Hospital Based Sentinel Surveillance

CH-SUR Influenza Report 2023 Week 5

Data status: 2023-02-13

About Hospital Based Sentinel Surveillance CH-SUR:

Since November 2018, hospitalisations of patients infected with influenza have been recorded in a hospital sentinel surveillance system (influenza Hospital Based Surveillance CH-SUR) each year 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 ICU treatment, risk factors and management of influenza patients. The FOPH, the Institute of Global Health 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 (17 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 2023-05

- During the reporting week, the number of influenza episodes (n = 97) increased by 64% compared to the previous week (n = 59) (Figure 2). The proportion of nosocomial infections increased compared to the previous week and represents 19% (n = 17) of influenza episodes with known source of infection (7 unknowns).
- Influenza type A virus was detected in 68 (76%) episodes, and influenza type B virus in 22 (24%) episodes in week 2023-05. Influenza type was unknown for 7 episodes.
- Information about the patient's vaccination status is available for 19 out of the 97 influenza episodes (78 unknowns). 13 (68%) influenza episodes occurred among non-vaccinated patients, during the reporting week.
- With respect to age distribution, in week 2023-05, 49 (51%) influenza episodes concerned patients aged 65 years and over, and 17 (17%) influenza episodes concerned children under the age of 15 (Figure 1). 0 is unknown.
- For week 2023-05, 8 (12%) influenza episodes concerned patients admitted to intermediate care (32 unknowns). Among those, 5 (62%) required non-invasive ventilation.
- As for intensive clinical course and management, during the reporting week, 11 (18%) influenza episodes concerned patients admitted to ICU (35 unknowns). Among those, 1 (9%) required non-invasive ventilation, 5 (45%) required invasive ventilation and 0 (0%) required ECMO.

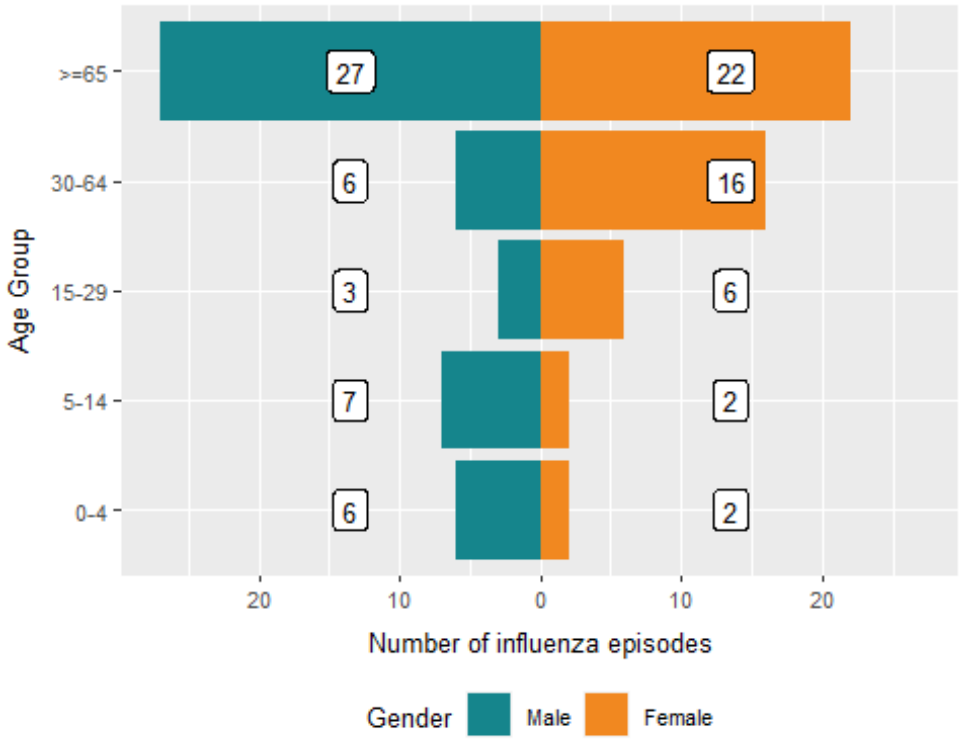

Figure 1: Demographic characteristics of new influenza episodes during the week 2023-05

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

- From week 2022-44 to week 2023-05, we registered a total of 1984 influenza episodes including 264 (13%) nosocomial infections among CH-SUR hospitals. For 27 influenza episodes, it is unknown if the infection is nosocomial (Figure 2).
- At present, Influenza type A virus was detected in 1901 (96%) episodes, and influenza type B virus in 70 (4%) episodes. Influenza type was unknown for 13 episodes.
- Information regarding the patient's vaccination status is currently available for 536 out of the 1984 influenza episodes (1448 unknowns). 434 (81%) influenza episodes occurred among non-vaccinated patients.
- A total of 1104 (56%) influenza episodes concerned patients aged 65 years and over (Figure 3). 367 (18%) influenza episodes concerned children under the age of 15 (Figure 3). 4 are unknowns.
- A total of 136 (7%) influenza episodes concerned patients admitted to intermediate care (103 unknowns). Among those, 61 (45%) required non-invasive ventilation.
- A total of 208 (12%) influenza episodes concerned patients admitted to ICU (192 unknowns). Among those, 90 (43%) required non-invasive ventilation, 66 (32%) required invasive ventilation and 8 (4%) required ECMO.
- A total of 35 influenza episodes resulted in death during the hospitalisation in this season.

