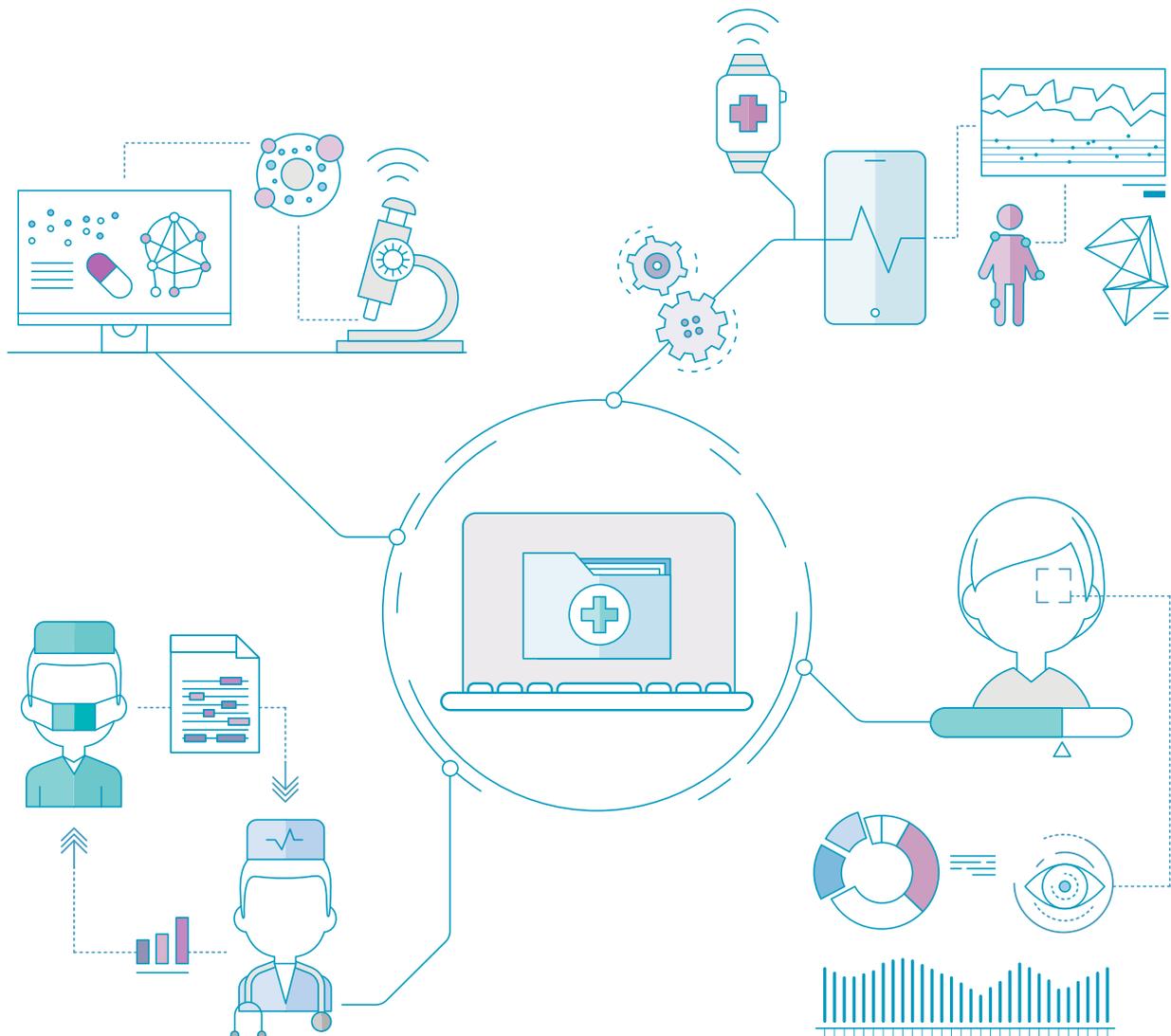




ehealthmonitor 2019

CITIZENS



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INTRODUCTION

The eHealthmonitor 2019 is a two-phased mixed-methods study (structured survey and focus group interviews). It was assigned by the federal and regional Belgian governments, and RIZIV/INAMI, and executed by imec and imec-SMIT-VUB in collaboration with WeLL.

The eHealthmonitor 2019 offers insight in the use of and experience with different eHealth services and digital applications in Belgian healthcare. Data was collected via **online questionnaires** (October–December 2019) from **six target groups**: General Practitioners (N=849), Specialists (N=941), Pharmacists (N=692), Nurses (N=1095), Nursing Assistants (N=118) and Citizens (N=5046).

It is important to keep in mind that the data was collected previous to the COVID-19 sanitary crisis.

This report describes the **survey results** for the group of **citizens**. All other reports, including a more detailed methodological section and the executive summary of all results (in French and Dutch), can be retrieved via www.ehealthmonitor.be. Before we present the results a short overview of the followed methodological procedure for all surveys is described.

QUESTIONNAIRE DEVELOPMENT AND DATA COLLECTION

The final questionnaires were iteratively developed with feedback from experts and representatives of the target group, with a focus on current use and experiences with the available eHealth services. This resulted in **6 different questionnaires** with comparable questions where relevant. **All questions focused on the experience of health care professionals and citizens in the past year (October 2018–September 2019) and our results therefore reflect the situation before the COVID19 sanitary crisis.**

We **recruited participants via several approaches**. The cabinet of the federal and regional health ministers and the RIZIV/INAMI communicated through their different channels and sent out a press release that was picked up by specialized press. Also, an invitation to participate was sent to all Belgian health professionals via the eHealthBox. Furthermore, we mobilized the help of many regional and federal health organizations, such as our project partners, unions, professional associations and interest groups to spread the questionnaires to their members. We want to thank them for their efforts. Citizens were reached through commercial panels such as imec.Maakdatmee and Bilendi Belgium.

DATA CLEANING AND ANALYSIS

Partially completed surveys were not systematically removed during **data cleaning**. Only respondents with unusual and/or inconsistent responses were removed by verifying open questions. Thus, the **N for each particular question is provided** under the table/graph, showing lower response rates for some of the items.

The **obtained sample** of each target group of healthcare professionals was **compared to the national statistics of healthcare practitioners 2019¹** for representativeness by region, age and sex. For the **citizens** the obtained sample was compared to the **statistics of the Belgian population** for representativeness by region, age, sex and education level². For each profession, as well as for the citizens, detailed information of the samples demographics is provided at the start of each report. In addition, disclaimers are added to the reports where the percentages of groups in our sample do not accurately represent the size of this group in society.

The **quantitative data was analyzed** using SPSS Statistics version 26. Due to the sample sizes, very small differences often still reached statistical significance³. The findings presented represent the **total sample** and cover the **Belgian trends** and attitudes. However, **when distinctive regional variations** are noticed these are **pointed out**.

1 Steinberg, P. (2019). Jaarstatistieken met betrekking tot de beoefenaars van gezondheidszorgberoepen in België. Cel Planning van het Aanbod van de Gezondheidszorgberoepen

2 Statbel (Algemene Directie Statistiek – Statistics Belgium). Kerncijfers Belgische bevolking 2019. FOD Economie, KMO, Middenstand en Energie.

3 Lantz, B. (2013). The large sample size fallacy. Scandinavian journal of caring sciences, 27(2), 487–492.

For each target group the **most relevant open-ended questions** with regards to the services (e.g. services with lowest usage, services with highest dissatisfaction) and the feedback question at the end of the survey were analyzed. All selected questions were first coded inductively (open coding) using MAXQDA 2020. When no new information was detected and saturation was reached, these codes were categorized. These categories were then used to complete focused coding of the rest of the data. **The main categories are reported.**

Recruiting exclusively via a digital questionnaire might limit the external validity of the results. The findings provide an **indication** of the trends, barriers and possibilities with regard to eHealth in Belgium for people of the target groups **who are already active online**. Therefore, the results presented in this report are limited to our sample and do not represent all segments of the entire Belgian population.

KEY CONCEPTS AND DEFINITIONS

This section provides an overview of the **key concepts and definitions** that are used throughout the report.

The definition of eHealth by the European Commission was adopted for the eHealthmonitor 2019, namely “... *tools and services that use information and communication technologies (ICTs) to improve prevention, diagnosis, treatment, monitoring and management of health and lifestyle*”¹. This definition is interpreted and applied in a broad sense to avoid a too restrictive scope, which could be unwanted to evaluate and monitor evolution over time.

Chronic condition. A condition that necessitates continuous or repetitive treatment for at least six months.

Digital applications. The total offer of apps, programs or digital devices that can be used to comply with the care needs of a patient. These can be provided by the public sector or the private sector.

Health portal. A secured website/application where part of the personal health data kept by the healthcare professional can be accessed, if consent was given by the citizen.

Long term illness. An illness that lasts longer than 4 weeks.

Official national or regional health portal (government health portal). A health portal provided by the federal or the regional government. For instance, Mijgezondheid/Masanté, MyHealthViewer, CoZo, Réseau Santé Bruxellois/Brussels Gezondheidsnetwerk and Réseau Santé Wallon.

Online consultation. Accessing and viewing the personal health data through a secured website/application (a health portal) is also known as online consultation.

Private health portal. A health portal provided by a healthcare professional/health care institution (e.g. hospital, doctor's practice, nursing service) or another private partner (e.g. a company).

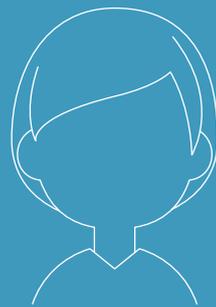
Teleconsult. A medical consultation held by telecommunication, for example patients asking medical questions via a website or email.

Telemonitoring. A method that allows healthcare professionals to monitor patients remotely. A patient measures a health parameter (e.g. blood pressure, blood sugar level) with a measuring instrument, sensor or another device, can store these parameters digitally and share them with a healthcare professional. Furthermore, telemonitoring allows healthcare professionals to ask additional questions to the patient in a digital way.

