

**Title of Intervention:** Asthma Wizard Computer-Based Education

**Website:** <http://www.nationaljewish.org/healthinfo/pediatric/asthma/asthma-wizard/wizard/chapter1.aspx>

**Intervention Strategies:** Individual Education, Supportive Relationships, Group Education

**Purpose of the Intervention:** To reduce measures of asthma control, student absenteeism and caregiver lost workdays

**Population:** Children ages 5-15 with asthma and their families

**Setting:** Three urban schools; school-based

**Partners:** School administrators, National Jewish Medical and Research Center

**Intervention Description:**

- Individual Education: Participants had access to the online program, Asthma Wizard. This program had over 20 interactive sessions for children that were designed to last five minutes or less each. All children began with the first sessions at the schools and were able to advance at their own pace. Each child participating in the program received two peak flow meters and training in their use. One peak meter was retained at school, and one was sent home. Each child was asked to record peak flow readings, symptoms, asthma-related activity and rescue medication usage daily into My Asthma Diary, a confidential, computerized, interactive Internet-based diary. With the My Asthma Diary, students were able to track symptoms and medicines, display graphs that showed progress and understand when their asthma is worsening. The diaries were monitored on a daily basis.
- Supportive Relationships: The children had the ability to send e-mail directly to the Wizard. Parents and caregivers received asthma education, additional asthma education materials and an asthma action plan that was pulled from the physician's asthma care plan for the child.
- Group Education: All children with asthma received 15 minutes of instruction on an asthma-related topic once a month from the study nurse or respiratory therapist in a classroom setting.

**Theory:** Not mentioned

**Resources Required:**

- Staff/Volunteers: Nurse, respiratory therapist
- Training: Not mentioned
- Technology: Computers, computer programs, internet, peak flow meters
- Space: Classrooms
- Budget: Not mentioned
- Intervention: Asthma Wizard program, My Asthma Diary program, peak flow meters, educational materials
- Evaluation: Pediatric Asthma Caregiver's Quality of Life Survey

**Evaluation:**

- Design: Cohort
- Methods and Measures:
  - Telephone surveys for parents assessed quality of life (Pediatric Asthma Caregiver's Quality of Life) and asked about frequency of symptoms and use of controller medications.
  - Hospital utilization data was collected.

**Outcomes:**

- Short Term Impact: Not measured
- Long Term Impact: The number of caregiver days, emergency room visits, hospitalizations and oral steroid bursts declined but were not statistically significant. However, number of missed school days, unscheduled doctor visits and frequency of symptoms decreased significantly. There was also an increase in perceived quality of life.

**Maintenance:** Not mentioned

**Lessons Learned:** A comprehensive, computer-based asthma management program in schools can successfully improve asthma control and reduce absenteeism in elementary and middle school students and caregiver lost workdays.

**Citation(s):**

Tinkelman, D. and A. Schwartz (2004). "School-based asthma disease management." J Asthma 41(4): 455-62.