

Influenza like-illness surveillance using a Belgian sentinel network of nursing homes: results of October 2022 onwards.

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INTRODUCTION

Respiratory tract infections place a burden on the vulnerable elderly nursing home (NH) populations. In September 2022 (after several pilot years) we developed a sentinel network of NH to monitor influenza-like illness (ILI), including COVID-19. The aim is to obtain a robust and representative network of participating NH that are geographically representative for Belgium. Results presented here are from October 2022 and onwards.

A similar project is ongoing to assess ILI activity in the general population by using a network of general practitioners (GP).

METHODS

Study design: active observational surveillance

Sample: Number of beds are used as a proxy for number of NH residents to calculate sample size. In Belgium, there were 1,558 NH and 151,130 NH residents in 2022.

Epidemiological part

- Throughout the year: week 40 (of the current year) to 39 (of the next year)
- Weekly questionnaire: number of new ILI cases, ILI-related hospital admissions and deaths

Viological part

- During influenza surveillance season: week 40 (October) to week 20 (May)
- Two nasopharyngeal samples per week
- Virus typing with RT-qPCR: Influenza A/B, SARS-CoV-2, and 16 other respiratory infections

RESULTS

Participation

Season 2022-2023	Season 2023-2024*
34 nursing homes	44 nursing homes
2,943 residents	4,209 residents

Epidemiological part

Season 2022-2023	Season 2023-2024*
Belgian influenza epidemic: week 49, 2022 to week 12, 2023	Belgian influenza epidemic: week 50, 2023 to week 8, 2024
Peaks in NH (Figure 1): • Dec 2022: 20/1,000 NH residents • Feb 2023: 20/1,000 NH residents (bigger outbreak in one NH)	Peaks in NH (Figure 1): • Dec 2023: 15/1,000 NH residents • Feb 2024: 16/1,000 NH residents
27 ILI-related deaths	13 ILI-related deaths

Viological part

Season 2022-2023	Season 2023-2024*
56 samples collected	79 samples collected
25 negative	39 negative
1. SARS-CoV-2 (10) 2. Seasonal corona (8) 3. RSV (7)	1. SARS-CoV-2 (13) 2. Enterovirus (12) 3. Influenza (8)

* Data reported here does not represent the complete season. Data up to 31/03/2024 (week 13)

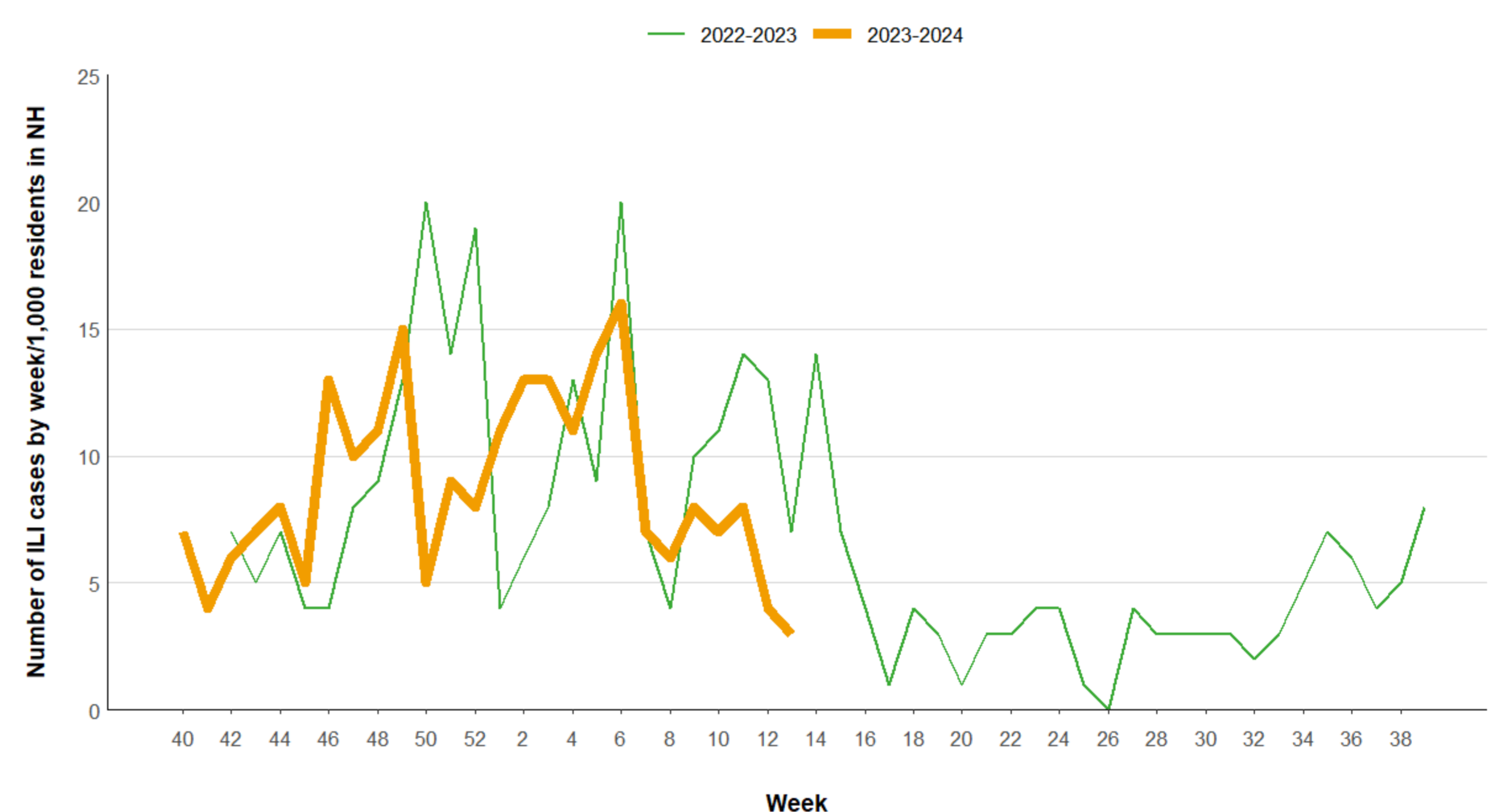


Figure 1: Influenza-like illness (ILI) cases per week per 1,000 nursing home (NH) residents in Belgium. Season start from week 40 (coincides with start of flu season) to week 39. Season 2022-2023: n = 34; Season 2023-2024: n = 44

GP network

In the network of GP the peak of season 2022-2023 fell in December 2022. For season 2023-2024 a smaller increase was observed in December 2023 with a peak in February 2024. Our findings seem to follow the ILI situation among the general Belgian population.

For more detailed information on these results we refer to the weekly bulletin.

Conclusion

- A sentinel network is a feasible way to monitor ILI in NH setting.
- Given the post-pandemic registration fatigue and workforce shortages it remains difficult to find NH willing to participate.
- The viological part is perceived as a major obstacle to participation.

BULLETIN ACUTE RESPIRATORY INFECTIONS

Results of this surveillance are published weekly in French and Dutch together with data from other surveillances related to acute respiratory infections. Scan the QR-code to find these reports



ACKNOWLEDGEMENTS

We would like to thank all nursing home staff, study coordinators and residents for their continuous commitment to this study. In addition, our gratitude goes towards all colleagues involved in this surveillance and the bulletin respiratory infections (among others the NRC Influenza team, the respi team, the regional health authorities)