

Hospital Based Sentinel Surveillance CH-SUR

Influenza Report 2023 Week 12

Data status: 2023-04-03

About Hospital Based Sentinel Surveillance CH-SUR:

Since November 2018, hospitalisations of patients infected with influenza have been recorded in a hospital based surveillance (CH-SUR) each season from week 44 to week 16. The aim of this surveillance is to obtain detailed clinical and epidemiological information on the burden of disease, clinical course such as intensive care unit (ICU) treatment, risk factors and management of influenza patients. The Federal Office of Public Health (FOPH), the Institute of Global Health (IGH) of the University of Geneva and the Infection Control Program of the Geneva University Hospitals (HUG) jointly coordinate CH-SUR. This project is financed by the FOPH.

Important note:

Given the limited number of patients and events, all epidemiological and clinical data included in this report are to be interpreted with caution. **Additional registrations are expected.**

This data is not representative of the whole nation of Switzerland, but exhibits the situation in the CH-SUR partner hospitals (18 Swiss institutions).

A list of essential definitions is provided at the end of the document.

Contact:

Questions regarding this report can be sent to the following e-mail address: ch-sur@unige.ch

1. Summary of new influenza episodes during the week 2023-12

- During the reporting week, the number of influenza episodes (n = 54) decreased by 30% compared to the previous week (n = 77) (Figure 2). The proportion of nosocomial infections increased compared to the previous week and represents 13% (n = 7) of influenza episodes with known source of infection (2 unknowns).
- Influenza type A virus was detected in 19 (37%) episodes, and influenza type B virus in 33 (63%) episodes in week 2023-12. Influenza type was unknown for 2 episodes.
- Information regarding the patient's vaccination status is available for 15 out of the 54 influenza episodes (39 unknowns). 14 (93%) influenza episodes occurred among non-vaccinated patients during the reporting week.
- With respect to age distribution, in week 2023-12, 17 (31%) influenza episodes concerned patients aged 65 years and over, and 22 (41%) influenza episodes concerned children under the age of 15 (Figure 1). 0 is unknown.
- Over the course of week 2023-12, 1 (2%) influenza episodes concerned patients admitted to intermediate care (9 unknowns). Among those, 0 (0%) required non-invasive ventilation.
- As for intensive care unit for week 2023-12, 4 (9%) influenza episodes concerned patients admitted to ICU (11 unknowns). Among those, 1 (25%) required non-invasive ventilation, 0 (0%) required invasive ventilation and 0 (0%) required ECMO.

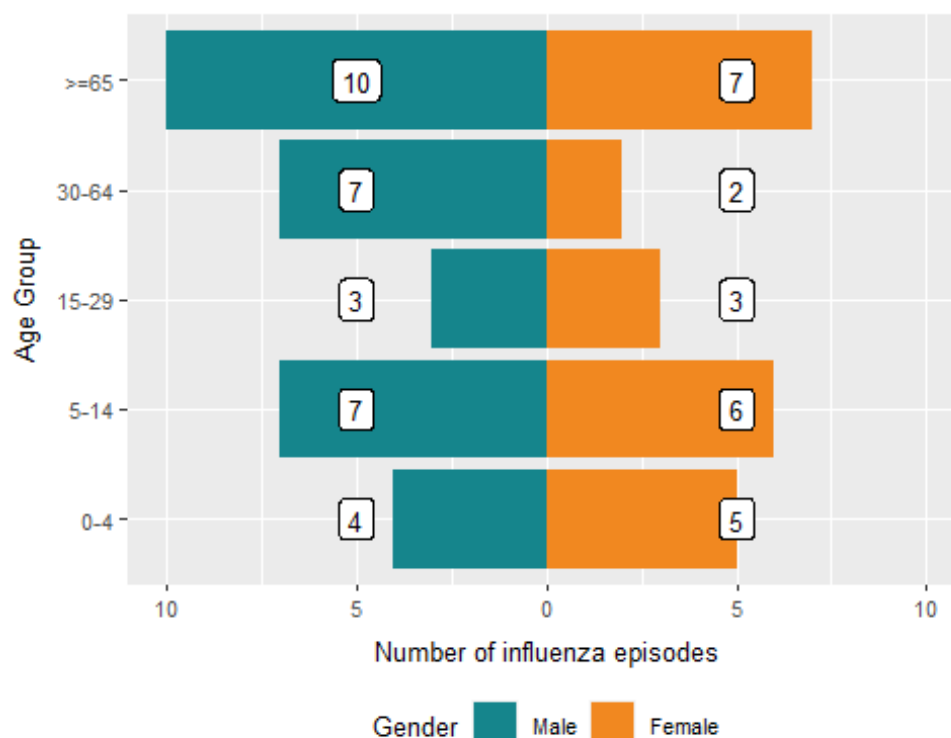


Figure 1: Demographic characteristics of new influenza episodes during the week 2023-12

