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PROCESS OPTIMISATION IN THE INSURANCE SECTOR

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SDG 9: Industry, innovation and infrastructure; SDG 12: Responsible production and consumption; SDG 17: Partnerships for achieving.

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ABSTRACT

The insurance industry faces constant challenges to improve its operational efficiency and meet growing customer demands in a highly competitive environment. In this context, process optimisation emerges as a key strategy to increase productivity, reduce costs and improve the customer experience. This analysis aims to examine the key areas for process optimisation in insurers, identify potential bottlenecks and propose effective solutions to drive efficiency and profitability. This involves:

- Identify inefficiencies: The first step in process optimisation is to identify areas of
 operation where inefficiencies exist. This may include claims processing, policy
 underwriting, risk management and customer service.
- Evaluate emerging technologies: Emerging technologies such as artificial
 intelligence, machine learning and robotic process automation offer significant
 opportunities to optimise processes in insurers. A thorough assessment of these
 technologies and their applicability in different operational areas should be
 conducted.
- Improving the customer experience: Process optimisation should focus on improving the customer experience. This includes simplifying complaint processes, implementing online self-management systems and personalising the services offered.
- Monitor and ensure continuous improvement: Process optimisation is an ongoing
 process that requires constant monitoring and continuous improvement. Clear
 performance metrics must be established and analytical tools used to identify
 areas of improvement and proactively take corrective action.

In conclusion, process optimisation in the insurance sector is essential to maintain competitiveness and improve long-term profitability relative to other insurers. Areas of inefficiency must be identified, emerging technologies must be evaluated and adopted, the customer experience must be improved, and a cycle of continuous improvement must be established. By implementing these measures, insurers can increase operational efficiency, reduce costs and offer a higher quality of service to their customers.

In terms of methodology, the thesis has employed data analysis and observation as key methodologies. Data analysis has allowed for a systematic examination of the information collected, identifying patterns, trends and relevant relationships. Observation, on the other hand, has provided an in-depth understanding of the phenomena studied, allowing for a qualitative and contextualised approach to the research. These methodologies have complemented each other to provide a comprehensive and rigorous view of the object of study, allowing for the formulation of well-founded conclusions and the generation of meaningful recommendations.

In a more detailed way, this project has been carried out based on a study of the processes of the different insurers. To do this, the analyst (me) starts the phases of medical use of the insurers as a user of our buyer persona profile. From there, captures are taken of the entire process, to know exactly how each phase behaves in each insurer and from there and comparing with the processes of the previous year, the differences are identified and the analysis of the processes begins.

It is worth highlighting the problems caused by failures in the web or app process of the insurers causing impediments to move to the next phase.

Keywords: insurance industry, optimisation, analysis, insurers, bottlenecks.

RESUMEN

El sector de los seguros se enfrenta a constantes retos para mejorar su eficiencia operativa y satisfacer las crecientes demandas de los clientes en un entorno altamente competitivo. En este contexto, la optimización de procesos emerge como una estrategia clave para aumentar la productividad, reducir costes y mejorar la experiencia del cliente. Este análisis pretende examinar las áreas clave para la optimización de procesos en las aseguradoras, identificar posibles cuellos de botella y proponer soluciones eficaces para impulsar la eficiencia y la rentabilidad. Esto implica:

- Identificar ineficiencias: El primer paso en la optimización de procesos es identificar las áreas de operación donde existen ineficiencias. Esto puede incluir la tramitación de siniestros, la suscripción de pólizas, la gestión de riesgos y el servicio al cliente.
- Evaluar las tecnologías emergentes: Las tecnologías emergentes como la inteligencia artificial, el aprendizaje automático y la automatización robótica de procesos ofrecen importantes oportunidades para optimizar los procesos en las aseguradoras. Debe realizarse una evaluación exhaustiva de estas tecnologías y su aplicabilidad en diferentes áreas operativas.
- Mejorar la experiencia del cliente: La optimización de procesos debe centrarse en mejorar la experiencia del cliente. Esto incluye simplificar los procesos de

- reclamación, implantar sistemas de autogestión en línea y personalizar los servicios ofrecidos.
- Supervisar y garantizar la mejora continua: La optimización de procesos es un proceso continuo que requiere un seguimiento constante y una mejora continua.
 Deben establecerse parámetros de rendimiento claros y utilizarse herramientas analíticas para identificar áreas de mejora y tomar medidas correctivas de forma proactiva.

En conclusión, la optimización de procesos en el sector asegurador es esencial para mantener la competitividad y mejorar la rentabilidad a largo plazo en relación con otras aseguradoras. Hay que identificar las áreas de ineficiencia, evaluar y adoptar las tecnologías emergentes, mejorar la experiencia del cliente y establecer un ciclo de mejora continua. Aplicando estas medidas, las aseguradoras pueden aumentar la eficiencia operativa, reducir costes y ofrecer una mayor calidad de servicio a sus clientes.

En cuanto a la metodología, la tesis ha empleado el análisis de datos y la observación como metodologías clave. El análisis de datos ha permitido examinar de manera sistemática la información recopilada, identificando patrones, tendencias y relaciones relevantes. Por otro lado, la observación ha proporcionado una comprensión profunda de los fenómenos estudiados, permitiendo una aproximación cualitativa y contextualizada a la investigación. Estas metodologías se han complementado para ofrecer una visión integral y rigurosa del objeto de estudio, permitiendo la formulación de conclusiones fundamentadas y la generación de recomendaciones significativas.

De una manera más detallada, este proyecto se ha realizado basándose en un estudio de los procesos de las distintas aseguradoras. Para ello, el analista (yo) inicia las fases de uso médico de las aseguradoras como un usuario del perfil de nuestra buyer persona. A partir de ahí, se toman capturas de todo el proceso, para conocer con exactitud cómo se comporta cada fase en cada aseguradora y a partir de ahí y comparando con los procesos del año anterior, se identifican las diferencias y se inicia el análisis de los procesos.

Cabe destacar, los problemas originados como consecuencia de fallos en el proceso de web o app de las aseguradoras provocando impedimentos para pasar a la siguiente fase.

<u>Palabras clave</u>: sector asegurador, optimización, análisis, aseguradoras, cuellos de botella.

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1. INTRODUCTION

1.1. Scope and objectives of the thesis

According to a study carried out by the CNMC, currently in Spain, more than 11 million people have taken out private health insurance (CNMC, 2023). Given its relevance, an analysis was carried out on the different phases of medical use of five insurance companies: Asisa, DKV, Mapfre Sanitas and SegurCaixa Adeslas with the aim of identifying best practices and optimising processes.

The aim of the thesis is to carry out an analysis of the different phases of medical use of 5 insurance companies (Asisa, DKV, Mapfre, Sanitas and SegurCaixa Adeslas) in order to find out what their processes are like, how they relate to the customer, what their strong points are and what points need to be improved.

To this end, a Benchmark was carried out on different processes carried out during the registration and use of health policies, ranging from attributes of the service or processes, to the number, means and timing of communications. The processes are analysed in the following order: contracting, medical directory, online appointment, video-consultation, chat/medical consultation and authorisation.

To guarantee the analysis of all the processes, as well as the collection of all communications, a buyer-person representative of each insurer subject to the analysis is designated, with similar characteristics, with the following profiles: no previous insurance, Spanish, resident in the Community of Madrid and with a positive health questionnaire. In addition, all of them are women aged 36, except for Asisa, which is a 32-year-old woman.

For the elaboration of the thesis, two subjects of the Master's degree are mainly taken into account. On the one hand, the subject of project management and on the other hand, the subject of marketing.

The subject of project management is related to the thesis, as the objectives and scope of the project must be defined, i.e. the parts of the process to be examined, the aspects to be evaluated and the results to be obtained must be delimited. In addition, having taken this subject allows you to learn the principles and techniques necessary to develop a detailed process analysis plan.

Another aspect of great interest is the knowledge of tools and techniques to monitor the progress of the project, which allows to identify deviations from the established plan and to take corrective measures as necessary.

The course also provides the necessary skills to evaluate the results obtained, identifying areas for improvement and providing viable and realistic solutions.

The subject of marketing has been fundamental in the development of the thesis, as the population has been segmented and a group has been chosen for the study (buyer persona). Likewise, this subject has been fundamental for carrying out a market positioning by carrying out an analysis of how each of the insurance companies position themselves in terms of quality of care, accessibility, variety of services covered, etc. In this way, it is analysed how these positioning strategies could affect consumers' perception and choice of insurer.

Another aspect that relates the thesis to the marketing subject is the analysis carried out to find out how insurers can develop products and services that add value in each of the phases of medical use, and how to communicate these benefits effectively to insurance users. In addition, this subject has allowed us to analyse the distribution channels to effectively reach the target public of each insurer and the ways to optimise them.

1.2. Sustainable Development Goals (SDGs)

The analysis of the different phases of medical use in the insurance sector can contribute to several Sustainable Development Goals (SDGs), taking into account their implementation:

- SDG 9: Industry, innovation and infrastructure: process optimisation in the insurance sector through the implementation of innovative and efficient technologies contributes to the development of resilient infrastructures, thus promoting inclusive and sustainable industrialisation. By improving systems and processes within insurance companies, operational costs can be reduced, efficiency can be increased and the quality of service for customers can be improved.
- SDG 12: Responsible production and consumption: Process optimisation in the insurance sector leads to more efficient management of resources, reduction of waste and minimisation of environmental impact. By simplifying and automating processes, paper and energy consumption and unnecessary travel can be reduced, contributing to more responsible and sustainable consumption.
- SDG 17: Partnerships to achieve the goals: Process optimisation in the insurance sector fosters collaboration between different actors, including insurance companies, government agencies, non-governmental organisations and civil society. By working together to improve efficiency and transparency in the

insurance sector, strong partnerships are created that drive progress towards other SDGs related to social protection, risk management and disaster resilience.

In short, process optimisation in the insurance sector contributes to SDGs 9, 12 and 17 by promoting innovation, resource efficiency and multi-stakeholder collaboration for sustainable and resilient development (*Gamez*, 2022).

1.3. Structure of the document

After the introduction, an analysis is intended to be carried out in five phases in the following order: recruitment, medical directory, online appointment, video consultation, chat/medical consultation and authorisation.

The first phase is the contracting phase in which an individual or entity formally applies to the insurer for health insurance. During this stage, application forms are completed and relevant personal and medical information is provided. The insurer assesses the risk associated with the applicant and determines the premium or rate to be paid for insurance coverage. Once the premium is set and the terms accepted, an insurance policy is issued to the applicant, formalising the health insurance coverage.

This is followed by the medical list phase which details a list of doctors, specialists, hospitals and other health service providers with whom the insurer has collaboration agreements. This list provides information on the providers available to policyholders within the insurer's network, including details on location, medical specialties, and hours of operation. Policyholders use the medical directory to select health care providers covered by their health insurance plan, thus ensuring access to quality medical services and preferential rates negotiated by the insurer.

The third phase allows policyholders to schedule medical appointments through an online platform provided by the insurer. Policyholders can access this platform from the insurer's website or mobile app and select the type of appointment and the desired medical provider. This feature improves accessibility and convenience by allowing policyholders to book appointments without the need for phone calls or face-to-face visits. In addition, it provides details about the scheduled appointment and automatic reminders prior to the scheduled date, thus optimising the management of medical appointments for policyholders and the insurer.

Fourthly, there is the video consultation phase which allows policyholders to have virtual medical consultations with healthcare professionals via video conferencing. Policyholders can access this option from the insurer's website or mobile app, selecting the type of consultation and the doctor of their choice. This modality offers convenience

by eliminating the need to physically travel to a doctor's office, allowing for real-time discussions on symptoms, visual assessments and treatment recommendations. In addition, some platforms allow secure sharing of medical records during the consultation, providing a comprehensive and effective remote healthcare experience.

The next phase is chat and medical consultation, allowing policyholders to communicate with health professionals via online chat for medical guidance and to resolve health concerns. This service, accessible from the insurer's website or mobile app, provides answers to medical questions, preventive recommendations and general guidance on symptoms and medical conditions. It is a convenient option for obtaining quick and reliable information without the need for a face-to-face consultation. In addition, it can be useful for resolving minor health concerns, complementing traditional medical care in an effective way.

Finally, the authorisation phase is the process by which coverage for medical services or treatments requested by insured persons is evaluated and approved. It is required for procedures that are costly or involve significant medical resources. Policyholders request authorisation through their treating physician, providing details of the recommended service or treatment and medical justification. The insurer evaluates the request and issues a response informing whether the authorisation has been approved, denied or whether further information is required. This phase is crucial to ensure that the medical services are appropriate and covered by the health insurance plan.

At each stage of the process, an overview is given with the main findings of the insurers and the most relevant differences compared to the previous year.

This is followed by an analysis of what the main functionalities are and what the process itself is like. Finally, a summary is given of how the process works in detail for each of the insurers.

2. THEORETICAL BACKGROUND

The term insurance has ancient roots, evidenced in civilisations such as the Greeks, Romans and Babylonians. In antiquity, communities protected each other against adversity through solidarity-based collaboration, such as helping destitute families. Babylonian merchants practised "fat loans", where they shared losses of goods as they crossed the country, providing compensation for various contingencies. Such practices were also observed in other ancient cultures, such as the Hebrews, who collected taxes for a community fund. In Greece, the Rhodian maritime trade adopted similar systems to protect ships and cargoes, while craftsmen's associations insured funerals through contributions. These ancient traditions laid the foundations for insurance regulation, as in Greece, where losses were shared proportionately among merchants in cases of damage.

