Wastewater Sequencing Trend Report: Detection of SARS-CoV-2 Variants of Concern by Metagenomic Sequencing

Public Health Agency of Canada

Agence de la santé publique du Canada

Longitudinal wastewater sequencing data ending 2022-12-04

The plots show the percentage of three SARS-CoV-2 variants of concern (Alpha, Delta and Omicron) detected in wastewater samples collected from different sites using metagenomic sequencing. SARS-CoV-2 viral fragments present in the wastewater are isolated and sequenced to obtain a genomic "blueprint" of the virus. Each variant of concern carries small differences in their genomic "blueprint" called mutations that can be queried using specialized software to identify the presence and abundance of Alpha, Delta and Omicron present in the wastewater sample. The shaded areas in the plot show Delta in green, Omicron in purple and where applicable, Alpha in blue.
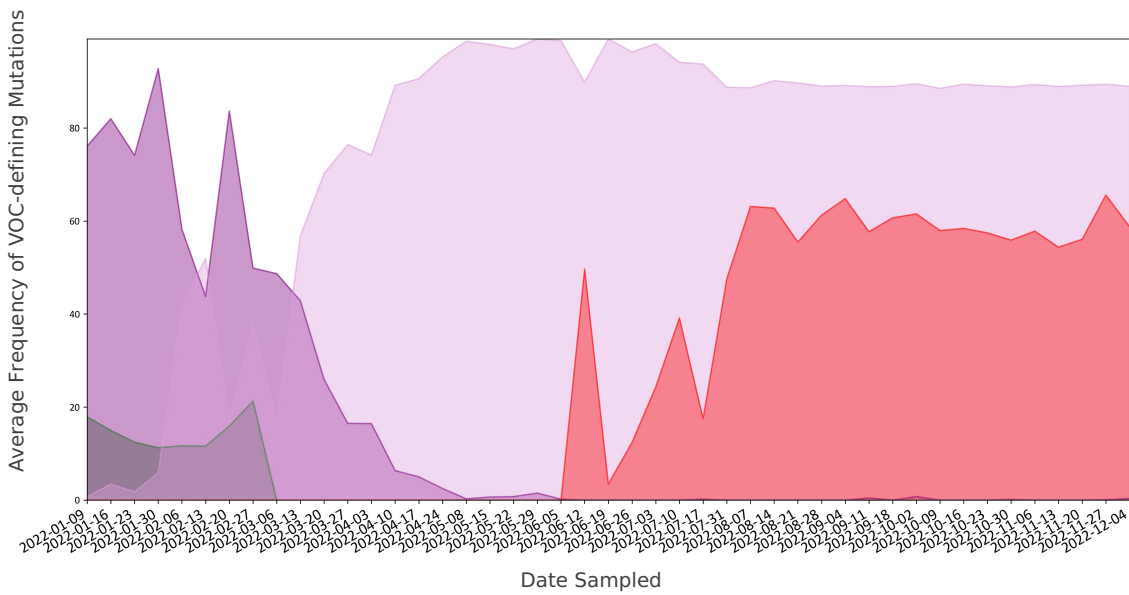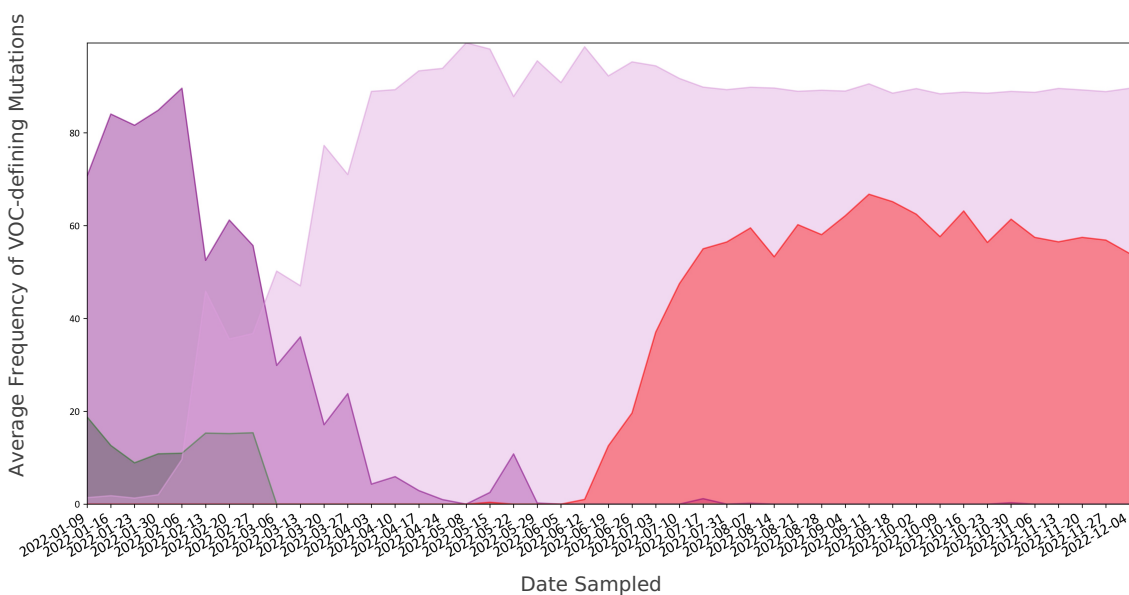
Winnipeg

