HSWAI

Instrument Design and Validation Process

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1. Purpose and Structure

This document describes the work process and activities that led to the design and creation of the Health Sector Website Assessment Index (HSWAI). It includes the steps taken and the decisions that derived from each step, registering every change performed to the instrument.

The document is structured according to the main phases presented in Section 2. Section 3 describes the design and validation, Section 4 details the dimensions and indicators weight attribution, and Section 5 reports the first application of the instrument to the Portuguese context.

Within each section, there are subsections for each task undertaken and the consequent results are presented.

2. Development Methodology

This section depicts the main steps of the development process and methodology followed to reach the latest version of HSWAI as represented in Figure 1. When applicable, it is also registered the instrument version that derived from a specific activity, enabling to keep track of changes in the instrument. Each of those steps is detailed in Sections 3, 4 and 5.

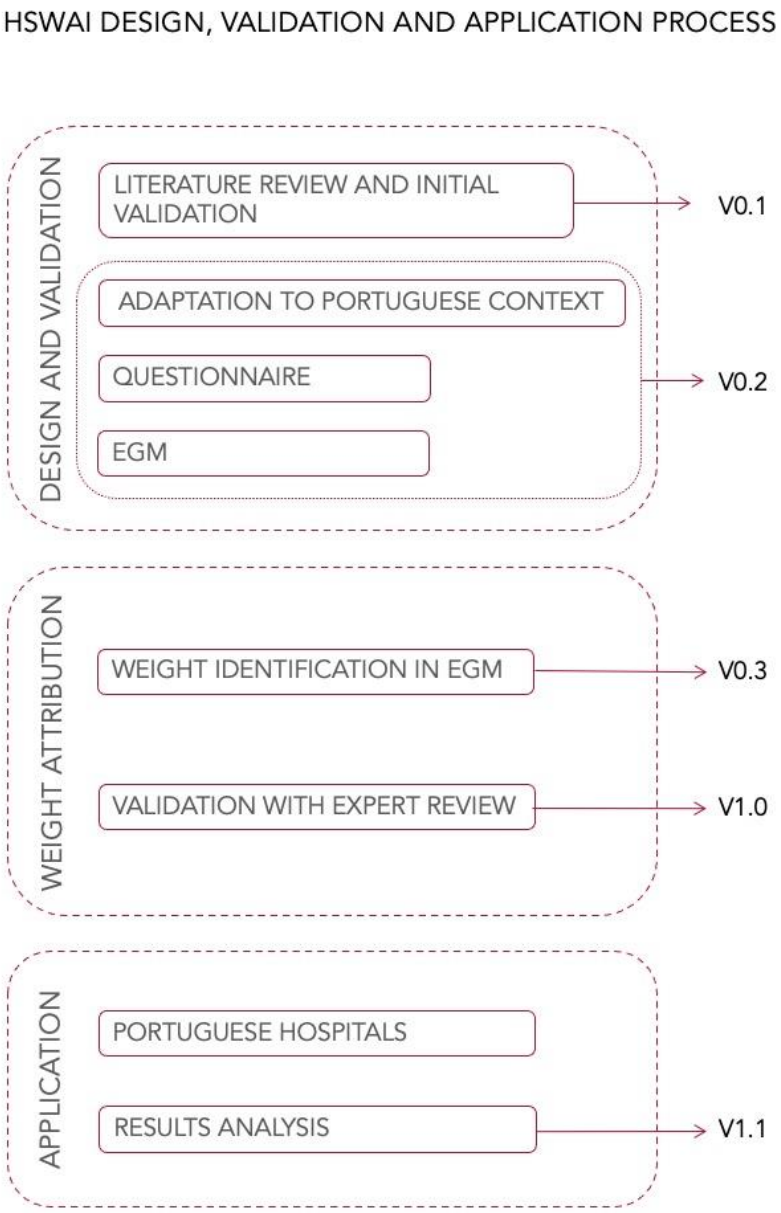

Figure 1 - HSWAI development process

Instrument development started in 2017 and HSWAI V1.1 was reached in 2019. Figure 2 depicts a timeline for project development.

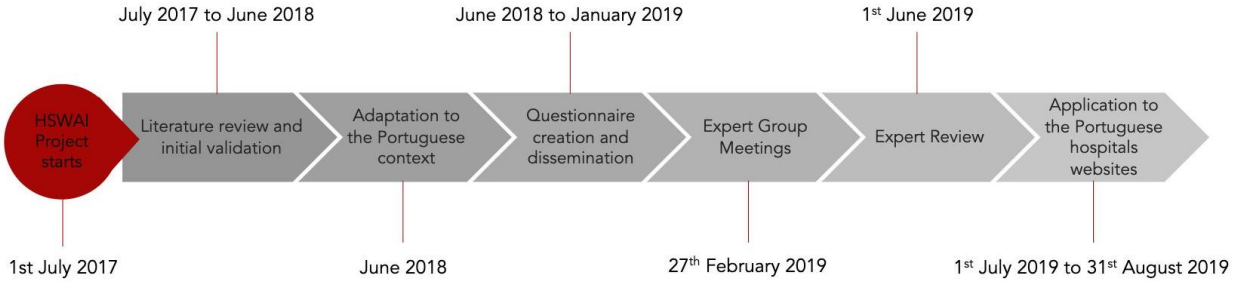

Figure 2 - Project development timeline

3. Design and Validation

The design and validation step comprises a set of activities that led to the first versions of the instrument and corresponding effort of validation. The aim in this step was to reach a first set of items (dimensions, indicators and sub-indicators) that would comprise the instrument.

3.1Literature Review

The first version of the Health Sector Website Assessment Index (HSWAI V0.0) was created based on a literature review process.

The literature review adopted an exploratory study approach to identify the conceptual content of the field and contributing to theory development towards formulating a conceptual framework.

Documents were searched in six academic online databases: Science Direct, EBSCOHost, Google Scholar, Web of Science, Scopus, and Wiley Online Library. The search limited titles from 2000 to 2017 using the following keywords and operators: hospital OR health sector AND web site OR website AND quality OR evaluation OR assessment.

Forty-five published articles were found, and the final selection was carried according to compliance with inclusion and exclusion criteria. Inclusion criteria were: a) the documents should be original articles published in peer reviewed journals or conferences; b) only articles where the complete text was available for retrieval were included. Exclusion criteria comprised: a) studies which did not contain at least one health sector website evaluation aspect; b) studies that did not make specific references to website characteristics. Among these papers, 20 were determined as suitable and were selected. In addition, a secondary search was carried out in article abstracts to locate possible relative resources which do not include some of the keywords in their titles. Four relative articles were found. The set of 24 papers collected is provided in Appendix A.

Content analysis was based on exploratory study of the selected articles carried out using systematic check techniques on existing health sector web presence assessment studies. This type of research was chosen because it can provide significant insight into a given situation, facilitating the identification, and structuring of new problems[1]. The different assessment approaches were analyzed, extracting the significant elements.

The result of the document analysis was an assessment framework comprising four dimensions and 18 indicators as presented in

Table 1. Each indicator comprises a set of sub-indicators that characterize the indicator.

Table 1 - HSWAI dimensions and indicators

Instrument	Dimension	Indicator
HSWAI	Content	Hospital Information

[1] P.M. Shields, and H. Tajalli, Intermediate theory: The missing link in successful student scholarship, Journal of Public Affairs Education, 12(3), 2006, pp. 313-334

		Quality Metrics
		Organizational Structure and Medical Information
		Patient Information
		Research and Teaching
	Services	Administration Procedures
		Appointments
		Patient Care
		Inter-Hospital Communication
		Communication with Others
	Participation	Community Interaction
		Media
		Marketing/Advertising
	Technology	Navigability
		Accessibility
		Usability/Readability
		Credibility
		Privacy/Security

3.2Instrument validation

To demonstrate the feasibility of the method used to assess health sector websites, and to apply the method, the instrument was used to assess a small set of Portuguese hospitals websites. This assessment and resulting adjustments to the instrument led to HSWAI V1.1.

A review of health sector websites in Portugal was conducted to identify hospitals that could be eligible for the study. The first eligibility criterion was for the hospital in question to have websites implemented in either Portuguese or English. These were the two languages that evaluators could understand and effectively judge the authenticity and content of a health sector website. Secondly, a decision was made to include websites from both private and public sector. This was in order to have a representative number of websites from both sectors. The third criterion was to choose hospitals from all Portuguese geographical regions.

Following this criteria, eighteen hospitals were selected: Casa de Repouso de Coimbra; Casa de Saúde de S. Mateus; Casa de Saúde de Amares; Centro Hospitalar do Algarve; Centro Hospitalar do Baixo Vouga; Centro Hospitalar entre Douro e Vouga; Centro Hospitalar Baixo Vouga; Centro Hospitalar Cova da Beira; Centro Hospitalar Barreiro Montijo; Centro Hospitalar Leiria; Centro Hospitalar Lisboa Central; Centro Hospitalar Lisboa Norte; Centro Hospitalar Lisboa Ocidental; Centro Hospitalar Médio Ave; Centro Hospitalar Médio Tejo; Centro Hospitalar Oeste; Centro Hospitalar Porto; Centro Hospitalar Póvoa de Varzim/Vila do Conde.

This evaluation was undertaken by two researchers, though also the authors cross referenced and reconciled the responses that were received. The instrument covered with a page that included a brief

introduction about website evaluation. Explanation of the questions/sub-indicators was provided to assessors. During this process, the evaluators' comments were noted by the authors who gave assistance when necessary, in order to clarify any ambiguities related to evaluation checklist.

3.3Instrument translation and adaptation to the Portuguese context

The following step was to validate the dimensions, indicators and sub-indicators proposed, consulting with professionals from health institutions and information systems professionals working in the health sector.

Wanting to apply this instrument to the Portuguese context, the instrument was translated to Portuguese taking in consideration the exact meaning of each item for its adequate translation.

Besides, the Portuguese municipalities' website evaluation instrument[2] was also analyzed looking for elements that could be included or adapted to the health institutions context. A set of sub-indicators was added concerning documents mandatory to be public by the Portuguese law. These are presented in the following table as well as the indicator in which they were inserted.

