ICT IN HEALTH-CARE ORGANIZATIONS AS A PATIENT ORIENTED SERVICE: THE GAMMA CASE

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Abstract. Feeling an integrated part of self-caring or for loved one illness can be a psychological help in the healing process. Therefore, many structures have switched from a focus on the disease to a patient-based organizational model. Thanks to the spread of new information technologies, patients have safe access to countless information in the medical field. Patients' involvement changes their approach to health and their role in relationships with physicians. So, communication tools can encourage a "Patient Empowerment," giving people an active role in the management of their health. This value co-creation increases the quality of service, patients' satisfaction, and their wellbeing. This exploratory study tries to understand the role of ICT in patient-oriented process. A qualitative case study, in which excellence in health-care is related to innovative communication with patients, too, is presented as a helpful example.

Keywords: communication tools, ICT, health care, patient empowerment.

1   Introduction

The disease, surgical interventions, and especially long-term care put people and their families in a state of fragility. Feeling an integrated part of self-caring or for loved one illness can be a psychological help in the healing process. Therefore, many structures have switched from a focus on the disease to a patient-based organizational model. This approach implies to design health care around the specific patient's need of being informed and safeguarded. The scientific literature is claiming that co-production of health care increased patients' satisfaction, service innovation, and cost savings. Only through the exchange and intersection of the skills of all the actors involved in the system, mutual benefits arise. 'Patient Empowerment' (PE) is an increasingly common term to define when citizens are encouraged to take an active role in the management of their health [1]. Two facts may play a decisive role in that tendency: the currently raising awareness of citizens and the advancements in ICT [2], and the consequent more extensive application to health. In most approaches, PE is addressed from a psychological perspective (i.e., studies of how physicians and health-workers could make patients more confident and involved in their health-care). Thanks to ICT, today, patients have access to countless information in the medical field and can be involved; therefore, ICT can be another interesting point of view for PE.

However, some questions are still unanswered, i.e., about how PE could be effectively achieved by ICT use and the role of communication tools in this process. For example, giving information to patients and/or their family is enough to create patients' empowerment? Hence, the purpose of this work is trying to explore the impact of ICT on healthcare organizations, especially considering how communication tools

can improve patient empowerment and, consequently, their health and wellbeing. In other words, if and how ICT can create value through PE in patient-oriented services.

For this reason, firstly we present a rapid overview of the principal ICT in health-care organizations, starting from generic front-office tools (i.e. civic networks, portals, websites, and social networks) until the hospital tools (i.e. electronic medical record, mailbox with the hospital domain, applications (app), dedicated video) to keep in touch patients or families with physicians and give real-time information about what has been done. In the same chapter, there is a literature review of the connections between ICT and patient-oriented services and the role of ICT in patients' empowerment. Secondarily, an empirical case, is presented to observe the connections between communication tools and patient empowerment. The case is an Italian Institute of Recovery and Care with Scientific Characteristic, European excellence in the orthopedic area, but also in communicative innovation, called "Gamma." The case study was analyzed by participant observation, thanks to the prolonged hospitalization that one author spent there. Twenty-six people, belonging to different stakeholders' categories, were interviewed. In the end, researchers' conclusions highlight main implication and limitation, with indications about future developments.

2   ICT and Health-care organizations

2.1 ICT in socio-sanitary organizations

Socio-sanitary organizations have mainly adapted to the use of ICT, both general of Public Administration, and specific, as electronic medical record (EMR). In the social-health context, they give many advantages, in communication between patient and structure [3], but also between physicians, and therefore among different structures and units. Interactions between doctors and patients reduce waiting times, costs for the hospital and, above all, information about updates concerning both the diagnosis and the treatment is almost in real-time [4]. These advantages are drawn from the same physicians, that have all the required documentation and can collect information, especially useful in case of doubt, and for patients too because they receive a better service. Interactions are today quite widespread, so it allows receiving and exchanging information very quickly in order to find a cure to the diagnosis, respecting patient's needs; thanks to these processes, the patient is always in the first place [2], [5], [6].

A hospital can create and update its web site, the Facebook or Instagram page on which news, images or, in a special encrypted section, sensitive data can be shared to inform patients and their families better. By reserved area, patients can vote and evaluate the structure, write comments on their experience, address people who suffer from the same disease and so on. Other common used ICT are also Tele-health systems, Management tool, HR management tools, Twitter communication, Web-based information, Technology system to support collaborative care management and active patient engagement [5], Mobile application for web portals, Internet of Things.

