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# The intention to use an electronic health record and its antecedents among three different categories of clinical staff

Claudio Vitari, Roxana Ologeanu-Taddei

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1 **The intention to use an Electronic Health Record and its**  
2 **antecedents among three different categories of**  
3 **clinical staff**

4 **Authors**

5 CLAUDIO VITARI

6 IAE Paris 1 Panthéon-Sorbonne (Sorbonne Business School)

7 8 bis rue de la Croix Jarry, 75013 Paris France

8 Vitari.iae@univ-paris1.fr

9

10 ROXANA OLOGEANU-TADDEI

11 Montpellier Research in Management, University of Montpellier, 34090 Montpellier, France

12 Place Eugène Bataillon, 34095 Montpellier France

13 roxana.ologeanu-taddei@umontpellier.fr

14

15 Corresponding and submitting author:

16 CLAUDIO VITARI

17 IAE Paris 1 Panthéon-Sorbonne (Sorbonne Business School)

18 8 bis rue de la Croix Jarry, 75013 Paris France

19 Vitari.iae@univ-paris1.fr

## 20 **Abstract**

### 21 Background:

22 Like other sectors, the healthcare sector has to deal with the issue of users' acceptance of IT. In  
23 healthcare, different factors affecting healthcare professionals' acceptance of software applications  
24 have been investigated. Unfortunately, inconsistent results have been found, maybe because the  
25 different studies focused on different IT and occupational groups. Consequently, more studies are  
26 needed to investigate these implications for recent technology, such as Electronic Health Records  
27 (EHR).

### 28 Methods:

29 Given these findings in the existing literature, we pose the following research question: "To what  
30 extent do the different categories of clinical staff (physicians, paraprofessionals and administrative  
31 personnel) influence the intention to use an EHR and its antecedents?" To answer this research  
32 question we develop a research model that we empirically tested via a survey, including the  
33 following variables: intention to use, ease of use, usefulness, anxiety, self-efficacy, trust, misfit and  
34 data security. Our purpose is to clarify the possible differences existing between different staff  
35 categories.

### 36 Results:

37 For the entire personnel, all the hypotheses are confirmed: anxiety, self-efficacy, trust influence ease  
38 of use; ease of use, misfit, self-efficacy, data security impact usefulness; usefulness and ease of use  
39 contribute to intention to use the EHR. They are also all confirmed for physicians, residents, carers  
40 and nurses but not for secretaries and assistants. Secretaries' and assistants' perception of the ease of  
41 use of EHR does not influence their intention to use it and they could not be influenced by self-  
42 efficacy in the development of their perception of the ease of use of EHR.

### 43 Conclusions:

44 These results may be explained by the fact that secretaries, unlike physicians and nurses, have to

45 follow rules and procedures for their work, including working with EHR. They have less  
46 professional autonomy than healthcare professionals and no medical responsibility. This result is  
47 also in line with previous literature highlighting that administrators are more motivated by the use  
48 of IT in healthcare.

## 49 **Keywords:**

50 Intention to use; Electronic Health Record; Clinical staff; Survey; Physicians; Paraprofessionals;  
51 Administrative personnel;

## 52 **Background**

53 While the implementation, diversity and uses of information technology (IT) have increased in  
54 hospitals, previous research has highlighted its low use among physicians and their resistance to it .  
55 Thus the healthcare sector has to deal with the issue of users' acceptance of IT. Acceptance is now  
56 considered a mature field in information systems research . The model assumes that two main  
57 antecedents—perceived ease of use (PEOU) and perceived usefulness (PU)—influence the intended  
58 and actual use of new IT. PEOU is “the degree to which a person believes that using a particular  
59 system would be free from effort” ; PU is “the degree to which a person believes that using a  
60 particular system would enhance his or her job performance” .

61 In healthcare, different factors affecting healthcare professionals' acceptance of software  
62 applications have been investigated. Unfortunately, inconsistent results have been found , maybe  
63 because the different studies focused on different IT and different occupational groups.  
64 Consequently, more studies are needed to investigate these implications for recent technology, such  
65 as electronic health records (EHR).

