Global Public Health Intelligence Network

From signals detection to action

EIOS Global Technical Meeting 2022

Session 6: Working Together for Stronger Public Health Intelligence

About GPHIN

- Established in 1997, GPHIN is an **early-warning, event-based surveillance** (EBS) system which relies on publicly available information sources in multiple languages.

- GPHIN supports global public health surveillance efforts in detecting, identifying and mitigating emerging and potential threats to public health. GPHIN tracks the following:

Infectious Disease: Human	Infectious Disease: Animal	Environmental Events	Product Safety
Substance Abuse	Biological Events	Chemical Events	Nuclear Events	Other Diseases

- GPHIN is made up of two critical components:
  - **Multilingual GPHIN Analysts**, who detect potential public health threat
  - **Information Management Tool** (GPHIN system), which uses machine learning and natural language processing to facilitate analysts' work

- GPHIN is hosted within the Public Health Agency of Canada (PHAC)

GPHIN Independent Review

Initiated in November 2020 by the Minister of Health with the goal of presenting **realistic and actionable recommendations** to make GPHIN fit for today's purpose and that of tomorrow.

Panel members selected based on **collective expertise in public health, health security and intelligence, and governance.**
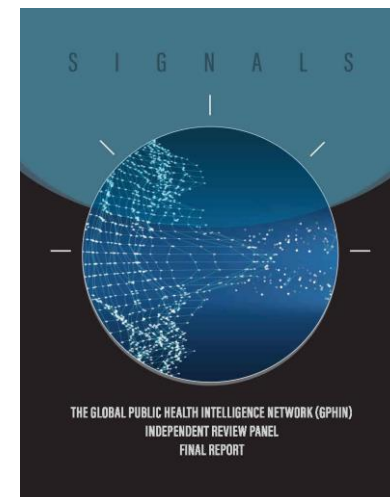
Scope of review :

1. **Capabilities** of existing system and **opportunities** for future improvements

2. **GPHIN's role in detecting and informing PHAC's response to COVID-19** and in global and domestic public health surveillance

3. **Lessons learned** from COVID-19 so that **Canada is well positioned to respond to future public health events**

GPHIN Independent Review
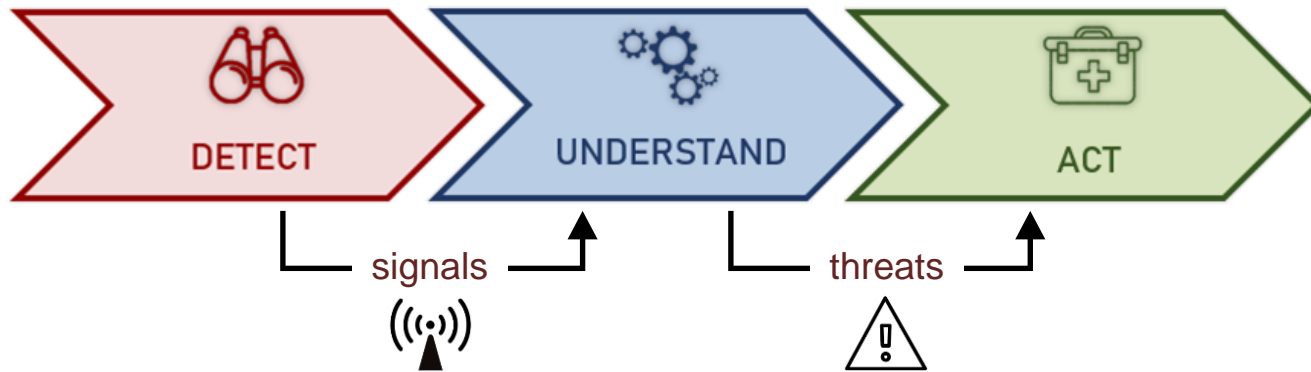

In **July 2021,** the final report was released

The Panel provided **36 recommendations** to improve GPHIN, as well as surveillance and risk assessment at PHAC more broadly

- In order to promote the **modernization and long-term sustainability of the GPHIN Program**, an action plan was developed to strategically respond to the recommendations and develop policy and operational guidelines. The action plan focusses on 4 areas:
    1. Clear mandate, vision and operations
    2. State-of-the-Art IT system
    3. Strong People: Support the GPHIN team
    4. Strategic Partnerships and Connections

- A key component of the recommendations was developing an Agency-wide **risk assessment continuum** to facilitate the movement of GPHIN signals to those best positioned to assess and respond.

  - An integral component of building this continuum has been the creation of a separate **Centre for Integrated Risk Assessment (CIRA)**
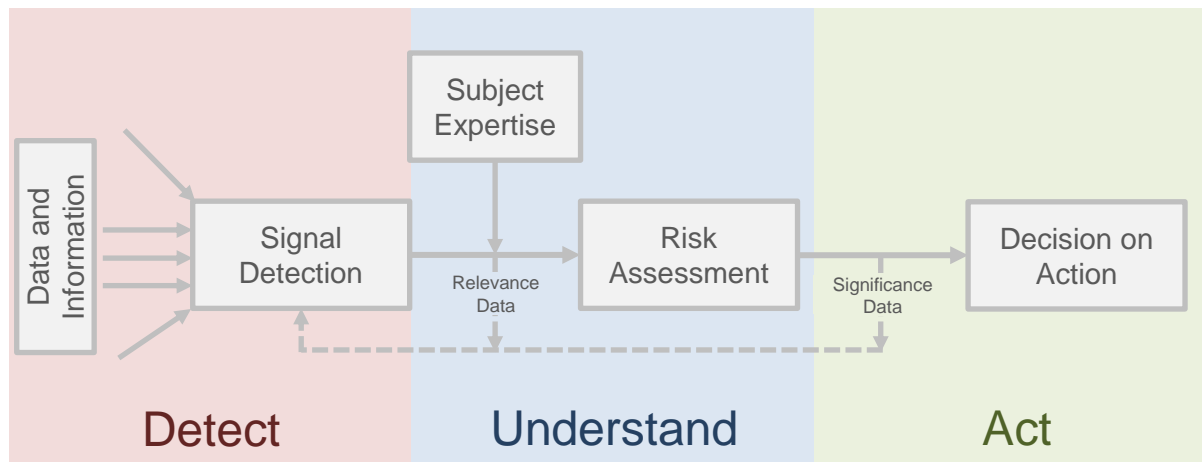
Benefits of Working Together

- The goal of the risk assessment continuum is to ensure the **effective movement of intelligence from detection to decision** on action, layering in additional intelligence and expertise to **prevent, prepare, respond and recover** from public health emergencies.

DETECT — signals — UNDERSTAND — threats — ACT

Benefits of Working Together

- The goal of the risk assessment continuum is to ensure the **effective movement of intelligence from detection to decision** on action, layering in additional intelligence and expertise to **prevent, prepare, respond and recover** from public health emergencies.

- Feeding quality assurance data back to the signal detection stage better connects the many facets and groups involved in preventing, protecting, and responding to emerging and potential threats, and facilitates refinement of the processes and systems.

- Reinforcing communication channels **supports every link in the chain**, leverages the right expertise for the best knowledge, and contributes to a beneficial feedback loop for GPHIN's own quality assurance.