Table 2 - Sub-indicators regarding the Portuguese law

Sub-indicator	**Indicator**
Corruption Risk Management and Related Infractions Plan	Hospital Information
Debts to suppliers	Hospital Information
Head of service	Organizational Structure and Medical Information
Public procurement: announcement information on the website	Hospital Information
Public procurement: connection to base.gov	Hospital Information
Legislation applied to the health institutions context	Hospital Information
Accessibility symbol present on the main page	Accessibility
Multimedia content (video)	Usability/Readability
Website Technological Sophistication (universal services use via web services, APIs, widgets)	Usability/Readability
Communication with the institution via Chat	Interaction with the community
Opinion polls available	Interaction with the community
Grants and Public Benefits Granted	Hospital Information
Social Balance	Hospital Information
Activity Plan (may be part of the Great Options Plan (GOPs) document)	Hospital Information
Budget (may be part of the Great Options Plan (GOPs) document)	Hospital Information
Personnel map	Organizational Structure and Medical Information

[2] Soares, Delfina, Amaral, Luís, Ferreira, Luís and Lameiras, Mariana (2019). *Presença na Internet das Câmaras Municipais Portuguesas em 2019: Estudo sobre Local e-Government em Portugal.* Universidade do Minho

Activity Report (may be part of the Management Report document)	Hospital Information
Report and Account (may be part of the Management Report document)	Hospital Information
Statement of Income and Expenses (may be part of the Management Report document)	Hospital Information
Multiannual Investment Plan	Hospital Information
Data regarding the execution of the Multiannual Investment Plan	Hospital Information
Home hospitalization information	Patient Information

While translating the instrument, a few adjustments to the items were made to reflect the Portuguese context, as follows:

- Altered WCAG level to 2.0 which was required by Portuguese legislation;
- Changed the word 'hospital' to 'institution' to have larger scope;
- "Hospital annual report for the previous year" (Health Institution information available at the website – Content) was deleted and replaced by several documents required by the Portuguese law;
- "Financial data available" (Health Institution information available at the website – Content) was deleted and replaced by several documents required by the Portuguese law;
- "The site provides patients' data (anonymized)" was altered and removed from Health Institution information available at the website and moved to Research and Teaching;
- "Information about private consultations/services and fees" (Health Institution information available at the website – Patient Information) was deleted because it was not valid for the Portuguese reality;
- "Availability of membership or signing in area (Customer Area)" (Patient Care - Services) was replaced by two new sub indicators – Private area access: with login and password and Private area access: with Citizen Card or Mobile Digital Key;

3.4Online survey creation and distribution

To validate the instrument items, an online survey was created and sent to professionals from the health sector. This process began in June 2018.

This section describes the creation of the survey, its distribution process, and the analysis of the data collected. Figure 3 provides an overview of this activity through a timeline of the events that took place.

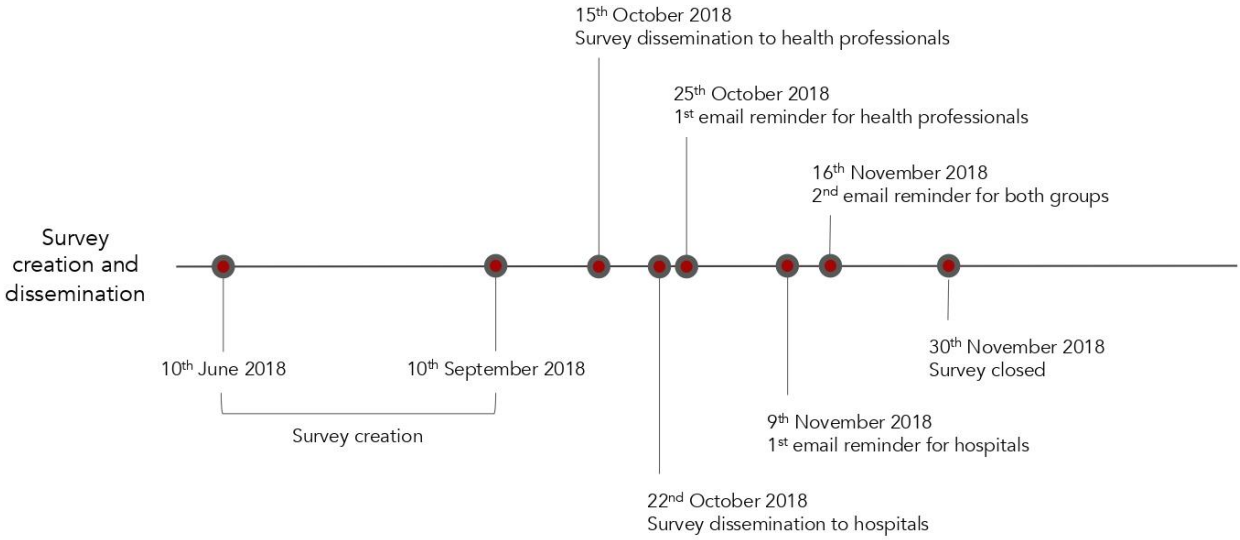

Figure 3 - Questionnaire creation and distribution timeline

3.4.1 Survey creation

An online survey was created using LimeSurvey (Version 2.67.2+170719).

The main goal of this survey was to understand if health sector professionals and information systems professionals working in the health sector found the evaluation items to be valid (if they made sense within the health context) and if they were applicable in the context of their institutions.

The survey was divided into four groups according to the instrument's dimensions (Content, Services, Participation and Technology) each containing a set of indicators. Within each indicator, several sub-indicators were assessed. For each sub-indicator two things were requested:

- The relevance of the sub-indicator (if the item was relevant to be included in the website evaluation instrument) with the options of: Maintain, Remove or Alter. If Remove or Alter were chosen, a new question would appear, asking for details on why it should be removed or how it should be altered.
- The applicability of the sub-indicator (if the item applies to the type of health institution represented by the respondent) with the option: Applicable or Not Applicable. The option Applicable was pre-selected for every item.

Five professional groups associated with the health sector were identified that were of interest to participate in this survey:

- Health professionals (doctors, nurses, etc.);
- Health institutions administrators and managers;
- Health institution information systems and technology professionals;
- Academics doing research in the area;
- Consultants working directly with health institutions.

The Technology dimension options would only appear for IS professionals, academics and IS consultants due to its specificity and level of detail.

3.4.2 Survey distribution

The survey was sent on the 15th of October 2018 to a set of 69 professionals. The survey was closed on the 30th of November 2018 and so it was active for 43 days.

Two email reminders to answer the survey were sent to this group. The first one was sent after 10 days on the 25th of October 2018 and the second one was sent on the 16th of November 2018.

From this survey five complete answers were received.

Considering the reduced response rate, the survey was later sent to 81 Portuguese health institutions asking them to disseminate the survey for their collaborators. This survey was distributed on the 22nd of October 2018 and closed on the 30th of November and so it was active for 36 days.

Two email reminders were sent to this group: the first after 17 days, on the 9th of November 2018 and the second on the 16th of November 2018

From this survey we got three complete answers.

3.4.3 Survey analysis

In total, 8 complete and 45 incomplete answers were received. Incomplete answer is considered one in which the respondent began answering the survey but never finished it. From the incomplete answers, 4 of them were also considered for analysis because they had advanced greatly in the survey and contributed with their opinion for some of the items.

3.4.4 Respondents Profile

The professional profiles of the respondents are presented in Table 3.

Table 3 - Professional profiles of survey respondents

Profession	**Number of respondents**
Doctor, Nurse or Health Technician	3
IST Professional	3
Other	2

From the four incomplete answers considered, three of them belonged to the administrative or management profession and one was a doctor, nurse or health technician.

3.4.5 Comments and suggestions

All the respondents' answers were analyzed and checked to see if they made sense of in their respective organizational context.

It was perceived that some respondents could not understand what was asked or understood the survey as an evaluation of the institution in which they work. Nonetheless, whenever a commentary was made, it was carefully analyzed to see its validity for the item being evaluated.

To further understand some answers, some issues were discussed with a hospital administrator that was able to give some insights to the doubts that arose while analyzing respondents' answers. One relevant aspect that will affect how Portuguese Public Hospitals are evaluated, is that most of them follow a website template provided by the National Health Service. This template has a rigid structure that doesn't allow for much innovation or personalization.

A table was created with the suggestions offered by the respondents as well as their opinions regarding some of the items. The table can be found in Appendix A.

3.4.6 Sub-indicators refinement

After analyzing and debating over the suggestions received, a new version of the instrument was prepared (version 0.2). The changes performed include:

- Grouping all the reports mandatory by the Portuguese law in one single sub-indicator that is called Management Reports;
- 'List of employed doctors in alphabetical order' and 'List of employed doctors by specialization' were merged into a single sub-indicator called: List of employed doctors;
- 'Details of how to pay prescription charges or fees' was simplified to 'Details of how to pay charges or fees so it can be applied to any context because, for example, in Portugal, paying for prescriptions has nothing to do with the hospital but paying for an appointment or exam does and the fee changes according to the person;
- 'Medical Examination Appointment via e-mail' and 'Medical Examination Appointment via web form' were merged into 'Medical Examination Appointment via web';
- 'Schedule Admission via e-mail' and 'Schedule Admission via web form' were merged into 'Schedule Admission via web';
- 'Schedule visits to outpatient consulting rooms via e-mail' and 'Schedule visits to outpatient consulting rooms via web form' were merged into 'Schedule visits to outpatient consulting rooms via web';
- 'Synchronous communication with interactive communication tool (chat with the doctor)' was changed to 'Synchronous communication with interactive communication tool (chat with a doctor)'. This was creating some confusion as respondents believed the patients specific doctor had to be part of the communication;
- 'Multimedia content (video)' was removed for being too generic.

A better Portuguese translation was created for the following sub-indicators:

- Services charter;
- Information regarding patients' privacy;

- The website provides open data regarding patients and hospital practices;
- Patient care service or unit;

3.5Expert Group Meetings

The purpose of the EGMs was to collect contributions from participants to reformulate, add and remove indicators and sub-indicators, as well as to validate and attribute relative significance to the dimensions, indicators and sub-indicators that compose the proposed instrument for evaluating health institutions web presence.

The EGMs took place the 27th of February 2019 in Guimarães at the facilities of UNU-EGOV.

3.5.1 Agenda

Both meetings had the same structure, following the presented steps:

- Welcome and self-introductions
- Introduction to the EGM – Purpose and objectives
- HSWAI presentation
- Main Discussion
    - Dimensions relevance - Which are the main dimensions (categories, areas) that should be covered in a hospital website?
    - Dimensions classification - Attribute relative significance to each dimension
    - Indicator relevance - Which are the indicators that each dimension should consider
    - Indicator classification - Attribute relative significance to each dimension
    - Sub-indicator assessment - Which are the sub-indicators that should be assessed when evaluating a health institution website?
- Group photo and Coffee Break
- Final discussion

3.5.2 Participants

Two expert groups were held. One in the morning with professionals from the health sector and another in the afternoon with citizens.

The health sector professionals invited included doctors, nurses and technicians, health institutions administrators and managers, health institutions information systems and technology professionals, academics doing research in the area, and consultants working directly with health institutions. We were able to gather a group of 6 experts, consisting of 2 doctors, 1 academic, 1 consultant, and 2 researchers.

A rapporteur was assigned to take notes of the meeting and register the discussion. These notes can be found in Appendix B.

The citizens group was composed of 11 participants

3.5.3 General remarks and decisions

a) From the discussions had, it was decided to create a document describing the HSWAI instrument in full detail – HSWAI Methodological Guide. This document should include the scope of instrument application and a description of each dimension, indicator, and sub-indicator. Regarding each sub-indicator, a description of how the evaluation should be conducted should also be provided.

b) An effort should be made to describe with more precision the assessment perspective.

c) A decision was made to limit the application of the instrument to hospitals and hospital-like institutions.

d) It was discussed whether we should state 'websites' or 'portals' in the name of the instrument considering that there is a difference between the two. Portal usually refers to a more advanced mechanism that integrates a reserved area for users[3].

e) The distinction between private and public hospital institutions was mentioned several times in the analysis conducted. Two of the most frequent comments were the fact that some of the things being evaluated do not occur in public institutions and the other was related with the expectation of better services from private institutions. Nevertheless, it was decided to keep the same evaluation items for both situations since public hospitals should be incited to do better and try to keep up with private services offered.

3.5.4 Proposed changes to the instrument and decisions

Participants' input was registered, and several suggestions were considered resulting in some changes. The changes introduced are presented in this section. The final version of the instrument after these changes is version 0.2.

3.5.4.1 Content

i. Quality Metrics

- Mandatory metrics were discussed and revised, after consulting also the Portuguese National Statistics Institute and the Health Shared Services Portals. A decision was also taken to ask evaluators to register additional metrics they may find during the evaluations.

