

Spread of flu virus in hospital environment common

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One in four inpatients with influenza in a given season showed signs of having become infected during care. This is clear from a University of Gothenburg thesis about the spread of influenza in hospitals and how this problem can be remedied.

One of the studies in the thesis is based on a review of the medical

records of all 435 hospitalized adult patients at Sahlgrenska University Hospital who had laboratory-confirmed influenza (flu) during the 2016–2017 season.

Of these patients, 114 cases (26 percent) were classified as healthcare-associated. These patients had been admitted for other reason, and the onset of their flu symptoms did not take place until 48 hours or more after admission.

A detailed genetic analysis of virus samples was also performed. This analysis showed a close genetic relationship between flu viruses in samples taken from patents staying in the same ward within a single week.

"Besides the association in time and space, a kind of DNA evidence, like from a crime scene, was used. Overall, teher's strong support for transmission of infection within the hospital", says Martina Sansone, Ph.D. a recent Ph.D. graduate at Sahlgrenska Academy, University of Gothenburg, and a consultant in [infectious diseases](#) and hospital hygiene at Sahlgrenska University Hospital.

High proportion with healthcare-associated infections

"The proportion who became infected within the hospital was even higher than I thought it would be—and after all, this is my job," she continues. "This research area isn't especially well explored."

Twenty-six people in the study group died. The majority were [older patients](#) with cardiac or pulmonary diseases, and the seasonal flu of 2016–2017 was considered relatively severe.

Based on her doctoral studies in their entirety—including a flu outbreak at Kungälv Hospital—Sansone concludes that transmission of influenza

in hospital wards is common.

The shortage of beds is identified as a key factor in the context. The lack of single rooms also leads to more transfers of patients within a hospital and this, in turn, can add to the spread of infection.

"There has been an exaggerated focus on measurable lead times in the emergency room, and on cutting wait times. Sometimes the decision to hospitalize a patient is taken too quickly, before the diagnosis is complete and the risk of a person being infectious is known to exist. I also think the staff sometimes finds it hard to grasp the fact that one patient can represent a danger to another."

Lessons related to COVID-19

The parallels with COVID-19 are obvious, Sansone thinks. Respiratory tract symptoms are common and may be mild. In the flu season too, planned care may be postponed and patients need to be kept isolated in the hospital environment.

"In Sweden our hospitals have been extremely open, to [family members](#) as well as others, with lots of people coming and going. Why not have separate flu wards, in the same way as we have COVID-19 wards?" she wonders.

"The crucial needs are for us to reduce numbers of contacts, carry out prompt flu testing in the [emergency room](#), and increase the vaccination rates. Today, around 50 percent of the [elderly population](#) in Sweden are vaccinated against the seasonal flu, well below the WHO target of 75 percent," Sansone says.

More information: Martina Sansone, Epidemiology of viral respiratory infections with focus on in-hospital influenza transmission.

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Provided by University of Gothenburg

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