

Workshop gives web-based disease tracking a checkup

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Web-based disease trackers like Google Flu Trends are supposed to revolutionize public health response to outbreaks, but how well do they actually work, and can they be made to work better? SFI Omidyar Fellows and epidemiologists Sam Scarpino and Ben Althouse hope to know more after a workshop starting today.

Traditional disease surveillance is a slow process: when a patient gets sick enough she visits the doctor, and the doctor reports her symptoms to the Centers for Disease Control and Prevention. Eventually the CDC puts enough reported cases together to spot an outbreak.

Google's idea was to use [web searches](#) related to symptoms as a proxy for sick patients; queries for "fever" or "muscle aches," for example, correlate with searchers actually having those symptoms, so a pattern of such searches could, in theory, signal an oncoming influenza epidemic.

It looked promising at its debut in November 2008, but Google Flu Trends disappointed its adherents – in 2009 and again earlier this year – when it predicted about twice as many [flu cases](#) as were actually reported to the CDC.

Another system, FluNearYou, relies entirely on self-reported symptoms, meaning it can only track those who decide to participate.

"It's clear there's potentially valuable information, but what does it really mean?" Scarpino asks, noting that web and Twitter-based systems face a

number of methodological and statistical challenges.

Of particular interest is whether the relationship between web searches and symptoms is changing, perhaps driven by the growing interest in the disease trackers themselves.

Althouse says their first goal is "getting everyone in the room," from scientists to CDC and World Health Organization officials to private-sector researchers. Then, he says, they hope to "figure out what's urgently needed and how to prepare now for the next pandemic."

Provided by Santa Fe Institute

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