

Mobile Phone Technology for Children with Type 1 and Type 2 Diabetes: A Parent Survey

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Abstract

Purpose:

The novel application of information technology has the potential to improve care for children with diabetes. We surveyed parents of children with type 1 diabetes mellitus (T1DM) or type 2 diabetes mellitus (T2DM) to (1) identify their concerns related to their children's diabetes and (2) assess the relationship between these concerns and parental attitudes toward a glucometer integrated into a mobile phone that could provide parents and health care providers with a child's real-time glucose readings via text message and a secure Web site.

Methods:

We conducted a cross-sectional Web-based survey of parents with children ages 10–19 years (125 with T1DM and 77 with T2DM). Parental concerns were grouped by (1) access to their child's provider, (2) parenting challenges, and (3) knowledge about managing their child's diabetes.

Results:

Parental concerns focused mostly on access to their child's health care provider. Over half of respondents expressed interest in subscribing to a mobile-phone-based service. In multivariate logistic regression models, the odds of being willing to use the service increased if parents had concerns about provider access, a child with T2DM, a college education, or currently subscribed to text messaging. Enthusiasm decreased with increasing annual service cost.

Conclusions:

Study participants—particularly parents with provider access concerns or a child with T2DM—were receptive to adopting novel health technology to help manage their children's diabetes. Adoption of such tools is most likely driven by the unmet needs of parents.

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Abbreviations: (OR) odds ratio, (SD) standard deviation, (T1DM) type 1 diabetes mellitus, (T2DM) type 2 diabetes mellitus

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