

Diabetes Self-Management Care via Cell Phone: A Systematic Review

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Abstract

Background:

The objective of this study was to evaluate the evidence on the impact of cell phone interventions for persons with diabetes and/or obesity in improving health outcomes and/or processes of care for persons with diabetes and/or obesity.

Methods:

We searched Medline (1966–2007) and reviewed reference lists from included studies and relevant reviews to identify additional studies. We extracted descriptions of the study design, sample size, patient age, duration of study, technology, educational content and delivery environment, intervention and control groups, process and outcome measures, and statistical significance.

Results:

In this review, we included 20 articles, representing 18 studies, evaluating the use of a cell phone for health information for persons with diabetes or obesity. Thirteen of 18 studies measured health outcomes and the remaining 5 studies evaluated processes of care. Outcomes were grouped into learning, behavior change, clinical improvement, and improved health status. Nine out of 10 studies that measured hemoglobin A1c reported significant improvement among those receiving education and care support. Cell phone and text message interventions increased patient–provider and parent–child communication and satisfaction with care.

Conclusions:

Providing care and support with cell phones and text message interventions can improve clinically relevant diabetes-related health outcomes by increasing knowledge and self-efficacy to carry out self-management behaviors.

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Abbreviations: (MeSH) Medical Subject Headings, (PDA) personal digital assistants, (SMS) short message service

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