Wearable. A portable, digital device that can be worn on the body or on/in clothing (excl. smartphone) to measure personal information, store this information digitally and possibly send it via the internet (e.g. a smartwatch).

¹ European Commission. eHealth: digital health and care [Web page] (2019) [cited 22 June 2020]. Available from: https://ec.europa.eu/health/ehealth/overview_en

CHAPTER 01
**SOCIO-
DEMO**



SOCIO-DEMO OF OUR SAMPLE

The table below provides an overview of the **socio-demographic characteristics** of the citizens included in our **sample**. The percentages between brackets reflect the percentages in the **Belgian population**¹

	Belgium	Flanders	Wallonia	Brussels
REGION (N=4493)		N=3008	N=955	N=530
		66,9% (57,6%)	21,3% (31,8%)	11,8% (10,6%)
AGE (N=4557)				
< 25* years	3,6% (11,3%)	4,0%	2,5%	2,7%
25-34 years	17,2% (12,9%)	17%	19,4%	14,4%
35-44 years	19,3% (12,9%)	18,9%	23%	14,4%
45-54 years	21% (13,8%)	19,4%	28,3%	16,9%
55-64 years	20,1% (13,1%)	20%	20,5%	20,6%
65+** years	18,8% (18,9%)	20,7%	6,3%	31,0%

*The minimum age to take part in the survey was 16 years.

**The maximum age to take part in the survey was 100 years

LANGUAGE (N=5046)				
Dutch	68,3%	97,9%	1,9%	21,0%
French	31,7%	2,1%	98,1%	79,0%
SEX (N=4557)				
Female	55,5% (50,8%)	53,3%	63,8%	52,5%
Male	44,3% (49,2%)	46,4%	36,2%	47,5%
Other	0,2%	0,3%	0,0%	0,0%
FUNCTION (N=5046)				
Citizen	90,1%	89,9%	87,4%	95,3%
Healthcare professionals in target group*	2,8%	2,9%	3,5%	1,3%
Other healthcare professional*	7,1%	7,2%	9,1%	3,4%

*Healthcare professionals that did not meet the inclusion criteria (e.g. be involved in patient care) or were not part of one of the target groups, were asked to complete the citizen questionnaire.

¹ Statbel (Algemene Directie Statistiek – Statistics Belgium). Kerncijfers Belgische bevolking 2019. FOD Economie, KMO, Middenstand en Energie.

CHRONIC CONDITION (N=4493)				
Yes	27%	27%	25,8%	29,6%
No	73%	73,0%	74,2%	70,4%
EDUCATION* (N=4486)				
Primary education	1,3%	1,4%	0,7%	1,7%
Lower secondary education	6,1%	6,4%	4,9%	6,5%
Upper secondary education	18,8%	19,1%	18,5%	17,5%
Non-University higher education	30,5%	31,4%	30,7%	24,8%
University degree	41,0%	38,9%	43,6%	48,0%

*The categories "No diploma", "Special education", "Would rather not say" and "None of the above", were all below 1%

Citizens who indicated "No diploma" or "primary education" as their highest obtained diploma were categorized as "**low education**". Citizens who indicated "lower secondary education" or "higher secondary education" were categorized as "**medium education**" and citizens who indicated "Non-university higher education" or "University degree" were categorized as "**high education**". The majority of citizens within our sample (71,4%) fall into the "high education" category.

EDUCATION LEVEL	Low education	Medium education	High education
	9,8%	18,8%	71,4%

Compared to the Belgian population:

- Citizens in **Flanders** are **overrepresented** and citizens in **Wallonia** are **underrepresented**. Citizens in **Brussels** are **almost equally represented**.
- Citizens between **16 and 25** years old are **underrepresented** whereas citizens between from **all age groups** between 25 and 64 years old are **slightly overrepresented**. The citizens who are **older than 65** are **equally represented**.
- **Female** citizens are **slightly overrepresented** and **male** citizens are **slightly underrepresented**.
- Citizens in the **medium education** group are **underrepresented** and citizens in the **high education** group are **overrepresented**.

CHAPTER 02

**USE OF
OFFICIAL
NATIONAL
AND REGIONAL
HEALTH
PORTALS**



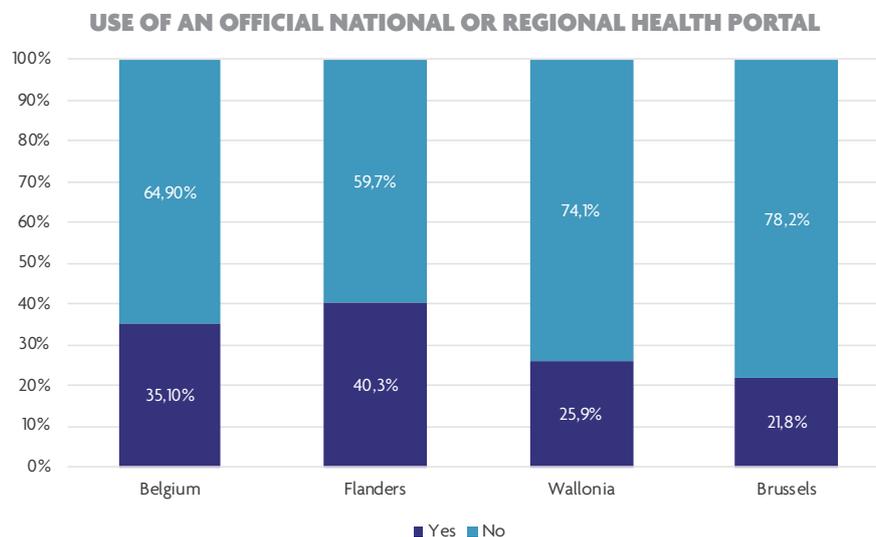
USE OF OFFICIAL NATIONAL AND REGIONAL HEALTH PORTALS

Citizens can use a health portal to consult their personal health data online. In this part of the report we will focus on the **use of official national and regional health portals** (e.g. MijnGezondheid/MaSanté, MyHealthViewer, CoZo, Réseau Santé Wallon, Réseau Santé Bruxellois/Brussels Gezondheidsnetwerk) and the satisfaction with the use of these health portals.

1. USE OF AND SATISFACTION WITH OFFICIAL NATIONAL AND REGIONAL HEALTH PORTALS

Citizens were asked whether they used one of the official national or regional health portals, **available within their region**, to consult their personal health data online.

In general, 35,1% of citizens in our sample used an **official national or regional health portal** to consult their personal health data online. Our results showed that a higher percentage of citizens in Flanders (40,3%) used an official national or regional health portal to consult their personal health data.



Graph 1. In the past year (October 2018 - September 2019), have you consulted your personal health data through any of the following secured websites/apps? – MijnGezondheid/MaSanté, MyHealthViewer, Cozo Website, CoZo app, RSW, RSB/BGN (N=4356)

Exploration with other variables showed some variety between different **education levels** and the **use** of an official national or regional health portal.

	Non Users	Users
EDUCATION LEVEL		
Low education	36,7%	63,3%
Medium education	48,7%	51,3%
High education	49,5%	50,5%

Table 1. Users and Non-users per education level (N=3974)

For the different national or regional health portals that were listed in the questionnaire, the percentage of citizens who **used** them in the past year (October 2018 – September 2019) ranges between 8,9% (CoZo app) and 29,8% (MijnGezondheid in Flanders). For all these health portals, the It's **Me application** and **electronic ID card and card reader** were the most used methods to log in.

Around 50% of citizens who used an official national or regional health portal indicated the need for **additional support material** to help them understand and optimally use the health portal. Our results showed some regional differences and some differences between the listed health portals in the need for additional support materials:

- A higher percentage of users in Wallonia (61,7%) indicated the need for additional support material to help them understand and use MaSanté.
- A lower percentage of users of the Cozo app (39,4%) indicated the need for additional support material to help them understand and use the CoZo app
- A higher percentage of users of Réseau Santé Bruxellois/Brussels Gezondheidsnetwerk (RSB/BGN) (65,6%) indicated the need for additional support material to help them understand and use RSB/BGN

In general, citizens who used an official national or regional health portals to consult their personal health data were **neither satisfied nor dissatisfied** with the use of the health portal..

	MijnGezondheid/MaSanté			MyHealth-Viewer	CoZo Website	CoZo App	Réseau Santé Wallon (RSW)	Réseau Santé Bruxellois/Brussels Gezondheidsnetwerk (RSB/BGN)
	Flanders	Wallonia	Brussels					Brussels
USE								
I have used it	29,8%	15,8%	15,0%	24,1%	17,8%	8,9%	21,2%	13,5%
I haven't used it, but have heard of it	28,2%	19,9%	23,6%	24,1%	13,9%	16,3%	36,9%	28,3%
Haven't heard of it	42,0%	64,2%	61,4%	51,8%	68,3%	74,8%	41,9%	58,3%
LOGIN METHOD								
eID	45,9%	54,1%	46,6%	48,7%	44,2%	21,1%	56,3%	54,7%
It's Me application	61,6%	49,6%	56,2%	60,6%	47,7%	50,9%	36,5%	45,3%
2 factor authentication	4,3%	2,3%	4,1%	3,0%	5,9%	21,5%	3,0%	1,6%
I don't know	2,6%	5,3%	4,1%	2,1%	2,2%	6,5%	4,1%	7,8%
SATISFACTION								
Very unsatisfied	4,1%	3,8%	2,7%	3,9%	2,0%	1,2%	5,5%	4,7%
Unsatisfied	10,1%	18,0%	15,1%	11,3%	8,5%	4,1%	16,6%	17,2%
Neutral	41,1%	37,6%	54,8%	43,2%	33,9%	34,0%	34,8%	46,9%
Satisfied	40,1%	33,8%	23,3%	37,1%	43,8%	43,6%	35,9%	25,0%
Very satisfied	4,5%	6,8%	4,1%	4,5%	11,8%	17,0%	7,2%	6,3%
SUPPORT								
I need additional support material to help understand and use the portal	49,9%	61,7%	47,9%	48,3%	44,2%	39,4%	55,3%	65,6%
I don't need additional support material	50,1%	38,3%	52,1%	51,7%	55,8%	60,6%	44,7%	34,4%

Table 2. In the past year (October 2018 - September 2019), have you consulted your personal health data through any of the following secured websites/apps? How did you login to the website/app? (Multiple choices possible) How satisfied are you with the use of the website/app? Would you like additional support material to help you understand and use the health portal (e.g. brochures, videos, online assistance)? (N=4356)

A. QUALITATIVE FEEDBACK ON DISSATISFACTION WITH THE USE OF OFFICIAL NATIONAL AND REGIONAL HEALTH PORTALS

The **reasons for dissatisfaction** were analyzed for each of the official national and regional health portals.