During the Middle Ages, commercial growth prompted the emergence of life insurance, especially due to the risks associated with sea voyages, where pirates captured crews and demanded ransoms. This led to the development of insurance to guarantee ransom and later, to extend cover to death by shipwreck or other incidents. Medieval guilds formed solidarity associations to protect their members against loss by fire, flood or theft. In England, guilds, and in France and Germany, professional institutions, established common rules for merchants. In the 14th century, Italy was a pioneer in insurance for profit, where marine insurance was provided through loans. In 1347, the first maritime insurance contract was signed in Genoa, known as policies. The Ordinance of Maritime Insurance in Barcelona, enacted in 1435, is the oldest known regulation in this field.

In the modern era, Charles I established the first law regulating compulsory marine insurance, marking the shift from individual insurers to multi-person entities and joint stock companies. The Great Fire of London in 1666 was a milestone that led physician Nicholas Barbon to found the Fire Office, the first fire insurance company. In England, Edward Lloyd turned his café into an information centre for merchants and insurers, giving rise to Lloyd's of London, one of the most influential insurance companies. During the 17th century, tontines emerged as the first attempt at life insurance, and in the 18th century, the theories of Galileo and Pascal led to the development of mortality tables and the creation of companies such as The Equitable Life Assurance Society. In 1802, in Toulouse, France, a large mutual insurance company was created, promoting reinsurance to distribute risks among several entities. In Spain, the development of

insurance companies accelerated in the 18th century, especially in the fields of marine, fire and life insurance. The momentum continued with the creation of Social Security in 1908 (¿Te Imaginas un Mundo Sin Seguros?, s. f.).

Insurers are companies that insure third party risks, protecting material assets against damage. Their main objective is to safeguard potentially vulnerable assets, such as homes, cars or even people through life insurance. In the event of an accident, the insurer is responsible for repairing or remedying the damage. In exchange for this protection, periodic payments, called premiums, are required, determined by the level of risk calculated by the company. Through a contract, the insurer and the insured agree on the conditions of protection and the way in which possible damages or payments are resolved. This is formalised in an insurance policy. To operate efficiently, insurers maintain considerable financial reserves to ensure their solvency in the event of future payments. This sector, a key player in the financial market alongside banks, is essential to protect and support policyholders in times of uncertainty.

Insurance has evolved to meet the needs to mitigate and diversify risks in business activities and to ensure personal health and financial well-being through life and health insurance. Well-regulated, the insurance sector provides a reliable mechanism for pooling and transferring risks, encouraging economic activity. Consumer confidence is crucial to the success of the sector (Galán, 2022).

In the traditional insurance industry structure, insurance shares risks, reduces losses, releases liability on other people's capital, strengthens alliances, and protects wealth and health. Traditional companies, with years of experience, offer security and trust, backed by brand recognition and reputation.

However, today's industry is being transformed by digitalisation and Insurtechs, which offer technological innovations to improve industry efficiency. Insurtechs use real-time data, optimise the user experience, reduce paperwork and offer greater personalisation. These advantages challenge traditional insurers, who must adapt by investing in new technologies and customising solutions to remain competitive in a constantly evolving market (*InsurTech*, 2023).

3. PHASES OF MEDICAL USE BY INSURERS

3.1. Recruiment

The contracting and pricing phase refers to the process by which a person or entity purchases health insurance and determines the price or premium to be paid for the coverage provided by the insurer.

At the contracting stage, the insured or the employer offering the insurance (in the case of group insurance) formally applies to the insurer for insurance coverage. This may involve completing application forms, providing relevant personal and family information, and selecting the type of insurance plan desired.

Once the insurer receives the application for coverage, it proceeds to assess the risk associated with the insured. This may include reviewing medical history, age, gender, lifestyle, and other relevant factors that may affect the likelihood of filing medical claims. Based on this risk assessment, the insurer determines the rate or premium that the insured will pay for insurance coverage.

Pricing is done according to various criteria, such as the insured's age, medical history, type of insurance plan selected, and geographic location. The insurer can use actuarial and statistical models to calculate the premium fairly and accurately, ensuring that the insurance costs adequately reflect the risk of the insured population.

Once the rate is set, the insurer issues an insurance policy to the insured that details the terms and conditions of the coverage, including the premium payable and the benefits covered. Once the policy is accepted and the premium is paid, the insured is formally covered by the health insurance and can access the medical services covered by his or her plan.

In summary, the contracting and pricing phase of an insurer is the process by which health insurance coverage is applied for and determined, establishing the premium that the insured must pay for it, based on risk assessment and other relevant factors.

3.1.1. Process overview

The entities, in general, process the contracting in a simple and orderly manner, although Asisa, DKV and Mapfre present problems in the process: DKV does not promote the digital signature and Mapfre does not allow the completion of the contracting online, in addition to not receiving the physical Welcome pack. Asisa, in its case, sends it and, after an error in the address, does not claim it from the client, obliging him to request its reception again. Mapfre and SegurCaixa Adeslas only allow telephone contracting. In addition, some entities integrate processes such as: contracting

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and signature (SegurCaixa Adeslas), online registration and signature (Sanitas) and registration in the customer area and loyalty programme (Mapfre and SegurCaixa Adeslas).

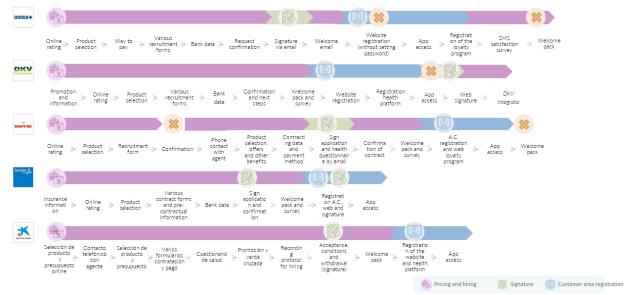


Figure 1 – Process overview (own elaboration)

3.1.2. Pricing and recruitment

PRICING:

Pricing processes generally consist of between 3 and 5 steps and all of them are carried out online. While all entities request date of birth and province/postcode, SegurCaixa Adeslas also requires the number of insured persons, name and contact details (telephone or email) to obtain the quote. Similarly, DKV and Mapfre also additionally require gender and number of insured persons. Highlights:

- Mapfre is the only one that divides the pricing process into several screens, counting up to 6 to complete the form required to obtain the information.
- SegurCaixa Adeslas is the only entity that does not offer a comparative of the prices of each health product, being necessary to price each one of them to access the price of the insurance.
- Asisa and DKV offer the simplest comparisons, showing recommended products
 with price and details, where the differences can be clearly appreciated. Mapfre
 and Sanitas also allow direct comparison of their coverage.
- Mapfre and SegurCaixa Adeslas do not offer price information in any form of payment other than monthly, although they then go on to contract the annual rate by telephone.

• Only SegurCaixa Adeslas sends, by email, the price quote without the need to start the contracting process.

HIRING:

Contracting is always done online, except in Mapfre and SegurCaixa Adeslas, where it is necessary to contact by telephone to complete it. All the entities request personal and bank details and a medical questionnaire, with SegurCaixa Adeslas being the entity that requires the completion of more information, and Mapfre being the only one that requires knowledge of the profession of the interested party. Highlights:

- In Mapfre, as in the previous year, it is not possible to complete the contracting process online, only by filling in the personal details and being informed, via a screen, that a call has been received from a manager to complete the process. The form, health questionnaire and signature are sent by email.
- SegurCaixa Adeslas carries out the entire contracting process by call, including the signature, which is obtained by recording after reading the consent protocol.
- Asisa, DKV and Sanitas do not require communication with the entity at any time.
- Mapfre, Sanitas and SegurCaixa Adeslas allow the inclusion of complements to the policy, offering up to 1, 4 or 3 complements, respectively. All of them offer the dental complement.
- Asisa, DKV (both by automatic email) and Sanitas (requesting it during the process), allow the recovery of the contracting process.

WELCOME PACK:

All the entities offer a digital welcome to the entity, either by e-mail (Asisa, DKV, Mapfre and Sanitas) and/or SMS (Sanitas and SegurCaixa Adeslas). However, as regards paper correspondence enclosing the health card, in the case of Mapfre it is not received, and in the case of Asisa, it is sent more than 2 months after the customer requests it. Highlights:

- In the case of Asisa, the client contacts the entity twice, up to 2 months after contracting, asking why it has not been received, to which the entity responds that the letter was returned due to an error in the sending address. At no time did the entity contact the client to solve the mistake. After insisting, it was received.
- All the entities include links in their welcome communications offering information about the insurance policy. SegurCaixa Adeslas is the only one that does not offer new data, as it includes a link to its official website. Asisa redirects

to a platform from which to access multiple functions, DKV and Sanitas provide access to user registration, while the latter includes a user guide. Mapfre provides access to the insurance documentation.

PROCESS TIMES:

Both Mapfre and Asisa and SegurCaixa Adeslas close in the same week the contracting process that ends with the written signature, digital signature, and recorded consent, respectively. In the case of DKV and Sanitas, the signature process is not finalised until registration in the private area (possible in both on the first day). The reception of the health card takes place between days 6 and 12, without being received in Asisa and Mapfre. Highlights:

- With the exception of SegurCaixa Adeslas and Mapfre, the rest of the entities allow the contracting and completion of the process by digital means, facilitating management for the customer.
- In Mapfre, not all the documentation is verified due to the lack of receipt of the physical welcome letter, together with the health card.
- Mapfre and Sanitas are the first entities to send the digital Welcome Pack (on the fifth day), one day before Asisa, which sends it on the sixth day. Meanwhile, DKV is the first to send the postal correspondence with the health card (day 6 of the process), followed by Sanitas (day 7). They are followed by SegurCaixa Adeslas, sending the welcome SMS on the 11th and the postal letter on the 12th. The entity that takes the longest time is Asisa on the 63rd day.
- Sanitas offers the shortest and most efficient process, closing the whole process on the first day (within a week) and without any errors. SegurCaixa Adeslas follows with no errors, completing the whole process on the 13th day. In DKV, all the steps of the process were also completed on the 14th, and could have been finished on the 1st if the signature process had not been delayed by the entity (the client had to actively look for the signature space).
- Excluding the receipt of the Welcome Pack (not available in Mapfre), Sanitas continues to be the fastest entity collecting all the rest on day 5, followed by Mapfre on day 6 and then SegurCaixa Adeslas, DKV and Asisa, in that order.
- Although SegurCaixa Adeslas allows the signature at the time of taking out the policy, the insurance cannot be taken out until it has been validated by the entity's risk department, which means that in the end the process takes a long time.

COMMUNICATION WITH THE CUSTOMER:

The first two days after the contract is signed are the days when most communications are received, with e-mail being the most frequently used medium, followed by SMS. Sanitas is the only company that communicates with the customer during both days. Most of the emails are related to the sending of information about the insurance and confirmation of the registration or welcome to the entity. Highlights:

- Asisa, DKV and Sanitas are the only ones that send a satisfaction survey for the
 purpose of evaluating the contracting process. Asisa is the only one that sends the
 survey by SMS, as opposed to the rest of the entities that send it by e-mail. Unlike
 the previous year, Mapfre does not send a satisfaction survey.
- In DKV a telephone call is made, more than one month after the contracting (day 39), through the DKV Integralia programme. The purpose of the call is to know the level of satisfaction of the client with respect to the insurance taken out and to resolve possible doubts.
- With respect to the previous year, where only SegurCaixa Adeslas, Mapfre and Sanitas communicated with the client via SMS, Asisa also does so in this case with the sending of the satisfaction survey.
- Mapfre is the entity that sends the most communications with a total of 10 (sending twice the email validation), despite not sending the postal letter with the physical card, followed by Asisa (8, not counting the password reset email) and Sanitas (7). Asisa and Mapfre are the companies that send the highest number of emails to customers, with a total of 8 each. Sanitas, in its case, is the one that sends the highest number of SMS to the insured, counting up to 2 Welcome Pack digital.
- SegurCaixa Adeslas is the company that has the least contact with the customer, both by email and SMS, with 5 communications sent throughout the process, one more than the previous year.
- No entity sends the documentation in physical format after sending the card.

3.1.2.1. Timing of the contracting process:

Sanitas offers the fastest and most efficient process and Sanitas, together with SegurCaixa Adeslas, are the only ones with no errors in the registration process. Asisa and Mapfre do not complete the process in the study period as they do not receive the postal letter with the physical card and the welcome letter. Although DKV does not

proactively offer the client the signature process, it allows the whole contracting process to be completed. Similarly, SegurCaixa Adeslas is the entity that communicates the least with the client during the process, in contrast with those that send the most communications, Asisa, DKV and Mapfre (with 10 communications all of them).

3.1.2.2. Pricing details

The greatest differences are observed in the personal data requested to access the price quote, with Asisa, DKV and Sanitas being the entities that request the least information. Asisa stands out positively for being the one that offers the most types of instalments, Mapfre for allowing the downloading of the price quote information and SegurCaixa Adeslas for sending the price quote by e-mail. The latter two institutions also try to make use of cross-selling.

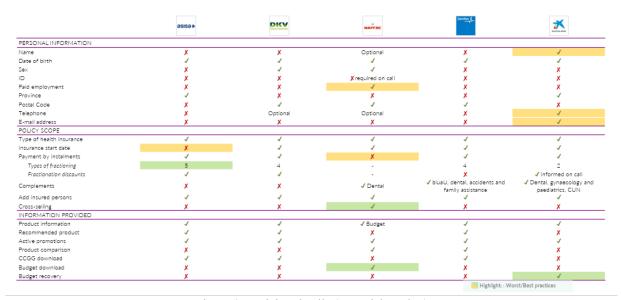


Figure 2 – Pricing details (own elaboration)

3.1.2.3. Hiring details

Asisa, DKV and Sanitas allow the online contracting process to continue until it is completed. On the other hand, Mapfre allows to start the process but when the second step is reached it informs that a salesperson will contact the customer to finalise the process. SegurCaixa Adeslas does not offer the possibility of online contracting and, after pricing, it is the entity that calls the customer to start the contracting process. Mapfre is the entity that requests the most personal data in the contracting process, in contrast to Sanitas, which requires the least. Likewise, Asisa and SegurCaixa Adeslas have the longest medical questionnaire. DKV and Sanitas require less than half as many questions as the previous insurers. Sanitas, moreover, is the only entity that allows payment by bank card.