66 While previous research showed the effect of task characteristics as moderate variable , very little  
67 research has been done on IT acceptance for different occupational groups in the health context.

68 Generally, studies select one occupational group or healthcare staff as a whole . These studies fail to  
69 acknowledge the diversity in the autonomy, work practices and power of the occupational groups  
70 involved in patient care. There are three main professionals groups within hospitals: doctors,  
71 paraprofessionals and administrative personnel . The people in each of these three groups have  
72 different educational backgrounds and professional cultures that play a key role in shaping their  
73 attitudes toward technologies in the workplace. While doctors tend to be more unwilling to change  
74 their traditional practice and use new IT, paraprofessionals tend to accept and use them more readily  
75. Moreover, paraprofessionals adopt more favorable attitudes toward new technology than doctors  
76 because they are likely to perceive it as an effective tool for facilitating coordination with other  
77 healthcare groups, another important role for them in addition to their bedside responsibilities .  
78 Some authors consider that doctors, unlike paraprofessionals, may perceive new IT as a threat  
79 because they lead to loss of power , challenging professions and driving to a “new  
80 professionalism” . Administrative personnel seem to take yet another point of view. In general, they  
81 coordinate external and internal activities, for example, doctors’ and paraprofessionals’ schedules,  
82 to optimize healthcare operations . They generally have a favorable attitude toward the adoption and  
83 use of new IT in healthcare because it helps them monitor and manage the work of doctors and  
84 paraprofessionals .

85 Given these findings in the existing literature, we aim to measure PEOU and PU for different  
86 occupational groups (doctors, paraprofessionals and administrative personnel) in the same hospital  
87 setting, relative to adoption of EHR.

88 We pose the following research question: “To what extent do the different categories of clinical staff  
89 (physicians, paraprofessionals and administrative personnel) influence the intention to use an EHR  
90 and its antecedents?”

91 To answer this research question we develop a research model (Figure 1), with the following  
92 hypotheses that we empirically tested via a survey.

93 The measure of intention of use and its antecedents were initially developed for voluntary uses of

94IT. Nevertheless, based on previous literature intention to use was also measured in mandatory  
95settings , according to the assumption that “even when users perceive system use to be  
96organizationally mandated, usage intentions vary because some users are unwilling to comply with  
97such mandates.” . Consequently Venkatesh & Davis defined voluntariness as “the extent to which  
98potential adopters perceive the adoption decision to be non-mandatory”. This definition highlights  
99the difficulty of the degree of voluntarism involved because "even when use is required, variability  
100in the quality and intensity of this use is likely to have a significant impact on the realization of the  
101system benefits" . Even in mandatory settings, the extent of system use varies by user and can lead  
102to users’ resistance, which is more or less passive , and to workarounds . Thus, the concept of  
103intention of use is relevant because it can assess the willing to really use the system or to find  
104alternative ways as workarounds. .

105Studies on intention to use and its antecedents in healthcare highlight relationships that differ from  
106those in other sectors. For example, a study on a clinical decision support system showed that the  
107influence of PU on technology acceptance among physicians was significantly supported, but the  
108influence of PEOU was not . In addition, a systematic review of the literature on physician  
109acceptance of IT showed that the PEOU component of the model is consistently related to PU. This  
110finding is consistent with the results of Holden and Karsh who reviewed 16 data sets. Every one of  
111the 16 tests of the relationship between PU and intention to use was significant. While Aggelidis  
112and Chatzoglou and Pai and Huang state that PEOU affects intention to use, Chau and Hu show  
113that PEOU has no significant effect on PU or physicians’ perceptions. Some authors suggest that  
114this inconsistency in the results may be explained by the rapid grasp of the importance of usefulness  
115as opposed to usability , and the availability of support staff to deal with the system .

