

Influenza activity in Thailand

September 1, 2022 to August 31, 2023



Laboratory surveillance started since 2016: partners

- Sentinel hospitals
- Division of Epidemiology, Department of Disease Control
- National Influenza Center, National Institute of Health, Department of Medical Sciences
- Influenza program, Thailand MOPH – U.S.CDC Collaboration

Inclusion criteria for laboratory surveillance

ILI = Fever $\geq 38^{\circ}\text{C}$
+ Cough within 10
days

SARI = history of
fever or Fever $\geq 38^{\circ}\text{C}$
+ Cough+ Admitted
within 10 days

ARI = OPD case with
cough or worsening
cough with onset
within the past 10 days

Samples: 2 per day

Samples: 2 per day

**

**Suppose the sentinel site can't collect the sample according to the surveillance criteria. In that case, the site can add additional samples to be included in the ARI group until the required daily number reaches the target.



Since August 2021,
sentinel sites -based
laboratory capacity for
diagnosis of influenza
and other respiratory
pathogens has been
strengthened.

1. Queen Sirikit National Institute of Child Health, Bangkok

2. Mae chan, Chiangrai Hospital

3. Prapokklao Hospital ,Chanthaburi

4. Nakorn Phanom Hospital

5. Phra Nakhon Si Ayutthaya Hospital

6. Koh Samui Hospital, Suratthani