DKV is the only entity that does not ask for a previous health policy, just as Mapfre is the only one that does not indicate the types of payment instalments, although it does indicate that the type chosen has a discount for payment instalments, which suggests that there is more than one type. Sanitas, however, stands out for being the only one to offer complementary cover (bluaU, dental, accident or family assistance) and the choice of the language in which the documentation is received (Spanish, Catalan, German or English).

Mapfre and SegurCaixa do not allow you to complete the contracting process online and access the digital signature, although Mapfre allows you to start the process where you can see the monthly quote and a progress bar. Only Asisa and Sanitas allow the loading of complementary documents for the contracting, although none of the entities allow the downloading of documentation and have a chat during the process, although Asisa and Sanitas inform of the telephone number by means of which a call can be made to manage the contracting by telephone. Thus, taking this into account, DKV is the only entity that does not inform of any other method of contracting other than online.

At the end of the process, DKV and Sanitas inform of the number of the policy contracted.

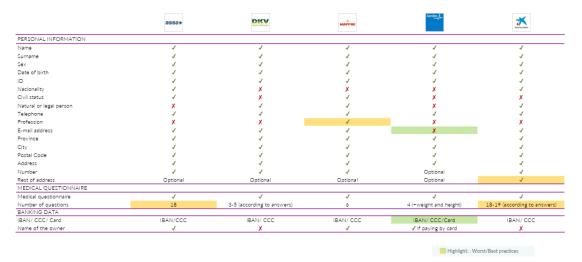


Figure 3 – Hiring details (own elaboration)

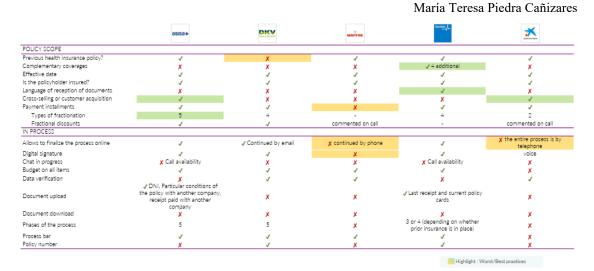


Figure 4 – Hiring details (own elaboration)

3.1.2.4. Overview of the pricing and hiring process

Asisa:

The contracting process is simple and linear throughout all the steps. It uses clear and intuitive screens that allow all procedures to be carried out digitally. From the pricing stage, it provides information on the different payment options, maintaining this information until the contract is taken out, making an annual calculation, regardless of the type of insurance chosen by the customer. The health questionnaire is not extensive, compared to the average of other entities, and is loaded on the same screen as the personal and contact details, allowing all the information entered to be viewed until payment is made. In this case, after validating the current account and, although the data is shown processing, it is necessary to confirm the payment again as there is no change of screen or assertion. On the second attempt, the insurance application number is displayed along with the possibility of including complementary documentation to speed up future procedures. In addition, other insurances are reported in an attempt at cross-selling. Subsequently, the signature is carried out by means of an email from which to access the platform where the complete documentation can be viewed and downloaded. The digital Welcome pack is received by another email, although the customer does not receive the welcome letter with the physical card until he/she has to claim it twice from the entity.

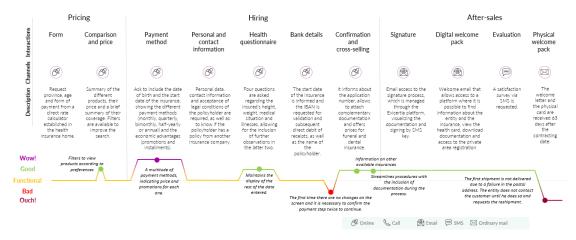


Figure 5 – Asisa overview of the pricing and hiring process (own elaboration)

DKV:

The whole process, in DKV, is managed online. The most important health promotions are displayed on the home page, and access is given to more information and to the pricing of these products in question, as well as to a global pricing by means of the form embedded in the main page for the comparison and prices of all the health insurance products of the entity. After choosing the product and specifying the contracting, the data of the policyholder and the insured are requested, as well as several answers related to health questions. After this, the home address is requested and, for verification and conformity, a summary of all the data entered in the process is shown, making it possible to edit it. As a last step, the IBAN is requested for the direct debit of the bills and the policy number of the insured person is confirmed, as well as the following steps to be carried out during the registration to the private customer area for the signature of the documentation (although subsequently, the signature is not possible by means of the steps indicated here). You will receive an email and a welcome letter from the institution, the latter including the physical health card.

Similarly, an evaluation survey of the contracting process is sent by email and subsequently a DKV Integralia manager calls to check the client's satisfaction with the entity and to solve any doubts that may exist.

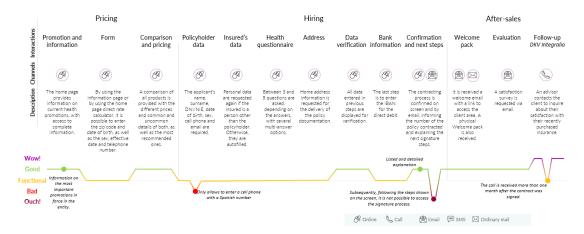


Figure 6 – DKV overview of the pricing and hiring process (own elaboration)

Mapfre:

In Mapfre, both processes are lengthy. The pricing, by dividing the 9 questions of the form into several screens (being, in addition, the only one that asks if you have a paid job). However, it is also the only entity that allows a download of the budget generated. In the contracting process, the process is complicated by a system error that paralyses the process, indicating that the interested party has requested telephone contact with the insurer. After the failure in the process, an agent contacts the policyholder in less than 48 hours. In the call, the customer is greeted but no identification data is requested. The agent then reviews the quote generated and asks to confirm that the customer is not already a current customer of Mapfre. The type of policy quoted and the price are also mentioned, remembering that it has an integrated dental add-on. Then contact details are requested to send the policy documentation and the signature document, which must be signed and returned. It is recommended to mark the current month as the effective date for the current promotion. After sending the signed document received by email, after a few hours you will receive another one with access to pre-contractual information and, subsequently, a digital Welcome pack, as well as an SMS notifying you that the health card has been sent to your home address, although it is not received.

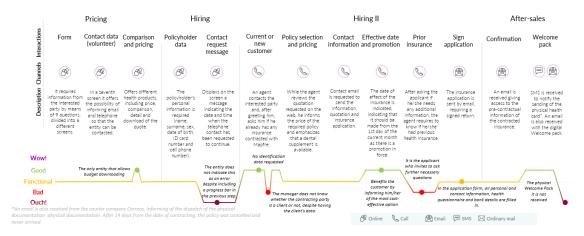


Figure 7 – Mapfre overview of the pricing and hiring process (own elaboration)

Sanitas:

The pricing and contracting processes are completely online. After displaying the most outstanding products, access to the pricing form is complicated by the impossibility of finding an enabled link, having to look for the access icon in the footer of the website. After completing the form, the different types of health insurance are displayed, enabling filters for personalising the search and showing the price of each type. After selecting the chosen product, the contracting process begins by entering personal and contact details, after which confirmation and acceptance of the pre-contractual information and privacy policy is requested. At any time during the process, it is possible to access the purchase product through a basket icon where it is possible to add complements such as bluaU, dental, accident and family assistance. After accepting the policies, you are asked to fill in the health questionnaire, which consists of 4 questions with an affirmative or negative answer. Afterwards, the form of payment by direct debit or bank card must be selected and the signature of the insurance application document is required, which is produced by SMS code. At the end of this process, you will receive an email with a customer satisfaction survey regarding the product contract, and in less than a week you will receive a welcome SMS and a physical Welcome pack with a health card.

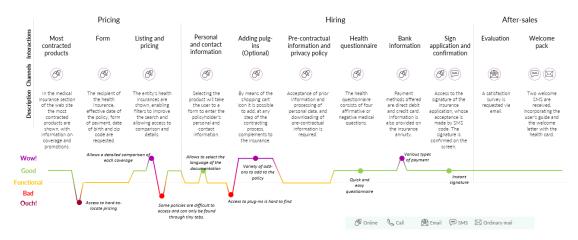


Figure 8 – Sanitas overview of the pricing and hiring process (own elaboration)

SegurCaixa Adeslas:

SegurCaixa Adeslas pricing is done online, however, the contracting process is entirely by telephone. The process starts by selecting the type of customer segment, after which all the available health insurance policies are shown, and you can access the details and minimum price of each one. After entering personal data and email for pricing, the agent's telephone contact is requested. The agent starts the conversation by saying hello and asking for the type of product desired. After choosing the policy, the coverage, copayments and permanence are detailed, and the contract is processed with the recording consent protocol. The agent collects the policyholder's personal, contact and bank details, as well as asking several questions related to the interested party's own health issues, a process in which personal details are again requested. It is indicated that the application for the contract is confirmed and pending validation by the risk management department of the insurer. After this, the limiting clauses are detailed, the period for withdrawing from the policy and the exclusions that are available if you do not have previous health insurance. Before ending the call, cross-selling through the car insurance is attempted. The welcome pack and Welcome pack are sent 10 days after the call, a slightly longer period than indicated by the agent.

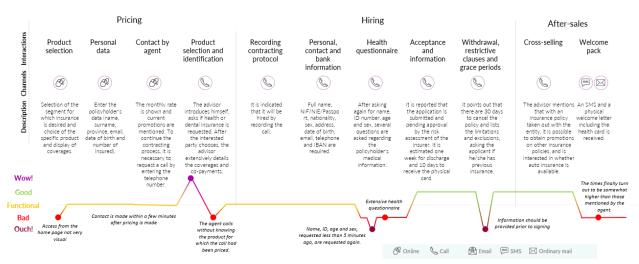


Figure 9 – SegurCaixa Adeslas overview of the pricing and hiring process (own elaboration)

3.1.3. Digital signature

The signature process is carried out digitally in Asisa, DKV and Sanitas, however, SegurCaixa Adeslas and Mapfre carry out theirs, in the first case, during the contracting call and requesting the re-sending of the documentation and attaching the signature on it, in the case of the second entity. Neither of the two ask for further signatures after this.

As for digital signatures, Asisa is the one that offers the shortest process, as opposed to DKV that requests up to 3 signatures, with 3 SMS for each of the documents offered. In addition, DKV also offers the most complicated signature procedure, as it does not include a reminder or visible access to access the signature even if the client does not complete the process. After 6 days, it is the client himself who must proactively look for the access command, which is found among the multiple and not very visible links at the bottom of the global position.

Sanitas, on the other hand, is the only one that divides the signature process into two different moments, requesting the signature of the insurance application in the last step of the contracting process and the rest of the documents (CCGG, CCPP and Privacy and data processing policy) during the registration in the private customer area. The signature is not confirmed due to a connection failure, although it is saved correctly, as the request is not notified again.

As for the signature documents, DKV is the only one that requests the signature of the project. Asisa, on the other hand, does not require the signature of the insurance application, unlike the rest of the entities. All the entities require the signature of four types of documents, with the exception of Mapfre with only three (insurance application, limiting clauses and privacy policy and data processing).



Figure 10 – Digital signature (own elaboration)

SIGNATURE REQUEST:

All the entities require the signature of their documents informing the client by email, with the exception of SegurCaixa Adeslas, in which the whole process of contracting and signing is done by telephone call. Sanitas also notifies the client via SMS and DKV via the contracting confirmation screen. For their part, Asisa and Mapfre make it possible to sign the documents by means of the information email; Mapfre by incorporating the documents to be signed in writing; and Asisa by including direct link to the signature platform. Highlights:

- Just as Asisa clearly informs in the communication and on the platform of the necessary steps (five) to formalise the signing of the documents with the entity, so does Sanitas before signing the insurance application (four). DKV also informs of the five steps of the signature process, although in this case, they are not correct as access is not offered.
- In the case of Mapfre and SegurCaixa Adeslas, the signature process is different. The signature is recorded in the SegurCaixa Adeslas contracting process and, in the case of Mapfre, a request is made to resend the completed and signed documentation, which is received by email.

ACCESS TO THE SIGNATURE:

Except for Sanitas and DKV, which differ from the rest by requiring registration in the private area, access to the signature of the other entities is direct.

While in Asisa and Mapfre, access to the signature is obtained via a link sent by email, in DKV access is possible in the private area. In the case of Sanitas, the signature is obtained at two points in the process, in the last step of the contracting process and in the client's first access to the private area. In the case of SegurCaixa Adeslas, it is done by telephone. Important points:

- DKV informs of the access to the signature by means of some detailed steps on the contracting confirmation screen, however, the follow-up of these steps does not transfer to the signing process. After waiting 6 days, the entity does not send any communication to remind about the need to digitally sign the contract documents to complete the registration process, so the process is forced by looking for access, finding this in the footer of the client's global position.
- Asisa uses Evicertia, an external platform for completing the signature, allowing
 access by means of a link received by e-mail and by introducing the ID card of the
 insured, although it is not received until 6 days after the contract is signed.

PROCESS AND DOCUMENTATION:

The most complex processes are still offered by Sanitas and DKV. Sanitas divides the signature into 2 steps and signatures by SMS key, one with the insurance application to be able to finalise the contract, and the rest of the policy conditions in the access after registering in the private area. DKV asks for 3 signatures, one for each document required.

REMARKABLE POINTS:

- In Asisa, all the documents (CCGG, GGPP, limiting clauses and privacy policy) are signed by means of a single code sent via SMS; it is the fastest process.
- In Mapfre, by means of the signature request email, the signed document to be resent (insurance application) is attached, as well as the presentation and the priced quote.
- All entities that enable digital signature allow the documentation to be downloaded during the process.