Winnipeg North End
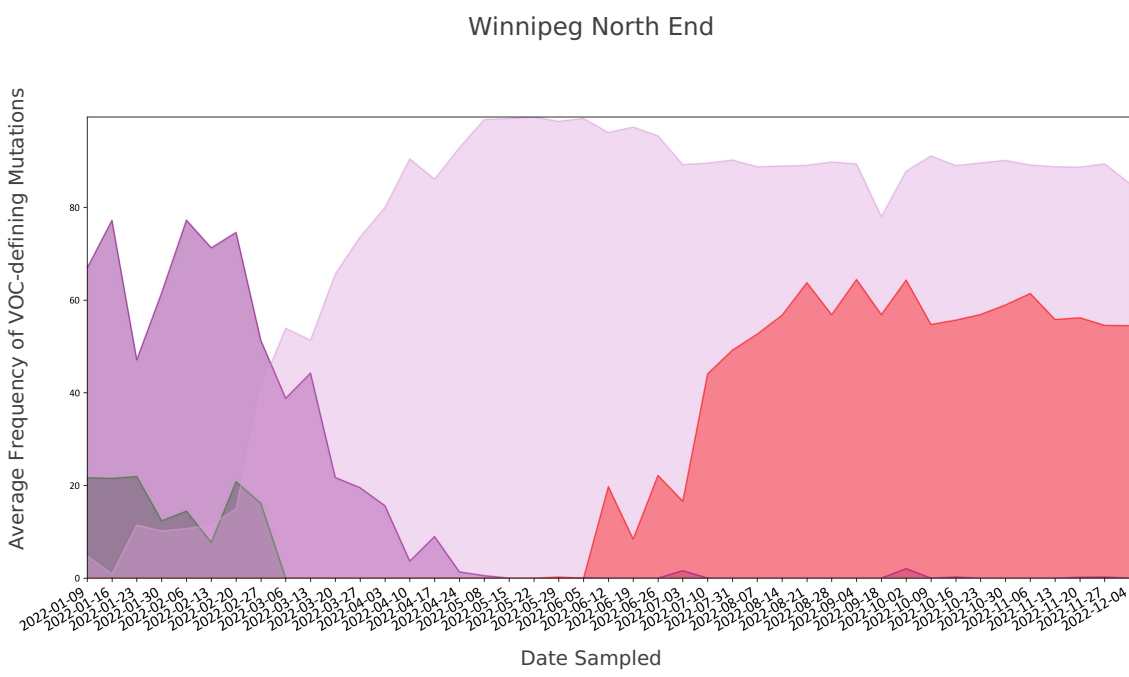
The plot shows a moderate to high presence of BA.1 until late February when BA.2 levels begin to increase and overtake BA.1. BA.2 levels increased rapidly and remained high in samples collected up to September 4, 2022. Trace to low levels of BA.4/BA.5 were first detected at the beginning of May 2022 and high signals have been detected in samples collected up to December 4, 2022.

Winnipeg South End

The plot shows a high presence of BA.1 until late February when BA.2 levels begin to increase and overtake BA.1. BA.2 levels increased rapidly and remained high in samples collected up to September 4, 2022. Trace to low levels of BA.4/BA.5 were first detected at the beginning of May 2022 and high signals have been detected in samples collected up to December 4, 2022.

Winnipeg West End

The plot shows a high presence of BA.1 until late February when BA.2 levels begin to increase and overtake BA.1. BA.2 levels increased rapidly and have remained high in samples collected up to September 4, 2022. Trace to low levels of BA.4/BA.5 were first detected at the beginning of May 2022 and high signals have been detected in samples collected up to December 4, 2022.