Influenza and SARS-CoV-2 Integrated Surveillance
LABORATORY TESTING ALGORITHM

I. Sentinel site laboratories conducting Influenza and SARS-CoV-2 testing.

Samples from events of Public Health Interest[1]

Send to NIC immediately

Sample (Sentinel Site)
Refrigerated (2 to 8ºC)
-70ºC

Aliquot samples
1 aliquot for RT-PCR
1 aliquot for shipping to NIC

Flu/SC2 Multiplex Assay
Influenza A
Influenza B
SARS-CoV-2

SARS-CoV-2 Positive

Report to FluNet

Send to NIC for sequencing [2a]

Influenza A Positive

Influenza B Positive

Report to FluNet

Sent to NIC for Subtyping or genotyping

Negative

Test for ORV[3b]

Positive

Negative

Report to FluNet

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1 – Samples collected out of routine surveillance from events of public health interests. International Health Regulations 2005: https://www.who.int/publications/i/item/9789241580410?msclkid=128025ecaabc11eca7819f6128ie007b

2 – **Recommended clinical samples based on laboratory diagnostic:** samples with Ct values ≤ 25; samples transported through an unbroken cold chain and stored under ultra-low temperature. Samples with Ct values above 30 can be sequenced to determine influenza subtype/lineage and SARS-CoV-2 lineage/variant. **Recommended selection criteria for representativeness:** different age groups; different geographic locations within the country; different time points; patients representing the spectrum of disease meeting case definitions in use for ILI/ARI or SARI; clinically significant cases from sentinel surveillance (e.g. fatal cases, vaccinated individuals, immunocompromised individuals, patients receiving treatment such as antivirals, plasma therapy or monoclonal antibodies), re-infected cases. https://apps.who.int/iris/handle/10665/336689

3 – Other respiratory viruses testing conducted molecularly or by immunofluorescence according to the country surveillance strategy.

a According to selection criteria

b According to each laboratory strategy

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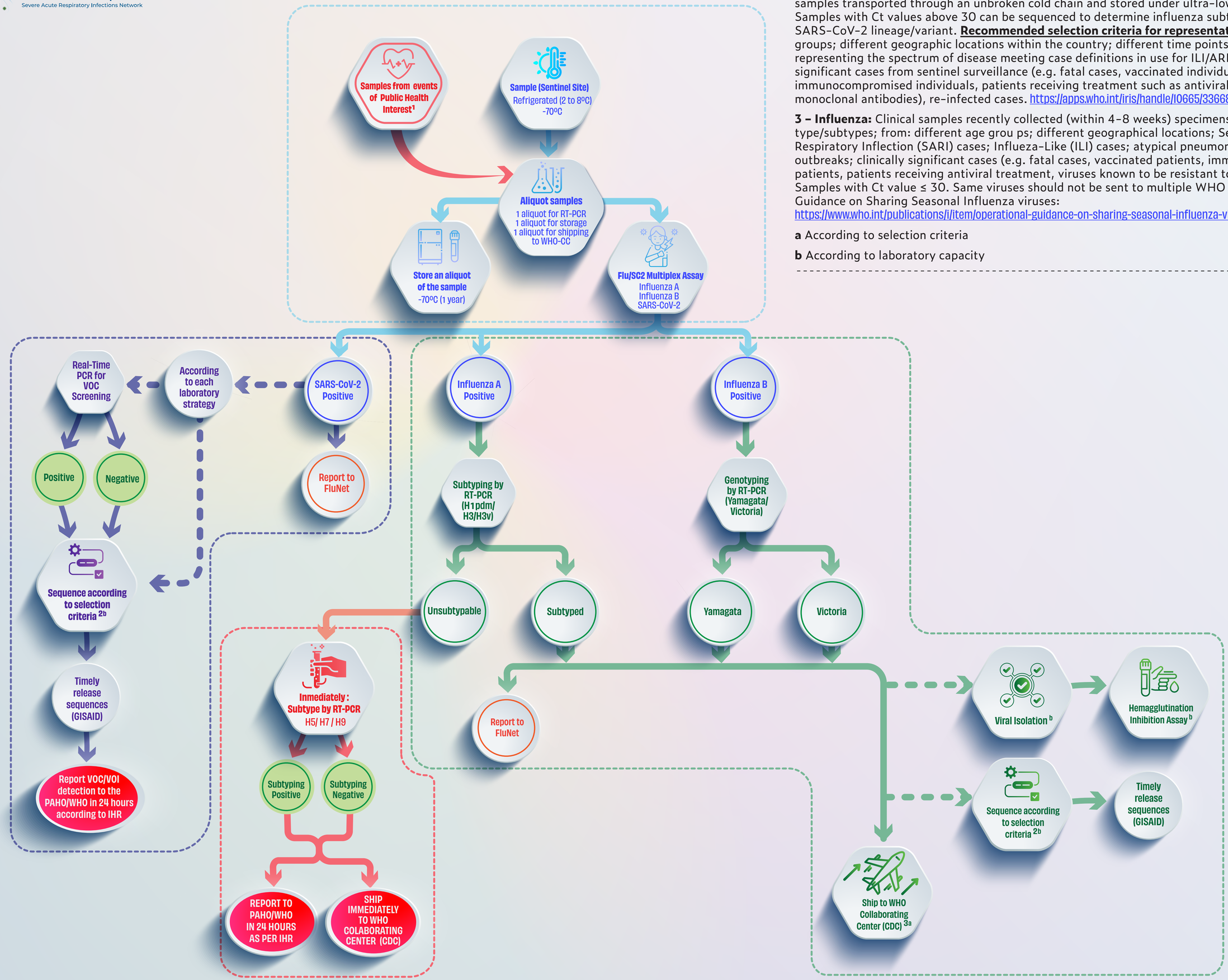
2. NIC receiving Influenza and SARS-CoV-2 positive samples tested at sentinel sites



