

Program could help teens control asthma

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Over the next three years, with \$2.1 million in funding from the National Heart Lung and Blood Institute, Drs. Dennis Ownby, chief in the MCG School of Medicine Section of Allergy and Immunology, and Martha Tingen, a nurse researcher at the Georgia Prevention Institute, will work to help rural teens with asthma manage their disease and avoid potentially fatal complications. Credit: Medical College of Georgia

An asthma program specifically tailored to teens could help those in rural areas manage their disease and avoid potentially fatal complications, Medical College of Georgia researchers say.

Black males have a death rate from asthma that is six times greater than their white counterparts, and Dr. Dennis Ownby, chief in the MCG School of Medicine Section of [Allergy](#) and [Immunology](#), believes asthma rates are as bad in rural areas as they are in inner cities.

"The prevalence is probably the same in rural areas," he said. "But teens

from those areas already face a number of other problems that can complicate their disease - poor housing quality, air pollution, more trouble getting to doctors and smaller, less-equipped hospitals."

Forgetting to take medications or carry rescue inhalers only exacerbates the problem, as does exposure to tobacco - either from smoking or second-hand smoke. Dr. Ownby said previous studies have shown smoking is more prevalent in rural areas than inner-cities.

He and other researchers think that Puff City, a culturally-tailored intervention program aimed at three key areas - reduction of [tobacco exposure](#), adherence to medication and attack readiness - could help at-risk teens better manage their asthma.

Over the next three years, with \$2.1 million in funding from the National Heart Lung and Blood Institute, Drs. Ownby and Martha Tingen, a nurse researcher at the Georgia Prevention Institute, will work with 300 Ninth- to 11th-graders with asthma from Burke, Jefferson and McDuffie counties. Half of the teens will be exposed to traditional educational asthma Web sites; the other half will use Puff City.

Developed and tested by Christine Joseph, an epidemiologist at Henry Ford Health System in Detroit, Puff City uses a "hip" character known as DJ Puffman to reach teens through a multi-session, Web-based program. Each time students log on, the character gives advice that is individually tailored to each student's asthma condition based on previously provided information about how the student already deals with the disease.

"The program really comes alive for them," Dr. Tingen said. "It may ask a question, for instance, about how they can best remember to take their medication, maybe by placing it next to their cell phone at night. The next time they log in to the program, DJ Puffman will ask how that

strategy is working for them."

In each group, teens receive four computerized asthma management sessions that are accessed on computers at school. Users also can problem solve asthma-management issues and hear educational information on the disease.

The program has already proven useful in other populations. Teens in inner-city Detroit, where it was originally tested, made 50 percent fewer visits to emergency departments, required 50 percent fewer hospitalizations and had 60 percent fewer school absences.

The disease, which affects more than 300 million people worldwide, is a chronic inflammation that causes a temporary narrowing of the airways that carry oxygen to the lungs. Those narrowings - commonly called [asthma](#) attacks - cause more than 4,000 deaths each year in the United States alone, according to the American Lung Association.

If the program proves to be successful with rural Georgia [teens](#), Puff City could be one way to lessen the burden of a disease that is the third most expensive to Georgia taxpayers.

"We are hoping that this is a program that can be easily disseminated world-wide at a relatively low cost," Dr. Tingen said.

Provided by Medical College of Georgia

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