

**Title of Intervention:** Interactive Multimedia Program for Asthma Control and Tracking (IMPACT)

**Intervention Strategies:** Individual Education

**Purpose of the Intervention:** To increase knowledge of asthma treatments and improve quality of life

**Population:** Children with asthma and their caregivers

**Setting:** Pediatric Pulmonary and Allergy Clinic of the University of Missouri-Columbia Health Care; health care facility-based

**Partners:** Clinic administrators and staff

**Intervention Description:**

- Individual Education: In addition to the usual care, which consisted of verbal and printed information on asthma and concepts related to its control, participants in the intervention group used Interactive Multimedia Program for Asthma Control and Tracking (IMPACT). The CD consisted of vignettes covering the basic pathophysiology of asthma, environmental triggers, quick-relief and control medicines and strategies to control and manage asthma. The program incorporated principles of self management in an interactive format consisting of animated lessons, each averaging a minute in length. Ten of the lessons presented real life scenarios and required decisions about alternative behaviors that would likely affect asthma. Other lessons involved activities in which children learned to more accurately describe their symptoms and medication use. Content was designed to satisfy specific theoretical concepts relating to self-management of asthma by school-aged children. Each template was designed to illustrate concepts, test comprehension and reinforce learning, develop decision making skills or improve the child's ability to communicate their asthma signs and symptoms to others. The program tracked educational progress and generated standardized reports to help record current symptom level and medication use.

**Theory:** Not mentioned

**Resources Required:**

- Staff/Volunteers: Facilitators
- Training: Not mentioned
- Technology: Computer, IMPACT computer program
- Space: Room for computer without distractions
- Budget: Not mentioned
- Intervention: IMPACT computer program, educational materials
- Evaluation: Questionnaire

**Evaluation:**

- Design: Randomized controlled trial
- Methods and Measures:
  - Questionnaires assessed ease of use and navigation, whether it was interesting and enjoyable and program use.

**Outcomes:**

- Short Term Impact: IMPACT significantly increased asthma knowledge of children and caregivers.
- Long Term Impact: The intervention decreased asthma symptom days and decreased emergency room visits. The intervention group children were also using a significantly lower average daily dose of inhaled corticosteroids.

**Maintenance:** Not mentioned

**Lessons Learned:** Physicians should consider incorporating interactive multimedia education into routine clinical practice. Health maintenance organizations and third party payers should finance effective education

for self-management so that patients and caregivers can achieve better control of asthma and health systems can conserve resources.

**Citation(s):**

Krishna, S., B. D. Francisco, et al. (2003). "Internet-enabled interactive multimedia asthma education program: a randomized trial." *Pediatrics* 111(3): 503-10.