

Web-based tool helps parents improve on kids' asthma treatment

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Asthma is the most common chronic illness in adolescents and children, affecting an estimated seven million children up to the age of 17 in the United States. The burden of asthma on children is substantial: kids with asthma have a three-fold greater risk of school absence than children without asthma, and asthma is the third leading cause of hospitalization among children under the age of 15.

Some parents of children with [asthma](#) have a tough time complying with treatment guidelines. Numerous surveys report between 40 to 60 percent of kids with [persistent asthma](#) are not receiving controller medications as they should. But there may be a solution. New study results from Seattle Children's Research Institute found that parents who used an [interactive website](#) to track their child's usage of asthma controller medications, improved compliance with asthma controller medication use.

"An Interactive Website to Improve Parental Compliance with [Asthma Treatment](#) Guidelines: A [Randomized Controlled Trial](#)," was published this week in [Academic Pediatrics](#).

Led by Dimitri Christakis, MD, MPH, the study found that the most significant benefits to this web-based approach were the interactivity and scalability of the intervention which made it convenience and easy for parents to use. Scalability is the ability of computer hardware or software to continue to function well when it is changed to meet a user's needs.

The website, called "My Child's Asthma," queried more than 600 parents enrolled in the study automatically without healthcare staff time, making the site both effective and low cost. Typical questions asked include: "During a recent typical week, on how many days has your child used quick-relief medicine?" and "How often has your child had chest tightness, cough [shortness of breath](#) or wheezing?" The site was developed to increase positive beliefs about [asthma management](#), optimize care by increasing provider-prescribed controllers for children with persistent asthma, and promote controller compliance among children on controllers.

"My Child's Asthma" gathered information from parents and applied algorithms to determine asthma severity, home care practices and parental beliefs related to administration of controller on a daily basis (e.g. positive and negative outcomes expectations and self-efficacy). The website also provided feedback to parents on their child's asthma symptoms at each successive visit and allowed participants to set goals for themselves. For example, if a child was on controller medications but not taking them regularly, parents could select, "I will give my child her controller as directed by her doctor" or "I will make an appointment to discuss my son's controller usage with his doctor."

"The vast majority of families enrolled in our study liked using 'My Child's Asthma,' and wanted to continue using it," said Dr. Christakis. "Sustainability is always an issue. But there are numerous benefits from this type of website for the child who has fewer asthma attacks and, subsequently, less hospital and emergency room visits. [Parents](#) will have fewer worries about their child's medical care and the site provides cost savings for the insurer."

According to a new report from the Centers for Disease Control and Prevention, children aged five to 17 years in 2008 who had one or more asthma attacks in the previous 12 months missed 10.5 million days of

school. The estimated total cost of asthma to society was \$56 billion in 2007. This figure includes medical expenses (\$50.1 billion per year), loss of productivity resulting from missed school or work days (\$3.8 billion per year), and premature death (\$2.1 billion per year).

More information: Supporting Materials:

"My Child's Asthma" screen grabs: www.flickr.com/photos/38997016...871/with/7181600609/

May 2012 Centers for Disease Control and Prevention report: "Asthma's Impact on the Nation": www.cdc.gov/media/releases/201...5_asthma_impact.html

Provided by Seattle Children's Research Institute

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