

GLOBAL PUBLIC HEALTH INTELLIGENCE NETWORK (GPHIN)**SYNOPSIS**

On July 25, the Globe and Mail published an article: *Without early warning you can't have early response: How Canada's world-class pandemic alert system failed*. This article was critical of Canada's early response to COVID-19, and focussed on what it described as the decline of the Global Public Health Intelligence Network (GPHIN).

POTENTIAL QUESTIONS

- Why was Canada's public health early warning network switched off prior to COVID-19?
- Why was no alert issued by GPHIN regarding COVID-19?
- Why was GPHIN redirected to do domestic surveillance instead of international surveillance?

KEY MESSAGES

- Global Public Health Intelligence Network (GPHIN) is Canada's internationally respected public health event early-warning system.
- The first report of a mysterious pneumonia outbreak in China, which would later be known as COVID-19, was reported in Agence France-Presse on the evening of December 30, 2019.
- This information was disseminated quickly through several mechanisms, including the December 31, 2019, GPHIN Situational Awareness Daily Report, distributed to Canadian public health practitioners at the federal, provincial and territorial levels, a posting on the Program for Monitoring Emerging Diseases (ProMED), and an official reporting from the Wuhan Municipal Health Commission.
- This enabled a rapid response, both domestically and globally. Enhanced surveillance and reporting began on December 31, 2019, and the WHO stood up its Incident Management Support Team on January 1, 2020.

IF PRESSED ON WHY A GPHIN ALERT WAS NOT DONE FOR COVID-19

- The information on the mysterious pneumonia in China had already been disseminated widely through a number of mechanisms.
- Canada's response to the initial report of the mysterious pneumonia in China was swift. Enhanced surveillance and reporting began immediately. A GPHIN alert would not have made Canada's response to COVID-19 faster or more effective.

IF PRESSED ON GPHIN REPORTING

- GPHIN's comprehensive Situational Awareness Daily Report provides timely reporting to Canadian public health practitioners at the federal, provincial and territorial levels.
- GPHIN also develop special reports to address needs identified by organizations, such as the World Health Organization (WHO).

IF PRESSED ON CONTINUITY OF GPHIN INTERNATIONAL SURVEILLANCE

- GPHIN’s primary role as a global event-based surveillance system remains unchanged.
- As public health threats emerge, GPHIN conducts subject-specific surveillance to support PHAC’s situational awareness and analysis. This includes both domestic issues, such as vaping, and international issues, such as Ebola.
- GPHIN continues to compile and disseminate international surveillance reports, in addition to its Situational Awareness Daily Reports.
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BACKGROUND

GPHIN: KEY FACTS

The Public Health Agency of Canada’s (PHAC) Global Public Health Intelligence Network (GPHIN) is an early-warning and situational awareness system for potential chemical, biological, radiological and nuclear public health threats worldwide, including outbreaks of infectious disease. GPHIN users include non-governmental public health agencies and organizations, as well as government authorities who conduct public health surveillance. GPHIN requires a free subscription from eligible users. GPHIN is a significant contributor to the World Health Organization’s (WHO) Epidemic Intelligence from Open Sources.

GPHIN consists of two critical components:

- a professional multidisciplinary team of life science analysts, reviewing information in nine languages and conducting rapid risk assessments to detect public health threats; and
- an Information Management Tool that uses machine learning and natural language processing to facilitate the work of the analysts.

Every day, about 7,000 articles are captured in the GPHIN system. The web-based application in the GPHIN system continuously scans and acquires news sources of information worldwide in nine languages (Arabic, Farsi, English, French, Portuguese, Russian, Spanish, and simplified and traditional Chinese).

Once the data are in the GPHIN system, GPHIN analysts conduct their daily review to validate and assess the data for inclusion in reports, including the Situational Awareness Daily Report published each morning. This report goes directly from GPHIN to Canadian public health practitioners at the federal, provincial and territorial levels, including senior management at the Public Health Agency of Canada (PHAC) and other government departments.

GPHIN has not ceased issuing alerts for disease outbreaks and other public health threats. At present, any GPHIN analyst may identify an emerging issue to management for consideration. The final authorization for issuing an alert rests with the Vice-President of the Public Health Agency of Canada’s (PHAC) Health Security Infrastructure Branch.

GPHIN AND COVID-19

As would be the case with any emerging disease, enhanced event based surveillance and reporting on COVID-19 began on December 31, 2019 (then referred to as “viral pneumonia”). On December 30, 2019, the GPHIN system uploaded an article called “China probes mystery pneumonia outbreak amid SARS fears” published by the Agence France-Presse. The GPHIN analysts conducted their review, recognized the potential importance of this issue, and highlighted it in the GPHIN Situational Awareness Daily Report, which was distributed on December 31, 2019 to Canadian public health practitioners at the federal, provincial and territorial levels.

Issuing a separate alert would not have made Canada's reaction faster or more effective. There was already global recognition, beginning on New Year's Eve, that the outbreak in Wuhan was significant. Canada's response was swift, and enhanced surveillance and reporting began immediately.

GPHIN continues to monitor the COVID-19 global outbreak and provides special reports to address information needs identified by Canadian government officials and organizations such as the WHO.

GPHIN ALERTS: 2009 - 2019

According to the *Globe and Mail* article, 1587 GPHIN Alerts were issued between 2009-2019. Internal PHAC records show that 1589 were issued during that time period.

INTERNATIONAL VERSUS DOMESTIC SURVEILLANCE

GPHIN's primary role as a global event-based surveillance system remains unchanged. As public health threats emerge, GPHIN is tasked with subject-specific surveillance to support PHAC's situational awareness and analysis. This can include domestic issues, such as vaping, or international issues, such as Ebola. These reports are compiled and disseminated in addition to GPHIN's regular reporting.

PHAC Contact: Alixandria Clymans (613.355.8317)

PHAC Approved by: Brigitte Diogo VP, HSIB