Key data in healthcare

Preparedness and responses to crisis situations

Health
Food Chain Safety
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Colophon

Subject:

This report provides an overview of the functioning of emergency, medical and psychosocial services based on a number of key figures. In four chapters on "Organisation", "Activity", "Funding" and "Quality", certain trends regarding the operation in this sector of healthcare are highlighted.

Editorial Committee:

Members of the Directorate General for Healthcare and the Directorate-General for Health Emergency Preparedness and Response.

Responsible Editor:

Dirk Ramaekers, Avenue Galilée 5/2 – 1210 Brussels.

Contact information:

Health
Food Chain Safety
Environment

FPS Health, Food Chain Safety and Environment
Avenue Galilée 5/2 – 1210 Brussels
T. +32 (0)2 524 97 97 (Health Service Centre)
Email: adhoc_admDM@health.fgov.be

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FOREWORD

Dear reader,

I am delighted to present this new edition of Key Data in which we provide you with a detailed overview of the latest figures on emergency medical assistance in Belgium. This publication is a source of information on the organisation, activity and funding of emergency medical assistance in Belgium.

Emergency medical assistance is one of the responsibilities of the new Directorate General for Health Emergency Preparedness and Response of the FPS Public Health. This new Directorate General is tasked with the preparedness and management of health crises and the management of emergency medical services. It also represents the Belgian position in terms of health crisis management in international forums such as the DG Health Emergency Preparedness and Response (DG HERA), the DG European Civil Protection and Humanitarian Aid Operations (DG ECHO), the DG Health and Food Safety (DG Health), the European Centre for Disease Prevention and Control (ECDC), the World Health Organization (WHO), etc.

The figures and analysis in this report demonstrate our commitment to guaranteeing the organisation of a safe, responsive and effective emergency medical intervention, with the aim of providing timely medical care to citizens who need it.

We hope that these data will give you an insight into the complexity and challenges of emergency medical assistance and that they will highlight the importance of our joint efforts to maintain a solid health infrastructure. It is important to remember that emergency care is organised in close association with our various partners including the FPS Home Affairs, the National Crisis Centre, the communities and the regions.

I would like to thank all those who have contributed to this publication and the professionals in the healthcare sector whose daily efforts save lives. Their tireless endeavours make a substantial difference.

I hope you enjoy reading it,

Marcel Van der Auwera,

Acting Director-General

Directorate-General for Health Emergency Preparedness and Response

1 ORGANISATION

10

Belgium has 10 emergency centres for 112 calls.

112 SOS

420 on-call staff

420

In Belgium, as of 1 February 2024, there were 420 on-call staff for both an ambulance (379) and a Paramedical Intervention Team (41). There were 94 Mobile Emergency Group (MUG/SMUR) functions.

116

116 organisations signed an “Ambulance service for emergency medical assistance” agreement with the FPS Public Health in 2024.

ORGANISATION

Emergency medical assistance is designed to help people who are at home, on the public road or in a public place and whose condition requires urgent, unplanned care as a result of an accident or illness.

The FPS Home Affairs (FPS HA) is responsible for the organisation and management of the 112 emergency centres. The emergency centre in the Brussels-Capital Region is an exception to this and is operated by the Firefighting and Emergency Medical Assistance service of the Brussels-Capital Region[1]. The FPS Public Health takes over responsibility from this service the moment an operator dispatches a medical resource to the victim. The medical resource may be a Paramedical Intervention Team (PIT), a Mobile Emergency Group (MUG/SMUR) or an ambulance. The FPS Public Health is therefore responsible for organising, maintaining and financing the various medical resources used by a victim.

Find out more
Emergency Medical Services Act

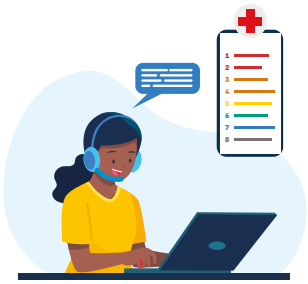
1 The Firefighting and Emergency Medical Assistance Service of the Brussels-Capital Region works under the authority of the Minister or State Secretary of the Government of the Brussels-Capital Region which is responsible for firefighting and emergency medical assistance.

What to do if someone needs medical assistance?

When a citizen calls 112 to ask for medical assistance, a process is initiated in which several actors play a role. These actors are discussed in detail later on.

The person requesting assistance calls 112 and is given a choice between an ambulance, the fire department or the police.

The operator picks up the 112 call and determines the resources to be deployed depending on triage.

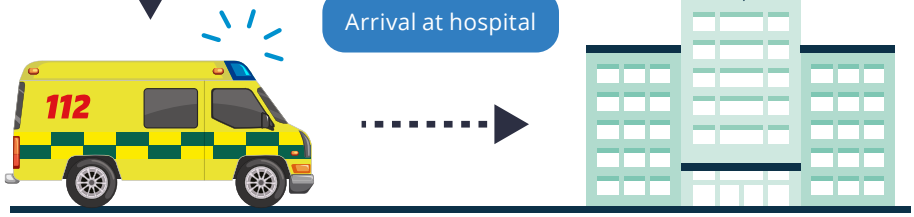


An ambulance/PIT is dispatched, if necessary combined with MUG/SMUR.

Departure to hospital

Ambulance, PIT and/or MUG/SMUR return to base.

Arrival at hospital



112 Emergency centres

General operation

There are 10 emergency centres for 112 calls in Belgium: one in each provincial capital, with the exception of Walloon Brabant, and one in the Brussels-Capital Region. The calls from Walloon Brabant are handled by the Hainaut 112 emergency centre.

"Belgium has 10 emergency centres for 112 calls."

Via the 112 emergency number, a person requesting emergency assistance in Belgium is referred to one of the 10 emergency centres. In 2023, the 112 emergency centres were manned by 447 operators[2]. An operator at the emergency centre will answer the call and analyse the request for assistance. Using the Belgian Medical Regulation Manual, which consists of established protocols, the 112 emergency centre operator classifies the request for assistance according to its a severity level. The mostappropriate resources are then dispatched. This may be an ambulance, a Paramedical Intervention Team (PIT) or a Mobile Emergency Group (MUG/SMUR).

The operators are assisted by a medical director[3], a deputy medical director [4] and nurse regulators[5].

- The medical director is responsible for supervising the medical quality of the emergency assistance. They must have a qualification as an emergency doctor.
- The deputy medical director holds the special professional title of nurse specialised in intensive and emergency care. Under the coordination of the medical director, they perform tasks within the 112 emergency centre as a functional medical authority and project officer, and act as a link between the various partners of the 112 emergency centre.
- The nurse regulator supports and advises the operators by offering them, among other things, appropriate medical training. The nurse holds the special professional title of emergency nurse. They should also have specific training in crisis management and contingency planning.

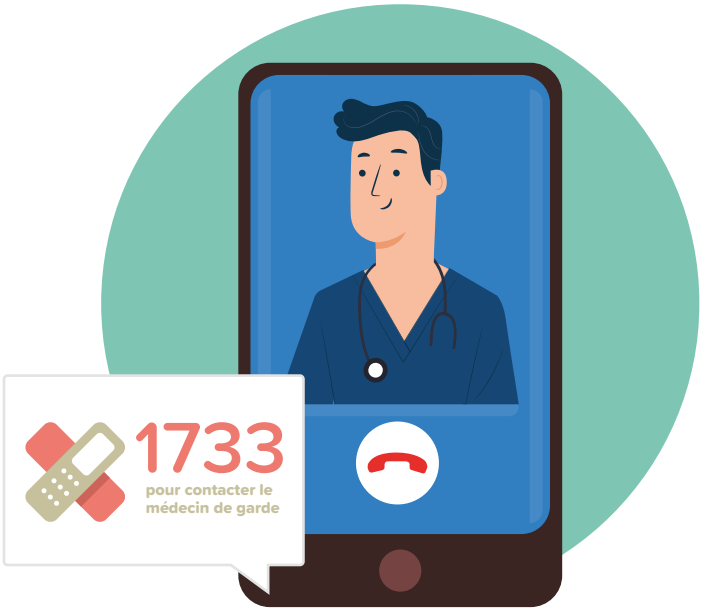
2 Source: FPS Home Affairs and the Firefighting and Emergency Medical Assistance service of the Brussels-Capital Region.
3 The duties of the medical director are laid down in the Royal Decree defining the function, tasks and competence profile of the medical director of 112 centres.
4 The duties of the deputy medical director are laid down in the Royal Decree defining the function, tasks and competence profile of the deputy medical director of 112 centres.
5 The duties of the nurse regulator are laid down in the Royal Decree defining the function, tasks and competence profile of the deputy medical director of 112 centres.

Non-urgent medical assistance via a call to 1733

1733 is a central number intended to provide non-urgent medical services to citizens outside of business hours such as on week nights, weekends or public holidays. This number is linked to the local on-call medical services. Operators at some 112 emergency centres already handle calls to the 1733 number.

As of 4 January 2024, the inhabitants of 1,109 locations, identified by postcode, can contact an on-call GP using the 1733 number[6].

In 602 of the 1,109 locations, 1733 calls are handled by a 112 emergency centre. This is the case for locations that are covered by the 112 emergency centres in Arlon, Antwerp, Mons, Bruges, Leuven or Liège. Which emergency centre takes the call depends on where the 1733 call originates. The call handling is organised in a complementary way and in synergy with the 112 call system. Trained operators refer the person requesting care to the most suitable care offer on the basis of the Belgian Medical Regulation Manual.



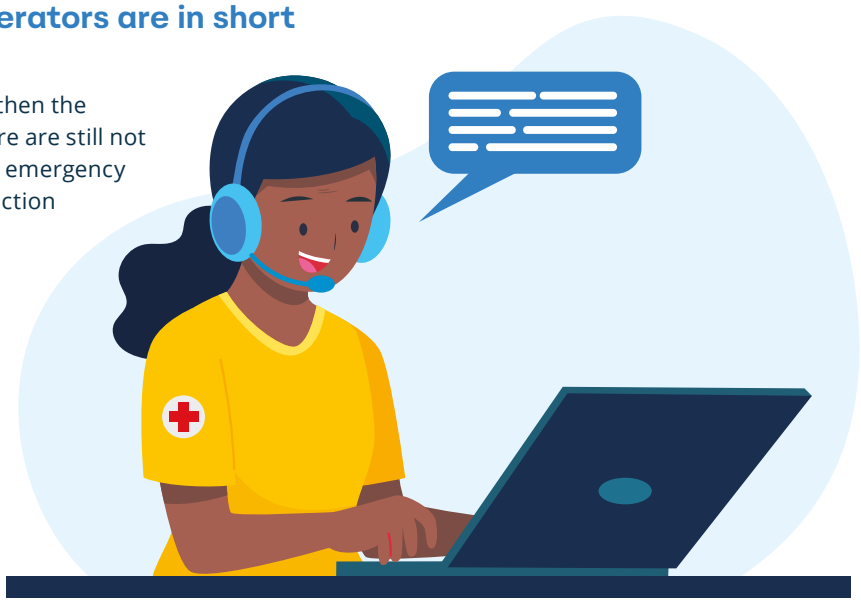
"The 1733 number can be used in 1,109 locations to reach an on-call GP."

In the 507 other locations, calls are currently transferred directly to an on-call medical staff member or an on-call GP. Due to the acute shortage of operators, it is not yet possible to have the 112 emergency centre answering all 1733 calls in all municipalities.

To find out more about the 1733 number:
www.1733.be

6 In other municipalities, the on-call GP can be reached using a local phone number.

Taskforce operators: when operators are in short supply



Despite the constant efforts used to strengthen the numbers in the 112 emergency centres, there are still not enough operators. It is estimated that a 112 emergency centre needs at least three operators to function well. Only once the centre has four or more operators does it have sufficient capacity to handle 1733 calls. In late 2023, the Directorate General for Civil Security of the FPS Home Affairs, working with its partners, including the FPS Public Health carried out a 360-degree exercise designed to tackle the difficulties encountered in the 112 emergency centres. This partnership resulted in the creation of a master plan for the 112 emergency centres. This plan is structured around seven major issues: governance (1), organisation of work (2), human resources (3), tools and technology (4), well-being (5), communication (6) and funding (7). The action plan contains nearly 150 actions and presents levers to improve the current situation significantly.

The solutions identified included the creation of an accelerated recruitment procedure, known as the "Fast Lane". In just one day, the candidate sits all the exams and attends the interviews that form the selection process. The training pathway has also been adapted so that future operators can handle 1733 calls during their training to deal with 112 calls. This win-win situation benefits both the operators, who gain hands-on experience in their future role before they finish their training, and the 112 emergency centre that has staff who are available to relieve the 112 operators more quickly.

At 15 March 2024, 32 operators were already in place and, via the Fast Lane, 25 individuals had accepted a position as a 112 or 1733 operator. 31 positions were still open. As a comparison, 32 112 and 1733 operators were recruited in 2023.

A second solution which was proposed involved creating two virtual, supra-provincial emergency centres (one Dutch-speaking and one French-speaking) for the 1733 number. The operators who will work in this virtual 1733 centre will continue to work physically from the stations in the 112 emergency centres in the different provinces. However, 1733 calls that end up in this virtual centre will be handled by operators regardless of which competent 112 emergency centre on the ground should have handled the call. Previously, a call made in the Province of Hainaut was handled by the Mons 112 emergency centre. Using this system, the same 1733 call may be handled by an operator at the Liège 112 emergency centre, for example. Given that the handling of calls no longer depends on where the operator works but their availability, this scheme could be used to resolve the problems related to staff shortages. In other words, it would enable the operator who handles 1733 calls in the Leuven emergency centre to take a 1733 call made by a caller in the city of Antwerp in the event that the 1733 operator in the Antwerp emergency centre is already on a call with another caller. Previously, this type of call would be put on hold until the operator at the Antwerp emergency centre finished their initial call. The pooling of human resources in emergency centres with the same linguistic role should lead to better management of 1733 calls.

The French-speaking virtual supra-provincial centre for 1733 was opened on 1 April 2024. After a test phase, the on-call medical staff were gradually integrated every 15 days. The Dutch-speaking virtual centre followed a month later on May 1st 2024. Eventually, all of Belgium should be covered.

Ambulance services and on-call rotations

In Belgium, as of 1 January 2024, 116 organisations had signed an "Ambulance service for emergency medical assistance" agreement with FPS Public Health. In this agreement, services commit to being available at agreed times.

"116 organisations signed an «Ambulance service for emergency medical assistance» agreement with FPS Public Health."

The following organisations are involved in providing emergency medical assistance:

- Emergency Rescue Zone
- An organisation/company approved by the FPS Public Health
- Hospital
- Red Cross-type associations (e.g. Belgian Red Cross, Rode Kruis Vlaanderen, Vlaamse Kruis, etc.)
- Others (Public Social Welfare Centres, airports)

Only services that have concluded a formalised, signed agreement can be dispatched by a 112 emergency centre. Having such an agreement is also a condition for obtaining a grant from the FPS Public Health. Services that have not signed an agreement handle non-urgent patient transport, provided that they are approved by the federated entities.

