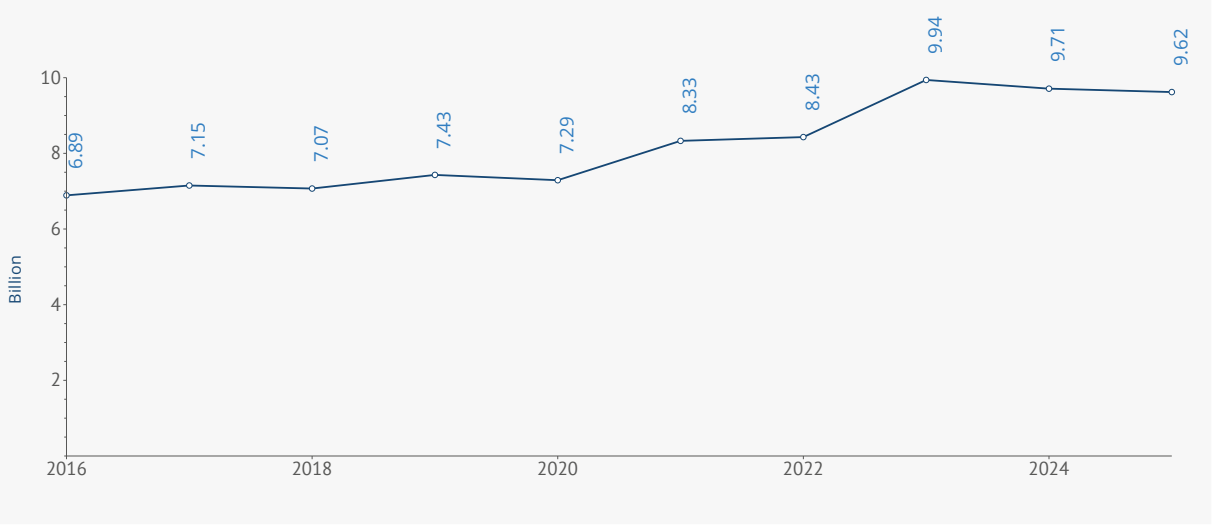
8 Source: FPS Public Health (undated). *Finhosta*. [Dataset]

3.2 The Financial Resources Budget



The financing of a hospital through the Financial Resources Budget results from the individual distribution of the overall hospital budget amongst all hospitals.[9] In January 2025, this overall budget was set at a maximum amount of €9.62 billion for the general hospitals. The FRB has increased by 40% over the past ten years from 6.89 billion in 2020 to 9.62 billion in 2025.

Evolution FRB general hospitals on Jan. 1





9 The distribution is carried out based on the procedures laid down in the Royal Decree of 25 April 2002 on the fixing and settlement of the financial resources budget of hospitals.

The FRB has three main components: an infrastructure and materials budget (Part A)[10], an operating costs budget (Part B) and a budget for the retrospective regularisation of funding for the various parts of the FRB (Part C). Hospital funding is mainly based on fixed amounts, real costs or on a fee-for-service system.

The components of the Financial Resources Budget			% (January 2025)
A: The infrastructure and equipment	A1	Financial charges relating to investments and pre-exploitation costs	4.60%
	A2	Short-term credit charges	0.56%
	A3	Financial charges relating to investments in medical technology services	0.05%
B: Operating costs	B1	Charges for shared services	19.66%
	B2	Cost of clinical services	37.34%
	B3	Operating costs of medical-technical services NMR - Radiotherapy - PET	1.21%
	B4	Recycling and fixed fees	16.16%
	B5	Operating costs of the hospital pharmacy	1.63%
	B6	Cost of employee benefits under social agreement not included in FRB	1.20%
	B7	Costs related to university functions	2%
	B8	Costs linked to the social nature of the patient population	0.31%
	B9	Costs under social agreement	17.89%
C: Corrections	C2	Catch-up amounts	-2.48%
	C3	Partial recovery of room supplements	-0.13%

10 We note that under the sixth state reform, authority pertaining to infrastructure financing (Parts A1 and A3) was transferred to the communities and regions. These budgets are disbursed through the FRB but are charged to the federated entities.

No specific funding is currently provided in the FRB at locoregional network level. Indeed, by means of a recommendation by the Federal Council of Hospital Facilities, the sector has indicated that before considering structural funding at network level, it will be necessary to achieve the following:

- Clarification of locoregional and supra-regional care assignments
- Stabilisation of governance within current networks
- Integration of elements relating to the current reform of hospital funding.

However, several projects are already obtaining funding through the FRB. These projects operate at network level or encourage consultation and coordination between different hospitals. The following are just a selection of these projects:

HOST

17.1 million euros

The Hospital Outbreak Support Teams were established to strengthen infection control and antimicrobial stewardship teams. Their aim is to strengthen cooperation between hospitals within the locoregional network, as well as to promote knowledge transfer between all partners involved.

Data capabilities

20 million euros

This project is intended to encourage hospitals to establish processes that promote collaboration within networks. It is designed to support hospitals in their joint digital transformation. Projects should focus on turning raw data into valuable information that provides added value to patients and in terms of public health.

Training breastfeeding

401,000 euros

Since 2023, funding has been offered to all locoregional networks to support the training of maternity nurses on the subject of breastfeeding and developmental care. The aim is to encourage the exchange of experience and expertise in this field between hospitals and to allow the sharing of certain costs related to this training.

4 COLLABORATION: AN OPPORTUNITY FOR QUALITY & INNOVATION

Premature newborn

Close cooperation between locoregional and supra-regional centres ensures that a premature newborn will receive the most appropriate possible care.

Stroke care

Establishing **specialised care programmes** for **stroke care** will increase the quality of treatment for affected patients.





94

A total of **94 Belgian teams** are members of the European Reference Networks (ERN) for rare diseases.

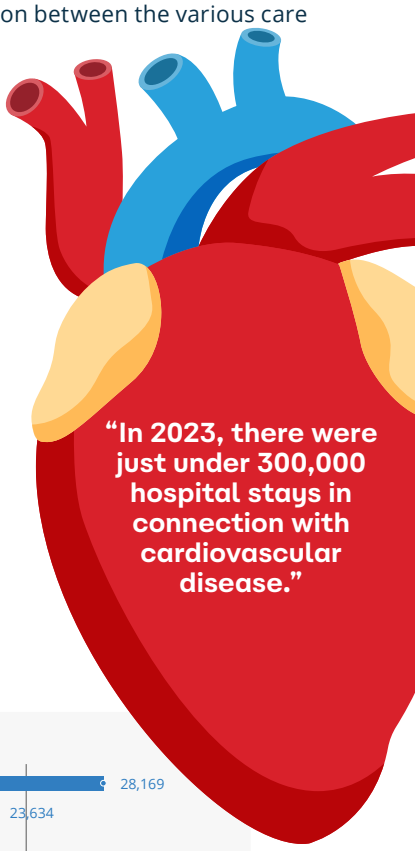
31

With **31 people donating at least 1 organ** per million inhabitants, Belgium has the highest number of donors of all 8 countries that are members of the Eurotransplant network.

COLLABORATION: AN OPPORTUNITY FOR QUALITY & INNOVATION

In this chapter, we will focus on some specific conditions for which frameworks are in place both in Belgium and internationally to streamline integrated cooperation between the various healthcare actors. Indeed, as a result of the rapidly evolving healthcare system, an ageing population and technological advances in healthcare, the healthcare system requires more and more coordination, integration and continuity. These integrated collaborations were created to improve the quality of care for specific patients groups. They are also based on scientific guidelines and expert input. By means of the frameworks provided, care is standardised and multidisciplinary cooperation between the various care actors is aligned.

Finally, we discuss the national action plan 'Operation Zero,' in which the authorities at the federal, community, and regional levels work together to reduce carbon emissions in the Belgian healthcare sector.

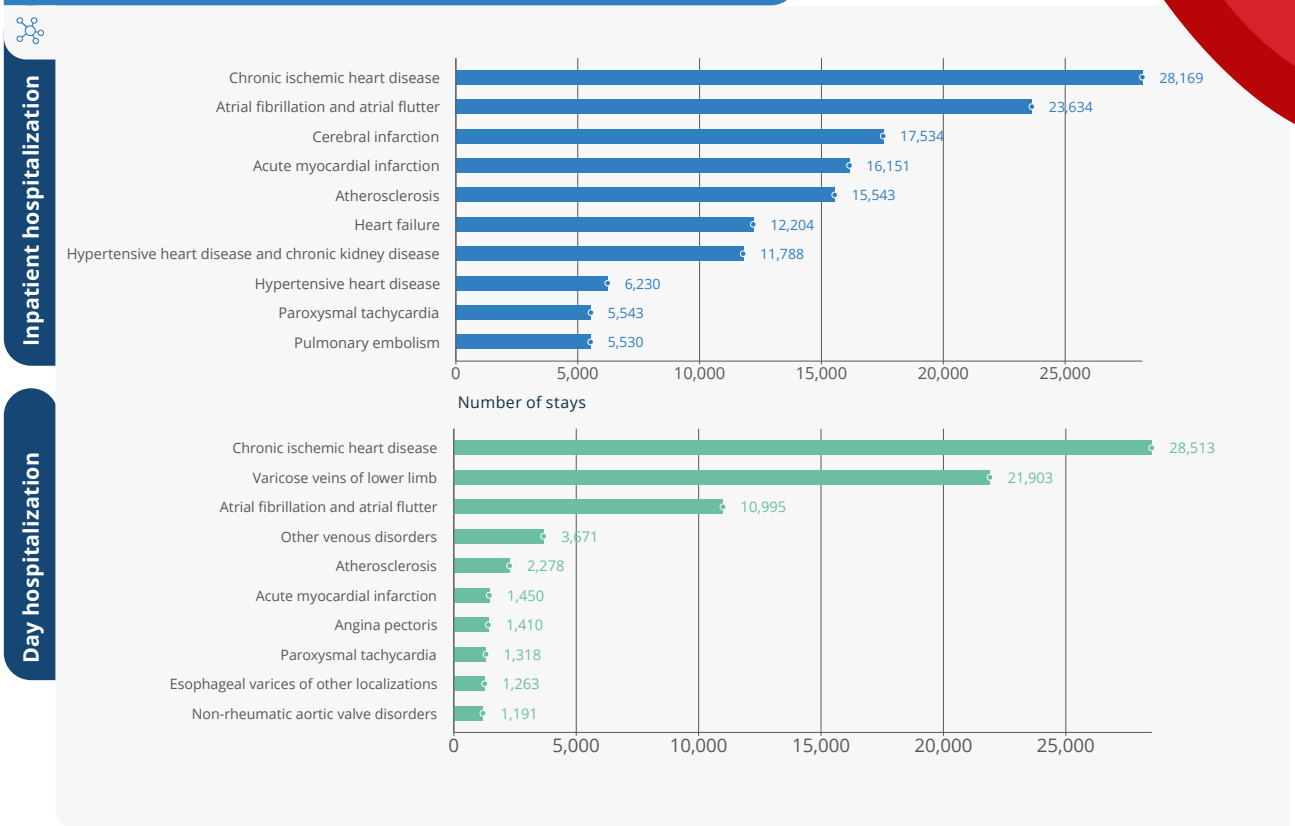


4.1 Cardiovascular disorders

General information regarding cardiovascular diseases

In 2023, there were just under 300,000 hospital stays in connection with cardiovascular disease. Looking at the top 10 cardiovascular conditions that led to classic hospitalisation and day hospitalisation in 2023, chronic ischaemic heart disease tops the ranking. Chronic ischaemic disease is a disease of the heart and is caused by arterial calcification or abnormalities in the coronary arteries. Another common reason for admission with cardiac pathology involves cardiac arrhythmias such as atrial fibrillation and atrial flutter.

Number of stays with a primary diagnosis of cardiovascular disease



Learn more?
https://www.health.belgium.be/nl/mzg-publicaties-Prevalentie-van-ziektebeelden-in-een-ziekenhuis

Care programmes for cardiac pathology

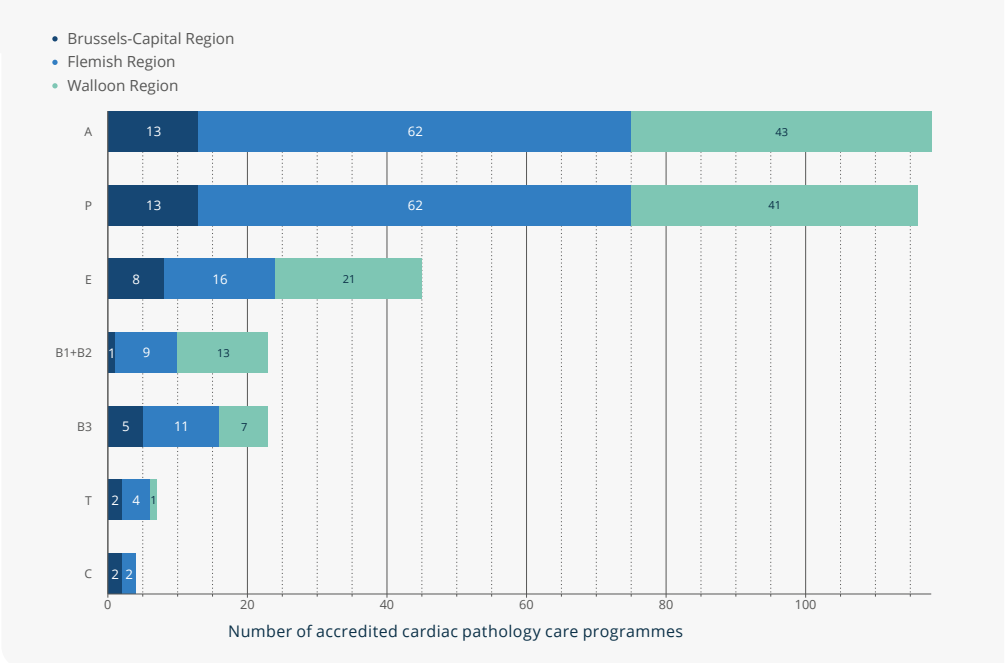
Within the cardiac pathology care programme, several sub-care programmes can be distinguished. Each care programme is characterised by its target population, range of care and interventions, required infrastructure, applicable quality standards, and the required expertise and personnel. Each care programme must meet legally established standards to obtain accreditation.