7. ChiangKhong Hospital, Chiangrai

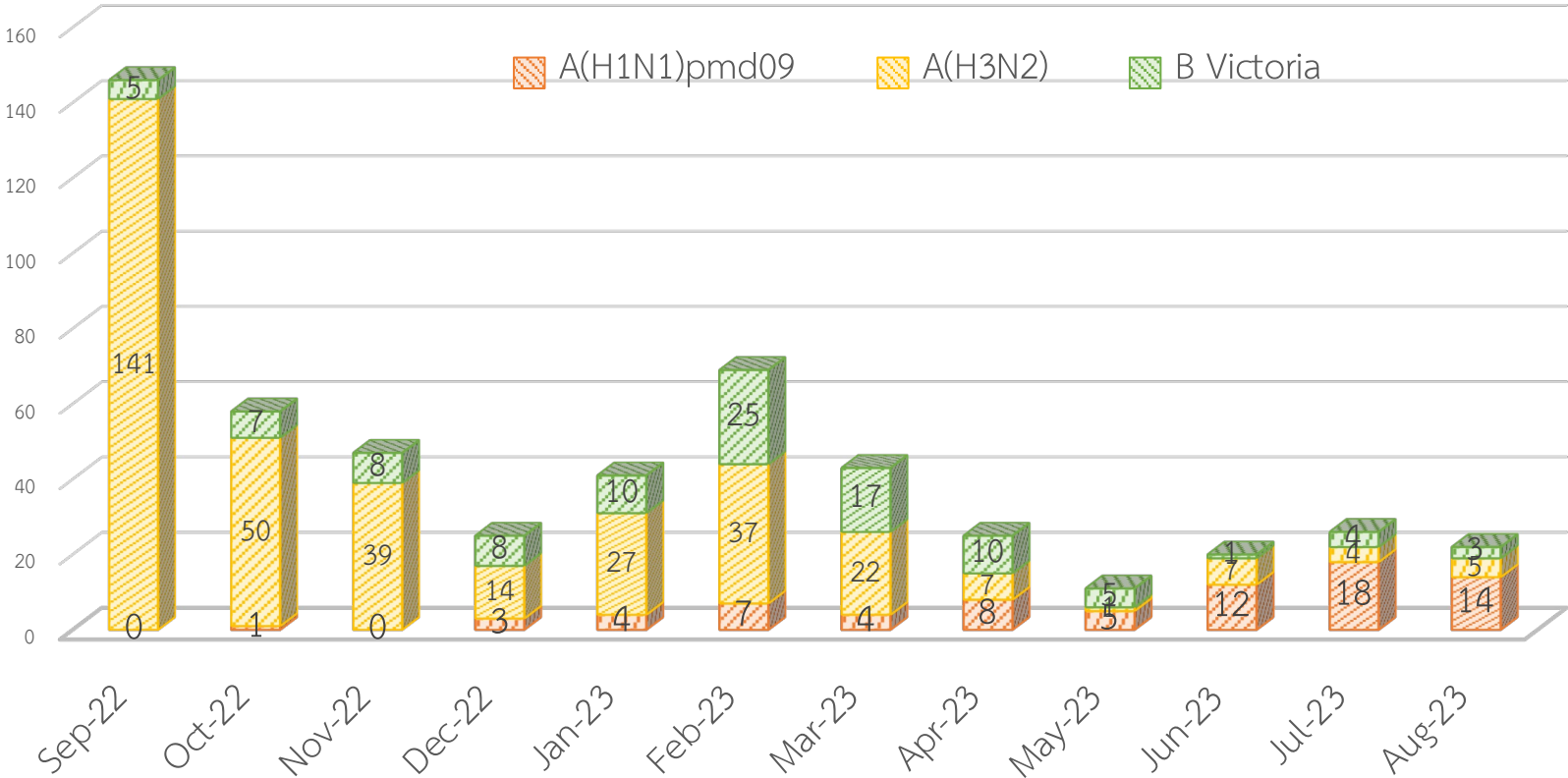
8. Ranong Hospital

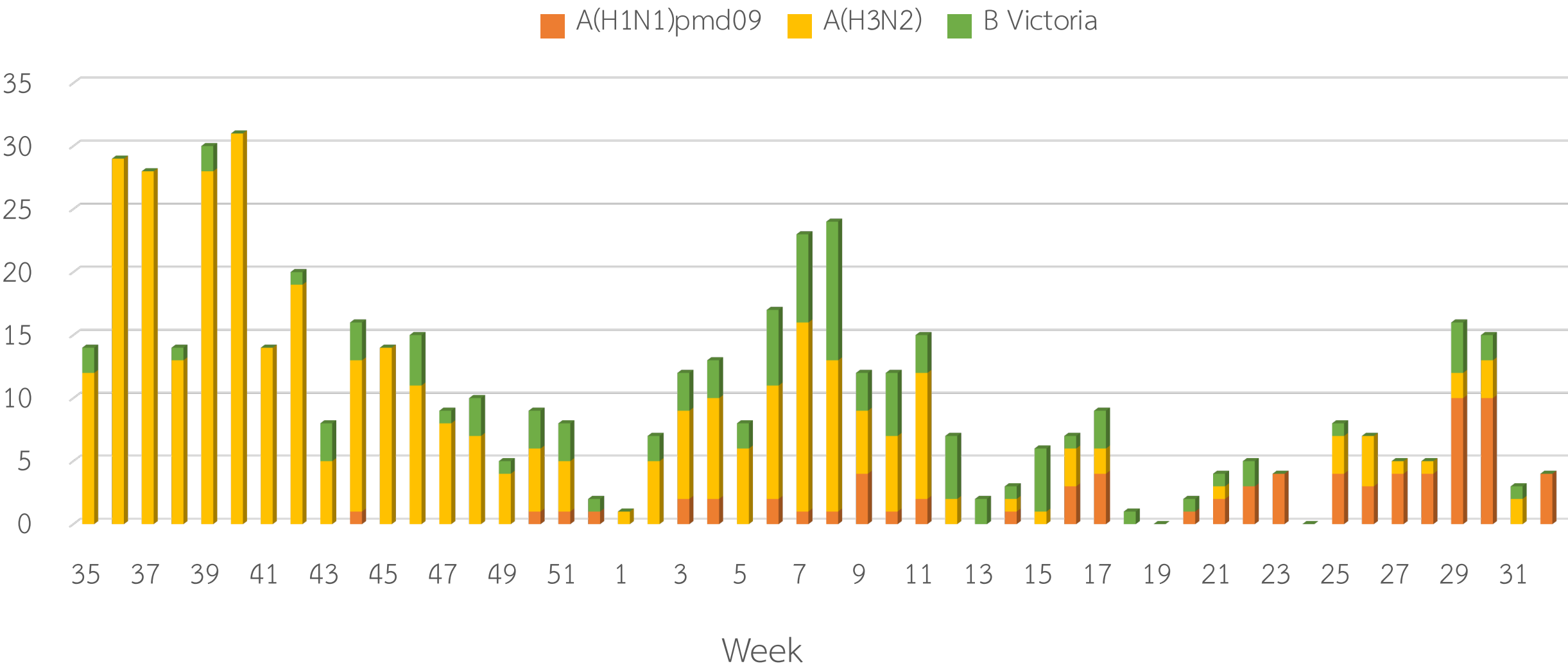
Epidemiology

Summary of samples collected since Sep 1, 2022 by type, subtype or lineage

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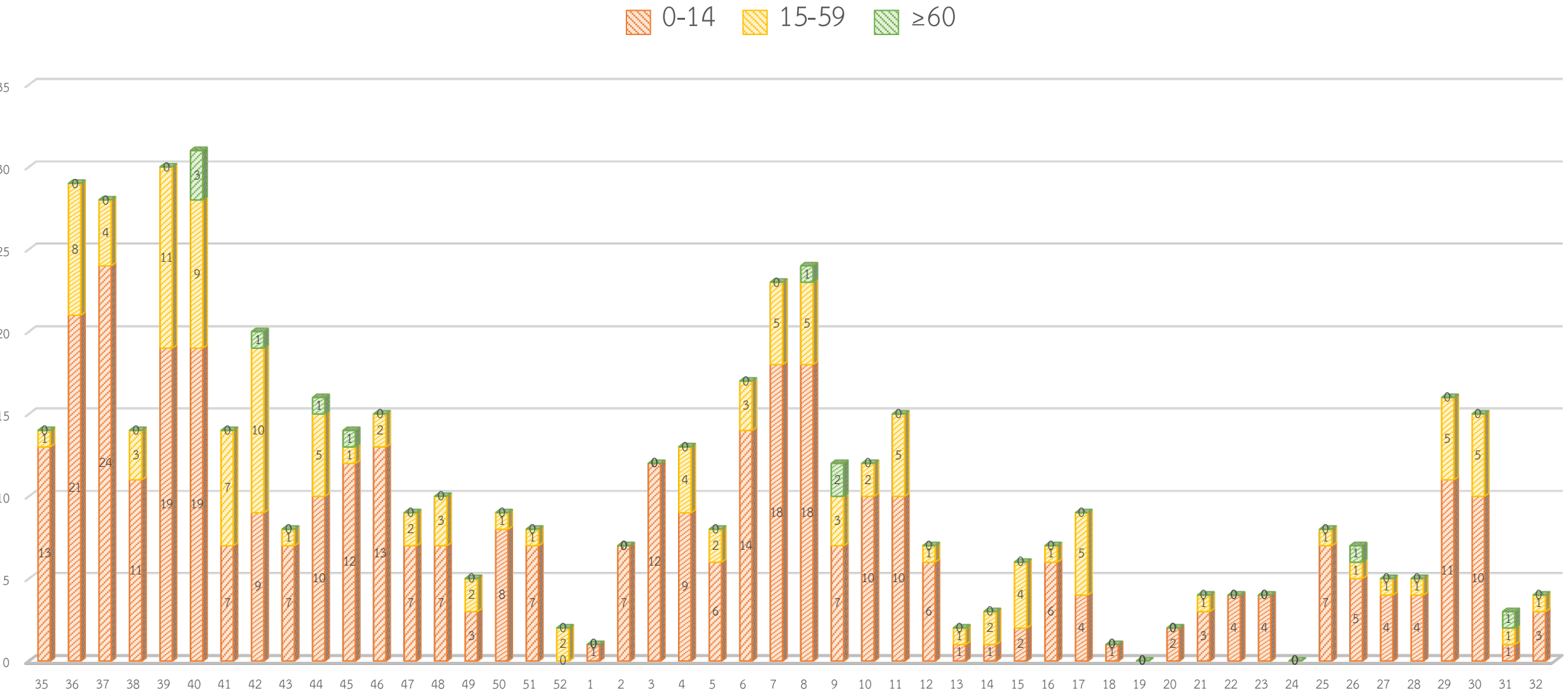
	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Total
A(H1N1)pmd09	0	1	0	3	4	7	4	8	5	12	18	14	76
A(H3N2)	141	50	39	14	27	37	22	7	1	7	4	5	354
B Victoria	5	7	8	8	10	25	17	10	5	1	4	3	103

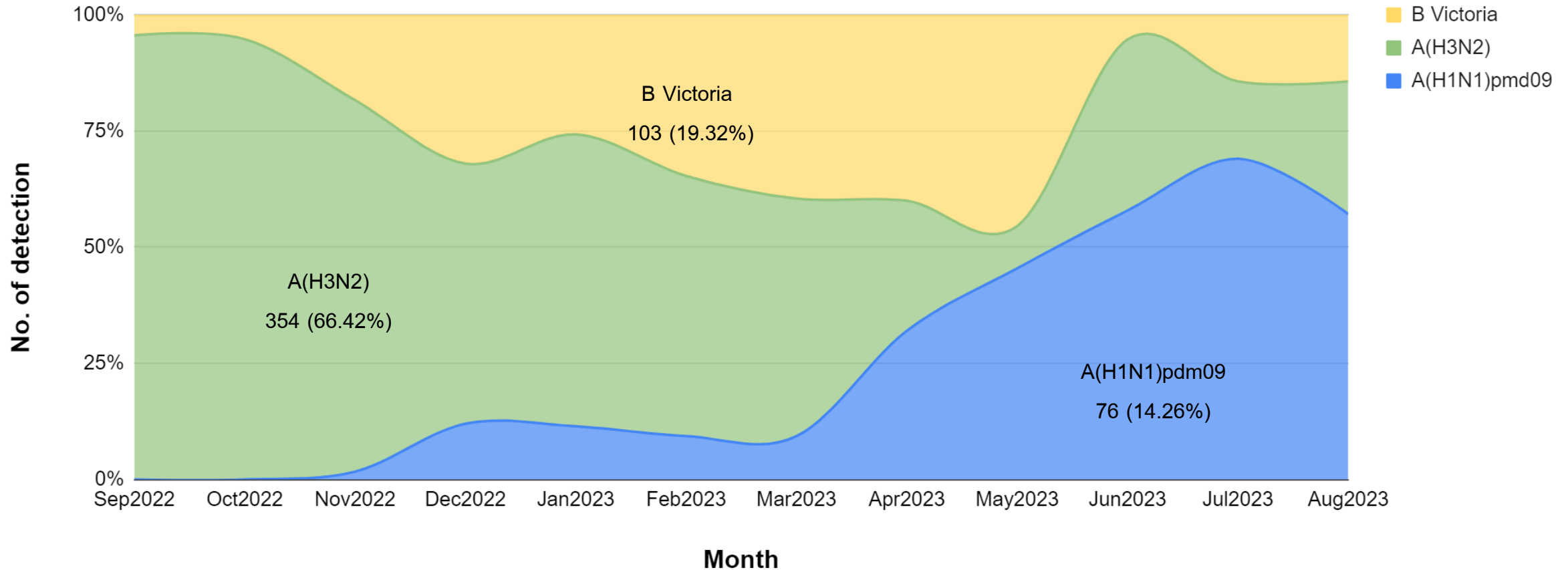




Influenza virus detection in Thailand by age group reported by Thai National Influenza Center