MIJNGEZONDHEID/MASANTÉ

1. Problems with the information

Citizens mentioned different problems concerning the information on the health portal namely, that it is **incomplete**, that it is **not being shared**, that it is **incorrect** or **not updated** and that there is **too little** or **no information** at all.

Resp. 162. “veel belangrijke info ontbreekt.”

Resp. 398. “Aucune informations ne m’est “autorisée” bien que mon médecin sache très bien que je souhaite avoir accès à la totalité de mes info médicale.”

Resp. 132. “Ook wordt veel info nog altijd niet gedeeld.”

Resp. 386. “Informatie is alles behalve correct.”

Resp. 1148. “Aucune info n’est disponible pour le patient (hormis une liste de consultation).”

Resp. 460. “Is leeg.”

2. User experience

Citizens found it **difficult to find information**, found the **interface not intuitive** and had **difficulties logging in**.

Resp. 785. “De informatie is moeilijk terug te vinden.”

Resp. 690. “Interface utilisateur pourrie.”

Resp. 424. “MOEILIJK INLOGGEN.”

3. Sharing of personal health data

Citizens expressed their concerns about **not knowing who has access** to the personal health data.

Resp. 124. “Wie er toegang heeft tot deze informatie”

Resp. 168. “Kan nergens [...] zien wie in mijn dossier zit.”

Citizens also had some questions regarding the **informed consent** for the digital exchange of personal health data amongst healthcare professionals.

Resp. 711. “Geen informatie zichtbaar voor mij wegens geen consent om te delen tussen zorgverstrekkers. Waarom is dit nodig voor mezelf om mijn eigen informatie te zien?”

Resp. 1148. “Le consentement éclairé n’en n’est pas un car on peut soit ouvrir tout, soit fermer tout.”

4. Minor themes

- The added value of the health portal was not always clear
- The fragmentation of the eHealth landscape makes it confusing and difficult

MYHEALTHVIEWER

1. Problems with the information

Comments made by citizens included problems such as, **too little or no information** available, **incorrect** or **outdated information** and **incomplete information**.

Resp. 1006. “Te weinig info vindt bijna niets terug.”

Resp. 1145. “GEEN GEGEVENS.”

Resp. 386. “Informatie is hoogst incorrect.”

Resp. 258. “Niet up to date.”

Resp. 203. “Er staat veel belangrijke informatie nog niet op (weet dat het nog in opbouw is maar toch).”

Resp. 367. “Gegevens niet volledig.”

2. User experience

Citizens experienced difficulties with the website and its **user interface**, and difficulties **logging in**.

Resp. 903. “Onoverzichtelijk, verwarrend, [...], niet gebruiksvriendelijk.”

Resp. 2283. “Geen logische opbouw in deze website.”

Resp. 338. “User Interface is onduidelijk.”

Resp. 1891. “Inloggen zéér moeilijk.”

3. Sharing of personal health data

Citizens expressed their concerns and questions regarding the **exchange of personal health data amongst healthcare professionals**.

Resp. 168. “Kan nergens aanzetten met wie ik wil delen of zien wie in mijn dossier zit. “

Resp. 711. “Geen consent, dus kan ik ook mijn eigen informatie niet zien???”

4. Minor themes

- The **fragmented eHealth landscape** is unnecessary.
- Currently MyHealthViewer had **no added value**.

COZO WEBSITE

1. Issues with the information

Citizens commented on the **lack of information**, the **accessibility** to the information and the **delay** with which the information is shared.

Resp. 203. “Veel belangrijke informatie staat er nog niet op.”

Resp. 367. “Niet genoeg info ingebracht. Te summier.”

Resp. 367. “Voor particulier enkel consulteerbaar.”

Resp. 1006. “Het duurt te lang voor de info online staat.”

2. User experience

Different comments were made regarding the **poor user experience**.

Resp. 910. “Deze UX¹ van deze website laat te wensen over.”

Resp. 3920. “Als je 1 verslag gelezen hebt, moet je telkens terug keren naar mijn cozo , om een volgend verslag te kunnen lezen.”

Resp. 467. “moeilijk om zorgverleners toe te voegen.”

3. Fragmented eHealth landscape

According to citizens, the **fragmented eHealth landscape** makes the process more **complicated**. They expressed the need for one common application.

Resp. 772. “Informatie veel te verspreid, niet duidelijk en overzichtelijk.”

Resp. 1987. “Waarom staat niet alle informatie gewoon in 1 applicatie? [...] Typisch Belgisch dat alles versnipperd is”.

Resp. 929. “Al deze producten zijn in een coherent design moeten terechtkomen. In plaats van te linken naar andere websites zouden de gegevens opgehaald moeten worden [...] en als 1 product aan de gebruiker getoond worden.”

¹ UX: user experience

4. Sharing of personal health data

Citizens expressed some concerns about the **privacy** regarding the personal health data.

Resp. 2160. “Te weinig privacy, geen eigen beheersing van de data.”

COZO APP

1. Issues with the information

Citizens commented on the **lack of information** on the app.

Resp. 686. “Veel info niet beschikbaar (huisarts).”

2. User experience and safety

Citizens felt the app failed to comply with **user-friendliness**, **safety** and **expectations** of the user

Resp. 927. “Voldoet niet aan de hedendaagse normen wat gebruiksvriendelijkheid, veiligheid en verwachtingen qua functionaliteiten betreft.”

RÉSEAU SANTÉ WALLON (RSW)

1. Issues with the information

Citizens mentioned different problems regarding the information on the health portal namely, that there is **too little or no information** at all, that there is **no access to the content**, that the **information is not** being **shared** and that the **information is incomplete** or **outdated**.

Resp. 3666. “Il n’y que très peu de données.”

Resp. 1148. “Vide.”

Resp. 4264. “Je n’ai pas accès a toutes mes données.”

Resp. 4257. “Je ne sais pas accéder à la plupart des résultats et rapports des médecins consultés.”

Resp. 4276. “Il faut que le fichier soit libéré par le médecin pour le consulter.”

Resp. 4426. “Documents accessibles incomplets.”

2. User Experience

The interface being **not intuitive** was the most recurring comment.

Resp. 2013. “Interface peu intuitive.”

Resp. 289. “Interface is verwarrend.”

3. Fragmented eHealth landscape

According to citizens, the **fragmented eHealth landscape** creates **confusion** and it is unclear why there is not **one national platform**.

Resp. 1142. “Le périmètre de ces 3 sites n’est absolument pas clair, je ne m’y retrouve pas. Cela fait très “bordélique” et très confus.”

Resp. 1873. “Waarom niet 1 nationaal platform.”

RÉSEAU SANTÉ BRUXELLOIS/BRUSSELS GEZONDHEIDSNETWERK (RSB/BGN)

1. Issues with information

Citizens stated there was **no access to the information** they tried to consult or that the **information** was **not shared** with the patient.

Resp. 4188. "Aucune possibilité de consulter pour le patient"

Resp. 398. "je n'ai accès à aucun document..."

Resp. 248. "Documents non libérés par l'auteur ou l'hôpital..."

Citizens who **did not use** a health portal (government or private) mostly indicated they were **not aware of the possibility** to consult their personal health data or that **it was not necessary** because they were not sick. Our results showed that a higher percentage of users in Flanders (27,4%) find it unclear what personal health data they can consult online.

	Flanders	Wallonia	Brussels	Belgium
REASONS OF NON-USERS				
It was not necessary because I was not sick	35,6%	36,9%	32,5%	35,6%
I have tried to log in, but it did not work	2,9%	3,3%	2,5%	3,0%
I was not aware of the possibility to consult my personal health data online	48,8%	55,1%	44,9%	50,0%
It's not clear what personal health data I can consult online	27,4%	4,6%	13,6%	19,7%
I don't have an eID reader, It's Me or mobile application to log in	6,9%	7,9%	9,1%	7,4%
I don't have a computer and/or internet access	0,5%	0,6%	0,0%	0,4%
It's not clear how/where I should log in	13,0%	9,2%	12,8%	11,9%
I have already consulted my personal health data via other channels	4,7%	14,9%	16,9%	8,8%
I have no interest to consult my personal health data online	6,1%	6,4%	14,4%	7,2%
The personal health data I would like to consult is not available for online consultation	2,9%	2,0%	3,3%	2,7%
I do not trust the online consultation of my personal health data through a secured website/app	3,9%	7,2%	11,5%	5,7%

Table 3. Why haven't you used a secured website/app to view your personal health data in the past year (October 2018 - September 2019)? (Multiple choices possible) (N=2060)

Exploration with other variables showed some variety between different **age categories** and **education levels** for citizens who **did not feel it was necessary** to consult their personal health data because they were not sick.