116The PEOU-intention relationship seems to be more inconsistent. It is significant in only seven of 13  
117tests of the sets relating to mixed groups of professionals and paraprofessionals Holden and Karsh  
118analyzed . Nevertheless, we consider that the effect of PEOU on intention is more likely to be  
119positive, given the majority of tests and previous studies in different organizational settings. We

120therefore hypothesize:

121

122H1. PU is positively related to intention to use.

123H2. PEOU is positively related to intention to use.

124H3. PEOU is positively related to PU.

125

126Research identified different antecedents of PU and PEOU. Several concepts were tested. Their  
127variety is one reason for the difficulty in comparing the results of different studies. Subjective  
128norms seem to be less significant for physicians because of their professional independence. Given  
129the specificity of physicians and all health professionals, we might consider self-efficacy a pertinent  
130antecedent. Self-efficacy is defined as “one’s belief in his or her ability to execute a particular  
131task/job using a computer.” . In line with Bandura’s self-efficacy theory , authors have shown that  
132individuals with higher self-efficacy are more likely to experience a positive effect than those with  
133lower self-efficacy. Authors identified that computer self-efficacy influences both PEOU and PU ,  
134while other results find that self-efficacy has no significant effect on either PU or PEOU. We  
135therefore hypothesize:

136

137H4. Self-efficacy is positively related to PEOU.

138H5. Self-efficacy is positively related to PU.

139

140Prior studies have found that compatibility is an important factor that impacts upon willingness to  
141adopt innovative technology . Generally, the misfit between health IT (including EHR) and work  
142practices is highlighted. At the same time fit is a very challenging objective because of the  
143complexity and variety of clinical processes .

144Several authors maintain that creating a fit between health IT and existing work practices requires  
145the initial acknowledgment that the former will change the latter. By customizing and adapting the

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146system to meet specific needs, users will become more open to using it . The fit between clinical  
147work tasks and the design of the technology significantly impacts on the likelihood of acceptance of  
148health IT . We therefore hypothesize:

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150H6. Misfit is negatively related to PU.

151

152Previous research shows contrasting results about the perceived importance of data security in the  
153provision of healthcare on the PU of health IT . Previous studies have insisted that both privacy and  
154the confidentiality of patient data are necessary to ensure the use of health IT . We consider that  
155data security implies both these factors. We therefore hypothesize:

156

157H7. Data security is positively related to PU.

158

159Computer anxiety, defined as people's apprehension, or even fear, when they are faced with the  
160possibility of using computers , has also been found to have a significant impact on PEOU in the  
161context of physicians' acceptance of health IT . We therefore hypothesize:

162

163H8. Anxiety is positively related to PEOU.

164

165Many studies highlight the importance of trust as a driver of human behavior . Trust in healthcare IT  
166may include having confidence in both the providers and the system . Within the healthcare sector,  
167the strong influence of physicians' trust on PEOU is consistent with earlier studies that show the  
168positive effect of situational normality and structural assurances on PEOU . We therefore  
169hypothesize:

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171H9. Trust is positively related to PEOU.

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173The purpose of this study is to clarify the possible differences, in intention to use an EHR and its  
174antecedents, existing between different staff categories. As described and argued above, this study  
175proposes 9 hypotheses developed based on previous theories and similar empirical studies.

176

177[Figure 1 around here]

178

## 179**Methods**

180To test our model of Figure 1 we organized a survey based on an online questionnaire that we  
181administered in a French teaching hospital that covers all the clinical specialties and has more than  
1822500 beds as well as an emergency department. In 2012 the hospital implemented an EHR system  
183according to a “big bang” strategy, aiming to support all departments and specialties within nine  
184months. This EHR incorporates computerized physicians’ order entries, medical and nursing  
185observations, laboratory test results, medical prescriptions, operating room process management,  
186and planning and billing management. It is a fully integrated system with a range of different  
187modules, including admission, discharge and transfer, computerized provider order entries,  
188treatment planning, resources and appointment scheduling systems, and a clinical data warehouse  
189(CDW). Results from ancillary subsystems (e.g., laboratories, imaging, and pharmacy) are  
190automatically integrated into the EHR as pdf files.