[3] Reyes, Christine (7th July 2017). Portal vs. Website: When to Use Each. Available at https://www.liferay.com/pt/blog/en-us/digital-strategy/portal-vs-website-when-to-use-each

- A sub-indicator was added for the availability of information about the waiting time to be attended in the emergency room – 'Waiting time to be seen in the emergency room'.

ii. Patient Information

- In the sub-indicator 'Admission guide: information and procedure for obtaining a copy of the medical documentation' was removed the "Admission Guide" part.

iii. Research and Teaching

- A sub-indicator was added for the number of internships accepted by the hospital each year.
- The sub-indicator 'The website provides open data regarding patients and hospital practices' was moved to Quality Metrics and a new one was added in this indicator – 'The website provides clinical open data'.

3.5.4.2 Services

iv. Administration Procedures

- The sub-indicators 'Provision of digitally signed documents' and 'Acceptance of digitally signed documents' are very hard to evaluate and a decision was made to remove them. Even so, during the first application of the instrument, evaluators will be asked to pay attention to these specificities.

v. Appointments

- For each sub indicator the word 'manage' was introduced to cover for the various options: consult, schedule, change. This alteration was done to make it possible to evaluate public hospitals in the cases where scheduling is not possible but consulting and requesting a change of date should be. For evaluation purposes, in the case of Portuguese public hospitals, the two latter options must be available for the hospital to punctuate.
- The sub-indicator 'electronic payment' was moved to the 'Administration Procedures' indicator.

vi. Patient Care

- In the sub-indicator 'Electronic directory with patient's exams', the word "exams" was changed to "records".
- A sub-indicator was added regarding the existence of electronic prescriptions – 'Electronic Prescription available'.

3.5.4.3 Inter-Hospital Communication and Communication with others

- These two indicators were removed from the instrument for now because they would imply a different type of assessment or assessing information regarding the existence of such features. It is possible that in the future, these may reintegrate the instrument.

3.5.4.4 Participation

The name of this dimension was changed with the name of the first indicator. The name of this dimension is now 'Community Interaction' and the first indicator 'Participation'. In this document the sections will maintain the previous names.

vii. Community Interaction

- The sub-indicators regarding 'Suggestions/Complaints' and 'Information request' via web form or email were merged into 'via web' to simplify the evaluation since what is being assessed is the existence of a mechanism that allows the user to perform any of these actions.
- The sub-indicator regarding 'Suggestions/Complaints' was divided in two. One for suggestions and one for complaints. Evaluators will be asked to specify what the portal made available for complaints: web form, email address or electronic complaint book. This last one is mandatory by Portuguese law.
- The sub-indicator 'Information about job opportunities at the hospital' was moved to the indicator 'Advertising/Marketing'.

viii. Media

- Public Relations Office sub-indicators are inserted in this indicator instead of Content – Information because these are not the core business of the hospital activity and is associated with Media.
- 'Virtual Visit to the institution' is in this indicator because it is usually created by the Public Relations Office.

ix. Advertising/Marketing

- Every sub-indicator regarding a social media use was changed to a social media link since what is being assessed is the presence of a link to the social media in the portal and not the existence of the social media account.
- The sub-indicator 'Affiliated insurance companies' was moved to Content – Patient Information. This was done because it is of the patient's interest to know if the hospital as a contract with the insurance company to which he is affiliated.
- The sub-indicator 'Advertising is not contradictory with respect of the website contents' needs to be clearly explained for evaluation purposes since it is very subjective to evaluator perception.

3.5.4.5 Technology

The dimension name was changed to Technology Features.

x. Accessibility

- The sub-indicators regarding website compatibilities with browsers were merged into one now called 'Website is compatible with the 3 most used browsers in the country'
- The same was done for the sub-indicator 'Access from mobile devices' which is now 'Website is compatible with the 3 most used mobile browsers in the country'

xi. Credibility

- The sub-indicator 'Interest conflict declaration is shown' was changed to 'Interest Conflict declaration or Declaration of non-conflict is shown'.

- The sub-indicator 'Sources and references are clearly listed' was removed due to the difficulty for assessment. There could be cases where references are not required, and the hospital cannot be penalized for that.

xii. Privacy/Security

- The sub-indicator 'There is a privacy policy' was changed to 'There is a website privacy policy'.

4. Weight Attribution

Following the instrument components validation phase, it was necessary to attribute weights to each dimension and indicator to reflect the level of relevance of each of them to the global computation of the Index. This section describes the technique and process used to perform weight attribution and validation.

4.1Weight Identification in the EGMs

One of the EGMs' objectives was to seize the opportunity of having a group of professionals and a group of citizens available to perform weight attribution. After this activity, the instrument is on version 0.3.

4.1.1 AHP Analysis

The Analytic Hierarchy Process (AHP) method was the method selected and used to determine the weights of the different dimensions and indicators. AHP is a structured technique for organizing and analyzing complex decisions. It is an approach to quantify the weights of decision criteria. Individual experts' experiences are utilized to estimate the relative magnitudes of factors through pair-wise comparisons. Each of the respondents compares the relative importance of each pair of items using a specially designed questionnaire. The comparison scale presented in the Table 4 was used.

Table 4 - Scale used for AHP analysis of sub-indicators

Explanation	Numeric Values
If Option A and Option B are equally important : Mark/Insert ->	1
If Option A is moderately more important than Option B : Mark/Insert ->	3
If Option A is strongly more important than Option B : Mark/Insert ->	5
If Option A is very strongly more important than Option B : Mark/Insert ->	7
If Option A is extremely more important than Option B : Mark/Insert ->	9
Use even numbers for intermediate judgments ->	2, 4, 6, 8

Dimensions were compared in relation to one another and the same was done for indicators within each dimension.

4.1.2 AHP results

Answers from EGMs' participants were analyzed, and the final weights attributed to each dimension and indicator calculated. Table 5 presents the results obtained.

Table 5 - Weight attribution to HSWAI dimensions and indicators

Dimensions/Indicators	Experts average	Users average	Average	Rough Estimation

Content	15,4	32	23,7	20
Health institution information available in the website	19,1	17,7	18,4	20
Quality Metrics	24,7	16,8	20,75	20
Organizational Structure and Medical Information	13,7	19	16,35	20
Patient Information	33,6	40,7	37,15	30
Research and Teaching	8,9	5,8	7,35	10
Services	50	44,3	47,15	40
Administration Procedures	14,2	11,9	13,05	20
Appointments	36,6	46,1	41,35	40
Patient Care	38,5	28,8	33,65	30
Inter-Hospital Communication	5,7	8,3	7	5
Communication with Others	5	4,9	4,95	5
Community Interaction	19,7	5,6	12,65	20
Participation	68,4	72,7	70,55	70
Media	20,9	16,7	18,8	20
Advertising/Marketing	10,7	10,6	10,65	10
Technology	14,9	18,1	16,5	20
Navigability	12,4	16,2	14,3	20
Accessibility	26,4	19,1	22,75	20
Usability/Readability	24,3	18,1	21,2	20
Credibility	16,7	18,4	17,55	20
Privacy/Security	20,2	28,2	24,2	20

After looking at the results of the weight attribution and at the latest version of the instrument (version 0.2), we concluded some adjustments had to be made to the weights to provide adequacy to the latest version. Version 0.2 of the instrument derived from the EGMs' suggestion and as such was different from the one the participants attributed weights to. An algorithm was established for weight attribution. The algorithm for weight calculation followed three simple rules:

Rule 1: The weight value is a multiple of 10;

Rule 2: The weight value is the result of truncation in the Average column;

Rule 3: If, after applying rules 1 and 2 the sum of weights does not result in 100 we add 10 to the element (dimension, indicators) which scores closer to the next ten. We repeat this process until the sum of weight results 100.

4.1.3 Final weight attribution

The final weight attribution is presented in Table 6.

Table 6 - Final weight attribution to HSWAI dimensions and indicators

Dimensions/Indicators	Experts average	Users average	Average	Rough Estimation	Algorithm Estimation
Content	15,4	32	23,7	20	20
Health institution information available in the website	19,1	17,7	18,4	20	20
Quality Metrics	24,7	16,8	20,75	20	20
Organizational Structure and Medical Information	13,7	19	16,35	20	10
Patient Information	33,6	40,7	37,15	30	40
Research and Teaching	8,9	5,8	7,35	10	10
Services	50	44,3	47,15	40	50
Administration Procedures	14,2	11,9	13,05	20	10
Appointments	36,6	46,1	41,35	40	40
Patient Care	38,5	28,8	33,65	30	30
Inter-Hospital Communication	5,7	8,3	7	5	10
Communication with Others	5	4,9	4,95	5	10
Community Interaction	19,7	5,6	12,65	20	10
Participation	68,4	72,7	70,55	70	70
Media	20,9	16,7	18,8	20	20
Advertising/Marketing	10,7	10,6	10,65	10	10

Technology	14,9	18,1	16,5	20	20
Navigability	12,4	16,2	14,3	20	20
Accessibility	26,4	19,1	22,75	20	20
Usability/Readability	24,3	18,1	21,2	20	20
Credibility	16,7	18,4	17,55	20	20
Privacy/Security	20,2	28,2	24,2	20	20

4.2Validation with Expert Review

Version 0.3 of the instrument was then sent to two experts who had already taken part in the professionals EGM. Both had large experience working with the health sector and understand both informational and technical components.

The goal of this validation was to get some feedback on the weights assigned to dimensions and indicators. An email was sent to the two experts on the 1st of June 2019. Only one of the experts replied.

According to the expert, weight attribution seemed reasonable, and no further comments were made on the topic. The expert left two remarks on two sub-indicators and slight changes were performed accordingly:

- 'Affiliated insurance companies' was changed to 'Affiliated insurance companies and other entities' to include national health entities that provide some type of coverage;
- 'Medical prescription available' was changed to 'Possibility to require and/or obtain medical prescription' to make more specific what is intended by the item.

After all the changes, HSWAI 1.0 was finished and ready to be applied to the Portuguese context.

5. Application to the Portuguese context

Application to the Portuguese context began on the 1st of July 2019 and lasted until the end of August. Throughout the assessment process, two independent assessors evaluated each hospital website following the methodological guide provided and filling an evaluation matrix. The assessors' evaluations were compared by one of the research team experts. All the discrepancies detected were rechecked by the assessors. If, after rechecking, a discrepancy still persisted, the team expert would make the evaluation of the item.

The assessment process revealed the need to do some adjustments/improvements in the instrument and suggestions from the assessors were taken in consideration for future applications of HSWAI.

This chapter describes the entire process of application of the instrument to the Portuguese context, highlighting the selection of assessors, the assessment process, suggestions, and observations provided by the experts, as well as changes that were after performed to the instrument originating version 1.1 of the instrument.

5.1Selection of assessors and process definition

Two assessors were selected to conduct the evaluation process. A first meeting was adjourned on the 1st of July to present the team and the instrument. Initial doubts regarding any of the instrument items were addressed and made clear.

The methodological guide and the evaluation matrix were explained in detail and provided to each assessor. The methodology guide contains all the details for each item assessment. The evaluation matrix provides the list of hospitals, corresponding URL, identification if it is public or private, and an answer field for each sub-indicator being assessed.

A process of weekly checking of the assessments done that week was in place for progress follow-up.