CONFIRMATION OF SIGNATURE:

All entities confirm the signature of the documentation after its execution, with the exception of Sanitas in the second process due to a connection error. In the first process, the entity confirms its achievement by means of a screen. On the other hand, Asisa sends an e-mail and DKV shows by means of a green check the documents as their signature is completed. Outstanding points:

 Asisa allows, by means of the email confirming the signature, to continue accessing the viewing and downloading of the documents on the Evicertia platform at any time.

3.1.3.1. Signature process

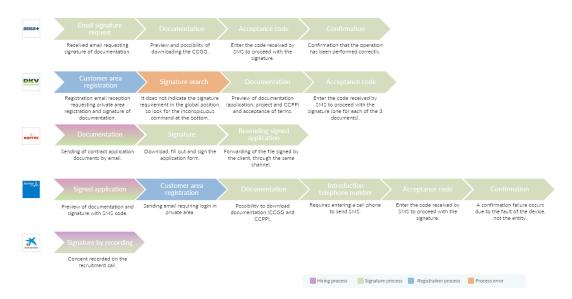


Figure 11 – Signature process (own elaboration)

3.1.4. Private customer area registration

In all cases, after completing the registration process on the website, the complementary registration in the app is not required. In DKV and SegurCaixa Adeslas, the app is linked to the health platform and not to the private area. Mapfre is the entity that requires the most steps for registration but, at the same time, allows simultaneous registration for the loyalty programme. Asisa only requires one step to register in the private area, however, it is subsequently necessary to force a password to be set up as one is not required at this stage.

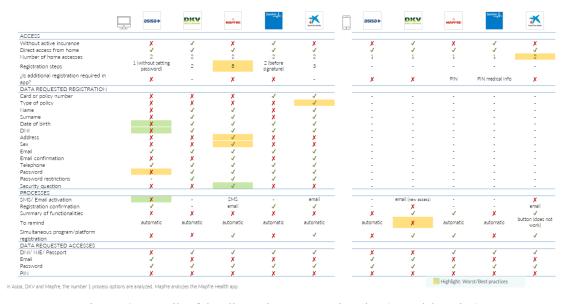


Figure 12 – Details of the client private area registration (own elaboration)

LOYALTY PROGRAMME AND HEALTH PLATFORM

In general, the registration processes in the programmes and platforms of the entities are simple, including many steps within the registration process in the private area. Asisa stands out for the disadvantage of not having direct access from the global customer position, having to open its platform to log in; Mapfre for integrating the programme within the customer area without additional access; DKV for being the longest to develop the registration process; and SegurCaixa Adeslas for speeding up the process by using the data provided during the user registration in the private area.



Figure 13 – Details of the loyalty programme and health platform (own elaboration)

3.1.4.1. Customer private area registration process

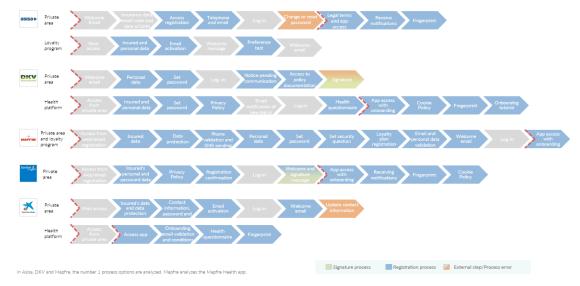


Figure 14 – Customer private area registration process (own elaboration)

3.2. Medical directory

The medical list phase refers to the list or catalogue of doctors, specialists, health centres, hospitals and other medical service providers with whom the insurer has agreements to provide medical care to its policyholders. This medical list is an essential component of the health insurance plans offered by insurers and determines which health care providers are included in the network of care and therefore available to policyholders.

Policyholders usually have access to a variety of medical services within the insurer's network of providers, and the choice of which doctor or specialist to consult is generally limited to those included in the medical directory. This ensures that policyholders receive quality medical care and helps control costs for the insurer by negotiating preferential rates with in-network providers.

The medical panel phase is a critical part of the health insurance plan selection process, as policyholders must ensure that their preferred health care providers are included in the insurer's network to ensure adequate coverage for the medical services they may need (Cuadros Médicos, Qué son y Qué Importancia Tienen, 2021).

3.2.1. Main features

The medical directory search engine is usually similar, with minor differences. The non-insured can access it on the public websites and, in the case of Asisa, from the app. In general, it requires entering location and speciality, as well as type of search (DKV and Sanitas) or insurance/policy (DKV and SegurCaixa Adeslas). Searches are sometimes specified with doctor, centre or type of service (Asisa and Sanitas include these three options). Search results with list and map display are shown for all entities. However, only Asisa continues to show the map next to the list of search results in the app. On the web, only Mapfre and SegurCaixa Adeslas offer it at the beginning. It is highlighted:

- From the public web, DKV continues to be the only one that does not recommend identifying oneself with the codes of the client area to obtain a more personalised search.
- In the app, SegurCaixa Adeslas is the only one that allows the download of the medical directory. On the web, it is possible through Asisa, DKV (dental insurance), Sanitas and SegurCaixa Adeslas.
- Sanitas is the entity that offers the most filters in the app search, offering sorting by proximity, name or relevance and filtering by search radius, municipality, appointment request, digital consultation and language. On the other hand, the

web of Asisa stands out for offering filters for its own centres as well as for online appointments, video consultation, electronic prescription, type of provider and language.

- DKV continues to stand out in the area of evaluations, as it is the only one that
 offers this section. Moreover, this year it also includes it in the app for each
 medical centre or doctor.
- DKV modifies the minimum search steps with Activa DKV, going from requiring
 only the speciality to requiring both this and the locality. Mapfre, in its case,
 previously only required location and now requires product and speciality (it
 allows searching for "all"). The location, in the latter case, is geolocated by
 default or the system itself establishes the results of the province of the insured's
 address.
- Mapfre also allows a change of location from the app and the web, without the
 need to make a new query. This is also possible with SegurCaixa Adeslas in the
 app and Asisa and DKV on the web. The latter two also allow the selected
 speciality to be modified.



Figure 15 – Main features of the medical panel (own elaboration)

3.2.2.Process

All entities allow the search for a medical directory in the app and on the web, with Sanitas being the only one with identical processes in both. The platforms of Asisa and SegurCaixa Adeslas have identical search steps but do not show the map in a medium, in app and web respectively.

The websites of Mapfre and DKV do not incorporate filters, although the latter allows further refinement of the search options (filtering before viewing the results). However, they are the only ones that allow an alternative search without having to start the

process from scratch. All entities show as a result both the list of medical centres/hospitals and the list of medical practitioners.

Mapfre and Asisa continue, as in the previous year, to prioritise their own centres in the results.

Mapfre and SegurCaixa Adeslas launch a satisfaction survey at the end of the consultation, while DKV differs by including the evaluation of the professionals.

Regarding the search in small localities with few or no options for medical care:

- Sanitas and SegurCaixa Adeslas show the search results closest to the selected location.
- Asisa and Mapfre show the results of the nearest centres ordered by relevance.
 Mapfre, in its case, allows a maximum search radius to be selected, but outside of this radius no results are provided.
- DKV only offers centres and doctors for the localities and specialities with search results. Sanitas, last year, did not offer results for the nearest centres.

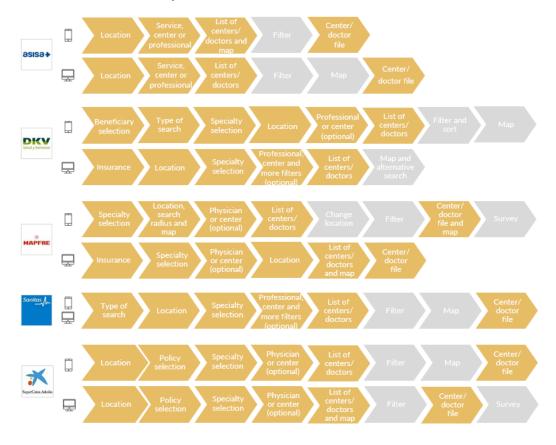


Figure 16 – Process of the medical panel (own elaboration)

3.2.3. Overview of the medical search process

Asisa:

Asisa presents an orderly and clear process, in which location and speciality or medical/professional centre are established as obligatory search criteria. The type of insurance is established automatically in the app, while on the web, although the default search for health insurance is selected by default, it is possible to choose mutual insurance, sports accidents and dental. It shows the map directly in the app results, associated with the list of centres and doctors, and on the web when clicking on a specific detailed file. It also allows different types of sorting, as well as bookmarking, sharing the medical record via social networks or email and access to appointment requests. It is the only entity that, in the app platform, allows the search in the medical directory without the need to be insured or log in to the private area.

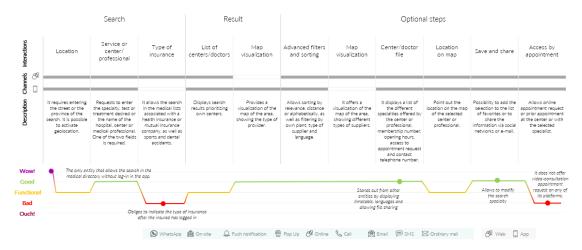


Figure 17 – Asisa overview of the medical search process (own elaboration)

DKV:

The search for the medical directory from the DKV Activa app presents several advances with respect to the app Quiero Cuidarme Más. Even so, the search, between the app and the web platform presents some differences such as the selection of beneficiary, type of insurance, selection of province or locality, variety of filters or accessibility. In general, it is a simple and intuitive process with multiple details in the results and in the optional steps, although it is the only entity that does not have a filtering tool for the web results. Moreover, it only shows results and records for doctors, without including the same for hospitals or associated medical centres. However, it stands out among the rest of the insurers for showing a valuation of the medical professionals offering added information to the insured.

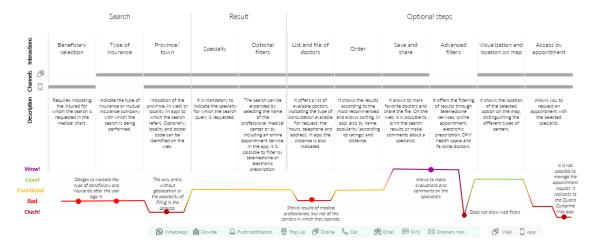


Figure 18 – DKV overview of the medical search process (own elaboration)

Mapfre:

With its change in app design, Mapfre proposes a medical directory search that differs from the web platform in the minimum search criteria, showing the map in the list of centres and including optional steps such as filters or access to the appointment request. Unlike other entities, Mapfre identifies the results by the name of the centre and not by the name of the doctor. It is also the only company that does not offer the option of marking favourites from the web environment. It stands out, however, for offering an alternative search without leaving the search results, simply by modifying the location and maintaining the other established criteria.

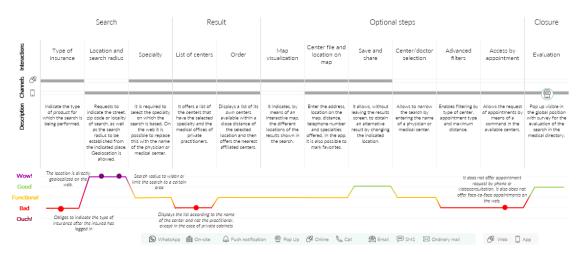


Figure 19 – Mapfre overview of the medical search process (own elaboration)

Sanitas:

Sanitas has great similarities between its two platforms, with the only difference being the display of the map, which is optionally shown in the app. It is the only entity that allows an in-depth search by diagnostic test or treatment, with a drop-down list of different specific tests. It shows several ways of narrowing down the search criteria and

the display of results is simple and clear, also showing different services such as curriculum vitae, other specialities, emergency services and others in the doctor's or centre's file. It also clearly shows the language available for each doctor. It also allows you to request an appointment through various channels: face-to-face, call and video-consultation.

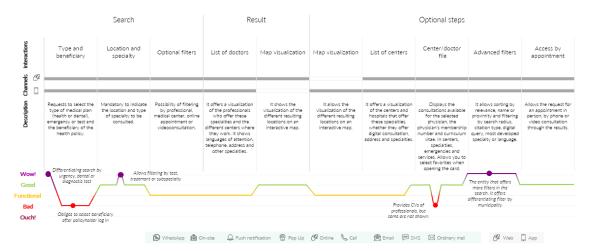


Figure 20 – Sanitas overview of the medical search process (own elaboration)

SegurCaixa Adeslas:

SegurCaixa Adeslas is one of the organisations with the most similarities between the app and web process, the only relevant exception being the map display. It allows searches by speciality, test or treatment, although these are not specified in the drop-down list. In the results, it shows a visualisation of the list of centres and doctors with more information than that shown in the file, omitting only the rest of the list of available specialities. A wide variety of filters and sorting are offered and only the access to the online appointment request is enabled through them, not being intuitive for the insured. It also allows reporting information errors, marking favourites and sharing the information of the selected medical record.

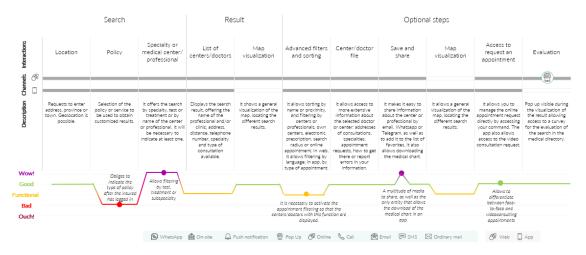


Figure 21 – SegurCaixa Adeslas overview of the medical search process (own elaboration)

3.3. Online appointment

The online appointment phase refers to the ability of the insurer to allow its policyholders to schedule medical appointments via the Internet, using an online platform or application provided by the insurer itself. This service allows policyholders to manage their medical appointments conveniently and efficiently, without the need to make phone calls or visit a customer service centre in person.

