



Pediatric Academic Societies Meeting

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Internet Health Information Can Reduce Parents' Trust in Doctors' Diagnoses

Research at the 2017 Pediatric Academic Societies Meeting highlights importance of discussing concerns with patients to avoid treatment delays.

SAN FRANCISCO – New research being presented at the 2017 Pediatric Academic Societies Meeting suggests online health information can influence whether parents trust a diagnosis made by their child's doctor, potentially leading to delayed treatment.

The study abstract, "Paging Dr. Google: The Effects of Online Health Information on Parental Trust in Pediatrician' Medical Diagnoses," will be presented at the Moscone West Convention Center in San Francisco.

Using the Mechanical Turk online research platform, researchers recruited 1,374 parent participants who were presented with a vignette of a child who "has had a rash and worsening fever for 3 days." The participants, who averaged 34 years of age and had at least one child under age 18, were then divided into groups.

In the first group, participants received screen shots of internet information describing some symptoms of scarlet fever, an infectious disease linked to Strep throat that causes rash and fever. Unless treated with antibiotics, scarlet fever can develop into rheumatic fever and, in some cases, lead to heart damage.

The second group of participants received screen shots listing select symptoms of Kawasaki disease, a condition in which blood vessels throughout the body become inflamed. It also is accompanied by fever and rash. Prompt treatment with anti-inflammatory drugs is needed to help prevent life-threatening complications such as aneurisms.

A third set of parents, the control group, received no internet screen shots. All participants then read that the doctor had diagnosed the child with scarlet fever. Compared to the control group, in which 81.0 percent of parents reported trusting the physician, 90.5 percent of parents who had received scarlet fever symptom screen shots reported trusting the physician. Furthermore, fewer parents in the scarlet fever cohort answered that they were likely to seek a second opinion (21.4 percent), compared to the control group (42.0 percent).

Conversely, only 61.3 percent of participants who had viewed the screen shots listing rash and fever as symptoms of Kawasaki disease reported trusting the doctors' diagnosis, and 64.2 percent reported that they were likely to seek a second opinion.

Lead author Ruth Milanaik, DO, FAAP, an associate professor at the Hofstra Northwell School of Medicine, said that although there are many advantages of having easily accessible medical information available on the internet, the study's findings show that "internet-driven interpretation of symptoms" can compromise trust between a doctor and patient.

"The internet is a powerful information tool, but it is limited by its inability to reason and think," Dr. Milanaik said. "Simply entering a collection of symptoms in a search engine may not reflect the actual medical situation at hand. These computer-generated diagnoses may mislead patients or parents and cause them to question their doctors' medical abilities and seek a second opinion, thereby delaying treatment."

Pediatricians should encourage parents to share all concerns they have, Dr. Milanaik said, so they lead them through the differential diagnosis process, and why others diagnoses were ruled out.

"Parents who still have doubts should absolutely seek a second opinion," she said. "But they shouldn't be afraid to discuss the result of internet information with the physician."

Reporters interested in an interview with Dr. Milanaik can contact the Northwell press office at 516-321-6701.

Please note: only the abstract is being presented at the meeting. In some cases, the researcher may have more data available to share with media, or may be preparing a longer article for submission to a journal. Contact the researcher for more information.

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The Pediatric Academic Societies (PAS) Meeting brings together thousands of individuals united by a common mission: to improve child health and wellbeing worldwide. This international gathering includes pediatric researchers, leaders in academic pediatrics, experts in child health, and practitioners. The PAS Meeting is produced through a partnership of four organizations leading the advancement of pediatric research and child advocacy: Academic Pediatric Association, American Academy of Pediatrics, American Pediatric Society, and Society for

Pediatric Research. For more information, visit the PAS Meeting online at www.pas-meeting.org, follow us on Twitter @PASMeeting and #pasm17, or like us on Facebook.

ABSTRACT

TITLE: Paging Dr. Google: The effects of online health information on parental trust in pediatricians' medical diagnoses

Background: In today's technology-laden world, parents are likely to seek health information online. Although online information may help parents make informed decisions about their child's healthcare, few studies have examined the impact this information has on the parent-pediatrician dyad.

Objective: To examine how online information that either supports or contradicts a doctor's medical diagnosis (Dx) affects parental trust in the doctor's Dx and parents' likelihood of seeking a second opinion (SO).

Design/Methods: The study was released on Amazon's Mechanical Turk to parents of at least one child <18 yrs. All participants were presented with a vignette of a child who "has had a rash and worsening fever for 3 days." Each participant was then assigned to 1 of 3 cohorts. The "Scarlet Fever (SF)" and "Kawasaki Disease (KD)" cohorts received screenshots of doctored internet results suggesting that the child's symptoms indicated either SF or KD. The control cohort received no internet results. All cohorts then read that the doctor had diagnosed the child with SF. Each participant was subsequently asked to rate their level of trust in the Dx from 1 (Not at all) to 7 (Completely). They were also asked to rate their likelihood of seeking a SO regarding the Dx, from 1 (Extremely Unlikely) to 7 (Extremely Likely). Mean trust and mean likelihood ratings were analyzed across cohorts using a Kruskal-Wallis Test with Dunn's Test for multiple comparisons.

Results: The sample included 1374 participants, (46.9% male, mean age 34.3 yrs). Overall, the three cohorts significantly differed in reported trust in the doctors' Dx ($p < .001$) and reported likelihood of seeking a SO ($p < .001$; Fig. 1). Compared to the control group, mean trust in the Dx was higher in the SF cohort and lower in the KD cohort, and reported likelihood of seeking a SO was lower in the SF cohort and higher in the KD cohort.

Conclusion(s): After reading online search results, parents were more inclined to trust their doctors' Dx when online information supported their doctor's Dx and less inclined when information contradicted the doctor. Parents were also more likely to seek a SO if internet results contradicted the doctor's Dx. Although it is imperative that parents participate in the medical decision-making process, conflicting online information could in some cases delay necessary medical treatment. Physicians must be aware of the influence the internet may have on parents and ensure adequate parental education to address any possible concerns.