A	Non-intensive invasive diagnostics, follow-up care, and rehabilitation for cardiac conditions.	
B	Cardiac invasive care complementary to activities under care programme A	B1 Invasive diagnostic cardiology B2 Interventional, non-surgical cardiology B3 Cardiac surgery
P	Pacemaker therapy	
E	Comprehensive electrophysiological examination	
T	Selection, preparation and follow-up of patients with terminal heart failure for heart (or heart-lung) transplant surgery.	
C	Congenital heart defects in children	

Learn more?
Royal Decree of 15 July 2004 establishing the standards that "cardiac pathology" care programmes must meet in order to be accredited.

The highest number of accredited care programmes involves category A care programmes for basic cardiac care and category P programmes involving care for patients with (or in need of) a cardiac pacemaker. It has been found that in the Flemish Region and the Brussels Capital Region, more care programmes have been accredited for invasive cardiac surgery (B3) than for invasive diagnostics combined with interventional, non-surgical treatment. In the Walloon Region, the opposite is the case. In addition, we observed that accredited care programmes for congenital heart defects in children can only be found in the Brussels-Capital Region and the Flemish Region.

Number of accredited care programmes for cardiac pathology by type and regior



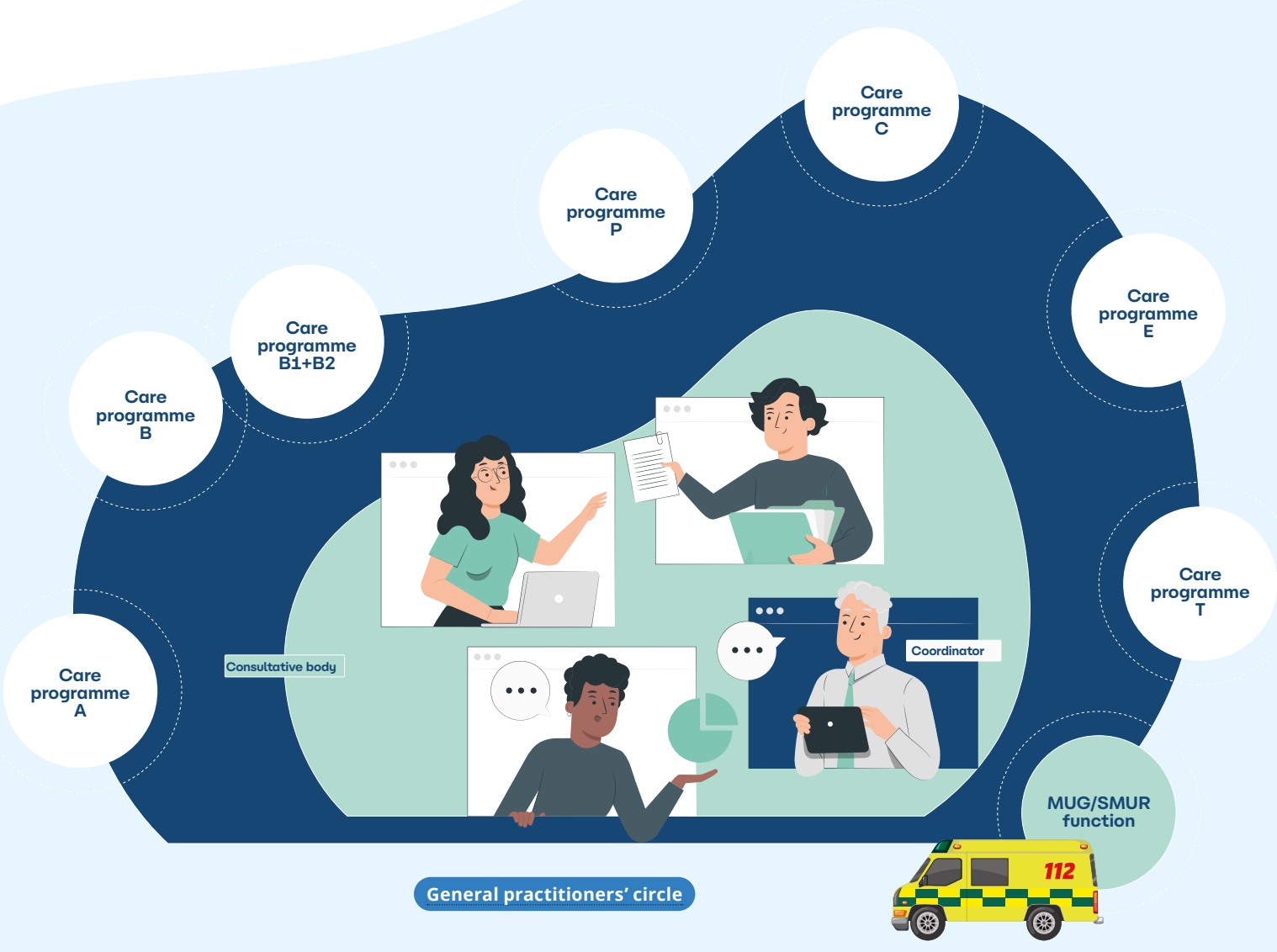
Cardiac pathology network

A 'cardiac pathology' network makes it possible to offer circuits of care for cardiac pathology patients within a specific geographic area. A circuit of care is a set of care activities tailored to the specific target group of patients.

As a minimum, a 'cardiac pathology' network consists of:

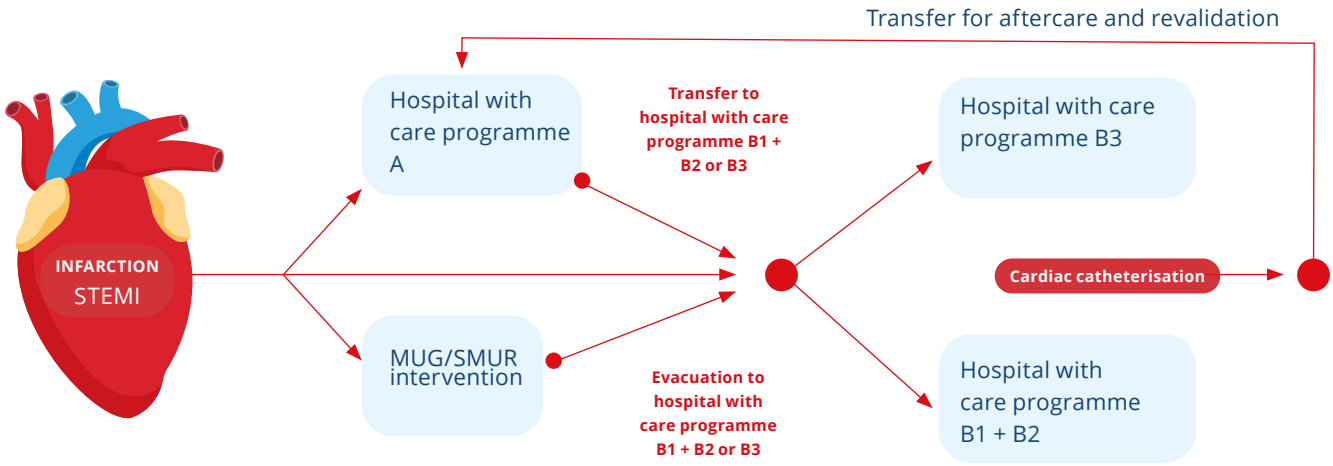
- A hospital with a 'cardiac pathology' A care programme
- A hospital with a 'cardiac pathology' B care programme or with accreditation for B1 and B2 sub-programmes, without B3
- A hospital with a 'cardiac pathology' P care programme
- A hospital with a 'cardiac pathology' E care programme
- A hospital with a 'cardiac pathology' T care programme
- A hospital with a 'cardiac pathology' C care programme
- A hospital with a Mobile Emergency Group (MUG/SMUR) function
- A general practitioners' circle
- A coordinator
- A consultative body

A hospital or healthcare provider can be part of multiple networks for cardiac pathology. Bringing various healthcare providers together should lead to the harmonisation of patient care and an improvement in the quality of healthcare provision.



Circuit of care for acute myocardial infarction with ST-segment elevation

Every cardiac pathology network should offer at least one circuit of care[11] for patients with acute myocardial infarction with ST-segment elevation (STEMI). In 2022, there were 54,048 stays with this diagnosis. [12]



Hyperacute

If acute myocardial infarction is suspected, the emergency services should be alerted as quickly as possible. After all, prompt hospitalisation is important because timely treatment increases the chances of recovery. After contact with the Mobile Emergency Group (MUG/SMUR) function, patients are transferred to a hospital accredited for cardiac pathology care programmes B1+B2 or B3. In 2022, 1,456 patients were transported to a hospital accredited for a B3 care programme and 743 were transported to a hospital accredited for a B1-B2 care programme after contact with a Mobile Emergency Group (MUG/SMUR) function.

In the emergency department, the diagnosis can be made using an electrocardiogram (ECG). In addition, taking a blood sample will definitely establish the severity of the myocardial infarction.

If the patient's diagnosis was made in a hospital with accreditation for the cardiac pathology A care programme only, the patient must be transferred to a hospital within the network that holds accreditation for care programme B1+B2 or B3. In 2022, 470 patients were transferred to a B3 accredited hospital and 156 patients to a B1 and B2 accredited hospital.



Acute

The cardiac catheterisation laboratory is notified of the patient's arrival at the hospital. In 2022, 27,957 stays were recorded in cardiac catheterisation for coronary conditions. In addition, there were 10,040 stays for percutaneous coronary procedures with acute myocardial infarction.

11 The illustration shows the terms laid down in the Royal Decree of 12 June 2012 concerning the care pathway to be provided in cases of acute myocardial infarction. In addition, however, it is possible that the patient obtains the diagnosis within primary care. For rehabilitation and aftercare, patients can also be transferred to a hospital with accreditation for S1.

12 Source: FPS Public Health (undated). *Technical unit*. [Dataset]. These are linked figures from the (Minimum Hospital Data – MZG) and the NIHDI. Here, all stays were selected that were classified in the following APR-DRGs (All Patient Refined Diagnosis Related groups): DRG 190 (Acute myocardial infarction), 191 (Cardiac catheterisation for coronary diseases) and 192 (Cardiac catheterisation for other non-coronary diseases).

Recovery and rehabilitation

After treatment, the patient will ideally be transferred again to a hospital with an accredited cardiac pathology A care programme or to one of the 20 approved specialised services for the treatment of cardio-pulmonary conditions (S1). The reason for this is so that care can be provided in proximity to the patient's home environment. 1,087 patients were transferred after a stay in a service with a care programme B to a service with care programme A or an S1 service.

4.2 Stroke care

General information about stroke care

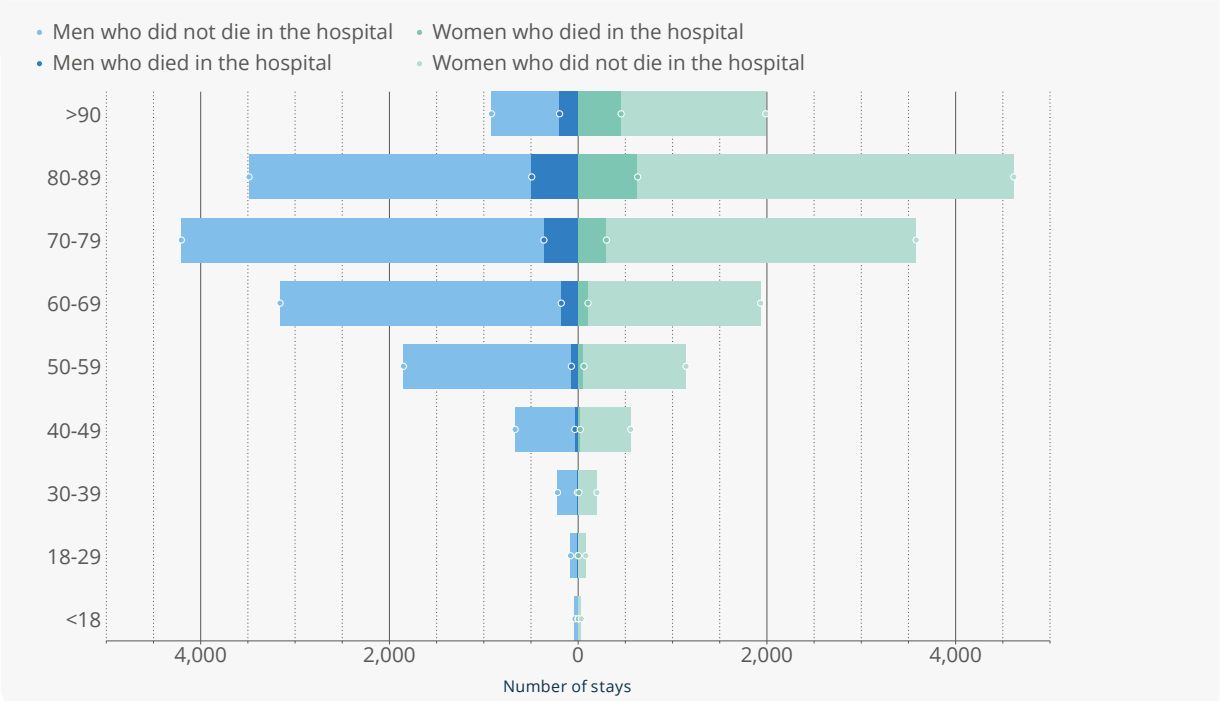
"In Belgium, an average of approximately 29,000 patients are admitted to a hospital."

