

STRONG CHILDREN'S RESEARCH CENTER

Summer 2018 Research Scholar

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ABSTRACT

Title: Internet Use among Caregivers of Urban Children with Persistent Asthma

Background: Asthma is the most common chronic disease of childhood, disproportionately affecting poor and minority children. The internet is now commonly used as a platform to share health information, however little is known about how caregivers of urban children with persistent asthma use the Internet.

Objective: 1) Describe the use of the Internet among urban caregivers of children with asthma; 2) Explore associations between Internet use and sociodemographics, asthma symptom measures, medications, and healthcare utilization.

Design/Methods: We used data from the *School-Based Telemedicine Enhanced Asthma Management (SB-TEAM)* program for elementary school-aged children with persistent asthma in urban Rochester, NY. We conducted in-home, structured surveys with caregivers to assess children's demographic information, healthcare utilization (prior year), asthma severity and symptoms (prior 14 days). Caregivers reported current Internet use at home based on Pew survey items. We used bivariate and multivariate regression analyses to explore relationships between demographics, healthcare utilization, medication use, asthma symptom measures and Internet use

Results: We included 317 subjects (response rate 79%; 56% Black, 29% Hispanic, mean caregiver age 35 yrs). Overall, 18% of caregivers reported never using the Internet at home. Caregivers who reported never using the Internet were older (37.8 vs. 34.2 years, $p=0.003$) and more likely to report depressive symptoms (45% vs. 31%, $p=0.046$) compared to caregivers who use the Internet at home. Healthcare utilization, controller medication use, and Childhood ACT scores were not related to Internet use. However, children of caregivers that never used the Internet were more likely to have moderate to severe asthma severity (60% vs. 44%, $p=0.028$), used rescue medication on more days (5.38 vs. 3.90 days/2-weeks, $p=0.039$), and had lower asthma-related caregiver quality of life scores (5.32 vs. 5.83, $p=0.013$) when compared to children of caregivers who do use the Internet. These asthma symptom variables remained statistically associated with Internet use even after controlling for caregiver age and depressive symptoms. Among this high-risk cohort, 11% of caregivers report not having a smartphone, 28% have never looked up health information online, and half have never used an online "patient portal."

Conclusion: Among caregivers of urban children with persistent asthma, the majority, but not all, reported at least some use of the Internet. Our findings suggest that caregivers who never use the Internet may be at higher risk and have children with worse asthma symptoms when compared to children of those caregivers who do use the Internet. These findings are pertinent in considering promotion of the Internet for health-related needs.