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Children in Eastern North Carolina Experience Higher Asthma-Related Emergency Department Visits

Morrisville, NC (March 29, 2018) – New research, published in the [current issue](#) of the *North Carolina Medical Journal*, pinpoints 5- to 9-year-olds in the Eastern region of the state as the demographic with the most asthma-related emergency department (ED) visits in North Carolina.

After reviewing existing data on child asthma rates in North Carolina, co-author Gregory D. Kearney, an assistant professor in the department of public health at East Carolina University, and his team analyzed the data to see whether ED rates were higher among the pediatric population in Eastern North Carolina compared to the rest of the state.

Using data from the North Carolina Disease Event Tracking and Epidemiology Collection Tool (NC DETECT), the researchers analyzed more than 320,000 ED visits between January 1, 2010 and December 31, 2014. They found that the Eastern region consistently had the highest ED visits each year, and unlike the other regions of the state, visits there increased from 76.3 per 10,000 people per year in 2010 to 93.5 per 10,000 people per year in 2014.

“When we compared regions across N.C., we found that asthma-related emergency department visit rates were significantly higher among several rural counties in the eastern part of the state,” said Kearney. “Among those, many of the higher ED rates clustered around Pitt County, including, Beaufort, Bertie, Martin, Greene and Edgecombe.”

The biggest public health takeaway, according to Kearney, was that while age-specific rates were mostly stable throughout the study period, those aged 5-9 years saw a nearly 14 percent increase from 2010 to 2014. This matches data from a recent state-wide survey showing that children 5-10 years old had the highest asthma rates in the state. Kearney says this group may be an ideal age group to target for asthma education and intervention.

“Given that a large percent of Eastern N.C. has some of the poorest counties combined with a shortage of health care providers, the results of the analysis didn't come as a huge surprise for us,” said Kearney.

Adam Zolotor, MD, DrPH, co-publisher of the NCMJ, states, “Asthma education is important, but addressing poverty and access to care are fundamental to improving the health of our rural communities as outlined in our [Rural Health Action Plan](#).”

Kearney notes that asthma programs such as those administered by Mission Children's Hospital, Community Care of North Carolina-Wake/Johnston Counties and the Eastern Carolina Asthma Prevention Program are good models to follow, but more funding and resources are needed to implement them more broadly.

To read the [full article](#), “Asthma-Related Emergency Department Visits in North Carolina, 2010-2014,” by Holly Dieu, Gregory D. Kearney, Hui Bian, Katherine Jones and Arjun Mohan, as well as other NCMJ articles, visit ncmedicaljournal.com.

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