

**Mobile Apps and Asthma Management**

*Why educational games matter in asthma care*

The goal of health education is to communicate information necessary to make informed choices and motivate self-management. With smartphone use in children on the rise, reaching children where they are already spending their time has shown to have great results. Educational games on smartphone apps have a mix of elements make them a good tool for learning including experiential learning, repetition, emotional compelling, personalized incentives and competition. All these mixes together are a good recipe to help patients learn about their disease and manage their disease more effectively.

Educational games are being designed for a variety of disease states with good results. A game designed to help kids with cancer showed a 16% improvement in medication adherence and better knowledge about their cancer, a diabetes game shows 50% urgent care visits and better child to parent communication about their diabetes control. An asthma game shows better child to parent communication, improved self-care and self-efficacy. Over 170 studies have already been done on gaming applications and asthma alone with many more studies in the works as well as asthma games being developed.

A variety of games and asthma management apps are available. Here is an outline of some of the leading apps, games and asthma trackers that could be useful for children with asthma:

Game	Description	Goals	Cost
	Kids ages 6-11 care for a loveable fire-breathing dragon that wants to blow fire, but cannot because it has asthma. Kids can care for the pet in a way that mirrors their own self-care.	Inhaler technique Controller medication timing Trigger avoidance Symptom recognition	\$2.99
	Asthma management app that uses acoustic respiratory monitoring that measures the sounds caused by breathing distress. The measurement is taken via Bluetooth and sends it to the app for measurement. The measurements can also be sent to the parent's phone for monitoring.	Symptoms Breathing measurements Medication use Adherence to Asthma Action Plan Alerts to take medications	Free (Sensor is \$150)
	SPARX aims to use gamification to help kids manage diabetes, asthma, and other chronic conditions. It is a video game equipped with a 3D interface reminiscent of World of Warcraft and reaches out to children & adolescents to ameliorate symptoms of depression and anxiety.	Cognitive behavioral therapy Managing co-morbid conditions Psychiatric & medical conditions	N/A

	<p>Assist Me With Inhalers is a patient centered app that instructs patients on how to use their inhaler and it will even set a reminder for them to take scheduled treatments. The app has 11 types of inhalers that it goes over. These types include: MDI – closed and open mouthed, MDI spacer, Aerolizer, autohaler, diskus, flexhaler, twisthaler, handihaler, respimat and neohaler.</p>	<p>Inhaler technique Medication compliance Alerts to take medication</p>	<p>Free</p>
	<p>Many doctors recommend Asthma patients to keep a daily journal to keep track of asthma symptoms, potential triggers, and medications. It helps doctors diagnose the cause of asthma and prescribe the most effective treatment. But, the paper and pencil based journals are hard to keep, and very difficult to sort through during the few precious minutes doctor spend with the patient in an office visit. The Asthma journal app changes that.</p>	<p>Asthma education Symptoms Triggers Medication Use</p>	<p>Free Pro version: \$4.99</p>
	<p><i>Asthma Buddy</i> is a take-anywhere reminder of your day-to-day asthma medications. This easy to use app can help you to recognize if your asthma is getting worse and tell you what to do in response.</p>	<p>Medication Use Peak Flow Tracker Asthma Action Plan Symptoms Triggers Asthma Education</p>	<p>Free</p>
	<p>This friendly application provides index levels for four different conditions: Allergy (Pollen), Asthma, Cold and Cough, and Ultraviolet Sensitivity. With a simple touch of the screen, you can plan your day with the One Day Alerts or think about your whole week with the four day forecasts!</p>	<p>Pollen alerts</p>	<p>Free</p>

The Enhancing Asthma Care Project in \_\_\_\_\_ is supported by Health Care Service Corporation's Healthy Kids, Healthy Families Initiative and lead by the American Lung Association in \_\_\_\_\_. This joint initiative aims to work with 15 clinics that serve high-risk populations to improve pediatric asthma care to an estimated 30,000 children in \_\_\_\_\_.