This chapter provides further detail on stroke, a specific condition within the broader group of cerebrovascular diseases, which in turn form part of cardiovascular diseases.

In Belgium, an average of approximately 29,000 patients are admitted to a hospital each year with a primary diagnosis of a cerebrovascular disease. These figures include patients with an ischemic or hemorrhagic stroke, as well as patients with a minor, transient stroke or other conditions such as narrowing of the cerebral blood vessels without infarction.

From the age of 40 onwards, a clear increase is observed in the number of patients with this type of condition. The difference between men and women is limited (51% men versus 49% women), although in the age groups from 40 to 79 years, more men than women are hospitalized with a cerebrovascular disease.

Number of stays with a principal diagnosis of stroke by gender and age group



In 2022, 2,934 patients with a primary diagnosis of a cerebrovascular disease died in Belgian hospitals (10.2%).

A stroke, also referred to as stroke or cerebrovascular accident, is an acute form of cerebrovascular disease in which parts of the brain are damaged as a result of oxygen deprivation.

13 Source: FPS Public Health (undated). Technical unit. [Dataset]. The following patients were included: patients with a primary diagnosis (ICD-10-BE) of subarachnoid hemorrhage (I60); intracerebral hemorrhage (I61); other non-traumatic intracranial hemorrhage (I62); cerebral infarction / ischemic stroke (I63); stroke, not specified as hemorrhage or infarction (I64); occlusion and stenosis of cerebral arteries without cerebral infarction (I66); transient ischemic attack and related syndromes (G45); or with one of the following APR-DRG codes: cerebrovascular accident and precerebral arterial occlusion with cerebral infarction (DRG 045); cerebrovascular accident and precerebral arterial occlusion without cerebral infarction (DRG 046); transient ischemic attack and precerebral arterial occlusion without infarction (DRG 047).

A cerebrovascular accident can occur through two different mechanisms:

To learn more, visit
https://www.belgianstrokecouncil.be/

- **Ischemic stroke**

In this case, the lack of oxygen is caused by a narrowing or blockage of a blood vessel in the brain. This is also referred to as a cerebral infarction or thrombosis. This form accounts for approximately 85% of all cases and is the most common cause of stroke.

- **Hemorrhagic stroke**

In this case, the lack of oxygen results from a spontaneous bleed in the brain.

The symptoms of a stroke generally appear suddenly. Their nature is closely related to the area of the brain that is affected. Among the most common manifestations are weakness or paralysis on one side of the body, often involving the face, arm and/or leg on the same side. This unilateral impairment presents as weakness, which may progress to complete paralysis.

Language disorders are also common. These may include difficulties in understanding or producing language, or problems with properly articulating words.

Other signs may occur, such as visual disturbances, dizziness, loss of balance, or severe headaches.

The severity of a stroke depends on the extent of brain damage and the time interval between the onset of the event and the initiation of treatment. This principle is summarized by the expression “Time is brain”.

In the case of an ischemic stroke, it is essential, where possible, to start treatment aimed at dissolving or removing the blood clot as quickly as possible, by means of thrombolysis or thrombectomy. The sooner treatment is initiated, the greater the chance of recovery. A full recovery, however, is not guaranteed. A significant number of patients are left with a permanent physical or cognitive disability or die.

Care programmes for stroke care

Scientific research[14] has shown that the establishment of specialist stroke treatment units – known as stroke units – significantly improves patient recovery. This reduces the risk of death, the risk of admission for rehabilitation in a healthcare facility, and the length of stay in hospital.

Since 2014, there has been a legal framework regarding the establishment of stroke care programmes. This defines a tiered organisation of care according to the complexity and severity of the stroke. This is linked to a number of quality frameworks that must be fulfilled.

The module ‘Acute care in the hospital’ distinguishes between 3 types of care:

- S0 – Hospital without accreditation for CVA_ S1 or CVA_ S2, but with a stroke care protocol;
- CVA_S1 – Basic care programme in ‘Acute stroke care’
- CVA_S2 – Specialist care programme in ‘Acute stroke care with invasive procedures’. Each accrediting authority may not accredit more than 8 centres, and a maximum total of 15 CVA_S2 centers may be accredited in Belgium.

Learn more?
Royal Decree of 19 April 2014 establishing the standards that care programmes “stroke care” must meet in order to be accredited

Learn more?
Royal Decree of 16 December 2018 establishing the maximum number of specialised care programmes for “acute stroke care with invasive procedures

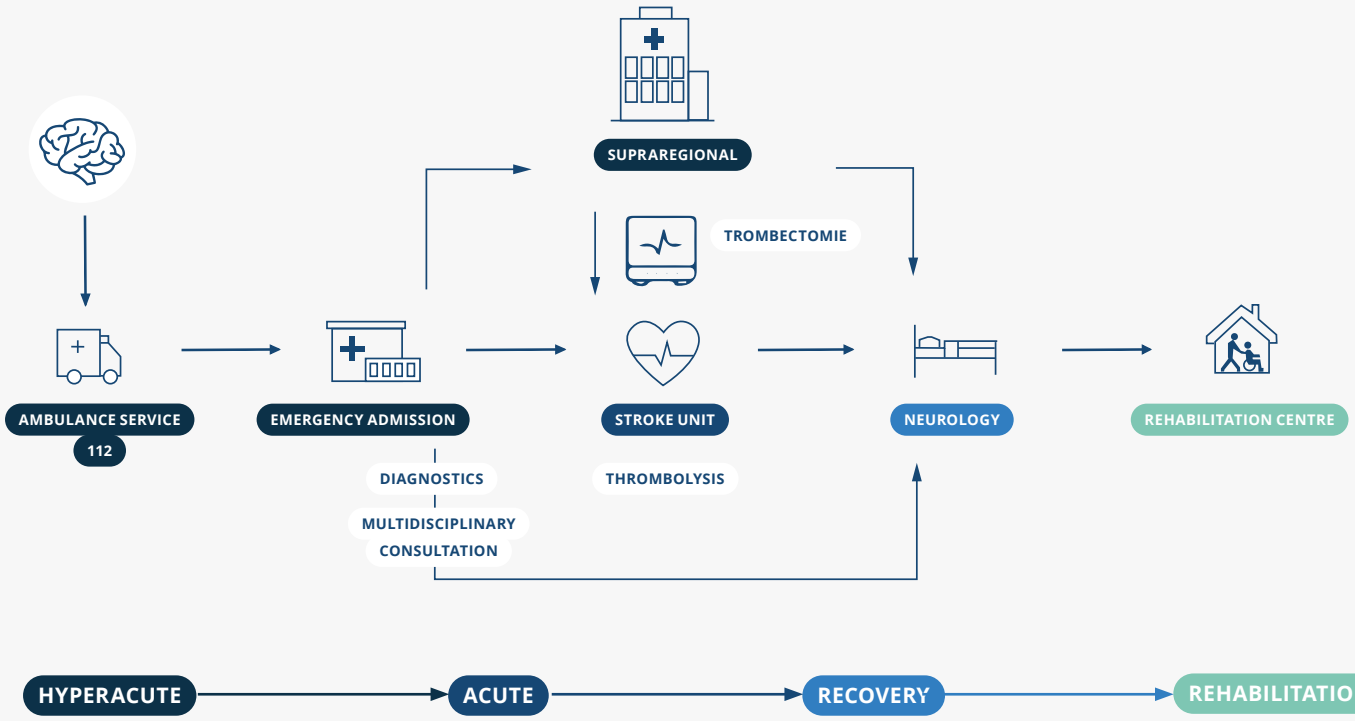
The concentration of invasive stroke care is an important objective in the context of Public Health to ensure sufficient quality for the patient. The Royal Decree of September 20, 2022, introduced several changes to this regulation with the aim of implementing volume standards, geographic distribution, and an allocation of the maximum number of invasive stroke care centers across the various accrediting authorities. However, these changes were annulled following an appeal lodged with the Council of State.[15]

14 Michiels Dominik, Sun Ying, Thys Vincent, Saka Rasit Omer, Hemelsoet Dimitri, Eyssen Marijke, Paulus Dominique. Stroke units: Doeltreffendheid en kwaliteitsindicatoren (Stroke units: effectiveness and quality indicators). Health Services Research (HSR). Brussels. Brussels: Belgian Health Care Knowledge Centre (KCE). 2012. KCE Reports 181A. DOI: 10.57598/R181A.

15 Cf. Notices prescribed under Article 3quater of the Regent’s Decree of 23 August 1948 regulating the procedure before the Administrative Litigation Division of the Council of State, published in the Belgian Official Journal on 10 January 2023, 14 February 2023, and 12 April 2023. These are respectively available at the following links: www.ejustice.just.fgov.be/cgi/article.pl?language=nl&sum_date=2023-01-10&lg_txt=N&numac_search=2022043265; www.ejustice.just.fgov.be/cgi/article.pl?language=nl&sum_date=2023-02-14&lg_txt=N&numac_search=2023040505; www.ejustice.just.fgov.be/cgi/article.pl?language=nl&sum_date=2023-04-12&lg_txt=N&numac_search=2023040509

In order to operate an CVA_S1 or CVA_S2 care programme, a hospital must receive accreditation from the competent authority. In anticipation of accreditation, hospitals have already put in place extensive collaboration within and outside their networks. Indeed, close cooperation with both urgent care and accredited rehabilitation centres is of great importance.

The course of a patient's care pathway



HYPERACUTE

Whenever a stroke is suspected, it is very important to notify the emergency services as soon as possible. They will take the patient to hospital as quickly as possible to receive the correct treatment. They will always choose the most suitable hospital, taking into account the time needed to drive to that hospital.

When the patient arrives at the emergency department, the first step in all cases will be to carry out a diagnostic examination and initial drug treatment will be started as quickly as possible.

ACUTE

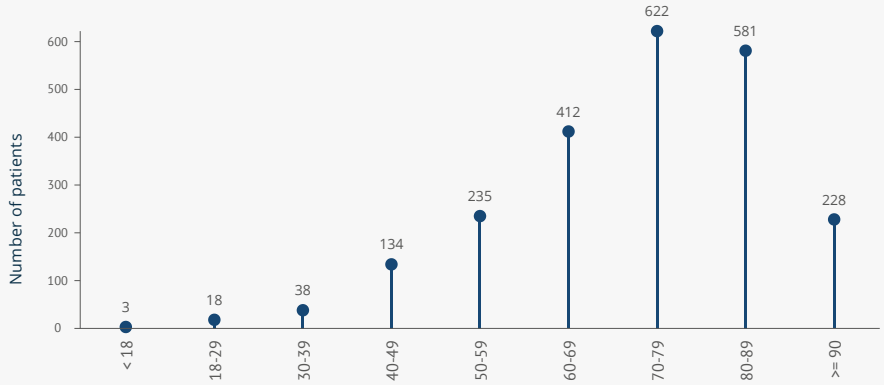
Depending on the severity of the stroke and the degree of specialisation of the hospital, a multidisciplinary consultation will determine whether on the one hand, the patient can continue to be treated within the current hospital, or on the other hand should be transferred to a more specialised centre to perform thrombolysis or a thrombectomy.

Depending on the patient's condition, he or she will be admitted to the specialised unit for the treatment of stroke – the stroke unit - for more intensive follow-up and monitoring. If the patient's condition is fairly reassuring, immediate admission to the neurology service may follow for further recovery.

Thrombolysis

To prevent permanent brain tissue damage, it is important in a group of patients to start treatment with blood-thinning medication as soon as possible and certainly within 30 minutes of arrival at the hospital.[16] About 20% of stroke patients need this treatment. [17] A 2017 study conducted in 44 European countries found that only 7% of stroke patients received thrombolysis. The table below presents the 2022 figures for Belgium. In 2022, 2,271 patients with ischemic stroke in Belgium received anticoagulant treatment (thrombolysis). This represents 14.4% of the total number of ischemic stroke patients (15,808 patients), which is well below the recommended 20%.[18]

Number of patients with ischemic stroke (I63) treated with thrombolysis



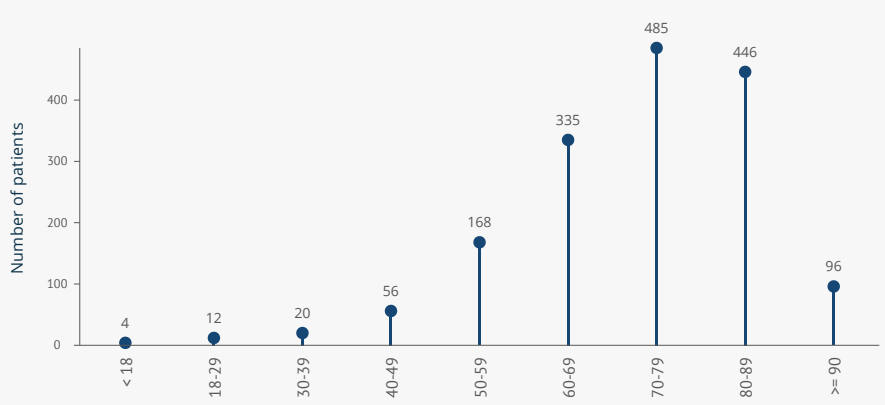
2,271 patients, which is well below the recommended 20%

Thrombectomy

Whenever, due to the size of the blockage, treatment by thrombolysis is insufficient, it may be decided to remove the thrombus by catheterisation or thrombectomy. Some 5-10% of patients with cerebral infarctions are eligible for this.

