It's not just a flu epidemic

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Background

- The TARRANT surveillance program helps monitor influenza activity in Alberta and is part of the Sentinel Practitioner Surveillance Network (SPSN) that quantifies vaccine effectiveness (VE) in Canada each year.
- Winter 'flu' epidemics are attributed to the dominant identified virus, Influenza. However, many other respiratory viruses cause similar clinical syndromes, and in recent years more of them are identifiable on routine testing.
- We describe the identifiable viral illness in community practice over the past 3 years.

Objective

- To describe the viral types found in the Alberta community during the post-COVID-19 resurgence of respiratory viral illness.

Methods

Inclusion criteria for TARRANT VE Study:

- Cough and fever together with one or more of: Arthralgia, myalgia, prostration, or sore throat.
- Samples collected from November 01, 2020 to February 02, 2023

- Nasopharyngeal swabs collected are sent to Alberta Precision Laboratory along with a brief questionnaire containing patient symptoms.

- Laboratory detection is done using standard nucleic acid amplification tests (NAAT). Information is collated and analyzed by the TARRANT office at University of Calgary.

Figure 1. Viral Illness Timeline (September 2019 to Feb 2023)

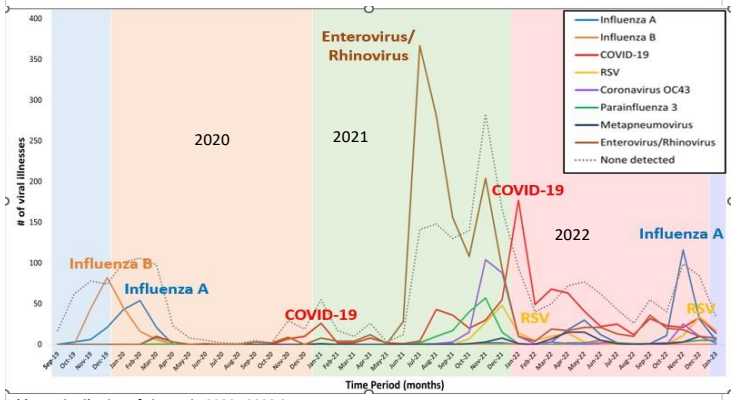

Table 1: Distribution of viruses in 2020 -2023 Season

	2020-2021 Season	2021-2022 Season	*2022-2023 Season	Total
COVID-19	161	**594**	68	823
Influenza A	1	81	**152**	234
Influenza B	0	1	0	1
RSV	7	123	63	193
Corona 229E	2	20	0	22
Corona 0C43	19	212	37	268
Corona NL63	7	48	0	55
Corona HKU1	0	1	4	5
Parainfluenza 1	0	5	5	10
Parainfluenza 2	0	27	0	27
Parainfluenza 3	68	89	13	170
Parainfluenza 4	8	39	2	49
Metapneumovirus	1	58	21	80
Entero/ Rhinovirus	973	473	36	1,482
Adenovirus	4	17	8	29
Chlamydophilia Pneumonia	0	0	1	1

Findings

- **Sample numbers: 2020-2021 -1,965, 2021-2022 -2727 and 2022-current-602.**

- During the COVID-19 outbreak of 2019-20, almost no other respiratory virus was detected. Fig 1

- Respiratory virus types and numbers vary widely for season to season.

Discussion

- In the 2020-2021 season, along with continuing COVID-19 activity, other viruses resurged with an increased incidence of enterovirus/rhinovirus cases.

- As community assessment centers closed and more virus activity occurred, sentinel practitioners saw more patients with respiratory viral illness.

- In the 2021-2022 season, there was Corona OC43, and Entero/Rhino virus along with continuing COVID-19 activity.

- The 2022-2023 season showed rising levels of Influenza A, RSV, COVID-19, Parainfluenza 3, and Entero/rhino virus, while Covid-19 continues.

Conclusion

- The 2020-21 season was unprecedented due to the onset of the COVID-19 pandemic.

- The lack of detected other viral illness may be due to public health measures or an effect of COVID-19.

- The "new normal" appears to include COVID-19 as an endemic virus transmitting alongside other respiratory viruses. .

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TARRANT VIRAL WATCH