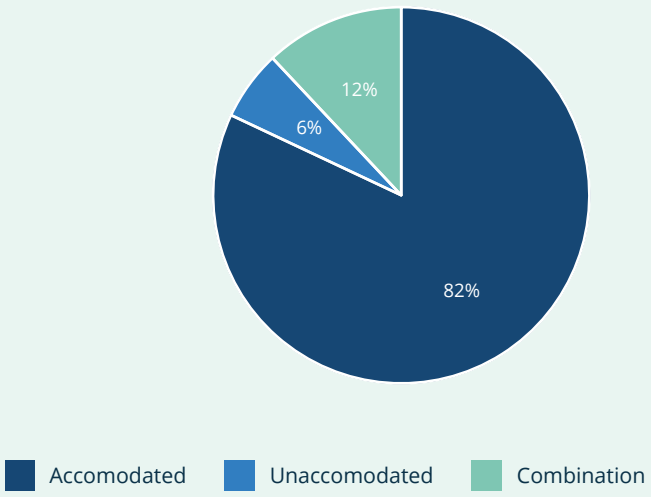
Based on the agreement, one or more on-call rotations are each manned by two paramedics, who are ready to go to a patient at the emergency centre's request. On 1 February, in Belgium, there were 420 on-call staff for both an ambulance (379) and a Paramedical Intervention Team (41)[7]. Some on-call rotations are set to begin during the year. By the end of 2024, Belgium will have a total of 441 on-call rotations funded due to the integration of 3 on-call ambulances and 18 additional on-call PIT.

- Most on-call rotations have an on-call service where the paramedics are on duty at the departure point. These on-call services have a rest area. This is also known as an **'accommodated' on-call rotation**. This is the most frequently-used on-call model (345 stations).
- A number of on-call rotations have an on-call service where the paramedics are on duty at home and go to the departure point in the event of a call. This is known as an '**unaccommodated' on-call rotation**. This type of on-call rotation is the least common model (26 posts).
- Some on-call rotations offer a "mixed" on-call service, combining accommodated and unaccommodated on-call rotations. A total of 49 posts are organised using this model.

Learn more about ambulance services:
https://www.health.belgium.be/

7 On-call rotations as discussed above are only organised for ambulances and Paramedical Intervention Teams (PIT). For this reason, no data on the MUG/SMUR functions has been incorporated here.

Number of on-call rotations for ambulance and PIT by type (01/02/2024)



The various emergency services for emergency assistance

In a situation where there is a need for emergency medical assistance, various resources can be dispatched to the location of the emergency, i.e. an ambulance, a Paramedical Intervention Team (PIT) or a Mobile Emergency Group (MUG/SMUR). On the basis of protocols established in the Belgian Medical Regulation Manual, the operator from the emergency centre determines which resource will be activated. In addition, based on the above protocols, an operator may refer the caller to an on-call general practitioner.

Ambulance

An ambulance is a vehicle that has been specially adapted, furnished and equipped to provide basic life support at an intervention site on the one hand, and on the other hand to safely transport a patient to hospital. An ambulance has the necessary equipment for monitoring and providing first aid. There are at least two paramedics in each ambulance. They are usually the first health workers to arrive at the intervention site.

In Belgium, there are 379 on-call rotations for dispatching ambulances approved for emergency medical assistance. Of these, 31 are located in the Brussels-Capital Region, 201 in the Flemish Region and 147 in the Walloon Region. Considering the number of on-call rotations per 100,000 residents, there is a greater presence of on-call rotations in the Walloon Region (3.98 per 100,000 residents), compared to 2.95 and 2.49 per 100,000 residents in the Flemish and Brussels-Capital Regions respectively.

Intermediate ambulance

An intermediate ambulance is an ambulance that is mostly designed for non-urgent medical and health transport but which can be integrated into emergency medical assistance on an ad hoc basis in the event of a disaster or crisis or as a temporary substitution vehicle for an existing 112 dispatch. This system should allow emergency medical assistance to be scaled up quickly when needed.

Non-urgent patient transport by ambulance is a regional competence. For example, this may involve the transfer of a patient between two hospitals or an examination at the hospital of a patient on a stretcher. The intermediate ambulance must be approved by the federated entities to be able to carry out non-urgent medical and health transport but also by the FPS Public Health so that it can be integrated into emergency medical assistance. Until 2024, this type of resource was a grey area midway between the competences of the federated and federal entities. A close partnership between the federal state and the federated entities has clarified the use of intermediate ambulances and their defining criteria.

Find out more.
Memorandum of Understanding of 08/11/2023 signed between the Federal Authority and the authorities refers to Articles 128, 130, 135 and 138 of the constitution on intermediate ambulances

Paramedical Intervention Team (PIT)

The Paramedical Intervention Team (PIT) is a team that intervenes in more serious cases. The team consists of at least one paramedic and one nurse who holds the special title of intensive and emergency care. A PIT ambulance can be dispatched for interventions where the care can be assigned to a nurse. In addition, a PIT is sent in some cases when no MUG/SMUR is available.

In addition to the basic equipment for an ambulance, a PIT ambulance must have the necessary equipment to carry out all its missions. Indeed, more tasks are assigned to the nurse and the paramedic using standing orders (see chapter Quality and Innovation). This allows the nurse to perform some medical acts on site. Furthermore, the PIT team can contact a referring doctor if medical guidance is necessary. This is a doctor who remotely advises and guides the nurse through the use of the standing orders.

The PIT function is currently a pilot project. In October 2009, 24 pilot projects in the framework of a PIT function were launched in Belgium. Currently, no new services are being launched within the pilot project, but several hospitals are taking the initiative to upgrade an existing, accredited ambulance service to a PIT function themselves. By the end of 2024, 27 new PIT functions will integrate emergency medical assistance as part of the urgent inter-hospital transport PIT project via hospital network. This will bring the total number of PIT functions in Belgium to 51. A PIT function may have several paramedical intervention teams.

At 1 February 2024, there were 41 on-call rotations held by a paramedical intervention team (PIT) in Belgium, 25 in the Flemish Region, 13 in the Walloon Region and 3 in the Brussels-Capital Region.

However, if the number of PIT on-call rotations per 100,000, residents is considered, it can be seen that these numbers are almost the same in Flanders and Wallonia. There are 0.35 PIT on-call rotations per 100,000 inhabitants in the Walloon Region compared with 0.37 in the Flemish Region. In the Brussels-Capital Region, there are 0.24 PIT on-call rotations per 100,000 inhabitants.

Mobile Emergency Group (MUG/SMUR)

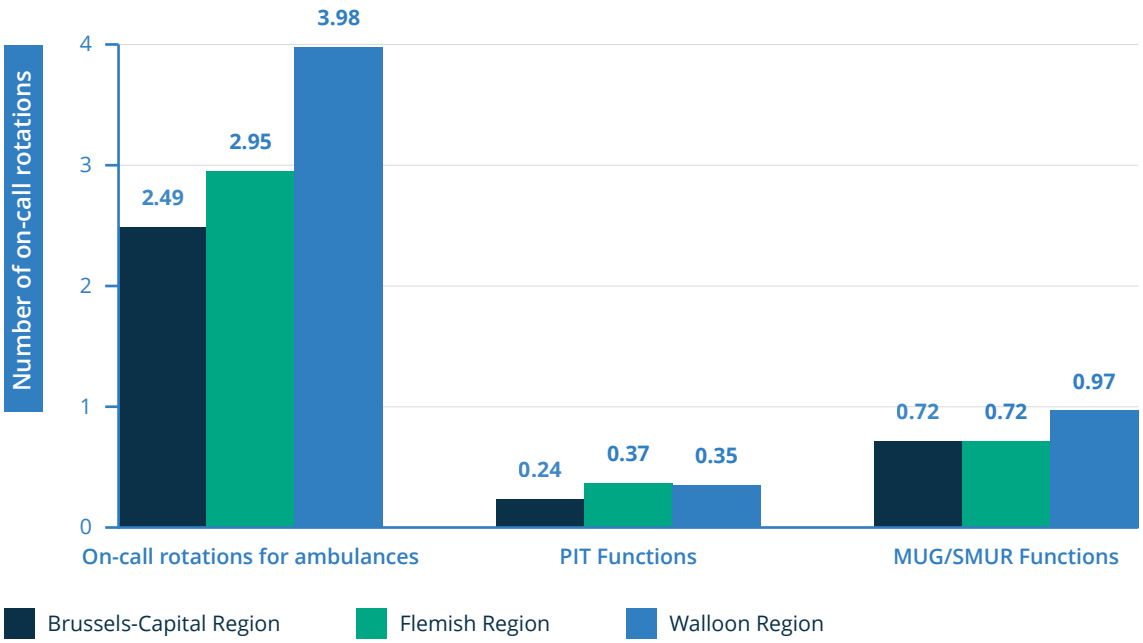
A Mobile Emergency Group (MUG/SMUR) is a mobile medical team that provides advanced life support during an intervention in the context of an emergency situation. The team consists of at least one emergency doctor and one nurse who holds the special title in intensive and emergency care. The MUG/SMUR station is located near a hospital.

The MUG/SMUR team is always accompanied by an ambulance at the intervention site and can be dispatched at the request of the operator at the 112 emergency centre or at the request of the on-site ambulance crews if they feel that a doctor is required.

At 1 February 2024, there were 94 MUG/SMUR functions in Belgium, 49 in the Flemish Region, 36 in the Walloon Region and 9 in the Brussels-Capital Region. Two of these 94 MUG/SMUR functions concern MUG/SMUR helicopters based in the Province of Liège and in Bruges, which are currently being evaluated as pilot projects.

Considering the number of MUG/SMUR functions per 100,000 residents, there is a greater presence of MUG/SMUR functions in the Walloon Region (0.97 per 100,000 residents), compared to 0.72 per 100,000 residents in the Flemish and Brussels-Capital Regions. The greater presence of MUG/SMUR in the Walloon Region can be explained by the more sparsely populated areas, which require a greater presence of MUG/SMUR functions to ensure rapid care. The aim is to achieve equal access to emergency assistance in the various regions of the country. To this end, the number of MUG/SMURs is determined by programming criteria that includes the population of each province. These criteria were defined in a Royal Decree[8].

Number of on-call rotations for accredited ambulances and PIT and MUG/SMUR functions per 100,000 inhabitants by region



Learn more about the location of the recognised MUG/SMUR and PIT functions and the departure locations for ambulances:
https://www.health.belgium.be

8 Royal Decree of 20 September 2002 determining the details of the maximum number and the programming criteria applicable to the "Mobile Emergency Group" function.

Emergency services

Typically, an ambulance will transport the patient to the nearest hospital with a specialist emergency care service, as determined by the 112 emergency call centre.

The nearest hospital is calculated in line with the journey time and not in line with the number of kilometres: e.g. the distance from Egenhoven via N264 to UZ Leuven campus Gasthuisberg is 5 km, but the journey time is 9 minutes. The distance from Egenhoven to Heilig Hart Regional Hospital is 4.2 km, but the journey time is 10 minutes. In this case, then, the patient will be taken to UZ Leuven campus Gasthuisberg even though the Heilig Hart Regional Hospital is closer, because the journey time is shorter. When a MUG/SMUR intervenes, the doctor can deviate from the fastest journey time provided that this is based on the diagnosis of the patient or the need for a specific therapeutic platform (neurosurgery or neonatology, for example).

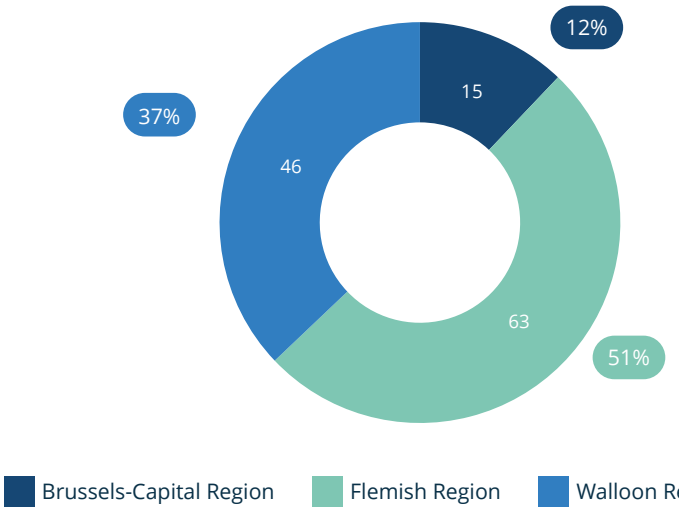
In Belgium, we have two types of emergency services:

- A **specialist emergency care** service: this service must be permanently staffed by an emergency doctor and a minimum of two nurses, at least one of whom must have obtained the special professional title in intensive and emergency care. This service must be able to stabilise and restore a patient's vital signs. 112 ambulances must be directed to this type of service to drop off a patient.
- An **emergency first responder service**: each critical hospital that does not have a specialist emergency care service must have an emergency first responder service. One nurse and one doctor on duty for the entire hospital are sufficient.

At 1 February 2024, there were 124 emergency departments in Belgium, spread across several hospital campuses[9]. Of these, 2 campuses in the Flemish Region, 2 campuses in the Walloon Region and 1 in the Brussels-Capital Region only have an emergency first responder service. The others are specialist emergency care services.

9 Source: FPS Public Health (2024, 1 February). Hospital Infrastructure Repository (HIR). [Dataset]

Number of emergency services per region (01/02/2024)



To find out more about the criteria that a specialist emergency care service or an emergency first responder service must meet:

Criteria for emergency first responder services

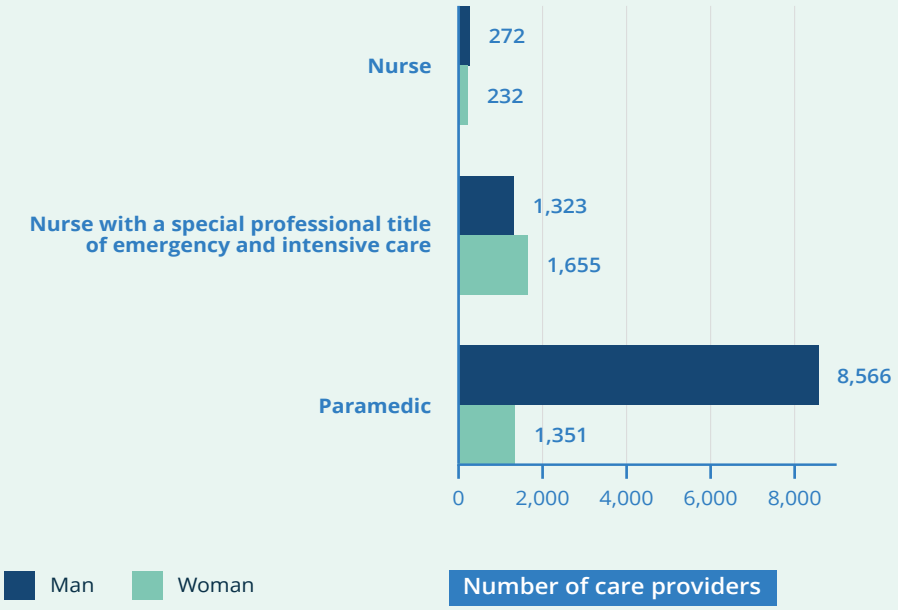
Criteria for specialist emergency care services

Staff at the various emergency services for emergency assistance

Nurses and paramedics licensed to work in emergency medical assistance can be identified through a badge issued by the FPS Public Health.