191Our survey measured the clinical staff’s perceptions of EHR, using questions derived from a review  
192of previous studies, adapted from different scales: PU , PEOU , misfit , data security , anxiety , self-  
193efficacy , and trust . Each variable was measured using a question and each question was answered  
194using a seven-point Likert scale, with 1 indicating “strongly disagree” and 7 indicating “strongly  
195agree.” For a better understanding of the EHR context and local setting, we conducted four

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196interviews with the two physicians involved in the EHR evolution and customization. Additional  
197data were collected from internal reports.

198The presence of complementary data collection, beyond the needs for this study, limited the  
199possibilities to include whole scales to measure our constructs of interest. We limited our data  
200collection to one item for each variable, keeping our construct narrowly defined in order to make  
201the single-item measures sufficient . This decision was made as a response to the request of the  
202president of the Delegation of Hospital Information (mandated to configure and customize the EHR  
203for the clinical staff), who commanded the questionnaire and who manage its administration. His  
204argument was that the questionnaire needs to be very short; unless, healthcare professionals would  
205not find time to respond to it. Nevertheless, initially, the questionnaire comprised more items for  
206every construct. The questionnaire was sent for pre-test to a panel of 20 volunteers. 11 respondents  
207actively contributed in the pre-test, asking to reduce further the survey because the respondents  
208considered that more items to measure the same construct were redundant. Furthermore,  
209considering the responses, we contextualized the meaning of EHR. As suggested by the pre-test  
210respondents, we decided to use the appellation of the software instead of the generic term “EHR”.  
211The questionnaire was developed and administered online by the Delegation of Hospital  
212Information to the care staff, during one month. One recall was made. A link inviting the clinical  
213staff to respond to this questionnaire was communicated to them by email and invitations were  
214posted on different staff resting rooms’ and corridors’ walls.

215We noted that the intensity of use of the EHR is not a significant issue because each patient’s  
216medical examinations, medical history, prescriptions, planning schedule and administrative  
217documents had to be entered in the EHR. Thus, all clinical staff had to post information or use  
218information posted by others in their daily work, eventually in different ways.

219To take these differences into account, we grouped respondents into three main categories: (1)  
220professionals (all physicians and medical residents in all medical domains); (2) paraprofessionals  
221(all carers and nurses); and (3) administrative personnel (all secretarial staff and personal

222assistants).

223The survey was administrated twice, the first time in December 2013 and then in September 2015.

224The 21-month lag between the two surveys was decided empirically with the hospital's top

225management during data collection, following an important change in the version of EHR used and

226to avoid summer holidays. As well as our survey questions, the questionnaire included sections

227relating to several hospital management objectives. All the data were provided by mandatory

228answers to a questionnaire by the employees of the hospital. We followed strict ethical procedures

229at every stage of the study to ensure data confidentiality and anonymity of the study participants.

230We duly explained the purpose of the study to all employees before verbally obtaining their consent

231to freely participate. All the participants consented to answer anonymously to the questions asked

232by questionnaire. The survey was presented and accepted by the Medical Commission of the

233Hospital, the Users' Commission and the Executive Board of the Hospital. All the data were

234collected anonymously. The respondents accepted to answer to the questions asked. No other ethics

235approval was necessary to be compliant with the French regulation.

236Between 2013 and 2015 several actions were initiated within the hospital, including training

237programs for all clinical staff and customization of EHR forms for different medical departments

238and occupations: the deployment of a new version of the EHR, the development of an e-learning

239platform, the continuous customization of EHR, the indexing of folders and files in EHR.

240We tested our hypotheses using multiple regressions analyses that included the assessment of: (1)

241the association between intention to use, ease of use and usefulness; (2) the association between

242usefulness and ease of use, misfit, data security and self-efficacy; (3) the association between ease

243of use and anxiety, self-efficacy and trust; and (4) the association between intention to use, ease of

244use, usefulness and control variables (i.e. transverse work, year of questionnaire administration).

