

New global surveillance tool detectsmonitors public concerns about vaccines in real time

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Scientists have developed a global media surveillance system that enables them to look for, and systematically monitor, up-to-the-minute public concerns and rumors about vaccines originating from 144 countries.

The application could help public health officials respond more quickly and effectively to a loss of public confidence in vaccines before it results in vaccination refusals and [disease outbreaks](#), according to an Article published Online First in *The Lancet Infectious Diseases*.

"Recent measles outbreaks in the UK, stemming from children not-vaccinated due to fears prompted by now-discredited research over a decade ago, is one example of the long-term consequences of broken public trust in vaccines", explains lead author Heidi Larson from the London School of Hygiene & Tropical Medicine in the UK.

"The Internet has speeded up the global spread of unchecked rumours and misinformation about vaccines and can seriously undermine [public confidence](#), leading to low rates of vaccine uptake and even disease outbreaks."

The new application builds on the capacity of HealthMap—an online surveillance resource that detects and maps early signs of disease outbreaks from electronic data sources such as news reports, blogs, social networking sites, and government announcements—to track the emergence and spread of public rumours and concerns about vaccines,

vaccine programmes, and vaccine-preventable diseases from 144 countries.

Between May 2011 and April 2012, 10 380 reports were identified and categorised by type of content—positive/neutral (7171; 69%) and negative (3209; 31%)—location, and disease. The researchers also devised a typology of concerns to evaluate and prioritise reports according to their potential to disrupt vaccine uptake, to guide further investigation and intervention.

Of the negative reports, almost half were associated with vaccine impacts (eg, vaccine suspension, refusals; 24%) and belief systems (eg, religious beliefs, risk perceptions; 21%).

According to Larson, "Real-time monitoring and analysis of vaccine concerns could help governments and [public health officials](#) locally, nationally, and globally understand where they should focus their attention and resources when a concern arises, and where specific vaccines might need more tailored engagement strategies."*

Writing in a linked Comment, Natasha Crowcroft, Chief of [Infectious Diseases](#) at Public Health Ontario in Canada and Kwame Julius McKenzie from the University of Toronto in Canada say it is time to move beyond passive responses to vaccine safety events towards active preparedness, "Pre-emptive action in childhood to promote immunisation might prime the minds of future parents, health-care providers, journalists, and politicians with a positive attitude towards immunisation. The benefits and risks of immunisation could be discussed in schools as part of history, politics, science, health, and ethics courses. This approach might lead to a stronger sense of the value of immunisation for both the individual and the public."

More information: [www.thelancet.com/journals/lan ...](http://www.thelancet.com/journals/lan...)

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