In 2022, 1,622 patients with ischemic stroke were treated by thrombectomy in a Belgian hospital, representing 10.2% of all patients who suffered an ischemic stroke that year (15,808 patients).

Number of patients with ischemic stroke (I63) treated by thrombectomy



16 Source: Federation of Medical Specialists. (2019). *Brain infarction and cerebral haemorrhage*. Consulted at https://richtlijnendatabase.nl/

17 Source: Vlaams Instituut voor Kwaliteit van Zorg vzw (Flemish Institute for Care Quality) (2024). Topic: Stroke care. Consulted at https://www.zorgkwaliteit.be/beroertezorg

18 These figures may represent an underestimate of actual situation due to an under-recording of treatments.

Recovery and rehabilitation

The nature and intensity of aftercare depend on the patient's condition. For example, after hospital treatment, it may be decided to refer the patient to a rehabilitation centre for aftercare. This may be a centre affiliated to the hospital where the patient is staying, or another rehabilitation centre closer to home or a rehabilitation centre specialising in the patient's specific needs.

4.3 Babies born prematurely

General information regarding prematurity

In 2022, 119,235 babies were born in our Belgian hospitals. Of this group of newborns, 11,092 were born at a gestational age of less than 37 weeks. This represents 9.3% of all newborns. Officially, those babies are referred to as premature.[19]

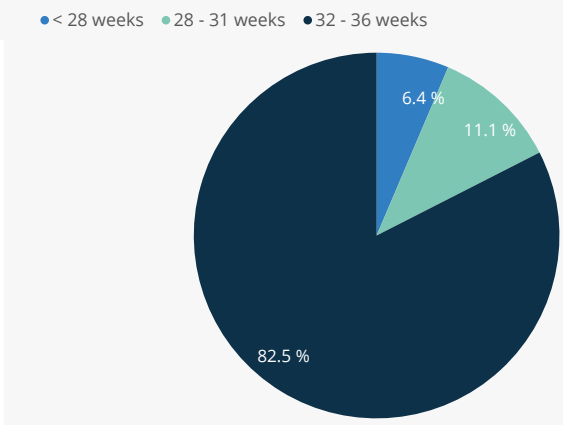
Within this group of premature babies, 82.5% were born at a gestational age of 32 to 36 weeks, 11.1% at 28-31 weeks and 6.4% at less than 28 weeks.

Most premature births happen spontaneously. Sometimes, they are due to a medical reason, such as an infection. In addition, in some cases, the early induction of labour or a caesarean section is required because of other pregnancy complications. For example, more premature births were noted in multiple pregnancies or in chronic maternal conditions such as heart, lung and kidney disease. Gestational diabetes and high blood pressure during pregnancy also increase the risk of premature birth. .[20,21,22]

"In 2022, 9.3% of all babies were born at a gestational age of less than 37 weeks."



Percentage of premature births by gestational age category (2022)



19 Source: FPS Public Health (undated). *Minimale Ziekenhuisgegevens (Minimum Hospital Data – MZG)*. [Dataset].

20 Source : Shaw, J., Steegers, E. A., & Verbiest, S. (2020). *Preconception health and care: A life course approach*. Springer.

21 Source : Vats, H., Saxena, R., Sachdeva, M. P., Walia, G. K., & Gupta, V. (2021). Impact of maternal pre-pregnancy body mass index on maternal, fetal and neonatal adverse outcomes in the worldwide populations: A systematic review and meta-analysis. *Obesity Research & Clinical Practice,* 15(6), 536-545. https://doi.org/10.1016/j.orcp.2021.10.005

22 Source : Cobo, T., Kacerovsky, M., & Jacobsson, B. (2020). Risk factors for spontaneous preterm delivery. *International journal of gynaecology and obstetrics: the official organ of the International Federation of Gynaecology and Obstetrics*, 150(1), 17–23. https://doi.org/10.1002/ijgo.13184

Common diagnoses in babies born at a gestational age of below 32 weeks in Belgian hospitals are respiratory dysfunctions, immaturity of the autonomic nervous system, anaemia and neonatal jaundice.[23]

Worldwide, premature birth is the leading cause of death in children under 5. This high figure is largely explained by inadequate care in low-income countries.[24] In high-income countries, almost all babies born prematurely survive. However, the child will still be at a higher risk of complications and lasting effects. For example, more developmental and behavioural disorders, learning disabilities, social-emotional difficulties and poorer mental health later in life are observed when babies are born prematurely.[25,26,27,28]

Care pathway for babies born prematurely

Several services exist within a hospital to provide optimal care to newborns.
In a maternity unit, babies are cared for with their mothers after birth has taken place. On 1/01/2025, there were 98 campuses in Belgium with a maternity unit that included a function for non-intensive, neonatal care. If the newborn needs extra care, he/she can be admitted to an N* service where he/she will be closely monitored. This function for non-intensive, neonatal care is available in every maternity unit in Belgium. The newborn can be cared for in this N* service from a gestational age of 32 weeks onwards. If a baby is born after a pregnancy of less than 32 weeks, or if he requires intensive care, it will be referred to an NIC service for specialised follow-up.

The specialist, supra-regional centres have a perinatal care function or P* function. This includes an MIC service, an NIC service, and a maternity unit with N* function.

- An MIC service is a service where women with at-risk (or high-risk) pregnancies are closely monitored.
- An NIC service is an intensive neonatal care service. If newborns are seriously ill or in specispecial illness conditions, they are cared for in an NIC service where specialist staff work.

Campuses with an MIC unit must also have NIC beds to ensure the safe care of babies after high-risk pregnancies.[29] Conversely, a campus that has an NIC department can exist without an MIC department. In Belgium, there are 19 campuses with an MIC service and 19 with an NIC service.



23 Source: FPS Public Health (undated). *Minimale Ziekenhuisgegevens (Minimum Hospital Data – MZG)*. [Dataset].

24 Source: World Health Organization. (2023). *Preterm birth*. Consulted at https://www.who.int/news-room/fact-sheets/detail/preterm-birth

25 Twilhaar, E. S., De Kieviet, J. F., Van Elburg, R. M., & Oosterlaan, J. (2020). Neurocognitive processes underlying academic difficulties in very preterm born adolescents. *Child Neuropsychology,* 26(2), 274-287.

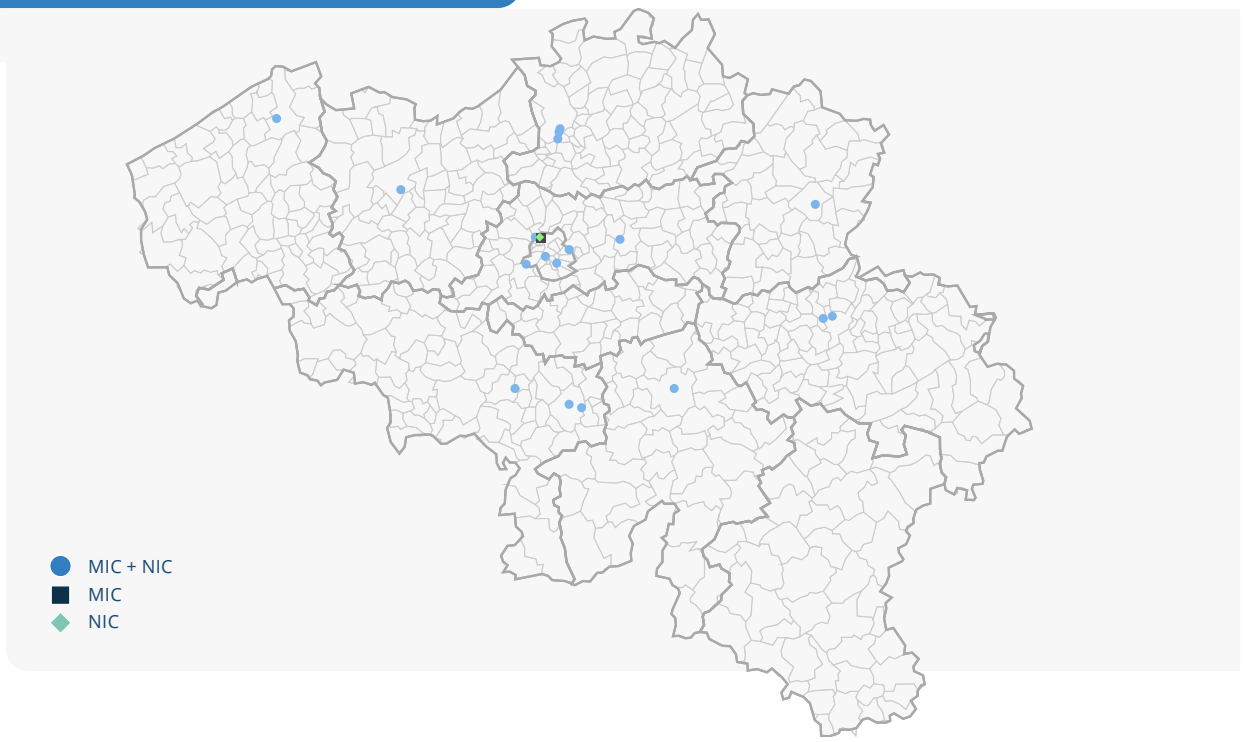
26 Roberts, G., Lim, J., Doyle, L. W., & Anderson, P. J. (2011). High rates of school readiness difficulties at 5 years of age in very preterm infants compared with term controls. *Journal of Developmental & Behavioral Pediatrics*, *32*(2), 117-124.

27 Montagna, A., & Nosarti, C. (2016). Socio-emotional development following very preterm birth: Pathways to psychopathology. *Frontiers in Psychology*, 7, 80.

28 Johnson, S., O'Reilly, H., Ni, Y., Wolke, D., & Marlow, N. (2019). Psychiatric symptoms and disorders in extremely preterm young adults of 19 years of age and longitudinal findings from middle childhood. *Journal of the American Academy of Child & Adolescent Psychiatry*, 58(8), 820-826.

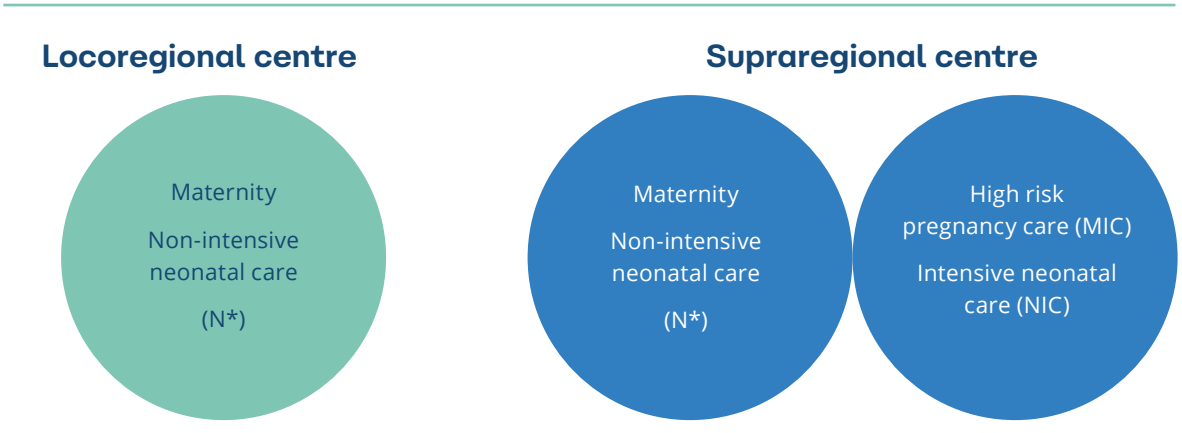
29 One hospital in the Brussels-Capital Region is an exception to this.

Distribution of MIC and NIC services (01/01/2025)



The hospitals with a P* function enter into cooperation agreements with hospitals that only have a maternity unit and an N* function. Indeed, good cooperation between the various services is crucial when it comes to offering an optimal level of perinatal care in Belgium. If it is determined during a prenatal consultation that a pregnancy carries increased risks, a pregnant woman may receive additional follow-up at a supra-regional hospital with an MIC service. This will ensure close cooperation between the gynaecologists and paediatricians associated with the MIC and NIC services.

The collaboration agreements, also ensure that a newborn in need of intensive care can be transferred smoothly from an N* to an NIC service. The most common reasons for the external transfer of a newborn from a hospital without a NIC service to a NIC service are respiratory dysfunction, prematurity and oxygen deprivation at birth.[30]



Sick newborns remain in the NIC service until they have recovered sufficiently and can be transferred back to the referring hospital for further care without undue risk.

