From: TARRANT Viral Watch <tarrant@ucalgary.ca>

Subject: TARRANT March 2024 Newsletter

View this email in your browser

TARRANT VIRAL WATCH

March 2024 Newsletter

TARRANT News & Updates

New Publication

Your work in collecting samples and patient data has once again contributed to a mid-season publication about the effectiveness of the Influenza vaccine. For the first time this year, the national Sentinel Practitioner Surveillance Network (SPSN) was also able to assess the effectiveness of the COVID vaccine. This paper, **"2023/24 mid-season influenza and Omicron XBB.1.5 vaccine effectiveness estimates from the Canadian Sentinel Practitioner Surveillance Network (SPSN),"** was published, in Eurosurveillance, an online infectious disease epidemiology journal, where we regularly publish our mid-season estimates, because of its rigorous review, yet fast turnaround. The last samples were taken on January 13, and the paper was published on February 13. The analysis was performed by our SPSN colleagues at BC Centre for Disease Control, led by Dr. Danuta Skowronski.

The paper presents mid-season estimates of vaccine effectiveness (VE) for influenza A(H1N1)pdm09 and A(H3N2) strains, as well as for medically attended COVID-19 cases caused by the Omicron XBB.1.5 variant. The findings emphasize our sentinel network's instrumental role in shaping public health responses and vaccination strategies.
Key conclusions include:

1. **Influenza A(H1N1)pdm09 Vaccine Effectiveness:** The vaccine's effectiveness against influenza A(H1N1)pdm09 in preventing medically attended acute respiratory infections (ARIs) was estimated to be 63% (95% CI 51–72), which aligns with historical observations.
2. **Influenza A(H3N2) Vaccine Effectiveness:** The VE against influenza A(H3N2) was approximately 40%.(95% CI 5-61) The wide confidence intervals reflect the relatively small sample size. This lower effectiveness is consistent with past observations, and highlights the challenges posed by this subtype and the need for ongoing surveillance and vaccine adaptation.
3. **Omicron XBB.1.5 Vaccine Effectiveness**: Remarkably, the updated monovalent XBB.1.5 vaccine demonstrated 47% (95% CI 21–65) effectiveness in reducing the risk of medically attended outpatient COVID-19 overall. Among individuals with a prior confirmed SARS-CoV-2 infection, the vaccine provided even higher protection, reducing COVID-19 risk by 67% (95% CI 28–85).

These findings were supported by detailed analysis of viral structures, and how their variations contribute to changes in immunological responses. The insights gained highlight the network's vital contribution to international understanding of vaccine performance against rapidly evolving viruses. The insights not only inform public health interventions but also underscore the significance of the molecular-level examination of circulating and vaccine strains. This enables better decisions by WHO about what should be contained in both future season influenza vaccines and COVID-19 vaccines.
The measure of COVID-19 vaccine effectiveness was one of the first assessments of community value for this vaccine. Unfortunately, our Alberta data did not contribute to this, because we were unable to obtain access to the Alberta Vaccine registry. We hope that next year we will be able to overcome the hurdles to obtaining access and be able to include our data in such calculations.
While vaccine effectiveness of 60% may seem disappointing, this is a conservative estimate, of effectiveness against medically attended illness. Those who do not attend cannot be counted. In addition, those who do not manifest the infection do not transmit it to others. Given the concerns about long COVID even a small benefit of this vaccine is valuable. Thus, the value of vaccines is greater than these numbers signify.

As we continue to navigate the complexities of respiratory virus surveillance and control, your ongoing participation and dedication to the sentinel network remain indispensable. Together, we are making a profound impact on public health and advancing the frontiers of medical science.
We extend our gratitude for your commitment to this vital work. Your contributions are invaluable to our current understanding and pave the way for future innovations in disease prevention and control.
We encourage you to read the full paper to explore this study's detailed findings and implications. Your feedback and insights would be greatly appreciated. The link is:

https://www.eurosurveillance.org/docserver/fulltext/eurosurveillance/29/7/eurosurv-29-7-2.pdf?expires=1708012795&id=id&accname=guest&checksum=6D57B84608DFA39DF7AA2C4D17702AB6

In-person meeting

We are excited to inform you that preparations are underway for the upcoming Annual General Meeting (AGM) of our Sentinel Network. This meeting will serve as a platform to discuss the implications for our future work, and further strengthen our collaboration. It will also provide an opportunity for you to share your experiences, insights, and suggestions for enhancing our surveillance efforts. Details regarding the date, location, and agenda will be shared shortly, and we look forward to your active participation.

Current epidemic.

It appears that the major winter respiratory viral epidemic this year has faded away, along with the snow. However, there is often a late-season resurgence after the mixing that occurs during the spring school break. So please maintain your guard!

TARRANT Viral Watch
Q Health Sciences Ctr
G012-3330 Hospital Dr NW
Calgary, AB T2N 4N1
Canada