245The regression models were run separately for the three categories (physicians and residents, carers

246and nurses, secretaries and assistants) and for all three categories together. Where appropriate,

247differences were also tested using analysis of variance (ANOVA).

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## 248 Results

249 From a population of 6,443 clinical employees, we collected 1,741 responses with the first  
250 distribution of the questionnaire (27% response rate) and 1,119 with the second distribution (17%  
251 response rate). Concerning our three categories of interest: 169 secretaries and assistants responded  
252 to the first questionnaire and 151 the second one, on the 547 total secretaries and assistants  
253 employed; 759 carers and nurses participated in the first data collection and 504 in the second one,  
254 on the 3754 carers and nurses working at the hospital; 574 physicians and residents contributed to  
255 the first questionnaire and 286 to the second one on a total population 1427. The overall percentage  
256 of missing data in the sample were small (< 7.5%) and no data imputation was carried out (Table 1  
257 and Table 2).

258

259 [Table 1 near here]

260 [Table 2 near here]

261

262 Altogether, usefulness and ease of use are good predictors of the intention to use EHR, explaining  
263 34% of the variance, which can be considered moderate. For physicians and residents, 37% of the  
264 variance of their intention to use is explained by usefulness and ease of use. We have similar values  
265 for carers and nurses (32%). Also, the beta coefficient of the two independent variables for the  
266 whole sample and for physicians and residents, as well as carers and nurses, are a similar size,  
267 around 0.55 for usefulness and 0.33 for ease of use.

268 Conversely, medical secretaries and assistants have different intentions and perceptions. For this  
269 category of personnel, ease of use and usefulness explain only 19% of the variance of intention to  
270 use. While usefulness has a beta coefficient close to that of the other personnel categories (0.46), the  
271 ease of use variable has no statistically significant influence on intention to use.

272 Concerning the antecedents of usefulness and ease of use, we do not identify relevant differences

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273among the different personnel categories. The R-squared of the different independent variables on  
274usefulness is between 0.35 and 0.43, depending on personnel category. The beta coefficients are  
275around 0.29 for ease of use, around 0.13 for self-efficacy, around  $-0.18$  for misfit (the more EHR  
276fits the job, the more it is perceived as useful), and around 0.17 for data security. The R-squared of  
277the different independent variables on ease of use is between 0.25 and 0.33, depending on personnel  
278category. The beta coefficients are around  $-0.10$  for anxiety (the less the EHR makes people  
279anxious, the more the people perceive it as ease of use), around 0.15 for self-efficacy, and around  
2800.36 for trust (Table 3).

281

282[Table 3 near here]

283

284The introduction of control variables in the model helps us to better explain some results and  
285suggest further exploration. We observe substantially stable R-squared across the models and the  
286personnel categories, with few exceptions worth detailing.

287Transversal work, i.e. having a job requiring patients' care in several medical departments, is never  
288statistically significant. The year of questionnaire administration is in some cases statistically  
289significant. For physicians and the personnel as a whole, perception of ease of use of the EHR is  
290negatively influenced by the year of administration of the questionnaire. This suggests that the EHR  
291became more complex to use over time, in parallel with the specific initiatives to improve it. These  
292initiatives to improve it could also explain the influence of the year of the questionnaire  
293administration on the intention to use the EHR for the same physicians and the personnel as a  
294whole: the year of the questionnaire administration positively impacts the intention to use the EHR.  
295The initiatives to improve the EHR made it more difficult to use, but the physicians and the  
296personnel altogether recognized the importance of using it and hence they strengthen their intention  
297to use the EHR.

298On the opposite, year of administration did not seem to have any effect on carers, nurses, secretaries

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299and assistants, except making not significant the influence of self-efficacy on ease of use for  
300secretaries and assistants.