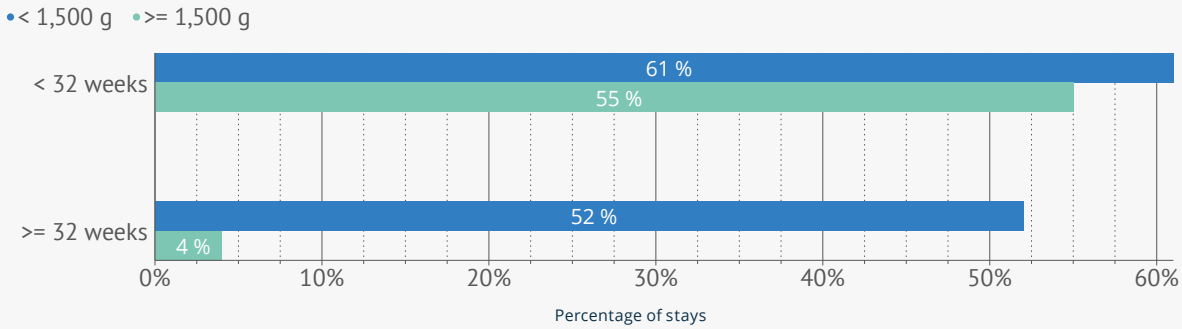
30 Source : Goemaes, R., Fomenko, E., Laubach, M., De Coen, K., Bogaerts, A. & Roelens, K. (2023). Perinatale gezondheid in Vlaanderen – Jaar 2022. Brussel: Studiecentrum voor Perinatale Epidemiologie.

Activity in an NIC department

A total of 6,238 patients were admitted to NIC services in 2022. Their length of stay was very variable, but averaged 19 days. The median length of stay is 45 days for newborns after gestational age of less than 32 weeks and 8 days at gestational age of 32 weeks and above.

Both prematurity and low birth weight are indications for admission to an NIC service. In principle, whenever babies are born at a gestational age of less than 32 weeks, they will be referred to a NIC unit by default. We find that 55 - 61% of babies in 2022 with a gestational age of less than 32 weeks made a passage in a NIC service during their stay. Only half (52%) of newborns with a birth weight of less than 1,500 grams and with a gestational age of 32 weeks or more make a passage in a NIC service.[31]

Percentage of stays by birth weight and length of pregnancy with a transfer to a neonatal intensive care unit



Rooming-in

In NIC services, all kinds of efforts are made to allow mothers to stay as close to their babies as possible. After all, the environment is very important to a premature baby's development.[32] However, it is not yet standard practice in Belgium for mothers to stay with their babies during the admission period in the NIC service.

To strengthen that closeness between parents and babies, efforts are being made nowadays to transfer the premature baby to an N* service closer to home from the moment it no longer needs intensive care. These locoregional centres are exploring how to offer more rooming-in rooms to ensure proximity between mother and baby. Research has shown how important this is from the first moment after birth. Together with developmentally appropriate care, it helps promote attachment and optimal development in the premature baby.[33] For mothers , this closeness and participation in care also leads to a positive decrease in stress levels.[34] The FPS Public Health supports the training of professionals in developmental care by means of various training contracts.

Learn more?
www.babyhospital.be

31 In the case of 0.42% of newborn stays, the gestational age is unknown and in the case of 0.09% of stays, the birth weight is unknown.

32 Kuhn, P., Dufour, A., Zores, C. et al. (2017). The Auditory Sensitivity of Preterm Infants Toward Their Atypical Auditory Environment in the NICU and Their Attraction to Human Voices. In: Filippa, M., Kuhn, P., Westrup, B. (eds) Early Vocal Contact and Preterm Infant Brain Development. Springer, Cham. doi.org/10.1007/978-3-319-65077-7_7

33 Klemming, S., Lilliesköld, S & Westrup, B. (2021). Mother-Newborn Couplet Care from theory to practice to ensure zero separation for all newborns. *Acta Paediatrica*, 110:2951–2957. doi: 10.1111/apa.15997

34 Van Veenendaal, N.R., van Kempen, M.W., Birit B.F.P. et al. (2022). Association of a Zero-Separation Neonatal Care Model With Stress in Mothers of Preterm Infants. *Journal of American Medical Association, 5*(3):e224514. doi:10.1001/jamanetworkopen.2022.4514

4.4 Breast cancer

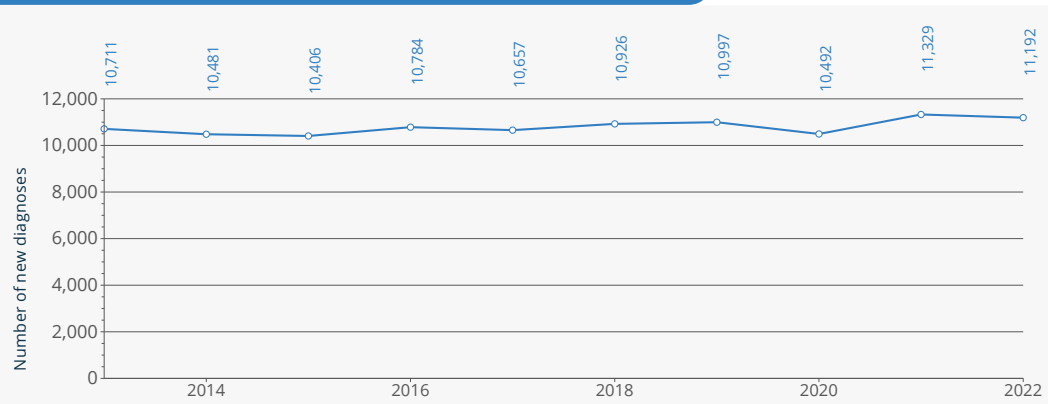
General information regarding breast cancer

In Belgium, breast cancer is the most common cancer in women with an average of 11,000 new diagnoses per year.[35] This type of cancer also occurs in men, though to a lesser extent, with an average of 100 new cases per year. A total of 88,512 women were diagnosed with breast cancer in 2021. This represents 1.5% of the female population in Belgium.[36]

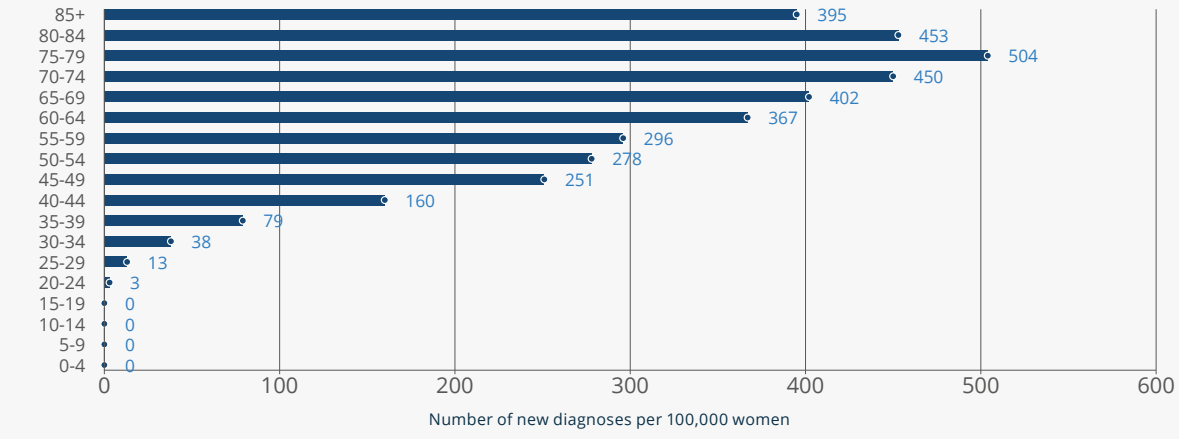
"An average of 11,000 new breast cancer diagnoses per year in women."

42% of diagnoses are made at an early stage. Screening programmes are set up in order to enable that to happen. In Belgium, 59% of women aged 50 to 69 participated in organised screening for breast cancer in 2021.[37]

Evolution in the number of new breast cancer diagnoses in women



Number of new breast cancer diagnoses per 100,000 women and age group in 2022

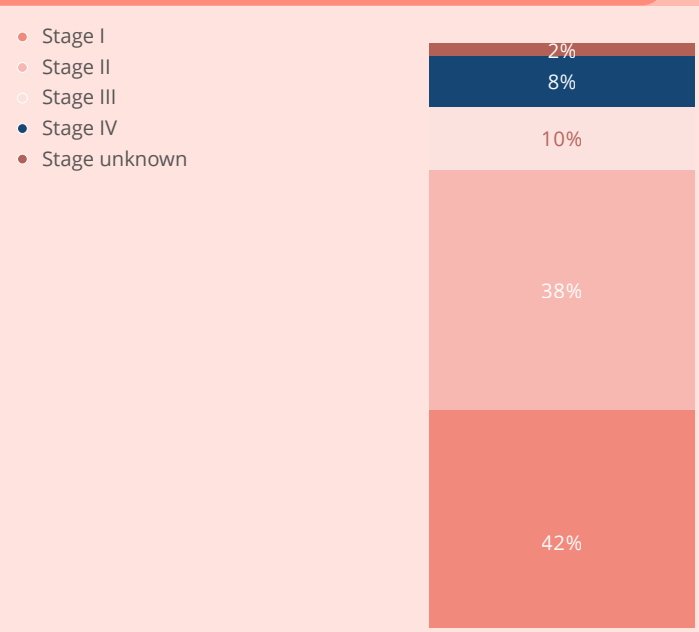


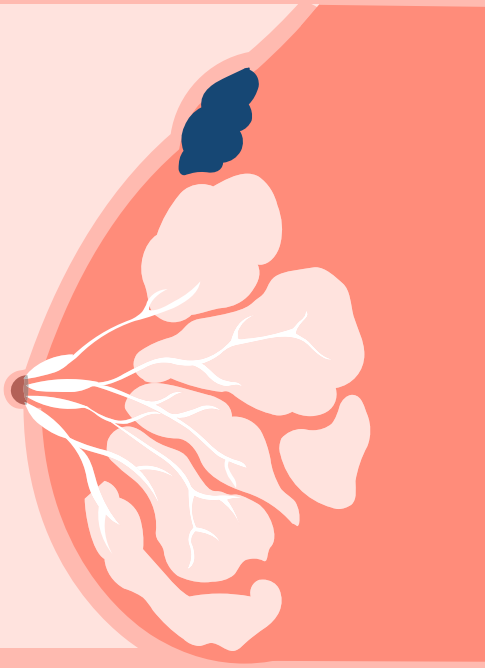
35 Source: Cancer Registry (2024). Cancer Fact Sheets 2022, *Belgian Cancer Registry (BCR), 2024*. Consulted at https://kankerregister.org/nl/publicaties/cancer-fact-sheet-borstkanker-2022

36 Sciensano (2024). Non-communicable diseases: Cancer. *Health Status Report*. Consulted at https://www.gezondbelgie.be/nl/gezondheidstoestand/niet-overdraagbare-aandoeningen/kanker

37 Gerkens Sophie, Lefèvre Mélanie, Bouckaert Nicolas, Levy Muriel, Maertens de Noordhout Charline, Obyn Caroline, Devos Carl, Scohy Aline, Vlayen Annemie, Yaras Harun, Janssens Christophe, Meeus Pascal. Performance du système de santé belge : rapport 2024. Health Services Research (HSR). Bruxelles Centre Fédéral d'Expertise des Soins de Santé (KCE). 2024. Rapports KCE 376A. DOI : 10.57598/R376A.

Percentage of women with breast cancer by stage at diagnosis





The survival rate after a diagnosis of breast cancer is 93.3% after 5 years. In the 15-69 age group, the survival rate is approximately 95%. This rate drops to 90.6% in women over 70 years of age.

For more figures, see the belgian-cancer-registry.shinyapps.io/data_app/

Care programmes for breast cancer

Current care programmes

To ensure quality and access to the best possible care for patients, a Royal Decree was published in 2007 that set the standards that programmes providing specialised oncological care for breast cancer must meet in order to be accredited.[38] This Royal Decree defines the criteria a hospital location must meet in order to be recognised as a "breast clinic." The criteria are mainly based on the presence and composition of the multidisciplinary team and the minimum volume of activity. A breast clinic is a specialist department within a hospital dedicated exclusively to the treatment of oncological breast conditions. However, this R.D. does not prevent patients from being treated in a clinic that does not meet the above criteria.

Breast cancer care is currently organised by means of collaboration between coordinating breast clinics and satellite breast clinics. On 1 January 2025, there are a total of 76 officially accredited breast clinics.