STATEMENT	AGE	
It was not necessary because I was not sick	under 25	49,3%
	25-34	43,5%
	35-44	37,5%
	45-54	33,0%
	55-64	35,8%
	65 and up	25,4%
	EDUCATION LEVEL	
Low education		31,0%
Medium education		27,4%
High education		38,8%

Table 4. Percentage of non-users selecting certain reasons (N = 2060)

For citizens who **were not aware of the possibility** to consult their personal health data online, our results showed a variety according their **age**.

STATEMENT	AGE	
I was not aware of the possibility to consult my personal health data online	under 25	67,1%
	25-34	54,4%
	35-44	54,4%
	45-54	50,1%
	55-64	41,8%
	65 and up	43,3%

Table 5. Percentage of non-users selecting certain reasons (N = 2060)

2. KEY FINDINGS

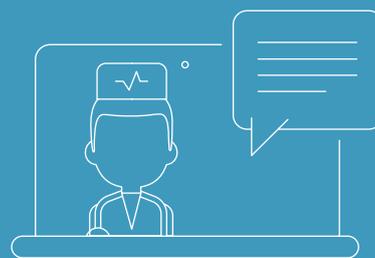
35,1% of citizens in our sample used an **official national or regional health portal**, available within their region, to consult their personal health data.

- **Use** of the different official national and regional eHealth portal ranges between 8,9% and 25,1%.
- The **It's Me application** and **electronic ID card and card reader** were the most used methods to log in.
- Around 50% of citizens who used an official national or regional health portal want **additional support material** to help them understand and optimally use the health portal
- In general citizens were **neither satisfied nor dissatisfied** with the use of these health portals.

Most **non-users** were **not aware** of the possibility to consult their personal health data online via a health portal.

CHAPTER 03

ONLINE CONSULTATION



ONLINE CONSULTATION OF PERSONAL HEALTH DATA

In this part of the report we will focus on different aspects regarding **online consultation of personal health data** and the **use of eHealth services** that are available to citizens within their region.

1. ATTITUDE TOWARDS ONLINE CONSULTATION

Citizens were asked their opinion on a number of statements regarding the online consultation of personal health data via a health portal. For citizens who used a health portal to consult their personal health data (**users**), the statements were formulated in the present tense. For citizens who did not use a health portal to consult their personal health data (**non-users**), the statements were formulated in the future tense.

In general, the majority of users and non-users in our sample:

- **Trust** or **would trust** the use of a health portal for the consultation of their personal health data
- Believe that online consultation allows them or would allow them to be **better informed** about their personal health data and/or treatment
- Do not think they get or would get more **confused** or **worried** through online consultation
- Are not concerned or would not be concerned that online consultation will **harm their privacy**. Nevertheless, **privacy raises the biggest concerns** in the use of health portals for online consultation of personal health data

Our results show some regional differences in the attitude towards online consultation:

- A lower percentage of non-users in Wallonia and Brussels **would trust** the use of a health portal for the consultation of their personal health data
- A higher percentage of non-users in Wallonia and Brussels believe they would get more **confused or worried** through online consultation

STATEMENT	REGION	USERS				
		Completely disagree	Disagree	Neutral	Agree	Completely agree
I trust the use of a secured website/app for the consultation of my personal health data	Flanders	1,5%	3,4%	17,2%	52,7%	25,2%
	Wallonia	1,4%	4,3%	18,3%	46,6%	29,3%
	Brussels	3,0%	7,9%	18,8%	48,5%	21,8%
	Belgium	1,6%	3,9%	17,5%	51,5%	25,5%
I am concerned that online consultation will harm my privacy	Flanders	13,8%	39,0%	26,4%	15,9%	4,9%
	Wallonia	19,2%	39,4%	22,1%	16,3%	2,9%
	Brussels	16,8%	37,6%	22,8%	16,8%	5,9%
	Belgium	14,8%	39,0%	25,5%	16,0%	4,7%
Online consultation allows me to be better informed about my personal health data and/or treatment	Flanders	1,9%	4,4%	16,1%	44,9%	32,7%
	Wallonia	0,5%	4,8%	16,8%	45,2%	32,7%
	Brussels	2,0%	5,0%	17,8%	49,5%	25,7%
	Belgium	1,7%	4,5%	16,3%	45,3%	32,2%
I am more confused or worried through online consultation	Flanders	35,8%	44,1%	16,8%	2,7%	0,6%
	Wallonia	36,5%	37,0%	21,2%	4,8%	0,5%
	Brussels	35,6%	38,6%	20,8%	1,0%	4,0%
	Belgium	35,9%	42,7%	17,8%	2,9%	0,8%

Table 6. To what extent do you agree with following statements regarding online consultation of your personal health data? (N=1390)

STATEMENT	REGION	NON-USERS				
		Completely disagree	Disagree	Neutral	Agree	Completely agree
I would trust the use of a secured website/app for the consultation of my personal health data	Flanders	2,4%	5,6%	16,5%	47,1%	28,4%
	Wallonia	6,1%	10,3%	19,1%	50,0%	14,5%
	Brussels	8,1%	11,5%	21,4%	43,2%	15,8%
	Belgium	4,1%	7,6%	17,8%	47,4%	23,2%
I would be concerned that online consultation will harm my privacy	Flanders	11,3%	31,7%	26,7%	21,3%	9,0%
	Wallonia	10,3%	30,9%	24,4%	25,8%	8,6%
	Brussels	8,1%	29,9%	25,2%	22,2%	14,5%
	Belgium	10,7%	31,3%	25,9%	22,6%	9,5%
Online consultation would allow me to be better informed about my personal health data and/or treatment	Flanders	1,6%	5,7%	20,1%	47,3%	25,4%
	Wallonia	5,5%	13,5%	23,7%	42,4%	14,9%
	Brussels	7,7%	11,1%	28,6%	37,2%	15,4%
	Belgium	3,4%	8,4%	22,0%	44,8%	21,4%
I would get more confused or worried through online consultation	Flanders	24,5%	42,2%	24,2%	7,7%	1,4%
	Wallonia	17,9%	35,1%	26,7%	15,3%	5,0%
	Brussels	19,7%	34,6%	27,8%	11,5%	6,4%
	Belgium	22,2%	39,4%	25,3%	10,2%	2,9%

Table 7. To what extent do you agree with following statements regarding online consultation of your personal health data? (N=1969)

2. RESPONSIBILITIES HEALTH PORTAL AWARENESS

Citizens were asked to indicate who they found mainly responsible for a number of tasks regarding the use and awareness of health portals.

Our results showed that citizens believe the **government** and the **public health insurance companies** to be (almost) equally responsible to:

- **Inform** them about the **existence** of a health portal with their personal health data (mainly the government)
- **Explain** them how they can **consult** their personal health data on this health portal

Most citizens considered a **healthcare professional** (mostly the **GP**) to be the main responsible party to **ensure** they **understand the health-related information** on this health portal.

Citizens regard **themselves** mainly responsible to make sure they **use** a health portal for the online consultation of their personal health data.

	A healthcare professional	Me	The government	The public health insurance company	Other
TASK					
Informing me about the existence of a secured website/app with my personal health data	46,5%	14,9%	61,1%	59,4%	2,8%
Explaining me how I can consult my personal health data on this secured website/app	24,1%	30,2%	48,6%	48,8%	5,1%
Ensuring that I understand the health-related information on this secured website/app	53,1%	23,3%	34,1%	35,9%	4,1%
Ensuring that I use this secured website/app to consult my personal health data	28,3%	50,3%	34,4%	31,9%	3,1%

Table 8. According to you, who is mainly responsible for the following tasks? (Multiple choices possible) (N=3911)

Citizens who indicated a healthcare professional is responsible for at least one of the above statements, were asked to further specify which health care professional. The vast majority of citizens indicated the **General Practitioner** (85,5%), followed by a specialist (6,6%), another healthcare professional (4,8%) and the pharmacist (2,1%).

Further exploration of these results showed that answers for three of the four statements regarding **health portal responsibilities**, varied across the different **education levels**.

TASK	EDUCATION LEVEL	Who is mainly responsible?				Other
		Me	A healthcare professional	The government	The public health insurance company	
Informing me about the existence of a secured website/app with my personal health data	Low education	24.0%	34.7%	36.0%	41.3%	8.0%
	Middle education	17.0%	36.9%	51.1%	58.7%	3.8%
	High education	13.7%	50.2%	65.5%	60.1%	2.3%
Explaining me how I can consult my personal health data on this secured website/app	Low education	34.7%	25.3%	22.7%	44.0%	8.0%
	Middle education	27.4%	23.8%	42.4%	51.4%	6.0%
	High education	30.9%	24.2%	51.6%	48.2%	4.6%
Ensuring that I understand the health-related information on this secured website/app	Low education	28.0%	40.0%	33.3%	37.3%	6.7%
	Middle education	22.6%	44.2%	34.7%	42.1%	4.2%
	High education	23.2%	56.7%	34.0%	33.7%	3.9%

Table 9. According to you, who is mainly responsible for the following tasks? (Multiple choices possible) (N = 3870)

Answers for **all responsibilities** showed variety between the different **age** categories.

