Cyberchondria: Studies of the Escalation of Medical Concerns in Web Search

Ryen White, Eric Horvitz
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The World Wide Web provides an abundant source of medical information. This information can assist people who are not healthcare professionals to better understand health and disease, and to provide them with feasible explanations for symptoms. However, the Web has the potential to increase the anxieties of people who have little or no medical training, especially when Web search is employed as a diagnostic procedure. We use the term cyberchondria to refer to the unfounded escalation of concerns about common symptomatology, based on the review of search results and literature on the Web. We performed a large-scale, longitudinal, log-based study of how people search for medical information online, supported by a large-scale survey of 515 individuals’ health-related search experiences. We focused on the extent to which common, likely innocuous symptoms can escalate into the review of content on serious, rare conditions that are linked to the common symptoms. Our results show that Web search engines have the potential to escalate medical concerns. We show that escalation is influenced by the amount and distribution of medical content viewed by users, the presence of escalatory terminology in pages visited, and a user’s predisposition to escalate versus to seek more reasonable explanations for ailments. We also demonstrate the persistence of post-session anxiety following escalations and the effect that such anxieties can have on interrupting user’s activities across multiple sessions. Our findings underscore the potential costs and challenges of cyberchondria and suggest
actionable design implications that hold opportunity for improving the search and navigation experience for people turning to the Web to interpret common symptoms.