2.2 ICT and Patient-oriented services

The organizational structure most suitable for best collecting value creation in the public sector would be a system of services designed as a configuration of resources that includes organizations, people, information and technologies, connected internally and externally to other systems through its value proposition [7]. From this description emerges, what are the four constituent elements of the "system of services": without the interaction of these elements it is not possible to trigger the process of value creation.

The Reticular Model of the organization is the first constitutive element of the service system. This structure is a complex network of interconnected actors who, through the interaction of multiple resources, generates co-creating value processes. The value co-creation arises from this constant adaptive and incremental interaction between systems. The second constituent element is the People dimension. In this dimension there is no longer a clear distinction of roles between producers and users

of services: companies, public bodies, employees, consumers, social partner, and all other subjects contribute together to the co-creation of value by integrating and sharing the operating resources of which they are bearers in a logic of mutual exchange. Only through the exchange and intersection of the skills of all the actors involved in the system can mutual benefits be generated. Third-dimension concerns technology. It makes it possible to enhance the exchange of operant resources, which generates the real added value capable of triggering the process of co-creation of value. The development of new information and communication technologies would make it possible to increase the opportunities for interaction among stakeholders, to facilitate access and the exchange of information, and to simplify active participation. These technologies allow the constant and real-time sharing of Information, as a fourth constituent element of the systems [7]. Constant and easy access to information in real-time allows users to acquire a predominant role in service decision making.

In conclusion, the combination of these four elements allows the creation of systems or groups of various entities which, thanks to their interaction, allow the production of value co-creation. The widespread recognition in recent years of the importance of collaboration between different actors in order to achieve benefits makes the health field one of the most exciting and complex to study. If health care was once a process through which patients passively received care from service providers (doctors, nurses, etc.), now it is clear that patients can make an active contribution to the processes that involve them. This patient-centered approach implies that health care is designed around the specific needs of the patient, achieving better results both in terms of health and cost-efficiency. While on the one hand a broader set of contributors (actors) to co-creation practices (for example, family or friends) has begun to be considered, on the other, a broader set of collaborative activities has been included, such as activities related to the emotional sphere or physical well-being. [8].

The awareness of the opportunities deriving from an adequate management of resources through the integration of economic, social and political actors, has favored the birth of the concept of a service ecosystem as "a relatively autonomous and self-regulating system of integrating actors resources, connected by institutions and shared institutional agreements and co-creation of mutual value through the exchange of service " [9]. So, if the old organizational model of the sanitary system was focused on the disease, many structures have switched to patient-based organizational models.

The organization of hospitals or departments in terms of care intensity is an example. The model works for highly multidisciplinary integration processes: clinical, managerial, and logistic responsibilities are reorganized and differentiated. At the center of the healing process is the patient and the professionals revolve around him. Each patient is the recipient of the construction of a personalized map. A sequence of services organized by the hospital and delivered by a multidisciplinary team accompanies him/her from diagnosis to care to follow-up through sharing and coordination between operating units and services.

2.3 ICT and Patient Empowerment

Patients have also changed their approach to health and in their relationship with the doctor. Thanks to the spread of new information technologies, today, everyone has access to countless information in the medical field. We can speak about this possibility as Patient Empowerment (PE).

Healthcare systems are under pressure because of demographic changes and increased demand. Patient empowerment is seen as a powerful approach to cope with this pressure. Information technology is used in various forms to promote patient empowerment [10]. Empowerment means a process of social action through which people, organizations, and communities acquire competence over their lives, in order to change their social and political environment to improve equity and quality of life. However, patients do not always check the sources of information, especially on the web. They believe all there is on the web, for the sole reason that it is on Internet. Only a relationship of partnership between doctor and patient can create a climate of trust that allows the patient to move from dependency to collaboration, from obedience to responsibility. For this, doctors must prescribe "information" as well as recipes: when a patient decides clear, complete, detailed, and convincing information, the results are