301Finally, for all the variables, the three personnel categories and all categories together have  
302statistically different mean values (Table 4).

303

304[Table 4 near here]

305

## 306**Discussion**

307Our results enrich previous contrasting results on intention to use and its antecedents for health IT.  
308We highlight some differences among personnel categories, an aspect that is still largely unclear in  
309the literature.

310For the whole personnel together, all the hypotheses are confirmed, as they are for physicians,  
311residents, carers and nurses. Results are different for secretaries and assistants, whose intention to  
312use the EHR is only influenced by perceived usefulness. Moreover, secretaries and assistants could  
313not be influenced by self-efficacy in the development of their perception of ease of use of the EHR,  
314while for the other personnel categories, self-efficacy, anxiety and trust influence the perceived ease  
315of use of the EHR. We see a considerable difference between physicians, residents, carers and  
316nurses, on the one hand, and secretaries and assistants on the other. For this staff category ease of  
317use does not have any influence on intention to use. This result may be explained by the fact that  
318secretaries, unlike physicians and nurses, are administrative employees and, consequently, have  
319more stringent rules and procedures for their work, including work with the EHR, and they have  
320less professional autonomy. Moreover, secretaries have no medical responsibilities related to patient  
321care and their risk of errors is in the form of errors in recording or failing to find relevant  
322information.

323While the literature highlights differences between physicians, residents, carers and nurses in the

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324acceptance and use of a new IT , we see a certain homogeneity among these categories. The  
325differences are with the third personnel category— secretaries and assistants—as already identified  
326by some researchers .

327Comparing our results with previous literature we reaffirm, contrary to earlier results , that for  
328physicians perceived ease of use has a moderate influence on perceived usefulness. Again, we  
329confirm the role of self-efficacy in building perceptions of usefulness , while questioning its role on  
330ease of use perceptions, in the open debate about their effects and the contrasting empirical results .

331Another open debate concerns the role data security plays in perceived usefulness. While some  
332previous results affirm that data security has an impact , and others do not , our results demonstrate  
333that data security has a positive influence on the perceived usefulness of EHR.

334Notwithstanding the useful results, this analysis has some limitations. The anonymity of the  
335respondents did not allow us to precisely measure the evolution of the perceptions for each single  
336respondent, via a longitudinal study. Moreover, our survey targeted only one hospital for data  
337collection, which limits the generalizability of our findings. Additionally, we restricted the measure  
338of each construct, in the questionnaire, at one single item. The use of full scales, at the place of  
339single items, would have increased the explained variance and opened to additional statistical  
340analysis.

## 341 **Conclusions**

342While the existing literature has focused on the acceptability of health IT by an occupational group  
343or by healthcare staff as a whole, our paper investigates the differences between occupational  
344groups within a teaching hospital. More concretely, we measure the extent to which the three largest  
345categories of clinical staff (physicians, paraprofessionals and administrative personnel) have an  
346influence on the intention to use an EHR and its antecedents.

347Mobilizing a set of antecedents of intention to use, we propose a model based on nine hypotheses.

348The hypotheses were tested mainly using multiple regressions analyses, with and without control  
349variables. For the entire personnel, as a whole, all the hypotheses are confirmed. They are also all  
350confirmed for physicians, residents, carers and nurses but not for secretaries and assistants. Unlike  
351the other personnel categories, secretaries' and assistants' perception of the ease of use of EHR does  
352not influence their intention to use it. Moreover, secretaries and assistants could not be influenced  
353by self-efficacy in the development of their perception of the ease of use of EHR. These results may  
354be explained by the fact that secretaries, unlike physicians and nurses, have to follow more stringent  
355rules and procedures for their work, including working with EHR. They have less professional  
356autonomy than healthcare professionals and no medical responsibility.

357We suggest that hospital managers have to take these differences among staff categories in a  
358hospital into account when they implement health IT, particularly in light of the interdependence of  
359these staff categories in patient care and the need to involve all categories in the use of the  
360technology.