- Paramedics can be issued this badge by obtaining a paramedics licence. This licence is obtained upon successful completion of the training organised by the provincial training centres.
- For nurses holding a special professional title of emergency and intensive care, obtaining a badge from the FPS Public Health does not require any additional training. For other nurses wanting to work in emergency medical assistance, the badge can be obtained by successfully completing the training in the provincial training centres.
- For doctors, no badge is required to work in a MUG/SMUR.

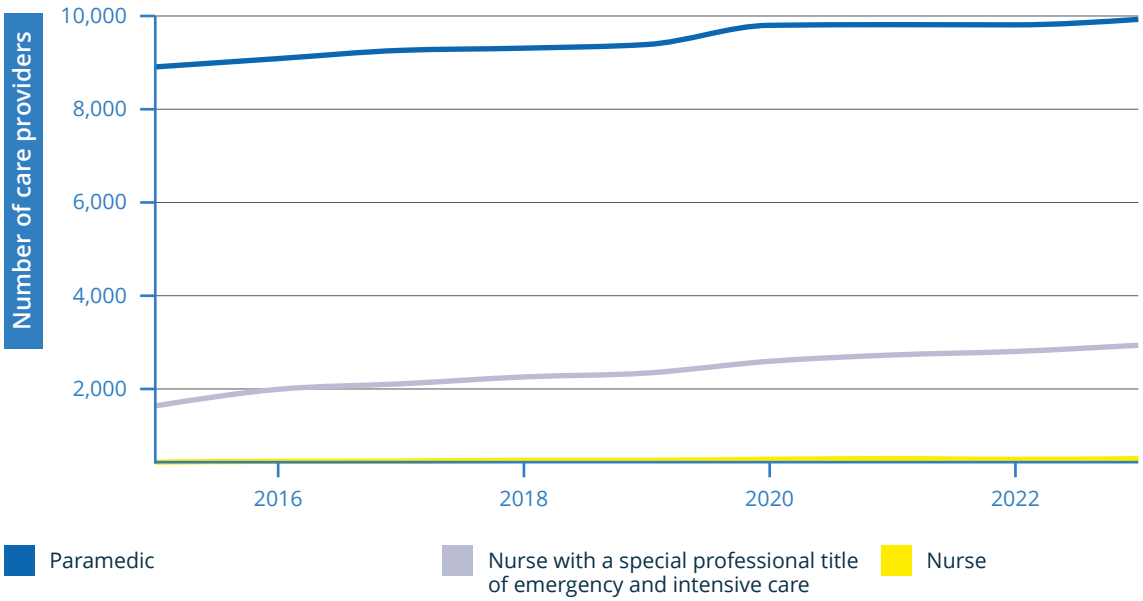
Number of care providers by type with licence and badge (31/12/2023)[10]



10 Source: FPS Public Health (31 December 2023). E-CAD. [Dataset]

It should be noted that the number of nurses specialising in intensive and emergency care with licence and badge has almost doubled in the last ten years.

Change in the number of care providers by type with licence and badge



To find out more about paramedic training:
http://www.ejustice.just.fgov.be/eli/arrete/2024/01/01/2023048632/moniteur

What if everyone needs help at the same time? The care process in the event of a disaster

The relief operation for a collective emergency situation or major federal crisis is coordinated from the **National Crisis Centre**, which is part of the FPS Home Affairs. However, the principles of management developed at a federal level are also applied at a provincial and municipal level for incidents of lesser importance.

Five disciplines

A disaster or collective emergency situation is tackled by various intervention services, whereby each discipline has a mono-disciplinary intervention plan that describes its own operation. Where multiple disciplines are deployed simultaneously, joint coordination is required, this is referred to as a multi-disciplinary deployment[11].

"5 disciplines or intervention services can be called upon in the event of a disaster or crisis."

11 Source: National Crisis Centre (s.d.) Organisation in an emergency. https://crisiscenter.be/en/what-do-authorities-do/crisis-management/organisation-emergency

Discipline 1: emergency rescue zones

Discipline 1 missions are carried out by fire brigades, which may be assisted by operational units from civil protection. Their duties include:

- Managing the emergency situation and eliminating the associated risks;
- Locating, freeing and rescuing people and protecting their property;
- Recovering people and property.

Discipline 2: medical, sanitary and psychosocial services

Discipline 2 missions are performed by medical and psychosocial services (e.g. ambulance services, MUG/SMUR services, the Red Cross, psychosocial workers, the Federal Health Inspectorate, etc.). The most important missions in this discipline are discussed later on in this report.

Discipline 3: police at the scene of the emergency

Discipline 3 missions are performed by federal and local police and are as follows:

- Maintaining and restoring public order;
- Keeping access and evacuation routes clear;
- Setting perimeters, physically defining them, signalling and controlling access to the area;
- Evacuating the population and overseeing shelter;
- Identifying fatalities;
- Assisting in the judicial investigation.

Discipline 4: logistical support

Discipline 4 missions are performed by civil protection, the fire brigade and the army. Their duties include:

- Providing reinforcements for personnel and equipment, as well as providing special rescue and relief equipment;
- Organising the technical means for communication between the disciplines, the operational command post and the coordination committee;
- Organising the supply of food and drinking water for the emergency services and the people affected.

Discipline 5: information to citizens

Discipline 5 missions are carried out by a communications manager and consist of:

- Providing information and guidance to the public;
- Providing information on measures for returning to normal.

Emergency planning

The purpose of emergency planning is to anticipate a disaster or crisis. A whole range of measures, procedures, tools and coordination mechanisms are put in place. In this way, the resources (both human and equipment) needed to manage the situation can be deployed quickly and efficiently. Depending on the nature of the incident, there are several different contingency plans.

- **Multi-disciplinary emergency plans** are developed by different authorities. These emergency plans are intended for crisis management at a federal, provincial or municipal level. For example, this type of contingency plan was used during the terrorist attacks in Zaventem and Maelbeek and the COVID-19 crisis;
- **Mono-disciplinary intervention plans**: these plans aim to develop the missions per discipline, so a discipline can start independently and act quickly. In addition, an emergency plan makes it possible to cooperate with other disciplines;
- **Internal emergency plans**: these are plans drawn up at the level of an institution, e.g. a hospital.

To find out more about emergency plans:
National Crisis Centre - Contingency Plans

Below, we will examine the mono-disciplinary contingency plan for medical, sanitary and psychosocial assistance (discipline 2), for which the FPS Public Health is responsible in an emergency situation.

This emergency plan describes the following missions:

- Initiating the medical chain;
- Administering medical and psychosocial care to victims and people involved in the emergency situation;
- Organising the transport of victims;
- Taking measures to protect public health.

The Federal Health Inspector plays an important role in executing this contingency plan. This individual is the local representative of the FPS Public Health in relation to emergency medical assistance. They are in direct contact with the governor, the mayor, health professionals and citizens. The Federal Health Inspector is assisted by an expert incident and crisis manager (ICM), a psychosocial manager (PSM) and a 112 medical team. This team consists of a medical director, a deputy medical director and nurse regulators (see 'Organisation' section) for each 112 emergency centre. Together, they form a 'Federal Health Inspectorate Cluster'.

The clusters are tasked with the following:

- supervising the proper organisation of emergency medical assistance by inspecting the quality of the activities;
- coordinating the medical component of emergency and contingency plans at a provincial and municipal level;
- implementing federal disaster plans locally (nuclear plan, health plan, heat wave plan, etc.)
- inspecting and applying possible sanctions for the standards in force within emergency medical assistance.

To find out more:
https://www.health.belgium.be/

Three specific sub-plans that were developed as part of the above missions will now be discussed.

Medical care

The Medical Contingency Plan

MIP

Psychological Care

The Psychosocial Intervention Plan

PSIP

Public health

Risks and Demonstrations Plan

RDP

The Medical Contingency Plan (MIP)

The first emergency services (police, ambulance service or fire brigade) on the scene can request the activation of a medical contingency plan (MIP)[12]. Only a few professionals are authorised to activate a MIP, namely:

- the (deputy) medical director[13];
- the first MUG/SMUR doctor at the scene;
- a federal health inspector;
- an incident and crisis management (ICM) expert;
- Head of the Response Service of the Directorate-General for Health Emergency Preparedness and Response of the FPS Public Health.

The emergency centre with territorial jurisdiction will formally declare the MIP.

An MIP has different levels, with an increasing use of resources depending on the phase the MIP has reached. The (deputy) health inspector ((DEP)HI), (deputy) medical director ((DEP)DIRMED) and psychosocial manager (PSM) are always called. Depending on the phase, the Medical Emergency Group (MUG/SMUR), ambulances (AMB 112) and rapid intervention resources (RIR) are deployed.

The scaling up and down of plans is carried out by the 112 emergency centre on the basis of the information obtained from the people referred to above. When an MIP is scaled up, the 112 emergency centre in the affected province can call upon the resources of neighbouring provinces.

	Alerting						
	(DEP) HI	(DEP) DIRMED	PSM	MUG/SMUR	AMB112	RIR	
Pre-alert	+	+	+				➜ Potentially dangerous situation
Alert	+	+	+	3	5	+	➜ 5 seriously injured people ➜ 10 injured people - nature unknown ➜ > 20 potentially in danger and have to be evacuated (except for evacuation due to law enforcement)
Extended MIP	+	+	+	10	20	+	➜ 20 seriously injured people ➜ 40 injured people - nature unknown
Maxi MIP	+	+	all	20	40	+	➜ 50 seriously injured people ➜ 100 injured people - nature unknown

12 The structure of the MIP is defined in a ministerial circular.

13 Within the MIP, this is a temporary function held by a doctor who is in operational charge of all medical, sanitary and psychosocial support services at the site. This doctor works under the administrative authority of the Federal Health Inspector.

The Federal Minister of Public Health has an agreement with the Belgian Red Cross to provide support in the event of a (medical) emergency. This includes, among other things, providing the following:

- Ambulances and paramedics.
- Rapid Intervention Resources (RIR) for the establishment of the advanced medical post.
- Liaison officers: these are people who establish contact during an emergency and ensure communication between the various partners involved.
- Logistical support (sanitary kits, camp beds, blankets, etc.).
- A deployment of "Emergency Social Intervention": these are volunteers who provide emergency psychosocial support in large-scale relief operations during disasters or severe cases.

The Head of the Response Service of the Directorate-General for Health Emergency Preparedness and Responses, the federal health inspectors and the incident and crisis management expert coordinate emergency medical assistance during a crisis. When the crisis is of such a magnitude that major socio-economic consequences are feared, administrative control (mayor, governor) is also required.

For example, during a large industrial fire, a toxic cloud moves towards surrounding businesses. At that point, a decision must be made on whether to evacuate the factory for health reasons. This decision is made by the director of the operational command post or, in the administrative phase, by the mayor or governor. This decision has financial implications. Compensation may also need to be paid. The various disciplines have an advisory role at the municipal or provincial coordination centre (CC) at that point.

The Psychosocial Intervention Plan (PSIP)

A collective emergency could cause serious psychosocial harm to a large number of people. As a result, there may be a need for appropriate assistance for those directly involved and their loved ones. In order to address this need, a Psychosocial Manager (PSM) works alongside the Federal Health Inspector (FHI). The actions within psychosocial support are aimed at stimulating the resilience of those affected and are targeted at both the direct and indirect victims of the emergency situation. The federal government is responsible for psychosocial assistance in the acute phase. Psychosocial support in the aftermath of a disaster is a task for the communities.

The following basic tasks of a psychosocial manager are to be carried out in the acute phase of an emergency situation:

- grouping the uninjured at or in the vicinity of the disaster area;
- transporting the uninjured to a reception centre;
- installing and developing a reception centre (RC) where psychosocial support and information can be provided to those involved;
- installing and developing a Telephone Information Centre (TIC) for those directly affected and their relatives;
- uniform registration: the accurate collection of information about those affected and its safe management;
- processing the data to create victim lists at one central information point (CIP).

For example, during a fire at an assisted living facility, the family needs information about their family member. The psychosocial manager concerned will organise an information point at a nearby sports hall.

To find out more about the PSIP:
www.health.belgium.be

Risks and Demonstrations Plan (RDP)

When a large-scale activity is organised, it may be necessary to provide a medical aid station as a precautionary measure. Using the Risks and Demonstrations Plan (RDP) questionnaire, the federal health inspectors give advice based on a risk analysis. The competent authority (the mayor or governor concerned) is advised on the necessary medical resources.

International emergency assistance

When there is a disaster or incident abroad, one of the FPS Public Health's missions is to provide aid and assistance to the affected country if it officially requests it. Below we have opted to focus on two projects that illustrate the international action of the FPS Public Health.

Belgian First Aid and Support Team

The Belgian First Aid and Support Team (B-FAST) is an inter-departmental federal structure that deploys Belgian emergency assistance abroad.

The FPS Public Health, which works with the Ministry of Defence, the FPS Home Affairs and the FPS Foreign Affairs under the B-FAST mission, is responsible for the operational maintenance of the following modules:

- A **water purification system** module that includes the storage and distribution of purified water.
- An **emergency medical team** type 2 will be included as an emergency response capacity in the European Union's civil protection pool and form part of the Emergency Medical Team (EMT) initiative, a network of medical teams qualified, trained and prepared to provide immediate assistance in the event of an emergency.
- A rapid response team for major burns and a **specialist mother and baby unit** will also be set up within the framework of the "rescEU EMT" consortium.
- The FPS Public Health will also provide **medical support** to all team members during B-FAST missions.

B-Fast in action

B-FAST's most recent major medical operation was the post-earthquake operation in Turkey in 2023. Our country responded alongside France, Spain and Italy, sending a team of 207 volunteers, medical equipment to set up a EMT-2 type field hospital and a water treatment unit.