Assessors were requested to do the assessments in the shortest time possible to ensure the same website version was being evaluated by both.

5.2Assessment process observations

Both assessors stated the assessment took between thirty minutes to one and a half hour, with an average of 45 minutes per website. Information dispersion was their main difficulty since each website follows a different structure, requiring a great attention from the assessors' side to find and identify the necessary information.

While conducting the evaluation, the set of notes and suggestions summarized in Table 7 were provided by the assessors.

Table 7 - Observations provided by the assessors during the assessment process

Sub-indicator number	Sub-indicator name	Observation
C1.i3.2	Services Charter	Assessors had difficulty in identifying what this document was
C1.i3.3	Listing of services available at the institution	Assessors had difficulty in distinguishing between the three
C1.i3.4	Detailed list of outpatient institution services available (consultation, diagnostic services)	
C1.i3.5	Departments or units providing user services: complete list	
--	--	There was a common doubt in distinguishing between Services and Departments. For example, C1.i3.6/7/8 and C1.i4.9/10/11 were always confused. The logic that was adopted was considering service as the direct public interaction and department as the back office of some specialization.
C1.i3.12	Photos of the medical team available	It was considered '1' only when individual photos were available. Also, it was considered '1' if at least some of the medical team had photos
C1.i3.13	Head of Service	Service was considered as a medical specialization
C1.i3.14	Possibility to read online or to download healthcare booklets	Assessors considered booklets all small informative articles that could be shared online through email or social networks
C1.i5.2	Publications of the institutions	Description should be made clearer that the publications should be scientific publications. Assessors were considering the hospital magazine.
C2.i1.4	Electronic Payment	A better description of the sub-indicator was requested describing more clearly what can be expected
C2.i3.2	Asynchronous communication with the doctor via email	Assessors considered this item as '1' if the doctor's e-mail was available
C4.i1.5	Interwebsite links show full description of the linked website	Assessors started to assume that if the link was the name of the company, for example, or the commercial image of some organization, this was considered a full description
C4.i4.7	Webmaster characteristics	Assessors had a very hard time understanding what a webmaster is and how to find this information
C4.i5.3	Ownership of the site	Assessors didn't know where to find this information. They started considering the item value as '1' if the bottom of the website said "Hospital xyz – all rights reserved"

5.3Assessment analysis

After completing the assessment, the analysis was initiated. A complete report of the Portuguese hospitals' application was produced. This section intends to provide information regarding sub-indicators with most and least identification during the assessment.

Only two sub-indicators received value '1' in all hospital website assessments. This reveals the sub-indicators which are present in every website analysed as is shown in Table 8.

Table 8 - Sub-indicators that scored '1' in all hospitals

Sub-indicator code	Sub-indicator name
C4.i2.7	Website listed on the first page of results after performing a Google search
C4.i4.1	The text is grammatically correct

There were ten sub-indicators that scored '0' in all assessments (Table 9), suggesting that these items are not being considered in any website in the Portuguese context.

Table 9 - Sub-indicators that scored '0' in all hospitals

Sub-indicator code	Sub-indicator name
C1.i2.2	Waiting list disclosed
C1.i2.10	Institution quality indicator: surgical mortality rate disclosed
C1.i2.13	The website provides open data regarding patients and hospital practices
C2.i1.3	Possibility of filled forms uploading
C2.i3.1	Asynchronous communication with the doctor via message exchange system
C3.i1.5	Discussion forum
C3.i2.3	Virtual visit to the institution
C3.i3.1	Website sponsors and investors are disclosed
C4.i1.3	Best browser version for the website is indicated
C4.i3.10	The website offers means to adjust (increase) the contrast of textual information for visitors with visual impairments

Table 10 depicts sub-indicators in which less than 10% (13) of the assessed hospitals tended for the same result. The colours represent the tendency. If green it means most hospitals received value '1', if red it means most hospitals received value '0'.

Table 10 - Sub-indicators with great tendency for the same answer

Sub-indicator code	Sub-indicator name	# '1'	# '0'
C1.i1.1	Institution name on the page header	131	1
C1.i1.2	Institution logo on the page header	131	1
C1.i1.4	Institution postal address	131	1
C1.i1.5	Institution telephone and/or fax number	131	1
C1.i2.7	Institution report of the number of admissions in the previous year	5	127
C1.i2.8	Institution quality indicator: nosocomial infection rate disclosed	1	131
C1.i2.9	Institution quality indicator: inpatient mortality rate disclosed	1	131
C1.i2.11	Institution quality indicator: others	2	130
C1.i2.12	Information on births per year	2	130
C1.i3.2	Services charter	5	127
C1.i3.3	Listing of services available at the institution	126	6
C1.i3.5	Departments or units providing user services: complete list	119	13
C1.i3.8	Departments or units providing user services: working hours	13	119
C1.i3.9	Personnel map	4	128
C2.i2.2	Manage admission via web	5	127
C2.i3.2	Asynchronous communication with the doctor via e-mail	6	126
C2.i3.3	Synchronous communication with interactive communication tool (chat with a doctor)	1	131
C3.i1.3	Information request via web	131	1
C3.i1.4	Communication with the institution via chat	3	129
C3.i1.7	Opinion polls available	6	126
C3.i1.10	Associations that work at the institution: patient associations	4	128
C3.i1.11	Associations that work at the institution: associations for the defence of patients' rights	5	127
C3.i2.5	Public relations office: work hours	3	129
C3.i2.6	Public relations office: location	6	126
C3.i3.4	Information on how to make a donation to the hospital	1	131
C3.i3.6	Twitter link	8	124
C4.i1.4	Interwebsite links are distinguished from intrawebsite links	1	131
C4.i1.6	Functioning intrawebsite links	127	5
C4.i1.7	Functioning interwebsite links	130	2
C4.i2.2	Compliance with level AA WCAG 2.0 W3C	12	120
C4.i2.3	Compliance with level AAA WCAG 2.0 W3C	1	131

C4.i2.5	Website is validated through W3C CSS 3.0 Validation Service	5	127
C4.i2.6	Website is validated through W3C Markup Validation Service (html5)	1	131
C4.i2.9	Website is compatible with the 3 most used browsers in the country	130	2
C4.i2.10	Website is compatible with the 3 most used mobile browsers in the country	131	1
C4.i3.5	Illustrations/pictures/photos accompany text to assist description	121	11
C4.i3.6	Graphics open conveniently (images/graphics are quick to load)	128	4
C4.i3.8	Individual sub-pages have specific and meaningful titles	129	3
C4.i3.11	The website offers means to adjust (increase) the text size without compromising the functionality of the website	7	125
C4.i3.12	The website provides a (consistently accessible) menu structure for navigating its sub-pages	129	3
C4.i3.13	Website does not include pop-up advertising	1	131
C4.i3.14	Website Technological Sophistication (universal services use via web services, APIs, widgets)	120	12
C4.i4.2	The text does not have spelling errors	128	4
C4.i4.3	Interest Conflict declaration or Declaration of non-conflict is shown	4	128
C4.i4.6	Website has HON (Health On the Net) foundation code certification	1	131
C4.i4.7	Webmaster characteristics	1	131
C4.i5.4	Responsible of the website content	2	130

Sub-indicators in which more than 10% (13) and less than 20% (26) of assessed hospitals tended for the same result are presented in Table 11. The colours have the same significance as before where green reveals a positive tendency for value ‘1’ and red a tendency for value ‘0’.

Table 11 - Sub-indicators in which hospitals have some tendency for the same result

Sub-indicator code	Sub-indicator name	# ‘1’	# ‘0’
C1.i1.19	Emergency Information	19	113
C1.i2.14	Results of surveys regarding patient satisfaction are provided	19	113
C1.i3.6	Departments or units providing user services: location	26	106
C1.i3.15	Medical glossary available	19	113
C2.i1.1	Provision of online forms	118	14
C2.i1.2	Possibility of forms downloading	17	115
C2.i1.4	Electronic payment	19	113
C2.i3.5	Provision of telemedicine (video-conference system) services	20	112
C2.i3.8	Private area access: with Citizen Card or Mobile Digital Key	24	108

C2.i3.9	Possibility to require and/or obtain medical prescription	23	109
C3.i2.7	Public relations office: telephone and/or fax number	22	110
C3.i2.8	Public relations office: e-mail address	24	108
C3.i3.9	Other social networks link (e.g., Flickr, Instagram)	26	106
C4.i1.1	Website name appears on browser title bar	113	19
C4.i1.2	Active part of the site appears on browser title bar	115	17
C4.i1.5	Interwebsite links show a full description of the linked website	111	21
C4.i2.1	Compliance with level A WCAG 2.0 W3C	15	117
C4.i2.4	Accessibility symbol present on the main page	15	117
C4.i3.7	Website pages can be printed	26	106
C4.i3.9	The layout of the website is responsive (i.e. does it adapt to varying screen sizes), or there is a separate version for mobile devices	110	22
C4.i4.5	ages have dates associated with them (There are indications of updates to materials)	107	25
C4.i5.2	Copyright notice	106	26
C4.i5.6	There is a website privacy policy	105	27

5.4Changes to the Instrument and Methodology Guide

This section presents the changes implemented in the instrument, methodology guide and evaluation matrix resulting from the analysis of the observations provided by the assessors. The analysis demanded careful attention to attain the best decision for future HSWAI applications.

Table 12 - Changes to HSWAI resultant from the application to the Portuguese context

Sub-indicator code	Sub-indicator name	Change performed
C1.i1.21	Applied legislation to the health institutions context	Change description to: Existence of information regarding applied legislation to the health institution's context (e.g. law decrees, laws)
C1.i1.21	Applied legislation to the health institutions context	Make assessment in both public and private hospitals
C1.i2.13	The website provides open data regarding patients and hospital practices	Change description to: Presentation of administrative open data regarding patients and hospital practices. Open data is considered data in any file format (pdf, doc, xls).
C1.i3.2	Services charter	Change description to: Presentation of hospital's services charter.

		The services charter is a statement that clarifies the responsibilities of the hospital. Examples can be consulted here: http://www.coflanzo.eu/download/cartaservizi_ing.pdf or https://kijabehospital.org/wp-content/uploads/2013/07/HOSPITAL-CHARTER-1-1.pdf
C1.i3.3	Listing of services available at the institution	Change description to: Presentation of all the services available in the hospital. Services require admission to the hospital (e.g.: maternity, complex surgery, rehabilitation)
C1.i3.4	Detailed list of outpatient institution services available (consultation, diagnostic services)	Change description to: Presentation of a detailed list of available outpatient institution services (e.g.: consultation, diagnostic services, minor surgery, routine exams)
C1.i3.5	Departments or units providing user services: complete list	Change description to: Presentation of a complete list of the departments or units providing user services in the hospital
C1.i3.12	Photos of the medical team available	Change description to: Presentation of at least one individual photo of the medical team (physicians, nurses)
C1.i3.13	Head of Service	Change description to: Information regarding the head of each service/medical specialty
C1.i3.14	Possibility to read online or to download healthcare booklets	Change description to: Provision of health-care booklets in electronic form (online or download form). Booklet can also be any small informative text that is easily shared online.
C1.i5.2	Publications of the institution	Change description to: Presentation of a list of scientific publications of the institution
C1.i5.3	Undergraduate or postgraduate courses that are held at the institution	Describe assessment aspect: If the hospital states on the website that it has/offers graduate and/or postgraduate courses, it should be assessed as a teaching hospital.
C1.i5.5	Number of internships accepted by the hospital each year	Change to section C1.i2 and become C1.i2.15. It refers to the number of internships accepted and can be classified as a quality metric. Besides, it is not dependent on the hospital being a teaching facility.
C1.i5.6	The website makes clinical open data available	Change to section C1.i2 because it is not dependent on the hospital being a teaching facility.
C2.i1.4	Electronic Payment	Change description to: Possibility of the user to make an electronic payment using any service that allows for non-presential payment
C2.i2.1	Manage medical examination via web	Change assessment note: the value is “1” if it is possible to, at least, change an appointment, schedule an appointment, or consult and change the scheduled appointment.