In the online appointment phase, policyholders can access the appointment booking system via the insurer's website or mobile app. There, they can select the type of appointment they need (e.g. medical consultation, consultation with a specialist, clinical analysis, etc.), choose the doctor or medical centre of their choice from the insurer's network of providers, and select an available date and time that suits their convenience.

Once the appointment has been scheduled, the system typically sends automatic email or text message confirmations to the insured, providing details about the scheduled appointment and reminders prior to the scheduled date.

The online appointment phase is beneficial for both policyholders and the insurer, as it improves accessibility and the user experience while optimising the management of medical appointments for the insurer. In addition, it can contribute to reducing waiting times and workload in customer service centres and doctors' offices, improving efficiency in the delivery of healthcare services (Aegon Lanza un Servicio de Cita Online Para Sus Clientes de Salud Cita Online, s. f.).

3.3.1. Main features

The online appointment process starts in the same way as the medical directory search process in the case of Asisa on its website, DKV in the app or SegurCaixa Adeslas in both, while the rest of the entities offer a direct command for the request. Likewise, it is

still necessary to activate online appointment filtering for the search in the SegurCaixa Adeslas medical directory, while the rest only offer filtering tools to facilitate the search. All platforms have access to the management of pending appointments:

- All entities indicate the remaining steps in the application process. While Asisa in app and SegurCaixa Adeslas number this, DKV app and Mapfre, visualise it by means of a progress bar.
- Asisa and DKV allow, via app, to schedule quick appointments by accessing favourite doctors, as does Sanitas to repeat appointments with previous doctors. In the latter case, it is also possible to make appointments on the web, while Asisa includes in this platform the functionality of "Asisa Elige por mí" (Asisa chooses for me), through which a random medical professional is assigned. In addition, Asisa, Mapfre app and Sanitas include a button to get an appointment as soon as possible.
- Asisa is the only entity in its app that does not allow the requested appointment to be added to the external personal calendar once it has been confirmed. In the web case, DKV and SegurCaixa Adeslas are the only ones that allow this option.
- All the entities except SegurCaixa Adeslas on the web allow the cancellation of appointments via all their platforms. DKV in app and web and Asisa web do not allow the modification of appointments, being necessary to cancel the previous one and request a new one. In addition, DKV, on the web, is the only entity that does not allow the process of requesting an appointment, although it has a button to access it.
- Asisa via its app continues to be the only entity that gives the option of changing
 the specialist, as well as modifying the date or time, in the modification of the
 appointment.
- As in the previous year, DKV web continues to be the only entity that enables the
 evaluation of the specialists and shows the average evaluation obtained by each
 professional.



Figure 22 – Main features of the online appointment (own elaboration)

3.3.2. Process

The completion of the online appointment process is possible in all entities through the app platform. On the web, it is possible in all of them with the exception of DKV, which does not allow the process to be carried out. In the case of SegurCaixa Adeslas, there is an error in the web management as it does not allow confirmation of the beneficiary's details; however, in subsequent days it is possible to do so. In general, there is a homogeneity of processes in both platforms of each entity, with Sanitas standing out as the one with the fewest differences between app and web. Mapfre shows differences in the search preferences questionnaire (analysed in the summary of processes) between app and web, however, the structuring of the application process is identical.

In the access, Asisa on the web, DKV on the app and SegurCaixa Adeslas, continue to require a search for the medical directory instead of establishing a direct command to request an appointment.

Asisa, in addition to offering different accesses between its platforms, incorporates on the web the option of "Asisa elige por mí" (Asisa chooses for me) by means of which the entity assigns a random medical professional, eliminating the selection step. In contrast to the previous year, this year there were no errors in the web process.

DKV presents the shortest and quickest process, with respect to what is obtained from the app process. Likewise, Asisa, Sanitas and SegurCaixa Adeslas app present the longest processes in terms of structure, although Mapfre is the one that adds more steps that lengthen the process, by establishing the questionnaires prior to requesting the appointment, dividing each of them into different screens. However, as in the previous year, Sanitas allows for repeating previous appointments, which makes it, in the case of requesting this option, the entity with the shortest process.

It should be noted that before confirming the appointment, all entities request a review of the data so that the user can confirm that everything is correct. A confirmation message is then displayed on the screen.



Figure 23 – Process of the online appointment (own elaboration)

3.3.3. Overview of the online appointment process

Asisa:

Asisa presents a simple process, but with a longer application phase. Access begins with a search for centres and doctors or speciality according to the selected location. After choosing the centre or professional and, later on the website, also the speciality for which the appointment is desired, you can choose between the medical professional and the desired date and time. On the web, it is also possible to omit the selection of the professional ("Asisa chooses for me") and have the entity assign you a random one, as well as directly displaying the closest available dates. Both platforms require the selection of the policy and the insured, but at different points in the process; while in the app this is done prior to entering the search parameters in the medical directory, on the web it is done once the request for an appointment has been made in the selected result of the medical directory. In both apps and on the web, a review of the appointment data is requested, after which it is confirmed on the screen (and pop up in the app as well). In addition, in the case of appointments obtained via the web, confirmation is sent by email.



Figure 24 – Asisa overview of the online appointment process (own elaboration)

DKV:

DKV stands out for having the shortest process for requesting an appointment online, although on the other hand, its request through the web platform fails. In both channels it is necessary to access the search for the medical directory (although on the web it is established by means of the command "Request appointment"), indicating the speciality and location (as well as the type of insurance on the web). Subsequently, it will be necessary to select the option chosen from the results and choose the appointment request. In the case of the web platform, the process is interrupted here as it is indicated in the details of all the medical professionals that the online appointment option is not offered. Via the app, you need to choose a date and time to make an appointment, after which a summary of the appointment data is displayed on the screen, including information about the consultation, alternative contact details, time, date, speciality, centre and doctor. This is confirmed by a pop-up and an email communication.

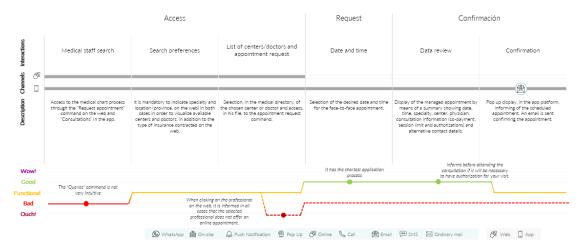


Figure 25 – DKV overview of the online appointment process (own elaboration)

Mapfre:

Mapfre is characterised by having the longest online appointment access process among the entities analysed. This is largely due to the fact that each of the search requirements is separated into several different screens. It incorporates several differences between one platform and the other, such as the selection of appointment type, search radius or nearby dates in the app, and the search for a specific centre or the confirmation of the policyholder's contact details on the web. In general, both platforms require entering speciality, location, search preferences and the selection of the time and date preferences for which you wish to search. Once the centre and doctor chosen and the desired date and time have been selected, the data review and subsequent confirmation is carried out. You receive notification of the appointment by email in all cases and SMS in the web management. In addition, after the web appointment, you will receive an email with access to a service evaluation survey.

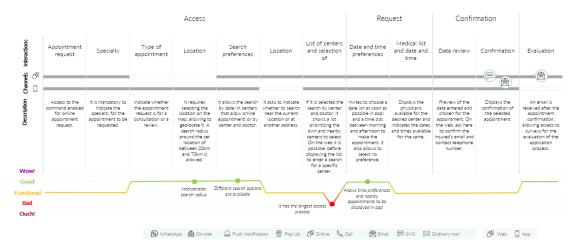


Figure 26 – Mapfre overview of the online appointment process (own elaboration)

Sanitas:

Sanitas presents the most homogeneous process between the two platforms of all the entities analysed. After selecting the appointment request option, the entity allows the user to request a new appointment or repeat a previous one and reduce the process. It is necessary to establish the type of appointment and search to be made, offering the user several options, as well as the location where the appointment is to be made. After this, the reasons, time slot preferences and date preferences are requested, differing from other insurers, and a search can be made by proximity to the date. The process continues with the listing and selection of the professional or medical centre and the chosen time and date. The data review shows all the selected information and confirmation is

received on screen and, subsequently, by email, as well as by SMS in the case of the app.

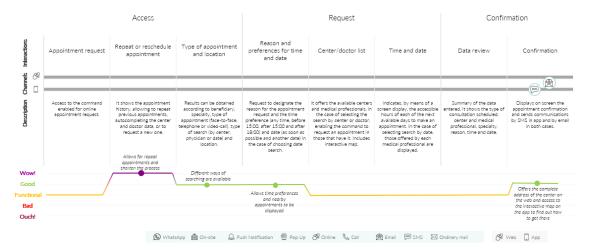


Figure 27 – Sanitas overview of the online appointment process (own elaboration)

SegurCaixa Adeslas:

SegurCaixa Adeslas, although it allows the application process to be completed, makes it impossible to complete the process on the first attempt. There are similar interactions between the web and the app, but with small differences that make the process longer on the mobile platform. In this case, in addition to the web steps, it requires filtering the search results by online appointment through an additional step and requires selecting the type of appointment. In both cases, it is necessary to access the medical directory to start the management process and enable the online appointment filtering search to access the list of centres and doctors with the option enabled. After choosing one of them, you need to select the beneficiary and enter contact details. The application is completed with the choice of date and time and, in the review of the previous data, it is required to accept the basic information on data protection. The entire process is confirmed via on-screen display, including an interactive map, and via SMS communication. On the web, in addition, two pop-ups are activated during the process for evaluation.

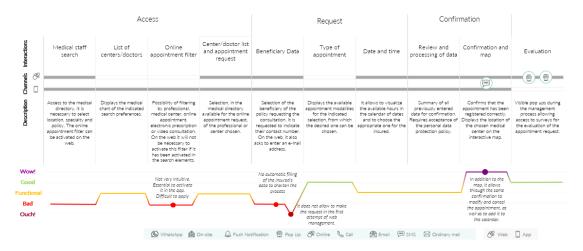


Figure 28 - SegurCaixa Adeslas overview of the online appointment process (own elaboration)

3.4. Videoconsultation

The video consultation phase refers to the insurer's ability to provide its policyholders with virtual medical consultations with health professionals via video conferencing. This service allows policyholders to receive medical care without the need to physically visit a doctor's office or care centre, which is convenient and accessible, especially in situations where distance or mobility restrictions may be an issue.

In the video consultation phase, policyholders can access the videoconferencing platform provided by the insurer through its website or mobile app. From there, they can schedule an appointment for a virtual medical consultation, selecting the doctor or specialist of their choice from the insurer's network of providers.

During the consultation, the insured and the doctor can communicate in real time via video and audio, allowing them to discuss symptoms, perform visual assessments, and receive medical recommendations and treatments as needed. Some video consultation platforms also offer the possibility to share files and medical test results securely during the consultation.

The video consultation phase is a convenient and efficient option for many insured persons, as it eliminates the need to physically travel to a doctor's office, reduces waiting times and offers flexibility in terms of consultation time and location. In addition, it can be particularly useful in emergency situations or for people with reduced mobility who have difficulty accessing traditional medical care (HM Hospitales, s. f.).

3.4.1. Main features

The entities have several functionalities within the video-consultation process, all of them facilitating access to the appointment request via the home page. All the institutions offer scheduled consultations by appointment request, and show a history of the sessions held. However, Asisa, Mapfre and Sanitas have immediate video call. The following stand out:

- Mapfre and SegurCaixa Adeslas are the only ones that do not ask to indicate the speciality during the application process, as they only offer the videoconsultation through General Medicine.
- While all the entities allow the cancellation of the scheduled video consultation,
 DKV is the only one that does not allow the modification of the appointment.
 Mapfre, in its case, allows cancellation but not once access to the video-call has been made possible, whereas before it was possible.
- Mapfre and SegurCaixa Adeslas do not provide electronic prescriptions, and the
 doctors themselves state that they do not prescribe prescriptions using this method
 of consultation. SegurCaixa Adeslas, however, gives the option of prescriptions in
 very special cases. Asisa, in its case, is the only one that does not offer a medical
 report.
- During the video call, Mapfre and SegurCaixa Adeslas are the only companies
 that do not have a chat, which makes the video call difficult in the event of a
 communication failure. In the case of Sanitas, this chat is used when it is not
 possible to establish communication with the doctor during the first attempt.
 SegurCaixa Adeslas does not allow documents to be attached either before or
 during the consultation.
- Asisa is the only one that shows the name of the doctor on the screen during the video call, although DKV and Sanitas inform of the name of the doctor in the waiting room.



Figure 29 – Main features of the videoconsultation (own elaboration)

3.4.2. Process

All the entities have the videoconsultation function in their applications, although SegurCaixa Adeslas only allows medical guidance and not all of them offer direct access to it. DKV and Sanitas, as in the previous year, require an appointment to be requested, regardless of the channel, and during the process indicate the desired preference. Once the videoconsultation request has been made, it is requested to enter the data related to the request such as speciality, patient, reason, date or time. In addition:

- During the request: Asisa does not ask the reason for the videoconsultation request; DKV and SegurCaixa Adeslas do not have to choose speciality; Mapfre offers scheduled or immediate videocall; SegurCaixa Adeslas does not have optional fields; DKV and Mapfre allow documents to be attached before the consultation; Asisa and Sanitas require patient selection.
- Sanitas invites to assess the consultation request via the app. At the end of the video call in the app, both Asisa and DKV ask the user to indicate their satisfaction.
- All of them remember the appointment made, but only Mapfre and SegurCaixa Adeslas do so when it is possible to access the waiting room.
- On entering the waiting room and with the camera already activated, Asisa starts a check of the system to ensure its operation.
- The Sanitas waiting room is the most complete as it has measurement and sending
 of vital signs (facial biomarkers), frequently asked questions, information,
 permission control, file attachment or chat access. Meanwhile, in Asisa, system
 verification is required and DKV offers functionalities such as chat or file
 attachment.
- While DKV and SegurCaixa Adeslas send push notifications, Asisa and Sanitas send SMS. Asisa also sends emails.
- Sanitas is the only one that experiences an error during the video call since, although the call from the doctor is made, it is not possible to contact him and a second attempt is necessary.
- Asisa, as in the previous year, is the only one that does not allow consultation of the report made on the app platform. This year, moreover, it does not send it by email either.