2. Summary of influenza episodes for the season 2022-2023:

- From week 2022-44 to week 2023-12, we registered a total of 3295 influenza episodes including 473 (14%) nosocomial infections among CH-SUR hospitals. For 32 influenza episodes, it is unknown if the infection is nosocomial (Figure 2).
- At this stage of the season, influenza type A virus was detected in 2796 (85%) episodes, and influenza type B virus in 493 (15%) episodes. Influenza type was unknown for 6 episodes.
- Information regarding the patient's vaccination status is available for 915 out of the 3295 influenza episodes (2380 unknowns). 766 (84%) influenza episodes occurred among non-vaccinated patients.
- A total of 1685 (51%) influenza episodes concerned patients aged 65 years and over (Figure 3). 669 (21%) influenza episodes concerned children under the age of 15 (Figure 3). 9 are unknowns.
- A total of 226 (7%) influenza episodes concerned patients admitted to intermediate care (69 unknowns). Among those, 90 (40%) required non-invasive ventilation.
- A total of 336 (10%) influenza episodes concerned patients admitted to ICU (74 unknowns). Among those, 141 (42%) required non-invasive ventilation, 124 (37%) required invasive ventilation and 14 (4%) required ECMO.
- A total of 68 influenza episodes resulted in death during the hospitalisation in this season.

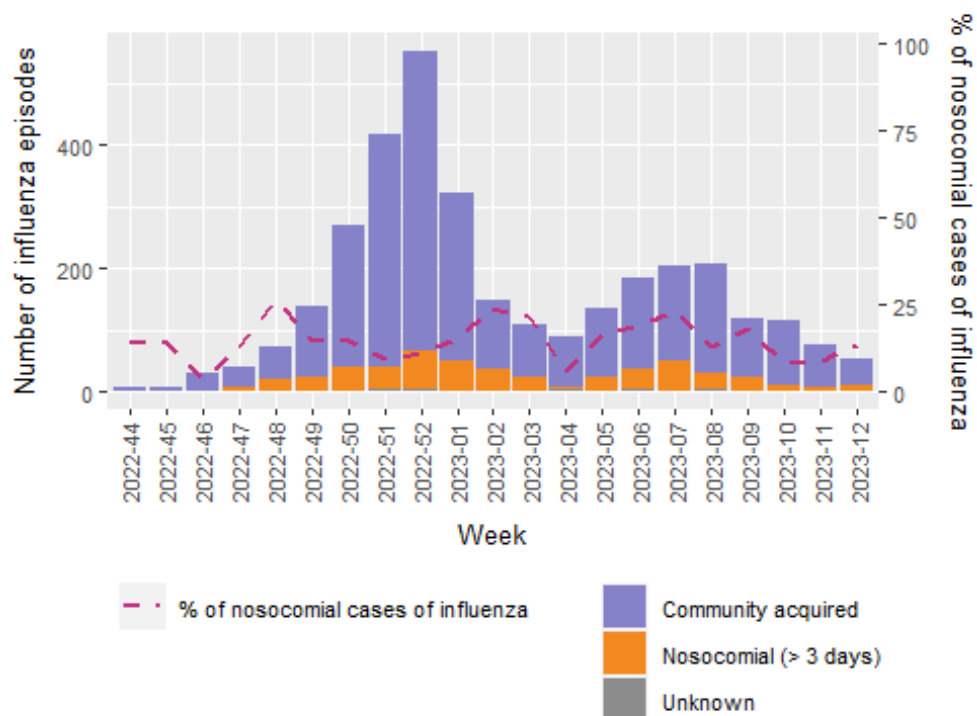


Figure 2: Number of influenza episodes per week according to the origin of infection.

