

Hospital Based Sentinel Surveillance CH-SUR

Influenza Report 2023 Week 3

Data status: 2023-01-30

About Hospital Based Sentinel Surveillance CH-SUR:

Since 2018, hospitalisations of influenza patients have been recorded in a hospital sentinel surveillance system (influenza Hospital Based Surveillance CH-SUR). 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) are jointly coordinating CH-SUR. This project is financed by the FOPH.

Important note:

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

This data is not representative for whole Switzerland, but represents the situation in the CH-SUR hospitals partners (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 2023-03

- During the reporting week, the number of influenza episodes (n = 73) decreased by 46% compared to the previous week (n = 136) (Figure 2). The proportion of nosocomial infections decreased compared to the previous week and represents 19% (n = 13) of influenza episodes with known acquisition of infection (6 unknowns).
- During the reporting week, Influenza type A virus was detected in 55 (82%) episodes, and influenza type B virus in 12 (18%) episodes. Influenza type was unknown for 6 episodes.
- During the reporting week, we have information about the patient's vaccination status for 21 out of the 73 influenza episodes (52 unknowns). 18 (86%) influenza episodes occurred among non-vaccinated patients.
- During the reporting week, 33 (45%) influenza episodes concerned patients aged 65 years and over, and 18 (25%) influenza episodes concerned children under the age of 15 (Figure 1). 1 is unknown.
- During the reporting week, 6 (11%) influenza episodes concerned patients admitted to intermediate care (17 unknowns). Among those, 0 (0%) required non-invasive ventilation.
- During the reporting week, 6 (12%) influenza episodes concerned patients admitted to ICU (24 unknowns). Among those, 2 (33%) required non-invasive ventilation, 1 (17%) required invasive ventilation and 0 (0%) required ECMO.

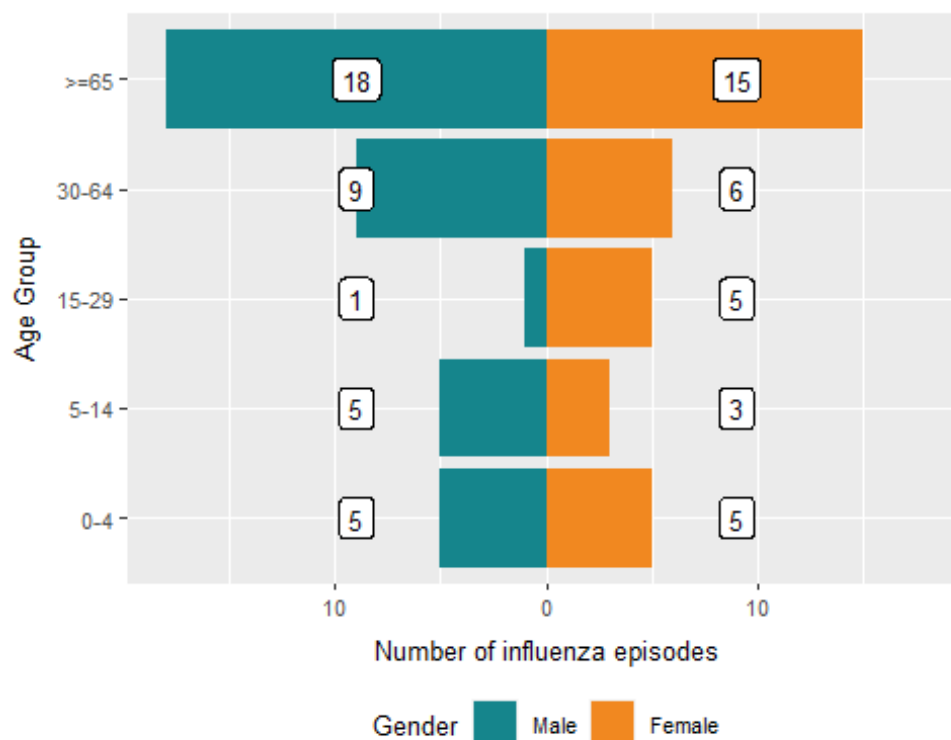


Figure 1: Demographic characteristics of new influenza episodes during the week 2023-03

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

- During this season, from week 2022-40 to week 2023-03 in the CH-SUR hospitals, we registered a total of 1714 influenza episodes including 223 (14%) nosocomial infections. For 66 influenza episodes, it is unknown if the infection is nosocomial (Figure 2).
- During this season, Influenza type A virus was detected in 1613 (97%) episodes, and influenza type B virus in 46 (3%) episodes. Influenza type was unknown for 55 episodes.
- During this season, we have information about the patient's vaccination status for 465 out of the 1714 influenza episodes (1249 unknowns). 379 (82%) influenza episodes occurred among non-vaccinated patients.
- A total of 964 (56%) influenza episodes concerned patients aged 65 years and over (Figure 3). 308 (18%) influenza episodes concerned children under the age of 15 (Figure 3). 3 are unknowns.
- A total of 163 (10%) influenza episodes concerned patients admitted to intermediate care (128 unknowns). Among those, 48 (29%) required non-invasive ventilation.
- A total of 170 (11%) influenza episodes concerned patients admitted to ICU (231 unknowns). Among those, 69 (41%) required non-invasive ventilation, 52 (31%) required invasive ventilation and 7 (4%) required ECMO.
- A total of 27 influenza episodes resulted in death during the hospitalisation in this season.