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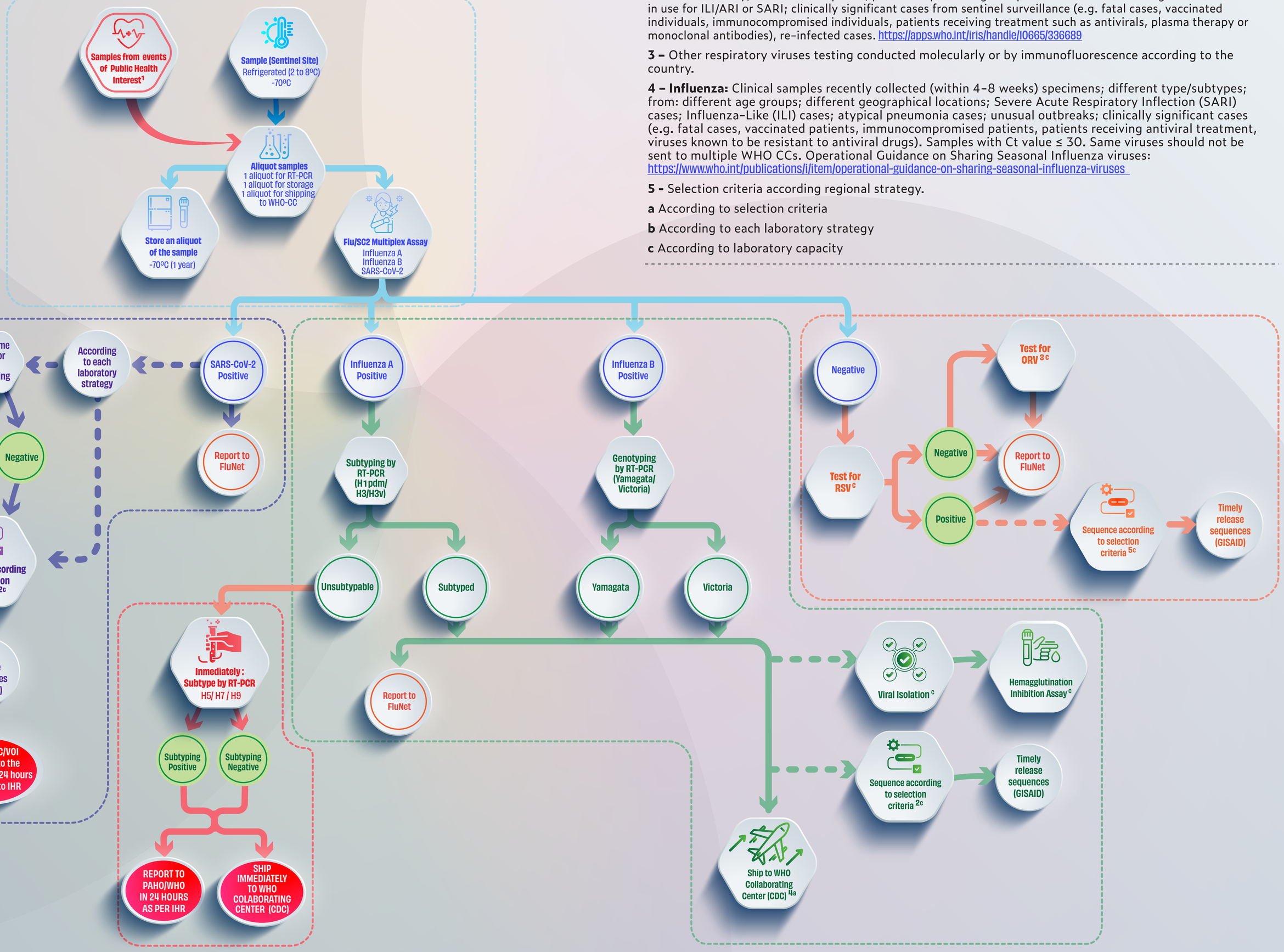
3 – Influenza: Clinical samples recently collected (within 4-8 weeks) specimens; different type/subtypes; from: different age grou ps; different geographical locations; Severe Acute Respiratory Inflection (SARI) cases; Influeza-Like (ILI) cases; atypical pneumonia cases; unusual outbreaks; clinically significant cases (e.g. fatal cases, vaccinated patients, immunocompromised patients, patients receiving antiviral treatment, viruses known to be resistant to antiviral drugs). Samples with Ct value ≤ 30. Same viruses should not be sent to multiple WHO CCs. Operational Guidance on Sharing Seasonal Influenza viruses: https://www.who.int/publications/i/item/operational-guidance-on-sharing-seasonal-influenza-viruses

a According to selection criteria

b According to laboratory capacity

3. NIC testing for Influenza and SARS-CoV-2 using CDC multiplex assay



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5 - Selection criteria according regional strategy.

a According to selection criteria

b According to each laboratory strategy

c According to laboratory capacity

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