

# Cystic Fibrosis Research News

**Title:**

Influenza B outbreak at an adult cystic fibrosis centre - clinical impact and factors influencing spread

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**What was your research question?**

Investigation of factors which contributed to a viral influenza B outbreak at an adult cystic fibrosis (CF) centre. Did the influenza have short or medium-term effects on patient's health?

**Why is this important?**

Chest exacerbations/infections are a risk factor for health decline in adults. Influenza infection can have severe consequences in people with CF, so it is important to try to understand what led to this outbreak and what the health related consequences were.

**What did you do?**

Data of all patients admitted around the time of the influenza outbreak were reviewed. Admission date, viral test results, influenza vaccine status and lung function test results were recorded for all patients. Ward location and ventilation levels, including air exchange rates, were also recorded to assess any possible relationship.

**What did you find?**

10 patients developed influenza B on the CF ward in an 8 day period in May 2016. The affected patients were mainly housed in one area of the ward and all those tested had the same strain of influenza B indicating likely cross infection. Ventilation in affected patient rooms was below



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the current recommended levels. Lung function of affected patients significantly declined during the influenza outbreak and remained low for the following three months. The influenza vaccine used in 2016 did not cover this specific influenza B strain so may have been less protective to patients.

## **What does this mean and reasons for caution?**

The influenza outbreak affected a high proportion (48%) of ward inpatients and had a detrimental effect on lung function which persisted after the infection. Airborne transmission and limited protection from the seasonal influenza vaccine may have been contributory factors to this outbreak.

The patients were admitted for chest exacerbations/infections before developing influenza, so the decline in lung function seen may, in part, be due to other causes. No staff members were tested, although none developed symptoms during the outbreak.

## **What's next?**

This is the first recorded outbreak for this strain of influenza in people with CF. Ward ventilation, isolation facilities, and infection prevention and control procedures should be considered when developing CF facilities of the future.

## **Original citation in PubMed**

<https://pubmed.ncbi.nlm.nih.gov/32565192/>