Figure 30 – Process of the videoconsultation (own elaboration)

3.4.3. Overview of the video consultation process

Asisa:

The video consultation process at Asisa is simple, with direct access through the home page and requires you to select your preferences. It is the only one that does not carry out the entire process through the app, but instead redirects to an external website. Here the insured is placed in a waiting room and is informed of the name of the medical professional who will attend the appointment. While waiting for the medical professional to get in touch, a system check is required to ensure the correct internet connection. Subsequently, a call is received from the doctor, which can be accepted without a video image. The call is made by displaying the name of the medical practitioner on the screen and is supported by a chat and the sending of attachments. At the end of the communication, an evaluation of the quality of the videoconference is requested via the same website. In addition, the doctor then sends a scanned form by email to request authorisation for medical tests.

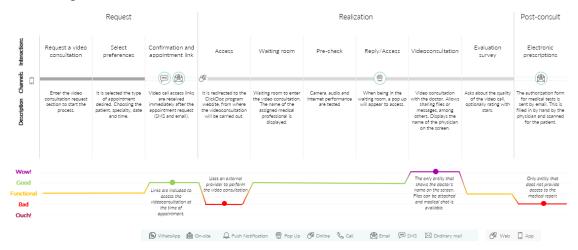


Figure 31 – Asisa overview of the videoconsultation process (own elaboration)

DKV:

The insurer does not give direct access to the video consultation request, it requires a general consultation request and, starting by designating a speciality, then type of appointment, date and time. In addition, it is required to indicate the reason. Optionally, you can indicate the name of a specific professional or medical centre and add attachments. As the day of the appointment approaches, reminders are received the day before and the day of the appointment, until access to the waiting room is enabled, where it is possible to attach further attachments and access the chat. During the video call after the call from the professional, it is noted that access to the chat is still enabled on the same screen. Subsequently, it is reported that the availability of the prescriptions and medical reports that have been prescribed in the health folder and the complete session through the My Diary History. At the end, an optional rating of the video call experience between 1 and 5 stars is displayed. Finally, from the electronic prescription section, the established medication is highlighted.

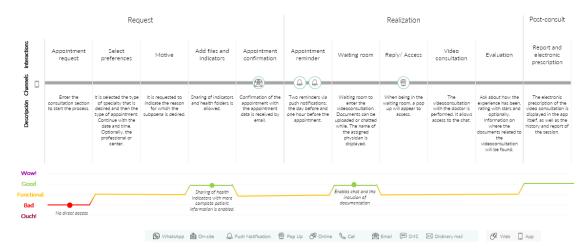


Figure 32 – DKV overview of the videoconsultation process (own elaboration)

Mapfre:

With the redesign of its Mapfre Salud app, the entity offers a simple and fast video consultation process. The application enables direct access to the video consultation request from the home page, allowing immediate or scheduled video calls. After selecting the scheduled mode, it is necessary to select the language, indicate contact details, reasons (and optionally documentation), as well as the desired date and time. After the reminder and in order to start the call, the insured person must access the video consultation where he/she will be put on hold until the medical professional is available. Once the consultation is completed, a report is generated and a reminder is sent to the insured person, which redirects him/her from the app. Although it is

mentioned that it will also be possible to consult the prescription, the doctors inform that it is not possible to prescribe medication through this channel. A survey is available on the home page to allow the service to be evaluated after its completion.

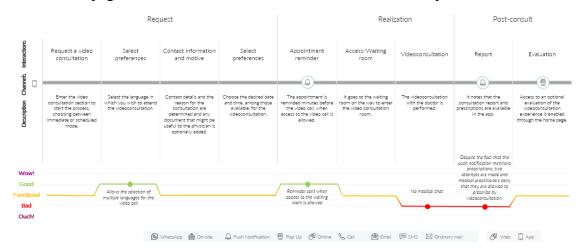


Figure 33 – Mapfre overview of the videoconsultation process (own elaboration)

Sanitas:

The Sanitas video-consultation process is one of the longest, as it is the entity that sends the most communications (up to three different assessments) and the only one that makes an error during the process, as two calls from the doctor are required to contact him/her. Thus, the process starts with the appointment request, having to indicate the parameters for the request (beneficiary, video consultation channel, reason, date and time). The appointment is confirmed by SMS while a pop-up is activated in the app to evaluate the appointment request experience. After receiving two appointment reminders, at the time of the appointment, the waiting room is enabled where vital signs can be measured and sent to the specialist who will take the call. During the appointment, there is a support chat (available until the professional finishes the consultation) and other participants can be included. At the end of the consultation, the assessment is requested again and the availability of the prescription prescribed in the My Health section is reported. In subsequent days, the assessment survey is sent again to the insured's email address.

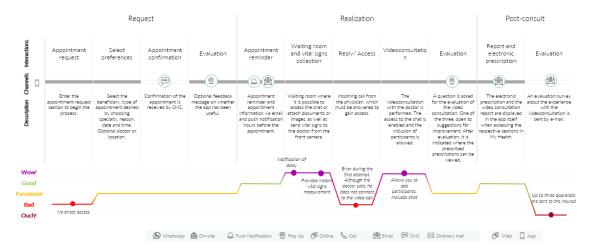


Figure 34 – Sanitas overview of the videoconsultation process (own elaboration)

SegurCaixa Adeslas:

The SegurCaixa Adeslas video-consultation process is different from the rest because it is the only entity that only allows medical advice to be given via video-call. This is a simple process; in the request, all through the same screen, the reason, contact details and the selection of language, date and time are required. Confirmation of the appointment is received via email and, on the day of the appointment, a reminder via push notification when access to the waiting room is enabled. After the videoconsultation, the history of all the consultations made is displayed and a report of the consultation can be accessed. As in the previous year, electronic prescriptions cannot be prescribed via video consultation, but only in special cases.

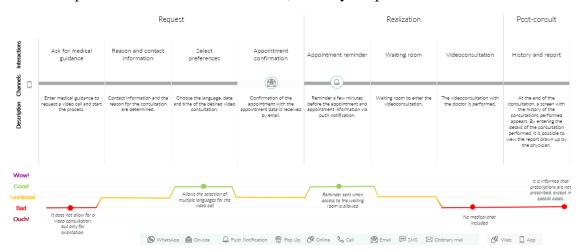


Figure 35 – SegurCaixa Adeslas overview of the videoconsultation process (own elaboration)

3.5. Chat and medical consultation

The chat and medical consultation phase refers to the insurer's ability to enable its policyholders to communicate with health professionals via online chat or instant messaging to receive medical guidance and resolve questions about health issues.

In this phase, policyholders can access an online chat platform provided by the insurer through its website or mobile application. From there, they can initiate a conversation with a doctor or health professional available at that time to receive answers to their medical questions.

Policyholders can ask questions about symptoms, medical conditions, medications, preventive recommendations, among other health-related topics. The health professionals providing this service are trained to offer general medical guidance, answer common questions and, in some cases, refer policyholders to a face-to-face medical consultation if necessary.

The chat and medical consultation phase is a convenient option for policyholders who want to obtain quick and reliable medical information without the need for a face-to-face consultation. In addition, it can be useful for resolving minor health questions or concerns that do not require urgent medical attention but may be of concern to policyholders. However, it is important to note that this service does not replace a face-to-face medical consultation for more complex or urgent health problems (*Chat Médico En el Seguro de Salud* | *Rastreator*, 2024).

3.5.1. Main features

The medical chat allows instant interaction with the specialist, as well as sharing files that help to assess or expand on the conversation. All entities have this functionality, with the exception of Sanitas and Asisa web. Asisa, moreover, is the only one that has this service through a secondary app, Chat Médico Asisa, instead of its main app.

In medical chat, Mapfre, with both platforms and the Asisa app, stand out for offering different specialities with which to start a conversation.

The medical consultation is intended to resolve specific general medical issues that do not require an immediate response or the need for direct and continuous interaction with the doctor. This option is only offered by Asisa and SegurCaixa Adeslas.

Asisa stands out in medical consultations because it offers a response service, notifying you by sending an email when the medical professional resolves the query you have raised.

Almost all the companies offer access through their home page to the chat and medical consultation options, except for Mapfre web, which requires access to the Club Mapfre section to access the medical guidance and chat submenu, and SegurCaixa Adeslas web,

which integrates these medical guidance services through its Health and Wellbeing platform.

All the entities have a consultation history for both services and platforms (including Sanitas, although it does not have an independent medical chat service if not associated with a consultation) and only DKV in the app and SegurCaixa Adeslas on the web offer the insured the option of assessing the service provided.

	əsisə	DKV	MAPFRE	Sonit <u>as</u> √	*	asisa+	DKV	MAPFRE	Sonit <u>as</u>	**
APPLICATION	Medical Chat Asisa and Asisa	DKV QC+	Health MAPFRE	My Sanitas	Health & Wellness	Private Area	DKV QC+	Mapfre Club	Private Area	Health & Wellness
MEDICAL CHAT	✓	√	√	Х	√	Х	1	✓	Х	1
Access (level)	Secondary app	1st	1st	-	1st	-	2nd	Others	-	Others
Different specialties	1	х	1	-	X	-	X	✓	-	X
Service rating	X	1	Х	-	X	-	X	Х	-	1
Historical	✓	1	✓	✓	✓	-	1	✓	✓	1
MEDICAL CONSULTATION	1	Х	Х	Х	√	✓	Х	Х	Х	1
Access (level)	1st	-	-	-	1st	1st	-	-	-	3rd
Different specialties	X	-	-	-	X	Х	-	-	-	X
Response notice	1	-	-	-	X	1	-	-	-	X
Allows interaction after the fact	Х	-	-	-	X	Х	-	-	-	X
Historical	✓	-	-	-	✓	✓	-	-	-	✓
								Highlight : Worst/Best practices		

Figure 36 – Main features of the chat and medical consultation (own elaboration)

3.5.2. Process

Sanitas is the only entity that does not offer a medical chat service through any channel. However, it is possible to access a chat in other medical services, for example, when making a video call. Asisa, in its case, does not offer a medical chat service through both platforms and does not have a medical chat service on its website. Moreover, it does not integrate the service into its main application, with the secondary app Chat Médico Asisa being in charge of managing these consultations. A distinction can be made between the medical chat services offered by the entities:

- Those that allow a choice of specialist (Asisa and Mapfre), integrate several medical professionals to choose from and where the conversation is initiated by the insured, as well as having a history of chats, due to the fact that the conversations in these are not deleted unless it is the insured himself who carries it out. Asisa also offers information about the doctor (timetable and curriculum vitae) prior to the start of the conversation.
- On the other hand, in the cases in which only medical guidance is offered through general medicine (DKV and SegurCaixa Adeslas), it will be necessary to request access indicating a reason for the consultation and/or personal details to start the conversation, which in this case will be introduced by the doctor or manager of the application. In this type of consultation, the conversations are not saved, but the history is shown in a separate section. There are variations between the entities that have this type of chat:

- o In DKV, it is requested to indicate the reason for the consultation, as well as allowing the sharing of attached data and medical indicators before the conversation. On the web, the doctor introduces himself to the insured, while in the app, this does not occur. The conversation screen in both cases, at the start of the process, shows the name of the specialist when the assignment is made.
- o In the case of SegurCaixa Adeslas, in addition to indicating the reason, name and telephone number are required to assign the specialist. After accessing the chat, the chat manager appears on the web and asks again for the reason for the consultation before assigning the doctor and allowing the conversation to begin. On both platforms, an explanatory message about the chat service appears as soon as the chat is accessed and it is indicated that this is a service offered by Teladoc.

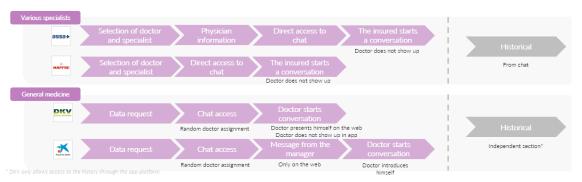


Figure 37 – Process of the chat and medical consultation (own elaboration)

3.5.3. Chat process overview

Mapfre and Asisa are the entities that offer the most complete medical chat process in app. Thus, Mapfre shows the service in the global position and, in addition, offers different medical professionals to choose from. It also shows the speciality of each of them, as well as their opening hours. Asisa offers the same information in the pre-access to its service, in addition to the curriculum vitae.

SegurCaixa Adeslas, in spite of offering the medical chat via direct access on the home page, requires information such as the name and telephone number, unlike the other entities, as well as the reason for the consultation (in this case, also requested by DKV). On the web, only DKV, Mapfre and SegurCaixa Adeslas offer the medical chat service. Here, Mapfre also stands out as the only one that offers the medical chat showing the list of available medical professionals. It continues to include associated information such as the different types of specialities and timetables available.

SegurCaixa Adeslas presents more requirements with the data requested (reason, name and telephone number).

All the entities present a medical chat in which the response is instantaneous, in less than 5 minutes. DKV is the only one that

DKV is the only one that indicates this on its chat screen, while SegurCaixa Adeslas reports a few minutes of waiting, without establishing a maximum.

Only DKV and SegurCaixa Adeslas offer an evaluation of the service, as well as being the only ones that address the insured person by name (SegurCaixa Adeslas only on the web). In addition, SegurCaixa Adeslas is different from the rest on the web because it includes an introductory message from the chat manager, which starts the conversation.

