

Asthma Exacerbation Risk and School Asthma Readiness

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OBJECTIVES

School-based asthma management is a key facet of child asthma care. We aimed to describe the proportion of students whose schools have child-specific components of asthma care, derive a composite metric of these components (“school asthma readiness”), and assess its association with asthma exacerbations (asthma risk) in the preceding year.

METHODS

Within a nested cohort of children enrolled in a larger randomized clinical trial, we assessed the baseline proportion of children whose school had elements of necessary asthma care. We then derived a “school asthma readiness” composite and used ordinal logistic regression to model the association between number of asthma exacerbations in the preceding year and the composite, accounting for demographic, clinical, and school characteristics.

RESULTS

Of 202 participants aged 5 to 13 years, most identified as Black (95%) and non-Hispanic (98%), and most participants (73%) had an emergency department visit for asthma in the year before enrollment. Most students’ schools (79%) had awareness of the child’s asthma diagnosis, whereas fewer had reliever medications and valved holding chambers (both 31%) and asthma care plans (7%). Asthma exacerbations in the prior year were associated with a significantly higher school asthma readiness in bivariate (odds ratio [OR], 1.44 [95% CI, 1.14–1.82]; $P = .002$) and multivariable analysis (OR, 1.31 [95% CI, 1.02–1.7]; $P = .037$).

CONCLUSIONS

A minority of children attended schools that were equipped to manage asthma symptoms. More past exacerbations were associated with higher school readiness, suggesting that more work is needed to support proactive asthma care in schools.

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