



# Cystic Fibrosis Research News

**Title:**

Exasperation with the lack of pulmonary exacerbation treatment standardization

**Lay Title:**

A review of three studies examining different aspects of pulmonary exacerbation treatment

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**What was your research question?**

In this editorial, we reviewed three articles that each looked at different aspects of the management of pulmonary exacerbations.

**Why is this important?**

Pulmonary exacerbations are common among people with CF (PwCF). However, there is quite a bit of variability in how they are treated. Some exacerbations are treated at home with oral antibiotics, and others are treated with intravenous (IV) antibiotics in the hospital. There is also a lack of consensus about the best choice of antibiotics or the appropriate amount of time to treat an exacerbation. All of these questions are important to answer in order to provide the best care possible for all PwCF when they experience pulmonary exacerbations.

**What did you do?**

We reviewed three studies that each asked a different question about pulmonary exacerbations. The first study, led by Dr. VanDevanter, looked at whether PwCF treated with oral antibiotics did as well as PwCF treated with IV antibiotics. The second study by Dr. Caverly and colleagues compared the outcomes of PwCF treated with antibiotics that work well in fighting anaerobic bacteria with those who were not treated with antibiotics that work well against anaerobic bacteria. The third study, conducted by Dr. Montemayor and colleagues, evaluated whether there were differences in treatment approach in treating females with CF and males with CF.

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## What did you find?

VanDevanter and colleagues found that PwCF who were treated with oral antibiotics did not do as well as those treated with IV antibiotics. Dr. Caverly's study found that there were no differences in outcomes comparing people who received antibiotics with good coverage of anaerobic bacteria to those who did not. Montemayor and colleagues found no differences in treatment approach when comparing female and male PwCF.

## What does this mean and reasons for caution?

Each of the three studies helped answer a distinct question within the bigger question of how best to treat pulmonary exacerbations. An important consideration for the study by Dr. VanDevanter is that receiving IV antibiotics often entails being admitted to the hospital. It is difficult to know whether the treatment differences were due to receiving IV vs oral antibiotics or if it had more to do with the location of treatment (i.e. hospital or home) and associated support and resources that the hospital provides.

## What's next?

While some questions about how best to treat pulmonary exacerbations have been answered, many more remain. It is important that we continue to perform studies on how best to treat a pulmonary exacerbation to ensure the best possible care for all PwCF.

## Original manuscript citation in PubMed

<https://pubmed.ncbi.nlm.nih.gov/34503929/>