TASK	AGE	Who is mainly responsible?				Other
		Me	A healthcare provider	The government	The public health insurance company	
Informing me about the existence of a secured website/app with my personal health data	under 25	8.9%	65.3%	66.9%	54.8%	6.5%
	25-34	14.0%	60.0%	71.9%	66.1%	3.8%
	35-44	11.6%	50.9%	69.8%	63.4%	1.8%
	45-54	13.5%	47.4%	60.6%	57.9%	2.6%
	55-64	16.5%	41.2%	56.3%	55.5%	3.0%
	65 and up	20.0%	30.8%	46.9%	55.3%	2.7%
Explaining me how I can consult my personal health data on this secured website/app	under 25	33.1%	31.5%	53.2%	44.4%	10.5%
	25-34	36.2%	26.1%	52.1%	52.0%	7.4%
	35-44	32.5%	24.9%	54.5%	49.4%	4.1%
	45-54	27.4%	24.8%	51.5%	47.2%	4.6%
	55-64	28.7%	23.5%	45.4%	46.4%	4.9%
	65 and up	26.7%	20.1%	39.0%	49.9%	4.0%
Ensuring that I understand the health-related information on this secured website/app	under 25	23.4%	56.5%	40.3%	34.7%	10.5%
	25-34	25.3%	63.0%	37.0%	37.8%	5.4%
	35-44	24.9%	57.3%	38.3%	35.2%	3.7%
	45-54	22.4%	54.9%	33.9%	36.1%	3.7%
	55-64	20.9%	52.0%	29.9%	31.0%	3.8%
	65 and up	23.1%	38.4%	30.5%	39.7%	3.4%
Ensuring that I use this secured website/app to consult my personal health data	under 25	58.9%	27.4%	32.3%	26.6%	6.5%
	25-34	54.9%	33.8%	40.3%	30.3%	4.1%
	35-44	52.6%	29.3%	37.9%	33.5%	2.3%
	45-54	47.1%	28.4%	36.0%	33.3%	3.5%
	55-64	48.4%	27.2%	32.6%	30.5%	3.4%
	65 and up	47.9%	23.5%	25.6%	32.6%	2.1%

Table 10. According to you, who is mainly responsible for the tasks following tasks? (Multiple choices possible) (N = 3928)

3. USE OF EHEALTH SERVICES

eHealth services refer to the personal health data that is made available for online consultation through the official national and regional health portals. The eHealth services available for online consultation depend on the **region** where citizens live and the information that health care workers made **available** for online consultation. Citizens were asked, for each of the eHealth services that are available within their region, to indicate whether they heard of the service and if they used it in the past year (October 2018 – September 2019).

In general, the **use** of eHealth services amongst citizens in our sample was rather low. For all eHealth services, except the consultation of medical imaging (26,9%), less than one in four citizens used the service.

Our results showed that the **most used eHealth services** are:

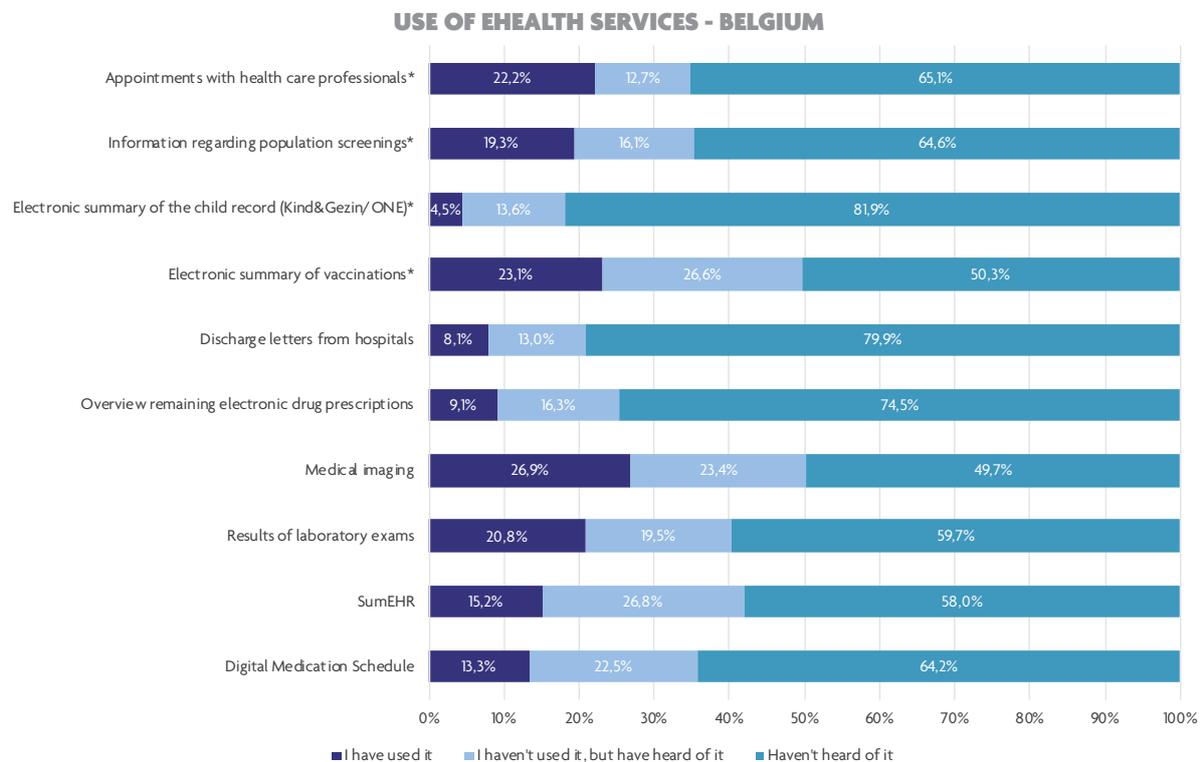
- The consultation of medical imaging (26,9%)
- An electronic summary of vaccinations (23,10%)*
- Appointments with healthcare professionals (22,2%)*
- Results of laboratory exams (20,8%)

*not available in Wallonia and Brussels

The **least used eHealth services** are:

- The electronic summary of the child record with organizations like Kind&Gezin or ONE¹ (4,5%²)*
- Discharge letters from hospitals (8,1%)
- An overview of the remaining electronic drug prescriptions (9,1%)

*not available in Wallonia and Brussels



Graph 2. Have you heard of the following personal health data that you can view online? (N=3817) *These eHealth services are not available in Wallonia and Brussels

Our results showed that a higher percentage of citizens in Flanders used eHealth services in the past year (October 2018 - September 2019).

EHEALTH SERVICE	REGION	I haven't viewed it, but have heard of it		
		I have viewed it	I haven't viewed it, but have heard of it	I haven't heard of it
Digital medication schedule	Flanders	17,2%	25,2%	57,5%
	Wallonia	5,1%	16,6%	78,3%
	Brussels	6,5%	18,2%	75,3%
SumEHR	Flanders	18,6%	25,5%	55,9%
	Wallonia	8,2%	30,6%	61,1%
	Brussels	8,7%	27,3%	64,0%
Results of laboratory exams	Flanders	24,6%	17,5%	57,8%
	Wallonia	14,0%	22,9%	63,1%
	Brussels	11,5%	24,3%	64,2%
Medical imaging	Flanders	32,9%	21,5%	45,7%
	Wallonia	13,8%	26,9%	59,3%
	Brussels	17,1%	26,9%	56,0%
An overview of remaining electronic drug prescriptions	Flanders	10,8%	14,3%	74,8%
	Wallonia	5,6%	18,8%	75,7%
	Brussels	6,1%	21,5%	72,5%
Discharge letters from hospitals	Flanders	9,9%	12,5%	77,5%
	Wallonia	4,6%	14,9%	80,5%
	Brussels	3,9%	11,5%	84,6%
Electronic summary of vaccinations	Flanders	23,0%	26,4%	50,6%
	Wallonia*			
	Brussels*			
Electronic summary of the child record with organizations like Kind & Gezin or ONE	Flanders	4,4%	13,5%	82,1%
	Wallonia*			
	Brussels*			
Information regarding population screenings (e.g. colon cancer, cervical cancer, breast cancer)	Flanders	19,2%	16,1%	64,6%
	Wallonia*			
	Brussels*			
Appointments with health care professionals	Flanders	22,2%	12,7%	65,1%
	Wallonia*			
	Brussels*			

* These eHealth services are not available in Wallonia and Brussels

Table 11. Have you heard of the following personal health data that you can view online? (N=3817)

4. INTEREST IN THE USE OF EHEALTH SERVICES

Our results showed that the **least known eHealth services** are:

- An electronic summary of the child record with organizations like Kind&Gezin or ONE³ (81,9% of citizens had not heard of it)*
- Discharge letters from hospitals (79,9% of citizens had not heard of it)
- An overview of the remaining electronic drug prescriptions (74,5% of citizens had not heard of it)

*not available in Wallonia and Brussels

Despite low use of, and knowledge about eHealth services, the vast majority of citizens would be **interested in using them**. Our results showed a lower interest in the use of the electronic child record with organizations like Kind&Gezin or ONE⁴ and a slightly lower interest amongst citizens in Brussels.

HEALTH DATA	REGION	Want to view it	Don't want to view it
Digital medication schedule (N = 3301)	Flanders	81.8%	18.2%
	Wallonia	79.6%	20.4%
	Brussels	71.0%	29.0%
SumEHR (N = 3232)	Flanders	95.3%	4.7%
	Wallonia	90.9%	9.1%
	Brussels	79.0%	21.0%
Results of laboratory exams (N = 3016)	Flanders	94.0%	6.0%
	Wallonia	90.2%	9.8%
	Brussels	76.2%	23.8%
Medical imaging (N = 2785)	Flanders	90.7%	9.3%
	Wallonia	86.5%	13.5%
	Brussels	71.9%	28.1%
An overview of remaining electronic drug prescriptions (N = 3463)	Flanders	87.8%	12.2%
	Wallonia	82.0%	18.0%
	Brussels	72.0%	28.0%
Discharge letters from hospitals (N = 3502)	Flanders	80.6%	19.4%
	Wallonia	77.5%	22.5%
	Brussels	64.3%	35.7%
Electronic summary of vaccinations (N = 1942)	Flanders	95.3%	4.7%
	Wallonia*	95.3%	4.7%
	Brussels*	84.4%	15.6%
Electronic summary of the child record with organizations like Kind & Gezin or ONE (N = 2414)	Flanders	57.6%	42.4%
	Wallonia*	69.2%	30.8%
	Brussels*	46.3%	53.7%
Information regarding population screenings (e.g. colon cancer, cervical cancer, breast cancer) (N = 2036)	Flanders	87.0%	13.0%
	Wallonia*	91.3%	8.7%
	Brussels*	79.2%	20.8%

3 ONE currently does not offer the possibility to consult the electronic summary of the child record online

4 The electronic summary of the child record with organizations like Kind&Gezin or ONE is only relevant to citizens with (young) children. The questionnaire, however, did not ask whether respondents had children. Therefore, we were not able to check if the interest to use this eHealth service might be higher amongst citizens with (young) children.

