

Site uses social media to track illness

9 October 2013, by Aviva Woolf

You might not consider Tweets such as "Missing the Redskins game because of the flu, ugh :(#worstday" as groundbreaking advancement in science, but Graham Dodge, founder and CEO of the disease-tracking site Sickweather.com, thinks they are.

Sickweather.com uses social media updates to follow outbreaks of the [flu](#), allergies and other illnesses around the country. Sickweather scans Facebook and Twitter for posts about sickness and gathers the data to form an interactive map showing the areas with the most statuses about infections.

The Baltimore-based company launched the site in 2011, but is still in beta mode.

Now, Sickweather is introducing a new smartphone app in six to eight weeks that will alert users every time they are in the vicinity of a sick person. The launch is just in time for the beginning of influenza season, a fact that Dodge said is a "just a happy coincidence."

The Sickweather app uses a unique feature called "geosensing" to notify people when they are entering a sick zone. Soon, before you enter a Starbucks or sit on a crowded city bus, you will be able to know if some people inside have had a fever in the past 24 hours, or a chickenpox-ridden child at home.

"The idea of data mining social media to identify sick people and outbreaks is really cool," said Phil Fogel, 27, a user from New York City.

About the upcoming app, he said: "It sounds really awesome as a novelty, but I'm not going to avoid a place simply because it's possible that someone with the flu was there."

Experts in the medical field say that information gathered via social media could be helpful, but should only be used in conjunction with traditional outbreak research.

"We are open to that kind of thing. At this point it can't replace tried and true techniques," said Dr. Lucy Wilson, of Maryland's Department of Health and Mental Hygiene. "I think if it can be validated and shown to fit with surveillance trends then yes, it has that potential."

Data on illnesses that the Department of Health and Mental Hygiene collects from hospitals, nursing homes, jails or other institutions can take up to six months to validate before being put up on the web. While doctors react to outbreaks immediately, the case numbers aren't uploaded in real-time.

Wilson, chief of the department's Center For Surveillance, Infection Prevention, and Outbreak Response, also said the public health system already has various groups that use social media for markers of different health issues.

Although using data collected via Twitter and Facebook to follow medical trends might seem suspect to some, the team at Sickweather uses a patent-pending algorithm. The Sickweather team is also advised by Michael J. Paul and Mark Dredz of Johns Hopkins University, who created a model in their study "You Are What You Tweet" to track illness via Twitter.

Their equation collects certain keywords from Twitter like "flu," "sick," and "sneezing," to create a map of general locations where the most keywords appear. Although Paul and Dredz admit that Twitter doesn't always give the most scientifically accurate results, the information they do receive is valuable for getting a broad sense of where diseases are heading.

Using its system, Sickweather was able to predict last year's early flu season six weeks before the Centers for Disease Control and Prevention, Dodge said.

Sickweather's advantage, Dodge said, is that it works in real time. Google's Flu Trends, for example, is on a 48-hour lag and reports from CDC

can be several weeks behind.

Recently, on Sickweather's blog, it was announced that Sickweather had been tracking reports of chickenpox on [social media](#) since October 2011.

Maryland was named the No. 1 best friend of chickenpox as the state is at the top of the "Chickenpoxensie" States list.

Don't worry too much. This could just mean that Marylanders are more vocal on Facebook when complaining about the disease.

"The bigger point of this is that anecdotal data has a place in this world of clinical data," said Dodge. "If people think their kid has something or think they have something and they're being told this isn't true, if they can't afford the lab to get concrete results, this offers data to help people make educated guesses."

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