generally better and the costs lower. [11] Some doctors are driven by conviction and personal sensitivity, as well as indications from enlightened directors, choose "a relational modality based on relationship, transparency, collaboration and the sharing of decisions" [11]. In this way they enable "empowerment, patient autonomy, active involvement in care, which require a new communication style centered on listening, dialogue and negotiation, to prevent patients from migrating to other treatments" [11]. The doctor changes perspective puts himself on the same level as the patient, paying attention, however not to lose authority and the consequent trust necessary for the excellent outcome of the relationship and therapies. Humanizing medicine means understanding that a good doctor must also be good listeners and invest time in relationships [11]. Only recently, the focus is shifting from the patient in its clinical context to the person in his living environment. Talking about "patient in the center" or "person in the center" is not the same. There are multiple definitions of "user involvement"; in the literature, we use this term, in general, to describe "any direct contact with users" [12]. There are three essential perspectives for involving users in health projects: the first strategy is user-centered design, where the designer actively studies and understands the patients' experiences to ensure the path is useful and usable to them. Examples include usability testing and user observation. In this case, the user is the object of study rather than driving the design process, so it is a passive approach. The second perspective is patients co-design, where the designer and users design the product together [12], giving the user more control in the design process. The third approach is participatory design, where the user is an active participant in design and has a strong voice in decision-making, driving the innovation while the designer facilitates the creative process [13]. Reported benefits of user involvement in Health Information Technology projects include improved system quality due to accurate user requirements gathering, inclusion of useful features and exclusion of less useful features, higher level of user acceptance and adoption during implementation, decreased training needs due to increased system understanding by users, and higher level of participation by users in the organization.

The scientific literature is consistent in claiming that co-production of care paves the way for increased health outcomes, enhanced patient satisfaction, better service innovation, and cost savings. The establishment of multi-disciplinary health care teams, the improvement of patient-provider communication, and the enhancement of the use of ICTs for value co-creation are crucial ingredients in the recipe for increased Patient Engagement. [14] Currently, there are several aspects of the involvement of health users that could be related to Patient Engagement. This perspective enhanced the emotional processing that patients do about their illness and their role in the care process. Authors defined the patient's involvement as "a multidimensional experience that results from the joint activation of the person on the cognitive, emotional and behavioral level towards the management of his own health"[14]. Advances in technology have empowered patients to be informed, which enabled them to play an active role in clinical encounters with the doctor [15]. The adoption of Web 2.0 in many business sectors is increasing because it offers the ability for customers to have greater control in generating contents to their personalized web. However, providing empowerment in any state of interaction levels to customers (patients) in a healthcare organization is challenging. Many healthcare organizations have adopted empowerment in their e-health scenario; therefore, it needs a mechanism to measure at which level they have implemented empowerment within their organizations. The layers of empowerment are personal, social, and medical layers, respectively. The modular approach is used to simplify healthcare organizations identifying which modules to be adopted in implementing a strategy for customers' empowerment. The maturity of the technologies for behavior change support and the illness context could impact on the kind of engagement [16]. Web 2.0, telemedicine, e-care, social media for peers are examples of this new perspective.

In the table 1, there are some possible use of new information and communication technology systems in health-care services and their effects on Patient Empowerment. The parameters for the communication services identification are based on the Communication 2.0 Observatory of the Italian Agency for Digital Italy (AgID)

Table 1 - Health tools for PE. *(Source: Authors)*

Health Tools	Function Area	Patient Empowerment
Tele-health systems	Telemedicine and e-care	Really determinant for PE and Patient Centricity. Important also for testing new collaborative forms of tele care.
Health information management tool store, management of personal health information	Administration 2.0	Conscious use of sensitive data. Participation for gathering big data.
Web-based information and communication. Technology system to support collaborative care management and active patient engagement	Communication 2.0	Humanization of the sanitary systems. Patient oriented services.
Mobile application for web portals	Communication 2.0. Accessibility/Usability	Data collection. Information 2.0
Health medication counselling session	Telemedicine and e-care	Evolution of the relationship between patients and sanitary services, and between patients and doctors.
Online peer collaboration	Communication 2.0. Accessibility/Usability	Humanization of the sanitary systems. An important challenge for peer collaboration.
Internet of Things	Communication 4.0	PE trough new devices and new applications.
Social media applications: Facebook pages, Twitter communication, dedicated channels	Communication 2.0. Accessibility/Usability	New services and information for users. Peer collaboration. Knowledge diffusion.