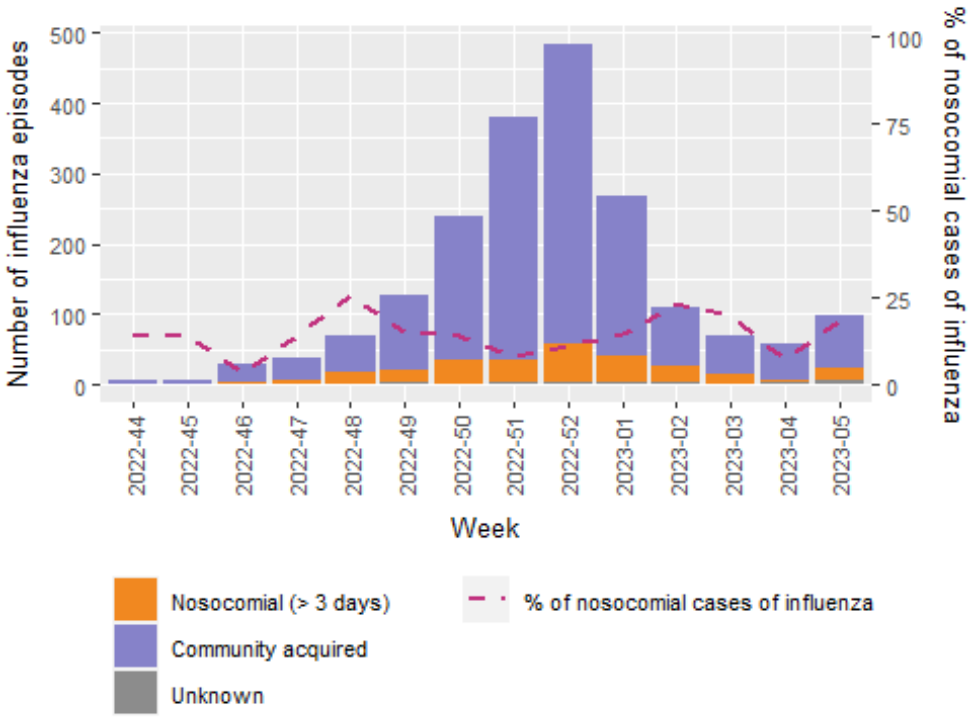

Figure 2: Number of influenza episodes per week according to the origin of infection.

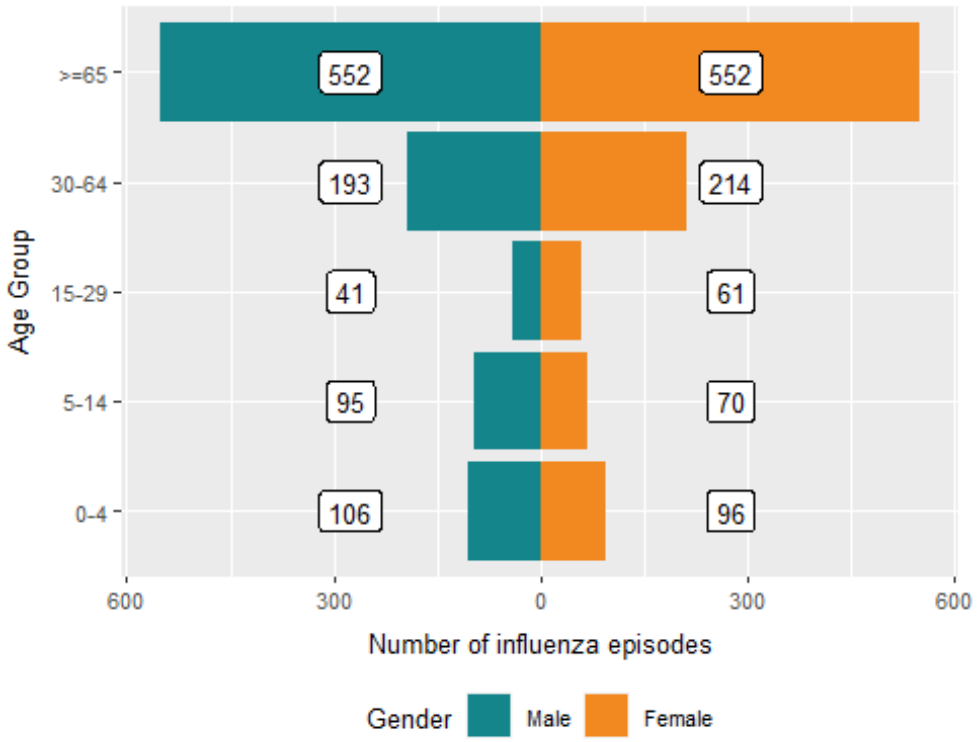

Figure 3: Demographic characteristics of influenza episodes for the season 2022-2023

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

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Kantonsspital Graubuenden (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), Kindersspital St. Gallen (OKS), Hôpital du Valais (HVS), Kantonsspital Münsterlingen (STGAG), Universitätspital Zürich (USZ), Centre Hospitalier Universitaire Vaudois (CHUV), Universitätspital 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 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 than 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.