C2.i3.2	Asynchronous communication with the doctor via email	Change description to: The website provides the possibility for the user to have an asynchronous communication with the doctor via email. It can be by making the doctors' email address available or within a private area.
C4.i4.7	Webmaster characteristics	Change description to: The presence of webmaster characteristics is assessed. Webmaster is a role responsible for maintaining/administering the website. It can usually be found at the bottom of the webpage.
C4.i5.3	Ownership of the site	Change description to: The ownership of the site is presented. This can be identified if anywhere on the website can be found something similar to: "xyz all rights reserved"
---	---	Remove the option 'NAPA' (No Access to Private Area) from the possible answers list. If something is clearly described as being part of a reserved section, it should be assumed as '1'.

After changes, the instrument is on version 1.1

Appendix A – List of articles used during literature review

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Appendix B – Respondents suggestions from the online survey

PORTUGUESE VERSION			ENGLISH VERSION		Only for Private Inst. in Portugal	Only for Public Inst. in Portugal	Obs. based on quest. Answers
Conteúdo			Content				
Indicador	**itm nbr**	**Sub indicador**	**Indicator**	**Sub indicator**			
Informação sobre a Instituição de Saúde disponível no website	1	Nome da instituição no cabeçalho da página	Health institution information available in the website	Institution name on page header			
	2	Logótipo da instituição no cabeçalho da página		Institution logo on page header			
	3	Mensagem de boas vindas		Welcome message			Considered non relevant information for one participant
	4	Morada da instituição		Institution postal address			
	5	Número de telefone e/ou fax da instituição		Institution telephone and/or fax number			
	6	Endereço email da instituição		Institution e-mail address			
	7	Número de contribuinte da instituição		Institution VAT number			Considered non relevant information for one participant
	8	Planta da área da instituição (incluindo parques de estacionamento)		Map of the hospital area (including parking lots)			
	9	Formas de chegar à instituição: carro, transporte público		Ways of reaching the institution location: car, public transport			
	10	Serviços Complementares: quiosque, café, televisão, telefone, estacionamento, serviço religioso		Complementary services: press,cafeteria, television, telephone, parking, religious service			Considered non relevant information for one participant
	11	Lista de contactos telefónicos		Phone directory			
	12	História da instituição		Institution history			Considered non relevant information for one participant
	13	Declaração de Propósito (Missão, Visão, Valores)		Statement of purpose (Mission, Vision, Values)			Considered non relevant information for two participants
	14	Abrangência da instituição (população servida)		Area covered by the hospital (population served)			Considered non relevant information for one participant
	15	Certificação de Gestão de Qualidade (e.g. ISO, EFQM)		Quality Management Certification (e.g. ISO, EFQM)			

PORTUGUESE VERSION			ENGLISH VERSION		Only for Private Inst. in Portugal	Only for Public Inst. in Portugal	Obs. based on quest. Answers
Conteúdo			Content				
Indicador	**itm nbr**	**Sub indicador**	**Indicator**	**Sub indicator**			
	16	Balanço Social		Social Balance		x	Considered non relevant information for one participant. May be included in the Report and Account
	17	Plano de Atividades (pode fazer parte do documento Grandes Opções do Plano (GOPs))		Activity Plan (may be part of the Great Options Plan (GOPs) document)		x	Considered non relevant information for two participants
	18	Orçamento (pode fazer parte do documento Grandes Opções do Plano (GOPs))		Budget (may be part of the Great Options Plan (GOPs) document)		x	Considered non relevant information for three participants
	19	Relatório de atividades (pode fazer parte do documento Relatório de Gestão)		Activity Report (may be part of the Management Report document)		x	Considered non relevant information for one participant
	20	Relatório e Contas (pode fazer parte do documento Relatório de Gestão)		Report and Account (may be part of the Management Report document)		x	Considered non relevant information for one participant
	21	Mapa de Receitas e Despesas (pode fazer parte do documento Relatório de Gestão)		Statement of Income and Expenses (may be part of the Management Report document)		x	Considered non relevant information for two participants. May be included in the Report and Account
	22	Planos plurianuais de investimentos		Multiannual Investment Plan		x	Considered non relevant information for two participants. May be included in the Report and Account
	23	Dados relativos à execução anual dos planos plurianuais		Data regarding the execution of the Multiannual Investment Plan		x	Considered non relevant information for two participants. May be included in the Report and Account
	24	Plano de Gestão de Risco de Corrupção e Infrações Conexas		Corruption Risk Management and Related Infractions Plan		x	Considered non relevant information for two participants
	25	Dívidas a fornecedores		Debts to suppliers		x	Considered non relevant information for one participant. May be included in the Report and Account
	26	Contratação pública: informação sobre anúncios no próprio website		Public procurement: announcement information on the website			Considered non relevant information for two participants
	27	Contratação pública: ligação ao base.gov		Public procurement: connection to base.gov		x	Considered non relevant information for one participant. It can be a direct link to where the information is available.

PORTUGUESE VERSION			ENGLISH VERSION		Only for Private Inst. in Portugal	Only for Public Inst. in Portugal	Obs. based on quest. Answers
Conteúdo			Content				
Indicador	**itm nbr**	**Sub indicador**	**Indicator**	**Sub indicator**			
	28	Subvenções e Benefícios Públicos Concedidos		Grants and Public Benefits Granted		x	Considered non relevant information for two participants. May be included in the Report and Account
	29	Informação sobre o que fazer em casos de emergência		Emergency information			
	30	Informação relativa a hospitalização domiciliária		Home hospitalization information		x	There are other ways of care which are not being focused like the external consultation, emergency room, Cirurgy, admissions, Day care hospital, Physical therapy, Lab, etc.
	31	Legislação aplicável no contexto da saúde		Applied legislation to the health institutions context			Considered non relevant information for three participants. It can be a direct link to where the information is available.
Métricas de Qualidade	32	Número de camas disponíveis	Quality Metrics	Number of institution beds disclosed			
	33	Informação da lista de espera do dia		Waiting list disclosed			
	34	Tempo de espera para consultas		Waiting time consultation			
	35	Tempo de espera para cirurgia		Waiting time surgery			
	36	Data da última monitorização da lista de espera		Date of last monitoring of the waiting list disclosed			
	37	Número de admissões no ano anterior		Institution report of the number of admissions in the previous year			
	38	Indicador de qualidade do hospital: Taxa de infecção nosocomial		Institution quality indicator: nosocomial infection rate disclosed			
	39	Indicador de qualidade do hospital: Taxa de mortalidade dos pacientes internados		Institution quality indicator: inpatient mortality rate disclosed			
	40	Indicador de qualidade do hospital: Taxa de mortalidade cirúrgica		Institution quality indicator: surgical mortality rate disclosed			
	41	Indicador de qualidade do hospital: outro		Institution quality indicator: others			
	42	Informação de nascimentos por ano		Information on births per year			
	43	Resultados de questionários sobre a satisfação dos pacientes		Results of surveys regarding patient satisfaction are provided			

PORTUGUESE VERSION			ENGLISH VERSION		Only for Private Inst. in Portugal	Only for Public Inst. in Portugal	Obs. based on quest. Answers
Conteúdo			Content				
Indicador	**itm nbr**	**Sub indicador**	**Indicator**	**Sub indicator**			
Estrutura Organizacional e Informação Médica	44	Organograma (gestão médica, gestão de enfermagem, gestão institucional)	Organisational Structure and Medical Information	Organisation chart (medical management, nursing management, institution management)			Considered non relevant information for one participant
	45	Descrição detalhada de cada serviço		Services charter			We need a better translation to Portuguese. This is the list of Patients Rights or fundamental basic principles.
	46	Lista de serviços disponíveis na instituição		Listing of services available at the institution			
	47	Lista detalhada de serviços disponíveis para pacientes de ambulatório (consultas, serviços de diagnóstico)		Detailed list of outpatient institution services available (consultation, diagnostic services)			
	48	Departamentos ou unidades que oferecem serviços ao utilizador: lista completa		Departments or units providing user services: complete list			
	49	Departamentos ou unidades que oferecem serviços ao utilizador: localização		Departments or units providing user services: location			
	50	Departamentos ou unidades que oferecem serviços ao utilizador: telefone e/ou número fax e/ou endereço email		Departments or units providing user services: telephone and/or fax number and/or e-mail address			
	51	Departamentos ou unidades que oferecem serviços ao utilizador: horário de funcionamento		Departments or units providing user services: working hours			
	52	Mapa de Pessoal		Personnel map			It was considered not relevant information for 4 respondents.
	53	Lista de médicos da instituição por ordem alfabética		List of employed doctors in alphabetical order			Respondents think it is more useful the organization by specialty
	54	Lista de médicos da instituição por especialidade		List of employed doctors by specialisation			
	55	Informação/Curricula dos médicos		Doctors' curricula/information			5 respondents argue that this information is unnecessary
	56	Fotos da equipa médica (médicos, enfermeiros)		Photos of the medical team (physicians, nurses) available			1 respondent thinks this is irrelevant
	57	Responsável por cada serviço		Head of service			
	58	Brochuras sobre cuidados de saúde (ler online ou descarregar)		Possibility to read online or to download health-care booklets			

PORTUGUESE VERSION			ENGLISH VERSION		Only for Private Inst. in Portugal	Only for Public Inst. in Portugal	Obs. based on quest. Answers
Conteúdo			Content				
Indicador	**itm nbr**	**Sub indicador**	**Indicator**	**Sub indicator**			
	59	Glossário médico		Medical glossary available			4 respondents think this should not be available. 1 suggested a link to one already existent.
	60	Informação sobre o processo saúde-doença e respetivos tratamentos		Conditions and Treatments			4 respondents think this should not be available. 1 suggested a link to one already existent.
Informação para os Pacientes	61	Informação relativa à privacidade dos pacientes	Patient Information	Information regarding patient privacy			We should state clearly what we mean in portuguese
	62	Direitos e obrigações dos pacientes		Patient's rights and obligations			
	63	Guia de admissão: são apresentados diferentes tipos de admissão		Admission guide: different types of admissions are disclosed			
	64	Guia de Admissão: informação e regras a serem seguidas no momento de admissão		Admission guide: information and rules to be followed on admission			
	65	Guia de Admissão: informação e regras a serem seguidas durante o internamento na instituição		Admission guide: information and rules to be followed during the stay at the institution			
	66	Guia de Admissão: informação e regras a serem seguidas no momento de alta		Admission guide: information and rules to be followed on discharge			
	67	Guia de Admissão: informação e regras a serem seguidas pelos visitantes		Admission guide: information and rules to be followed by visitors			
	68	Guia de Admissão: informação e procedimentos a seguir para obtenção de cópia da documentação médica		Admission guide: information and procedure for obtaining a copy of the medical documentation			
	69	Serviço ou unidade de cuidado do paciente: localização		Patient care service or unit: location			It is possibly not clear what we mean in the portuguese version because of the difference between "consulta externa" and "internamento"
	70	Serviço ou unidade de cuidado do paciente: horário de funcionamento		Patient care service or unit: business hours			It is possibly not clear what we mean in the portuguese version because of the difference between "consulta externa" and "internamento"