3. Research method

Given the explorative nature of this study, a process of qualitative data collection and analysis [17] seemed as the most appropriate. Gamma case is an excellent orthopedic structure, but it is also considered an excellent communicative one. Two years ago, it won the SMAU's award for technological and communicative innovation; hence, this case study can be a representative case, selected through the maximum intensity criterion [18]. We choose Gamma case for two main reasons, because it is a representative case of the topics observed in the literature review, but also because there was easy access to the data by researchers, thanks to interviews to many and varied stakeholders.

The typical data gathering techniques of case study research were used: document analysis, site's access, participant, and non-participant observation. The method of "participant observation" [19], indeed, allowed the researcher's first-person intervention. One author has been a long-term patient of the Hospital and played a strategic role. She could provide in respect of the objective but also the subjective characteristics, accompanying the criterion of objectivity with proven sensations and emotions by verbal and non-verbal language

Authors administered twenty-six interviews: four physicians, fifteen patients, and seven caregivers, to verify the degree of user satisfaction on the technological tools in use at the facility in question. The interviews were conducted in different ways: by e-mail, by telephone, and personally. The advantage of direct meeting and interviewing people allowed researchers interpreting their non-verbal language (i.e., expressions and gestures) regarding their satisfaction in the structure. [20].

The interviews were composed of eighteen questions subdivided in this way: the first group (seven questions) follow the Likert scale. The subject is the answer parameter the "never", "almost never", "rarely", "often", "always". They were about the frequency of Hospital's ICT use inside (displays, app, videos shown on the monitors, etc) and outside the structure (website, Facebook page, app). The second group (questions eight, nine, and ten) are open ones: people could explain positive and negative facts, in the communication field, experienced at the Hospital. Besides, interviewed people could suggest some change; this was useful to gather opinions and identify better solutions for the patients' and parents' needs. The last group (eight questions), formulated on Cantril

scale; a ten-point scale measured the interviewee's answer: one represents the negativity of the service, and ten its highest positivity. (see Appendix).

The research activities provided authors with a multi-faceted experience of the phenomenon under study, as well as rich and diverse text and data archives, resulting from institutional and corporate reports, website texts, social network texts, interview recordings, and researchers' field notes. The analyses of these archives allowed to yield a shared interpretation of the case, and to compare it to the existent literature. The work results in both retrospective analysis and a design-oriented model of communication in social-sanitary organizations. [21]

3   The "Gamma" case

The Institute for hospitalization and scientific care (IRCCS)₁ which, in this paper, will be called "Gamma," is Italian excellence on a worldwide scale in the orthopedic field [22]; for over ten years it has been providing a communication system based on the doctor-patient-family relationship.

Only ten years ago, the voice call or to go personally at the hospital were the only way to talk with physicians. Today, the IRCCS Gamma, takes care of the ICT processes to patients, minimizing waiting time to receive information, to increase the patient's empowerment and satisfaction, and consequently, the evaluation of issued services. Each IRCCS Gamma's worker has a private e-mail address with the hospital domain that will be given to all patients, to guarantee the opportunity to contact specialists speedily. Physicians, in fact, immediately receive the requests and can answer, promptly informing patients. They can use the same tool among doctors of different structures to reach a joint diagnosis.

The hospital also uses a Facebook page, managed by the human resources area, to give information about the structure; it is instrumental both to get in touch with other patients of the IRCCS and to receive information about possible services or organizational procedures. It is possible to contact the structure through a private chat; in this case, someone of the HR office will reach users to answer their request for free and in a short time. Any mobile phone or tablet provided to an internet connection can have access to this service. FB page is also useful to contact patients, receiving helpful advice. With a simple "like," users can view millions of ratings released by other users and read interviews with physicians, which are daily published

The website presents the hospital organization in detail. Each department has a dedicated page on which are listed used resources, both in medical and nursing, supporting and rehabilitation staffs, the location and the diseases treated. Each doctor also has a private website; physicians of IRCCS Gamma, indeed, are excellent and often works in other highest Italian and European centers, so it is possible to book a visit or to contact them in other locations. Patient's data are automatically recorded into the portal and kept in the archive always accessible.

The same happens with EMR [3] that it is archived and available for an informal consultation. The digitization reduces search times, the faults of homonymy, and clerical errors. The registered hospital documents, personal data, and an id code identify each people [15]. Just entering the electronic device, on which people are registered on the hospital portal, to trace all the information concerning the patient.

