Using Electronic Questionnaires to Collect Patient Reported History

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Abstract

EMR adoption has faced a major barrier around time and effort required to enter clinical data. In addition, patient entered data has not been effectively used by clinicians to identify critical clinical issues and drive best clinical interventions. By allowing patients to enter historical clinical data, using online questionnaires before their visit, it will have a positive impact on office workflow, physician and patient satisfaction, and support population based health and risk assessment.

Introduction

The goal of the iHistory project is for patients to communicate with their providers and enter information such as past medical history, family medical history, past surgical history and sociological information in an electronic questionnaire, before their scheduled appointment with their provider. Information is reviewed and annotated by the provider in the context of the visit. In addition, issues of usability in medical informatics are in the forefront with the ultimate rejection or acceptance of computer systems depending largely on the degree of usability.\cite{1} We will test the usability of the US Carelink iHistory application, which was used to create and send history questionnaires to patients at Brigham & Women’s Hospital (BWH) FISH Center for Women’s Health.

Methods and Results

This is an ongoing study at the Brigham & Women’s Hospital (BWH) FISH Center for Women’s Health. After approval by the Partners Institutional Review Board, we approached 600 patients, of which 114 (19\%) consented to participate in the study. To date, 97 iHistory invitations have been sent to patients via Patient Gateway, the Partners patient web portal. By March 15th, we have collected 50 completed questionnaires (51.5\%). Focus groups with participating physicians are currently being formed to analyze physician satisfaction. We received 25 completed web-based patient satisfaction surveys which are used to evaluate the usability of the iHistory application. Usability of computer software is defined as the capacity of the computer system to allow the user to carry out the task safely, effectively, efficiently and enjoyably.\cite{2}. To date, 80\% of respondents reported that the iHistory application was easy to use (Figure 1) and 72\% agreed that the process was effective. (Figure 2)

Conclusion

Thus far, the majority of patients who participated in the study had a positive experience with using the iHistory application. iHistory proved to be easy to use and patients believe that completing the questionnaire prior to their visit improved the level of care they received during the visit, thus displaying a high level of effectiveness.

References

\cite{1} Andre W. Kushniruk, M.Sc., Vimla L. Patel, PhD., James J. Cimino, MD. Usability Testing in Medical Informatics: Cognitive Approaches to Evaluation of Information Systems and User Interfaces