



Cystic Fibrosis Research News

Citation:

Kopp, Benjamin. The Geographic Impact on Hospitalization in Patients with Cystic Fibrosis Kopp BT, Nicholson L, Paul G, Tobias J, Ramanathan C, Hayes D Jr. The Geographic Impact on Hospitalization in Patients with Cystic Fibrosis. *J Pediatr.* 2016 Mar;170:246-52.e1-4. doi: 10.1016/j.jpeds.2015.11.012. PubMed PMID: 26690850.

What was your research question? (50 words maximum)

We looked at whether geographic location influences hospitalizations for pulmonary exacerbations for patients with cystic fibrosis (CF) in the United States (US).

Why is this important? (100 words maximum)

Previously we identified differences across the US in the distribution of lung bacteria, chronic medication usage, and other diagnoses such as depression for patients with CF in the US. Therefore, it was important to determine whether these differences may impact outcomes such as hospitalization frequency for patients with CF depending on which region of the US they live in.

What did you do? (100 words maximum)

We analyzed the CF Foundation Patient Registry during the years 2007-2012 by grouping patients into geographic regions. The impact of geographic region on recovery from hospitalization, hospitalization length, and time to next hospitalization were analyzed.

What did you find? (100 words maximum)

We found that there is significant regional variability in hospitalization length and risks for subsequent hospitalizations for patients with CF in the US. The West region was associated with risk of longer hospital stays. There was a significantly decreased risk for subsequent hospitalizations in the Northeast compared with other regions. History of allergic bronchopulmonary aspergillosis and adult age in the Northeast and infection with *Candida albicans* and *Pseudomonas aeruginosa* in the Midwest were associated with increased hospitalization length.

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

Emerging evidence suggests that outcomes for patients with CF vary geographically. The current study adds to the growing evidence that geographic factors influence hospitalization for pulmonary exacerbation. We discovered several regional variables that impact hospital length of stay and risk for subsequent hospitalizations with varying impacts in children compared with adults. These must be interpreted cautiously at the level of individual centers within each region.



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What's next? (50 words maximum)

Next, it will be important to determine if regional variables can be used to determine benchmarking standards across all regions to improve national CF care.