Due to the work of these volunteers, the field hospital was able to stay open 24 hours a day, 7 days a week from 16 February to 6 March 2023. The hospital, which included an emergency ward, a general consultation ward, a radiology service, a pharmacy and an operating room was able to help no fewer than 2,389 adults and 1,114 children, 400 of whom were aged under 5.

398 patients
consulted EMT Belgium several times to monitor their health.

354 patients
were referred to other healthcare providers.

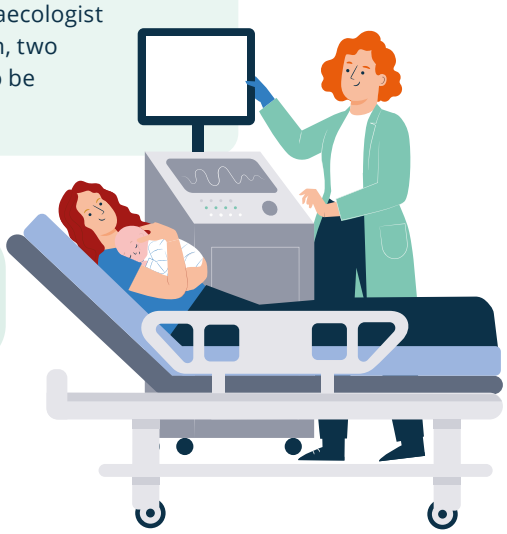
7 patients
were registered for rehabilitation.

8 babies
were born at the EMT Belgium hospital.

167 pregnant women
attended for advice or treatment.

During the strongest aftershock, the emergency ward at EMT Belgium took care of **405 serious cases**. The gynaecologist saw 138 women, two of whom had to be quarantined.

The outpatient tents received 2,816 patients.



Despite B-FAST's assistance, living conditions were particularly difficult for the affected population. In total, 491 of the 3,503 patients stayed in shelters, 2,295 patients lived in tents and 63 were sleeping in the street. Many of these patients did not have access to drinking water, food or toilets.

B-FAST recorded the most common complaints and shared them with the international community to improve its preparedness for future operations. In Turkey, the most common symptoms were, in decreasing order, respiratory problems and flu symptoms, localised cuts and fractures, gastro-intestinal disorders, skin problems and pain. This breakdown is observed after nearly all types of disaster.

These actions would not be possible without our pool of volunteers. This currently stands at 670 professionals, including medical and logistics profiles, but also experts in water purification and technicians.

Want to learn more?
https://www.health.belgium.be/en/b-fast

RescEU: 5 million euros of medical assistance for Ukraine.

In March 2022, the European Commission and the FPS Public Health set up a platform in Belgium to transport privately-donated medication and medical equipment to Ukraine. This partnership, launched under the European Commission's RescEU programme, was initially planned for a period of six months. However, as the need for medical provisions in Ukraine has persisted and the platform has continued to receive donations, the project has been extended. The project was first extended for six months, then a year.

This partnership with the European Commission came at a crucial moment when the emergency situation in Ukraine required a united and coordinated response.

« Over the last two years, these donations worth over 5 million euros have been transported on more than 600 pallets. »

This critical phase of the operation was concluded in February 2024, bringing to an end the project financed by the EU which facilitated the delivery of medical aid to Ukraine. This partnership set up with the EU will continue and the FPS Public Health will be ready to intensify its operations at any time, if the situation demands.

Belgium will continue to support Ukraine with its own assistance and donations from third parties will be evaluated on a case-by-case basis. The European Commission will continue to transport private donations to Ukraine via its platform in Poland.

Want to know more?
https://civil-protection-humanitarian-aid.ec.europa.eu/what/civil-protection/resceu_en

2 ACTIVITY

2 559 690 emergency calls

In 2023, 2,559,690 emergency 112 calls were taken by the operators who work in the 10 Belgian emergency centres.

755 284 interventions

In 2022, there were 755,284 interventions for which a call for emergency assistance was sent to 112. Over half the emergency medical assistance interventions related to patients aged 60 and over.

327 030 calls to the 1733 number

were taken by operators at the Belgian 112 emergency centres in 2023.

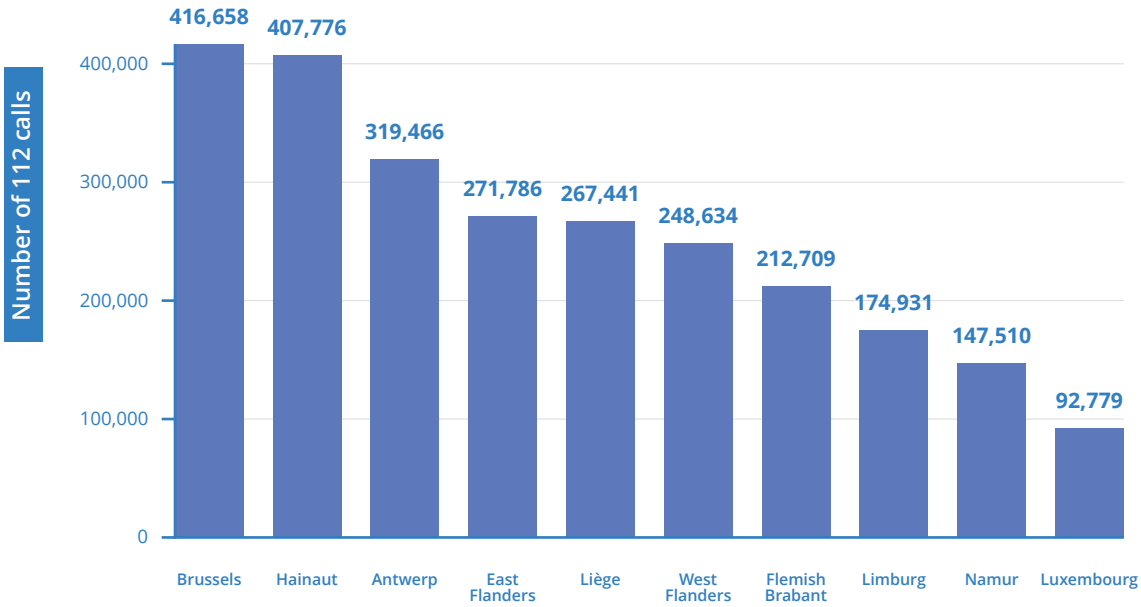
ACTIVITY

This chapter presents some key figures on the emergency medical assistance activity[14].

112 and 1733 calls

In 2023, 2,559,690 emergency 112 calls were taken by the operators who work in the 10 Belgian emergency centres[15].

Number of 112 calls in 2023



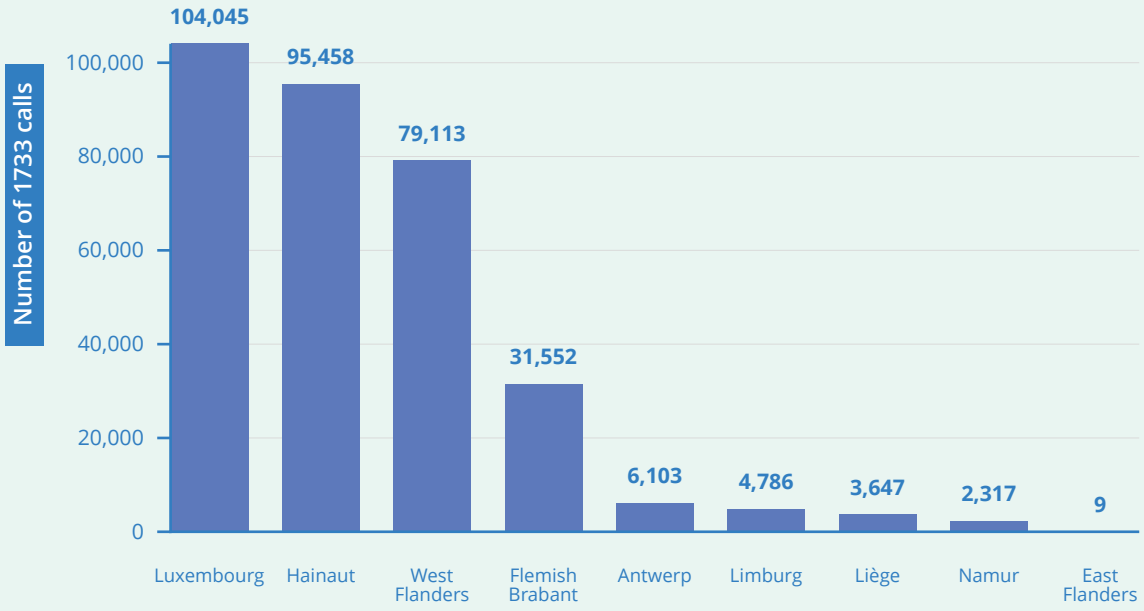
The Brussels emergency centre recorded most 112 calls, totalling 416,658 calls in 2023. This is followed by the Mons centre, with a total of 407,776 calls. It should be noted that the Mons emergency centre handles calls from the Provinces of Hainaut and Brabant Wallon. The Antwerp centre completes this top three with 319,466 calls.

The calls are predominantly redirected from the emergency centre that has territorial jurisdiction. However, since 2023, if a 112 emergency centre experiences a peak in activity, any calls that cannot be handled, are redirected to the 112 emergency centre in a neighbouring province. This so-called overflow system takes account of the linguistic role of the initial 112 emergency centre for which the call was intended. So, for example, a call from Flemish Brabant for the Leuven 112 emergency centre will not be redirected to the Mons 112 emergency centre in the Province of Hainaut, but instead to that of Ghent in the Province of East Flanders. The figures above refer to the calls actually taken by the various 112 emergency centres and not the calls that were initially destined for them.

14 Figures on the number of contacts with the emergency services can be found in the Key Data for General Hospitals and in the report on emergency care.

15 Source: FPS Home Affairs and the Firefighting and Emergency Medical Assistance service of the Brussels-Capital Region.

Number of 1733 calls in 2023



In 2023, 327,030 calls to the 1733 number were taken by operators at the Belgian 112 emergency centres. This figure will increase in the coming years with the deployment of 1733 in the 112 emergency centres. The breakdown of the figures above results from the delayed activation of the 1733 number in some 112 emergency centres. The 1733 number has not yet been implemented in the 112 emergency centre of the Brussels-Capital Region.

Operators at the 112 emergency centre in Arlon in the Province of Luxembourg handled most 1733 calls, totalling 104,045 calls in 2023. Next come the 112 emergency centre in Mons in Hainaut (95,458 calls) and Bruges in West Flanders (79,113).

112 Interventions

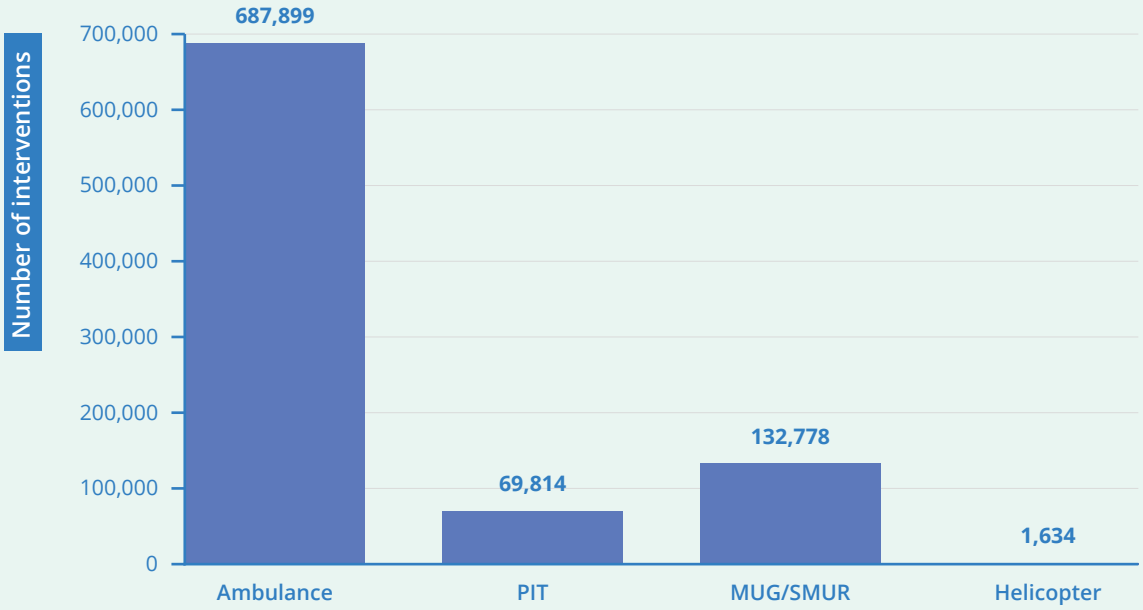
In 2022, there were 755,284 interventions for which a call for emergency assistance was sent to 112[16]. 1% of these interventions are inter-hospital transfers.

"746,354 primary interventions and 8,930 inter-hospital transfers in 2022"

16 Source: FPS Public Health and FPS Home Affairs (s.d.). SDS-records, AMBUREG, federal list of on-call rotations, data sets from 112 emergency centres. [Datasets]. Only non-occasional on-call rotation interventions were selected, excluding interventions abroad, planned and unplanned collocations and cancelled and test interventions.

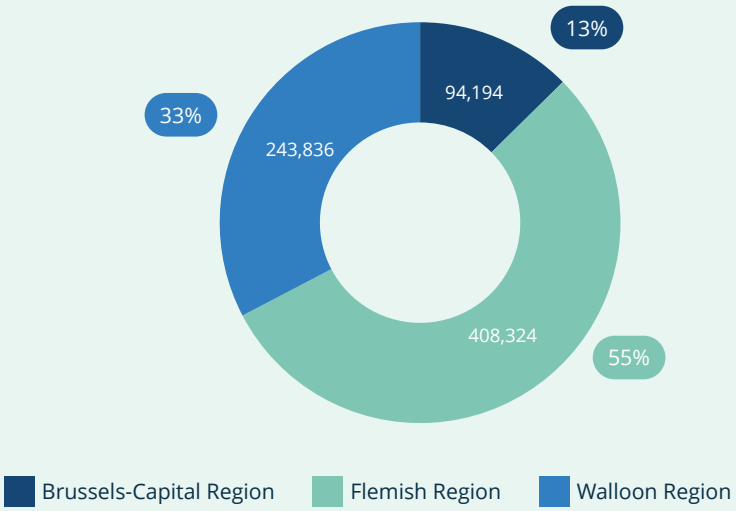
For these interventions, an ambulance was deployed 687,899 times and a PIT team 69,814 times. The assistance of a MUG/SMUR team was requested 132,778 times and a helicopter was mobilised 1,634 times. It is possible that several resources were called to the same place for the same intervention.

