

Red Sky: New Tool for Health Threats

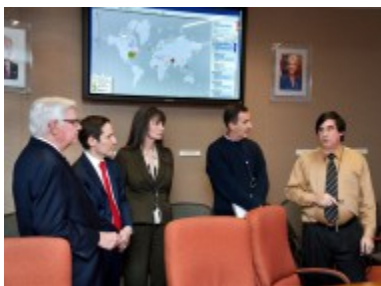
By Lexi Sowers, Health Communications Specialist, CDC.

"Red sky at night, sailor's delight. Red sky in the morning, sailors take warning."

Wouldn't it be great if we all had a signal to tell us when danger was approaching? An easy-to-use tool to help us be prepared and take action? Like this age-old sailor's warning, CDC is now developing an instrument to help senior leaders gather the available data to make executive decisions in emergency situations. Named Red Sky after the seafarer's adage, this new cloud-based dashboard will allow users to access real-time information of public health events on an interactive map.

The Red Sky dashboard has an intuitive interface that displays public health events on a global map, color coding them for severity. By simply clicking on an event, users are given a basic synopsis of the situation. Users also have the option of delving deeper by exploring data tables, charts, reports, or maps associated with the event that are housed within the dashboard. The ability to access this range of information anytime, anywhere, fulfills CDC Director Tom Frieden's intent to keep CDC leadership better informed of developing public health threats. This dynamic, real-time dashboard will replace the static Emergency Operations Center Daily Reports.

Data to populate the dashboard will come from a variety of sources both internal and external to CDC. In order to work, Red Sky needs CIOs to provide relevant information on developing health events. CDC's Emergency Operations Center (EOC) will then upload data into the Red Sky dashboard. This data sharing gives visibility to all CDC programs and public health events, ensuring that all messages get to the director so he can make timely and critical decisions.



The Situation Awareness Team, led by Jim Tyson, shows the Red Sky demo to Director Frieden and Representative Hal Rogers (KY).



The CDC Red Sky Public Health Response Dashboard gives real-time data on public health events.

The team responsible for creating Red Sky is the Situation Awareness Team from the Office of Public Health Preparedness and Response (OPHPR). Jim Tyson, Situation Awareness branch chief, talks about the information sharing and collaboration that make Red Sky possible. "Having knowledge where we can predict, extrapolate, or be able to provide and think about courses of action takes us well beyond just standard status. Red Sky, from our standpoint, is to provide Dr. Freiden and the leadership at CDC a capacity where critical information of significance can get to leadership in a way that it's collected, processed, and analyzed by subject matter experts," said Tyson. His team works with CDC CIOs to process and correlate information for an integrated one-stop shop.

Jacqueline Burkholder, epidemiology lead, helps with the who, what, when, where, and why for each public health event. She reaches out to partners across the agency to find out CDC's involvement in the event, the location, the outcome, and what CDC is doing to reduce or prevent situations like an outbreak. Burkholder works directly with the subject matter experts with partners across CDC and with other agencies like WHO and PAHO to gather their information, insight and recommendations to make sure all the information on Red Sky is correct. "Our biggest partners right now are Global Disease Detection and NCIRD, so they help support us and provide the majority of the information that we have right now for outbreaks all over the world. We try to get as much information as we can from subject matter experts and we also try to garner information from other sources. We want to be sure that the information is epidemiologically correct and the latest information as it can be," she said.

Red Sky also shows CDC's efforts in the field. Burkholder asserts, "It's usually about cases. It's about people we're deploying, teams we have set up, things that CDC is already doing." By not only including epidemiological data about certain public health events, but also contextual information about how CDC is responding to the problem, senior leaders are better informed and can make better decisions.

While Red Sky is currently CDC-centric, Freiden plans to eventually take this information-sharing platform across the global community. Partners like CGH and WHO can help expand Red Sky to include several countries around the world. Tyson says, "We really believe that Red Sky has the integrated functionalities that can build and deliver global health capacity for preventing, detecting, and responding to global public health threats." Developing countries can use this capability to learn the capacities needed in the exchange of information and the methodologies and best practices of

information sharing globally. CDC has reached out to global partners to see how it can assist in improving information sharing and collaboration from a global health perspective.

Red Sky was developed to provide a simple-to-use and common platform to share critical information securely anytime, anywhere. It improves leadership access and knowledge of critical events or issues by enabling programs to capture, share, and apply their collective knowledge in one location. Red Sky has been tested among 60 people from CDC leadership and will be available to all CDC stakeholders this month. While a majority of the CDC Red Sky development is complete, the Situation Awareness Team is still testing, updating, and improving the dashboard interface. Tyson said, "In the next few weeks, we're going to go out for what's called 'initial operation capability' for the whole of CDC." During this time, the Situation Awareness Team will take recommendations and any troubleshooting reports to make Red Sky the best resource it can be.

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