To find out more about the location of breast clinics, visit https://www.health.belgium.be/nl/gezondheid/organisatie-van-de-gezondheidszorg/delen-van-gezondheidsgegevens/gezondheidszorginstellingen

38 Royal Decree of 15 December 2013, published on 23 December 2013, amending the Royal Decree of 26 April 2007 establishing the standards that the specialised oncological care programme for breast cancer must meet in order to be accredited. Consulted at http://www.ejustice.just.fgov.be/eli/besluit/2013/12/15/2013024439/staatsbladeditie=&numac_search=2013024439&caller=&2013024439=&view_numac=2013024439nx2013024439fx2013024439nl

Coordinating breast clinics

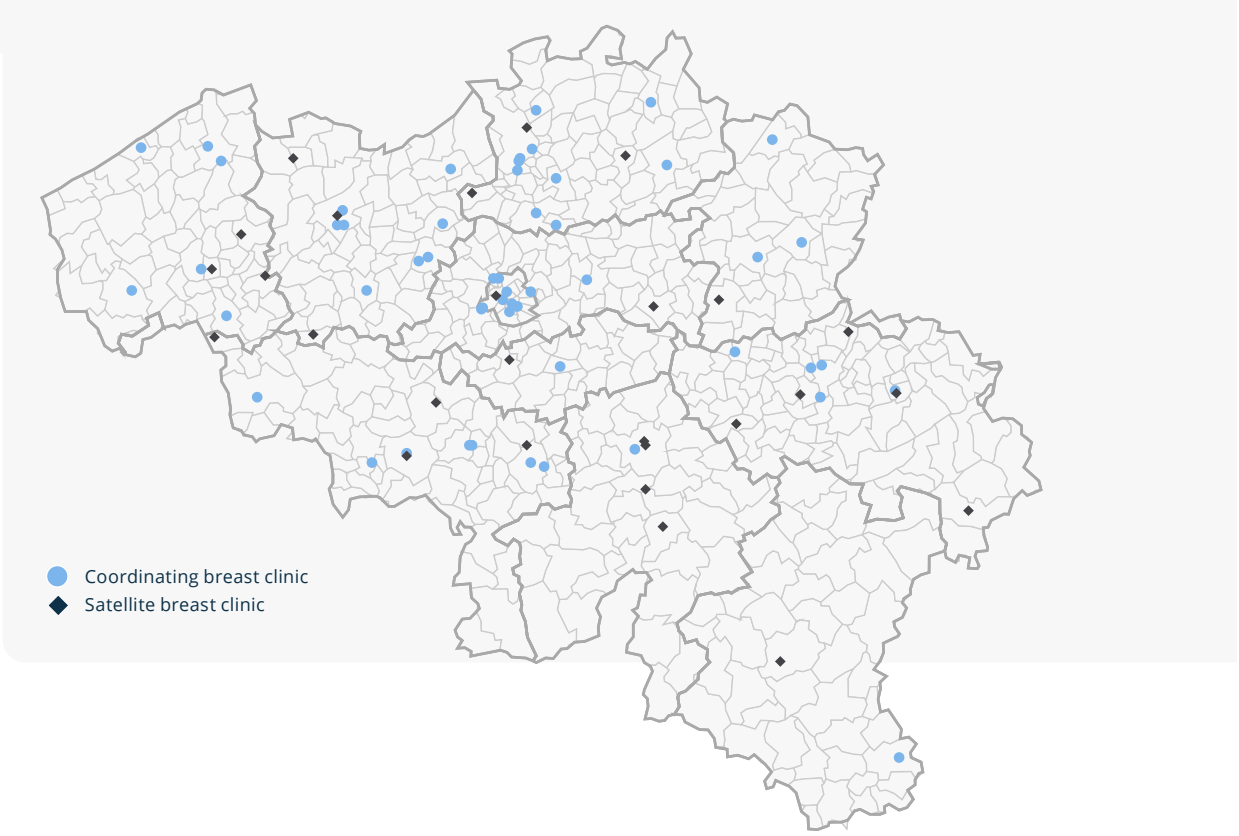
These clinics must diagnose and treat at least 125 new cases of breast cancer each year. A specialist team provides comprehensive multidisciplinary medical and paramedical care. All of the most complex phases of patient care must be performed in one of the coordination clinics, including diagnosis, treatment plan preparation, surgery and rehabilitation.

Satellite breast clinics

These clinics collaborate closely with a coordinating breast clinic. They must diagnose and treat at least 60 new cases of breast cancer each year. Follow-up treatments, such as chemotherapy or radiotherapy, can also be performed at these clinics.

These two types of breast clinics must work closely together to ensure quality care, while taking into account where patients live. Ideally, the more specialised and complicated aspects of care will take place at the coordinating breast clinic, while standard follow-up care is provided at the satellite clinic near the patient's residence.

Geographical distribution of the coordinating and satellite breast clinics (01/01/2025)



Future care programmes

Regulations regarding breast cancer care programmes were recently reformed following the KCE report "Survival and Quality of care offered in Belgian hospitals with and without recognition for breast cancer" in 2023. The report shows that concentrating specialist care in reference centres with the necessary expertise and a multidisciplinary team results in better quality of care. In contrast, the risk of dying from breast cancer is 30% higher in patients receiving treatment at non-accredited clinics.

To learn more, visit
https://kce.fgov.be/en/publications/all-reports/survival-and-quality-of-care-offered-in-belgian-hospitals-with-and-without-recognition-for-breast

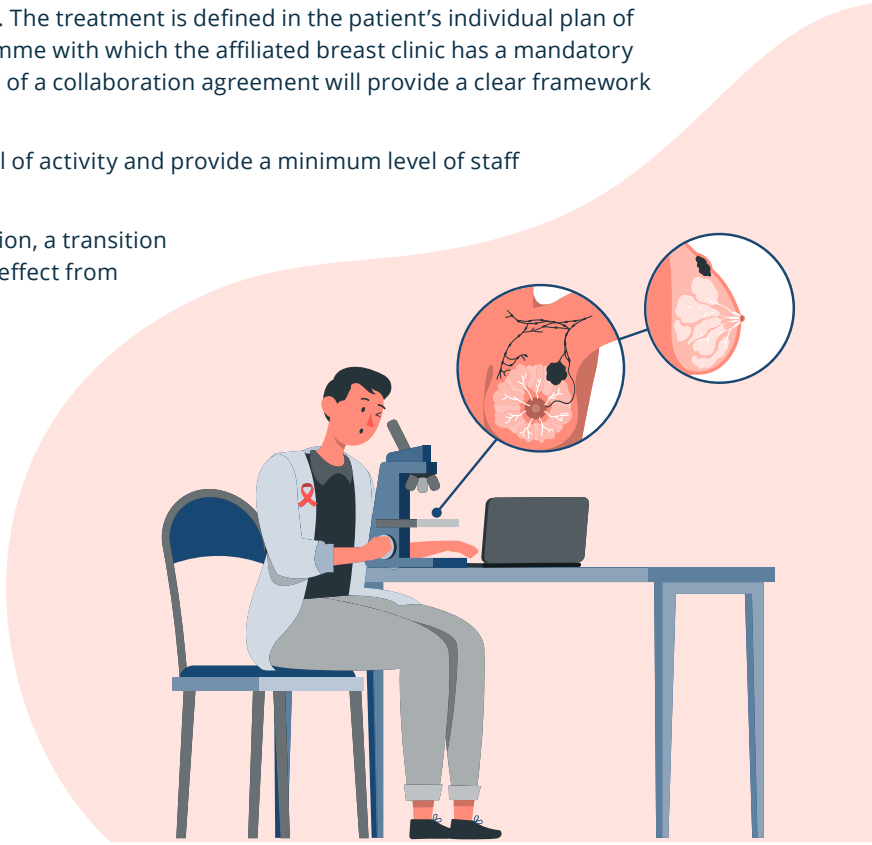
As a result of this report and in order to provide concentrated care, the legislation in force was amended.

In future, all surgical procedures (breast-conserving surgery, mastectomy, lymph node surgery, reconstructive surgery) may only be performed in a coordinating breast clinic. Furthermore, a multidisciplinary oncology consultation for each patient must take place at the coordinating breast clinic. The medical and nursing frameworks are also being strengthened. The specific conditions needed to define a coordinating breast clinic as such are also laid down in the legislation.

Changes are also planned for satellite breast clinics, which will be replaced by affiliated breast clinics. These affiliated breast clinics will focus on diagnostic procedures, radiotherapy, complementary systemic treatments, and the following up of malignant breast disease. The treatment is defined in the patient's individual plan of care established in the coordinating care programme with which the affiliated breast clinic has a mandatory collaboration agreement. The mandatory signing of a collaboration agreement will provide a clear framework for cooperation in all aspects of patient care.

Each breast clinic must maintain a minimum level of activity and provide a minimum level of staff supervision.

To put this new organisational model into operation, a transition period has been provided. The changes will take effect from 1 January 2026.



Learn more?
Royal Decree of 26 April 2007 establishing the standards that the coordinating specialist oncological care programme for breast cancer and the specialist oncological care programme for breast cancer must fulfil in order to be accredited.

4.5 Rare diseases

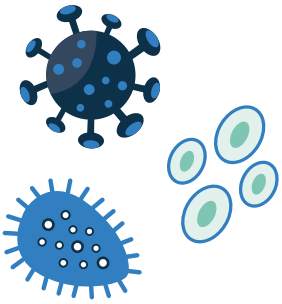
General information regarding rare diseases

"To date, between 6,000 and 8,000 rare diseases have been identified."

A disease is considered 'rare' if it affects fewer than 1 in 2,000 people. To date, between 6,000 and 8,000 rare diseases have been identified. It is important to emphasise that the prevalence of different diseases can vary widely. Of the 400 most common rare diseases, about 98% of patients with a rare disease are believed to be suffering from one of them, while other conditions are regarded as extremely rare, with a prevalence approaching 10 patients in 1 million. The best-known diseases are cystic fibrosis, spinal muscular atrophy, Huntington's disease and Duchenne muscular dystrophy.

By way of example, below are the details of some of the most well-known rare disease are given below :[39,40]

- **Mucoviscidosis:** affects about 1 in 3,000 newborns in Europe and 1 in 5,000 in Belgium.
- **Spinal muscular atrophy:** affects about 1 in 30,000 births in Europe.
- **Huntington's disease:** estimated prevalence of 1 in 20,000 to 1 in 10,000 people.
- **Duchenne muscular dystrophy:** occurs mainly in boys with a prevalence between 1 in 3,500 and 1 in 9,300 boys.
- **Amyotrophic lateral sclerosis:** has a prevalence of about 1 in 20,000, with a slight preponderance of men (ratio of about 1.5 men to 1 woman).
- **Haemophilia:** affects 1 in 5,000 boys at birth and 1 in 12,000 persons in the general population.



Most of these diseases are serious, complex genetic disorders that can also be chronic and progressive. No less than 75% of them affect children. Of patients with rare diseases, 30% die before the age of 5 years. In Belgium, it is estimated that more than 660,000 people suffer from a rare disease.

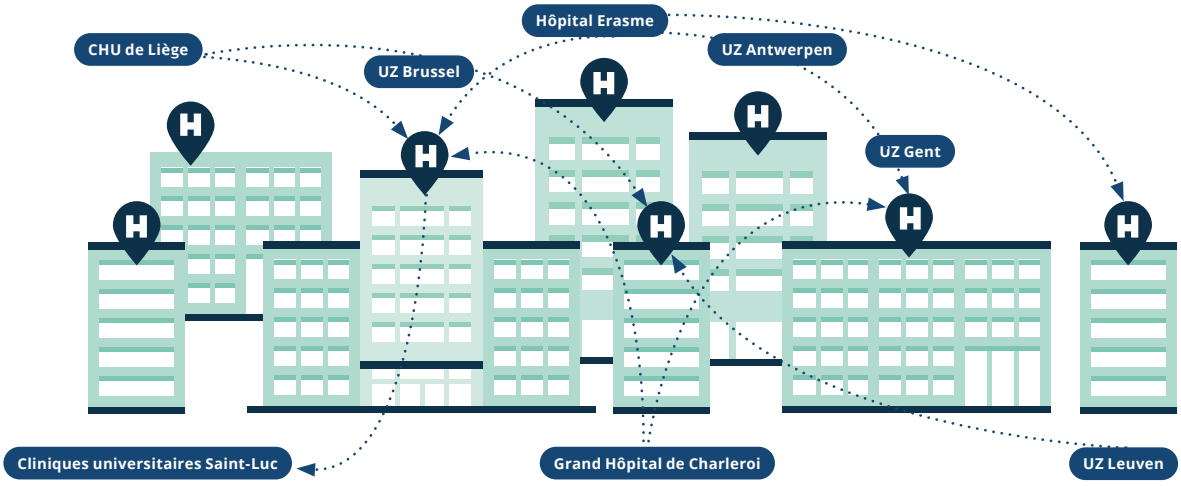
These diseases also have major economic and professional consequences for patients and their families. On average, 36% of patients are obliged to significantly reduce or completely stop carrying out their occupational activities. In 26% of cases, a family member must also give up his or her job to devote himself or herself to caregiving.[41]

In most cases, there is no cure, but treatment of the symptoms can improve the patient's quality of life and extend their lifespan.

The large number, diversity, and rarity of these diseases create several problems in treating them. On average, it takes 5 years until the correct diagnosis is made. The characteristics of these diseases mean that the expertise needed to treat them cannot possibly be available everywhere in Belgium. Networks with the aim of pooling expertise in the field are therefore particularly important in the case of these diseases.

Rare disease networks in Belgium

Treating rare diseases requires highly specialised care. General practitioners and specialists can refer their patients to one of the 8 hospitals with an accreditation for the function of 'Rare diseases'. This accreditation guarantees quality of care, diagnostic expertise, specialised multidisciplinary care, access to innovative treatments, and the opportunity to participate in research. The hospitals that have obtained this accreditation are: Cliniques universitaires Saint-Luc, CHU de Liège, UZ Brussel, Hôpital Erasme, UZ Antwerpen, UZ Leuven, UZ Gent as well as the Grand Hôpital de Charleroi in collaboration with the Institute of Pathology and Genetics (IPG).



