*Abstract content of maximum 300 words*

**Title of abstract:** Retrospective correlation analysis between SARS-CoV-2 test positivity data from sentinel and universal system reported to WHO at the country, area or territory level, January 2020-June 2022
**Type of abstract:** Poster
**Virus that serves as the primary subject of your abstract:** SARS-CoV-2
Theme of abstract:
**First and last names of all authors:** Aspen Hammond1, Katelijn Vandemaele1, Alessandro Gaetano2, Daniella Paolotti2, Marco Quaggiotto2
**Full affiliations for all authors:** 1World Health Organization, 2ISI Foundation

**Introduction:**

In March 2020, the Global Influenza Surveillance and Response System (GISRS) incorporated SARS-CoV-2 into laboratory algorithms for testing specimens from sentinel surveillance sources. WHO was also collecting universal SARS-CoV-2 testing data from countries, including number of tests and number of positives, on a weekly basis through June 2022. This analysis explored the correlation between percent positivity for SARS-CoV-2 from sentinel and universal testing, considering lag and smoothing of the data.

**Methods:**

This analysis was restricted to SARS-CoV-2 testing data from universal surveillance (collected by WHO) and sentinel surveillance (reported to WHO’s FluNet) for those countries with at least 12 continuous weeks of data common between the two data sets, from 2020 through June 2022, and where more than 10 samples per week were tested in sentinel surveillance. The Pearson correlation coefficient was used to measure correlation for each country. The influence of lag (shifting the sentinel signal by a variable number of weeks) and smoothing (averaging the signal of one week with the one of the previous weeks) was included in the analysis. For each country, the correlation coefficient was computed for several time windows, chosen to correspond to the country-dependent COVID-19 waves.

**Results**

Positive correlation was found in 47 of 49 countries for which there was data included in the analysis, with a moderate correlation (0.40-59) in 15 countries and a strong correlation (≥ 0.6) in 21 countries. For most countries, lag and smoothing of the sentinel data had a minor effect on correlation. Differences in the correlation between time periods was evident for several countries.

**Conclusions**: These findings support the use of sentinel surveillance for monitoring SARS-CoV-2 trends going forward. Changing testing strategies during the pandemic could have an effect on correlation over time. Contextual information on national testing strategies for universal surveillance was not available to be included in the analysis.