SARI/ILI & COVID-19 surveillance in the Americas

SARInet & REVELAC-i meeting
16–18 September 2020
Key considerations

• While the evolution of the COVID-19 pandemic remains uncertain, SARI/ILI surveillance should eventually remain the key approach for the surveillance of respiratory viruses.

• We need to maintain and strengthen our surveillance networks, included of the lab component, through close evaluation and monitoring. Some adaptations may be necessary in the interim.
Regional Update
Influenza
(August 16, 2010 - 17h GMT - 12h EST)

The information contained within this update is obtained from data provided by Ministries of Health of Member States and National Influenza Centers through reports sent to Pan American Health Organization (PAHO) or updates on their web pages.

1. Influenza surveillance

South America

Southern Cone

Influenza activity was reported as regional in Brazil and Chile. The trends in acute respiratory disease were reported as unchanged in both countries.

In Chile, in epidemiological week (EW) 31, nationally, influenza-like illness (ILI) activity continued to be low, and was similar to the previous week, remaining in the security zone of the epidemic channel. At the regional level, the highest rates of ILI activity were in the regions of Tocopilla, Los Rios and Los Lagos. The proportion of consultations in emergency services for respiratory disease of the total number of consultations remained similar to the previous week, after two prior consecutive EW of decreasing trends.

In EW 31, Paraguay, nationally, reported a decrease of 6.2% in ILI outpatient consultations as compared to the previous EW. At the regional level, in 3 regions (North, Central and Chaco districts) the ILI activity was above their epidemic threshold, while in the remaining 2 regions, activity was within the epidemic alert zone of the endemic channel. Severe acute respiratory infection (SARI) activity in children under five years of age remained lower as compared to the same week of 2009 and 2008.

Viral circulation

In EW 31 in Chile, 72% of positive specimens were respiratory syncytial virus (RSV) and 12% were parainfluenza viruses. In Chile, influenza B (recently increasing), pandemic influenza A H1N1 2009 and seasonal influenza A H3 were also identified. During EW 30-31 Paraguay reported circulation of influenza B, RSV, parainfluenza virus and the new circulation of seasonal influenza A H1, which had not previously been identified during 2010.

Andean

In EW 31, influenza activity was reported as widespread in Bolivia (5 of 9 departments reported positive influenza cases and regional and in Bolivia and Colombia). Peru reported increasing trends of acute respiratory disease, while Bolivia and Colombia reported decreasing and unchanged trends, respectively.

In EW 31, Bolivia reported, at the national level, a slight decrease in the number of acute respiratory illness (ARI) cases as compared to the previous week, remaining below the epidemic threshold. Regionally, in EW 30-31, no departments were above their epidemic thresholds for ARI, while in EW 29, 2 departments were above the epidemic thresholds.

WNV

Mary Synagaphil Virus Anna (WNV)

16 August 2010
Fast forward...

Data on a weekly basis for 10 years & counting

But, also how surveillance & lab contribute to the larger picture—e.g., to pandemic preparedness & readiness, burden of disease and vaccine effectiveness
FluNet and FluID Reporting Frequency

FluNet, a global web-based tool for influenza epidemiological surveillance, first launched in 1997. The epidemiological data entered into FluNet, e.g., number of influenza viruses detected by subtype, are critical for tracking the movement of viruses globally and interpreting the epidemiological data.

FluID, a global platform for data-sharing that links regional influenza epidemiological data into a single global database. The platform accommodates both qualitative and quantitative data, which facilitates the tracking of global trends, spread, immunity, and impact of influenza.

FluNet percentage of weeks reported in 2019
Percentage of the epidemiological weeks for which data were reported to PAHO/WHO:
- < 25%
- 25-49%
- 50-74%
- > 75%

Influenza-Like Illness (ILI) Surveillance by Country
Percentage of the epidemiological weeks for which data were reported to PAHO/WHO:
- < 25%
- 25-49%
- 50-74%
- > 75%

PAHO/WHO Influenza and Other Respiratory Viral Surveillance in the Americas 2019
Circulation of influenza & other respiratory viruses, included SARS-CoV-2—The Americas

North America

Southern Cone & Brazil

PAHO, Weekly influenza report, EW 35-2020 (8 September 2020)
COVID-19 is not influenza

Suppression vs. mitigation, as control goal
Detect & isolate cases, trace & quarantine contacts

- **CASES**
  - DETECT
  - ISOLATE

- **CONTACTS**
  - TRACE
  - QUARANTINE
# Public health surveillance for COVID-19

Interim guidance
7 August 2020

The document combines and supersedes two earlier documents. It should be read together with:

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Interim guidance 20 March 2020</td>
<td>Interim guidance 10 May 2020</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Critical preparedness, readiness and response actions for COVID-19</th>
<th>Contact tracing in the context of COVID-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interim guidance 24 June 2020</td>
<td>Interim guidance 10 May 2020</td>
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</table>

[World Health Organization logos]
Public health surveillance for COVID-19

Interim guidance
7 August 2020

Combines and supersedes two earlier documents

Should be read together with

1. Critical preparedness, readiness and response actions for COVID-19
   Interim guidance
   24 June 2020

2. Surveillance strategies for COVID-19 human infection
   Interim guidance
   10 May 2020

3. Contact tracing in the context of COVID-19
   Interim guidance
   10 May 2020
# Critical preparedness, readiness and response actions for COVID-19