Number of interventions by type of emergency medical assistance vehicle



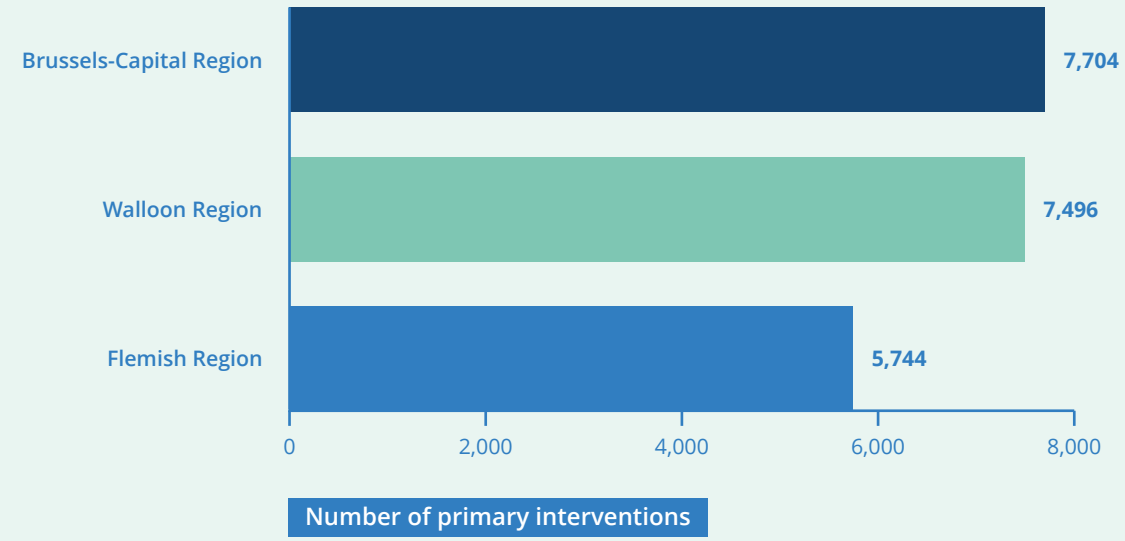
The Flemish region had the highest number of primary interventions in 2022 with 408,324 interventions (55%). One third of interventions took place in the Walloon Region and 12% in the Brussels-Capital Region.

Number of primary interventions per region in 2022



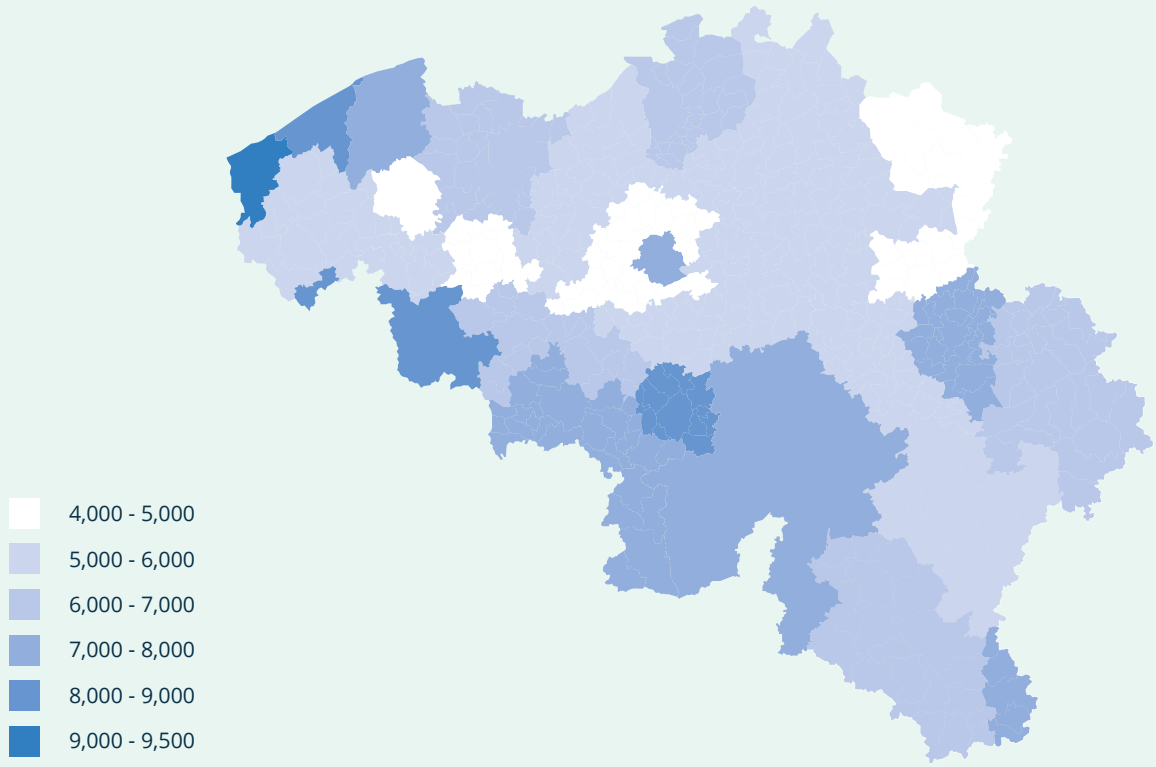
However, if the number of interventions is considered according to the number of inhabitants of the region, it can be seen that the number of interventions per 100,000 inhabitants in the Flemish Region is significantly lower (5,744 interventions) than in the Walloon Region (7,496 interventions) and the Brussels-Capital Region (7,704 interventions).

Number of primary interventions per 100,000 inhabitants and per region in 2022



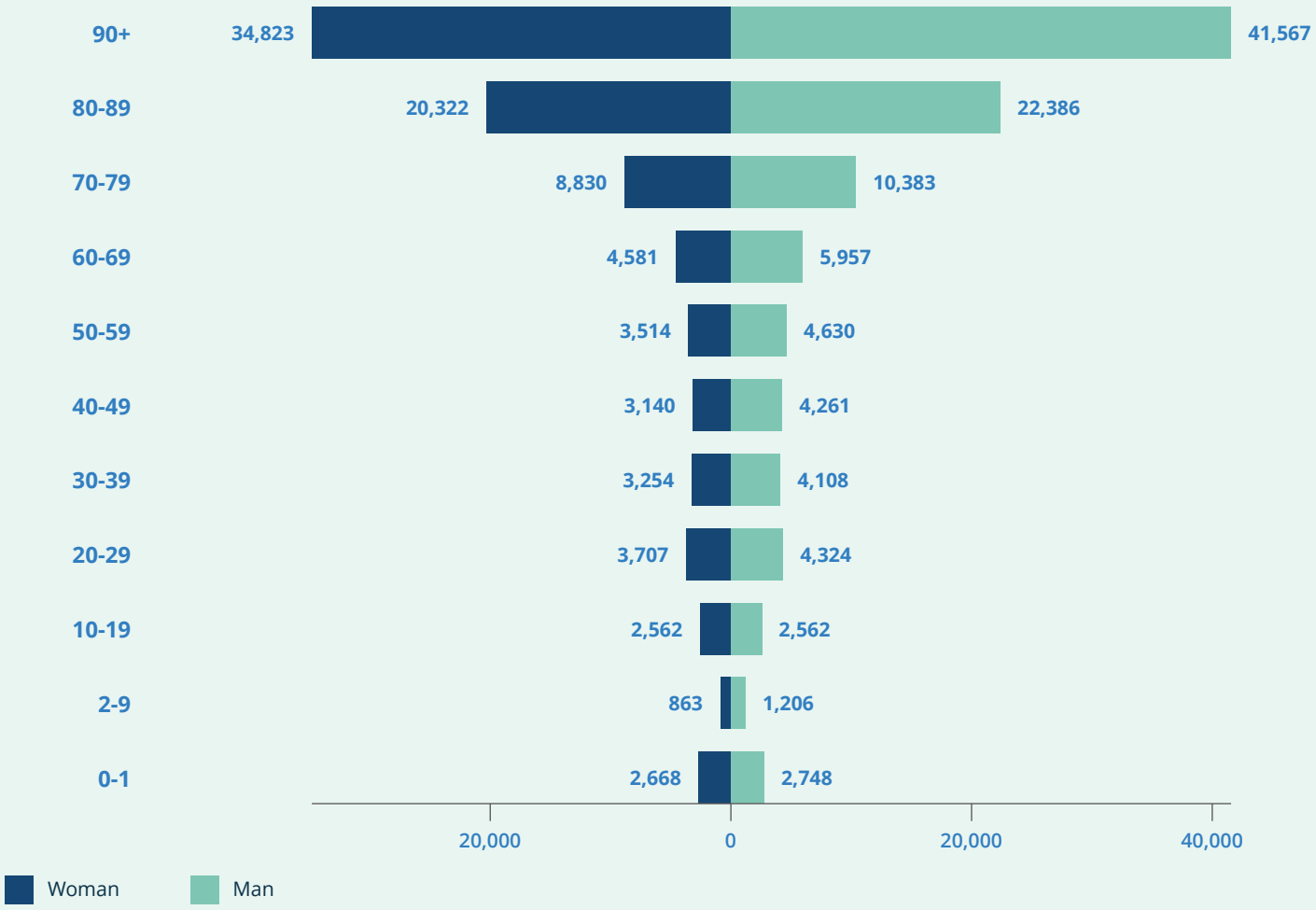
If the interventions per district are broken down, it can be observed that the coastal regions, Tournai-Mouscron and Charleroi have the highest number of interventions per 100,000 inhabitants.

Primary interventions per 100,000 inhabitants and per district in 2022



Over half the emergency medical assistance interventions related to patients aged 60 and over[17]. Regarding patient gender, approximately equal numbers of interventions were carried out for men and women. However, we note that the proportion of interventions per 100,000 inhabitants is higher in men than women across all age brackets.

Number of patients treated during primary interventions per 100,000 inhabitants



17 The data on age and gender were extracted from the AMBUREG database and are based solely on interventions where an ambulance or a PIT team were called. For 98% of primary interventions, a match can be found between SDS and AMBUREG records. For 16.7% of AMBUREG records, age was not entered and for 16.4%, the gender was undetermined or unknown.

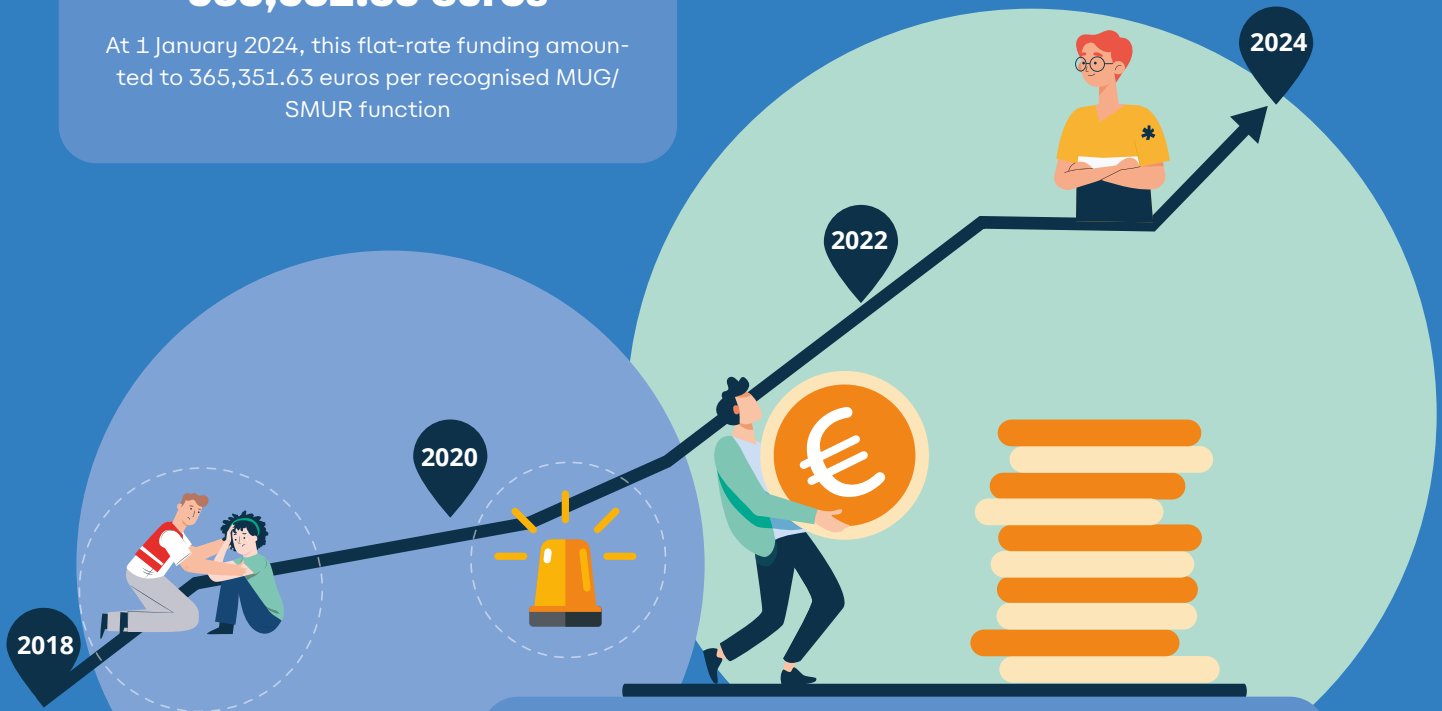
3 FUNDING

594,000 euros

The FAMU is a non-profit organisation created by the insurance companies . The FPS Public Health funds a third of it with the insurance companies covering the other two thirds. In 2024, the FPS' contribution will be 594,000 euros.

365,351.63 euros

At 1 January 2024, this flat-rate funding amounted to 365,351.63 euros per recognised MUG/SMUR function



Since the reform of the funding for ambulance services and the introduction of a fixed invoice price for the patient, the subsidy paid to the ambulance services has comprised two parts: the activation premium and the on-call bonus.

146 million

Since 2018, the subsidy granted to the ambulance services has increased considerably. It was 146 million euros in 2024.