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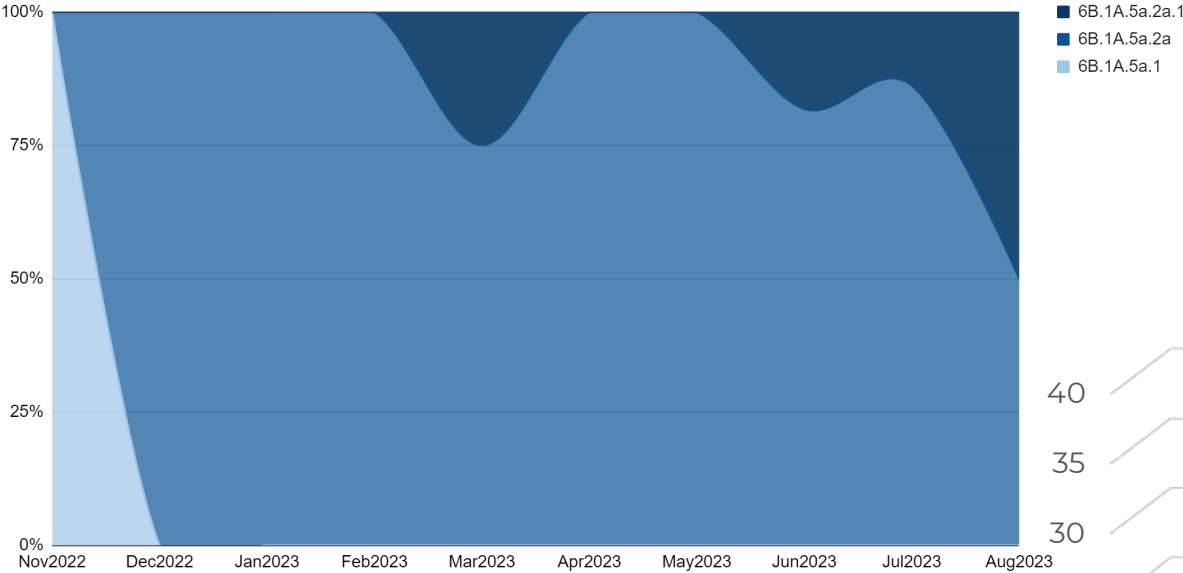
A(H1N1)pdm09, A(H3N2) and B viruses co-circulated. In B viruses, almost all viruses were B/Victoria-lineage.

Virus characterization

A (H1N1) pdm09

Relative Frequency of A(H1N1)pdm09

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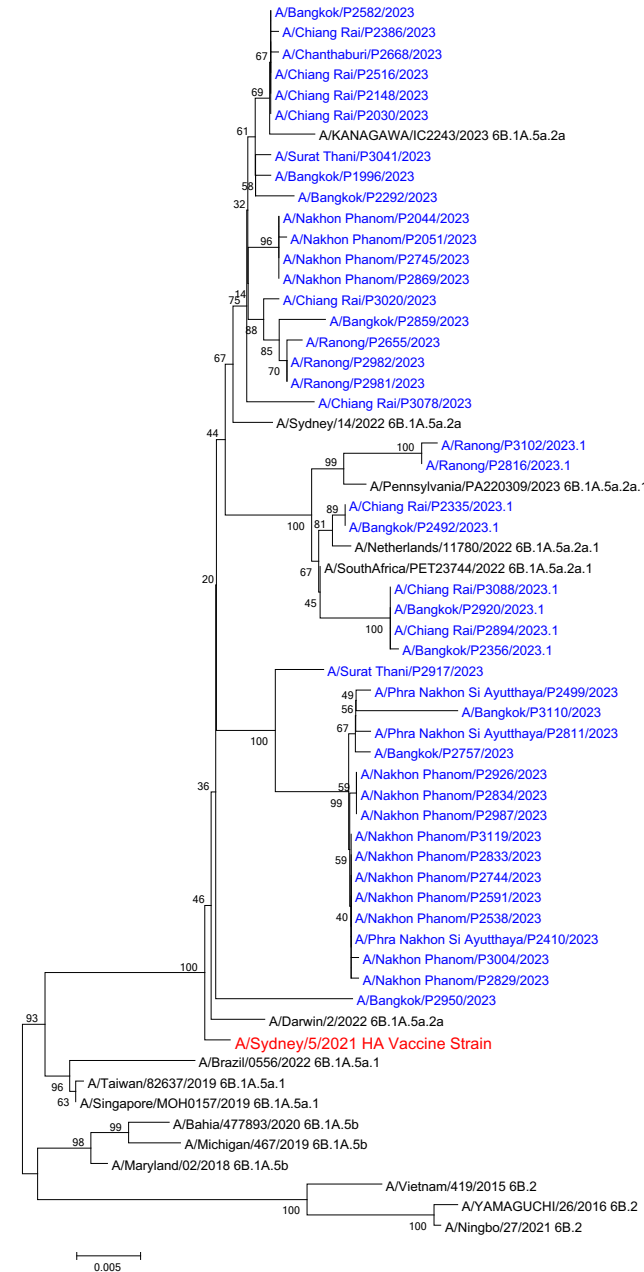