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Conteúdo			Content				
Indicador	**itm nbr**	**Sub indicador**	**Indicator**	**Sub indicator**			
	71	Serviço ou unidade de cuidado do paciente: telefone e/ou fax		Patient care service or unit: telephone and/or fax			It is possibly not clear what we mean in the portuguese version because of the difference between "consulta externa" and "internamento"
	72	Detalhes sobre como pagar encargos ou taxas das prescrições		Details of how to pay prescription charges or fees			It was recommended that a link would be enough since these values are always changing and depend on each patient. We should state clearly that it is for pharmacy prescriptions
	73	Lista de consultas/serviços taxados disponíveis		List of consultations/services with fees available			There should be a link to the website where this information is available
	74	Informação para estrangeiros		Information for foreigners			
Investigação e Ensino	75	Estudos científicos que a instituição promove ou que está envolvida	Research and Teaching	Scientific studies that the institution promotes or is involved in			
	76	Publicações da instituição		Publications of the institution			
	77	Cursos superiores ou de pós-graduação da instituição		Undergraduate or postgraduate courses that are held at the institution			
	78	Calendário de atividades que decorrem na instituição: cursos, congressos e conferências		Schedule of activities that take place at the institution: courses, congresses and conferences			
	79	Existência de biblioteca		Presence of a library		x	
	80	Biblioteca: endereço		Library: address		x	
	81	Biblioteca: horário de funcionamento		Library: business hours		x	
	82	Biblioteca: catálogo de publicações		Library: publications catalog		x	
	83	Biblioteca: serviços disponíveis (e.g. leitura, empréstimo, cópias)		Library: services available, such as reading, loans, copies		x	
	84	O site disponibiliza dados abertos sobre os pacientes e práticas hospitalares (open data)		The website provides open data regarding patients and hospital practices			We should state this more clearly in Portuguese

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Conteúdo			Content				
Indicador	**itm nbr**	**Sub indicador**	**Indicator**	**Sub indicator**			
					Suggestions for this Group		One respondent recommends the inclusion of Blood Donation Schedules and other useful information. Another says that a lot of information is already available on the Health Ministry page and that direct links are enough.
Serviços			Services				
Indicador		**Sub indicador**	**Indicator**	**Sub indicator**			
Procedimentos Administrativos	85	Disponibilização de formulários online	Administration Procedures	Provision of online forms			
	86	Possibilidade de descarregar formulários		Possibility of forms donwloading			
	87	Possibilidade de fazer upload de formulários preenchidos		Possibility of filled forms uploading			
	88	Disponibilização de documentos assinados digitalmente		Provision of digitally signed documents			
	89	Aceita documentos assinados digitalmente		Acceptance of digitally signed documents			
Marcações	90	Marcação de exame médico via email	Appointments	Medical Examination Appointment via e-mail	x		We think we can merge these two "via web"
	91	Marcação de exame médico via preenchimento de formulário web		Medical Examination Appointment via web form	x		
	92	Marcação de internamento via email		Schedule Admission via e-mail	x		We think we can merge these two "via web"
	93	Marcação de internamento via preenchimento de formulário web		Schedule Admission via web form	x		
	94	Marcação de consulta médica via email		Schedule visits to outpatient consulting rooms via e-mail	x		We think we can merge these two "via web"
	95	Marcação de consulta médica via preenchimento de formulário web		Schedule visits to outpatient consulting rooms via web form	x		
	96	Pagamento eletrónico		Electronic payment			
Cuidado do Paciente	97	Comunicação assíncrona com o médico através de sistema de troca de mensagens	Patient Care	Asynchronous communication with the doctor via message exchange system			
	98	Comunicação assíncrona com o médico através de e-mail		Asynchronous communication with the doctor via e-mail			

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Conteúdo			Content				
Indicador	**itm nbr**	**Sub indicador**	**Indicator**	**Sub indicator**			
	99	Comunicação síncrona através de ferramenta de comunicação interativa (chat com o médico)		Synchronous communication with interactive communication tool (chat with the doctor)			We should state clearly that it can be any doctor
	100	Diretoria eletrónica com os exames dos pacientes		Electronic directory with patient's exams			
	101	Oferta de serviços de telemedicina (sistema de vídeo-conferência)		Provision of telemedicine (video-conference system) services			
	102	Telemonitorização de pacientes (e.g. sinais vitais específicos, glucose, fluxo máximo, química do sangue/urina)		Patient telemonitoring (e.g. specific vital signs, blood glucose, peak flow rate, blood/urine chemistry)			
	103	Acesso a área reservada: por login e password		Private area access: with login and password			
	104	Acesso a área reservada: por Cartão de Cidadão ou Chave Móvel Digital		Private are access: with Citizen Card or Mobile Digital Key			
Comunicação entre Instituições de Saúde	105	Troca de dados eletrónicos do paciente (Registos eletrónicos do paciente)	Inter-Hospital Communication	Electronic exchange of patient's data (Electronic patient record)			
	106	Troca de outros dados eletrónicos		Electronic exchange of other data			How can we evaluate this item?
	107	Serviços de teleconsulta		Teleconsultation services			
Comunicação com Outras Instituições	108	Integração do Sistema de Informação da instituição com os sistemas de informação das empresas farmacêuticas	Communication with Others	Integration of Institution's Information System with pharmaceutical companies information systems			We should revise the inclusion of these two items since they cannot be evaluated with a simple website consultation. Only if conducted by someaone from the inside.
	109	Integração do Sistema de Informação da instituição com sistemas de organizações do setor público (e.g. segurança social, municípios, etc.)		Integration of Institution's Information System with public sector's organisations systems (e.g. social security, municipalities etc.)			
Participação							
Indicador		**Sub indicador**	**Indicator**	**Sub indicator**			
Interação com a	110	Sugestões/reclamações através de formulário web	Community Interaction	Suggestions/Complaints via web form			
	111	Sugestões/reclamações através de e-mail		Suggestions/Complaints via e-mail			

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Conteúdo			Content				
Indicador	**itm nbr**	**Sub indicador**	**Indicator**	**Sub indicator**			
Comunidade	112	Pedidos de informações através de formulário web		Information request via web form			
	113	Pedidos de informações através de e-mail		Information request via e-mail			
	114	Existe chat para interação com a instituição		Communication with the institution via Chat			
	115	Informações sobre oportunidades de trabalho na instituição		Information about job opportunities at the hospital			
	116	Fórum de discussão		Discussion forum			It was considered not relevant for one respondent
	117	Se o website tem um fórum, é possível identificar o administrador		If the website has a forum it is possible to identify the administrator			It was considered not relevant for one respondent
	118	Existem sondagens de opinião		Opinion polls available			
	119	FAQ (questões frequentes)		FAQ			
	120	Associações que trabalham na instituição: associações de voluntários (responsabilidade social)		Associations that work at the institution: voluntary associations (social responsibility)			
	121	Associações que trabalham na instituição: associações de pacientes		Associations that work at the institution: patient associations			
	122	Associações que trabalham na instituição: associações para a defesa dos direitos do paciente		Associations that work at the institution: associations for the defence of patients' rights			
Média	123	A instituição nos média: notícias que apareceram em jornais, revistas, rádio, TV, redes sociais	Media	The institution in the media: features news that appeared in press, radio, TV, social networks			
	124	Calendário/newsletter atualizado de notícias/eventos		Website provides an up-to-date news/events schedule/newsletter			
	125	Visita virtual à instituição		Virtual visit to the institution			
	126	Ligações a outros websites de interesse: hospitais, sociedades científicas, instituições		Links to other websites of interest: hospitals, scientific societies, institutions			
	127	Gabinete de relações públicas: horário de funcionamento		Public relations office: work hours			
	128	Gabinete de relações públicas: localização		Public relations office: location			

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Conteúdo			Content				
Indicador	**itm nbr**	**Sub indicador**	**Indicator**	**Sub indicator**			
	129	Gabinete de relações públicas: telefone e/ou número fax		Public relations office: telephone and/or fax number			
	130	Gabinete de relações públicas: endereço e-mail		Public relations office: e-mail address			
	131	Notícias da instituição (e.g. novas técnicas utilizadas pelos especialistas, melhorias na infraestrutura)		Institution news: new techniques used by the center specialists, infrastructure improvement			
Publicidade /Marketing	132	São divulgados os patrocinadores e investidores do website	Advertising/ Marketing	Website sponsors and investors are disclosed			
	133	Publicidade existente no website diferencia-se de outro tipo de conteúdos		Advertising and contents are differentiated	x		
	134	Publicidade existente não é contraditória aos conteúdos do website		Advertising is not contradictory with respect of the website contents	x		
	135	Informação sobre como fazer um donativo à instituição		Information on how to make a donation to the hospital			
	136	Ligação ao Facebook		Facebook use			
	137	Ligação ao Twitter		Twitter use			
	138	Ligação ao LinkedIn		LinkedIn use			
	139	Ligação ao Youtube		Youtube use			
	140	Ligação a outras redes sociais (e.g. Flickr, Instagram)		Other social networks use (e.g. Flickr, Instagram)			
	141	Companhias de seguros afiliadas		Affiliated insurance companies	x		
Tecnologia							
Indicador		**Sub indicador**	**Indicator**	**Sub indicator**			
Navegabilidade	142	O nome do website aparece na barra de título do browser	Navigability	Website name appears on browser title bar			
	143	A parte ativa do site aparece na barra de título do browser		Active part of the site appears on browser title bar			
	144	Indicação da melhor versão do browser para a visualização do website		Best browser version for the website is indicated			

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Indicador	**itm nbr**	**Sub indicador**	**Indicator**	**Sub indicator**			
	145	Links para websites externos são distinguidos de links dentro do website		Interwebsite links are distinguished from intrawebsite links			
	146	Links para websites externos mostram uma descrição completa do website a que se ligam		Interwebsite links show a full description of the linked website			
	147	Os links internos do website funcionam		Functioning intrawebsite links			
	148	Os links externos funcionam		Functioning interwebsite links			
Acessibilidade	149	Conformidade com o nível A WCAG 2.0 W3C	Accessibility	Compliance with level A WCAG 2.0 W3C			
	150	Conformidade com o nível AA WCAG 2.0 W3C		Compliance with level AA WCAG 2.0 W3C			
	151	Conformidade com o nível AAA WCAG 2.0 W3C		Compliance with level AAA WCAG 2.0 W3C			
	152	Símbolo de acessibilidade na página principal		Accessibility symbol present on the main page			
	153	O website é validado através do Serviço de Validação W3C CSS 3.0		Website is validated through W3C CSS 3.0 Validation Service			
	154	O website é validado através do Serviço de Validação de Marcação W3C (html5.0)		Website is validated through W3C Markup Validation Service (html5)			
	155	O website é listado na primeira página de resultados após uma pesquisa no Google		Website listed on the first page of results after performing a Google search			
	156	Para cada sub-página é oferecida uma descrição clara e específica através de etiquetas META/descritivas		For individual sub-pages, there is a specific and meaningful description provided via the META/description tag			
	157	O website é compatível com o Internet Explorer		Website is compatible with Internet Explorer			
	158	O website é compatível com o Mozilla Firefox		Website is compatible with Mozilla Firefox			
	159	O website é compatível com o Google Chrome		Website is compatible with Google Chrome			
	160	O website é compatível com o Safari		Website is compatible with Safari			
	161	O website é compatível com o Microsoft Edge		Website is compatible with Microsoft Edge			
	162	O website é acessível a partir de dispositivos móveis		Access from mobile devices			
Usabilidade/Legibilidade	163	Disponibilização do mapa do website	Usability/Readability	Website map available			
	164	Existência de mecanismo de pesquisa no website		Website search engine			

