Assessing the Distribution of Indoor Air Quality Cases in Louisiana, 2021-2024

Authors and Affiliations

Paula Dinh[1]; Adrienne Katner[1]; Kate Puszykowski[2]

[1] Louisiana State University Health Sciences Center School of Public Health, [2] Louisiana Department of Health

Background

Louisiana lacks sufficient indoor air quality (IAQ) policies to keep its residents safe from airborne mold contaminants and their health implications. Louisiana is particularly at risk for microbial growth due to high humidity and extreme weather events (i.e., floods, hurricanes), yet the spatial and temporal distribution of mold exposures in Louisiana are not well understood.

Objectives

This study investigates the spatial and temporal distribution of mold exposures in Louisiana.

Methods

IAQ mold calls made to the Louisiana Department of Health (LDH) Indoor Environmental Quality Education Service (IEQES) by Louisiana residents between 2021-2024 were analyzed. Spatial analysis was implemented through ArcGIS using count of mold calls and call rates per parish. Temporal analysis was executed through Microsoft Excel using the count of mold calls per year and month. The Chi-Square Goodness of Fit test was implemented to determine whether observed distributions of mold calls were equal between each month.

Results

The highest volume of mold calls came from East Baton Rouge (N=139), Lafayette (N=88), and Jefferson (N=78) parish. Call rates revealed that Catahoula (0.67), Washington (0.53), and Claiborne (0.49) parish had the most calls per capita. Temporally, mold-related calls peaked in September except for 2022 and 2023 which peaked in August and March, respectively. Chi-Square Goodness of Fit test determined mold calls differ by month.

Conclusion

Mold-related concerns made up the majority of IEQES calls, with both crude counts and per-capita rates revealing distinct geographic concentrations and clear seasonal peaks in reported mold issues across Louisiana.

Recommendation

These findings underscore the influence of extreme weather events, housing conditions, and inadequate policies on mold exposure risks, highlighting the need for improved regulations, funding for assessment and abatement, and strengthened outreach to address persistent mold problems statewide.