

Picture this: Digital album puts focus on kids' health

April 7 2009



This is an example of what a parent would see on the home screen for BabySteps, a multimedia system that's part digital baby album and part medical chart. Credit: University of Washington

(PhysOrg.com) -- Modern moms and dads snap thousands of photos, recording every drooling smile and flailing attempt to crawl. Until now, this frenzy of activity could be one more thing distracting parents from monitoring their child's health and developmental progress.

Now Julie Kientz at the University of Washington has built a high-tech tool that takes photos and video, creates an online diary and family newsletters, and at the same time tracks a child's developmental milestones. The multimedia system, called Baby Steps, combines sentimental snapping with medical record-keeping. Baby Steps feels like a fun toy for [parents](#), but researchers found in a small pilot study that

having it on their home computers doubled the parents' collection of medically relevant information.

Kientz, an assistant professor of human-centered design and engineering and the Information School, presents the results this week in Boston at the Conference on Human Factors in Computing Systems. Co-authors are Rosa Arriaga and Gregory Abowd of the Georgia Institute of Technology.

Most parents can tell you the first time their baby smiled, or took his or her first step. But what about the first time a baby could adjust his or her gaze to look in the direction of a pointed finger, which an inability to do at a certain age indicates a possible risk of autism?

Pediatricians often ask parents to complete medical charts that record six categories of developmental milestones from birth to age five. Tracking this information may help with earlier diagnosis of conditions such as speech delays, autism and hearing or visual impairment.

"So much of the medical literature shows that the quality of decision making and diagnosis really depends on the amount of data that doctors have," said Kientz, whose research focuses on technology for medical and educational record-keeping.

In a perfect world, parents would record milestones as soon as they were observed. In the real world, busy parents often fill out records before each checkup - sometimes in the doctor's office parking lot.

"Parents are busy, they have a lot going on in their life. Even though they have a lot of good intentions, the time between visits goes by very quickly," Kientz said.

Baby Steps encourages participation by adding social incentives.

Researchers tested the system with eight families over three months. Four families were given a computer system designed strictly for medical record-keeping. The other four families used a more elaborate system with added features such as a keepsake album, pop-up reminders and e-mail alerts, tools to print or e-mail newsletters, as well as a button to create a report for the doctor's visit.

Adding sentimental functions caused parents to use the system three times more frequently, uploading three times as many pictures and videos and ultimately recording twice as many developmental milestones. Parents also reported enjoying the Baby Steps system more.

On top of the high-tech scrapbook tools, researchers built a wireless video camera with a time-lapse save function to help record events, similar to how a digital video recorder works. Parents set up the camera where their child plays, and if the child does something new, parents can press the camera's button and save footage of what just happened. Otherwise, the camera keeps rolling and footage older than 20 minutes is deleted. The videos can then be easily synchronized with a child's records.

"Kids do unpredictable things, and usually when they do these things you don't have a camera running. By the time you go and grab a camera they fall down, they're crying, or they've moved on to something else. We tried to find a way to help capture those moments," Kientz said.

Baby Steps lets parents share these videos with family and friends by e-mail or by posting to YouTube. Parents can also bring the video camera to the doctor's office.

Doctors reported that parents using Baby Steps seemed much better prepared and more confident during their well-child visits.

Kientz hopes to modify the tool so it requires less expensive electronics, perhaps running entirely on a cell phone, so families would not need a personal computer and high-speed Internet connection to use the system.

Baby Steps mimics some of the functions of popular baby-centered sites such as Tumblon.com, BabyAlbum.com and BabyCenter.com. Kientz said parents would likely also benefit from those sites because they incorporate many of the same features, though the medical goals are not yet as closely integrated in the commercial ventures.

Source: University of Washington ([news](#) : [web](#))

Citation: Picture this: Digital album puts focus on kids' health (2009, April 7) retrieved 26 April 2024 from <https://phys.org/news/2009-04-picture-digital-album-focus-kids.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.