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Conteúdo			Content				
Indicador	**itm nbr**	**Sub indicador**	**Indicator**	**Sub indicator**			
	165	Disponibilização do website em línguas estrangeiras		Access to the website in foreign languages			
	166	Tempo de carregamento do website		Website load time			
	167	Os textos são acompanhados de ilustrações/imagens/fotografias para ajudar na descrição		Illustrations/pictures/photos accompany text to assist description			
	168	Conteúdos multimédia (vídeo)		Multimedia content (video)			
	169	Gráficos abrem convenientemente (imagens/gráficos carregam rapidamente)		Graphics open conveniently (images/graphics are quick to load)			
	170	Possibilidade de impressão das páginas do website		Website pages can be printed			
	171	Sub-páginas têm um título específico e com significado		Individual sub-pages have specific and meaningful titles			
	172	O layout do website é responsivo (i.e. adapta-se a vários tamanhos de ecrã), ou existe uma versão para dispositivos móveis		The layout of the website is responsive (i.e. does it adapt to varying screen sizes), or there is a separate version for mobile devices			
	173	Possibilidade de ajuste do contraste da informação textual para visitantes com problemas de visão		The website offers means to adjust (increase) the text size without compromising the functionality of the website			
	174	Possibilidade de ajuste do tamanho do texto sem comprometer a funcionalidade do website		The website offers means to adjust (increase) the contrast of textual information for visitors with visual impairments			
	175	Existência de estrutura em menu (acessível consistentemente) para navegar nas sub-páginas da instituição		The website provides a (consistently accessible) menu structure for navigating the department's sub-pages			
	176	Existência de publicidade pop-up		Website does not include pop-up advertising			
	177	Sofisticação Tecnológica do website (e.g. utilização de serviços universais via web services, APIs, widgets)		Website Technological Sofistication (universal services use via web services, APIs, widgets)			
Credibilidade	178	O texto está gramaticamente correto	Credibility	The text is grammatically correct			
	179	O texto não contém erros		The text does not have spelling errors			

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Conteúdo			Content				
Indicador	**itm nbr**	**Sub indicador**	**Indicator**	**Sub indicator**			
	180	Declarações de conflitos de interesses são apresentadas		Interest conflict declaration are shown			
	181	Data da última atualização do website é apresentada		Date of last website update			
	182	As páginas têm datas associadas (Há indicadores de atualizações dos materiais)		Pages have dates associated with them (There are indications of updates to materials)			
	183	O website tem o código de certificação da fundação HON (Health On the Net)		Website has HON (Health On the Net) foundation code certification			
	184	Características do webmaster		Webmaster characteristics			
	185	Fontes e referências são claramente mencionadas		Sources and references are clearly listed			
Privacidade /Segurança	186	Isenções de responsabilidade	Privacy/Security	General disclaimers provided			
	187	Aviso de copyright		Copyright notice			
	188	Propriedade do website		Ownership of the site			
	189	Responsável pelo conteúdo do website		Responsible of the website content			
	190	Segurança do website (encriptado)		The site is secure (encrypted)			
	191	Política de privacidade		There is a privacy policy			
	192	Política de cookies		Cookie Policy			

Appendix C – Notes from the EGMs (in Portuguese)

Expert Group Meeting
Instrumento para Avaliação dos Websites das Instituições de Saúde
Notas da Reunião

1. DATA & LOCAL

Quarta-feira, 27 fevereiro de 2019 (09:30-12:30), instalações da UNU-EGOV no Campus de Couros, Rua Vila Flor 166 (Guimarães, Portugal).

2. PARTICIPANTES

Os participantes foram profissionais do setor da saúde (médicos, enfermeiros, técnicos), administradores e gestores de instituições de saúde, profissionais de sistemas de informação e tecnologias de instituições de saúde, académicos que realizam a sua investigação na área e consultores que trabalham diretamente com instituições de saúde. Detalham-se os participantes:

- Médico 1 (M1), Médico do Hospital de Braga
- Rapporteur (R), UNU-EGOV, Portugal
- Investigador 1 (I1), UNU-EGOV, Portugal
- Investigador 2 (I2), UNU-EGOV, Portugal
- Investigador 3 (I3), UNU-EGOV, Portugal
- Académico (A), Professor Universitário da Universidade do Minho
- Investigador externo 1 (IE1), Regional Center for Studies on the Development of the Information Society/ The Brazilian Network Information Center (Cetic.br/NIC.br), Brasil
- Investigador externo 2 (IE2), Regional Center for Studies on the Development of the Information Society/ The Brazilian Network Information Center (Cetic.br/NIC.br), Brasil
- Consultor (C), Lynx.IT
- Médico 2 (M2), Médico de Clínica Geral e Familiar

3. PROPÓSITO DA REUNIÃO

A finalidade deste EGM era validar e atribuir significância relativa às dimensões, indicadores e subindicadores que compõe o instrumento proposto para avaliação da presença web de instituições de saúde.

4. OBJETIVOS

Os principais objetivos do EGM foram:

• Identificar as principais dimensões que devem ser avaliadas num website de uma instituição de saúde;
• Atribuir significância relativa a cada dimensão;
• Identificar os indicadores que devem ser incluídos em cada dimensão;
• Atribuir significância relativa a cada indicador;
• Identificar os subindicadores que devem ser utilizados na avaliação da presença web de instituições de saúde;
• Discutir a aplicabilidade do instrumento.

5. SUMÁRIO DA REUNIÃO

(I1) iniciou a sessão com a explicação do motivo da realização do projeto (qual o seu propósito, objetivos e contexto do instrumento), seguindo para uma contextualização sobre o que é a UNU-EGOV (pequeno resumo histórico e principais objetivos).

(I1) introduziu as apresentações da apresentação da equipa de investigação e pediu a apresentação dos participantes, passando a palavra a cada um.

(I3) procedeu à explicação da relevância do instrumento de avaliação e contextualização do desenvolvimento do instrumento e da recolha de dados demográficos do EGM:

- 4 dimensões: Conteúdo, Serviços, Participação e Tecnologia;
- 177 indicadores;
- Subindicadores.

_____Início da Discussão_____

(A) foi o primeiro interveniente, e afirmou que concorda com a dimensão da vertente dos websites, no entanto suscitou dúvidas na parte dos conteúdos. (A) acredita que os websites dos hospitais estão direcionados para ótica da centralidade no hospital e não na disponibilização de serviços e informações ao utente e que, por isso, é difícil avaliar os conteúdos que o hospital providencia sem definir claramente o que cada website deverá ter ou não (discussão essa que não foi feita). Estes websites tem uma visão federal que deturpa a visão dos conteúdos (não existe arquitetura de conteúdos).
Os websites dos hospitais não devem ser o local para propaganda de informação de saúde. Há 2 indicadores importantes a considerar:

- Diversidade do *look&feel* dos hospitais, ainda em processo de aprendizagem. Todos eles apresentam estruturas diferentes.
- Páginas estão centradas no marketing e não na prestação de serviços aos utentes.

É necessária uma abordagem centralizada da elaboração dos websites.

(I1) reforçou a intenção de este estudo ser aplicado no contexto português, na vertente pública, e que é necessário perceber a capacidade do seu impacto, para que seja possível a aplicação noutros contextos, permitindo assim uma análise comparativa. O importante é a facilidade de acesso à informação (não necessariamente a informação em si, mas o número de "*clicks*" necessários para lá chegar).

(M1) defendeu que o sucesso da informação do website deverá partir da sua difusão e da comunidade em que está inserido. Um forte conhecimento desta comunidade permitirá evitar a exclusão social (informação pode estar bem partilhada, mas a população não ter capacidade para aceder a ela, devido às elevadas faixas etárias ou baixo nível de literacia). Neste momento não há fontes claras e fidedignas que esclareçam direitos e informações do utente.

Segundo (C), a informação relativa a doenças deve ser partilhada com os utentes e nesse seguimento, (A) acrescentou que a informação presente nos websites deverá ser coerente, coesa e fidedigna e o princípio deverá ser o de ter o utente no centro do sistema.

(IE2) comparou este tema com o seu trabalho na área da governação eletrónica. Questionou se os indicadores servem para todos as instituições de saúde e qual é o conceito de instituição de saúde neste estudo.

(IE1) afirmou que a pesquisa no Brasil está virada para a vertente da investigação. Os hospitais do setor público no Brasil não têm website pessoal, sendo os serviços prestados apenas no website do governo central (à exceção dos hospitais privados que tem website próprio). Além disso, as especificações dos hospitais são importantes para a definição do instrumento, já que alguns serviços são sempre centralizados (ex. transplantes, que fazem o reencaminhamento a nível central de pacientes consoante especialidades e vagas dos serviços).

(I1) prosseguiu na agenda da discussão, com a explicação da questão da pontuação e o facto de ainda não haver um peso associado aos indicadores.

Entrega de um questionário de cotação de valores das dimensões para preenchimento pedido aos presentes. Preenchimento da primeira página das dimensões do instrumento.

(I3) introduziu a dimensão "Serviços", com a explicação dos indicadores.

(IE2) realçou que em alguns websites apenas se consegue verificar e analisar os parâmetros com login do utente, ou seja, havendo interação. Há por isso a necessidade de referência desta questão, já que a informação pode existir na área reservada e não disponibilizada livremente ao público.

(M1) observou falha de 2 itens: cirurgia de ambulatório e cirurgia programada (marcações). Embora seja impossível marcar cirurgia pelo website, a área reservada pode permitir contacto mais privado. Por vezes, a forma como os administrativos passam a mensagem pelo telefone é bastante diferente da informação passada pelo médico. É necessária uma maior transparência na comunicação com o doente.

(IE1) explicou que o regime no Brasil é diferente, já que primeiro os utentes vão a uma consulta geral e só depois são conduzidos para uma especialidade.

(C) reforçou a importância de diferenciar o uso do utente e o uso do profissional.

(A) mencionou o exemplo das câmaras municipais e referenciou que quando se tornou obrigatório que estas tivessem um website, a sua instalação foi bastante rápida, no entanto houve alguma demora na implementação dos serviços, já que estes são iguais para todas as faixas etárias e exigiram um maior cuidado. O cidadão que procura informação do hospital é diferente daquele que está a ser seguido nas consultas, logo as lógicas de avaliação terão que ser diferentes. Tem de haver uma distinção entre públicos. Além disso, sugere que também deva existir um sistema de gestão de acessos ao website, já que as marcações de consultas e sistema de acompanhamento não devem ser supridas pelo website. Não se deve avaliar uma função que não seja do website. É importante poder seguir procedimento e processo, assim como perceber o que leva uma pessoa ao website do hospital. Usabilidade tem que ter importância.

(M1) esclareceu que os exames e consultas são os únicos que permitem marcação.

(I1) questionou o grupo de experts se o pagamento de serviços pode ser efetuado por via eletrónica, e estes respondem que depende se o utente está ou não isento de taxas moderadoras e que o pagamento nunca será efetuado online, apenas presencialmente, devendo este parâmetro ser excluído.

