Patient Experience Recommender System for Persuasive Communication Tailoring

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To maximize patient perspective and effectively support lifestyle choices, we will develop the "Patient Experience Recommender System for Persuasive Communication Tailoring." PERSPeCT is an adaptive computer system that will assess a patient's individual perspective, understand the patient's preferences for health messages, and provide personalized, persuasive health communication relevant to the individual patient. To improve the effectiveness of computer tailored health communication, we will adapt recommender systems frameworks that are widely used by innovative businesses outside of healthcare. This project is designed around three specific aims. We propose to 1) collect data for the PERSPeCT machine learning recommender system; 2) design, implement, train and validate the PERSPeCT system; and then 3) conduct a pilot randomized trial comparing the impact of PERSPeCT versus a traditional rule-based system. In order to provide detailed predictions and best represent individual perspectives and preferences, recommender systems make use of data from multiple, complimentary sources. Our initial concept of PERSPeCT includes information about the patients, user feedback (implicit and explicit) and information about the messages themselves.

RELEVANCE
PERSPeCT addresses areas of interest for PCORI, namely: 1) Identifying, testing, and/or evaluating methods that can be used to assess the patient perspective when researching behaviors, lifestyles, and choices within the patient's control; and 2) Developing, refining, testing, and/or evaluating patient-centered approaches, including decision support tools. The successful completion of the PERSPeCT study will move the field of computer tailored health communications forward and open the door to a variety of exciting future directions of direct relevance to the PCORI program.