361We hope that our results would contribute to help EHR decision makers and developers to  
362understand the specific motives impacting the use of the EHR for the different staff categories and  
363hence to include these specificities in their development plans. In particular, secretaries and  
364assistants would need special attention, as their antecedents to the intention to use an EHR have a  
365distinct impact in comparison to the impact that the same antecedents have on the other staff  
366categories. In our study, we advance some justifications for these differences, basing on literature  
367and our empirical knowledge. Nonetheless, we consider that future studies should extend our  
368understanding of the origin of these differences, through qualitative and quantitative methods.

369

## 370 **List of abbreviations**

371 EHR: Electronic Health Records

372 IT: Information Technology

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373PEOU: Perceived Ease Of Use

374PU: Perceived Usefulness

375CDW: Clinical Data Warehouse

## 376 **Declarations**

377Ethics approval and consent to participate:

378This study does not include any data on subjects, human material, or human data from patients. All  
379the data were provided by voluntary answers to a questionnaire by the employees of the hospital.  
380We followed strict ethical procedures at every stage of the study to ensure data confidentiality and  
381anonymity of the study participants. We duly explained the purpose of the study to all employees  
382before verbally obtaining their consent to freely participate. All the participants consented to answer  
383anonymously to the questions asked by questionnaire. The survey was presented and accepted by  
384the Medical Commission of the Hospital, the Users' Commission and the Executive Board of the  
385Hospital. All the data were collected anonymously. The respondents accepted to answer to the  
386questions asked. No other ethics approval was necessary to be compliant with the French  
387regulation.

388Consent for publication:

389Not applicable

390Availability of data and materials:

391The datasets used and/or analysed during the current study are available from the corresponding  
392author on reasonable request.

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394The authors declare that they have no competing interests

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398 Authors' contributions:

399 RO designed the research and collected data. CV analysed the data. All authors wrote, read and  
400 approved the final manuscript.

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404

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Variable	Question	Mean	SD	Min	Max	N	%*
Intention to not use	I prefer to not use the EMR to care for my patients, as far as I can	3.39	2.217	1	7	3139	92.54%
Usefulness	The EMR is useful to care for my patients	4.21	1.728	1	7	3152	92.92%
Ease of use	I find easily the data I need in the EMR	3.55	1.74	1	7	3208	94.58%
Misfit	The EMR misfits with my tasks	4.2	2.108	1	7	3167	93.37%
Data security	The medical records of my patients are secured in the EMR	4.04	1.878	1	7	3142	92.63%
Anxiety	I feel alone facing the EMR	3.75	1.953	1	7	3166	93.34%
Self-efficacy	I have the resources and information to use the EMR to care for my patients	4.05	1.8	1	7	3165	93.31%
Trust	I have trust in the EMR	3.64	1.867	1	7	3167	93.37%

Note: \* = The denominator of the % is 3392, the total number of collected questionnaires. The nominator is the N value in the previous column, the total number of responses to the specific question of the survey.

<b>Table 2 Sample characteristics</b>					
		Respondents, for each category, to the questionnaire administered in:			
		Year 2013		Year 2015	
Staff categories	Declaring doing a transversal work	Number of respondents	% of respondents on the total number of respondents	Number of respondents	% of respondents on the total number of respondents
Secretaries and assistants	Yes	16	1.15%	15	1.59%
	No	147	10.53%	136	14.45%
Carers and nurses	Yes	82	5.87%	72	7.65%
	No	630	45.13%	432	45.91%
Physicians and residents	Yes	187	13.40%	113	12.01%
	No	334	23.93%	173	18.38%
Total		1396	100.00%	941	100.00%

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563Table 2 Sample characteristics