The IRCCS Gamma develops these innovative communication processes patient-oriented, at pre-operative admission. The first is the assignment to each patient of a doctor specializing; the second is the use of an application to continually inform the patient's family of what is happening in the operating room. Gamma is the first Italian hospital to adopt an app like that. The patient receives a link that he/she can give to his/her family. The relationship only lasts 24 hours. From the sign-up time, connection let the user see the patient's conditions, that are continuously updated. Consultation can take place from any electronic device through an internet connection. It is a simple but significant innovation that improves communication and information between structure

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1 IRCCS is an acronym of the Istituto di Ricovero e Cura a Carattere Scientifico *(eng. Trad. Institute of Recovery and Care with Scientific Characteristic)*

and patients' family according to hospital ethic code [23].

On 2017, IRCCS Gamma received the innovation award in the healthcare sector for "Life360 °" software and "Everyware" app, two projects that improve the quality of patients' care processes and communication. Life360 ° is software created to facilitate the timely sharing of all information useful for the treatment process, between physicians and patients. Patients can access their virtual folder at any time and view all the treatment process. The software has been tested only in two departments; it will be gradually extended to the entire structure. Everyware is an app designed to optimize accessibility, internal movements, and the service usability of Gamma patients and visitors. By downloading it for free on any electronic device, users can be recognized and accepted, can view their reservations and communications, can be guided to their hospital destination.

The patients' rights, especially the right to privacy protection and information, inspires these procedures [24]. The introduction of innovative technological tools led, also in this case, to significant changes in the relationship with patients, due to the patients' empowerment, so the hospital becomes excellence not only for the treatment of orthopedic diseases but also for communication between doctors and patients.

4   Data analysis and discussion

From the interviews emerge a sharp dichotomy. The 46% of those interviewed, aged between 57 and 76, declare that they do not use or rarely use information technology tools. The 65% are young people; they declare, instead, to use them every day while in hospital and, on average, once a week at other times. The interviewed patients and relatives show a high degree of satisfaction with communication in general. They are happy to receive explicit information before any performance. In their opinion, physicians "*use a comprehensible language, and it seems simple, sympathetic, and appropriate*."

62% of the interview considered very useful to find the same information on web pages and social networks, in particular on Facebook.

Patients appreciated a significant change in technological communication tools since the 2000s until the present days; they saw "*a great innovative path centered on patients' needs*." Despite 100% of respondents were satisfied and always well informed about risks and performance, it was asked to suggest something to improve. They would like a reminder (preferably through message or email), after each medical service, to book the next. Among the negative communication aspects, there are indeed difficulties to make an appointment by phone. Although the online booking service is considered very useful for reducing waiting times and costs, both site and phone, however, are not very functional in practice, so many people turn to other structures.

90% of people like watch monitors in the waiting room. 100% of them declared in this way "*to get to know Gamma's physicians". "They could discover hospital activities, information on surgeries and illnesses, so gaining awareness and feeling more reassured*."

One of the favorite tools is videos of the medical staff's interviews about pathologies, which are regularly published; they "*inform patients, increase trust, and help them to contact the most suitable doctors, to choose the best path for their needs*."

The private channel of each department, to which the patient can easily access, is also very welcome. All the interviewed doctors reported that the structure "*advised them to create a personal website, linked with a link to the IRCCS website, to inform each other's performances better and specializations and give better services*." Each doctor also provided his patients with a personal email, replying to them in 48 hours maximum. Patients and families appreciated very much "*to be able to directly dialogue with their doctor about the health status, without waiting for precise (and often long) timing*."

The electronic medical records are highly appreciated, but only 64% (young patients and families of old ones) use it. They said to "*feel empowered thanks to the regular updating at every intervention, hospitalization, therapy, clinical examination, and visit*." 20% declare that "*It is not only a simple reading; you can consult it and make decisions; you can change doctor or hospital without losing information*."

The most positively evaluated ICT tool is the code that patients receive, in case of

surgery, to login an application downloadable on any electronic device, even if only 5% have known this app before hospitalization. Physicians provide the family in real-time the information about patients, both the "state" (i.e., the location of the patient, the health condition) and developments in a secure way. A father said: "*the use of symbols makes communication understandable to all of us*." It is mainly used to know the start time of surgery, the expected period (updated for sudden complications). Even physicians love it. They feel "*proud of this ICT innovation. It allows intervening concretely on the organizational hospital processes, enhancing them and opening new scenarios of interaction with the patients and their family"*. For all, "*the app is handy in case of unconsciousness or complications, that in surgery are frequent*."