FUNDING

Funding for ambulance and PIT

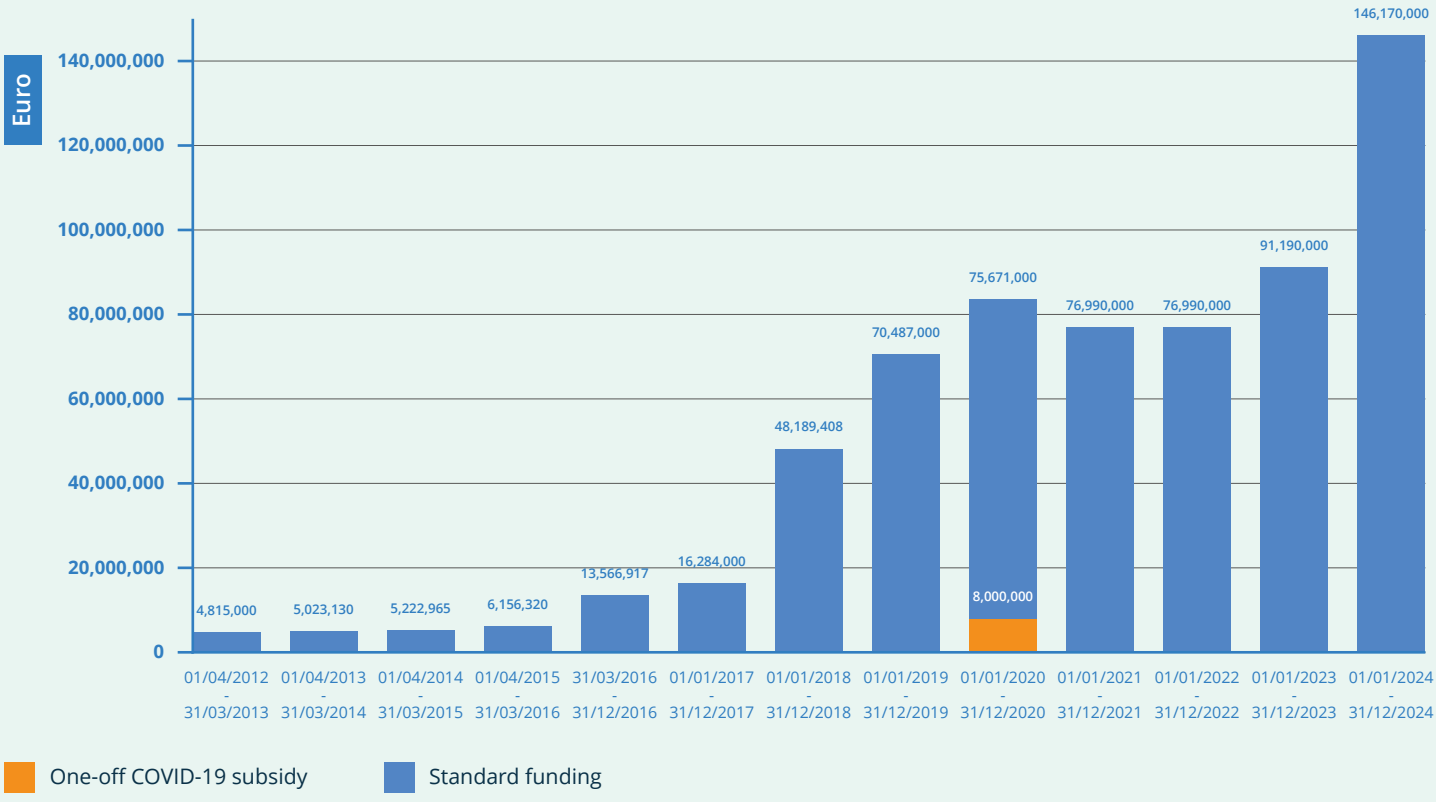
"Since the reform of the funding for ambulance services and the introduction of the fixed invoice price to the patient, the subsidy granted to the ambulance services has increased significantly."

In 2018, the way in which ambulance service subsidies were allocated was reformed[18]. Previously, ambulance services received a flat-rate payment for each on-call rotation they operated. Since the reform, the subsidy for an ambulance service consists of two parts:

- **Activation premium:** subsidy for the journeys made. Since 2018, this premium has been calculated on the basis of the number of journeys made and the total number of kilometres travelled in the past year. In 2024, this calculation method was revised in favour of funding calculated prorata on the number of kilometres travelled during the previous year. This amount is defined annually by the minister. In 2024, this premium stood at 2 euros per kilometre travelled.
- **On-call bonus:** subsidy for operating their on-call rotation(s). The ambulance services are remunerated on the basis of a points system, depending on the number of on-call rotations they operate, their opening hours (day, night, Sundays and public holidays, etc.), accommodated or unaccommodated on-call rotations.

The above relates to the funding of regular ambulance services and PIT functions.

Funding for ambulance and PIT



18 The legal basis for this reform is the Royal Decree of 6 December 2018 establishing the terms and conditions for granting the allowance referred to in Article 3ter of the Act of 8 July 1964 on emergency medical assistance

Since 2018, the subsidy granted to the ambulance services has increased considerably due to the introduction of a fixed invoice price, which ambulance services can charge to the patient[19]. This amount was set at 70.92 euros in January 2024. In many cases, this fixed invoice price was lower than what the ambulance services previously charged their patients. To compensate for this loss of income, the subsidy from the government was substantially increased. Moreover, in 2020, an extra one-off subsidy of 8 million euros was awarded to the ambulance services due to the COVID-19 pandemic.

In recent years, political lobbying has highlighted the structural underfunding of emergency medical assistance. Consequently, the budget of 146,170,000 euros awarded in 2024 is an increase of 54,980,000 on 2023.

Funding of MUG/SMUR

The Medical Emergency Group (MUG/SMUR) function is partly funded via the Financial Resources Budget (FRB)[20] for hospital funding. In this context, the MUG/SMUR function is funded on a flat-rate basis with a single amount being granted for each accreditation. This means that no account is taken of the real cost and that no contribution for the MUG/SMUR can be charged to the patient. At 1 January 2024, this flat-rate funding amounted to 365,351.63 euros per recognised MUG/SMUR function[21]. The MUG/SMUR function is also funded by charging specific fee codes to the patient and the health insurance.

Emergency Medical Assistance Fund

The Emergency Medical Assistance Fund (FAMU) is a guarantee fund for unpaid invoices after a emergency medical assistance intervention. The ambulance services can submit their unpaid invoices to the FAMU and the fund pays a fixed price amount to them. This fixed price amount is a percentage of the uniform 112 rate and is set annually by the minister. For 2024, this percentage is set at 60%, which is the legal minimum.

How the Fund works was changed in 2023. Two major changes were made:

- The FAMU itself will no longer recover the unpaid invoices from the patients (as it has done until now).
- The ambulance services must first try and recover the unpaid invoices themselves for up to 12 months after the intervention (compared to 6 months previously). Any invoice which is not fully repaid after this period may be submitted to the FAMU.

The FAMU is a non-profit organisation created by the insurance companies determined by the King. The FPS Public Health funds a third of it with the insurance companies covering the other two thirds. In 2024, the FPS' contribution will be 594,000 euros. The Fund is managed by a board of directors comprised of eight people, half of whom represent the State with the other half representing the insurers.

Find out more.
https://www.famu-fdgh.be

19 This was laid down in the Royal Decree of 28 November 2018 on invoicing following the provision of emergency medical assistance by an ambulance service.
20 See Key Data in Healthcare - General Hospitals for more information on the Financial Resources Budget.
21 The funding for the MUG/SMUR function is described in Article 68 of the Royal Decree of 25 April 2002 on the establishment and settlement of the financial resources budget for hospitals.

4 QUALITY AND INNOVATION

77%

In 2022, for 77% of interventions a first emergency response team arrived on-site within 15 minutes of the call.

Belgian Medical Regulation Manual

Using the Belgian Medical Regulation Manual, the operators of the 112 emergency centre can classify a situation to severity levels.
The most appropriate assistance is chosen on this basis.

92

From March 2022 to March 2024, 92 incidents were recorded in the Belgian Incident Tracking System (BITS) involving a total of 4,297 individuals.

4

The Federal Council for Emergency Medical Assistance has set up 4 working groups to overhaul emergency medical assistance.

95

In 2023, TAMELU (Tactical Liaison Unit) liaison officers took part in 7 exercises for a total duration of 95 hours.

QUALITY AND INNOVATION

Within the provision of emergency medical services, various initiatives are being taken to guarantee the quality of emergency interventions at all times. In this section, we provide a non-exhaustive list of initiatives, activities and facilities to promote quality in emergency assistance.

Protocols and guidelines

Belgian Medical Regulation Manual

The Belgian Medical Regulation Manual (BMRM) is a guide for operators at the 112 emergency centre. The severity level of the caller's situation is determined with the aid of flow charts specifically drawn up for each medical protocol. Based on the severity level, the most appropriate resource is then chosen (MUG/SMUR, PIT, ambulance, on-call station or general practitioner).

Level	Resources
Critical Immediately life-threatening and/or immediate treatment required	MUG/SMUR and ambulance
Severe Life-threatening situation (short-term evolution)	PIT
Serious Rapid admission to hospital is required for treatment, observation or technical examinations	Ambulance
Moderate No life-threatening situation but rapid treatment is required	GP Urgent < 2 hours
Minor Situation is not immediately life-threatening but care is required	GP scheduled appointment < 12 hours and during out-of-hours service
Non-urgent Referral to own GP practice during office hours, or new call if worsened complaints	Schedulable care > 12 hours and during office hours

To find out more about the Belgian Medical Regulation Manual:
https://www.health.belgium.be

Standing orders

The actions that the paramedic is permitted perform have been regulated by law. Based on this, the Federal Council for Emergency Medical Assistance worked on a national standing order template where specific examples of procedures are given. The bundle of standing orders gives the paramedic a helping hand when they need to carry out the actions assigned them.

For example: The bundle describes the care that a paramedic may perform for a patient who has suffered thermal, electrical or chemical burns. Here, they may measure respiratory rate and blood pressure, undress the patient and cool burns, among other things.

The standing orders also focus on working with the PIT nurse and/or the MUG/SMUR doctor.

To find out more about the standing orders for paramedics:
https://www.health.belgium.be

The nurse who is part of a PIT also works in accordance with standing orders that have been agreed upon with a doctor. These actions appear in the list of technical provisions drawn up by the Technical Commission for Nursing, known as B1, B2 and C actions[22].

Advisory bodies within emergency medical assistance

Provincial Commission for Emergency Medical Services (PCDGH/COAMU)

The Provincial Commission for Emergency Medical Assistance (PCDGH/COAMU) promotes collaboration between the services and people working in emergency medical assistance. The provincial commissions are composed of several representatives from the sector and are chaired by the relevant federal health inspector.

To find out more about this commission:
https://www.health.belgium.be

22 More information about these specific actions can be found here.

Federal Council for Emergency Medical Assistance (CFAMU)

The Federal Council for Emergency Medical Assistance[23] (CFAMU) is a body that advises the Federal Minister for Public Health on the organisation and functioning of Emergency Assistance.

General operation of the CFAMU

The CFAMU advises on the functioning of the ambulance services and the training of people involved in emergency medical assistance. The Council should evaluate the quality of practice based on scientifically sound criteria. Moreover, the CFAMU has an important role in shaping the accreditation standards for ambulance services and the criteria applicable to scheduling these services.

The Council is composed of professionally active representatives from the following organisations:

- The scientific associations of general practitioners
- The associations of emergency medicine and disaster medicine
- The associations of healthcare establishments
- The scientific associations of nurses
- The professional associations of paramedics
- 100/112 emergency centres
- The Belgian Red Cross
- The Medical Component of the Ministry of Defence
- Patients' associations
- Representatives of insurance companies presented by the Collège Intermutualiste National
- Representatives of the unions of cities and municipalities
- Representatives of the Governors' Conference
- Presidents of the Emergency Medical Assistance Commissions.

For more information on this consultation body:
Federal Council for Emergency Medical Assistance | Public Health (belgique.be)

The Council sets up working groups with a well-defined remit and seeks the advice of experts of its choice. Conclusions from the working groups are sent to the Minister through the Council's Office in the form of recommendations.

23 The Federal Council for Emergency Medical Assistance was previously known as the National Emergency Assistance Council. The tasks of the National Council were set out in the Royal Decree of 4 July 2004. This body was reformed by the Royal Decree of 17 March 2024 on the Federal Council for Emergency Medical Assistance and the Emergency Medical Assistance Commissions.

Four working groups to overhaul emergency medical assistance

On 22 October 2022, the Federal Minister of Public Health, Frank Vandenbroucke, asked the CFAMU for an opinion on the use of additional budgets granted to emergency medical assistance.

2023 An ad-hoc additional budget of 14,200,000 euros to compensate for inflation and the increase in the number of interventions

2024 An additional structural increase of 69,180,000 euros conditional upon:

- The publication of a decree on the accreditation of ambulances;
- The organisation of a suitable funding mechanism.

2025 An additional structural increase of 93,500,000 euros conditional upon:

- The implementation of an optimal use plan for resources used for emergency medical assistance;
- The publication of accreditation standards for the PIT.

The total budget for emergency medical assistance would then be 239,670,000 euros in 2025.

In 2022, the CFAMU comprised four working groups designed to provide the best response to the Minister.

1. One group responsible for defining the accreditation and operational criteria of the PIT;
2. One group responsible for optimising medical regulations;
3. One group responsible for scheduling resources within emergency medical assistance;
4. One group responsible for funding.

1. PIT Working Group

The PIT working group is responsible for defining the outline for the development of the legislative framework on the Paramedical Intervention Team (PIT) as a resource for emergency medical assistance.

- ➔ Definition of the requirements that the PIT nurse must satisfy.
- ➔ Specification of the role of the liaison doctor for the PIT: the doctor on the PIT team must be available 24 hours a day, 7 days a week to provide remote assistance to the PIT nurse.
- ➔ Determination of the recognition criteria for the PIT.
  - The PIT team must preferably be set up in a hospital with a specialist emergency care service. It is possible to deviate from this if necessary, based on the scheduling.
  - The PIT should preferably be dispatched from a hospital with a specialist emergency care service. It is also possible to deviate from this if necessary, based on the scheduling.
  - The link between the PIT team service and a hospital with a specialist emergency care service must be ensured so that the quality is standard across all PIT services.

The working group will focus on several issues in 2024:

- Standardisation, at federal level, of the standing orders for PITs.
- Definition of minimum requirements in terms of equipment and materials available in each Paramedical Intervention Team.
- Identification of quality requirements for all PIT services.