## Interim guidance

24 June 2020

<table>
<thead>
<tr>
<th>Surveillance</th>
<th>No Cases</th>
<th>Sporadic Cases</th>
<th>Clusters of Cases</th>
<th>Community Transmission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surveillance</td>
<td>Conduct active case finding; isolation of cases. Implement testing for COVID-19 using existing community-based surveillance, respiratory disease surveillance systems, hospital-based surveillance, event based surveillance and investigation of clusters. Implement or maintain enhanced surveillance for residential facilities and for vulnerable groups.</td>
<td>Enhance active case finding; isolation of cases. Implement COVID-19 surveillance using existing community-based surveillance, respiratory disease surveillance systems and hospital-based surveillance, event based surveillance and investigation of clusters. Implement enhanced surveillance for residential facilities and for vulnerable groups.</td>
<td>Intensify case finding; isolation of cases. Expand COVID-19 surveillance using existing community-based surveillance, respiratory disease surveillance systems and hospital-based surveillance, event based surveillance and investigation of clusters. Implement enhanced surveillance for residential facilities and for vulnerable groups.</td>
<td>Continue case finding, where possible, especially in newly infected areas; isolation of cases and apply self-initiated isolation for symptomatic individuals. Adapt existing surveillance systems to monitor disease activity. Continue event based surveillance and investigation of clusters. Implement enhanced surveillance for residential facilities and for vulnerable groups.</td>
</tr>
</tbody>
</table>

| Contact tracing and management | Prepare for surge in contact tracing needs | Conduct contact tracing and monitoring; quarantine of contacts. | Intensify contact tracing, monitoring; quarantine of contacts. | Continue contact training and monitoring where possible; quarantine of contacts. |
## COVID-19 surveillance systems across different sites/contexts

<table>
<thead>
<tr>
<th>System Site/Context</th>
<th>Immediate case notification</th>
<th>Contact tracing</th>
<th>Virologic surveillance</th>
<th>Cluster investigations</th>
<th>Mortality surveillance</th>
<th>Serologic surveillance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Primary Care Sites (non-sentinel ILI/ARI)</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospitals (non-sentinel ILI/SARI)</td>
<td>X</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Sentinel ILI/ARI/SARI sites</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Closed settings*</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Health care-associated COVID-19 infection</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

WHO, Public health surveillance for COVID-19, 7 August 2020 (Table 1)
Objectives of COVID-19 surveillance

- Enable rapid detection, isolation, testing & management of cases
- Identify, follow-up & quarantine of contacts
- Detect & contain clusters & outbreaks, especially among vulnerable populations
- Monitor trends in COVID-19 deaths
- Monitor longer term epidemiologic trends & evolution of SARS-CoV-2
- Contribute to understanding of co-circulation of SARS-CoV-2, influenza & other respiratory viruses
- Evaluate impact of pandemic on health-care systems & society
- Guide implementation & adjustment of targeted control measures

WHO, Public health surveillance for COVID-19, 7 August 2020
Complementarity of SARI/ILI & COVID-19 surveillance

**SARI**

- **sentinel**
  - Test for flu & ORV
  - If flu A/B neg

- **not sentinel**
  - Test for SARS-CoV-2

**ILI / ARI**

- **sentinel**
  - Test for flu & ORV
  - If flu A/B neg

- **not sentinel**
  - Test for SARS-CoV-2

If flu A/B neg or not tested
Circulation of influenza viruses & SARS-CoV-2
North America & Americas’ Southern Cone, 01/2014–09/2020
Epidemic curves of COVID-19 cases & 7-day rolling cumulative incidence per 100,000 people—The Americas

Country reports to PAHO, as of 10 September 2020
# What we might expect over the next 2+ years

<table>
<thead>
<tr>
<th>Timeframe</th>
<th>COVID-19 situation</th>
<th>COVID-19 surveillance</th>
<th>Influenza situation</th>
<th>SARI/ILI surveillance</th>
</tr>
</thead>
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<tr>
<td><strong>Short term</strong></td>
<td>Elevated potential for community transmission persists. Public health and social measures (PHSM) are still enacted, but with lower acceptance.</td>
<td>Efforts to detect all cases continue, regardless of severity. Universal, case-based surveillance is carried out in different settings.</td>
<td>Lower or expected transmission occurs depending on levels of public health &amp; social measures and seasonal influenza vaccination efforts.</td>
<td>Surveillance networks, included of labs, needs to be maintained through evaluation &amp; monitoring. Characteristics/ location of sentinel sites &amp; data flows may need revision.</td>
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<tr>
<td>Approx. Sept. 2020–March 2021 (next Northern hemisphere season)</td>
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<tr>
<td><strong>Medium term</strong></td>
<td>Potential for community transmission gradually decreases, possibly due to increasing population immunity via natural infection and/or vaccination. PHSM are eased and then discontinued.</td>
<td>Focus is on early detection and control of clusters (included contact tracing), especially in specific settings. Special studies are set up for rare &amp; severe or chronic outcomes.</td>
<td>Expected to much higher transmission may occur, given low transmission in previous season and PHSM easing/ discontinuation.</td>
<td>Surveillance surge should be planned if higher than expected transmission occurs. At lab, capacity for differential diagnostics of influenza &amp; SARS-CoV-2 becomes critical.</td>
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<tr>
<td>Approx. April 2021–March 2022 (next Southern hemisphere season and possibly following Northern hemisphere season)</td>
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<td><strong>Long term</strong></td>
<td>While burden may remain high compared to other ORV, a transition begins toward endemicity and thus seasonality and severity in specific groups. Large vaccination campaigns have occurred.</td>
<td>Sustainable monitoring of epidemiologic &amp; virologic trends, severity, and vaccine effectiveness becomes priority.</td>
<td>Expected transmission patterns should return.</td>
<td>Gradually, pre-pandemic status returns and SARS-CoV-2 becomes “another” ORV.</td>
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<tr>
<td>From early 2022 onwards</td>
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• We need to maintain and strengthen our surveillance networks, included of the lab component, through close evaluation and monitoring. Some adaptations may be necessary in the interim.
Thank you