

**Title of Intervention:** The Health Buddy System

**Website:** [https://www.healthhero.com/products\\_services/products\\_services.html](https://www.healthhero.com/products_services/products_services.html)

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

**Purpose of the Intervention:** To improve self-management of asthma

**Population:** Children ages 8-16 with asthma

**Setting:** Participants' homes; home-based

**Partners:** Not mentioned

**Intervention Description:**

- Individual Education: Participants received an educational session with a nurse coordinator. The session included instructions on how to use a peak flow meter, green-yellow-red zone determination, appropriate use of medications and utilization of health care services. The participants received the Health Buddy device. The Health Buddy was a personal and interactive communication device developed by Health Hero Network. The device was connected to a home telephone and could be programmed to present questions and information on a screen and to record responses. The nurse coordinator sent a set of questions each day. The participant answered the questions by pressing buttons. Each answer to a question received immediate feedback from the device: praise for a correct answer or encouragement to try again. The nurse coordinator reviewed the information. In addition to the core immutable questions, asthma facts and trivia questions, which changed daily, were included to peak children's curiosity and enhance learning. The dialogues were designed for a third-grade reading level.
- Supportive Relationships: Parents were instructed on the health Buddy's use at the first visit and requested to be available to supervise its use only when the child indicated a need for help.

**Theory:** Not mentioned

**Resources Required:**

- Staff/Volunteers: Coordinators
- Training: Not mentioned
- Technology: Health Buddy devices, telephones
- Space: Participants' homes
- Budget: Participant families received a \$20 incentive for participating
- Intervention: Health Buddy system, peak flow meter, educational materials
- Evaluation: Questionnaire, access to hospital records

**Evaluation:**

- Design: Randomized controlled trial
- Methods and Measures:
  - Hospital records recorded hospital admissions, emergency room visits and urgent calls to the hospital.
  - Questionnaires assessed perceived asthma symptoms, absence from school, any peak flow reading in the yellow or red zone and use of health services.

**Outcomes:**

- Short Term Impact: Self-care behaviors improved more for the intervention group.
- Long Term Impact: The intervention group was significantly less likely to report peak flow readings in the yellow or red zone or to make urgent calls to the hospital.

**Maintenance:** Not mentioned

**Lessons Learned:** Easy-to-use, web-based devices such as the Health Buddy may be useful tools to empower children to provide their own care while reducing asthma symptoms and health care use in pediatric settings.

**Citation(s):**

Guendelman, S., K. Meade, et al. (2002). "Improving asthma outcomes and self-management behaviors of inner-city children: a randomized trial of the Health Buddy interactive device and an asthma diary." *Arch Pediatr Adolesc Med* 156(2): 114-20.