Mapfre and DKV stand out. The former is the only one that carries out a follow-up a few days after the end of the medical consultation in app

and DKV is the only one that proactively prescribes prescriptions. Asisa and DKV are distinguished by sending push notifications informing of the reception of a new message from the doctor.

In all cases it is possible to access the history of conversations in the medical chat, including SegurCaixa Adeslas' on the web, the only one that did not offer it the previous year. In the case of DKV and SegurCaixa Adeslas, it is shown in a separate section, including Asisa and Mapfre by saving the conversations in the chat itself.

It should be noted that Sanitas, this year, has incorporated a history of chats derived from other types of telemedicine consultations (video consultations, health programmes, etc.), which can be accessed from the home page.





Figure 38 – Chat process overview (own elaboration)

3.6. Authorization

The authorisation phase refers to the process by which the insurer evaluates and approves coverage for certain medical services or treatments requested by an insured. This process is commonly used for medical procedures that may be costly or require significant medical resources, such as surgeries, specialised procedures, rehabilitation treatments, among others.

When an insured person needs access to a medical service that requires prior authorisation, he or she must generally request it through his or her treating physician. The physician sends the request for authorisation to the insurer, providing details about the recommended service or treatment, the medical justification, and any additional information needed.

The insurer evaluates the authorisation request based on several criteria, such as medical necessity, effectiveness of the treatment, clinical guidelines, insurance plan coverage and the insured's eligibility. Once the assessment is completed, the insurer issues a response informing whether the authorisation has been approved, denied or if further information is required.

If the authorisation is approved, the insurer provides the insured with the necessary details to access the authorised service or treatment. If denied, the insurer provides an explanation of the reasons for the denial and the steps to take to appeal the decision.

The authorisation phase is essential to ensure that medical services are appropriate, necessary and covered by the health insurance plan. It helps control costs and ensures that policyholders receive appropriate and timely medical care according to their needs (Generali, 2022).

3.6.1. Main features

All platforms allow authorisations to be requested through both channels, with SegurCaixa Adeslas and DKV adding the app as a new feature. Moreover, the processes are similar, with Mapfre having the longest form, with twice as many steps as Asisa or Sanitas:

- Asisa and Mapfre make the process easier for the insured person as they have an
 image reader of the prescription code that also directly locates the prescribing
 centre of the application form.
- DKV and SegurCaixa Adeslas stand out as they show the list of tests and treatments by means of an ordered breakdown that facilitates the search for the insured person. However, Sanitas and SegurCaixa Adeslas do not have a service search that allows the insured person to quickly indicate the desired service.
- All except Sanitas offer access to the medical list in the process: SegurCaixa
 Adeslas at the beginning of the form, DKV and Mapfre during its completion and
 Asisa, at the end of the application.
- While all the entities need to know the details of the medical prescription to assess
 the authorisation request, only DKV asks the insured person, in an email after the
 application in the app, for the medical report, requesting complementary
 information to the prescription.
- Sanitas is the only entity that does not indicate, through the application process,
 which tests do or do not require authorisation. However, the attempts made are
 quickly and satisfactorily obtained. DKV, in its case, although it indicates some
 tests as requiring authorisation, is subsequently informed by e-mail that this is not
 necessary.
- Mapfre communicates the immediate resolution by screen, and Sanitas in a few minutes, being the quickest procedures; although they do not communicate the resolution of the request by email.



Figure 39 – Main features of the authorization (own elaboration)

3.6.2. Process

The authorisation application process is simple in most of the entities, with only DKV encountering problems and errors in the process. Sanitas and Mapfre stand out as the only ones that do not have additional external steps for the resolution of the application. In addition, Sanitas has the shortest process of all and Mapfre manages the application immediately, generating a leaflet automatically at the end of the application. The longest process is that of DKV as it takes the longest to resolve the application, as well as being the only one that requires additional information once the form has been filled in and sent.

DKV and Sanitas are the only ones that do not create an access from the home page to initiate the process, although DKV shows the details of the most recent authorisations on its initial screen.

All the entities except SegurCaixa Adeslas allow consultation of the status of the authorisations (Asisa, in its case, showing only pending applications). SegurCaixa Adeslas is also the only one that places limitations on the download of the authorisation form, only allowing it to be downloaded in less than 7 days or, at the most, 60 days. In addition, both SegurCaixa Adeslas and Asisa are the only companies that do not have the option of viewing a history of authorisations in their app.

It is necessary to select the medical centre carrying out the test in the case of DKV and SegurCaixa Adeslas, with Sanitas indicating this obligation in the case of requiring hospital admission.

SegurCaixa Adeslas requires the documentation to be attached to the form, while DKV does it by means of an email and push notification, days after completing the application. Sanitas, in its case, also requires attaching the medical prescription in case the test is not found in the search list and selecting "other services".

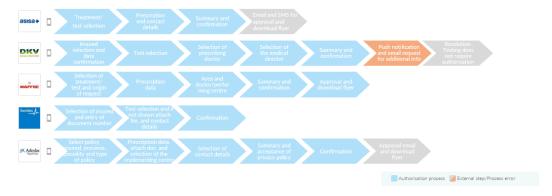


Figure 40 – Authorization process of the various insurers (own elaboration)

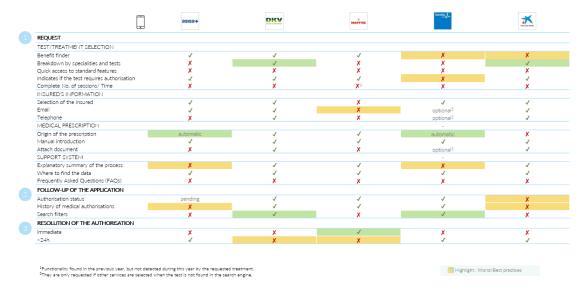


Figure 41 – Process of the authorization (own elaboration)

3.6.3. Overview of the authorisation process

Asisa:

Asisa shows one of the simplest processes. After obtaining the test prescription by video call, the doctor sends the scanned referral by email. Through the app, the request is accessed via a command available on the home page, where the test or treatment prescribed must be selected, and the referral number must be identified by entering it manually or by scanning the code using the phone's camera. In addition, the insurance details and email address for which the authorisation is requested are also filled in and can be edited. No further steps are required and the details of the authorisation data can be accessed via the app, which shows the pending status as well as the prescribing centre, date and all previously entered data. In less than an hour you receive an email and two SMS informing you of the resolution of the application. The authorisation form is attached to the email, which can be accessed by means of a security code received by

SMS. After this approval, the details of the authorisation are removed from the app section. Finally, an evaluation survey is sent by email.

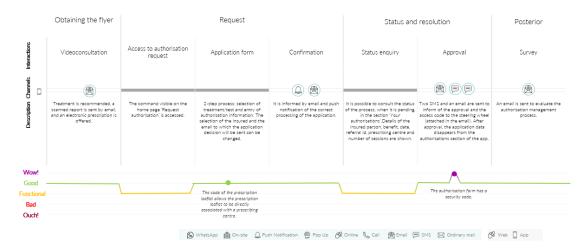


Figure 42 – Asisa overview of the authorization process (own elaboration)

DKV:

This is the most complicated insurance company. The video consultation is carried out via the DKV Quiero Cuidarme Más app and the authorisation management via the Activa DKV app. To do this, you access the authorisations section, where you fill in a five-step form to request a new authorisation, which shows inconveniences as the number of digits of the prescription (obtained by video-consultation) does not coincide and there is no option to select a prescribing doctor by digital consultation. Afterwards, the insurer requests the medical report by email and push notification, but it is a non-response email, so it is attached to the application initiated in the app. After 15 days without response or change of status, the user contacts support and resubmits the medical report. After a few days, an email is received informing of the resolution and that the requested test does not require authorisation. Three attempts are made with different types of tests, but the same result is obtained in all of them.

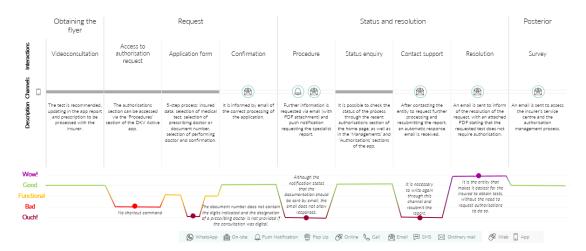


Figure 43 – DKV overview of the authorization process (own elaboration)

Mapfre:

Mapfre is the only entity that carries out an immediate resolution of the application, despite having the longest application form. Through the face-to-face consultation, a prescription form is obtained, and the authorisations section of the app is accessed from the app's home page in order to process the application. The process consists of six steps with the selection of the test, the origin of the request situation, the area and medical centre performing the test, as well as the confirmation of the request after a summary of all of the above is displayed. At the end, the screen automatically confirms the approval of the request and displays a button for downloading the authorisation form. Through the platform it is possible to access the history of all authorisations and the details and download of the authorisation forms.

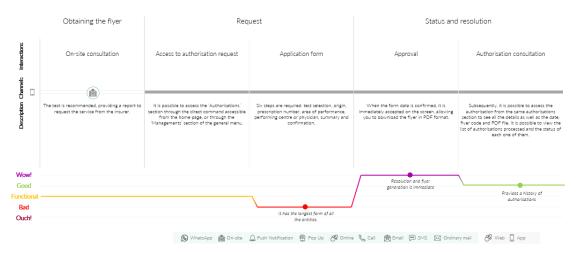


Figure 44 – Mapfre overview of the authorization process (own elaboration)

Sanitas:

It is the insurer with the fastest process, although the prescription form is obtained in a face-to-face consultation. When accessing the application, it is necessary to search in the menu to find access to the authorisations section, where the history is shown, the filtering option and access to a new authorisation request. The form is quick, needing to indicate insured, document number and type of proof. Optional attachments can be added and contact details other than the usual ones can be indicated. After confirming the request and indicating an expected date of resolution, the user is redirected to the list of authorisations processed, where the change of status of the request to approved is shown within minutes, with the identification of the prescribed service. When viewing details, you are informed that you must go to the prescribing medical centre with the application form in order to obtain the test.

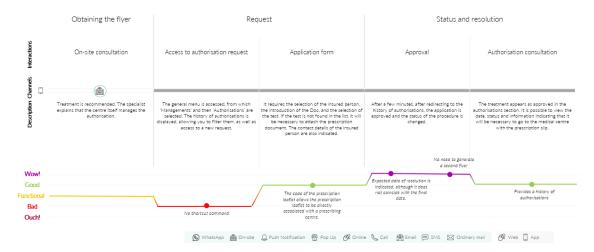


Figure 45 – Sanitas overview of the authorization process (own elaboration)

SegurCaixa Adeslas:

The patient goes to the doctor's office to obtain a prescription for a test or treatment and to obtain the request form. On the home page of the app there is a command to request new authorisations. The application process is divided into four steps: general data to define the desired test or treatment, data on the documents obtained and the desired centre, contact details, and review and acceptance of the organisation's privacy policy. Once the application has been confirmed, a pop-up survey is sent to you, allowing you to rate the management process with 5 stars or to send complaints or suggestions to the insurer. Finally, in less than 24 hours you receive the resolution of the application by email, indicating the steps for downloading the authorisation form, which is only available for a limited time.

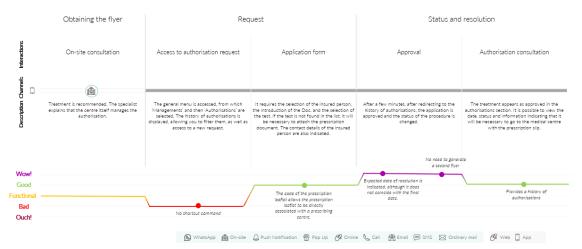


Figure 46 – SegurCaixa Adeslas overview of the authorization process (own elaboration)

4. CONCLUSIONS

The app platform continues to present more digital services than the web platform. In addition, it is possible to experience more errors on the web than on mobile devices. This is the case of Asisa, which made it impossible to carry out the video call last year via web and this year allows it to be carried out via app. The same happens with DKV, where the process of requesting authorisation could not be completed last year via the web platform and this year it is completed via the new Activa DKV app.

The medical consultation process is the least offered by the entities, only being offered by Asisa and SegurCaixa Adeslas. Sanitas does not offer any of the non-interactive medical consultations. DKV does not allow access to the online appointment request via the web or the modification of appointments in any of its platforms. Asisa does not allow the modification of appointments on the web and SegurCaixa Adeslas does not allow the cancellation of appointments on the web. DKV does not allow any test that requires authorisation.

After analysing the management of the services of medical directory search, online appointment, video consultation, medical chat/medical consultation and authorisation, we can classify the medical use of insurers as follows.

In terms of communications, the most used means of communication are email and sms. In general, we can conclude that:

- The online appointment process is the one that receives the most communications, while the medical directory process is the one that sends the least, with only Mapfre and SegurCaixa Adeslas receiving evaluation surveys.
- SegurCaixa Adeslas is different in that it is the only company that gives priority to sending SMS rather than e-mails. In addition, Mapfre and Sanitas only confirm the authorisation process on screen. Mapfre also does so in its medical chat.
- While Mapfre sends the most communications in online appointments, Sanitas does so in video consultations and, in authorisations, Asisa and DKV.
- Assessment surveys are only sent via e-mails and pop-ups.

The companies have similar processes, all of them offering most of the services and, moreover, integrating all of them in both applications, with the exception of the medical consultation, which is only common in SegurCaixa Adeslas. However, both the search for the medical directory and the management of online appointments are easy and complete processes for the user. The online appointment process is satisfactory in its

app platform, but several errors were experienced during the study in its web management. On the other hand, the video consultation is the one with the most differences between the insurers. The app authorisation shows smooth processing and clear communication between insurer and user, but very different times and methods are used by all of them.