39 Source: Sciensano. (2024). Rare diseases. Consulted at https://www.sciensano.be/nl/gezondheidsonderwerpen/zeldzame-ziekten

40 Source: Orphanet. (2024). Access to aggregated data from Orphanet. Consulted at https://www.orphadata.com.

41 Source : Rare Diseases and Orphan Drugs Fund (2011). *Recommendations and proposals for action for a Belgian Plan for Rare Diseases*. Consulted on https://www.departementzorg.be/nl/zeldzame-ziekten-0

In Flanders, the "Vlaamse Netwerken Zeldzame Ziekten" (Flemish Networks of Rare Diseases) association was set up in 2017. This structure facilitates the creation of rare diseases networks in Flanders. There are now 23 networks, based on the same disease groups as the European reference networks. Taking part in those networks is voluntary.

European reference networks for rare diseases (ERNs)

The large number of different rare diseases, the rarity of each disease, and its complexity present a major challenge. The expertise needed to treat a disease is not always available, sometimes not even in the patient's country of residence, and the same is also true of the treatments themselves. The characteristics of these diseases also lead to a lack of resources in healthcare systems: for example, the often (very) high cost of treatment, or the difficulty of conducting research due to the small number of patients and the lack of data and resources. In Europe, an estimated 30 million people suffer from a rare disease.



To meet these challenges, the European Commission, together with EU Member States and Norway, created the European Reference Networks for Rare Diseases, also known as ERNs, in 2017.

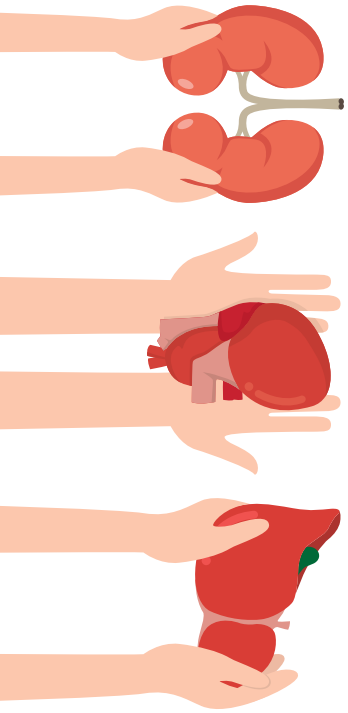
These are virtual networks that aim to bring together European expertise on rare diseases. There are currently 24 ERNs, each of which specialises in a specific type of disease. Teams of experts from across Europe participate in these networks, which aim to disseminate expertise rather than patients. These networks work on virtual consultations, setting up specific registries, drawing up treatment guidelines, and organising training sessions to share knowledge.

A healthcare provider can call upon the knowledge of expert members of an ERN. The assembled experts will analyse the specific case of the patient. If necessary, additional examinations may be requested and, whenever possible, performed in the patient's country of residence. The goal of this virtual advisory board is to make the correct diagnosis and suggest the most appropriate treatment. If specialist intervention is needed, efforts are made to ensure that expertise goes to the patient's country as much as possible and not the other way around. This is not always possible.

This work allows health professionals who previously treated rare and complex cases in isolation to consult their colleagues for a second opinion.

For more information, see
https://health.ec.europa.eu/rare-diseases-and-european-reference-networks/european-reference-networks_en

4.6 Organ donation and transplantation



Eurotransplant

In the world of organ donation and transplantation, collaboration is invaluable. Not only within the borders of our country, but also across international borders. Belgium has committed itself to cooperating closely with Eurotransplant, an international non-profit organisation that streamlines communication between donor hospitals and transplant centres. This organisation facilitates the allocation and exchange of donor organs between the 8 participating countries.

Patients waiting for an organ transplant are registered in a central Eurotransplant database. As soon as a donor becomes available, his/her characteristics are registered in the same database. A computer program then searches for a possible match for each organ made available. International and national regulations regarding organ donation are respected every time an organ is allocated.

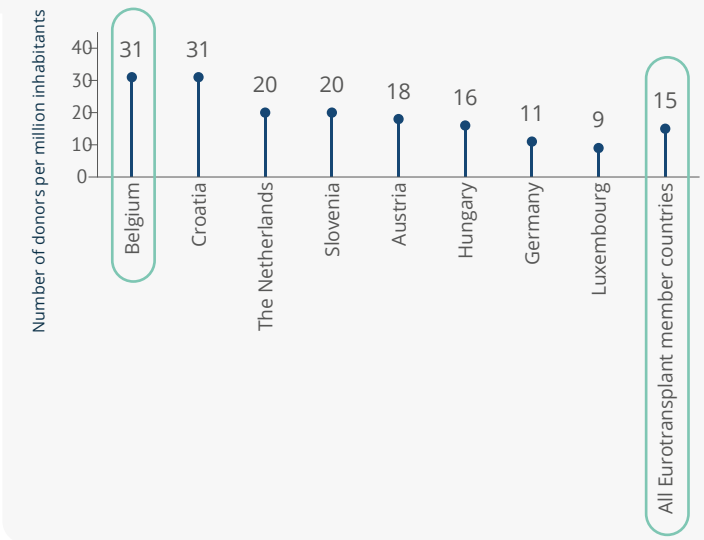
International cooperation increases the likelihood of a positive match between a donor patient and a patient on the transplant waiting list. The Eurotransplant region, which includes Belgium, the Netherlands, Luxembourg, Germany, Austria, Slovenia, Croatia, and Hungary, has a population of more than 130 million. This broad base offers considerable potential for organ donation, with the number of transplants depending, of course, on the available supply from donors.

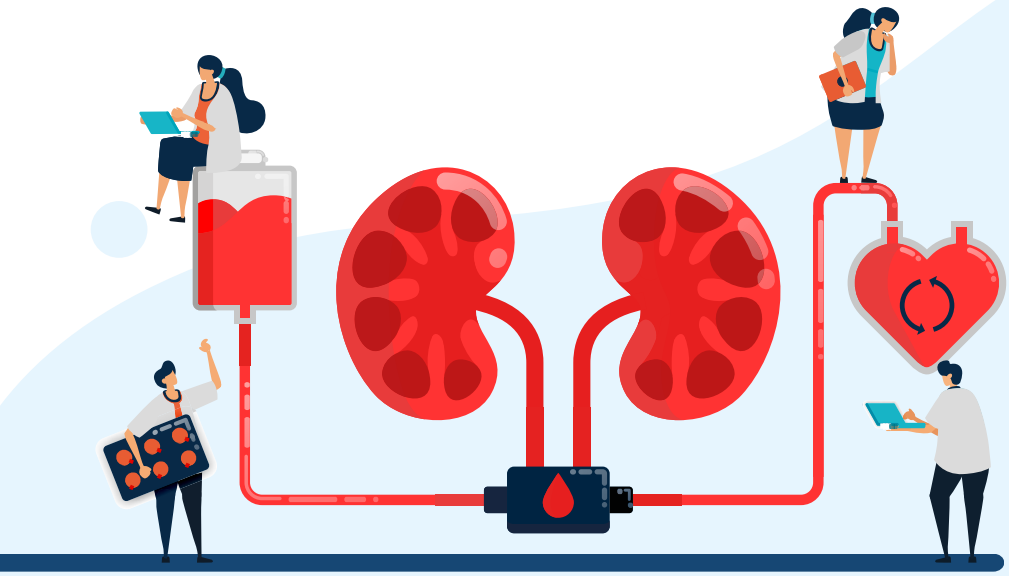
Learn more?
https://www.eurotransplant.org/

Organ donation

Per million inhabitants, the number of donor patients who donated at least 1 organ ranges from 9 to 31 in the countries that form part of the Eurotransplant network.

Number of donors per million inhabitants in Eurotransplant member countries in 2024





"With 31 people per million inhabitants donating at least one organ, Belgium has the highest number of donors of all eight countries that are members of the Eurotransplant network."

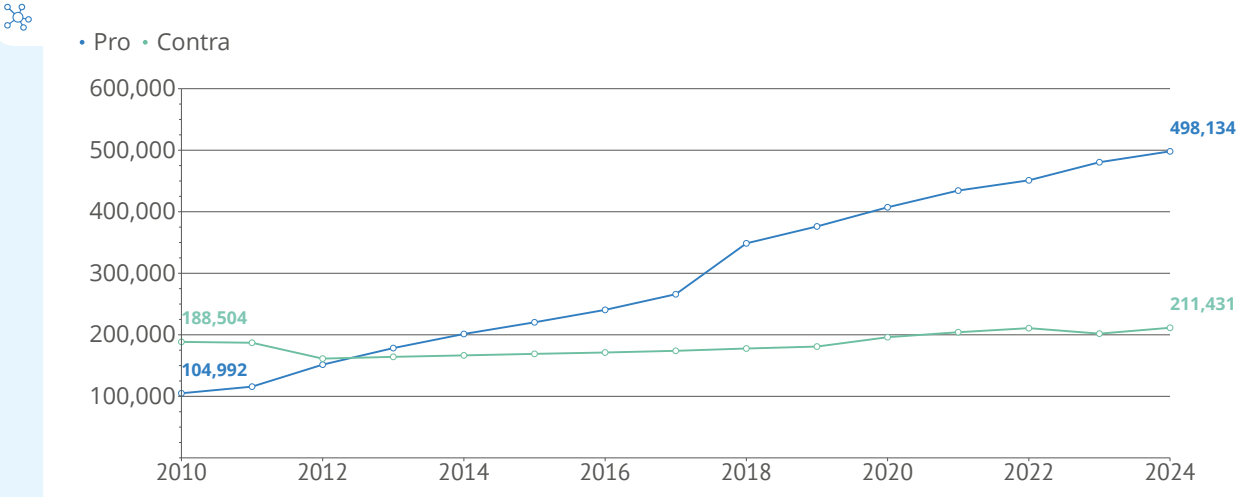
Want to register your choice regarding organ donation?
Klikvoororgaandonatie.be

Amongst the countries in the Eurotransplant network, Belgium has the highest number of donors per million inhabitants. However, Spain – which is not part of Eurotransplant – is the leader in Europe, with 47 donors per million population having donated an organ in 2022. [42]

Belgium has a high number of donors thanks to the existing legal framework and to the efforts of hospitals and the government. The legislation, which includes an opting-out system, is such that the population is automatically considered a donor, unless a person objects. This contrasts with the opting-in system used by some other countries, which requires explicit consent from individuals or their families.

Regardless of the opting-out system in Belgium, there is a national registry in which every citizen can register their choice to donate organs. In 2024, there were 709,565 registrations in this registry. 70% of the registrations are positive registrations in which the patient indicates that they are making their organs available for donation. The number of registrations has more than doubled since 2010 and the major share of that increase relates to the number of positive registrations (+374%) compared to the number of negative registrations (+12%). If a patient does not record his/her wishes in the registry, the question as to whether organs can be donated is put to the immediate family.

Evolution of the number of registrations in the national register



42 Source: Council of Europe Organización Nacional de Trasplantes (2023). International figures on donation and transplantation 2022. Newsletter transplant, EDQM, 28 (2023). Consulted at https://www.transplant-observatory.org/summary/summary/

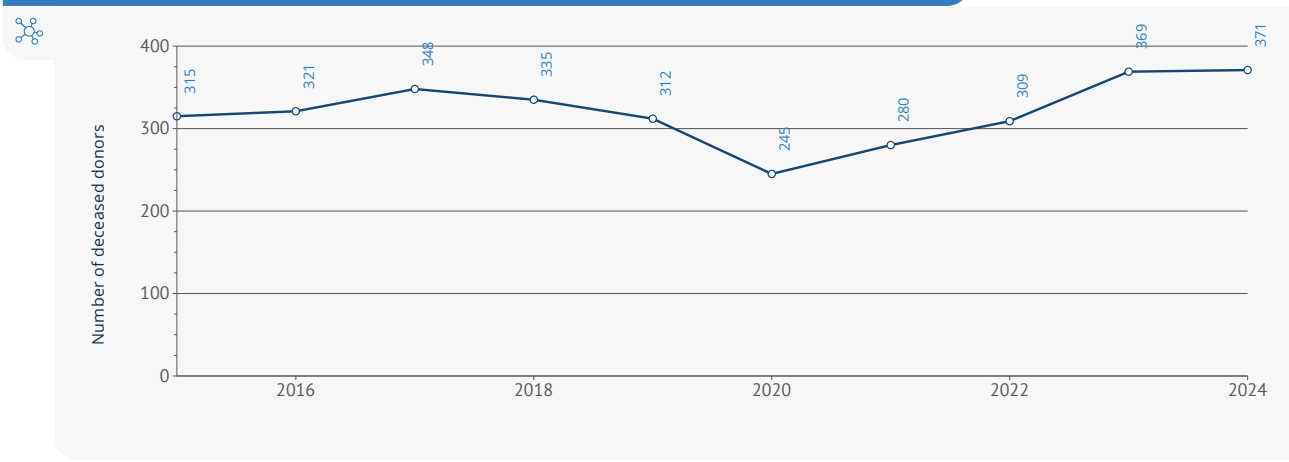
Organ transplantation

With 33 transplant programmes for various organs in 8 transplant centres across the country, including 7 university hospitals and 1 heart transplant hospital, Belgium has built an advanced infrastructure for organ donation and transplantation. These centres work closely with about 100 hospitals around the country, in which local medical and nursing donor coordinators have been appointed. These coordinators play a crucial role in detecting potential donors and ensuring a streamlined donation process.

