

School-based telehealth program reduces ED visits by pediatric asthma patients

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Kelli Garber, MSN, APRN, lead nurse practitioner & clinical integration specialist at the Medical University of South Carolina Center for Telehealth, consulting with a school nurse, telepresenter and student via a telehealth cart. Credit: SCETV, for MUSC Health Center for Telehealth

Researchers at the Medical University of South Carolina (MUSC) report

in *JAMA Pediatrics* an association between a school-based telehealth program and reduced emergency department visits for children with asthma living in a rural and underserved region of South Carolina.

This study shows the potential impact that school-based telehealth programs can have on [children](#) with chronic illnesses, especially those living in communities lacking access to [health care](#).

The MUSC team, led by pediatrician Kathryn King Cristaldi, M.D., analyzed Medicaid claims for children ages 3-17 in Williamsburg County with access to a school-based telehealth program. They then compared them to those for children in four surrounding counties without school-based telehealth. Cristaldi co-directs the Telehealth Center of Excellence at MUSC, one of only two such centers in the nation.

The study found that children with access to school-based telehealth were 21% less likely to visit the ED for their asthma than those without such access. However, the three-year study found no association between school-based telehealth and all-cause ED visits.

"Asthma is one of the most common and costly diseases in childhood," said Cristaldi. "We showed that the program was associated with decreased likelihood of ED visits. We think that this was achieved by engaging the school nurse to ensure that children are getting their controller medications daily and increasing overall awareness of managing childhood asthma."

Williamsburg County is a rural and medically underserved area of South Carolina situated along the I-95 "corridor of shame," so dubbed for its high rates of poverty. MUSC developed this program to address disparities in access to care, linking children to pediatric experts via telemedicine.

But it was the school nurses who helped to ensure the program's success by actively engaging the community.

"The program connects school nurses, who are really the frontline pediatric public health professionals, to providers via a telehealth cart that provides two-way audio-video communications with electronic peripherals that are HIPAA compliant," said Cristaldi. HIPAA refers to the Health Insurance Portability and Accountability Act, which provides data privacy and security provisions that safeguard medical information.

School nurses, Cristaldi said, go out of their way to help students on a daily basis. So it was no surprise that they would be the ones to use the telehealth cart to connect sick children with expert providers at [remote locations](#), helping to examine the children with special electronic stethoscopes and other peripherals. This special equipment enabled providers at remote locations to assess the children's conditions, just as if they were in the room. It was also the school nurses who helped to obtain feedback from parents, kept them informed and made sure they had the resources they needed. Without these dedicated school nurses, this program would not have been possible.

"Our findings in *JAMA Pediatrics* show progress. This puts residents along the I-95 corridor in a positive light, showing that they really partnered with us and over the years did something really good," said James T. McElligott, M.D., executive medical director for the Center for Telehealth at MUSC, who pioneered the school-based telehealth program in Williamsburg County.

"This is just the beginning," he added. "I think this study offers really strong empiric evidence that they can improve their community, and we want to make sure that is heard."

Next, Cristaldi and her team will analyze the program's ability to help to

implement asthma [best practices](#) as well as continue to explore the cost-effectiveness of school-based [telehealth](#).

More information: John Bian et al, Association of a School-Based, Asthma-Focused Telehealth Program With Emergency Department Visits Among Children Enrolled in South Carolina Medicaid, *JAMA Pediatrics* (2019). [DOI: 10.1001/jamapediatrics.2019.3073](https://doi.org/10.1001/jamapediatrics.2019.3073)

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