A/Sydney/5/2021 (6B.1A.5a.2a)
A/Victoria/4897/2022 (6B.1A.5a.2a.1)
A/Wisconsin/67/2022 (6B.1A.5a.2a.1)

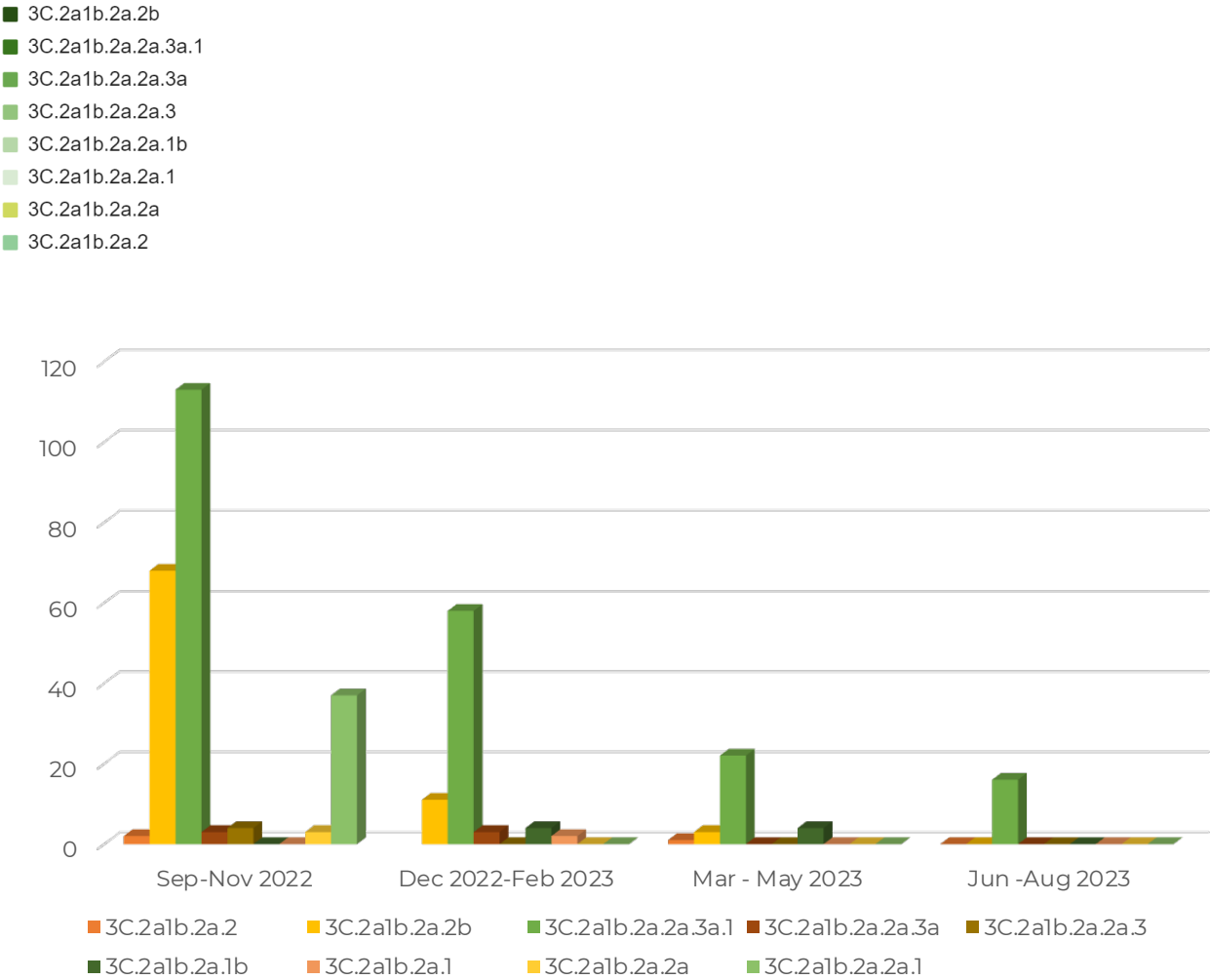
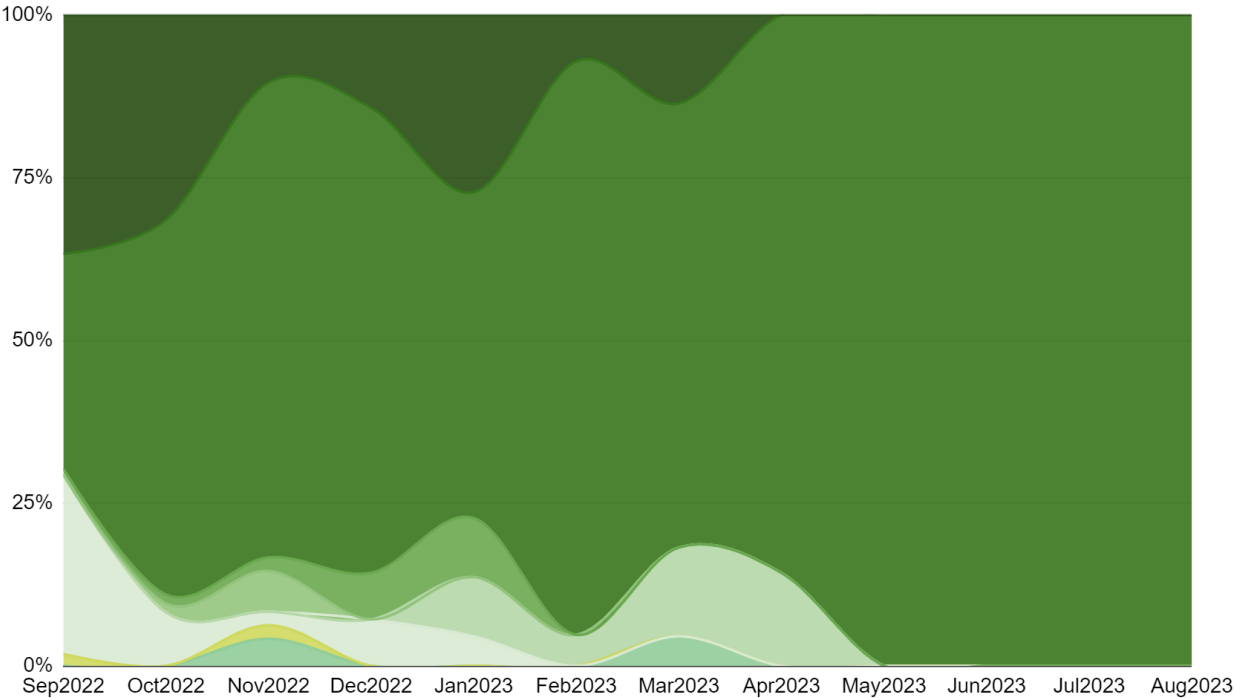