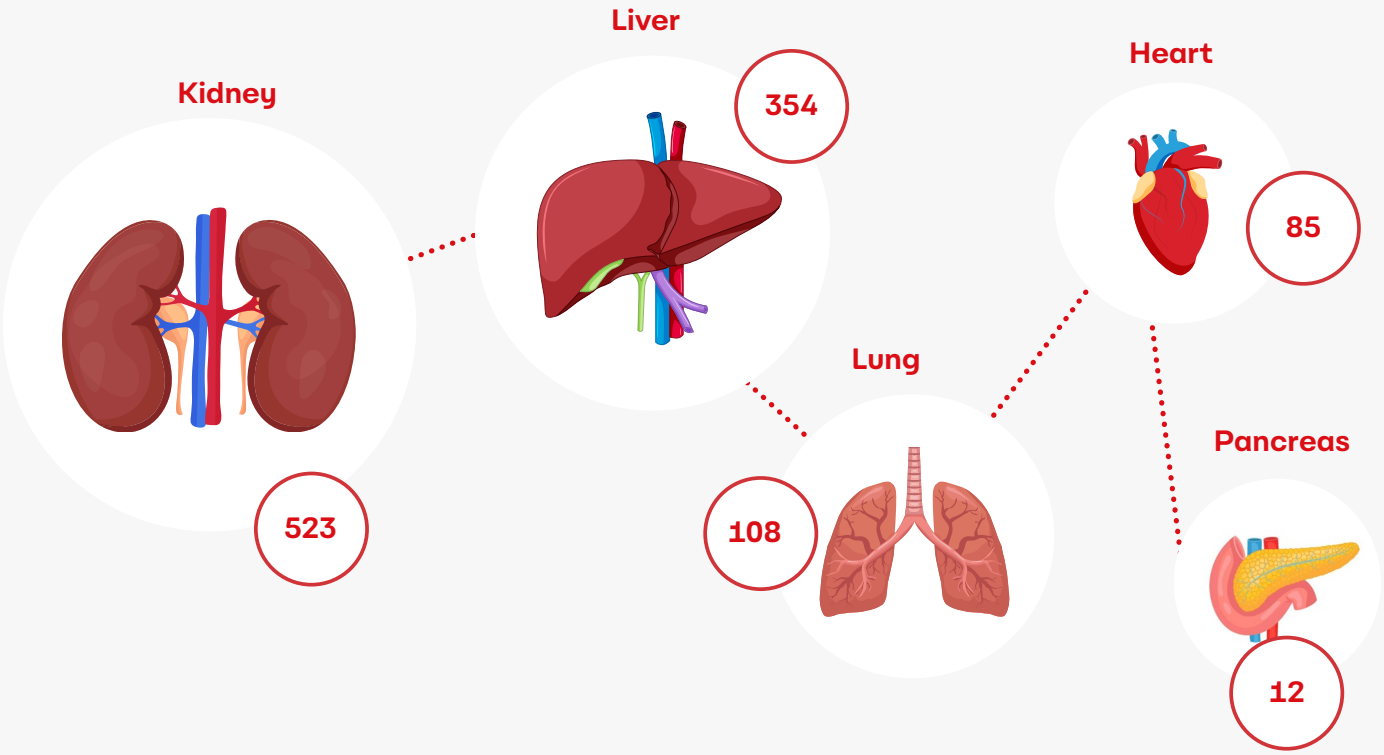
Effective cooperation between transplant centres and hospitals has not only increased the number of donors, but has also generated international interest. Other countries are showing interest in the Belgian model of cooperation and coordination, which clearly illustrates that a joint effort on a national and international level is essential in order to improve organ donation and transplantation projects worldwide.

In the last 10 years, the annual number of organ donations by Belgian patients has increased from 315 to 371 (+18%).

Evolution in the number of deceased donors who donated at least 1 organ in Belgium



Proportion of transplants in Belgium in 2024

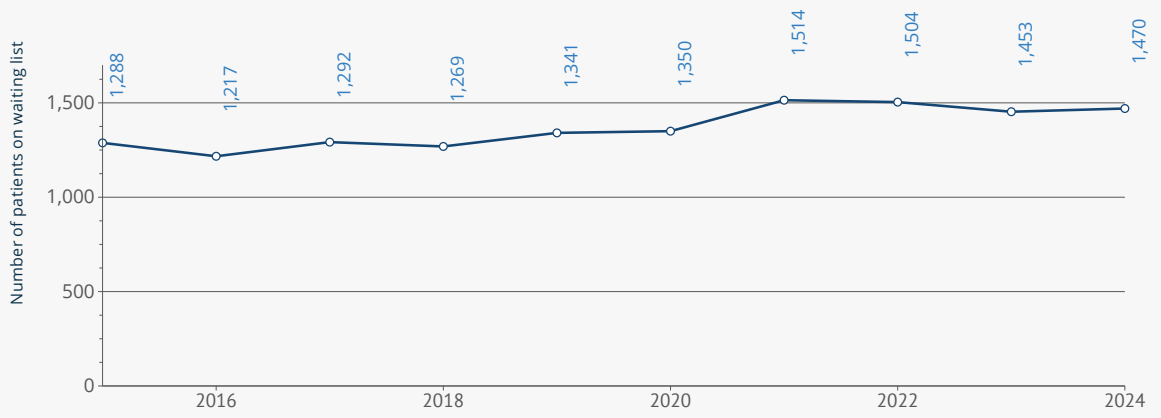


In 2024, 1,082 transplants were performed in Belgium. Half of the transplants were kidney transplants and one-third were liver transplants.

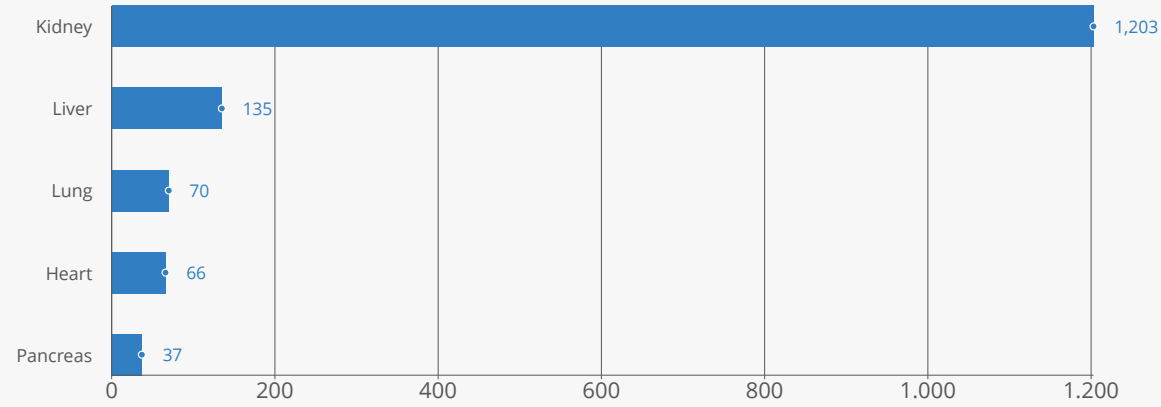
Organ transplantation waiting list

There were 1,470 people on the organ transplant waiting list in Belgium in 2024. That number has increased 14% since 2015.

Evolution in the number of active patients on the organ transplant waiting list in Belgium



Number of people on the waiting list by organ type in 2024



Learn more?
https://www.health.belgium.be/en/health/taking-care-yourself/begin-and-end-life/organ-donation

4.7 Operation Zero

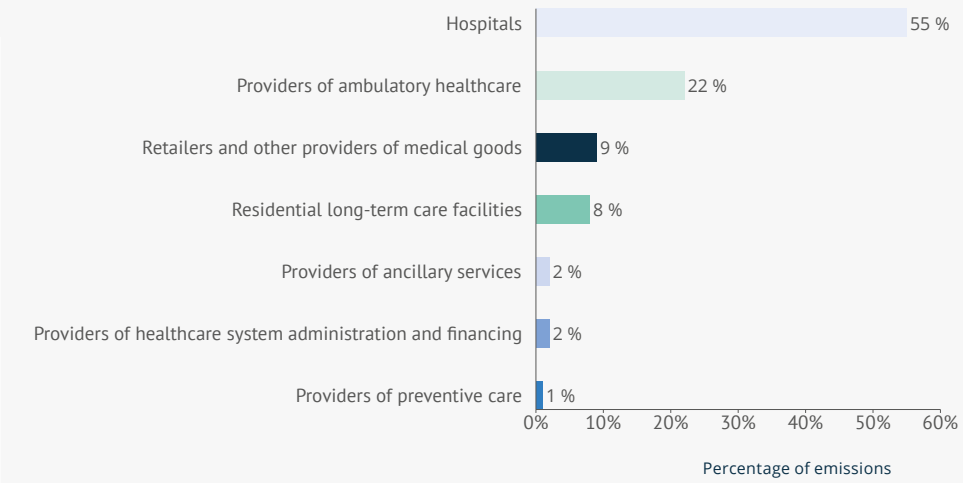
Climate change is having an increasing impact on our daily lives. The need for climate action across all sectors, including healthcare, is becoming ever more evident. The healthcare sector is a significant contributor to CO_2 emissions and thus plays a crucial role in the fight against climate change.

The Belgian healthcare sector—including hospitals, residential care centers, preventive medicine, and outpatient care—is responsible for 5% of total emissions. This amounts to 9,901 kilotons of CO_2 equivalent per year. Without decisive action, an increase of 61% is expected by 2050, primarily due to rising healthcare demand caused by an aging population and the consequences of global warming.

To tackle this challenge, the federal and regional governments have developed the National Environmental Health Action Plan (NEHAP). From this initiative emerged the study Operation Zero, which provides detailed insight into the distribution of CO_2 emissions within the healthcare sector.

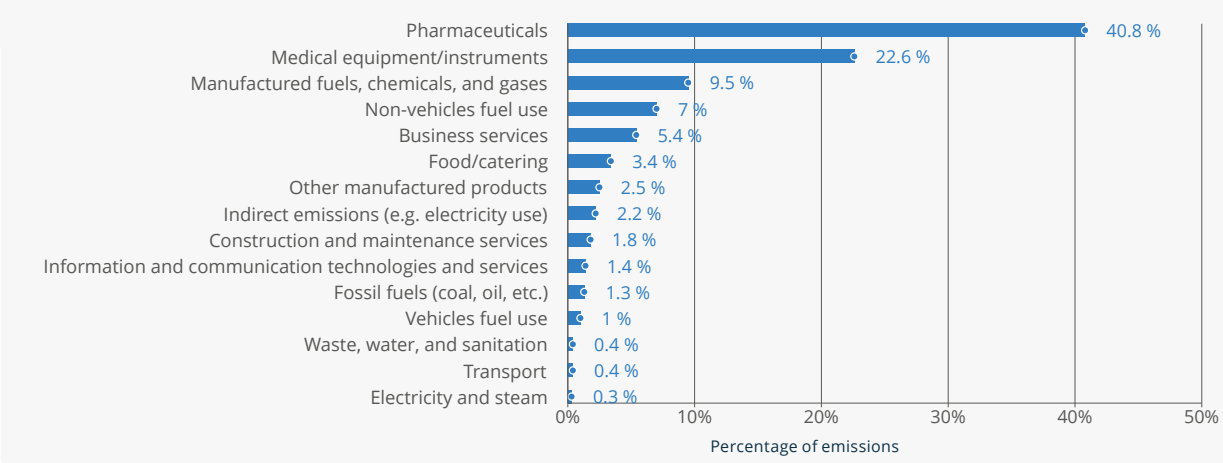
Hospitals account for 55% of the total emissions.

Emissions by type of healthcare provider



Goods and services—such as medical supplies, food, office materials, and medication—account for more than 80% of hospital emissions. Pharmaceuticals alone represent 40.8% of the total emissions, partly due to the use of anesthetic gases and aerosol inhalers, which release greenhouse gases. One-fifth of emissions stem from the medical equipment and instruments used.

Percentage of emissions in hospitals by category



Many healthcare institutions are already taking active steps to integrate sustainability and reduce their ecological footprint. This includes:

- Switching to renewable energy
- Sustainable and energy-efficient building practices
- Waste management and a circular economy in healthcare
- Local and sustainable catering

Through international collaborations, knowledge is shared to learn how other countries are addressing these challenges.

At the 2021 climate summit, Belgium committed to making the healthcare sector climate neutral by 2050. Thanks to Operation Zero, we now have a detailed overview of CO_2 emissions within the healthcare sector, which supports both governments and healthcare providers in taking targeted action.

Learn more?
https://www.leefmilieu-gezondheid.be/nl/nieuws/operation-zero-eerste-stap-naar-de-vergroening-van-de-gezondheidszorg

CONCLUSION

In this publication, we have highlighted various forms of collaboration that have already been initiated to improve the quality of healthcare within the general hospital sector. These initiatives demonstrate a shared goodwill to strengthen our healthcare system. While progress is encouraging, much work remains to be done.

The setting up of hospital networks requires activities to be reorganised, new forms of funding to be developed, and the legal framework to be adapted. The success of these innovations relies on the ongoing commitment and involvement of all actors within the sector. From healthcare providers to policymakers, everyone has a crucial role to play in the further expansion and strengthening of these networks. A concerted effort to overcome obstacles and seize opportunities is essential.

The emphasis must continue to be upon cooperation and shared responsibility. A sustainable, efficient and patient-centred healthcare system can only come about through a collective effort underpinned by a common vision. Joining forces will enable us to meet current and future challenges so that every citizen is guaranteed equal access to quality care.

With confidence in the future and with gratitude for the efforts already made, we conclude this publication with a call for continued cooperation and shared responsibility.

Together, we can build a resilient healthcare system that stands ready to meet the needs of tomorrow and provide excellent care for us all.



Health
Food Chain Safety
Environment