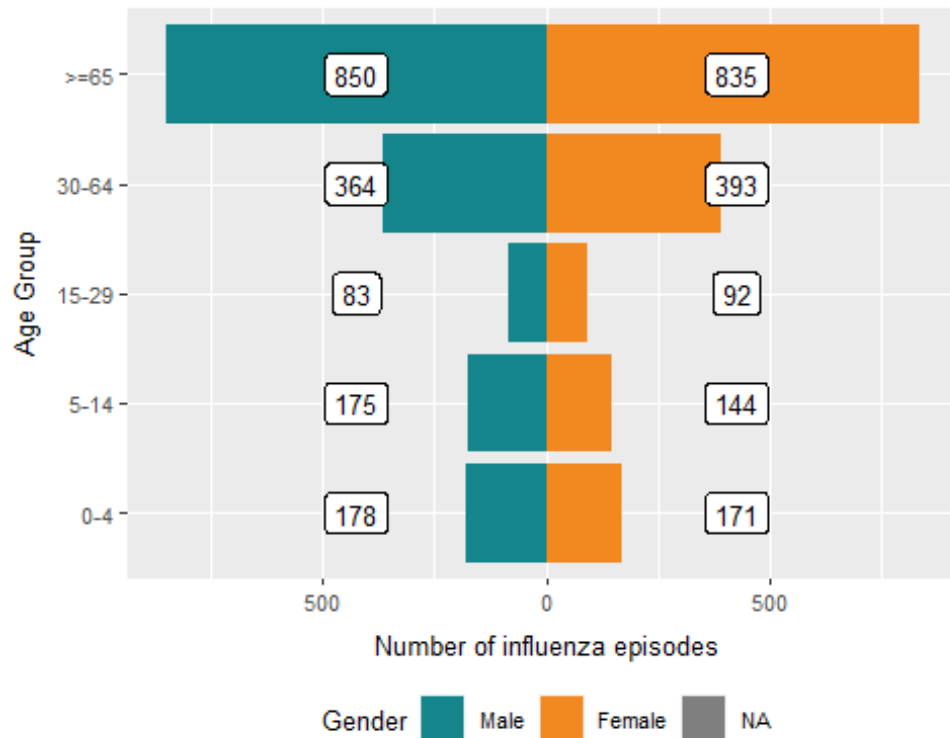


Figure 3: Demographic characteristics of influenza episodes for the season 2022-2023

3. Contributions

The following members of the CH-SUR group have participated in the development of this report:

- Jonathan Sobel, Erol Orel, and Olivia Keiser from the Institute of Global Health, Geneva;
- Michèle Steiner, Marianne Rousseau-Schadegg, Anne-Flore Combaz, Jason Toko, Marie-Céline Zanella, and Stephan Harbarth from the Infection Prevention Control Division, HUG.

4. Acknowledgments

University of Geneva, Institute of Global Health (IGH):

Vancauwenberghe, Laure; Suveges, Maria; Sobel, Jonathan; Orel, Erol; Botero Mesa, Sara; Keiser, Olivia

Infection Control Program, University of Geneva Hospitals (HUG):

Zanella, Marie-Celine

Federal Office of Public Health (FOPH):

Roder, Ursina; Luminati, Ornella; Greiner, Clara; Resenterra-Charrière, Véronique; Fesser, Anna; Vonlanthen, Jasmin;

Centers participating in the Influenza Hospital Based Surveillance:

Kantonsspital Graubünden (KSGR), Kantonsspital St. Gallen (KSSG), Hôpitaux Universitaires de Genève (HUG), Kinderspital Basel (UKBB), Luzerner Kantonsspital (LUKS), Kinderspital Zürich (KISPI USZ), Kantonsspital Winterthur (KSW - paediatrics only), Ente Ospedaliero Cantonale (EOC), Hôpital de Fribourg (HFR - paediatrics only), Kinderspital St. Gallen (OKS), Hôpital du Valais (HVS), Kantonsspital Münsterlingen (STGAG), Universitätsspital Zürich (USZ), Centre Hospitalier Universitaire Vaudois (CHUV), Universitätsspital Basel (USB), Spitaeler Schaffhausen (Spitaeler SH), Hirslanden Clinic St Ana, Inselspital Bern (INSEL).

5. Definitions

Influenza season: As CH-SUR participating hospitals report influenza cases from the beginning of November, we consider the influenza season to span from week 44 to week 16. Consequently, this means that the report starts 4 weeks later and ends 4 weeks before the influenza season definition of WHO, which is from week 40 to week 20.

Children are defined as patients < 15 years of age.

The **week** (calendar week - Monday to Sunday), used for the figures is:

- the week of hospital admission for community-acquired infections,
- the week of diagnosis for hospital-acquired infections, or if the hospital admission date is missing for community-acquired infections,
- the week of inclusion into CH-SUR if hospital admission and diagnosis dates are missing.

Nosocomial influenza infection: patient who developed symptoms of influenza or tested positive for influenza 3 days or more after admission to the hospital.

Episodes: An episode number is given to each new hospital admission which is separated by at least 30 days from a prior hospitalization and lasts for more than 24 hours. Therefore, if a patient is hospitalized only once, or several times within 30 days, then both scenarios account for only one episode. Two different hospitalizations of the same patient that happen to be separated by 30 days result in two different episodes. If a patient is transferred between two hospitals participating in CH-SUR within the period of 30 days after last discharge, then these hospitalizations account for the same episode. One episode can therefore include multiple hospitalizations and each hospitalization can include multiple ICU admissions.