Influenza strain in Thailand Reference Vaccine Strain

- Genetically characterized viruses had haemagglutinin (HA) genes that belong to phylogenetic clade 6B.1A.5a.2 (5a.2)
- Majority fall within subclades 5a.2a represented by A/Sydney/5/2021, the vaccine virus recommended for inclusion in influenza vaccines for the 2022 and 2023 Southern Hemisphere influenza season.

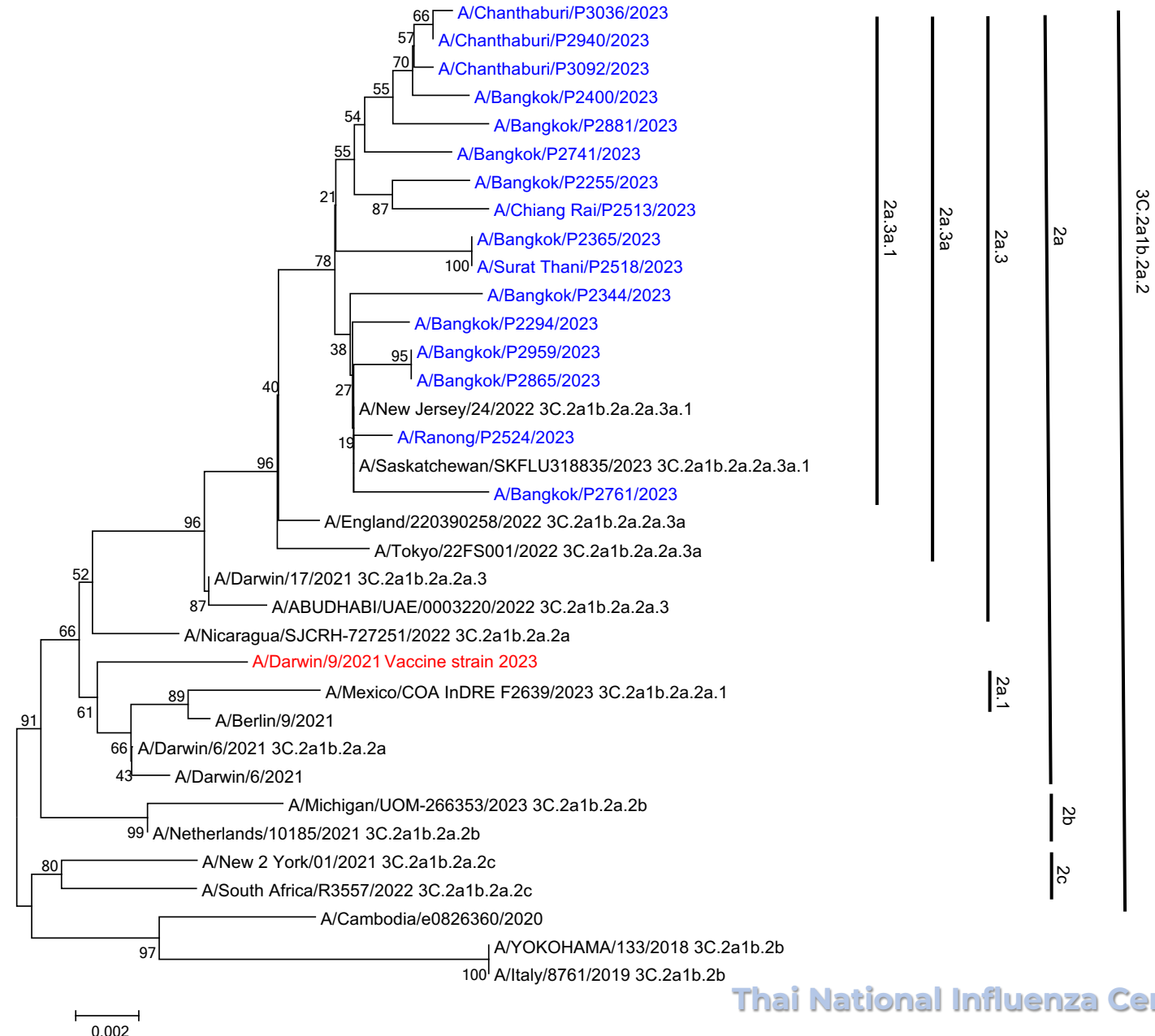


A (H3N2)



