# Pardon the "Int"-eruption: Why Healthcare Organizations Should Embrace Open-Source Intelligence (OSINT)

In 2009, a novel influenza virus (Influenza A/H1N1) was detected in the United States and spread world-wide. The recent COVID-19 pandemic, which likely emerged in China, quickly spread around the world. These events highlight the increasing frequency of the emergence of world-wide infectious disease outbreaks. Hospitals and health systems often had to rely on traditional scientific channels, the popular press, or patients presenting at the emergency department or doctor's offices to be informed of these events. Now, with the proliferation of social media sites such as Facebook, Twitter, Tik Tok, and Instagram, news of these type of outbreaks are more frequent and more numerous. For healthcare organizations, do they dedicate scarce resources to monitor these events in order to plan for, and possibly mitigate, the next pandemic? Can these companies rely on traditional medical/public health surveillance methods or are there other methods they can use to increase their awareness of infectious disease outbreaks?

Figure 1: Number of countries experiencing significant disease outbreaks, 1995-2018
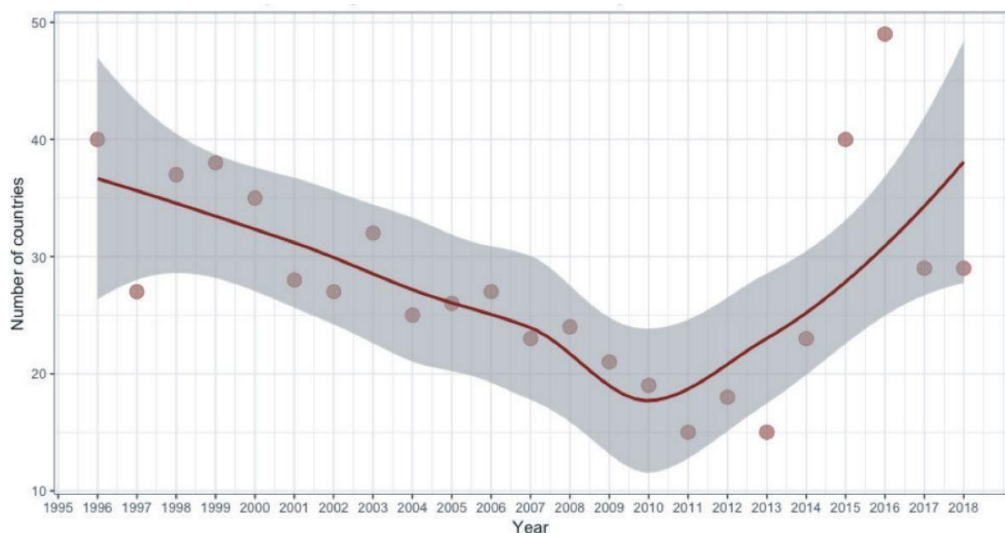
Source: Harvard Global Health Institute/World Economic Forum analysis of data from WHO Disease Outbreak News (http://www.who.int/csr/don/en/)

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Many healthcare organizations have relied on the CDC and the WHO (and the traditional popular press) to provide updates on disease outbreaks. The validity, timeliness, and usefulness of these notifications is often in doubt. How can a hospital or other provider reliably achieve real-time, or near real-time, surveillance of potential pandemics so that it can adequately plan for and mitigate the effects to its operations with valid, actionable data in a cost-effective manner?

In the intelligence community (IC), several methods are used to assess information to provide actionable classified intelligence for decision makers. A brief list includes:

- Imagery Intelligence (IMINT)
- Geospatial Intelligence (GEOINT)
- Open-Source Intelligence (OSINT)
- Social Media Intelligence (SOCMINT)

For unclassified information to be utilized as intelligence by healthcare organizations preparing for infectious disease outbreaks, OSINT can be a valuable resource.

OSINT

The Department of Defense defines OSINT as "intelligence that is produced from publicly available information and is collected, exploited, and disseminated in a timely manner to an appropriate audience for the purpose of addressing a specific intelligence requirement" (50 U.S.C. Chapter 15, Subchapter 1, §403-5). The tools used to gather open-source information are numerous but can often be unreliable. A good way to begin assessing the utility of a source is to start with the OSINT Framework. A fundamental problem for healthcare organizations with open-source information is the amount of information published every day around the world on infectious disease outbreaks. Being able to turn that information into actionable intelligence can be a challenge. A list of tools to turn information into intelligence can be found

here and here. In addition, The Program for Monitoring Infectious Diseases (ProMED) a program of the International Society for Infectious Diseases, has an free email subscription service ProMED Mail, which sends out daily reports of news regarding outbreaks among other issues. Earlier this year the OSINT Foundation began operations. According to the website, the mission of the Foundation is to "Promote open-source intelligence tradecraft, elevate the discipline, and develop the practitioner community to advance the national security of the United States." While primarily focused on traditional IC practitioners and tradecraft, their intent is that "80% or higher of the publicly available information on our site is of value to all OSINTers" (Eliot Jardines, personal communication). How can hospitals and other healthcare organizations that face increasing frequency of infectious disease outbreaks, make efficient use of OSINT tools to prepare for pandemics?

Health System Strategic Planning and OSINT

The COVID-19 pandemic reminds us that emerging infectious diseases (EID) are a world-wide problem. Because of the delay in recognizing the onset of the disease and current travel patterns, diseases that start in one country can be expected to spread around the world. Time is the scarcest resource but by having a prevention strategy in place, the provider can prevent or mitigate the pandemic's full effects, and not react which can be costly. The most efficient way to monitor these outbreaks is to take advantage of as many low or no-cost resources as possible. Some of those resources, including the OSINT tools previously mentioned, have been outlined here. In addition, subject matter experts can be consulted to strategically plan for the next pandemic.

If you'd like to learn more or have any questions, contact Jim Wooten at +1(609) 706-2880 or by email at jwooten@geomarkconsulting.com.