Appointments with health care professionals (N = 1965)	Flanders	89.5%	10.5%
	Wallonia*	85.5%	14.5%
	Brussels*	76.1%	23.9%

* These eHealth services are not available in Wallonia and Brussels

Table 12. Would you like to view these eHealth services? (N is provided per eHealth service)

5. SATISFACTION WITH EHEALTH SERVICES

For those eHealth services citizens had used in the past year (October 2018 - September 2019), they were asked to indicate how **satisfied** they were with the use of the service.

In general, Citizens who used eHealth services were generally **satisfied** with the available information.

	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied
EHEALTH SERVICE					
Digital medication schedule (N = 505)	11,8%	13,2%	33,7%	31,9%	9,4%
SumEHR (N = 577)	8,7%	17,1%	29,7%	34,4%	10,1%
Results of laboratory exams (N = 791)	3,2%	5,2%	18,0%	52,4%	21,2%
Medical imaging (N = 1022)	3,1%	5,8%	20,4%	52,0%	18,8%
An overview of remaining electronic drug prescriptions (N = 345)	4,7%	5,5%	28,6%	43,4%	17,8%
Discharge letters from hospitals (N = 306)	5,6%	6,6%	20,5%	47,0%	20,2%
Electronic summary of vaccinations* (N = 582)	6,9%	15,9%	21,3%	42,7%	13,1%
Electronic summary of the child record with organizations like Kind & Gezin or ONE* (N = 111)	1,9%	9,3%	34,3%	45,4%	9,3%
Information regarding population screenings (e.g. colon cancer, cervical cancer, breast cancer)* (N = 487)	2,1%	3,1%	24,7%	53,3%	16,8%
Appointments with health care professionals* (N = 559)	2,0%	3,8%	18,5%	48,7%	27,0%

* These eHealth services are not available in Wallonia and Brussels

Table 13. How satisfied are you with the health data you consulted? (N provided per type of data)

A. QUALITATIVE FEEDBACK ON THE USE OF EHEALTH SERVICES

The reasons for **dissatisfaction** were analyzed for some of the eHealth services.

SUMEHR

Citizens mentioned that the information they consulted was **incorrect, not accessible, not complete** or that there was **minimal information** available.

Resp. 1134. "Incorrecte informatie."

Resp. 4188. "Aucun détail disponible, juste le nom du médecin consulté : frustrant."

Resp. 570. "Onvolledig, zaken ontbreken."

Resp. 537. "Nauwelijks informatie aanwezig."

Citizens who consulted their SumEHR had some remarks regarding the **content of the SumEHR**.

Resp. 809. "Ce n'est pas un résumé mais la somme des résultats des consultations de mon médecin généraliste depuis 4 ans..."

Resp. 512. "De vermelding van bepaalde gegevens zonder het in een kader te situeren, vb geestelijke problematiek wordt vermeld zonder aanduiding dat dit maar 1 keer voorgevallen is."

Citizens also expressed concerns regarding the **exchange of personal health data** and **privacy**.

Resp. 234. "Er staat informatie in waarvan ik niet weet hoe die erin is gekomen en die die daar niet hoort in te staan omwille van privacy redenen."

Resp. 957. "Qu'advient-il de ces données en termes de sécurité de la vie privée?"

DIGITAL MEDICATION SCHEDULE

Citizens stated that the information they consulted was **incorrect, outdated** or **incomplete**.

Resp. 209. "Foutieve gegevens."

Resp. 289. "De informatie was niet 'meer' correct, en niet goed ingevuld."

Resp. 809. "Information trop brute et pas à jour."

Resp. 2274. "Onvolledige informatie."

Citizens also expressed their concerns regarding the **informed consent** for the sharing of health data amongst health care professionals and **privacy**.

Resp. 353. "Je souhaite voir mes données sans consentement. Je souhaite pouvoir dire quels données ou groupe de données, je donne mon consentement. Je souhaite savoir qui peut accéder à ces données. Je n'ai pas confiance sur qui accède à mes données avec ou sans mon consentement ou avec un consentement donné à mon insu. Je souhaite être averti quand un nouveau groupe cible/une autre solution est ajouté et peut consulter mes données postérieurement à mon consentement."

Resp. 164. "Schending privacy."

RESULTS OF LABORATORY EXAMS

Citizens mentioned a **delay** in the results being available for online consultation.

Resp. 4293. "Attente d'un mois avant de disposer du resultat d'analyses."

Resp. 4264. "Delai pour obtenir l'information."

Citizens also experienced difficulties in getting **access** to the information, difficulties in **understanding** the information and a **lack of information**.

Resp. 454. "Bv voor lab uitslagen van bloed moet je hemel en aarde bewegen om die te kunnen inkijken."

Resp. 929. "Cijfers zeggen niet het volledige verhaal, waarom is er geen duiding beschikbaar?"

Resp. 2013. "Peu compréhensible par le patient."

Resp. 3920. "Niet alle resultaten staan erop."

MEDICAL IMAGING

Citizens mentioned that only the medical images are available for online consultation and not the **accompanying report**

Resp. 454. “Waarom kan patiënt de protocollen van dokter niet lezen?? Dit is wel belangrijk voor patiënt.”

Resp. 1880. “Enkel de foto’s waren zichtbaar, maar niet het verslag van de arts met de interpretatie/conclusie. Zonder verslag waren de foto’s zinloos!”

Citizens also experienced difficulties when trying to **open** the medical images:

Resp.4293. “Logicielle de lecture non disponible.”

Resp. 3894. “De beelden bekijken werkte niet, dit gaf telkens een foutmelding/error.”

Other minor themes

- Information is not **accessible** anymore after a certain period of time

6. GENERAL ISSUES REGARDING THE USE OF EHEALTH SERVICES

The vast majority of citizens in our sample (83,0%) would like to get access to a **website containing information, validated by health care professionals**, to help them gain a better understanding of their personal health data. Our results showed that a higher percentage of citizens in Flanders (86,6%) would like to get access to a validated website.

		Yes	No	I don't know
STATEMENT	REGION			
I would like access to a validated website containing information, validated by health care professionals, to better understand my personal health data	Flanders	86,8%	5,0%	8,2%
	Wallonia	78,2%	7,5%	14,3%
	Brussels	70,6%	13,4%	16,0%
	Belgium	83,0%	6,5%	10,4%

Table 14. I would like access to a validated website containing information, validated by health care professionals, to better understand my online personal health data (N=3771)

The majority of citizens in our sample (65,6%) would like to automatically get access to **all** their personal health data, **without any preselection** by a healthcare worker. Our results showed that a higher percentage of citizens in Flanders (72,3%) would like to automatically get access to all their personal health data

		Yes	No	I need more information	No opinion
STATEMENT	REGION				
I would like to automatically get access to all my personal health data online without any preselection by a health care professional	Flanders	72.3%	9.9%	14.5%	3.3%
	Wallonia	54.4%	14.7%	27.5%	3.4%
	Brussels	49.1%	15.6%	28.5%	6.8%
	Belgium	65,6%	11,6%	19%	3,7%

Table 15. I would like to automatically get access to all my personal health data online without any preselection by a health care professional (N=3771)

Exploration with other variables showed that **preferences in preselection by a health care professional** varied across **ages**.

		Yes	No	I need more information	No opinion
STATEMENT	AGE				
I would like to automatically get access to all my personal health data online without any preselection by a health care professional	under 25	48,7%	21,0%	24,4%	5,9%
	25-34	53,9%	18,1%	24,4%	3,6%
	35-44	65,0%	12,3%	19,0%	3,6%
	45-54	67,7%	11,4%	17,6%	3,3%
	55-64	70,5%	9,1%	17,4%	3,0%
	65 and up	72,0%	7,0%	16,1%	5,0%

Table 16. I would like to automatically get access to all my personal health data online without any preselection by a health care professional (N=3788)

7. KEY FINDINGS

ATTITUDE TOWARDS ONLINE CONSULTATION

- The majority of users and of non-users in our sample **trust** the use of a health portal for the consultation of their personal health data
- Users and non-users do not seem to find that that online consultation will harm their **privacy**
 - Nevertheless, privacy raises the biggest concerns in the use of health portals
- The majority of users and non-users agrees that online consultation allows them to be **better informed** about their personal health data and/or treatment
- The majority of users and non-users do not believe that they would get more **confused or worried** through online consultation

RESPONSIBILITIES HEALTH PORTAL AWARENESS

Citizens believe the **government**, the **public health insurance companies** and the **general practitioner (GP)** are the main responsible party to:

- **Inform** them about the **existence** of health portals for the consultation of their personal health data (mainly the government)
- **Explain** them how to consult their personal health data on these health portals (mainly the public health insurance companies)
- Ensure they **understand** the **health-related information** that is available on these health portals (mainly the GP)

Citizens regard **themselves** mainly responsible to make sure they **use** a health portal for the online consultation of their personal health data.

USE OF EHEALTH SERVICES

A relatively small percentage of citizens in our sample have **used** eHealth services.