Influenza strain in Thailand Reference Vaccine Strain

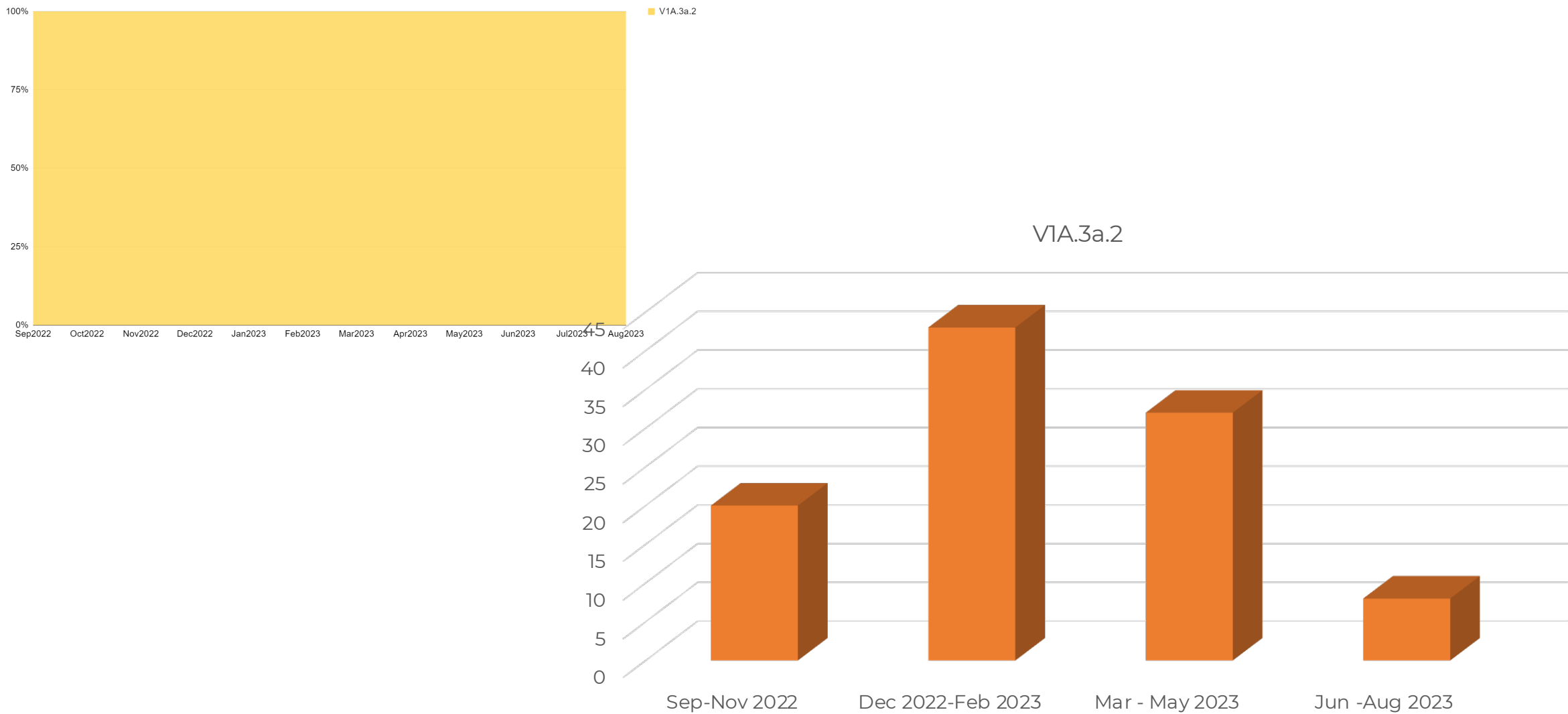
- Phylogenetic analysis of the HA gene of A(H3N2) viruses collected since 1 September 2022 showed that viruses belonging to genetic subclade 3C.2a1b.2a.2a.3a.1 predominated globally and were detected in Thailand.
- Majority fall within subclades 3C.2a1b.2a.2 represented by A/Darwin/9/2021 (2022 and 2023 SH vaccine)