MEDICAL DIRECTORY:

The search in the medical directory is an easy and similar process in all entities.

- Sanitas is the entity that offers the most filters in the app, while SegurCaixa Adeslas is the one that offers the most extensive filtering on the web.
- Mapfre and DKV, on the web, are the only ones that do not enable any type of filtering for the search. However, they are also the only ones that enable an alternative search.
- Mapfre and Asisa continue, as in the previous year, to prioritise their own centres.
- SegurCaixa Adeslas is the only company that allows the medical directory to be downloaded from its web platform.

ONLINE APPOINTMENT:

The online appointment process is similar in most of the entities. DKV and SegurCaixa Adeslas present errors in the web appointment request and SegurCaixa Adeslas, where they show problems during the web appointment request and cancellation.

- DKV and Asisa, both on their web platforms, do not allow in any case the modification of appointments.
- Asisa, Mapfre app and Sanitas make it possible to get an appointment on the closest date. Asisa also makes it easier to assign a doctor with its random function on the web "ASISA choose for me".
- Asisa app is the only entity that makes it possible to modify the specialist of the scheduled appointment.
- DKV stands out for being the only one that offers assessments of medical specialists.

VIDEOCONSULTATION:

The scheduled video-consultation process is common among all the insurers analysed, with immediate video-consultation only being enabled for Asisa, Mapfre and Sanitas.

• Mapfre and SegurCaixa Adeslas are the only ones that only allow video consultations with the speciality of general medicine.

- DKV and Sanitas are the only ones that allow participants to be included in the call.
- Sanitas warns of the delay of the medical practitioner in the waiting room.
- Asisa is the only entity that does not generate a medical report at the end of the video call.
- DKV and SegurCaixa Adeslas are the only ones that do not request an assessment of the video consultation.

CHAT AND CONSULTATION:

Sanitas is the only entity that does not offer any medical chat or consultation service. Only Asisa and SegurCaixa Adeslas offer medical consultation.

- Mapfre is the only entity that enables different specialities for its medical chat on both platforms. Asisa also offers several specialists for its app version, being the only one that makes use of a secondary app, Chat Médico Asisa.
- SegurCaixa Adeslas is the only entity that enables both services on both platforms.
- Only DKV and SegurCaixa Adeslas request an evaluation of the service by means of satisfaction surveys.
- Sanitas enables access to the history of medical chats held during video consultations.

AUTHORISATION:

All the entities allow the management of authorisation via the web. DKV is the only one from which authorisation is not obtained, as it is not required for any of the medical tests attempted, after three attempts.

- Asisa and Mapfre are different in that they have an image reader that associates the prescription code directly with the prescribing centre.
- Mapfre is the most immediate in communicating the resolution of the authorisation, displaying it on the screen at the end of the request. Sanitas, in its case, takes only a few minutes to communicate it and Asisa also communicates it within a few hours.
- Sanitas offers only one form, with the prescription form being sufficient as the final authorisation form.

4.1. Best practices

MEDICAL DIRECTORY:

- Asisa is the only one that allows you to search the medical directory without logging in to the app.
- DKV, with its new app Activa DKV, includes assessments and comments on medical specialists.
- Mapfre makes it possible, via its web platform, to geolocate the location of the insured or, failing that, to establish the location of their place of residence as the location for the search.
- SegurCaixa Adeslas is the only one that allows the download of the medical directory both from the app platform and from the web platform.
- Sanitas is the entity with the most extensive filtering, especially by municipality.

ONLINE APPOINTMENT:

- Asisa continues to stand out by allowing a random doctor to be assigned, by the entity, through its "ASISA choose for me" function.
- DKV has the shortest online appointment request process. In addition, the app informs about detailed information needed at the time of the appointment (authorisations and co-payments).
- Mapfre allows a search within a radius of up to 70 km from the established location.

VIDEOCONSULTATION:

Sanitas makes it possible to add more participants to the video call during the video call. In addition, the waiting room allows the measurement of vital signs and access to a FAQs section, chat and audio and camera control.

CHAT/MEDICAL CONSULTATION:

- Asisa informs of the CV of the medical professionals available in the medical chat, offers different specialities to carry out the chat consultation via the app and provides response notification in the medical consultation service.
- DKV allows medical indicators to be shared before starting the medical chat. In addition, it is the only entity that proactively prescribes a medical prescription through it.

- Mapfre offers different specialities in the medical chat through both platforms. In addition, it is the only company in which the professional follows up the consultation once it has been completed.
- SegurCaixa Adeslas is the only company that allows the use of the medical chat and the medical consultation through both platforms.

AUTHORIZATION:

- DKV is the entity that most facilitates the carrying out of tests for the insured person, not requiring authorisation for the majority of them.
- Mapfre resolves the authorisation at the same time as the application process is completed, communicating its resolution immediately and automatically generating the referral form.
- Sanitas has the shortest application process. Moreover, it only requires the
 prescription slip, which is the only one necessary to present at the centre where it
 is carried out.
- SegurCaixa Adeslas facilitates the search for tests and treatments by separating each type into different blocks.

4.2. Main differences vs previous year

MEDICAL DIRECTORY:

- DKV, via the new app Activa DKV, includes the assessments of specialists and the requirement of the locality for the search. However, it does not provide access to request an appointment.
- Mapfre modifies its app and with it the design, introducing filters, the delimitation
 of a search radius and the requirement of product and speciality (allowing a search
 for "all").
- SegurCaixa Adeslas modifies its public website, including a menu with the option
 of accessing the medical directory. It also includes in app and web, filter for
 electronic prescription prescriptions

ONLINE APPOINTMENTS:

- Asisa, unlike the previous year, allows the process of requesting and cancelling appointments on the web.
- DKV does not allow completion of the web appointment request. In the app, it adds details of the appointment: the download of the medical voucher, the export of the appointment to the personal calendar or the co-payments and

reimbursement limits. In the confirmation of the data, it also informs about the need for authorisation and the patient's contact details.

- Mapfre has modified the design of its app and thus the access to the appointment request, adding steps to the request process (eleven vs. four the previous year on the web). In addition, on the web it is possible to search for appointments by centre/doctor or date, by proximity or other address, or by indicating the name of the medical centre or the specific doctor desired. In addition to this, the app also adds a search by type of appointment and time of day and the determination of the search radius. In this exercise, an evaluation survey is also sent out.
- SegurCaixa Adeslas modifies its web client area and with it the appointment request steps (three vs. one the previous year). Appointments cannot be cancelled on the web. The appointment confirmation process is reduced from seven to four steps (app) and three (web). Two evaluation surveys are received.

VIDEOCONSULTATION:

- Asisa does not experience failures during the completion of the video call in app,
 unlike the previous year when the process was carried out on the web.
- DKV shows the application process with the same changes experienced in appointments (progress bar, consultation information, etc.).
- Mapfre asks to select the language to be attended to. However, it does not allow
 the prescription of prescriptions, as reported by the doctor. In the appointment
 confirmation, the commands for Share and View my video consultations are
 eliminated.
- Sanitas allows, in the appointment confirmation, to add it to the personal calendar, but eliminating the inclusion of the doctor in favourites. Removes the information on CO2 levels avoided with video consultations. The waiting room shows the doctor's delay and includes frequently asked questions. Does not send email confirming appointment, but sends assessment survey.

CHAT/MEDICAL CONSULTATION:

- Asisa informs of the CV and timetable of the chosen medical practitioner before starting the medical chat.
- DKV, in the medical chat in the app, offers a list to select the reasons for consultation, instead of requesting a description of this. An e-mail is received

- notifying of the availability of the electronic prescription in the health folder and, in addition, an evaluation survey.
- In Mapfre, the medical practitioner follows up on the consultation, initiating the chat proactively in subsequent days.
- Sanitas includes the history of medical chats.
- SegurCaixa Adeslas integrates access to the chat and the medical consultation through its medical guidance options. On the web, the reason, telephone number and name are requested before making the medical consultation on the web.

AUTHORIZATION:

- Asisa does not require, complementary to the application, the sending of the prescription leaflet by email.
- DKV allows the authorisation request to be completed without problems via the
 Activa DKV app, however, there are complications with the sending of
 complementary information as it does not allow a response to the email requesting
 information, although it is indicated via the app that this is the means of sending
 the documentation.
- Mapfre stops showing the most frequent type of tests/treatments, replacing it with a general search list. Nor does it send any communication during the process.
- Sanitas provides a prescription form, leaving the processing of the authorisation in the hands of the insured. Thus, it is sufficient to present this form as an authorisation form at the centre where the treatment is carried out. No information on the decision is sent by email.
- SegurCaixa Adeslas, through a pop up survey, allows you to evaluate the application process positively or, on the other hand, to send complaints or suggestions.

4.3. Main features

- In general, the entities present similar processes between both platforms, improving some processes in the app compared to the previous year and always showing better scores in this platform. In the overall score, Asisa is the only one to achieve sufficient improvements to achieve a higher score on the app than on the web.
- The search process in the medical directory is the most complete among the entities and the one with the most similarities. Mapfre stands out for modifying

the design of its app and allowing the search to be carried out within a radius of 70 km. Likewise, with Activa DKV the search criteria are increased, requesting more parameters than with Quiero Cuidarme Más. Sanitas, on the other hand, stands out for its greater filtering and differentiates itself with the filtering by municipality.

- The online appointment is presented as a key process for the entities but which, nevertheless, presents errors during the study: in DKV it is not possible to request it via the web and in SegurCaixa Adeslas it is not possible to cancel it. On the other hand, DKV makes it impossible, in any case, to modify the appointment via both platforms. Asisa does not allow this on the web either.
- With regard to video consultations, the inclusion of Asisa, Mapfre and Sanitas in
 the immediate mode is noteworthy. In addition, it is possible for all entities to
 make an appointment. Mapfre and SegurCaixa Adeslas are the only ones that do
 not allow the choice of speciality, only offering videoconsultation with general
 medicine and by orientation, respectively.
- In non-interactive consultations, Asisa is the one that presents a great improvement in app, compared to the web platform, including medical chat in app and having different specialities.
- All the entities present an easy and clear authorisation request process, which can
 be completed via the app platform. While SegurCaixa Adeslas does not allow
 consultation of the management status, as it does not have a viewing history,
 Asisa only allows access to details when it is pending approval or rejection.



Figure 47 – Main features of insurers (own elaboration)

4.4. Customer contact points

- Email continues to be the most widely used channel for the insurer's communications with customers, with SMS and push notifications also being used. Similarly, pop ups are also used to request the valuation of services. Onscreen confirmations are also common.
- Online appointments are the most common form of communication, with Mapfre
 and Sanitas sending the most. While Asisa only uses email, SegurCaixa Adeslas
 only communicates with customers by SMS. In the modification process, there are
 no communications from DKV, nor reminders from Sanitas and SegurCaixa
 Adeslas.
- For the video consultation, all entities send a couple of reminders except Mapfre, with only one push notification. For the consultation, Asisa and Sanitas use email, while DKV and Mapfre use push notifications. In terms of assessment surveys, Sanitas stands out for sending up to three different surveys.
- In the chat and medical consultation process, only Asisa and DKV send communications other than the on-screen confirmation that all of them do. Thus, Asisa sends push notifications during the medical chat process and email communications in medical consultations. DKV uses these two types of channels only for the medical chat process. Both DKV and DKV request chat assessment.
- Regarding authorisations, only Asisa, DKV and SegurCaixa Adeslas communicate the confirmation of the request sent, either on screen or by other means. Asisa, DKV and SegurCaixa Adeslas send an e-mail to resolve the authorisation, as well as to request the evaluation of the process. Asisa communicates the resolution also by means of two SMS and on-screen confirmation. Mapfre and Sanitas only confirm the resolution on screen, without sending any type of communication in this process.

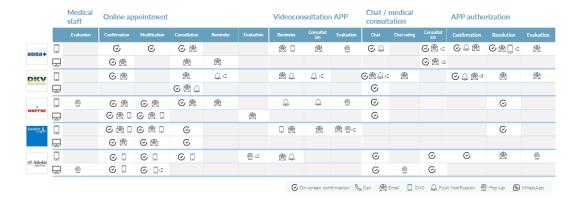


Figure 48 – Customer contact points (own elaboration)

WEBSITES

- (Aegon Lanza un Servicio de Cita Online Para Sus Clientes de Salud Cita Online,
 s. f.) Aegon lanza un servicio de cita online para sus clientes de salud cita online.
 (s. f.). https://www.aegon.es/sobre-aegon/area-prensa/notas-de-prensa/notas-citaonline-2023
- (CNMC, 2023) Blog, C. (2023, 15 septiembre). Un análisis muy saludable: la competencia en los seguros de salud CNMC Blog. CNMC Blog.
 https://blog.cnmc.es/2023/09/15/un-analisis-muy-saludable-la-competencia-en-los-seguros-de-salud/
- (Chat Médico En el Seguro de Salud | Rastreator, 2024) Chat médico en el seguro de salud | Rastreator.
 (2024, 9 febrero). Rastreator. https://www.rastreator.com/seguros-de-salud/guias/chat-medico
- (Cuadros Médicos, Qué Son y Qué Importancia Tienen, 2021) Cuadros médicos,
 qué son y qué importancia tienen. (2021, 25 mayo). Somos Salud Blog de
 Seguros de Salud, Salud, Nutrición, Enfermedades.
 https://segurossalud.es/cuadros-medicos/
- (Galán, 2022) Galán, J. S. (2022, 24 noviembre). Aseguradora. Economipedia. https://economipedia.com/definiciones/aseguradora.html
- (Gamez, 2022) Gamez, M. J. (2022, 24 mayo). Objetivos y metas de desarrollo sostenible Desarrollo Sostenible. Desarrollo Sostenible.
 https://www.un.org/sustainabledevelopment/es/objetivos-de-desarrollo-sostenible/