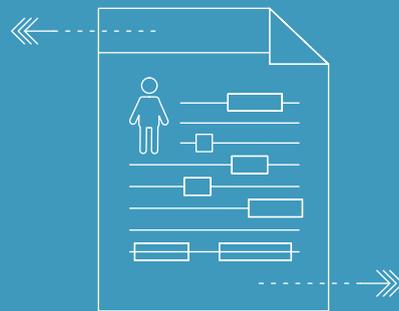
- Citizens who used eHealth services were generally **satisfied** with the available information
- Despite low use of, and knowledge about eHealth services, the vast majority of citizens would be **interested** in using them

GENERAL ISSUES REGARDING THE USE OF EHEALTH SERVICES

- Vast majority of citizens in our sample (83%) would like to get access to a **website** containing **information, validated by health care professionals**, to help them gain a better understanding of their personal health data
- Approximately 65% of citizens would like to **automatically** get access to **all** their personal health data, **without any preselection** by a healthcare worker

CHAPTER 04

INFORMED CONSENT



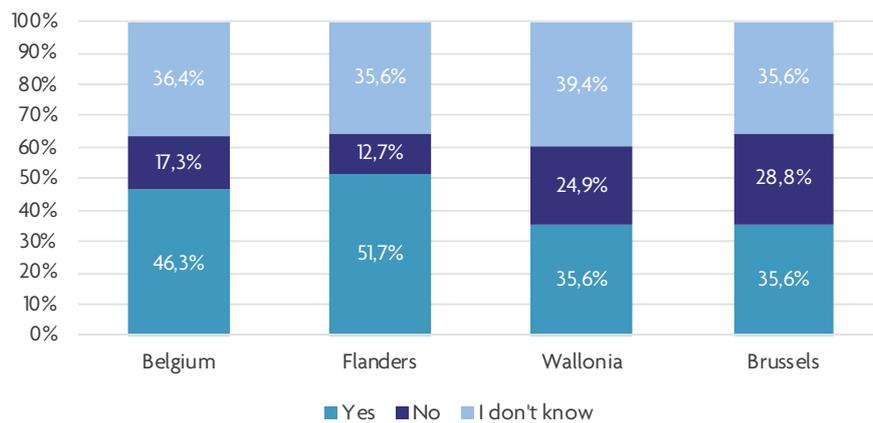
INFORMED CONSENT

In this part of the report we will focus on the **consent for the digital exchange of personal health data amongst health care professionals**. This consent needs to be provided for citizens to be able to view their personal health data online through one of the official national or regional health portals.

1. CONSENT FOR THE DIGITAL EXCHANGE OF PERSONAL HEALTH DATA AMONGST HEALTH CARE PROFESSIONALS

Less than half (46,3%) of the citizens in our sample gave **consent for the digital exchange of their personal health data amongst health care professionals**. Our results show that a higher percentage of citizens in Flanders (51,7%) gave their consent for the digital exchange of personal health data amongst health care professionals.

CONSENT FOR THE DIGITAL EXCHANGE OF PERSONAL HEALTH DATA AMONGST HEALTH CARE PROFESSIONALS



Graph 3. Have you given consent to your healthcare professional(s) to share your personal health data digitally and securely with other healthcare professionals? (N=3765)

Exploration with other variables showed that whether citizens provided their **consent for the digital exchange of their personal health data** amongst health care professionals varied across their **level of education** and **age**.

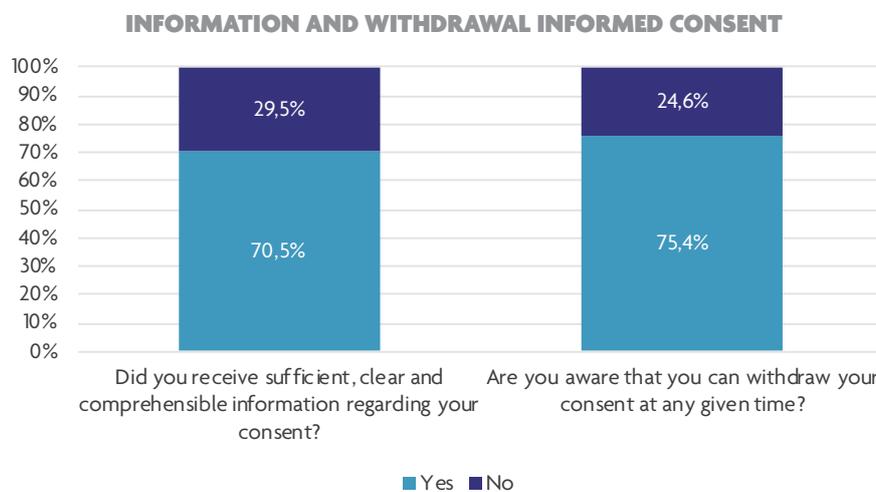
EDUCATION LEVEL	Yes	No	I don't know
Low education	63,8%	7,2%	29,0%
Medium education	42,6%	17,7%	39,8%
High education	47,2%	17,5%	35,3%

Table 17. Have you given consent to your healthcare professional(s) to share your personal health data digitally and securely with other healthcare professionals? (N=3728)

	Yes	No	I don't know
AGE			
under 25	29,4%	16,8%	53,8%
25-34	43,4%	16,0%	40,6%
35-44	44,0%	16,9%	39,1%
45-54	40,8%	22,0%	37,2%
55-64	50,9%	17,1%	32,0%
65 and up	55,8%	14,1%	30,1%

Table 18. Have you given consent to your healthcare professional(s) to share your personal health data digitally and securely with other healthcare professionals? (N=3782)

The majority of citizens (70,5%) who gave their consent for the digital exchange of personal health data amongst health care providers received **sufficient, clear** and **comprehensible information** regarding this consent. Also, more than three out of four of these citizens (75,4%) were aware that they can **withdraw** their consent at any given time.



Graph 4. Did you receive sufficient, clear and comprehensible information regarding your consent for sharing your personal health data? Are you aware that you can withdraw your consent for sharing your personal health data at any given time? (N=1741)

Exploration with other variables showed that whether citizens felt they received **sufficient, clear** and **comprehensible information** regarding their consent and if they were aware that they can **withdraw** their consent at any given time varied across their **level of education, age** and **gender**.

STATEMENT	EDUCATION LEVEL	Yes	No
Did you receive sufficient, clear and comprehensible information regarding your consent?	Low education	61,4%	38,6%
	Medium education	71,7%	28,3%
	High education	70,6%	29,4%
Are you aware that you can withdraw your consent at any given time?	Low education	65,9%	34,1%
	Medium education	70,6%	29,4%
	High education	77,5%	22,5%

Table 19. Did you receive sufficient, clear and comprehensible information regarding your consent for sharing your personal health data? Are you aware that you can withdraw your consent for sharing your personal health data at any given time? (N=1729)

		Yes	No
STATEMENT	AGE		
Did you receive sufficient, clear and comprehensible information regarding your consent?	under 25	54,3%	
	25-34	67,1%	32,9%
	35-44	64,8%	35,2%
	45-54	71,7%	28,3%
	55-64	74,9%	25,1%
	65 and up	74,2%	25,8%
Are you aware that you can withdraw your consent at any given time?	under 25	65,7%	34,3%
	25-34	79,7%	20,3%
	35-44	79,8%	20,2%
	45-54	75,1%	24,9%
	55-64	74,9%	25,1%
	65 and up	70,9%	29,1%

Table 20. Did you receive sufficient, clear and comprehensible information regarding your consent for sharing your personal health data? Are you aware that you can withdraw your consent for sharing your personal health data at any given time? (N=1751)

		Yes	No
SEX			
Male		81,0%	19,0%
Female		71,0%	29,0%

Table 21. Are you aware that you can withdraw your consent for sharing your personal health data at any given time? (N=1748). The gender category "Other" is omitted from reporting as n = 3

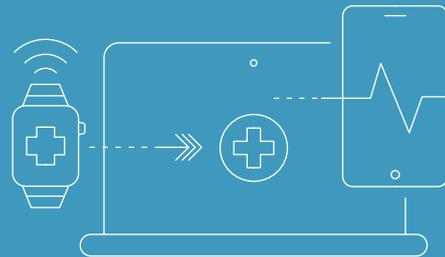
2. KEY FINDINGS

Less than half (46,3%) of the citizens in our sample gave **consent for the digital exchange of their personal health data amongst health care professionals**.

- 70.5% of citizens who gave consent received **sufficient, clear and comprehensible information** regarding this consent
- 75.4% of citizens who gave consent are aware that they can **withdraw** their consent at any given time

CHAPTER 05

USE OF DIGITAL APPLICATIONS AND DEVICES FOR HEALTH PURPOSES

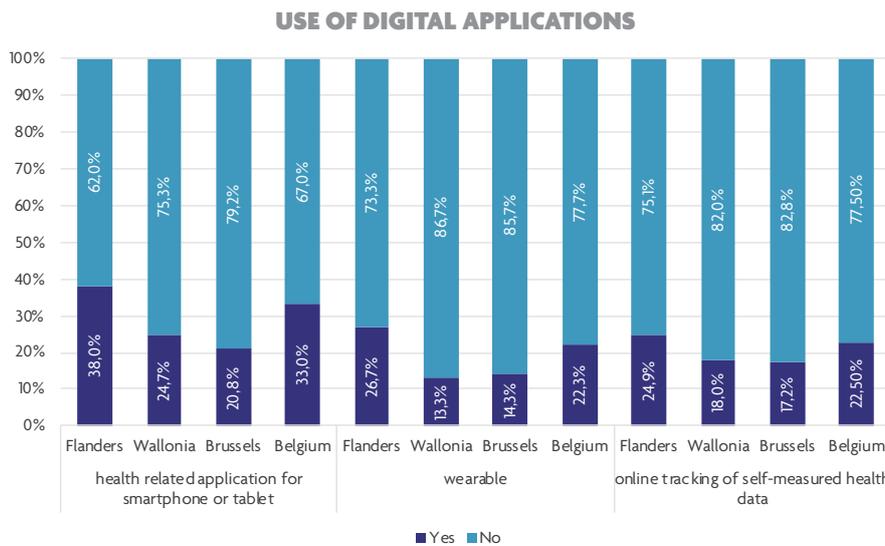


USE OF DIGITAL APPLICATIONS AND DEVICES FOR HEALTH PURPOSES

In this part of the report we will focus on the use of **digital applications** for health purposes and the attitude of citizens towards the future use of **teleconsults** and **telemonitoring**.