2. Scheduling working group

The aim of the Scheduling working group is to give opinions on the organisation of emergency medical assistance in Belgium:

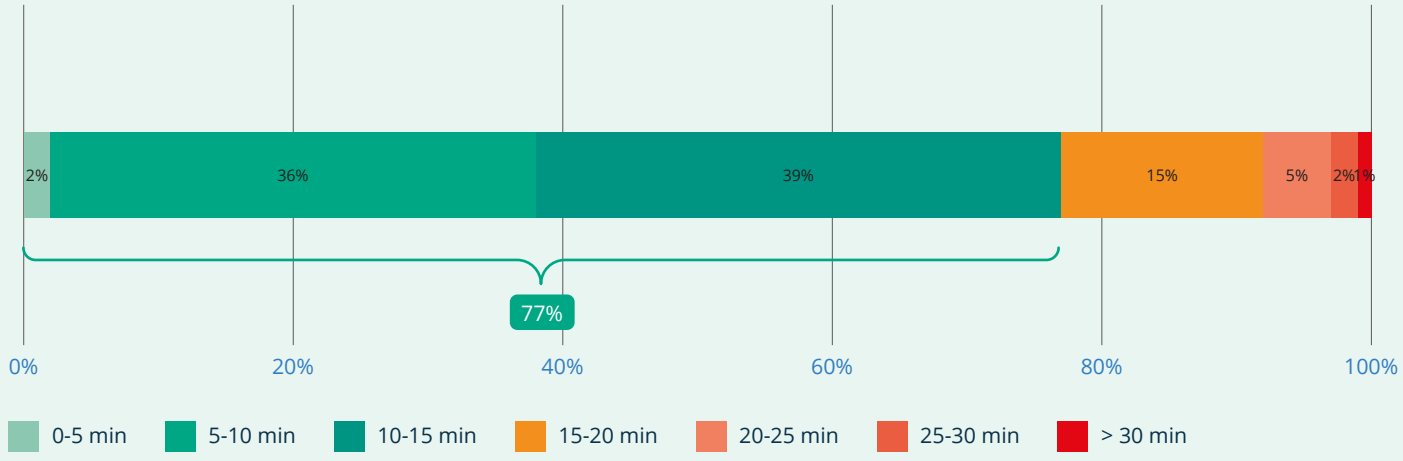
- Evaluation of scheduling needs;
- Definition of the Service Level Agreement (SLA) for emergency medical assistance;
- Identification of the resources to be deployed across Belgium, their location, quantity, distribution and use.

For example: with the transformation of ambulances into PITs, under the "one PIT per hospital network" project, urgent medical assistance in the south of the Province of Antwerp falls from three ambulances to just one for the vast Mechelen-Bonheiden region. The care given to emergency patients for severity levels 3 and 4 is strengthened but patients needing level 5 interventions will be faced with longer waiting times. The Federal Health Inspector decides to include an additional ambulance at Mechelen to shorten the time taken for an ambulance to reach a patient in this region and, consequently, improve the region's SLA.

These are just some of the issues that will be addressed using a tool to view the current Service Level Agreement in Belgium. The SLA is an agreement between the federal government and the ambulance services, whereby performance indicators and quality requirements are agreed upon based on scientific literature. Some emergency medical situations require a rapid response. It was agreed that a timespan of fifteen minutes between a call to the 112 emergency centre and the arrival of an ambulance team at the scene should be guaranteed in 90% of interventions.

In 2022, for 77% - for which it was estimated that an ambulance, a PIT and/or a MUG/SMUR team had to be called - a first emergency response team arrived on-site within 15 minutes of the call. In 92% of interventions, a emergency medical assistance resource was on site within 20 minutes and in 98% of interventions within 30 minutes[24].

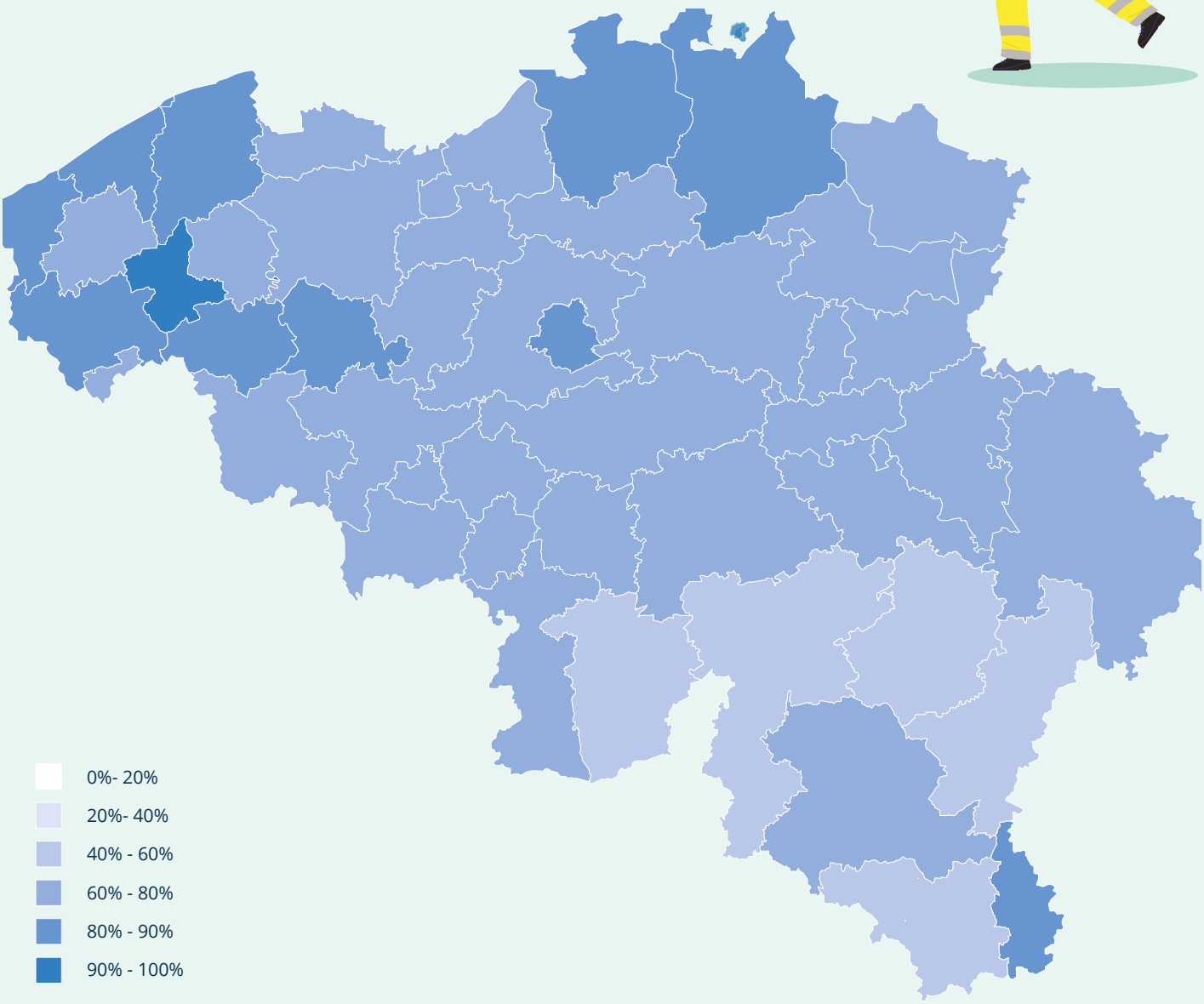
Percentage of interventions per time interval between the duration and the arrival at the intervention site in 2022



24 Source: FPS Public Health and FPS Home Affairs (s.d.). SDS-records, AMBUREG, federal list of on-call rotations, data sets from 112 emergency centres. [Datasets]. Only non-occasional on-call rotation interventions were selected, excluding inter-hospital transport, interventions abroad, planned and unplanned collocations and cancelled interventions and test interventions. In addition, interventions where the time intervals were missing or unlikely were excluded, as were interventions where the contact details were missing or the distance travelled was 0 km or abnormally long.

Depending on which region in Belgium, the percentage of interventions where emergency assistance is on site within 15 minutes of the call being placed varies. It can be noted that this percentage is lower in the Walloon Region.

Percentage of interventions where emergency assistance is sent to site within 15 minutes of the call being made to 112 in 2022.



Within the Scheduling working group, the figures above are analysed in detail and improvements that can be implemented to achieve the SLA are explored.

3. Regulation working group

The Regulation working group is responsible for reassessing the Belgian Medical Regulation Manual in line with the resources available within emergency medical assistance and the definition of the SLA.

- Evaluation of the level of pre-hospital medical care needed for each medical regulation severity level and definition of the timeframes within which this should be carried out;
- Definition of the related transport mode (ambulance, PIT, MUG/SMUR, etc.);
- Definition of the place of the intermediate ambulance and non-emergency medical and health transport in order to examine the extent to which patient transport can be a new element to be defined in the chain of unplanned treatment;
- Definition (and strengthening) of the support to be provided to the 112 operator in terms of medical regulation given the crucial role of the 112 emergency centre in the management of available emergency medical assistance resources according to the needs and the context.

4. Funding working group

The working group is responsible for evaluating the funding of emergency medical assistance. This working group has subdivided its work into three stages.

- Definition of the activation subsidy: the overhaul of the activation subsidy should have been approved by the members of the funding working group before the end of 2023. This first stage was necessary to obtain a significant increase in the budget for the emergency medical assistance subsidy in 2024.
- Evaluation of the funding system for ambulance and PIT services, as it was in force until 2023. This evaluation was carried out considering the changing emergency medical assistance landscape, as it takes shape over the coming years and the impact of the proposals of other working groups.
- Reviews of the funding of other elements of emergency medical assistance such as contingency planning, exercises to prepare for collective emergency situations, emergency centres and emergency services.

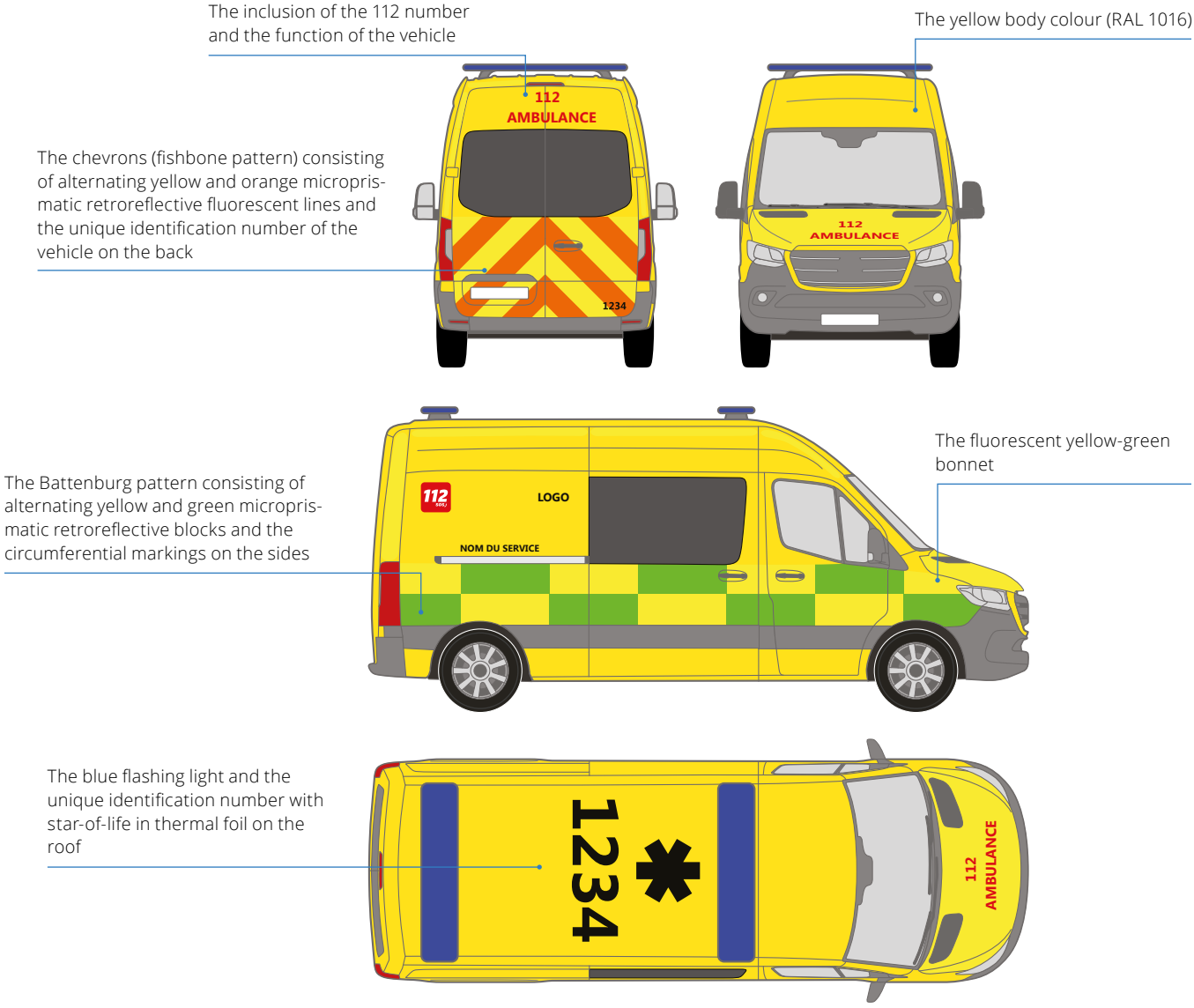
Mandatory features of ambulances and intervention clothing

On 27 March 2017, a protocol agreement was concluded between the Federal Government and the Communities and Regions regarding the external features for medical intervention equipment and staff, for both emergency and non-emergency transport.

Mandatory external features for ambulances

Vehicles that are permanently used for emergency medical assistance must comply with specific external features.

The main difference in the external features of non-emergency and intermediary transport compared to emergency transport is the body colour (white instead of yellow), the different pattern on the side and the absence of the 112 number[25].



25 The regulations on non-urgent transport have already been drawn up by the federal states. The Royal Decree on the external features of intermediary transport is in the preparatory stage.

Mandatory equipment in ambulances

The contents of an ambulance were determined by a ministerial circular letter in order to standardise, at a federal level, the equipment available to meet the needs of staff working in emergency medical assistance.

Some examples of mandatory equipment can be found below:

- Stretcher
- Portable oxygen cylinder, minimum 400 litres
- Stethoscope
- Glucometer with strips
- Suction probes
- Immobilisation equipment for fractures

To find out more about the mandatory contents of an ambulance:
https://www.ejustice.just.fgov.be/

Mandatory features of intervention clothing

The intervention clothing used by emergency medical assistance professionals when providing emergency and intermediate transport consists of the following components: an anorak with summer jacket, trousers, t-shirt or polo shirt and chasuble. The wearer of the clothing may decide which combination to wear, as long as visibility class 3, as described in EN ISO 20471 concerning high-visibility clothing, is met. The components are considered personal protective equipment and must therefore comply with the relevant European regulations.

The only difference from the non-emergency transport intervention clothing is the addition of a "Star of life" for the function of a paramedic in a silver-grey colour. However, the federated entities further clarify these regulations.

The compulsory colours of yellow (in accordance with EN ISO 20471) and enamel blue (Pantone 18-4733 TCX)

The "Star of Life" on the right chest and back in a specific colour to indicate the function:

- Doctor
- Nurse
- Paramedic
- Non-emergency transport paramedic

To find out more about the features of intervention clothing:
https://www.health.belgium.be/

Belgian Incident Tracking System

In the event of a collective emergency situation, the FPS Public Health is responsible for organising medical and psychosocial assistance. In this context, one of its missions is to establish a list of all individuals involved. In order to carry out this task in the best possible way, a new tool, the Belgian Incident Tracking System (BITS) was launched on 28 April 2023.

