Influenza surveillance system: Leveraging GISRS for COVID-19 surveillance

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SARInet Laboratory Network Meeting
28-30 October • Virtual meeting
GISRS – world’s asset

Speed! - racing against influenza virus evolution

2020: 125 countries 155 Institutions including 146 National Influenza Centres
TOP URGENT: GSD (Genetic sequence data) sharing

- GSD sharing – critical for diagnostic development, risk assessment ….
- ABS – Access and Benefit Sharing
- GISAID – the GISRS mechanism for influenza GSD sharing

- 2020-01-10 1st GSD shared via GISAID (< 48 hours)
- ~138K whole genomes of SARS-CoV-2 as of 16 Oct 2020
TOP URGENT: EQAP (external quality assessment program)

- Evaluate lab diagnostic quality of the novel virus SARS-CoV-2; understand the global capacity
- GISRS mechanism of annual EQAP for influenza since 2007
- Influenza EQAP → WHO COVID-19 EQAP
  - 8 Feb initiated discussion
  - Confirmed contract 15 March – 31 August
  - 16 April – 1st shipment going out

164 countries (233 labs) participated:
- 94% participating labs all correct
- 95 participating countries with all correctness full capacity in place
- 96% of labs with 2019 influenza EQAP all correct record, all correct for COVID-19 virus
Capacity built through influenza readily $\rightarrow$ COVID-19 response

- **FluMart** $\rightarrow$ CoVMart: COVID data reporting
- GISRS influenza **shipping mechanism** $\rightarrow$ COVID-19 virus materials shipping
- Influenza pandemic **special study** protocols $\rightarrow$ COVID-19 serology and early investigation protocols
- ~90% national COVID-19 labs are **NICs** or labs associated with GISRS
- **GISRS mechanisms** e.g. TORs of H5RefLabs $\rightarrow$ COVID-19 Reference Labs

- **COVID-19 sentinel surveillance by GISRS**

Operational considerations for COVID-19 surveillance using GISRS
Interim guidance
26 March 2020

World Health Organization
Impact on influenza surveillance and monitoring

Reporting to FluNet

Reporting to FluID
Impact on influenza surveillance and monitoring

Reporting indicators of PISA

Total responses (n=31)
(from AFRO, AMRO, SEARO and WPRO)

Influenza sentinel hospitals (e.g. SARI surveillance) repurposed to COVID-19 designated hospitals?

- All of them
- None
- Some of them
For the **persistent** influenza threat: continuous surveillance, monitoring, and timely assessment of associated risks of seasonal, zoonotic, and pandemic influenza as specified in the WHO Terms of Reference of GISRS.

For the **current** COVID-19 response: continued leverage of GISRS and associated surveillance systems for COVID-19 sentinel surveillance.

https://www.who.int/influenza/gisrs_laboratory/upcoming_flu_season/en/
Optimize the use of GISRS influenza systems

- Enhance **vigilance** for the threat of influenza
- Surveillance for **co-circulation** of influenza and COVID-19
  - Utilize existing influenza sentinel surveillance systems – sustainable, practical
  - Atypical seasonality 2020 – strategies for *inter-seasonal* periods

<table>
<thead>
<tr>
<th>Region</th>
<th>Sentinel samples tested per week</th>
<th>Universal testing per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Africa</td>
<td>46 - 210</td>
<td>4 - 730</td>
</tr>
<tr>
<td>Myanmar</td>
<td>161 - 324,226</td>
<td>441 - 20,755</td>
</tr>
</tbody>
</table>
COVID-19 sentinel surveillance

Country, area, territory reporting SARS-CoV-2 to FluNet
GISRS COVID-19 Sentinel Surveillance
- Monitoring Community Transmission

**Week 9-42:** Influenza and COVID-19 positivity from sentinel surveillance (tested ≥ 40 per week)
WHO Consultation to Adapt Influenza Sentinel Surveillance Systems for Including COVID-19 (virtual meeting 6 – 8 October 2020)

Scope of the guidance document

• To provide interim operational considerations for adapting and sustaining influenza sentinel surveillance systems to ensure continued influenza surveillance and complement COVID-19 surveillance wherever possible during the ongoing pandemic for the next 6 to 12 months.

• This guidance document focuses on sentinel surveillance for countries to consider in adapting its existing national surveillance systems to sustain influenza surveillance, and wherever possible address the need of SARS-COV-2 during the ongoing COVID-19 pandemic.

Expected to be published in a coming weeks (early November)
Acknowledgement

• **WHO GISRS** (Global Influenza Surveillance and Response System)
• GISRS associated national/sub-national surveillance systems
• **Countries** hosting GISRS institutions
• WHO Regional and Country Offices
• WHO Global Influenza Programme
  o Especially
    - Wenqing Zhang
    - Vanessa Cozza
    - Aspen Hammond
    - Siddhi Hirve
    - Marie-jo Medina
Thank You

Be Safe

World Health Organization