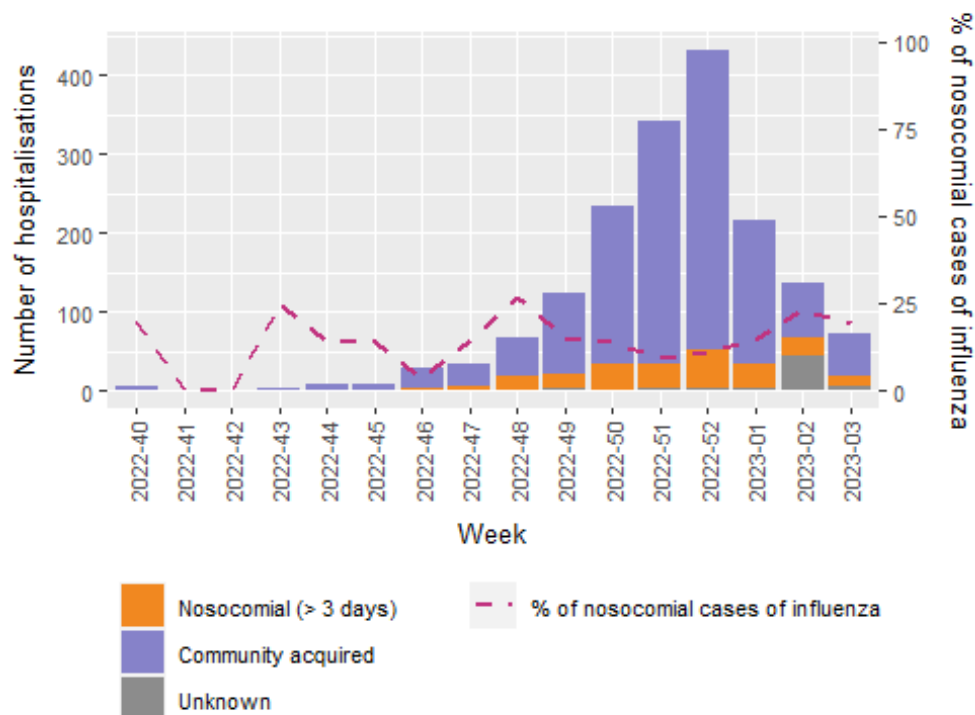


Figure 2: Number of influenza episodes per week according to the origin of infection.

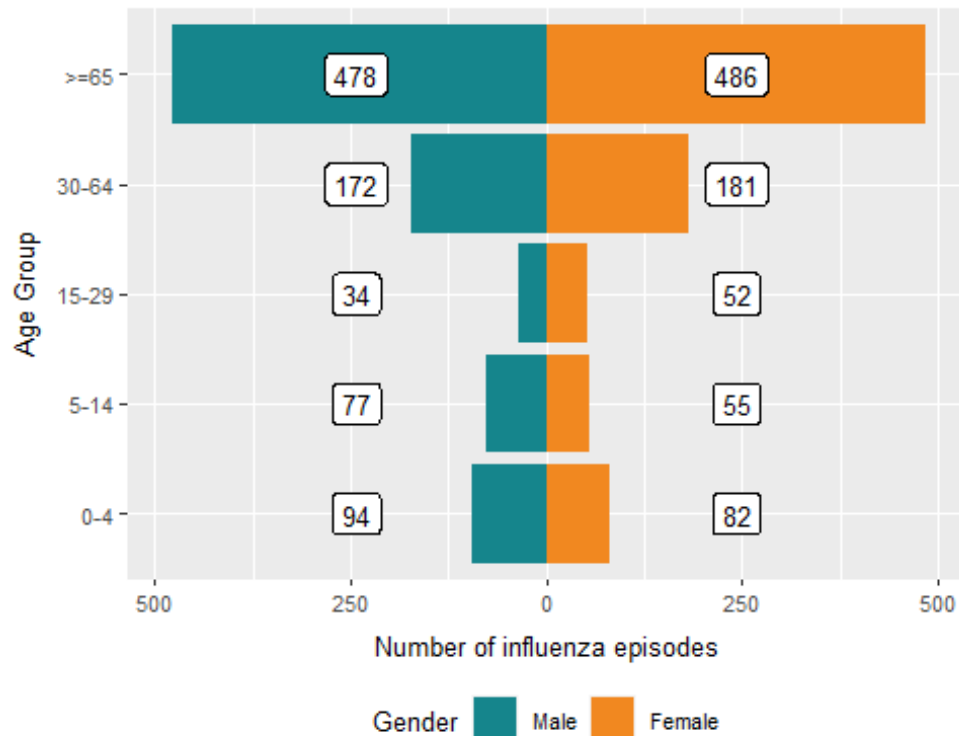


Figure 3: Demographic characteristics of influenza episodes for the season 2022-2023

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: We consider the influenza Season in conformity with WHO 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 admission to hospital, 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 separated by 30 days result in two different episode numbers. 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.