

Poster 5

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Using usability-tests to improve language match of a web-based system for digital triage in primary care

Background: Previous research showed that health care consumers favor web-based communication systems to control their own care [1, 2]. Systems that combine high-quality information with interactive components for self-assessment, decision support, or behavior change have the potential to reduce costs while maintaining the same or achieving better quality of care [3]. A system that incorporates these different features is eConsultPlus (developed by Medinfo) which combines digital triage with e-consultation. For digital triage systems to be adopted and accepted, it is important to adjust the system to the needs and expectations of its users. A serious problem hereby is a discrepancy between the language of users and that of the system (inadequate language match) [4].

The system under investigation matches the description of the complaint entered by users to pre-defined complaints in a database. This matching occurs by comparing the entered description to a list of synonyms of the pre-defined complaints. The matched complaint is linked to questionnaires which provide triage and identify the urgency. The users receive a computer generated advice, varying from "contact a doctor immediately" to sending their GP a question accompanied by the gathered information. **Objective:** The aim of this study was to assess and improve the language match of a web-based system for digital triage in primary care in the Netherlands. **Methods:** A usability-test (55 consults by 19 unique respondents) was conducted to assess the language match of the web-based system and to obtain insight in the users' language. These data were used to complement and adapt the database. An online survey (29 different respondents) was conducted to obtain additional synonyms. Finally a second usability-test (60 consults by 20 different respondents) was conducted to measure the effects of adapting the database. **Results:** The initial usability-test revealed that the system returned a response in 58,1% of cases (no response means the system asks the user to rephrase the complaint) of which only 64,5% included an adequate response. On average respondents needed 2,3 descriptions to get an adequate response. The average number of matching-problems (problems that occur during the description process and the system's response) was 5,2. Overall, participants awarded the system with 6,23 (scale 1-10). The second usability-test showed significant improvement in all areas: 82,4% response, of which 91,0% included an adequate response; users only needed 1,42 descriptions to get an adequate response ($p=0,001$); users experienced 2,42 matching-problems

($p=0,000$); the overall grade increased to 6,87 ($p=0,004$). **Conclusions:** Altering and expanding the database of the system by making use of the actual language of users, significantly improved the language match, resulting in more adequate responses, fewer descriptions needed, less problems experienced and respondents valuing the system higher. This research shows that usability-testing is an effective way of matching the language of systems and their users and that improved matching not only leads to fewer problems, but also to higher ratings and eventually to improved adoption and acceptance of these systems.

References

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Poster 6

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Internet Use among Occupational Therapists in Their Clinical Practice

Introduction There has been an increased use of the Internet in clinical practice for a broad range of health care professionals; however, this has not yet been documented for persons working in the rehabilitation field. **Objectives** This study aimed to investigate the patterns of Internet use in clinical practice among occupational therapists. **Methods** A self-administered, structured survey was mailed to all provincially registered occupational therapists ($n=4050$) who engaged in any form of client contact (e.g., personal interaction or phone consultation). Descriptive statistics were used to describe their Internet use and bivariate data analyses were performed to identify relationships between therapists' characteristics and Internet use. Barriers and facilitators to Internet use (e.g., paid time) were also examined. **Results** Of the 1382 surveys received that met the inclusion criteria for data analysis; majority of respondents were female, full-time therapists who lived and worked in urban areas. A majority of participants reported that access to information over the Internet was useful as their clinical information source. The top 3 facilitators for Internet use were: 1. "having a computer at work", 2. "a work culture that fosters Internet use" and 3. "the availability of technical support". To a lesser extent, having paid time to access the Internet and the presence of regulatory guidelines (e.g., privacy issues related to emailing clients) were