B Victoria

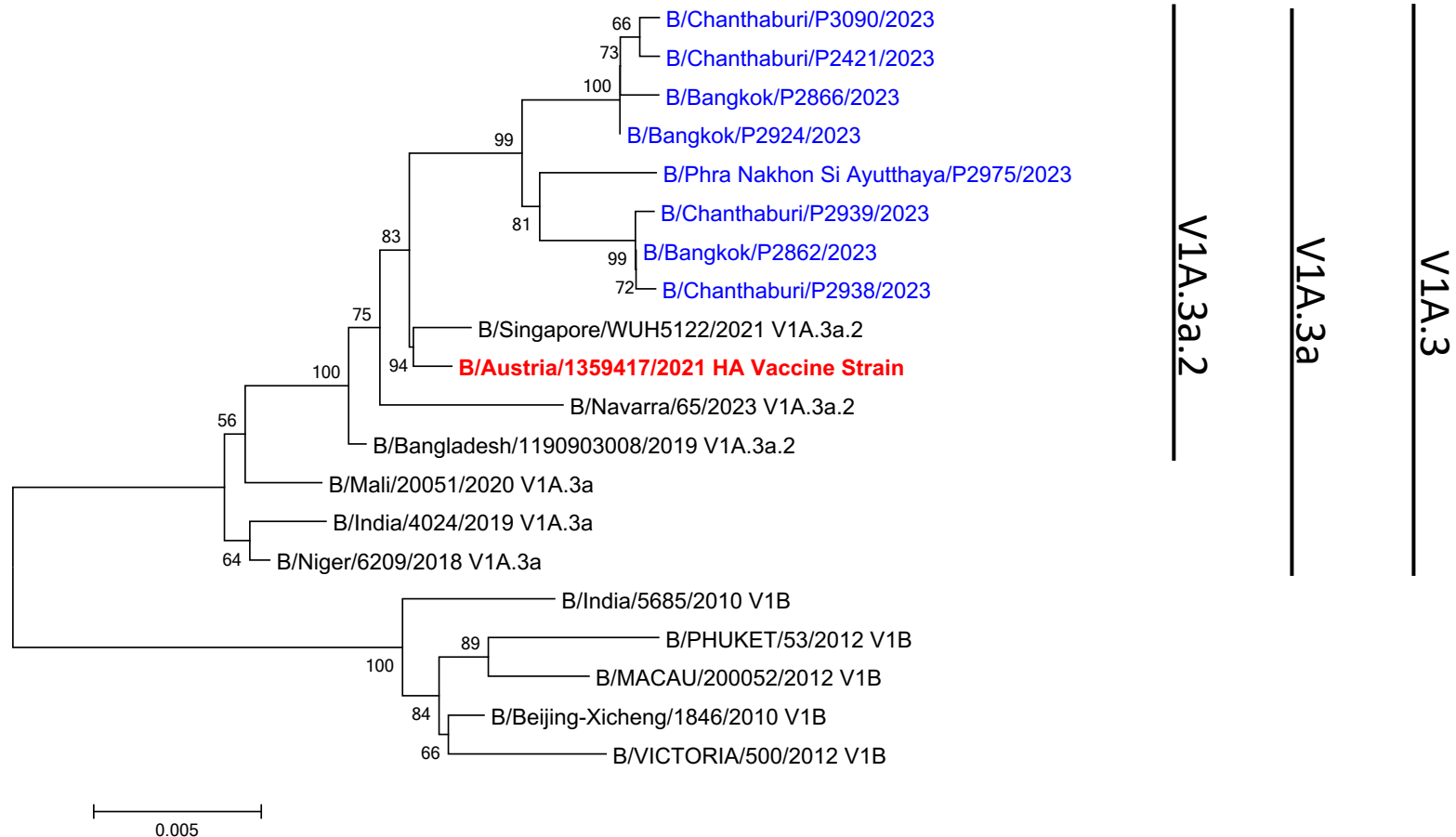
Relative Frequency of B Victoria

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Influenza strain in Thailand Reference Vaccine Strain

- In Thailand, influenza B viruses represented 19.3% of the viruses detected since 1 September 2022, and all of those tested belonged to the B/Victoria lineage.
- There have been no confirmed detections of circulating B/Yamagata lineage viruses after 2020.





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CENTERS FOR DISEASE
CONTROL AND PREVENTION