

Monitoring of varicella trends in Belgium between 2017 and 2022 through Google Trends

S. Jacquinet¹ • S. Bensemanne¹ • L. Cornelissen¹ •

1. Epidemiology and Public Health, Sciensano, Belgium

- Few data sources exist in Belgium to track trends of varicella over time.
- Several studies have validated the use of search queries for syndromic surveillance or trend monitoring for diseases such as varicella.
- We examined varicella trends in the recent years to assess a possible influence of the covid-19 pandemic and the measures to limit its spread.

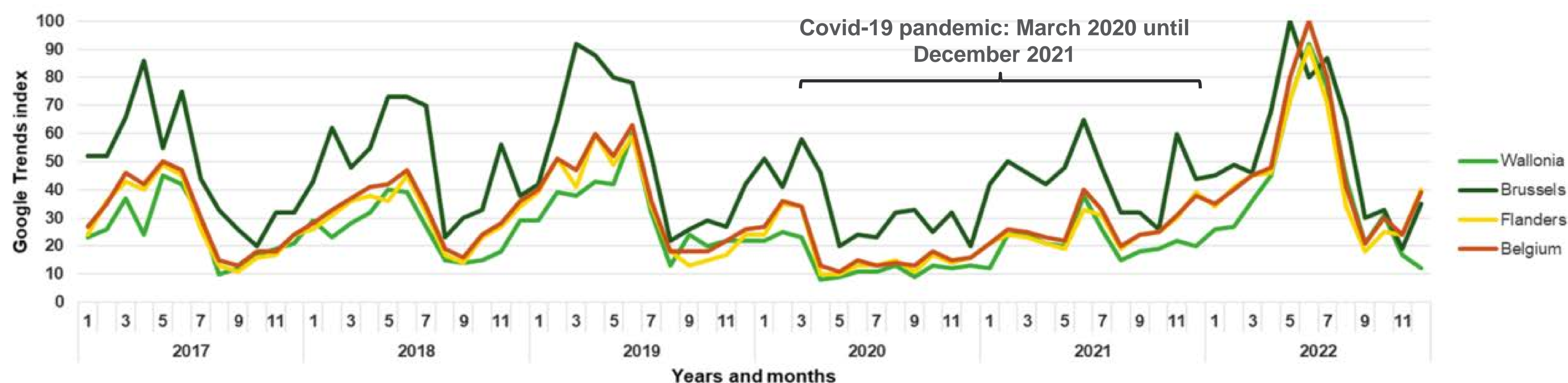
Conclusion

The circulation of the varicella zoster virus has been strongly impacted by the covid-19 pandemic related measures.

Google trends :

- is a validated tool
- is inexpensive and accessible to all,
- can monitor in real time diseases whose symptoms are easily recognizable by the population.
- represent an interesting alternative to conventional surveillance systems

Fig 1. Search query popularity with Google Trends from 2017 to 2022



Method

We looked for information-seeking behavior using Google queries :

- For the terms “varicelle”, “windpokken” and “waterpokken”
- For Belgium and the 3 Belgian regions,
- Per month, for 2017 to 2022, lockdown periods included.

Google Trends...

- Is an unbiased sample of Google search data.
- Reflects the proportion of searches for a given keyword in a region and for a specific period, compared to all searches on all topics on Google at that time and location (value of 100). The numbers are standardized within each country such that values range from 0 to 100.

Results

- Google Trends data showed a significant seasonality for 2017 and 2018 (with a peak in spring).
- A drop in the number of queries is observed in March 2020 until June 2021.
- Viral circulation was intense in 2022. Compared to the average of 2017-2019 for Belgium, search queries were much higher in July and August 2022 (+140%) compared to the average absolute search volume of July and August 2017-2019.
- Very similar trends are observed for Flanders and Wallonia. In Brussels-Capital, the trends are more variable, especially from March 2020.

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