(I3) introduziu a explicação do indicador "Cuidado do Paciente", na dimensão "Serviços".

Relativamente a este indicador, (IE1) afirmou que os_cidadãos devem poder ter acesso ao seu historial clínico e explicou que no Brasil existe essa possibilidade, e existe também um projeto nacional para interoperabilidade entre hospitais (marcação e visualização, acesso aos resultados dos exames online).

(M1) esclareceu que o médico deverá informar os pacientes que existe uma hora reservada semanalmente para que estes possam esclarecer dúvidas simples que facilitem o acesso às consultas por quem realmente necessita. Ao nível urbano, acredita que os serviços funcionam muito bem, mas na vertente rural e a nível das aldeias não. Nestes casos, ligar para os utentes revela-se bastante mais eficaz. Além disso, defende que a informação do pré e pós-operatório poderia ser fornecida no website.

(IE1) sugeriu que seja possível que os pacientes com doenças crónicas recebam informação por mensagem para lembrar a medicação e o modo de seguir o tratamento.

Durante a sua intervenção, (A) defendeu que a disponibilização de ferramentas de contacto simples e rápida é importantíssima. A qualidade do website está inteiramente ligada ao uso do mesmo. A lógica da construção do site e efetiva prestação de serviços ao cidadão e não apenas a apresentação institucional do hospital é importante. Quando os sistemas não são integrados é que são disponibilizados os dados. É a forma como o hospital presta contas à comunidade e por isso os indicadores de saúde devem ter nível de transparência elevado.

(I1) esclareceu que é possível que a comunicação entre instituições de saúde seja avaliada por observação mas não tem que pertencer à estrutura do website.

(IE2) defende que os websites deviam pelo menos conter a informação de que existe a troca de dados entre instituições para maior transparência pública.

(IE1) sugeriu que nesta dimensão fosse acrescentada a vertente da Telemedicina, que se enquadra na vertente do cuidado com o paciente.

(M1) voltou ao tema das marcações, e sugeriu que nos websites deva constar informação relativa às marcações e não apenas a possibilidade de marcar consultas ou exames. Defende que deveria haver sistema de interação entre serviços centrais e hospital onde o paciente é atendido e que o agendamento no website deverá ser algo lógico (através de uma área reservada, com possibilidade de assinatura digital e acesso com cartão de cidadão), seguido por (A), que considera inadmissível que: "Em 2019 vou a uma consulta de medicina no trabalho e tenho que levar o meu boletim amarelo das vacinas", defendendo de igual modo a necessidade de interoperabilidade dos sistemas.

Embora de acordo(IE1) referiu o exemplo do Brasil, onde os médicos ainda não têm autenticação eletrónica certificada, sendo por isso difícil de conseguir as prescrições assinadas digitalmente.

Preenchimento do Questionário dos Indicadores da dimensão "Serviços".

(I3) procedeu à explicação do critério "Participação" e dos seus indicadores.

(A) defendeu a importância desta informação, embora torne a cotação do indicador negativa quando o foco é o marketing. Mencionou o exemplo do portal do SNS, considerado bastante forte a nível de *marketing* mas fraco a nível de conteúdos. Questionou por isso se fará sentido avaliar se existe livro de reclamações eletrónico ou não.

Na sua intervenção, (I1) defendeu que no contexto português faz sentido avaliar se existe livro de reclamações eletrónico e relembra que este instrumento é um instrumento de aprendizagem. Se alguma informação estiver no site e não for obrigatória, aumentará a pontuação da avaliação. Por este motivo, reforçou a importância de perceber claramente o que deve ou não conter um website de uma instituição de saúde.

(IE2) questionou como seriam medidos e definidos os conceitos de publicidade, conteúdo e *marketing*. Sugeriu uma maior especificação destes indicadores para uma compreensão mais clara do que é realmente pedido, mencionando que no Brasil a maioria das divulgações são institucionais, um cenário diferente do português. Manuela sugeriu por isso que ao questionário fosse acrescentada a resposta "não aplicável".

(IE1) mencionou novamente o exemplo do Brasil, onde o SNS tem mobilizações e campanha e sugeriu que pode ser um aspeto a avaliar. Questionou, no entanto, como se poderia validar a qualidade dos aplicativos de dispositivo móvel de saúde.

Preenchimento do Questionário dos Indicadores da dimensão "Participação".

(I3) procedeu com a explicação da dimensão "Tecnologia" (que envolve questões relacionadas com a acessibilidade, número de links, credibilidade e privacidade e segurança) e os seus indicadores (adequados com as diretrizes exigidas aos websites públicos portugueses).

(IE2) reiniciou o debate, questionando se à vertente da acessibilidade estava associada a verificação da abertura correta dos gráficos do website. Explicou que o Brasil tem lei de acesso á informação que obriga a linguagem acessível, embora seja complexo definir qual a métrica da acessibilidade. Defendeu que o questionário teria que ser mais específico, e que deveria considerar casos em que os gráficos efetivamente existem, mas não funcionam (com erros ou como algo mais complexo).

(IE1) explicou que existe diferença entre política de privacidade do site e da informação e questionou se a informação relativa ao conflito de interesses penaliza e se tem de ser declarada.

(A) levantou a temática de pessoas com deficiência e como se avalia a capacidade de estas acederem aos websites, nomeadamente através de informação áudio e funcionamento adaptado, e questionou quais são as ferramentas utilizadas para efetuar essa verificação.

Preenchimento do Questionário dos Indicadores da dimensão "Tecnologia".

(A) questionou se a qualidade da informação e a disponibilização de informação fidedigna é avaliada e como se mede a credibilidade. Pediu para que seja definido o grau de transparência e questiona se as omissões também são contabilizadas.

(I1) esclareceu que, em caso de omissão, o parâmetro não pontua. A omissão é diferente da veracidade da informação e não é possível constatar isso.

(I3) procedeu com a explicação do critério "Conteúdos" e os seus indicadores.

(A) pediu a retificação do termo "lista de espera" para "lista de inscritos". Explicou ainda que a informação destas listas não se aplica tão linearmente por isso terá de haver uma melhor especificação dos indicadores.

Em seguida, (M1) concordou que a verificação dos tempos de espera faz sentido, no entanto, estes deverão ser divididos por especialidade e por instituição. Prosseguiu esclarecendo que na cirurgia, desde o momento da inscrição, há tempos de espera cirúrgicos e sugeriu que essa informação deveria constar nas áreas reservadas. O doente tem que ser informado sobre os tempos mínimos de espera (esta informação é pública e costuma ser divulgada pela comunicação social – qual o tempo de espera para receber vale cirúrgico). Informação sobre os períodos obrigatórios e interligações de especialidades no tratamento de doenças é indicador de qualidade dos serviços.

Já (A) acredita que esta informação é importante, mas não é obrigatória. Além disso, o tempo para o vale cirúrgico deverá ser garantido a nível nacional. Os tempos médios de espera dos hospitais poderia ser indicador, mas não existe nenhuma medida. Há hospitais que dão mais informação sobre o seu funcionamento que outros (alguns até providenciam a taxa de mortalidade da especialidade). A qualidade de um site mede-se pela quantidade de informação que ele disponibiliza.

(I3) atestou que no SNS o doente tem acesso aos tempos de espera dos hospitais naquela especialidade, no entanto não existem outras informações.
(I1) questionou se existe algum conjunto de indicadores obrigatórios, para poderem acrescentar ao estudo.

(M1) respondeu que os indicadores são complicados pelas codificações, mencionando o exemplo do hospital de Barcelos, que apresentou indicadores em que é número 1. O hospital tem pessoas especializadas em otimizar indicadores por causa da qualidade e faturação.
(IE1) reforçou a ideia de que os indicadores obrigatórios devem ser divulgados. No entanto, indicadores como a taxa de mortalidade, ao serem divulgados poderão quebrar a confiança dos utentes.
(M1) explicou que em hospitais maiores, há mais mortes porque tem mais serviços, e questionou se esta informação deverá mesmo ser disponibilizada. Deu o exemplo do Hospital de Braga, onde no serviço de ortopedia foi realizado um teste piloto identificar pessoas em risco de queda, que passaram a ser identificadas com amarelo (fita) para maior visibilidade e cuidado e, sendo esta medida um indicador de segurança, deveria haver um modo de quantificá-la.

Já (A) acredita que este estudo deverá avaliar se os dados são divulgados ou não, e não a sua qualidade e que a sua disponibilização, independente da qualidade, tem que ser fator a considerar.

(C) afirmou que o hospital tem que ter listagem obrigatória para apresentar anualmente ao INE, e que é possível avaliar se esta é divulgada ou não.

Em seguida, a (I1) questionou o grupo sobre o indicador "Informação aos Pacientes", e se existe algo relevante a acrescentar relativamente ao mesmo.

(A) respondeu que caso o indicador de investigação de ensino faça parte vai privilegiar os hospitais com faculdade de medicina integrada relativamente aos hospitais que não tem, e estes não podem ser prejudicados. O guia de admissão tem demasiado peso, e não devia ser considerado dado que varia consoante o serviço.

Na sua intervenção, (M1) explicou que existe informação generalizada relativa à conduta pessoal, sendo por isso apenas necessário questionar se este guia existe ou não. Sugeriu ainda que fosse dada a possibilidade aos doentes que necessitam de relatório para as juntas de avaliação de capacidade, de pedirem o relatório e terem acesso ao mesmo no próprio site (na área reservada), em vez de o irem buscar pessoalmente, já que estes relatórios, legalmente, tem apenas 10 dias para ser respondidos, algo que nunca acontece.

(A) sugeriu a alteração da nomenclatura de "equipa médica" para "corpo clínico".
(I1) questionou os experts se a apresentação dos CV nos websites faz sentido, ao que (A) respondeu que sim, embora não seja obrigatório e parte da politica portuguesa, contrariamente aos EUA, onde é obrigatória a apresentação dos currículos e até das taxas de sucesso nas cirurgias.

(M1) defendeu que, como formador de internos, tem de os deixar "mexer", e que as equipas em Portugal não têm recursos suficientes para que os procedimentos ocorram de outra forma, sendo por isso complexo concretizar a vertente curricular. Refere que em Portugal não há valorização de carreiras e que muitas vezes os diretores de serviço são inferiores academicamente aos seus súbditos. Acredita que por este motivo, os currículos nos websites são manobras de marketing e que são demasiado sobrevalorizados.
(I1) confidenciou que no Expert Group Meeting com os administradores hospitalares, estes repulsam a decisão de transparência, e questionou se isto seria suposto, ou não.
(A) explicou que se no nosso SNS os utentes não tivessem confiança em "qualquer um ", os serviços seriam altamente dificultados.
(M1) reforçou esta ideia, destacando a elevada confiança dos portugueses no sistema e nos médicos, e que caso isto deixe de se verificar e a população comece a questionar, perde-se bastante do que caracteriza o SNS. (M1) defende que a medicina em Portugal é boa e os profissionais são competentes mas a estrutura dos serviços é péssima e mesmo assim, a colocação dos médicos funciona com base nas centésimas. "Como se pode cotar os médicos que estão "em doutoramento"? Como saber se ainda vão a meio ou se o fizeram?"

Preenchimento do Questionário da dimensão "Conteúdo"

Após o preenchimento do questionário, (I1) agradeceu a presença de todos os participantes e procedeu ao encerramento da sessão às 12:30.

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