Helping health workers understand unfolding disease outbreaks

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Imagine you're in the public health field, perhaps an epidemiologist, tasked with tracking diseases causing serious health problems in your area – especially new diseases that you have seen reported only in distant lands. If dengue, for example, suddenly sends scores of people to a hospital in one part of your state, local decision makers would turn to you to predict the steps needed to prevent an outbreak in your region.

With unlimited research time, subscriptions to specialty publications and a deep awareness of the complex modeling tools on the market, you could probably create a report with some suggestions. Instead, what you need is a quick tool to help develop actionable information and, in the case of lethal infections, this tool could rapidly propose life-saving actions in the early days of the event.

This is the plan for a web-based disease-outbreak tool developed at Los Alamos National Laboratory, a quick analysis resource called AIDO ("I-do") for Analytics for Investigation of Disease Outbreaks. Unlike traditional epidemiological models, this tool can be used by diverse group of users, such as analysts, scientists, practitioners, decision makers and the public, at no cost. The website provides historic information for key outbreaks of nearly 40 different diseases and it helps responders select the historic similarities to each new situation, even as an outbreak evolves over the first hours and days.

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