Generally, the twenty-six interviews revealed an excellent degree of satisfaction on the technological communication tools used in the structure, and 80% of them feel more involved in the care process thanks to their use. There is, perhaps, a distinction between patients supported by the National Health System and private ones. The three interviewed people who firstly accessed to the structure, highlight that staff contacted them respectively after many days, weeks and months from the surgery, to get news about their health. It was not declared the same by the other interviewees, but we think it is a non-representative sample.

5   Conclusions

According to several authors [1][4][5][6], ICTs are very useful to improve relationships among all the people involved in health care structures. The introduction of innovative technological tools leads to significant improvements in the relationship with patients, time-saving, and costs reduction. The well-being of hospitalized people also arises from their being informed and involved.

This work aimed to understand if and how the use of ICT tools could empower patients to a value co-creation. The technologies allow the constant and real-time sharing of information, that is a constituent element of value co-creation because it allows users to acquire a predominant role in service decision making.

Our contribution tried to understand the connections among patients' use of ICT, Information, involvement, and empowerment that seemed not in-depth investigated.

According to Osei et al. [15], technologies should improve the continuous network availability of information; websites and portals should promote communication, cooperation, exchange and provision of services among users that can be empowered, collaborating with workers and creating a "community" [15]. Collected data confirm the theory, even if there are still a few patients who use technological communication tools in all their potential.

Current patients exchange real-time information with doctors and nurses, but they then come up with advice and information for visitors who try to understand the benefits of the structure over the others and may then choose it. The direct contact, made by ICT, creates a sense of belonging and strong ties between doctors, nurses, past, current, and future patients and their families. Analyzed case shows that both hospital-patient and hospital-family (for example if the patient is not empowered while anesthetized, or underage) communication can create value for both of them.

The study is at the beginning and has some limits. First of all, are aware that one case study, even if excellence at European level, should be not enough, therefore we believe it is a good incentive for further study. Secondarily, it would be essential to distinguish between the patient-oriented and the person-oriented service, because in the second case, the involvement of the family is more important. We could increase the sample and divide the two categories instead of under the umbrella notion of Patient empowerment.

Another future development is the possibility of better understanding the role of each communication tool in patient empowerment, deepening all the fields of tab 1.

The different opinion between the patients of the national health service and the others shows another possible development; to understand if there are differences due to this or if both public and private hospitals can make the same investments, it would be necessary to repeat the analysis in both systems by increasing the sample. It would also be essential to understand the balance between the right to information and privacy

because new communication tools must not publicize patients' health conditions.

It seems that the hospital becomes excellence for the treatment of diseases but also for communication between physicians and patients, so we hope it is a good incentive for further study.

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Appendix

Track for questionnaire

A group (Likert scale: "never", "almost never", "rarely", "often", "always")

1. How often do you use the websites and social networks of the Gamma's structure and of the doctors who work in it before requesting a service?

2. How often do you communicate directly with the doctors' or Gamma's pages before a care service?

3. How often do you view the videos shown on the monitors when you are at the IRCSS?

4. How often do you use display communications when you are at the Gamma hospital?

5. How often do you view the app while your family member is at?

6. How often do you communicate directly with doctors via their dedicated email?

7. How often do you access your EMR?

B group (Open questions)

8: Which are, in your opinion, the most useful communication tools at the Gamma structure and why?

9. Do you think that communication tools are enough to feel you an integrated part of your/your family care, or more awareness?

10: What would you change in the Gamma's ICT system of physicians-patient-family communication?

C group (From 1 to 10 - Cantril scale)

11. In the online reservation system do you think you will receive all the information you need?

12. Do you feel empowered to know the advance notice for the services requested?

13. In case you request for information, to be contacted via e-mail makes you feel considered?

14. How much do you feel involved in receiving important information from the monitors in the waiting room?

15. How much more reassured do you feel using the health information app for family members?

16. How does your well-being improve receiving transparent communication from doctors and staff?

17. How much does your well-being improve by excellent information about the risks and procedures of a encrypted private communication tools?

18. How much do you think a good ICT increases patient satisfaction and involvement?

12