1. USE OF DIGITAL APPLICATIONS FOR HEALTH PURPOSES

Less than one in three citizens in our sample used one of the listed digital applications for health purposes. A **health-related application for smartphone or tablet** (33,0%) was used more frequently than **online tracking of self-measures parameters** (22,5%) and a **wearable** (22,3%). Our results showed a higher use of digital applications and devices amongst citizens in Flanders.



Graph 5. Have you used any of the following options in the past year (October 2018 - September 2019)? (N=3746)

Exploration with other variables showed that the **use of digital applications** for health purposes varied across the **level of education** and **age**.

DIGITAL APPLICATION		SEX	Yes	No
Used a health-related application for smartphone or tablet	Low education		29,4%	70,6%
	Middle education		23,2%	76,8%
	High education		36,3%	63,7%
Use of a wearable to measure and digitally store personal health-related information	Low education		11,8%	88,2%
	Middle education		14,7%	85,3%
	High education		25,1%	74,9%

Table 22. Have you used any of the following options in the past year (October 2018 - September 2019)? (N=3709)

		Yes	No
USAGE OF DIGITAL APPLICATIONS	AGE		
Used a health-related application for smartphone or tablet	under 25	53,4%	46,6%
	25-34	41,7%	58,3%
	35-44	38,2%	61,8%
	45-54	33,8%	66,2%
	55-64	27,7%	72,3%
	65 and up	20,3%	79,7%
Use of a wearable to measure and digitally store personal health-related information	under 25	33,1%	66,9%
	25-34	33,0%	67,0%
	35-44	29,9%	70,1%
	45-54	23,3%	76,7%
	55-64	14,6%	85,4%
	65 and up	9,2%	90,8%
Track self-measured health parameters online	under 25	36,4%	63,6%
	25-34	32,9%	67,1%
	35-44	25,3%	74,7%
	45-54	22,2%	77,8%
	55-64	15,1%	84,9%
	65 and up	15,5%	84,5%

Table 23. Have you used any of the following options in the past year (October 2018 - September 2019)? (N=3763)

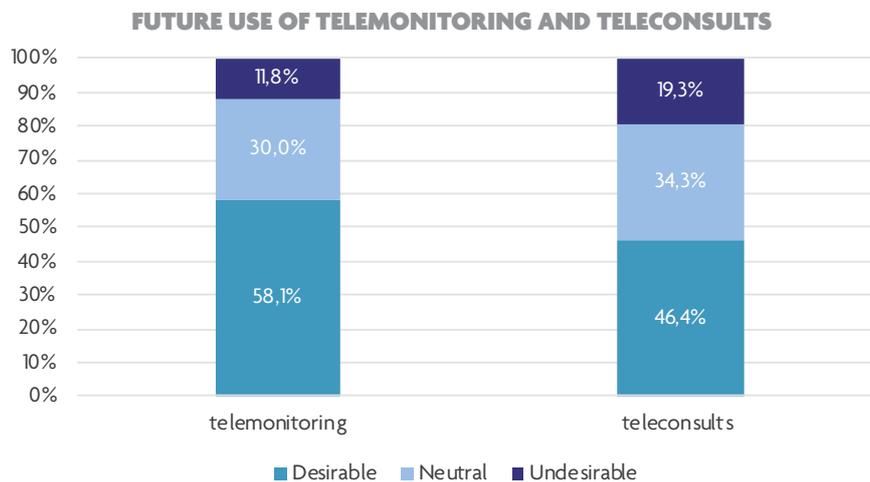
Our results showed that 13,2% of citizens who tracked self-measured health parameters online, **shared** these with a **healthcare professional** (e.g. GP, nurse, specialist). A higher percentage of citizens in Wallonia (19,2%) and Brussels (17,9%) shared self-measured health parameters with a health care professional.

		Yes	No	I don't know
STATEMENT	REGION			
Share self-measured health parameters with a health care professional	Flanders	11,1%	85,3%	3,6%
	Wallonia	19,2%	78,1%	2,7%
	Brussels	17,9%	79,5%	2,6%

Table 24. Have you sent these self-measured health parameters to a healthcare professional? (N=843)

2. FUTURE USE OF TELECONSULTS AND TELEMONTORING

Citizens were asked for their opinion regarding the future use of teleconsults and telemonitoring. Our results showed that citizens tend to be **slightly more positive** towards the future use of **telemonitoring**. Almost 60% of citizens in our sample find the future use of telemonitoring desirable, whereas just under half (46,6%) find the future use of **teleconsults** desirable.



Graph 6. How do you feel about the use of telemonitoring/teleconsults in the future? (N= 3742)

Exploration with other variables showed that the attitude towards **telemonitoring** varied across **education levels**.

		Desirable	Neutral	Undesirable
STATEMENT	EDUCATION LEVEL			
How do you feel about the use of telemonitoring in the future?	Low education	51,50%	32,40%	16,20%
	Middle education	49,70%	37,30%	12,90%
	High education	61,50%	27,30%	11,20%

Table 29 How do you feel about the use of telemonitoring in the future? (N= 3742)

3. KEY FINDINGS

USE OF DIGITAL APPLICATIONS FOR HEALTH PURPOSES

- Modest use of digital applications and devices for health purposes:
- 33,0% of citizens used a health-related application for smartphone or tablet
- 22,3% of citizens used a wearable to measure and digitally store personal health-related information
- 22,5% of citizens tracked self-measured health parameters online (e.g. weight or blood glucose level)
 - 13,2% of these citizens shared these self-measured health parameters with a health care professional (e.g. GP, nurse, specialist)

FUTURE USE OF TELECONSULTS AND TELEMONTORING

- 58,1% of citizens find the use of telemonitoring in the future desirable
- 46,4% of citizens find the use of teleconsults in the future desirable

ANNEX



ANNEX

1. GENERAL QUALITATIVE FEEDBACK ON EHEALTH

1. Need for more and better information about eHealth services, how it works and how to use it

Citizens indicated that they had **no knowledge of the existence of eHealth services** prior to the questionnaire or that they needed **more and/or better information** or help to them understand the eHealth services and system (e.g. which sites, how to login, what data is available, etc).

Resp. 495. "La population n'est pas suffisamment informée de la présence de cet outil."

Resp. 1539. "Het is de taak van de overheid om middels heldere communicatie duidelijk te maken aan de bevolking van welke gegevens kunnen geraadpleegd worden, en op welke manier."

Resp. 2980. "Je ne sais toujours pas à ce jour où et comment me connecter aux outils numériques pour avoir accès à mes données médicales personnelles. Quel site? Besoin de codes? Login?..."

Resp. 3010. "Deze diensten zouden meer moeten mede gedeeld worden aan de mensen. Was me volledig onbekend dat dit bestond."

Resp. 3367. "Oui il faut absolument informer le people."

2. Digital exchange of personal health data

Citizens expressed their concerns regarding the **security** of the eHealth system and **privacy** of personal health data (e.g. use of personal health data by third parties).

Resp. 1820. "Ik blijf bezorgd over de mogelijkheid dat verzekeringsartsen en andere toegang verkrijgen tot je medische gegevens ook al is daar geen toestemming voor gegeven."

Resp. 1844. "Qu'en est-il des possibles "dérives" concernant l'utilisation des données privées?"

Resp. 3606. "Ik vrees dat dit een groot risico voor de privacy inhoudt."

Resp. 3645. "Mijn grootste zorg is de garantie tot waterdichte beveiliging van medische data online."

3. eHealth and health care professionals

Citizens wondered whether **health care professionals** were **reluctant** to take part in the eHealth process and expressed a **want for health care professionals to use the eHealth services more**.

Resp. 519. "J'ai consulté mes données de santé avec intérêt, mais, malheureusement, il y avait fort peu de choses. Les médecins, hôpitaux, pharmaciens,... seraient-ils réticents?"

Resp. 1281. "Mij lijkt de eerste stap dat artsen ook effectief alles invullen. Ik denk dat dit vaak nog niet wordt gedaan."

Resp. 1436. "Plus d'initiatives de la part du monde médical."

Resp. 4265. "Gevoel dat gezondheidszorgen dit proces willen tegenhouden uit zelf protectie."

4. Fragmented eHealth landscape

Citizens wondered why the **eHealth system is fragmented**, whether there were plans to **harmonise the landscape** and mentioned that the **current landscape is confusing** due to the various websites.

Resp. 592. “Ik bekijk alles, ben daar dus in geïnteresseerd, maar zie intussen de bomen door het bos niet meer. E-health, mycozo, mijn gezondheid en mynexushealth.... Ontzettend verwarrend voor de burger. [...] Bovendien vraag ik me af of het voor de burger niet veel eenvoudiger zou zijn dat er maar 1 Belgisch platform is.”

Resp. 1122. “Va-t-on créer une plate-forme unique pour toutes données provenant de différents réseaux?”

Resp. 1637. “Je ne comprends pas pourquoi il y a deux plateformes de santé, l'une fédérale et l'autre bruxelloise... il m'eût semblé plus pertinent de tout rassembler.”

Resp. 4361. “Het zou fijn zijn mocht de overheid voor 1 systeem kiezen!”

5. Should not forget the 'human' aspect.

Citizens raised their concerns about **not forgetting the human element** in health care and practices.

Resp. 615. “Digitale toepassingen mogen nooit het contact van persoon tot persoon vervangen. Er is altijd nood aan genuanceerde, aan de persoon aangepaste informatieoverdracht.”

Resp. 3343. “Dans les soins de santé, l'humain est essentiel. Tant du côté du soignant que du soigné. Et on a trop tendance à l'oublier.”

Resp. 3352. “Attention à veiller à l'humain, au contact physique, à l'écoute....”

6. Other minor themes

- Issues with **information** (e.g. access to information, too little/no information available, information is slow to arrive).
- Have the ability to **input information** in your own file.