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<b>Table 3 Results of regression analysis split by staff category</b>									
Without control variables		Ad.d R2 and p-value				β and p-value			
Independent variable	Dependent Variable	All sample	Physicians and residents	Carers and nurses	Secretaries and assistants	All sample	Physicians and residents	Carers and nurses	Secretaries and assistants
Usefulness	Intention to not use	0.34***	0.37***	0.32***	0.19***	-0.55***	-0.55***	-0.54***	-0.46***
Ease of use						-0.31***	-0.38***	-0.29***	not sig.
Ease of use	Usefulness	0.39***	0.39***	0.35***	0.42***	0.29***	0.30***	0.27***	0.28***
Self-efficacy						0.11***	0.08**	0.12***	0.17***
Misfit						-0.20***	-0.22***	-0.18***	-0.14**
Data security						0.18***	0.17***	0.18***	0.16***
Anxiety	Ease of use	0.33***	0.30***	0.33***	0.25***	-0.11***	-0.07*	-0.12***	-0.11*
Self-efficacy						0.17***	0.18***	0.17***	0.12*
Trust						0.37***	0.35***	0.37***	0.35***
With control variables		Ad.d R2 and p-value				β and p-value			
Independent variable	Dependent Variable	All sample	Physicians and residents	Carers and nurses	Secretaries and assistants	All sample	Physicians and residents	Carers and nurses	Secretaries and assistants
Usefulness	Intention to not use	0.35***	0.37***	0.32***	0.20***	-0.54***	-0.54***	-0.54***	-0.44***
Ease of use						-0.31***	-0.38***	-0.29***	not sig.
Transversal work questionnaire						not sig.	not sig.	not sig.	not sig.
Ease of use						-0.17*	-0.32*	not sig.	not sig.
Ease of use	Usefulness	0.39***	0.39***	0.35***	0.43***	0.29***	0.30***	0.27***	0.28***
Misfit						-0.20***	-0.22***	-0.17***	-0.14***
Self-efficacy						0.11***	0.08**	0.12**	0.15***
Data security						0.17***	0.18***	0.18***	0.16***
Transversal work questionnaire						not sig.	not sig.	not sig.	not sig.
Ease of use						not sig.	not sig.	not sig.	not sig.
Anxiety	Ease of use	0.33***	0.30***	0.33***	0.26***	-0.11***	-0.07*	-0.12***	-0.13*
Self-efficacy						0.17***	0.20***	0.17***	not sig.
Trust						0.38***	0.37***	0.38***	0.37***
Transversal work questionnaire						not sig.	not sig.	not sig.	not sig.
Ease of use						-0.23***	-0.35**	not sig.	not sig.

Legend: β = Beta coefficient; Ad.d R2 = adjusted R-squared; \*\*\* = statistically significant p-value lower than 0.001; \*\* = statistically significant p-value lower than 0.01; \* = statistically significant p-value lower than 0.05; not sig.= not significant when the p-value is higher than 0.05.

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Table 4 Results of the analysis of variance									
Variable	Staff Category								F (sig.)
	Physicians and residents		Carers and nurses		Secretaries and assistants		All		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Trust	3.34	1.84	3.38	1.86	4.42	1.73	3.50	1.87	44,9***
Self-efficacy	3.73	1.72	4.02	1.80	4.89	1.62	4.03	1.79	49,4***
Anxiety	4.07	1.91	3.80	1.97	3.03	1.81	3.80	1.96	33,0***
Ease of use	3.38	1.68	3.30	1.70	4.30	1.61	3.46	1.72	46,5***
Misfit	4.52	2.06	4.50	2.11	3.05	1.87	4.32	2.12	69,0***
Data security	3.86	1.83	3.89	1.94	4.46	1.79	3.95	1.89	13,1***
Usefulness	4.11	1.68	3.86	1.76	4.93	1.40	4.08	1.72	49,0***
Intention to not use	3.78	2.26	3.66	2.25	2.19	1.60	3.52	2.24	65,4***
Legend: SD= Standard Deviation = F-test of the ANOVA; *** = statistically significant p-value lower than 0,001.									

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572Table 4 Results of the analysis of variance

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574**Figure 1: The theoretical model**

575**Detailed legend: Each rectangle is a construct, each arrow is a hypothesis**

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