Cystic Fibrosis Research News

Citation:

Psoter KJ, Rosenfeld M, DeRoos AJ, Mayer J, Wakefield J. Differential geographical risk of initial *Pseudomonas aeruginosa* acquisition in young U.S. children with cystic fibrosis. Am J Epi. 2014; 179(12):1503-1513.

What was your research question? (50 words)

The purpose of this investigation was to determine if geographic location affects the risk for *Pseudomonas aeruginosa* acquistion among young children with cystic fibrosis (CF) in the United States.

Why is this important? (100 words)

P. aeruginosa is one of the most prevalent and hardest to treat bacterial pathogens affecting CF patients. Earlier *P. aeruginosa* acquisition is associated with worse clinical outcomes. Early identification is therefore essential for delaying or preventing chronic infection. It is important to investigate differences in *P. aeruginosa* acquisition between states to ascertain whether environmental factors, such as annual ambient temperatures, might influence risk of acquisition and warrant closer monitoring of young patients.

What did you do? (100 words)

We conducted a study to describe the geographical distribution of initial *P. aeruginosa* acquisition in young children with CF and evaluate potential differences between state of residence. We used data from the Cystic Fibrosis Foundation Patient Registry from 2003 to 2009.

What did you find? (100 words)

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We demonstrated that there are significant geographical differences in time to initial *P. aeruginosa* acquisition in young children with CF in the United States. Those residing in Southern states had a higher risk of *P. aeruginosa* acquisiton than those residing in other states.

What does this mean and reasons for caution? (100 words)

These results suggest that environmental factors, such as temperature, humidity, and air pollution may contribute to the risk of *P. aeruginosa* acquisition, particularly in the Southern states.

What's next? (50 words)

Results of this analysis provide evidence to justify conducting future studies to identify potential climatic and environmental risk factors for *P. aeruginosa* acquisition.