
Supporting Patient-Provider Collaboration to Identify Individual Triggers using Food and Symptom Journals

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This research highlight presents our recent publication “Supporting Patient-Provider Collaboration to Identify Individual Triggers using Food and Symptom Journals”, which appeared in the Proceedings of the ACM Conference on Computer Supported Cooperative Work (CSCW 2017) [1].

Original Abstract

Patient-generated data can allow patients and providers to collaboratively develop accurate diagnoses and actionable treatment plans. Unfortunately, patients and providers often lack effective support to make use of such data. We examine patient-provider collaboration to interpret patient-generated data. We focus on irritable bowel syndrome (IBS), a chronic illness in which particular foods can exacerbate symptoms. IBS management often requires patient-provider collaboration using a patient’s food and symptom journal to identify the patient’s triggers. We contribute interactive visualizations to support exploration of such journals, as well as an examination of patient-provider collaboration in interpreting the journals. Drawing upon individual and collaborative interviews with patients and providers, we find that collaborative review helps improve data comprehension and build mutual trust. We also find a desire to use tools like our interactive visualizations within and beyond clinic appointments. We discuss these findings and present guidance for the design of future tools.

Relevance to Wish

Many people self-track in order to test a specific hypothesis, and recent work in the CHI community has addressed supporting such hypothesis testing. However, little work has focused on how to help people form those hypotheses. For people who have chronic illnesses, the process of hypothesis formation can be particularly difficult. Healthcare providers often supply long lists of possible symptom triggers, but narrowing those down to the subset of likely triggers for a specific individual often requires conjecture and trial-and-error.

Our work investigates supporting patient-provider collaboration to identify individual triggers using food and symptom journals. We focus on a case study of irritable bowel syndrome (IBS), a chronic illness characterized by episodic gastrointestinal symptoms. The majority of people with IBS think that certain foods cause or worsen their symptoms, but different individuals have problems with different nutrients. Many people therefore struggle to identify their personal triggers. Healthcare providers generally suggest that patients with IBS record their food and symptoms in a journal to try to identify possible triggers. Patients then bring the journals back to their providers looking for answers. Unfortunately, they are often disappointed in the feedback they receive, as providers currently lack appropriate tools to help them make sense of the data. We therefore developed interactive, exploratory visualizations that can help patients and their providers explore the dietary trends in the individual patient's data. By collaboratively reviewing the visualizations, patients and providers could form hypotheses about which nutrients worsen or improve each patient's symptoms.

We look forward to participating in the WISH workshop to discuss different strategies for hypothesis formation, and

how it could fit into a larger self-experimentation framework. We also hope to engage in discussions around what other conditions may benefit from interactive visualizations of patient-generated data, and what challenges those different conditions may pose. The WISH community seems like a great place to engage in those discussions and develop new ideas about supporting people through all stages of a self-experimentation process.

Statement of Non-Conflict with Policies

This WISH submission does not conflict with the policies of CSCW, where the work was originally published.

REFERENCE

1. Jessica Schroeder, Jane Hoffswell, Chia-Fang Chung, James Fogarty, Sean Munson, and Jasmine Zia. 2017. Supporting Patient-Provider Collaboration to Identify Individual Triggers using Food and Symptom Journals. In *Proceedings of the 19th ACM Conference on Computer-Supported Cooperative Work & Social Computing (CSCW 2017)*. <http://dx.doi.org/10.1145/2998181.2998276>