The attacks of 22 March 2016 highlighted the difficulty of gathering data about the victims of a disaster. The process of identifying victims was both long and laborious. In 2016, information was still recorded on paper at the advance medical posts (at the disaster site), at hospitals, reception centres, etc. The absence of a suitable, standard registration system and a methodology for collecting, processing and disseminating the data relating to those involved, to relatives and missing individuals who needed to be found led to great suffering for the victims and their relatives. The recommendations of the parliamentary enquiry commission on the attacks accelerated the development of a global registration system for victims.

The BITS is used to identify the journey and location of deceased individuals, injured and non-injured persons, to know their state of health and be able to name them as quickly as possible. Using a bracelet, every person involved has a unique QR Code to which data can be attached. Data are collected in the medical posts, the centres for uninjured individuals and relatives and in the hospitals.

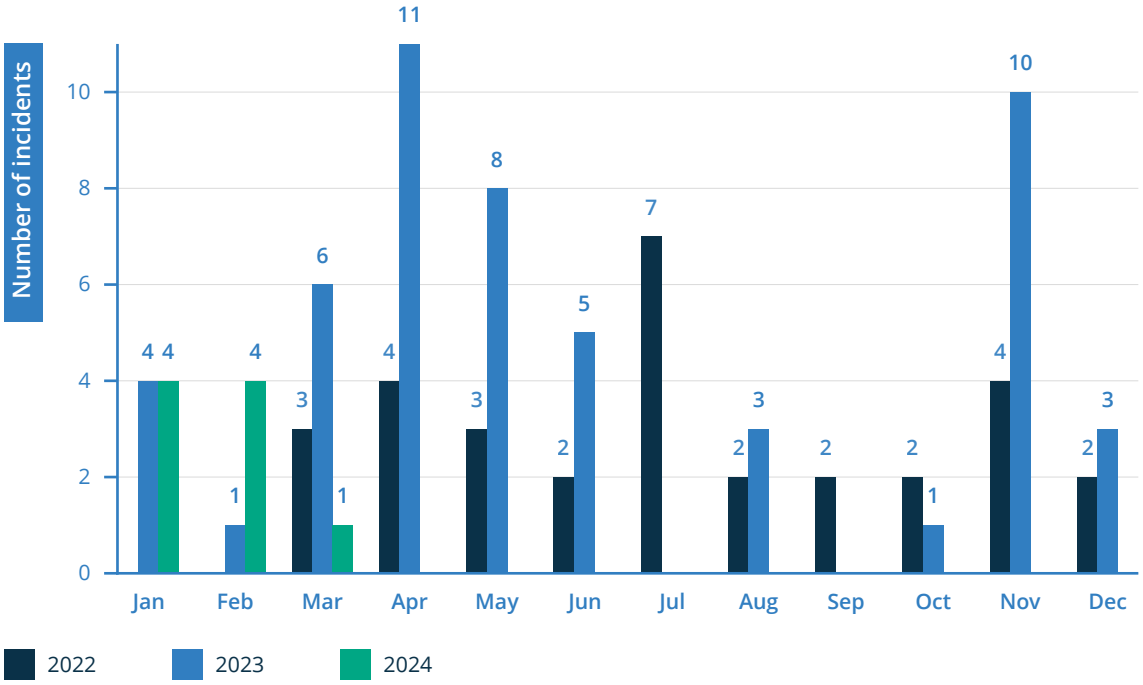
The BITS is also used to register requests from relatives to search for missing persons. During the Brussels attacks, 17,291 calls of this type were recorded. The BITS gives the paramedics in a call centre or a reception centre the opportunity to verify whether the missing person has been registered. If this person is not found, a detailed record of the search request can perhaps help to identify individuals whose identity is still unknown, such as deceased persons or those who are unconscious and injured.

The BITS application enables the authorities to generate lists ased on the registrations. These overviews are useful for coordinating medical and psychosocial assistance and informing the partners operating in the crisis centre. This information can also be sent to professionals who are involved in the post-acute phase.

The BITS has been used by the medical and psychosocial assistance services since 2022 in collective emergency situations and exercises.

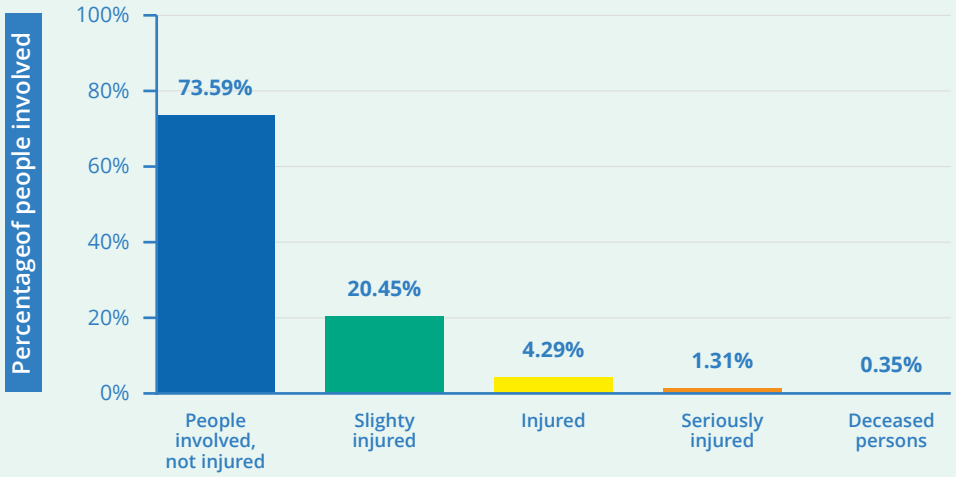
From March 2022 to March 2024, 92 incidents were recorded in the BITS application involving a total of 4,297 individuals[26].

Number of incidents registered in BITS



Based on the initial triage, three quarters of the victims registered were uninjured. A fifth of them were assessed as slightly injured and 5% as injured and seriously injured.

Percentage of people involved by initial triage code (March 2022 - March 2024)



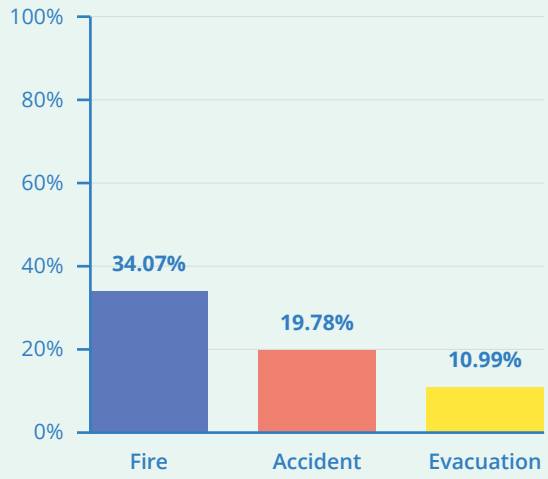
26 Source: BPrepared, the statistics are established based on the registration database of the BITS application.

Fires, accidents and evacuations are the top 3 types of incident for which the BITS application was most used.

In the future, individuals involved in a collective emergency situation can register themselves via a citizen portal that can be activated by the FPS Public Health. This website is currently being developed. During a large-scale disaster it is not uncommon for many of those involved, who are uninjured or only slightly injured to return home on their own and then seek medical and/or psychosocial assistance. This self-registration will enable the authorities to find out about those people involved in the emergency situation and provide them with assistance and information and inform their relatives.

A second module, also being developed, will be specially designed for the hospitals. This connection between the data recorded in BITS and the hospitals will help to improve the exchange of data. This module will also allow the capacities and specialities available in the hospitals to be determined.

Type of incident (March 2022 - March 2024)



Tactical Medical Liaison Unit (TAMELU)

The Tactical Medical Liaison Unit (TAMELU) is a specialist unit that focuses on facilitating emergency medical assistance in a police tactical context, providing the link between the two worlds. The TAMELU unit provides 24/7 security for the entire country.

A member of this unit is called a liaison officer for discipline 2 (or LO D2) which covers medical, sanitary and psychosocial assistance. These are federal civil servants with a professional profile as a nurse specialised in emergency care. They have also had additional training in disaster management and have a certificate of competence as director of the operational command post.

For example: on 17 May 2021, a manhunt was launched in the Haute Campine national park. Jürgen Conings, a radicalised soldier with close ties to far-right circles, took refuge in the forest with firearms stolen from the Leopoldsburg barracks. A large-scale operation was launched. A Liaison Officer from the TAMELU unit was dispatched to coordinate between the emergency medical assistance resources and the special unit command of the federal police.

The liaison officers are attached to the special units of the federal police. There is not currently any link with the specialist assistance teams of the local police.

In practical terms, the liaison officer joins the special units of the federal police in the field as soon as there is a potential or actual need for medical support. The action of the TAMELU unit focuses on coordination missions and not on performing medical actions. The liaison officer is the point of contact for the special units of the federal police, the ambulances, PIT or MUG/SMUR on site, the Medical Director and their deputies and the federal health inspector. The mission of the liaison officer involves facilitating the safe and effective evacuation of victims from the dangerous area so that they can enter the medical care chain as soon as possible, in order to increase their survival chances.

This support mission concerns the preparation and execution of scheduled operations, such as arrests or enhanced searches but also crisis situations such as a Fort Chabrol[27], a criminal or terrorist hostage situation, AMOK incidents[28], the seizure of a plane, the seizure of a ship (piracy) or any other means of transport or a terrorist attack.

27 A situation where a person, generally armed, hides in a building surrounded by law enforcement agencies. The expression Fort Chabrol comes from a news story that took place from 12 August to 20 September 1899 on Rue Chabrol in Paris.

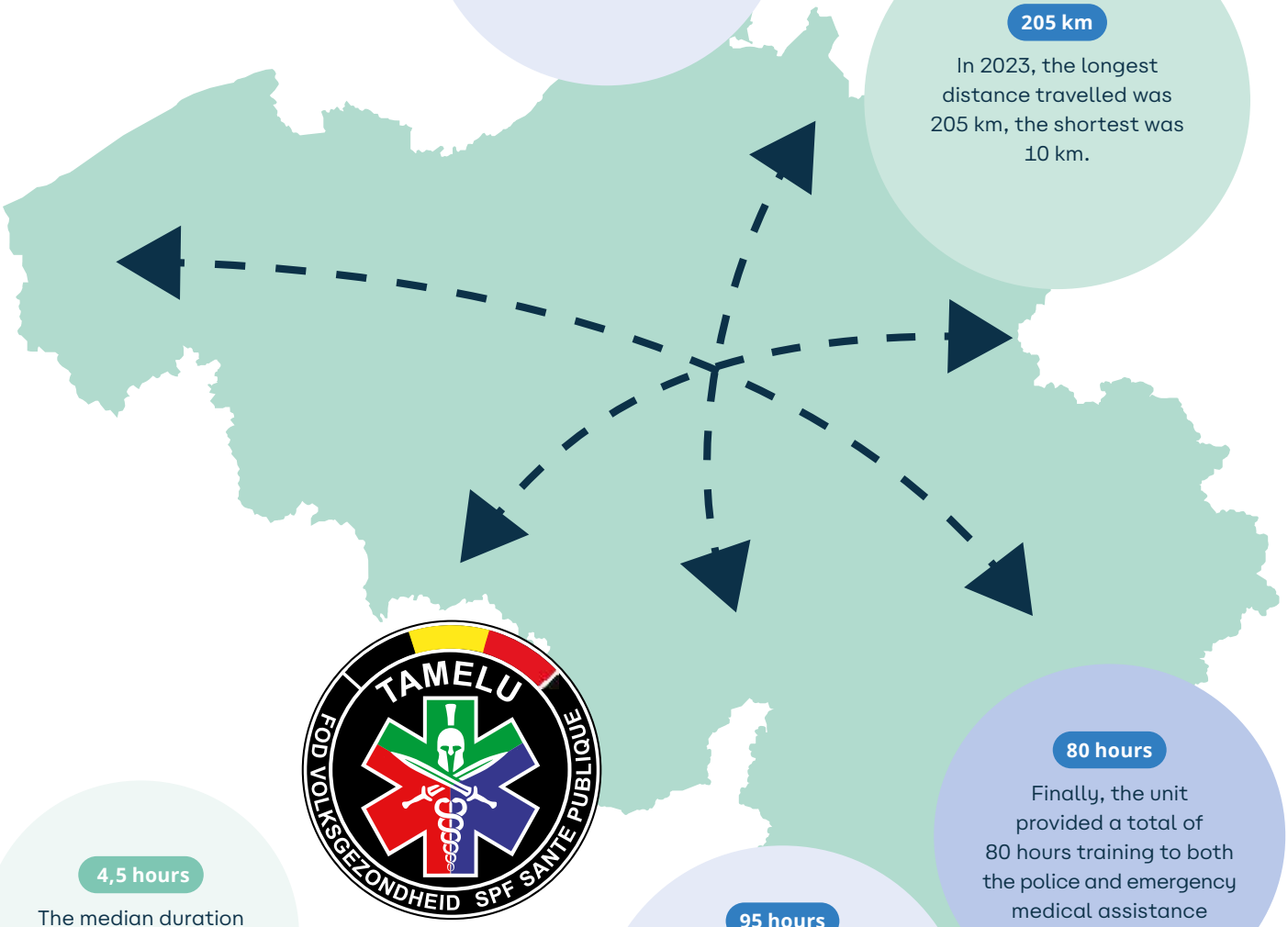
28 The Malaysian AMOK concept describes a situation during which one or more individuals attack the people present and try to cause as many casualties as possible, without seeking to retreat or take hostages.

105 km

On average, liaison officers travelled a distance of 105 km under blue lights to reach the intervention sites.

205 km

In 2023, the longest distance travelled was 205 km, the shortest was 10 km.



80 hours

Finally, the unit provided a total of 80 hours training to both the police and emergency medical assistance resources.

4,5 hours

The median duration of an operation was 4.5 hours in 2023.

95 hours

In total, TAMELU (Tactical Liaison Unit) liaison officers took part in 7 exercises for a total duration of 95 hours.

60 hours

The longest operation since TAMELU was set up lasted 60 hours non-stop and took place in 2021.

28 operations lasting a total of 110 hours

In 2023, the TAMELU unit carried out 28 operations lasting a total of 110 hours, comprised of a mix of scheduled operations and crisis interventions.

CONCLUSION

There are still a number of challenges to be addressed for the Directorate-General for Health Emergency Preparedness and Response.

With recognition of ambulances and PIT, a long-expected reform process will be able to be launched.

Society and the global medical world are also constantly changing. Emergency medical assistance and preparedness for disasters must therefore constantly be adapted to these changing circumstances so that citizens can benefit from the emergency medical assistance to which they are entitled.

This is what the Directorate-General for Health Emergency Preparedness and Response will be working on in the coming years.

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