European Cystic Fibrosis Society

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Cystic Fibrosis Research News

Title:
Inhaled antimicrobial prescribing for *Pseudomonas aeruginosa* infections in Europe.

Lay Title:
Use of inhaled antibiotics to treat *Pseudomonas aeruginosa* infections in Europe.

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What was your research question?
We wanted to find out how doctors in cystic fibrosis centres in Europe decided which inhaled antibiotic to use for *Pseudomonas aeruginosa* infections in people with cystic fibrosis.

Why is this important?
It is important to understand what information doctors need when they decide which inhaled antibiotic to use. This will allow us to put together better advice that makes it easier for doctors to decide in the future.

What did you do?
We sent a survey to doctors (Principal Investigators) at each of the 57 centres in the ECFS Clinical Trials Network. We asked how they decided which antibiotics to use, what antibiotics they chose to give at different periods of infection, and how they decided when to change antibiotics if they were not working,

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What did you find?

Most doctors (n= 51/57) completed the survey. A range of information is used when deciding which antibiotic to use. The information used by most doctors was how the antibiotic was delivered, either as a nebuliser or inhaler, how well the person with cystic fibrosis had been able to complete previous antibiotic treatments, and the side-effects of the antibiotic. Many doctors used nebulised tobramycin or colistin in their first attempts to treating the infection, before choosing other inhaled antibiotics such as aztreonam or levofloxacin if these did not work.

What does this mean and reasons for caution?

Understanding which information is useful when deciding what inhaled antibiotic to use will help us decide the best way to use each of the many options available in the future. We will be able to provide advice with the most useful information to make the decision easier for doctors. However, this study was based on the thoughts of a small number of doctors and results might be different for a larger group or if the survey was completed in a different part of the world e.g., the United States.

What's next?

These results will hopefully allow for a trial to be set-up to explore how well inhaled antibiotic regimens specified by the doctors in the survey manage *Pseudomonas aeruginosa* infections in people with cystic fibrosis.

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